

Compilation of Changes to the CPC Scheme Between 2022.08 and 2023.01

Presentation Details

Entries for new symbols and headings:	<i>Black text in italics</i>
Entries for existing symbols and headings	
—text insertions:	<i>Green text in italics with yellow background</i>
—text deletions:	Red strikethrough text with grey background
Entries for deleted symbols and headings:	Black strikethrough text

- Entries arranged by project. Duplicate entries may appear where multiple projects impact the same symbol
- In cases when the originating project cannot be found, "N/A" is given for the Project information (e.g. the change could be due to an Editorial Correction).
- Projects ending in "-F" indicate finalisation after reclassification was completed.

Project: MP11753 (B09B)

M B09B

DISPOSAL OF SOLID WASTE

NOTES

1. This subclass covers only single or combined, e.g. multistage, operations not fully classifiable in a single other subclass
2. In this subclass the following terms or expressions are added with the meanings indicated :
 - "disposal" means the discarding, e.g. dumping, or destroying of waste or its transformation into something useful or harmless;
 - "solid waste" includes waste which, although it has liquid content, is for practical purposes handled as solid

3. Attention is drawn to the following places:

A23J 1/16	Obtaining proteins from waste water of starch manufacturing plants of like wastes
A23K 10/26 , A23K 10/37	Animal feeding-stuffs from waste products of animal origin or of plant origin
A23K 10/38	Animal feeding-stuffs from distillers' or brewers' waste
A23K 10/28	Animal feeding-stuffs from waste dairy products
A23K 10/20	Animal feeding-stuffs from kitchen waste
A43B 1/12	Footwear made of rubber waste
A61L 11/00	Disinfection or sterilisation methods specially adapted for refuse
A62D 3/00	Chemical means for combatting harmful chemical agents; processes for making harmful chemical agents harmless
B01D 53/34	Chemical purification of smoke or fumes, e.g. flue gas
{ B02C 18/0084 }	Disintegrating by knives or other cutting or tearing members, which chop material into fragments, specially adapted for disintegrating garbage, waste or sewage
B03B 7/00	Combinations of wet processes or apparatus with other processes or apparatus, e.g. for dressing ores or garbage
B03B 9/06	General arrangement of separating plant, e.g. flow sheets, specially adapted for refuse
B05B 12/16 , B05B 14/00	Control of spray area of spraying plant, e.g. masking, side shields; Means for collection or re-use of excess material
B08B 15/00	Prevent escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area
B22F 8/00	Manufacture of articles from scrap or waste metal particles

B23D 25/14	Machines or arrangements for shearing stock while the latter is travelling otherwise than in the direction of the cut without regard to the exact dimensions of the resulting material, e.g. for cutting up scrap
B24B 55/12	Devices for recovering materials from grinding or polishing
B27B 33/20	Edge trimming saw blades or tools combined with means to disintegrate waste
B29B 17/00	Recovery of plastics or other constituents of waste material containing plastics
B30B 9/32	Presses for consolidating scrap metal or for compacting used cars
B62D 67/00	Systematic disassembly of vehicles for recovery of salvageable components, e.g. for recycling
B63B 17/06	Refuse discharge from vessels, e.g. for ash
{ B63J 4/006 }	Arrangements of installation for treating waste water or sewage on vessels
B63J 4/00	Arrangements of installations for treating waste water or sewage on vessels
B65F 1/00	Refuse receptacles
B65F 3/00	Vehicles particularly adapted for collecting refuse
B65F 5/00	Gathering or removal of refuse otherwise than by receptacles or vehicles
B65F 7/00	Cleaning or disinfecting devices combined with refuse receptacles or refuse vehicles
C03C 1/00	Ingredients generally applicable to manufacture of glasses, glazes or vitreous enamels
C04B 7/24	Hydraulic cements from oil shales, residues or waste other than slag
C04B 11/26	Calcium sulfate cements from phosphogypsum or from waste, e.g. purification products of smoke
C04B 18/04	Waste materials or refuse used as fillers for mortars, concrete, artificial stone or the like
{ C04B 22/0006 }	Waste inorganic materials used as active ingredients for mortars, concrete, artificial stone or the like
{ C04B 24/001 }	Waste organic materials used as active ingredients for mortars, concrete, artificial stone or the like
C04B 33/132	Waste materials or refuse used as compounding for clay-ware
C05F 9/00	Fertilisers made from household or town refuse
C08B 16/00	Regeneration of cellulose
C08J 11/00	Recovery of waste materials of macromolecular substances
C08L 17/00	Compositions of reclaimed rubber
C09K 11/01	Recovery of luminescent materials
C10B 53/00	Destructive distillation, specially adapted for particular solid raw materials or solid raw materials in special form
C10B 57/00	Other processes not covered before; Features of destructive distillation processes in general
C10G 1/10	Production of liquid hydrocarbon mixtures from rubber or rubber waste
C10L 5/46	Solid fuels essentially based on sewage, house or town refuse
C10L 5/48	Solid fuels essentially based on industrial residues and waste materials
C10M 175/02	Working-up used lubricants based on mineral oils

C11B 13/00	Recovery of fats, fatty oils, or fatty acids from waste materials
C11D 19/00	Recovery of glycerol from a saponification liquor
C12F 3/00	Recovery of by-products
C12F 3/08	Recovery of alcohol from press residues or other waste material
C12P 7/08	Biochemical production of ethanol from waste
C22B 7/00	Working-up raw materials other than ores, e.g. scrap, to produce non-ferrous metals or compounds thereof
C22B 19/28	Obtaining zinc or zinc oxide from muffle furnace residues
C22B 19/30	Obtaining zinc or zinc oxide from metallic residues or scrap
C22B 25/06	Obtaining tin from scrap
C25D 13/24	Regeneration of process liquids used in electrophoretic coatings
C25D 21/16	Regeneration of process solutions used in electrolytic coating
D01B	Mechanical treatment of natural fibrous or filamentary material to obtain fibres or filaments, e.g. for spinning
D01C 5/00	Carbonising rags to recover animal fibres
D01F 13/00	Recovery of starting material, waste material or solvents during the manufacture of artificial filaments or the like
D01G 11/00	Disintegrating fibre-containing articles to obtain fibres for re-use
D01H 11/00	Arrangements for confining or removing dust, fly, or the like
D06L 1/10	Regeneration of used chemical baths used for dry-cleaning or washing fibres, fabrics or the like
D21B 1/08	Dry treatment of waste paper or rags for making paper or for the production of cellulose
D21B 1/32	Defibrating waste paper
D21C 5/02	Processes for obtaining cellulose by working-up waste paper
D21C 11/14	Regeneration of pulp liquors by wet combustion
D21F 1/66	Re-use of pulp-water in wet end machines for making continuous webs of paper
D21H 17/01	Waste products added to the pulp or used in paper-impregnating material
E03F	Sewers, Cesspools
E04F 17/10	Arrangements in building for the disposal of refuse
F23B 5/00	Combustion apparatus arrangements for burning uncombusted material from primary combustion
F23G	Consuming waste products by combustion
F23J	Removal or treatment of combustion products or combustion residues
G03C 11/24	Removing emulsion from waste photographic material
G03G 21/10	Collecting or recycling waste developer used in electrography, electrophotography, magnetography
G21F 9/28	Treating radioactively contaminated solids
H01B 15/00	Apparatus or processes for salvaging material from electric cables
H01J 9/52	Recovery of material from discharge tubes or lamps
H01M 6/52	Reclaiming serviceable parts of waste cells or batteries

[H01M 10/54](#) Reclaiming serviceable parts of waste accumulators
4. In this subclass, it is desirable to add the indexing codes of group
[B09B 2101/00](#).

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

U B09B 1/00

Dumping solid waste

M B09B 1/002

· {Sea dumping ~~(disposal of radioactively contaminated material by storage under water G21F 9/24)~~}

Project: MP11759 (G05D)

M G05D

SYSTEMS FOR CONTROLLING OR REGULATING NON-ELECTRIC VARIABLES ~~(for continuous casting of metals B22D 11/16; valves per se F16K; sensing non-electric variables, see the relevant subclasses of G01; for regulating electric or magnetic variables G05F)~~

NOTES

1. This subclass does not cover features of general applicability to regulating systems, e.g. anti-hunting arrangements, which are covered by subclass [G05B](#).
2. In this subclass, the following term is used with the meaning indicated:
 - "systems" includes self-contained devices such as speed governors, pressure regulators.
3. Control systems specially adapted for particular apparatus, machines or processes are classified in the subclasses for the apparatus, machines or processes, provided that there is specific provision for control or regulation relevant to the special adaptation, either at a detailed level, e.g. [A21B 1/40](#): "for regulating temperature in bakers' ovens", or at a general level, e.g. [B23K 9/095](#): "for automatic control of welding parameters in arc welding". Otherwise, classification is made in the most appropriate place in this subclass.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M G05D 3/00

Control of position or direction ([G05D 1/00](#) takes precedence; *numerical control to execute positioning G05B 19/18*)

M G05D 7/00

Control of flow (level control [G05D 9/00](#); ~~ratio control G05D 11/00; weighing apparatus G01G; control of flow ratio G05D 11/00~~)

NOTE

In groups G05D 7/0629 - G05D 7/0694, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

M G05D 9/00

Level control, e.g. controlling quantity of material stored in vessel ~~(controlling level of liquid-pool electrode in electric discharge tubes and lamps H01J 1/10, H01J 13/14)~~

M G05D 11/00

~~Ratio control~~ **Control of flow ratio** (control of chemical or physico-chemical variables, e.g. pH-value, [G05D 21/00](#); ~~humidity control G05D 22/00; control of humidity G05D 22/00; control of temperature by varying the mixing ratio of two fluids having different temperatures G05D 23/13~~; control of viscosity [G05D 24/00](#); ~~proportioning the ingredients for mixing clay or cement with other substances B28C 7/00~~)

- M G05D 13/00** Control of linear speed; Control of angular speed; Control of acceleration or deceleration, e.g. of a prime mover (~~synchronising telegraph receiver and transmitter H04L 7/00~~)
- U G05D 13/08 · without auxiliary power
- M G05D 13/30 · · Governors characterised by fluid features in which the speed of a shaft is converted into fluid pressure (~~transducers converting variations of physical quantities into fluid pressure variations F15B 5/00~~)
- M G05D 13/34 · with auxiliary non-electric power (~~fluid-pressure converters F15B 3/00~~)
- U G05D 16/00** Control of fluid pressure
- M G05D 16/02 · Modifications to reduce the effects of instability, e.g. due to vibrations, friction, abnormal temperature, overloading, ~~unbalance~~ *or unbalance* (~~vibration-dampers F16F 7/00~~)
- M G05D 19/00** Control of mechanical oscillations, e.g. of amplitude, of frequency, of phase (~~generating or transmitting mechanical vibrations B06B ; control of electric motors H02P~~)
- M G05D 22/00** Control of humidity (~~of tobacco products A24B 9/00 ; air conditioning F24F~~)
- M G05D 23/00** Control of temperature (~~automatic switching arrangements for electric heating apparatus H05B 1/02~~)
- NOTE
- Within **In** groups [G05D 23/01](#) - [G05D 23/32](#), an invention is classified in the last appropriate place *the last place priority rule is applied, i.e. at each hierarchical level*, in the absence of an indication *of the contrary to the contrary, classification is made in the last appropriate place.**
- U G05D 23/01 · without auxiliary power
- U G05D 23/02 · · with sensing element expanding and contracting in response to changes of temperature ([G05D 23/13](#) takes precedence)
- M G05D 23/08 · · · with bimetallic element (~~valve arrangements adapted for mixing F16K 11/00~~)
- M G05D 23/10 · · · · with snap-action elements (~~for valves F16K 31/56~~)
- U G05D 23/19 · characterised by the use of electric means {([G05D 23/1393](#) takes precedence)}
- M G05D 23/30 · · Automatic controllers with an auxiliary heating device affecting the sensing element, e.g. for anticipating change of temperature (~~automatic controllers in general and not restricted to control of temperature G05B~~)
- M G05D 25/00** Control of light, e.g. intensity, colour, *or* phase (~~mechanically operable parts of lighting devices for the control of light F21V~~; optical devices or arrangements using movable or deformable elements for controlling light independent of the light source [G02B 26/00](#); devices or arrangements, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements for the control of light, circuit arrangements specially adapted therefor, control of light by electromagnetic waves, electrons or other elementary particles [G02F 1/00](#); ~~circuit arrangements for controlling light sources H01S 3/10, H05B 44/00, H05B 35/00 — H05B 47/00~~)

Project: MP11768 (B64G)

- U B64G 1/00** Cosmonautic vehicles
- U B64G 1/22 · Parts of, or equipment specially adapted for fitting in or to, cosmonautic vehicles

- U B64G 1/52 • • Protection, safety or emergency devices; Survival aids (life-saving in general [A62](#))
- M B64G 1/56 • • • Protection against ~~meteorites~~*meteoroids or space debris* (~~meteorite detectors B64G 1/68~~*meteoroid or space debris detectors B64G 1/68*)
- U B64G 1/66 • • Arrangements or adaptations of apparatus or instruments, not otherwise provided for (instruments per se, see the relevant classes, e.g. antennas for use in satellites [H01Q 1/28](#))
- M B64G 1/68 • • • of ~~meteorite~~*meteoroid or space debris* detectors

Project: MP11772 (H01)**M H01 ~~BASIC~~ ELECTRIC ELEMENTS**NOTES

1. Processes involving only a single technical art, e.g. drying, coating, for which provision exists elsewhere are classified in the relevant class for that art.
2. Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "microstructural devices" and "microstructural systems".

Project: MP11772 (H03)**M H03 ~~BASIC~~ ELECTRONIC CIRCUITRY****Project: MP11772 (H04N)**

- U H04N 7/00 **Television systems (details [H04N 3/00](#), [H04N 5/00](#); methods or arrangements, for coding, decoding, compressing or decompressing digital video signals [H04N 19/00](#); selective content distribution [H04N 21/00](#))**
- M H04N 7/18 • Closed ~~circuit television~~*circuit television [CCTV]* systems, i.e. systems in which the *video* signal is not broadcast ~~{(television transmission of measured quantities G01D 5/39; intruder alarm or detection by television surveillance G08B 13/196)}~~

Project: MP11774 (H03J)**M H03J TUNING RESONANT CIRCUITS; SELECTING RESONANT CIRCUITS
(~~indicating arrangements for measuring G01D; measuring, testing G01R; remote control in general G05, G08; automatic control or stabilisation of generators H03L~~)**NOTE

This subclass covers also the control of tuning, including the combined control of tuning and other functions, e.g. combinations of tuning control and volume control, combinations of control of local oscillator and of supplementary resonant circuits.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

- M H03J 1/00 **Details of adjusting, driving, indicating, or mechanical control arrangements for resonant circuits in general (~~machine elements in general F16; coupling of knobs to shafts F16D~~)**

NOTE

Groups [H03J 1/14](#), [H03J 1/16](#) take precedence over groups [H03J 1/08](#) - [H03J 1/12](#).

{This Note corresponds to IPC Note (1) relating to [H03J 1/08](#) - [H03J 1/12](#).}

- U H03J 3/00** Continuous tuning ([H03J 7/00](#), [H03J 9/00](#) take precedence; combination of continuous and discontinuous tuning other than for bandspreading [H03J 5/00](#))
- U H03J 3/02 · Details
- M H03J 3/04 · · Arrangements for compensating for variations of physical values, e.g. temperature (~~automatic control of ambient conditions G05D~~)
- M H03J 3/06 · · Arrangements for obtaining constant bandwidth or gain throughout tuning range or ranges (~~automatic gain control H03G~~)
- U H03J 5/00** Discontinuous tuning; Selecting predetermined frequencies; Selecting frequency bands with or without continuous tuning in one or more of the bands, e.g. push-button tuning, turret tuner ([H03J 7/00](#), [H03J 9/00](#) take precedence; for bandspreading [H03J 3/10](#))
- U H03J 5/02 · with variable tuning element having a number of predetermined settings and adjustable to a desired one of these settings
- U H03J 5/04 · · operated by hand
- M H03J 5/10 · · · Settings determined by a number of positioning means mounted on a common support, {e.g. turret tuner,} which is adjustable to desired positions, a different positioning means being in operation in each position
- M H03J 5/24 · with a number of separate pretuned tuning circuits or separate tuning elements selectively brought into circuit, e.g. for waveband selection; *or* for television channel selection (~~switches in general H01H~~)
- U H03J 7/00** Automatic frequency control; Automatic scanning over a band of frequencies
- M H03J 7/02 · Automatic frequency control ([H03J 7/18](#) takes precedence; ~~automatic tuning control for television receivers H04N 5/50~~)

Project: MP11839 (A61J)

- M A61J 1/00** Containers specially adapted for medical or pharmaceutical purposes (capsules or the like for oral use [A61J 3/07](#); specially adapted for surgical or diagnostic appliances or instruments [A61B 50/00](#)[A61B 50/30](#); ~~antithrombogenic treatment of articles for conditioning blood A61L 33/00~~; ~~devices for introducing media into or onto the body A61M~~; containers for radioactive substances [G21F 5/00](#))
- M A61J 1/03 · for pills or tablets (~~containers with special dispensing means therefor B65D 83/04~~*containers for pills or tablets with special dispensing means therefor B65D 83/04*)
- M A61J 1/14 · · Details {, e.g. provisions for hanging or shape retaining means}; Accessories therefor {, e.g. inlet or outlet ports, filters or caps}([A61J 7/00](#) takes precedence; ~~plugs or stoppers B65D 51/00~~; openers [B65D](#), [B67B 7/00](#))
- M A61J 1/1406 · · {Septums, pierceable membranes}
- M A61J 1/1412 · · {Containers with closing means, e.g. caps (~~plugs for containers B65D 51/00~~)}
- M A61J 1/1418 · · · {Threaded type}
- M A61J 1/1425 · · · {Snap-fit type}
- M A61J 1/1431 · · · {Permanent type, e.g. welded or glued}
- M A61J 1/1437 · · {Locking means requiring key or combination to open the container}
- M A61J 1/1443 · · {Containers with means for dispensing liquid medicaments in a filtered or sterile way, e.g. with bacterial filters}
- M A61J 1/145 · · · {using air filters}
- M A61J 1/1456 · · · {using liquid filters}

- M A61J 1/1462
 - • ▾ {Containers with provisions for hanging, e.g. integral adaptations of the container (~~accessories for hanging the container A61J 1/16;~~ ~~A61M 5/1414~~ ~~accessories for hanging the container A61M 5/1414~~)}
- M A61J 1/1468
 - • ▾ {Containers characterised by specific material properties}
- M A61J 1/1475
 - • ▾ {Inlet or outlet ports}
- M A61J 1/1481
 - • • ▾ {with connection retaining means, e.g. thread or snap-fit}
- M A61J 1/1487
 - • • ▾ {with friction fit, e.g. connecting tubes directly to a protruding port}
- M A61J 1/1493
 - • ▾ {Containers with shape retaining means, e.g. to support the structure of the container during emptying or filling}
- M A61J 1/16
 - • ▾ Holders for containers
- M A61J 1/165
 - • • ▾ {Cooled holders, e.g. for medications, insulin, blood, plasma (~~containers with thermal insulation in general B65D 81/38;~~ ~~ice-boxes F25D~~)}
- M A61J 1/18
 - • ▾ Arrangements for indicating condition of container contents, e.g. sterile condition
- M A61J 1/20
 - • ▾ Arrangements for transferring {or mixing} fluids, e.g. from vial to syringe
- M A61J 1/2003
 - • • ▾ {Accessories used in combination with means for transfer or mixing of fluids, e.g. for activating fluid flow, separating fluids, filtering fluid or venting}
- M A61J 1/2006
 - • • • ▾ {Piercing means}
- M A61J 1/201
 - • • • • ▾ {having one piercing end}
- M A61J 1/2013
 - • • • • ▾ {having two piercing ends}
- M A61J 1/2017
 - • • • • ▾ {having three or more piercing ends}
- M A61J 1/202
 - • • • • ▾ {Separating means}
- M A61J 1/2024
 - • • • • ▾ {having peelable seals}
- M A61J 1/2027
 - • • • • ▾ {having frangible parts}
- M A61J 1/2031
 - • • • • ▾ {having openings brought into alignment}
- M A61J 1/2034
 - • • • • ▾ {having separation clips}
- M A61J 1/2037
 - • • • • ▾ {having valve means}
- M A61J 1/2041
 - • • • • ▾ {having removable plugs}
- M A61J 1/2044
 - • • • • ▾ {having slits}
- M A61J 1/2048
 - • • • • ▾ {Connecting means}
- M A61J 1/2051
 - • • • • ▾ {having tap means, e.g. tap means activated by sliding}
- M A61J 1/2055
 - • • • • ▾ {having gripping means}
- M A61J 1/2058
 - • • • • ▾ {having multiple connecting ports}
- M A61J 1/2062
 - • • • • • ▾ {with directional valves}
- M A61J 1/2065
 - • • • • ▾ {having aligning and guiding means}
- M A61J 1/2068
 - • • • • ▾ {Venting means}
- M A61J 1/2072
 - • • • • • ▾ {for internal venting}
- M A61J 1/2075
 - • • • • • ▾ {for external venting}
- M A61J 1/2079
 - • • • • ▾ {Filtering means}
- M A61J 1/2082
 - • • • • • ▾ {for gas filtration}
- M A61J 1/2086
 - • • • • • ▾ {for fluid filtration}
- M A61J 1/2089
 - • • ▾ {Containers or vials which are to be joined to each other in order to mix their contents (combinations of vial and syringe for mixing their contents [A61J 1/2096](#))}
- M A61J 1/2093
 - • • ▾ {Containers having several compartments for products to be mixed}

- M A61J 1/2096 . . . {Combination of a vial and a syringe for transferring or mixing their contents}
- M A61J 1/22 . . . with means for metering the amount of fluid

Project: MP11904 (A21C)

- M A21C MACHINES OR EQUIPMENT FOR MAKING OR PROCESSING DOUGHS; HANDLING BAKED ARTICLES MADE FROM DOUGH**
- WARNING
{In this subclass, non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
- M A21C 1/00 Mixing or kneading machines for the preparation of dough (~~domestic mixing or kneading machines A47J 43/00, A47J 44/00~~; ~~mixing in general B01F~~; ~~mixing or kneading of substances in a plastic state in general B29B 7/00~~)**
- U A21C 3/00 Machines or apparatus for shaping batches of dough before subdivision**
- M A21C 3/02 . Dough-sheeters; Rolling-machines; Rolling-pins ~~{(mixing or kneading dough by rollers A21C 1/08; non-manual rolling and working of discrete dough pieces A21C 7/00)}~~
- M A21C 3/06 . Machines for coiling sheets of dough, e.g. for producing rolls ~~{, e.g. crescent rolls (as part of a machine for further moulding or forming A21C 7/00; with filling A21C 9/06)}~~
- U A21C 5/00 Dough-dividing machines**
- M A21C 5/08 . with radial, i.e. star-like, cutter-blades slidable in the slots of, and relatively to, a pressing-plunger ~~{(A21C 7/06 takes precedence)}~~
- M A21C 13/00 Provers, i.e. apparatus permitting dough to rise ~~{(testing dough properties G01N 33/10)}~~**
- U A21C 15/00 Apparatus for handling baked articles**
- M A21C 15/04 . Cutting or slicing machines or devices specially adapted for baked articles other than bread ~~(for cutting or slicing bread B26B, B26D)~~

Project: MP11907 (B61D)

- M B61D 19/00 Door arrangements specially adapted for rail vehicles (locks for vehicles [E05B 77/00](#) - [E05B 85/00](#); door-operating mechanisms [E05F](#))**

Project: MP11907 (C01B)

- M C01B 4/00 Hydrogen isotopes; Inorganic compounds thereof prepared by isotope exchange, e.g. $\text{NH}_3 + \text{D}_2 \rightarrow \text{NH}_2\text{D} + \text{HD}$ (~~separation of isotopes B01D 59/00~~; ~~other chemical reactions to form compounds of hydrogen isotopes, see the relevant groups for hydrogen compounds in class C01~~)**

Project: MP11907 (F04D)

- M F04D 27/00 Control, e.g. regulation, of pumps, pumping installations or **systems pumping systems specially adapted for elastic fluids****

Project: MP11913 (D01C)

M D01C CHEMICAL **OR BIOLOGICAL** TREATMENT OF NATURAL FILAMENTARY OR FIBROUS MATERIAL TO OBTAIN FILAMENTS OR FIBRES FOR SPINNING; CARBONISING RAGS TO RECOVER ANIMAL FIBRES

NOTE

Attention is drawn to the note following the title of Class [D01](#)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme:

M D01C 3/00 Treatment of animal material, e.g. chemical scouring of wool ~~(recovery of lanolin or wool wax G11B 11/00)~~

M D01C 5/00 Carbonising rags, ~~{threads or fabrics}~~ to recover animal fibres, ~~{i.e. chemical removal of vegetable impurities (treatment of threads or fabrics of animal fibres for other purposes than removal of vegetable impurities D06L or D06M)}~~

Project: MP11918 (G10H)

M G10H ELECTROPHONIC MUSICAL INSTRUMENTS ~~(electronic circuits in general H03); INSTRUMENTS IN WHICH THE TONES ARE GENERATED BY ELECTROMECHANICAL MEANS OR ELECTRONIC GENERATORS, OR IN WHICH THE TONES ARE SYNTHESISED FROM A DATA STORE~~

NOTE

This subclass covers musical instruments in which individual notes are constituted as electric oscillations under the control of a performer and the oscillations are converted to sound-vibrations by a loud-speaker or equivalent instrument.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

M G10H 1/00 Details of electrophonic musical instruments ~~(keyboards applicable also to other musical instruments G10B, G10C; arrangements for producing a reverberation or echo sound G10K 15/08)~~

M G10H 1/0008 • {Associated control or indicating means ~~(teaching of music per se G09B 15/00)}~~

M G10H 1/0033 • {Recording/reproducing or transmission of music for electrophonic musical instruments ~~(of accompaniment G10H 1/361)}~~

M G10H 1/0041 • • {in coded form ~~(see also G10H 7/002)}~~

M G10H 1/02 • Means for controlling the tone frequencies, e.g. attack; **or** decay; Means for producing special musical effects, e.g. **vibrato**, **glissando** ~~{vibratos or glissandos (for instruments using voltage controlled oscillators and amplifiers or voltage controlled oscillators and filters G10H 5/002)}~~

U G10H 1/06 • • Circuits for establishing the harmonic content of tones {, or other arrangements for changing the tone colour}

M G10H 1/08 • • • by combining tones ([G10H 1/14](#), [G10H 1/16](#) take precedence; chord [G10H 1/38](#); ~~analysis or synthesis of sound waves per se G10L~~)

U G10H 1/12 • • • by filtering complex waveforms ([G10H 1/14](#), [G10H 1/16](#) take precedence)

M G10H 1/125 • • • • {using a digital filter ~~(digital filters per se H03H 17/02)}~~

M G10H 1/14 • • • during execution ~~{(modulation during execution G10H 1/053 {-; voice controlled instruments G10H 5/005})}~~

- M G10H 1/16
- • • by non-linear elements ([G10H 1/14](#) takes precedence; ~~generation of non-sinusoidal basic tones G10H 5/10~~)
- U G10H 1/18
- Selecting circuits
- M G10H 1/26
- • for automatically producing a series of tones (~~musical toys A63H 5/00~~)
- U G10H 1/32
- Constructional details
- M G10H 1/34
- • Switch arrangements, e.g. keyboards or mechanical switches ~~peculiar to specially adapted for~~ electrophonic musical instruments (~~G10H 1/055 takes precedence~~); ~~keyboards applicable also to other musical instruments G10B, G10C~~)
- U G10H 1/344
- • • {Structural association with individual keys (electrically operated wind-actuated organs [G10B 3/22](#))}
- M G10H 1/348
- • • • {Switches actuated by parts of the body other than ~~the fingers fingers~~} (~~pedals or pedal mechanisms for wind-actuated organs G10B 3/14, for pianos G10C 3/26~~)
- U G10H 1/36
- Accompaniment arrangements
- U G10H 1/361
- • {Recording/reproducing of accompaniment for use with an external source, e.g. karaoke systems}
- M G10H 1/363
- • • {using optical disks, e.g. CD, CD-ROM, to store accompaniment information in digital form (~~recording/reproducing by optical means G11B 7/00~~)}
- M G10H 1/40
- • Rhythm (~~metronomes G04F 5/02~~)
- U G10H 3/00**
- Instruments in which the tones are generated by electromechanical means**
- U G10H 3/12
- using mechanical resonant generators, e.g. strings or percussive instruments, the tones of which are picked up by electromechanical transducers, the electrical signals being further manipulated or amplified and subsequently converted to sound by a loudspeaker or equivalent instrument
- U G10H 3/14
- • using mechanically actuated vibrators with pick-up means ([G10H 3/24](#) takes precedence)
- M G10H 3/143
- • • {characterised by the use of a piezo-electric or magneto-strictive transducer (~~piezo-electric or magnetostrictive loudspeakers for mechanical vibrations B06B, G10K; piezo-electric or magneto-strictive transducers or microphones H04R 15/00, H04R 17/00~~)}
- U G10H 5/00**
- Instruments in which the tones are generated by means of electronic generators ([G10H 7/00](#) takes precedence)**
- M G10H 5/007
- {Real-time simulation of [G10B](#), [G10C](#), [G10D](#)-type instruments using recursive or non-linear techniques, e.g. waveguide networks, recursive algorithms (~~establishing the harmonic content of tones by non-linear elements G10H 1/16; synthesising waveforms using a recursive algorithm G10H 7/12~~)}
- M G10H 7/00**
- Instruments in which the tones are synthesised from a data store, e.g. computer organs (~~synthesis of acoustic waves not specific to musical instruments G10K 15/02, G10L~~)**
- M G10H 7/008
- {Means for controlling the transition from one tone waveform to another (~~glissando or legato per se G10H 1/02~~)}

Project: MP11919 (G10K)

- M G10K** **SOUND-PRODUCING DEVICES (~~sound-producing toys A63H 5/00~~); METHODS OR DEVICES FOR PROTECTING AGAINST, OR FOR DAMPING, NOISE OR OTHER ACOUSTIC WAVES IN GENERAL; ACOUSTICS NOT OTHERWISE PROVIDED FOR**
- NOTES
1. This subclass covers arrangements for generating mechanical vibrations in fluids.
 2. This subclass covers also the production of sounds which may not be audible to human beings but which are audible to animals.
 3. In this subclass, the following terms are used with the meanings indicated:
 - "acoustics" and "sound" cover the technical field dealing with mechanical vibrations at all infrasonic -, sonic - and ultrasonic frequencies. However, generation or transmission of mechanical waves, in general, is covered by subclass [B06B](#), subject to the exception specified in Note (1) above.
- WARNING
- {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
- M G10K 1/00** **Devices in which sound is produced by striking a resonating body, e.g. bells, chimes, ~~gong or gongs (combinations with clocks or watches G04B, G04C; carillons G10F 1/10; {for percussion instruments G10D 13/00} multi-toned musical instruments G10D 13/08; automatic carillons G10F 1/10)~~**
- U G10K 1/06 • the resonating devices having the shape of a bell, plate, rod, or tube (bells for towers [G10K 1/28](#))
- M G10K 1/062 • • electrically operated ~~{{self-interrupting relays H01H 51/34}}~~
- U G10K 1/063 • • • the sounding member being a bell
- U G10K 1/064 • • • • Operating or striking mechanisms therefor
- M G10K 1/065 • • • • • for timed or repeated operation ~~{{alarm-clocks G04C 21/00}}~~
- U G10K 1/07 • • mechanically operated; Hand bells; Bells for animals
- U G10K 1/072 • • • Operating or striking mechanisms therefor
- M G10K 1/076 • • • • • for timed or repeated operation ~~{{alarm-clocks G04B 23/00}}~~
- U G10K 1/28 • Bells for towers or the like
- U G10K 1/30 • • Details or accessories
- M G10K 1/36 • • • Means for silencing or damping ~~{means or arrangements for avoiding or reducing out-of-balance forces due to motion F16F 15/00}~~
- U G10K 7/00** **Sirens**
- M G10K 7/02 • in which the sound-producing member is rotated manually or by a motor ([G10K 7/06](#) takes precedence ~~}; musical tops A63H 1/28~~)
- M G10K 7/06 • in which the sound-producing member is driven by a fluid, e.g. by a compressed gas ~~{{fluidically operated vibrators B06B 1/18}}~~
- M G10K 9/00** **Devices in which sound is produced by vibrating a diaphragm or analogous element, e.g. fog horns, vehicle ~~hooter, buzzer~~ ~~hooters or buzzers~~ (loudspeakers or like acoustic electromechanical transducers [H04R](#) ~~}; arrangement or adaptation for ships B63B 45/08; mechanically driven vibrators B06B 1/10~~)**
- M G10K 9/18 • Details, e.g. bulbs, pumps, pistons, ~~switch, casing~~ ~~{switches or casings (cones, diaphragms G10K 13/00)}~~

- U G10K 11/00** **Methods or devices for transmitting, conducting or directing sound in general; Methods or devices for protecting against, or for damping, noise or other acoustic waves in general**
- M G10K 11/18 · Methods or devices for transmitting, conducting, or directing sound ([G10K 11/02](#), [G10K 11/36](#) take precedence; ~~medical stethoscopes A61B 7/02~~)
- M G10K 11/26 · · Sound-focusing or directing, e.g. scanning ~~{(horns for impedance matching G10K 11/02; megaphones G10K 11/08)}~~
- M G10K 11/28 · · · using reflection, e.g. parabolic reflector ~~{reflectors (hearing aids A61F 11/30)}~~
- U G10K 15/00** **Acoustics not otherwise provided for**
- M G10K 15/02 · Synthesis of acoustic waves (synthesis of speech ~~G10L~~[G10L 13/00](#))
- NOTE
see provisionally [G10H](#) e.g. [G10H 1/26](#)

Project: MP11920 (E04H)

- M E04H** **BUILDINGS OR LIKE STRUCTURES FOR PARTICULAR PURPOSES; SWIMMING OR SPLASH BATHS OR POOLS; MASTS; FENCING; TENTS OR CANOPIES, IN GENERAL (foundations [E02D](#))**
- NOTES
1. This subclass deals primarily with the layout of buildings as a whole, but includes details which are peculiar to types of buildings or buildings for special purposes, specified in the groups. The word "buildings" does not exclude engineering structures and other constructions
 2. This subclass provides for canopies in general and for canopies similar in construction to tents. For canopies having special application, see the relevant class, e.g. bed canopies [A47C 29/00](#); protecting chairs against the weather [A47C 7/66](#); sunshades or awnings for buildings [E04F 10/00](#)
 3. In this subclass, the term "tent" means a tent or canopy having a supporting means, e.g. frame and a flexible cover
- WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

E04H 4/02	covered by	E04H 4/0018 , E04H 4/0075
E04H 4/04	covered by	E04H 4/0018 , E04H 4/0075
 2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
- M E04H 1/00** **Buildings or groups of buildings for dwelling or office purposes; General layout, e.g. modular co-ordination, ~~staggered storeys {small buildings} or staggered storeys~~ ([E04H 3/00](#) takes precedence; ~~buildings for two or more purposes, e.g. drive-in buildings E04H 14/00; building construction in general E04B 1/00~~)**
- M E04H 1/06 · Office buildings; Banks ([E04H 1/12](#) takes precedence; ~~furniture or fittings for shops, storehouses or the like A47F~~)
- M E04H 1/12 · Small buildings or other erections for limited occupation, erected in the open air or arranged in buildings, e.g. kiosks, waiting shelters for bus stops or for filling stations, roofs for railway platforms, ~~watchmen's huts~~, [watchmen's huts](#) or dressing cubicles ~~(movable screens as household equipment A47G 5/00)~~

M	E04H 3/00	Buildings or groups of buildings for public or similar purposes; Institutions, e.g. infirmaries, prisons or prisons(portions of buildings for individual occupation, e.g. cubicles E04H 1/00; structures covering a large free area E04B 1/342)
M	E04H 3/02	• Hotels; Motels; Coffee-houses; Restaurants; Shops; Department stores {(furnishing or fitting A47F)}
M	E04H 3/04	• • Restaurants or shops having arrangements for self-service (paying counters A47F 9/02; furniture or installations specially adapted for supermarkets A47F 10/00; transport aspects B65G; coin-freed apparatus G07F)
U	E04H 3/10	• for meetings, entertainments, or sports
M	E04H 3/12	• • Tribunes, grandstands or terraces for spectators {or amphitheatres} (auditoriums E04H 3/30; chairs, stools, benches A47C)
M	E04H 3/14	• • Gymnasiums; Other sporting buildings (tribunes E04H 3/12)
M	E04H 3/16	• • • for swimming (swimming or splash baths or pools E04H 4/00)
M	E04H 3/22	• • Theatres; Concert halls; Studios for broadcasting, cinematography, television or similar purposes (drive-in buildings E04H 14/00; equipment for theatres or concert halls A63J-; vehicles specially adapted to carry a theatre or stage B60P 3/025)
U	E04H 3/24	• • • Constructional features of stages
M	E04H 3/26	• • • • Revolving stages; Stages able to be lowered (devices for raising or lowering persons A63J 5/12)
M	E04H 3/30	• • • Constructional features of auditoriums (chairs, stools, benches A47C; building details providing acoustical effects E04B 1/99)
M	E04H 4/00	Swimming or splash baths or pools (wave-producers for baths A47K 3/10; separation B01D; treatment of water C02F; wave-producing pumps F04D 35/00)
U	E04H 4/14	• Parts, details or accessories not otherwise provided for
M	E04H 4/16	• • specially adapted for cleaning (cleaning devices peculiar to vessels B63B 59/00)
M	E04H 5/00	Buildings or groups of buildings for industrial or agricultural purposes (building construction in general E04B 1/00)
M	E04H 5/02	• Buildings or groups of buildings for industrial purposes, e.g. for power-plants; or factories (buildings forming part of cooling plants E04H 5/10 ; building structures for parking vehicles E04H 6/00)
M	E04H 5/06	• • Pits or building structures for inspection or services (manhole shafts or other inspection chambers in general E02D 29/12)
M	E04H 5/08	• Buildings or groups of buildings for agricultural purposes (silos E04H 7/22 ; manure storage places A01C 3/02; greenhouses A01G 9/14)
U	E04H 5/10	• Buildings forming part of cooling plants
M	E04H 5/12	• • Cooling towers (towers in general E04H 12/00; cooling equipment F28)
M	E04H 6/00	Buildings for parking cars, rolling-stock, aircraft, vessels or like vehicles, e.g. garages (tents for use as garages E04H 15/00; bicycle stands B62H; storing of vessels on land B63C 15/00; construction of ground-supported surfaces E01C; marking of parking areas on the ground E01F 9/50; building construction in general E04B 1/00)
M	E04H 6/02	• Small garages, e.g. for one or two cars (attached to, or supported by, the vehicle B62D ; prefabricated and with undivided interior E04B 1/343)
M	E04H 6/04	• • wheeled, hinged, foldable, telescopic, swinging or otherwise movable {(E04H 6/025 takes precedence); transportable or collapsible buildings in general E04B 1/343}

- U E04H 6/08 · Garages for many vehicles
- M E04H 6/10 · · without mechanical means for shifting or lifting vehicles, e.g. with helically-arranged fixed ramps, with movable ramps-~~(({E04H 6/26 takes precedence})}~~)
- U E04H 6/12 · · with mechanical means for shifting or lifting vehicles
- U E04H 6/18 · · · with means for transport in vertical direction only or independently in vertical and horizontal directions ([E04H 6/14](#) takes precedence)
- M E04H 6/20 · · · · characterised by ~~the~~ use of conveyor chains or rotatable rollers for horizontal transport
- M E04H 6/22 · · · · characterised by ~~the~~ use of movable platforms for horizontal transport; ~~{ {, i.e. cars being permanently parked on palettes-({E04H 6/20 takes precedence})}~~}
- M E04H 6/24 · · · · characterised by ~~the~~ use of dollies for horizontal transport; ~~{ {, i.e. cars being permanently parked on wheeled platforms-({E04H 6/20 takes precedence})}~~}
- M E04H 6/26 · · · · characterised by ~~the~~ use of tiltable floors or floor sections; characterised by ~~the~~ use of movable ramps
- M E04H 6/28 · · · · characterised by ~~the~~ use of turntables or rotary rings for horizontal transport-~~(({E04H 6/20 takes precedence})}~~)
- U E04H 6/30 · · · with means for transport in horizontal direction only
- M E04H 6/34 · · · · characterised by use of movable platforms-~~(({E04H 6/32 takes precedence})}~~)
- M E04H 6/40 · · · · characterised by use of turntables or rotary rings-~~(({E04H 6/32 - E04H 6/38 take precedence})}~~)
- M E04H 6/44 · for storing aircraft (~~structures covering a large free area E04B 1/342~~)
- U E04H 7/00 Construction or assembling of bulk storage containers employing civil engineering techniques in situ or off the site (tower aspects [E04H 12/00](#); storage aspects, e.g. floating roofs, sealing means, filling or discharging means [B65D](#), [B65G](#), [F17B](#), [F17C](#); foundations [E02D 27/38](#))**
- M E04H 7/02 · Containers for fluids or gases; Supports therefor-~~(arrangements or adaptations of tanks for water supply E03B 11/00)~~
- M E04H 9/00 Buildings, ~~or~~ groups of buildings; or shelters adapted to withstand or provide protection against abnormal external influences, e.g. war-like action, earthquake; ~~or~~ extreme climate (~~floatable buildings B63B~~; foundation aspects [E02D](#); ~~building constructions in general E04B~~; ~~bearings or like supports allowing movement E04B 1/36~~; ~~special details in regard to insulation or other protection E04B 1/62~~; ~~supporting structures for endangered or damaged existing buildings or parts thereof E04G 23/04~~; ~~doors, windows E06B 5/00~~; ~~air-conditioning, ventilation F24F~~; ~~camouflage F41H 3/00~~; ~~cells or rooms shielded against dangerous radiation G21F 7/00~~)**
- M E04H 9/04 · against air-raid or other ~~warlike~~ ~~war-like~~ actions-~~(respiratory apparatus A62B)~~
- U E04H 9/10 · · Independent shelters; Arrangement of independent splinter-proof walls
- M E04H 9/12 · · · entirely underneath the level of the ground, e.g. air-raid galleries-~~(tunnels; mine galleries E21D)~~
- M E04H 12/00 Towers; Masts or poles; Chimney stacks; Water-towers; Methods of erecting such structures (cooling- towers [E04H 5/12](#); ~~supports for road signs E01F 9/60~~; ~~foundation piles E02D 5/22~~; ~~foundations for masts, poles or chimneys E02D 27/42~~; ~~structural elongated members in general E04C 3/00~~; ~~fixed climbing irons E06C 9/04~~; ~~derricks for oil drilling E21B 15/00~~)**
- M E04H 12/02 · Structures made of specified materials-~~(E04H 12/16, E04H 12/18 take precedence)~~

- M E04H 12/18 • movable or with movable sections, e.g. rotatable, ~~telescopic~~ *or telescopic* (~~flexible slalom-gate poles A63C 19/062; flexible road-sign supports E01F 9/627; rotary buildings E04B 1/346~~)
- M E04H 12/20 • Side-supporting means therefor, e.g. using guy ropes, ~~struts~~ *or struts* (~~ground anchors E02D 5/80; fastening means for cables or ropes F16G 11/00~~)
- M E04H 12/22 • Sockets or holders for poles or posts {(for sports articles, e.g. floor sockets [A63B 71/023](#); for road signs [E01F 9/673](#); ~~foundations for poles, masts or chimneys E02D 27/42~~)}
- M E04H 12/26 • Winding-towers for mines (~~elevators B66B~~)
- M E04H 12/28 • Chimney stacks, e.g. free-standing, or similar ducts (~~foundations E02D 27/42; chimneys as part of buildings E04F 17/02; connections between furnace and smoke-stack, chimney equipment F23~~)
- M E04H 12/30 • Water-towers (~~tanks B65D 88/00; use of high-level tanks E03B 11/12~~)
- M E04H 12/32 • Flagpoles (~~flags, banners, mountings therefor G09F 17/00~~)
- M E04H 13/00** **Monuments; Tombs; Burial vaults; Columbaria, (~~coffins, urns A61G 17/00~~); sculpture or other artistic features B44)**
- M E04H 14/00** **Buildings for combinations of different purposes not covered in a single previous group by any single one of main groups E04H 1/00-E04H 13/00 of this subclass, e.g. for double purpose ([E04H 3/02](#), [E04H 9/06](#) take precedence); Buildings of the drive-in type**
- U E04H 15/00** **Tents or canopies, in general**
- U E04H 15/02 • Tents combined or specially associated with other devices
- M E04H 15/04 • • suspended type, e.g. from trees, *or* from cantilever supports (~~supporting frames E04H 15/34~~)
- M E04H 15/10 • • Heating, lighting or ventilating (~~for heating, lighting or ventilating devices per se, see the relevant classes, e.g. F21, F24~~)
- M E04H 15/20 • inflatable, e.g. shaped, strengthened, or supported by fluid pressure (~~connection of valves to inflatable elastic bodies B60C 29/00; inflatable forms for making walls or the like E04G 11/04~~)
- M E04H 15/30 • convertible, e.g. from one type *tent* to another type tent, from tent to canopy, *or* from tent cover into diverse articles (~~sacks or packs convertible into tents A45F 4/04; coats or capes convertible into tent coverings A45F 4/14~~)
- U E04H 15/32 • Parts, components, construction details, accessories, interior equipment, specially adapted for tents, e.g. guy-line equipment, skirts, thresholds
- U E04H 15/34 • • Supporting means, e.g. frames
- M E04H 15/44 • • • collapsible, e.g. breakdown type (~~having connecting nodes~~) ([E04H 15/42](#) takes precedence; ~~building structures having collapsible parts in general E04B 1/343~~)
- M E04H 15/54 • • Covers of tents or canopies (~~ventilated tent roofs E04H 15/16~~)
- U E04H 17/00** **Fencing, e.g. fences, enclosures, corrals (features peculiar to electrified fences [A01K 3/00](#), [H05C](#); means for allowing passage through fences, barriers, or the like [E06B 11/00](#))**

WARNING

Group [E04H 17/00](#) is impacted by reclassification into groups [E04H 17/004](#), [E04H 17/006](#), [E04H 17/009](#), [E04H 17/013](#), and [E04H 17/017](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M E04H 17/02
- Wire fencing, e.g. made of wire mesh ([E04H 17/14](#) takes precedence; ~~working or processing of wire B21F~~; e.g. ~~making wire nets B21F 27/00~~)
- WARNING
Group [E04H 17/02](#) is impacted by reclassification into groups [E04H 17/045](#), [E04H 17/05](#), and [E04H 17/055](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U E04H 17/06
- • Parts for wire fences
- WARNING
Group [E04H 17/06](#) is impacted by reclassification into groups [E04H 17/127](#), [E04H 17/131](#), [E04H 17/133](#), [E04H 17/135](#), and [E04H 17/139](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M E04H 17/08
- • • Anchoring means therefor, e.g. specially-shaped parts entering the ground; Struts or the like (~~for towers or masts E04H 12/20~~; ~~sockets for posts E04H 12/22~~)
- NOTE
Parts entering the ground are classified in [E04H 12/22](#)
- U E04H 17/14
- Fences constructed of rigid elements, e.g. with additional wire fillings or with posts
- WARNING
Group [E04H 17/14](#) is impacted by reclassification into groups [E04H 17/21](#) and [E04H 17/23](#).
Groups [E04H 17/14](#), [E04H 17/21](#), and [E04H 17/23](#) should be considered in order to perform a complete search.
- U E04H 17/20
- • Posts therefor
- WARNING
Group [E04H 17/20](#) is impacted by reclassification into group [E04H 17/21](#).
Groups [E04H 17/20](#) and [E04H 17/21](#) should be considered in order to perform a complete search.
- M E04H 17/22
- • • ~~anchoring means therefore~~ *Anchoring means therefor*, e.g. specially-shaped parts entering the ground; ~~struts~~ *Struts* or the like (~~for towers or masts E04H 12/20~~; ~~sockets for posts E04H 12/22~~)
- NOTE
Parts entering the ground are classified in [E04H 12/22](#)
- WARNING
Group [E04H 17/22](#) is impacted by reclassification into group [E04H 17/009](#).
Groups [E04H 17/22](#) and [E04H 17/009](#) should be considered in order to perform a complete search.
- M E04H 17/26
- Devices for erecting or removing fences ~~{(hand-operated hammers having the impact head in form of a sleeve slidable on a shaft B25D 1/16)}~~

Project: MP11924 (B41J)

M B41J

TYPEWRITERS; SELECTIVE PRINTING MECHANISMS, {e.g. ~~INK-JET PRINTERS, THERMAL PRINTERS~~}, i.e. MECHANISMS PRINTING OTHERWISE THAN FROM A FORME; CORRECTION OF TYPOGRAPHICAL ERRORS (~~composing B41B; printing on special surfaces B41F; laundry marking B41K; erasers, rubbers or erasing devices B43L 19/00; fluid media for correction of typographical errors by coating C09D 10/00; recording the results of measuring G01; recognition or presentation of data, marking record carriers in digital fashion, e.g. by punching, G06K; franking or ticket-printing and issuing apparatus G07B; electric keyboard switches, in general H01H 13/70, H03K 17/94; coding in connection with keyboards or like devices, in general H03M 11/00; receivers or transmitters for transmission of digital information H04L; transmission or reproduction of documents, or the like, e.g. facsimile transmission, H04N 1/00; printing mechanisms specially adapted for apparatus, e.g. cash registers, weighing machines, producing records of their own performance, see the relevant subclasses)~~

NOTES

1. This subclass covers:

- manually controlled power-operated apparatus or apparatus of this type with additional control by input of recorded information, e.g. on punched cards ~~ef~~^{or} tapes;
- the "print-out" features of apparatus controlled by record carriers or electric signals in so far as these are of general interest, e.g. impression, inking, line-spacing mechanisms, printing heads.

2. This subclass does not cover:

- electrical features of apparatus controlled by record carriers or electric signals and of interest apart from the "print-out" features of said apparatus;
- apparatus controlled by record carriers or electric signals, as a whole.

3. In this subclass, the following term is used with the meaning indicated:

- "paper" covers also similar flexible copy material;
- "printing material" covers both paper and temporary record carriers from which records are transferred to a paper, but does not cover printing masters, e.g. formes.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

M B41J 1/00

Typewriters or selective printing mechanisms characterised by the mounting, arrangement, or disposition of the types or dies (~~non-selective embossing B44B 5/00~~)

M B41J 2/00

Typewriters or selective printing mechanisms characterised by the printing or marking process for which they are designed (mounting, arrangement, or disposition of types or dies [B41J 1/00](#); ~~marking methods B41M 5/00; structure or manufacture of heads, e.g. inductive, for recording by magnetisation or demagnetisation of a record carrier G11B 5/127; heads for reproducing capacitive information G11B 9/07~~)

NOTES

1. This group covers devices reproducing only a discrete number of tones, whereas group [H04N 1/00](#) covers devices used for the reproduction of documents or the like, which devices are capable of reproducing continuous tone value scales.

2. In this group, the following expressions are used with the meanings indicated:

- "ink jet" involves the projection of ink on to the printing material, e.g. paper, through a nozzle as a stream of droplets or particles of colouring matter

- "continuous ink jet" means a jet of ink transformed into a continuous stream of droplets or particles of colouring matter after having left the nozzle
 - "ink spray" means a spray of ink transported by a stream of charged particles or air on to the printing material
- M B41J 2/385 · characterised by selective supply of electric current or selective application of magnetism to a printing or impression-transfer material ([B41J 2/005](#) takes precedence; ~~electrography; magnetography G03G~~)
- U B41J 2/39 · · using multi-stylus heads
- U B41J 2/40 · · · providing current or voltage to the multi-stylus head
- M B41J 2/405 · · · · Selection of the stylus or auxiliary electrode to be supplied (~~electronic switching circuits in general H03K 17/00~~)
- M B41J 2/435 · characterised by selective application of radiation to a printing material or impression-transfer material (~~optical elements, systems, or apparatus G02B; modulation or deflection of light G02F; electrophotography G03G~~)
- M B41J 2/44 · · using single radiation source {per colour}, e.g. lighting beams or shutter arrangements (~~(B41J 2/465; B41J 2/47); B41J 2/475 take/takes~~ precedence)
- M B41J 2/442 · · · {using lasers (~~ablative marking methods and sheet materials for use therein B41M 5/24; working material by laser beam in general B23K 26/00~~)}
- M B41J 2/465 · · using masks, e.g. light-switching masks (~~photographic composing B41B~~)
- M B41J 2/52 · Arrangement for printing a discrete number of tones, not covered by group [B41J 2/205](#), e.g. applicable to two or more kinds of printing or marking process ([B41J 2/525](#) takes precedence; ~~for photomechanical production G03F 5/00~~)
- M B41J 2/525 · Arrangement for multi-colour printing, not covered by group [B41J 2/21](#), e.g. applicable to two or more kinds of printing or marking process (~~for photomechanical production G03F 3/00~~)
- M B41J 3/00** **Typewriters or selective printing or marking mechanisms, {e.g. ink-jet printers, thermal printers} characterised by the purpose for which they are constructed (~~cryptographic typewriters G09C 3/00~~)**
- M B41J 3/28 · for printing downwardly on flat surfaces, e.g. of books, drawings, boxes {, envelopes, e.g. flat-bed ink-jet printers (~~(B41J 3/36; B41J 3/407; B41J 3/4071; B41J 3/4073; B41J 3/4075; B41J 3/4076; B41J 3/4078 take precedence; flat page-size platens B41J 11/06; conveyor belts B41J 13/12; drawing instruments B43L 13/00; automatic draughting machines B43L 13/022)~~}
- M B41J 3/38 · for embossing, e.g. for making matrices for stereotypes (~~{(surface shaping; e.g. embossing B29C 59/00; mechanical deformation of paper or cardboard without removing material B31F 1/00; machines or apparatus for embossing decorations or marks B44B 5/00)}~~)
- M B41J 3/39 · · hand-held (~~manually-controlled or manually-operable label dispensers having printing equipment B65C 11/02~~)
- M B41J 3/407 · for marking on special material ~~{(printing on special surfaces B41F 7/00; {apparatus or processes for manufacturing printed circuits by printing or dispensing a conductive paste or ink H05K 3/1241})}~~
- M B41J 3/44 · Typewriters or selective printing mechanisms having dual functions or combined with, or coupled to, apparatus performing other functions (~~printing mechanisms coupled to typographical composing machines B41B 27/41~~)
- M B41J 3/50 · · Mechanisms producing characters by printing and also producing a record by other means {, e.g. printer combined with RFID writer} (~~punching mechanisms G06K~~)
- M B41J 3/51 · · · the printed and recorded information being identical; using type elements with code-generating means (~~G06K 1/12 takes precedence~~)

- M B41J 3/62
- for printing on two or more separate sheets or strips of printing material {being conveyed simultaneously to or through the printing zone} ([B41J 3/54](#) takes precedence; ~~[B41J 15/18](#), [B41J 15/20](#), [B41J 15/22](#) and [B41J 15/24](#) take precedence~~)
- M B41J 5/00
- Devices or arrangements for controlling character selection (~~([interpreting G06K 3/00](#);~~) methods or arrangements for sensing record carriers [G06K 7/00](#))**
- M B41J 11/00
- Devices or arrangements {of selective printing mechanisms, e.g. ink-jet printers; *or* thermal printers;} for supporting or handling copy material in sheet or web form (~~specially adapted for supporting or handling copy material in short lengths [B41J 13/00](#); in continuous form [B41J 15/00](#); holders for text to be copied [B41J 29/00](#)~~ *script supports connected to the typewriter or printer [B41J 29/15](#)*)**
- U B41J 11/0045
- {Guides for printing material (curl smoothing [B41J 11/0005](#); platens [B41J 11/02](#), [B41J 11/06](#); guiding webs [B41J 15/046](#))}
- M B41J 11/005
- {Guides in the printing zone, e.g. guides for preventing contact of conveyed sheets with printhead (~~guides in the printing section for copy material in short lengths [B41J 13/14](#)~~)}
- M B41J 11/007
- {Conveyor belts or like feeding devices (~~conveyor belts specially adapted for handling sheets [B41J 13/08](#); conveyor belts specially adapted for handling copy material in continuous form [B41J 15/048](#); conveyor belts in general [B65G 15/00](#); separating articles from piles using belts [B65H 3/04](#); feeding articles by belts [B65H 5/02](#))}~~
- U B41J 11/02
- Platens
- M B41J 11/06
- Flat page-size platens {or smaller flat platens having a greater size than line-size platens ([B41J 11/0085](#) takes precedence; ~~flat-bed ink-jet printers [B41J 3/28](#)~~)}
- M B41J 11/14
- Platen-shift mechanisms; Driving gear therefor (~~[B41J 11/20](#) takes precedence~~)
- M B41J 11/20
- Platen adjustments for varying the strength of impression, for a varying number of papers, for wear or for alignment {, or for print gap adjustment (~~adjustments by moving the print head [B41J 25/308](#), [B41J 25/312](#)~~)}
- M B41J 11/22
- Paper-carriage guides or races (~~printhead carriage guides [B41J 19/00](#)~~)
- U B41J 11/36
- Blanking or long feeds; Feeding to a particular line, e.g. by rotation of platen or feed roller
- M B41J 11/42
- Controlling {printing material conveyance for accurate alignment of the printing material with the printhead; Print registering (~~controlling printhead [B41J 11/008](#); control of the transport of cut sheets [B41J 13/0009](#)~~)}
- M B41J 11/48
- Apparatus for condensed record, tally strip, or like work using two or more papers, or sets of papers {, e.g. devices for switching over from handling of copy material in sheet form to handling of copy material in continuous form and *vice versa* or point-of-sale printers comprising means for printing on continuous copy material, e.g. journal for tills, and on single sheets, e.g. cheques or receipts ([B41J 15/042](#) takes precedence; ~~simultaneous conveyance of sheets or strips [B41J 3/62](#)~~)}
- M B41J 11/50
- in which two or more papers or sets are separately fed in the same direction towards the printing position (~~[B41J 15/18](#), [B41J 15/20](#), [B41J 15/22](#) and [B41J 15/24](#) take precedence~~)
- M B41J 11/51
- with different feed rates (~~[B41J 15/18](#), [B41J 15/20](#), [B41J 15/22](#) and [B41J 15/24](#) take precedence~~)
- M B41J 11/56
- specially constructed to facilitate storage or transport of typewriter (~~[B41J 3/36](#) takes precedence~~)

- M B41J 11/58 · Supply holders for sheets or fan-folded webs, e.g. shelves, tables, scrolls, pile holders ~~{{(B41J 13/10, B41J 13/103 and B41J 13/106 take precedence)}~~
- M B41J 11/66 · Applications of cutting devices ~~{{(cutting in general B26D)}~~
- M B41J 13/00 **Devices or arrangements {of selective printing mechanisms, e.g. ink-jet printers, or thermal printers,} specially adapted for supporting or handling copy material in short lengths, e.g. sheets ~~{{(handling sheets or webs in general B65H; apparatus for electrographic processes using a charge pattern, e.g. copying machines, G03G 15/00)}~~**
- M B41J 13/02 · Rollers (roller platens [B41J 11/04](#) ~~;~~ rollers for conveying in general [B65G 39/00](#); separating articles from piles using friction rollers [B65H 3/06](#); feeding articles by rollers [B65H 5/06](#))
- M B41J 13/08 · {Conveyor} bands or like feeding devices ~~{{(B41J 11/007 takes precedence)}~~
- U B41J 13/10 · Sheet holders, retainers {, movable guides}, or stationary guides
- M B41J 13/12 · · specially adapted for {small} cards, envelopes, or the like {, e.g. credit cards, cut visiting cards ~~(handling thick cut sheets larger than credit cards B41J 13/0063)}~~
- M B41J 13/26 · Registering devices ~~{{(registering in general B65H 9/00)}~~
- M B41J 15/00 **Devices or arrangements {of selective printing mechanisms, e.g. ink-jet printers, or thermal printers,} specially adapted for supporting or handling copy material in continuous form, e.g. webs ~~{{(handling sheets or webs in general B65H)}~~**
- U B41J 15/18 · Multiple web-feeding apparatus
- M B41J 15/20 · · for webs superimposed during printing ~~(machines for separating superposed webs B65H 41/00)~~
- M B41J 19/00 **Character- or line-spacing mechanisms ~~{{(paper carriage guides B41J 11/22; superimposed movements for serial printing B41J 25/005;)} key actions B41J 25/02)}~~**
- M B41J 21/00 **Column, tabular, or like printing arrangements; Means for centralising short lines (carrier-release mechanisms [B41J 19/66](#); key actions [B41J 25/18](#) carriage-release mechanisms [B41J 19/66](#))**
- M B41J 23/00 **Power drives for actions or mechanisms ([B41J 9/00](#), {, [B41J 19/305](#)}; take precedence)**
- U B41J 25/00 **Actions or mechanisms not otherwise provided for**
- M B41J 25/22 · for aligning characters for impression ~~(in machines using index setting B41J 5/02)~~
- M B41J 25/24 · Case-shift mechanisms ~~(B41J 11/14 takes precedence; key actions B41J 25/08)~~; Fount-change arrangements
- M B41J 25/304 · Bodily-movable mechanisms for print heads or carriages movable towards or from paper surface ~~{{(type carriers {rotatable for selection and} sliding for impression B41J 1/36; type carriers {rotatable for selection and} swinging for impression B41J 1/40 ~~;~~ line print heads movable towards a cleaning unit [B41J 2/16588](#))}}~~
- M B41J 25/308 · · with print gap adjustment mechanisms ~~{{(by platen movement B41J 11/20)}~~
- M B41J 25/34 · Bodily-changeable print heads or carriages ~~(B41J 1/20, B41J 1/22, B41J 1/60 take precedence)~~
- U B41J 29/00 **Details of, or accessories for, typewriters or selective printing mechanisms not otherwise provided for**
- M B41J 29/10 · Sound-deadening devices embodied in machines ~~(B41J 19/04 takes precedence)~~

- M B41J 29/15 · Script supports connected to the typewriter or printer (~~tables, desks, office furniture in general A47B~~)
- M B41J 29/18 · Mechanisms for rendering the print visible to the operator (~~ink-ribbon shifts B41J 35/20~~)
- U B41J 29/26 · Devices, non-fluid media or methods for cancelling, correcting errors, underscoring or ruling
- M B41J 29/36 · · for cancelling or correcting errors by overprinting (B41J 31/00 takes precedence)
- M B41J 29/46 · Applications of alarms, e.g. responsive to approach of end of line (~~responsive to transfer-material breakage or exhaustion B41J 17/36, B41J 35/36~~)
- M B41J 31/00 **Ink ribbons (~~spools for ink ribbons B65H 75/00; coated or treated non-woven strips or sheets used as ink ribbons D21H~~); Testing or renovating** *Renovating or testing* ink ribbons
- U B41J 33/00 **Apparatus or arrangements for feeding ink ribbons or like character-size impression-transfer material**
- U B41J 33/14 · Ribbon-feed devices or mechanisms
- M B41J 33/54 · · for ensuring maximum life of the ribbon (B41J 33/38 takes precedence; ~~by adjustment of vibrator mechanisms B41J 35/14~~)
- U B41J 35/00 **Other apparatus or arrangements associated with, or incorporated in, ink-ribbon mechanisms**
- U B41J 35/04 · Ink-ribbon guides
- U B41J 35/10 · · Vibrator mechanisms; Driving gear therefor
- M B41J 35/12 · · · adjustable, e.g. for case shift (~~key actions B41J 25/02~~)
- M B41J 35/16 · Multicolour arrangements (~~B41J 35/10 takes precedence~~)

Project: RP11754 (B22F)

- U B22F 3/00 **Manufacture of workpieces or articles from metallic powder characterised by the manner of compacting or sintering; Apparatus specially adapted therefor {; Presses and furnaces}**

WARNING

Group [B22F 3/00](#) is impacted by reclassification into groups [B22F 10/00](#) - [B22F 12/90](#).

Groups [B22F 3/00](#) and [B22F 10/00](#) - [B22F 12/90](#) should be considered in order to perform a complete search.

- B22F 3/23 · involving a self-propagating high-temperature synthesis or reaction sintering step {(making cermets by reaction sintering ~~C22C 1/058~~ *C22C 1/051*)}

Project: RP11754 (C22C)

- M C22C 1/00 - C22C 32/00 **Non-ferrous alloys, i.e. alloys based essentially on metals other than iron (~~master alloys for iron and steel C22C 35/00; alloys containing radioactive material C22C 43/00; amorphous alloys C22C 45/00; alloys containing fibres or filaments C22C 47/00, C22C 49/00~~)**
 - M C22C 1/00 **Making *non-ferrous* alloys (~~powder-metallurgical apparatus or processes; not specially modified for making alloys B22F; by electrothermical methods C22B 4/00; by electrothermic methods C22B 4/00~~; by electrolysis ~~C25C~~ *C25C 1/24, C25C 3/36*)**
 - D C22C 1/002 · {Making amorphous alloys (processes for making amorphous material by powder metallurgy B22F)}
- <administratively transferred to [C22C 1/11](#)>

- D C22C 1/005 • {Making alloys with holding in the range of the solid-liquid phase}
<administratively transferred to [C22C 1/12](#)>
- C C22C 1/04 • by powder metallurgy ([C22C 1/08](#), ~~{[C22C 1/05](#), [takes C22C 1/10](#), [C22C 32/00](#), [C22C 47/00](#), [C22C 49/00](#)}~~ take precedence)
- WARNING**
Group [C22C 1/04](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/04](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/0408 • • {Light metal alloys}
- WARNING**
Group [C22C 1/0408](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/0408](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/0416 • • • {Aluminium-based alloys}
- WARNING**
Group [C22C 1/0416](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/0416](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/0425 • • {Copper-based alloys}
- WARNING**
Group [C22C 1/0425](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/0425](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/0433 • • {Nickel- or cobalt-based alloys}
- WARNING**
Group [C22C 1/0433](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/0433](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/0441 • • • {Alloys based on intermetallic compounds of the type rare earth - Co, Ni}
- WARNING**
Group [C22C 1/0441](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/0441](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/045 • • {Alloys based on refractory metals}
- WARNING**
Group [C22C 1/045](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/045](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/0458 • • • {Alloys based on titanium, zirconium, or hafnium}
- WARNING**
Group [C22C 1/0458](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/0458](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/0466 • • {Alloys based on noble metals}
- WARNING**
Group [C22C 1/0466](#) is impacted by reclassification into group [C22C 1/059](#).

- Groups C22C 1/0466 and C22C 1/059 should be considered in order to perform a complete search.*
- Q C22C 1/047
- comprising intermetallic compounds ~~{(C22C 1/0441 takes precedence)}~~
- WARNING
Group C22C 1/047 is impacted by reclassification into group C22C 1/059. Groups C22C 1/047 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 1/0475
- {Impregnated alloys}
- WARNING
Group C22C 1/0475 is impacted by reclassification into group C22C 1/059. Groups C22C 1/0475 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 1/0483
- {Alloys based on the low melting point metals Zn, Pb, Sn, Cd, In or Ga}
- WARNING
Group C22C 1/0483 is impacted by reclassification into group C22C 1/059. Groups C22C 1/0483 and C22C 1/059 should be considered in order to perform a complete search.
- D C22C 1/0491
- {comprising intermetallic compounds (C22C 1/0441 takes precedence)}
<administratively transferred to C22C 1/047>
- C C22C 1/05
- Mixtures of metal powder with non-metallic powder (C22C 1/08, ~~{C22C 47/00; takes C22C 49/00} take~~ precedence)
- WARNING
Group C22C 1/05 is impacted by reclassification into group C22C 1/059. Groups C22C 1/05 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 1/051
- • ~~{Making hard metals based on borides, carbides, nitrides, oxides or silicides; Preparation of the powder mixture used as the starting material} therefor~~
- WARNING
Group C22C 1/051 is incomplete pending reclassification of documents from group C22C 1/058.
Group C22C 1/051 is also impacted by reclassification into groups C22C 1/057 and C22C 1/059.
All groups listed in this Warning should be considered in order to perform a complete search.
- C C22C 1/053
- • • ~~{with in situ forming of the hard compound formation of hard compounds (C22C 1/058 takes precedence)}~~
- WARNING
Group C22C 1/053 is incomplete pending reclassification of documents from group C22C 1/058.
Group C22C 1/053 is also impacted by reclassification into group C22C 1/059.
Groups C22C 1/058, C22C 1/053 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 1/055
- • • • ~~{using carbon}~~
- WARNING
Group C22C 1/055 is incomplete pending reclassification of documents from group C22C 1/058.

*Group C22C 1/055 is also impacted by reclassification into group C22C 1/059.
Groups C22C 1/058, C22C 1/055 and C22C 1/059 should be considered in order to perform a complete search.*

- C C22C 1/056 {using gas}
- WARNING**
*Group C22C 1/056 is incomplete pending reclassification of documents from group C22C 1/058.
Group C22C 1/056 is also impacted by reclassification into group C22C 1/059.
Groups C22C 1/058, C22C 1/056 and C22C 1/059 should be considered in order to perform a complete search.*
- N C22C 1/057 with *in situ* formation of phases other than hard compounds by solid state reaction sintering, e.g. metal phase formed by reduction reaction
- WARNING**
*Group C22C 1/057 is incomplete pending reclassification documents from groups C22C 1/051, C22C 1/058, C22C 1/1078, C22C 1/1084 and C22C 1/1089.
All groups listed in this Warning should be considered in order to perform a complete search.*
- F C22C 1/058 (Frozen) . . . {by reaction sintering (i.e. gasless reaction starting from a mixture of solid metal compounds)}
- WARNING**
*Group C22C 1/058 is no longer used for the classification of documents as of January 1, 2023.
The content of this group is being reclassified into groups C22C 1/051 - C22C 1/057 and C22C 1/059.
Groups C22C 1/058, C22C 1/051 - C22C 1/057 and C22C 1/059 should be considered in order to perform a complete search.*
- N C22C 1/059 . . . Making alloys comprising less than 5% by weight of dispersed reinforcing phases
- WARNING**
*Group C22C 1/059 is incomplete pending reclassification documents from groups C22C 1/04, C22C 1/0408, C22C 1/0416, C22C 1/0425, C22C 1/0433, C22C 1/0441, C22C 1/045, C22C 1/0458, C22C 1/0466, C22C 1/047, C22C 1/0475, C22C 1/0483, C22C 1/05, C22C 1/051, C22C 1/053, C22C 1/055, C22C 1/056, C22C 1/058, C22C 1/10, C22C 1/1005, C22C 1/101, C22C 1/1015, C22C 1/1021, C22C 1/1026, C22C 1/1031, C22C 1/1036, C22C 1/1042, C22C 1/1047, C22C 1/1052, C22C 1/1057, C22C 1/1063, C22C 1/1068, C22C 1/1073, C22C 1/1078, C22C 1/1084, C22C 1/1089, C22C 1/1094 and C22C 32/00 and all its subgroups.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C22C 1/08 . Alloys with open or closed pores ~~{(by powder metallurgy B22F-3/11)}~~
- D C22C 2001/081 . . {Casting porous metals into porous preform skelet without foaming}
<administratively transferred to C22C 1/081 INV>
- N C22C 1/081 . . {Casting porous metals into porous preform skeleton without foaming}
- D C22C 2001/082 . . . {with removal of the preform}
<administratively transferred to C22C 1/082 INV>

- N C22C 1/082 . . . {with removal of the preform}
- D C22C 2001/083 . . {Foaming process in molten metal other than by powder metallurgy}
<administratively transferred to [C22C 1/083](#) INV>
- N C22C 1/083 . . {Foaming process in molten metal other than by powder metallurgy}
- D C22C 2001/085 . . . {with external pressure or pressure buildup to make porous metals}
<administratively transferred to [C22C 1/085](#) INV>
- N C22C 1/085 . . . {with external pressure or pressure buildup to make porous metals}
- D C22C 2001/086 . . . {Gas foaming process}
<administratively transferred to [C22C 1/086](#) INV>
- N C22C 1/086 . . . {Gas foaming process}
- D C22C 2001/087 . . . {after casting in solidified or solidifying metal to make porous metals}
<administratively transferred to [C22C 1/087](#) INV>
- N C22C 1/087 . . . {after casting in solidified or solidifying metal to make porous metals}
- D C22C 2001/088 . . {Foaming process with solid metal other than by powder metallurgy}
<administratively transferred to [C22C 1/088](#) INV>
- N C22C 1/088 . . {Foaming process with solid metal other than by powder metallurgy}
- C C22C 1/10 . Alloys containing non-metals (~~C22C 1/05~~, [C22C 1/08](#), ~~C22C 47/00~~, ~~C22C 49/00~~) take precedence)

WARNING

Group [C22C 1/10](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/10](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- C C22C 1/1005 . . {Pretreatment of the non-metallic additives (pretreatment of non-metallic fibres [C22C 47/02](#))}

WARNING

Groups ~~C22C 1/1005~~, ~~C22C 1/101~~ and ~~C22C 1/1015~~ are not complete, see also [C22C 1/10](#)

Group [C22C 1/1005](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1005](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- C C22C 1/101 . . . {by coating}

WARNING

Group [C22C 1/101](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/101](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- C C22C 1/1015 . . . {by preparing or treating a non-metallic additive preform}

WARNING

Group [C22C 1/1015](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1015](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- D C22C 2001/1021 {the preform being ceramic}
<administratively transferred to [C22C 1/1021](#) INV>

- Q C22C 1/1021 {the preform being ceramic}

WARNING

Group [C22C 1/1021](#) is impacted by reclassification into group [C22C 1/059](#).

Groups [C22C 1/1021](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- C C22C 1/1026
- {starting from a solution or a suspension of (a) compound(s) of at least one of the alloy constituents}
- WARNING**
Group [C22C 1/1026](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1026](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/1031
- {starting from ~~(a) gaseous compound(s) or (a) vapour(s)~~ [gaseous compounds or vapours](#) of at least one of the constituents}
- WARNING**
Group [C22C 1/1031](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1031](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/1036
- {starting from a melt ~~(infiltration of sintered ceramic preforms with molten metal C04B 41/51)~~}
- WARNING**
Group [C22C 1/1036](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1036](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/1042
- • {by atomising ~~(atomising molten metal B22F 9/08)~~}
- WARNING**
Group [C22C 1/1042](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1042](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- D C22C 2001/1047
- • {by mixing and casting liquid metal matrix composites}
- <administratively transferred to [C22C 1/1047](#) INV>
- Q C22C 1/1047
- • {by mixing and casting liquid metal matrix composites}
- WARNING**
Group [C22C 1/1047](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1047](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- D C22C 2001/1052
- • • {by mixing and casting metal matrix composites with reaction}
- <administratively transferred to [C22C 1/1052](#) INV>
- Q C22C 1/1052
- • • {by mixing and casting metal matrix composites with reaction}
- WARNING**
Group [C22C 1/1052](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1052](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- D C22C 2001/1057
- • • {Reactive infiltration}
- <administratively transferred to [C22C 1/1057](#) INV>
- Q C22C 1/1057
- • • {Reactive infiltration}
- WARNING**
Group [C22C 1/1057](#) is impacted by reclassification into group [C22C 1/059](#).

Groups [C22C 1/1057](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- D C22C 2001/1063 . . . {Gas reaction, e.g. lanxide}
<administratively transferred to [C22C 1/1063](#) INV>
- Q C22C 1/1063 . . . {Gas reaction, e.g. lanxide}
WARNING
Group [C22C 1/1063](#) is impacted by reclassification into group [C22C 1/059](#).
Groups [C22C 1/1063](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/1068 . . . {Making hard metals based on borides, carbides, nitrides, oxides, or silicides}
WARNING
Group [C22C 1/1068](#) is impacted by reclassification into group [C22C 1/059](#).
Groups [C22C 1/1068](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- D C22C 2001/1073 . . . {Infiltration or casting under mechanical pressure, e.g. squeeze casting}
<administratively transferred to [C22C 1/1073](#) INV>
- Q C22C 1/1073 . . . {Infiltration or casting under mechanical pressure, e.g. squeeze casting}
WARNING
Group [C22C 1/1073](#) is impacted by reclassification into group [C22C 1/059](#).
Groups [C22C 1/1073](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/1078 . . {by internal oxidation of material in solid state}
WARNING
Group [C22C 1/1078](#) is impacted by reclassification into groups [C22C 1/057](#) and [C22C 1/059](#).
Groups [C22C 1/1078](#), [C22C 1/057](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- C C22C 1/1084 . . {by mechanical alloying (blending, milling)}
WARNING
Group [C22C 1/1084](#) is impacted by reclassification into groups [C22C 1/057](#) and [C22C 1/059](#).
Groups [C22C 1/1084](#), [C22C 1/057](#) and [C22C 1/059](#) should be considered in order to perform a complete search.
- D C22C 2001/1089 . . {by partial reduction or decomposition of a solid metal compound}
<administratively transferred to [C22C 1/1089](#) INV>
- Q C22C 1/1089 . . {by partial reduction or decomposition of a solid metal compound}
WARNING
Group [C22C 1/1089](#) is impacted by reclassification into groups [C22C 1/057](#) and [C22C 1/059](#).
Groups [C22C 1/1089](#), [C22C 1/057](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- C C22C 1/1094
- {comprising an after-treatment}
- NOTE
Documents classified in group [C22C 1/1094](#) are also classified in subclass [C22F](#)
- WARNING
Group C22C 1/1094 is impacted by reclassification into group C22C 1/059. Groups C22C 1/1094 and C22C 1/059 should be considered in order to perform a complete search.
- N C22C 1/11
- Making amorphous alloys
- N C22C 1/12
- by processing in a semi-solid state, e.g. holding the alloy in the solid-liquid phase
- C C22C 32/00
- Non-ferrous alloys containing at least 5% by weight but less than 50% by weight of oxides, carbides, borides, nitrides, silicides or other metal compounds, e.g. oxynitrides, sulfides, whether added as such or formed in situ**
- NOTE
This group comprises also dispersion hardened alloys with less than 5% of dispersed compounds
- WARNING
Group C22C 32/00 is impacted by reclassification into group C22C 1/059. Groups C22C 32/00 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 32/0005
- {with at least one ~~oxides~~ **oxide** and at least one of carbides, nitrides, borides or silicides as the main non-metallic constituents}
- WARNING
Group C22C 32/0005 is impacted by reclassification into group C22C 1/059. Groups C22C 32/0005 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 32/001
- {with only oxides}
- WARNING
Groups C22C 32/001, C22C 32/0015 and C22C 32/0021 are impacted by reclassification into group C22C 1/059. All groups listed in this Warning should be considered in order to perform a complete search.
- C C22C 32/0015
- {with only single oxides as main non-metallic constituents}
- C C22C 32/0021
- • {Matrix based on noble metals, Cu or alloys thereof}
- C C22C 32/0026
- • {Matrix based on Ni, Co, Cr or alloys thereof}; ~~Matrix based on Fe for ODS steels (matrix based on Fe for steels other than ODS C22C 33/00, by powder metallurgy C22C 33/02)}~~
- WARNING
Group C22C 32/0026 is impacted by reclassification into groups C22C 1/059 and C22C 33/0261. Groups C22C 32/0026, C22C 1/059 and C22C 33/0261 should be considered in order to perform a complete search.

- C C22C 32/0031
- • {Matrix based on refractory metals, W, Mo, Nb, Hf, Ta, Zr, Ti, V or alloys thereof}
- WARNING**
 Group C22C 32/0031 is impacted by reclassification into group C22C 1/059.
 Groups C22C 32/0031 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 32/0036
- • {Matrix based on Al, Mg, Be or alloys thereof}
- WARNING**
 Group C22C 32/0036 is impacted by reclassification into group C22C 1/059.
 Groups C22C 32/0036 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 32/0042
- • {Matrix based on low melting metals, Pb, Sn, In, Zn, Cd or alloys thereof}
- WARNING**
 Group C22C 32/0042 is impacted by reclassification into group C22C 1/059.
 Groups C22C 32/0042 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 32/0047
- {with carbides, nitrides, borides or silicides as the main non-metallic constituents}
- WARNING**
 Groups C22C 32/0047, C22C 32/0052, C22C 32/0057, C22C 32/0063, C22C 32/0068, C22C 32/0073 and C22C 32/0078 are impacted by reclassification into group C22C 1/059.
 All groups listed in this Warning should be considered in order to perform a complete search.
- C C22C 32/0052
- {only carbides}
- C C22C 32/0057
- • {based on B₄C}
- C C22C 32/0063
- • {based on SiC}
- C C22C 32/0068
- {only nitrides}
- C C22C 32/0073
- {only borides}
- C C22C 32/0078
- {only silicides}
- C C22C 32/0084
- {carbon or graphite as the main non-metallic constituent}
- WARNING**
 Group C22C 32/0084 is impacted by reclassification into group C22C 1/059.
 Groups C22C 32/0084 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 32/0089
- {with other, not previously mentioned inorganic compounds as the main non-metallic constituent, e.g. sulfides, glass}
- WARNING**
 Group C22C 32/0089 is impacted by reclassification into group C22C 1/059.
 Groups C22C 32/0089 and C22C 1/059 should be considered in order to perform a complete search.
- C C22C 32/0094
- {with organic materials as the main non-metallic constituent, e.g. resin}
- WARNING**
 Group C22C 32/0094 is impacted by reclassification into group C22C 1/059.

Groups [C22C 32/0094](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- M C22C 33/00 - C22C 45/00** **Ferrous alloys, i.e. alloys based on iron** ~~(alloys containing radioactive material [C22C 43/00](#); amorphous alloys [C22C 45/00](#); alloys containing fibres or filaments [C22C 47/00](#), [C22C 49/00](#); heat treatment thereof [C21D](#))~~
- U C22C 33/00** **Making ferrous alloys**
- U C22C 33/02 · by powder metallurgy (working metallic powder [B22F](#))
 - U C22C 33/0257 · · {characterised by the range of the alloying elements}
 - N C22C 33/0261 · · · {Matrix based on Fe for ODS steels}
- WARNING
Group [C22C 33/0261](#) is incomplete pending reclassification of documents from group [C22C 32/0026](#).
Groups [C22C 32/0026](#) and [C22C 33/0261](#) should be considered in order to perform a complete search.
- M C22C 45/00** **Amorphous alloys** (*making amorphous non-ferrous alloys [C22C 1/11](#)*)
- M C22C 2202/00 - C22C 2204/00** **Non-ferrous alloys, i.e. alloys based essentially on metals other than iron** ~~(master alloys for iron and steel [C22C 35/00](#); alloys containing radioactive material [C22C 43/00](#); amorphous alloys [C22C 45/00](#); alloys containing fibres or filaments [C22C 47/00](#), [C22C 49/00](#))~~

Project: RP11755 (C04B)

- U C04B 14/00** **Use of inorganic materials as fillers, e.g. pigments, for mortars, concrete or artificial stone; Treatment of inorganic materials specially adapted to enhance their filling properties in mortars, concrete or artificial stone (expanding or defibrillating materials [C04B 20/00](#))**
- NOTE
Fillers with a well-defined shape other than granular are considered to be reinforcing elements and thus are classified in [E04C 5/00](#). However, if they are only characterised by their composition, classification is made in [C04B](#) only
- U C04B 14/38 · Fibrous materials; Whiskers
 - U C04B 14/40 · · Asbestos
 - D C04B 14/405 · · · {Waste asbestos}
<administratively transferred to [C04B 18/0475](#)>
- U C04B 18/00** **Use of agglomerated or waste materials or refuse as fillers for mortars, concrete or artificial stone (use of waste materials for the manufacture of cement [C04B 7/24](#)); Treatment of agglomerated or waste materials or refuse, specially adapted to enhance their filling properties in mortars, concrete or artificial stone**
- NOTE
Fillers with a well defined shape other than granular are considered to be reinforcing elements and thus are classified in [E04C 5/00](#). However, if they are only characterised by their composition, classification is made in [C04B](#) only
- U C04B 18/02 · Agglomerated materials {, e.g. artificial aggregates}
 - M C04B 18/023 · · {Fired or melted materials ~~([C04B 20/06](#) takes precedence)}~~}
 - M C04B 18/027 · · {Lightweight materials ~~([C04B 14/12](#) takes precedence)}~~}
 - M C04B 18/04 · Waste materials; Refuse ~~{([C04B 14/405](#) takes precedence)}~~}
 - U C04B 18/0463 · · {Hazardous waste}

- M H01S 3/0805 {by apertures, e.g. ~~pinholes, pin-holes~~ or knife-edges, ~~apodizers~~}
- M H01S 3/081 . . . comprising ~~more than two reflectors~~ {~~three or more reflectors~~ (folded-path gas lasers H01S 3/076)}
- M H01S 3/082 defining a plurality of resonators, e.g. for mode selection {~~or suppression~~ (single longitudinal mode control H01S 3/08022)}
- U H01S 3/10 . Controlling the intensity, frequency, phase, polarisation or direction of the emitted radiation, e.g. switching, gating, modulating or demodulating
- NOTE**
Group [H01S 3/10007](#) takes precedence over groups [H01S 3/102](#) - [H01S 3/104](#)
- M H01S 3/106 . . by controlling ~~a device~~ ~~devices~~ placed within the cavity ({[H01S 3/10076](#)},,} [H01S 3/13](#) take precedence)
- M H01S 3/107 . . . using ~~an electro-optical device~~ ~~electro-optic devices~~, e.g. exhibiting Pockels- or Kerr- effect ({[H01S 3/1061](#), [H01S 3/1063](#), [H01S 3/1065](#) take precedence)}
- M H01S 3/108 . . . using ~~a non-linear optical device~~ ~~devices~~, e.g. exhibiting Brillouin- or Raman- scattering {(mode locking using a non-linear element [H01S 3/1112](#))}
- M H01S 3/109 Frequency ~~multiplying~~ ~~multiplication~~, e.g. harmonic generation
- C H01S 3/11 . . ~~Mode locking~~; {~~Pulse generation~~, e.g. Q-switching, ~~mode locking~~}; ~~Other giant-pulse techniques, e.g. cavity dumping~~
- WARNING**
Group H01S 3/11 is impacted by reclassification into group H01S 3/1123. Groups H01S 3/11 and H01S 3/1123 should be considered in order to perform a complete search.
- M H01S 3/1106 . . . {Mode locking}
- M H01S 3/1109 {Active mode locking}
- M H01S 3/1112 {Passive mode locking}
- M H01S 3/1115 {~~using a saturable absorber~~ ~~using intracavity saturable absorbers~~ (Q-switching by saturable absorbers H01S 3/113)}
- M H01S 3/1118 ~~Semiconductor saturable absorbers, e.g. semiconductor saturable absorber mirrors [SESAMs];~~ {~~Solid state absorber~~ ~~Solid-state saturable absorbers~~, e.g. ~~SESAM~~} ~~carbon nanotube [CNT] based~~
- U H01S 3/1121 {Harmonically mode locking lasers, e.g. modulation frequency equals multiple integers or a fraction of the resonator roundtrip time}
- N H01S 3/1123 . . . Q-switching
- WARNING**
Group H01S 3/1123 is incomplete pending reclassification of documents from group H01S 3/11. Groups H01S 3/11 and H01S 3/1123 should be considered in order to perform a complete search.
- M H01S 3/1124 {~~Q-switching~~ using magneto-optical devices}
- M H01S 3/1127 {~~Q-switching~~ using pulse transmission mode [PTM]}
- M H01S 3/113 {~~Q-switching~~} using ~~bleachable or solarising media~~ ~~using intracavity saturable absorbers~~
- M H01S 3/115 {~~Q-switching~~} using ~~electro-optical~~ ~~using intracavity electro-optic~~ devices
- M H01S 3/117 {~~Q-switching~~} using ~~acousto-optical~~ ~~using intracavity acousto-optic~~ devices
- M H01S 3/121 {~~Q-switching~~} using ~~using intracavity~~ mechanical devices
- M H01S 3/123 {~~Rotating mirror~~ ~~using rotating mirrors~~}

- M H01S 3/125 ~~Rotating prism~~ using rotating prisms
- M H01S 3/127 . . . ~~Plural Q-switches~~
- M H01S 3/13 . . . Stabilisation of laser output parameters, e.g. frequency; ~~or~~ amplitude
- NOTE**
Group [H01S 3/1301](#) takes precedence over groups [H01S 3/131](#) - [H01S 3/134](#)
- M H01S 3/136 . . . by controlling ~~a device~~ devices placed within the cavity
- U H01S 3/14 . characterised by the material used as the active medium
- U H01S 3/22 . . Gases
- M H01S 3/223 . . . the active gas being polyatomic, i.e. containing ~~more than one atom~~ two or more atoms ([H01S 3/227](#) takes precedence)

Project: RP11765 (C02F)

- M C02F TREATMENT OF WATER, WASTE WATER, SEWAGE, OR SLUDGE (separation in general [B01D](#); special arrangements on waterborne vessels of installations for treating water, waste water or sewage, e.g. for producing fresh water, [B63J](#); adding materials to water to prevent corrosion [C23F](#); treating radioactively-contaminated liquids [G21F 9/04](#); regeneration of reactants for recirculation into processes, see the relevant places for the processes)**

NOTE

When classifying in this subclass, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[C02F 9/02-C02F 9/14](#) covered by [C02F 9/00](#) and subgroup

~~2. 1.~~ {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

- U C02F 1/00 Treatment of water, waste water, or sewage ([C02F 3/00](#) - [C02F 9/00](#) take precedence)**
- U C02F 1/001 . {Processes for the treatment of water whereby the filtration technique is of importance ([C02F 1/44](#) takes precedence; construction of filters in general [B01D 24/00](#) - [B01D 41/00](#))}
- C02F 1/003 . . {using household-type filters for producing potable water, e.g. pitchers, bottles, faucet mounted devices (~~C02F 9/005~~ [C02F 9/20](#) takes precedence)}
- M C02F 9/00 Multistage treatment of water, waste water, or sewage**

NOTES

1. This group covers ~~only those combined treating operations where the interest is directed to the relationship between the steps.~~ combined treatment operations, carried out in a defined order in three or more different treatment stages, each stage occurring in a separate location, e.g. apparatus, reactor or compartment.

2. This group does not cover, for example, chemical treatment followed by settlement or biological treatment involving normal mechanical treatment treatments where the essential characteristic resides in an individual step of the treatment, which treatments are covered by groups [C02F 1/00](#) - [C02F 7/00](#).

3. In this group, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

- D C02F 9/005 · {Portable or detachable small-scale multistage treatment devices, e.g. point of use or laboratory water purification systems (single-stage processes in combination with filtration techniques C02F 1/002 or C02F 1/003)}
- <administratively transferred to [C02F 9/20](#)>
- N C02F 9/20 · *Portable or detachable small-scale multistage treatment devices, e.g. point of use or laboratory water purification systems*

Project: RP11770 (A61B)

- U A61B 5/00 **Measuring for diagnostic purposes (radiation diagnosis [A61B 6/00](#); diagnosis by ultrasonic, sonic or infrasonic waves [A61B 8/00](#)); Identification of persons**
- NOTE
- In this group, the following term is used with the meaning indicated:
"measuring" covers also detecting or recording.
- A61B 5/117 · Identification of persons (~~methods or arrangements for recognising patterns, e.g. fingerprints, G06K 9/00~~; *methods or arrangements for recognising patterns, e.g. fingerprints, G06F 18/00, G06V 40/00*; identification of persons by analysing their voice or speech [G10L 17/00](#))
- A61B 5/72 · {Signal processing specially adapted for physiological signals or for diagnostic purposes (~~pattern recognition G06K 9/00~~ *character recognition, recognising digital ink, document-oriented image-based pattern recognition G06V 30/00; recognition or understanding of postal images G06V 30/424*)}

Project: RP11770 (B07C)

- U B07C 3/00 **Sorting according to destination {(collating the pages of a book [B42C 1/00](#))}**
- B07C 3/10 · Apparatus characterised by the means used for detection of the destination (~~methods or arrangements for reading and recognising printed or written characters or geometric figures G06K 9/00~~ *methods or arrangements for reading and recognising printed or written characters or geometric figures G06V 30/00*)

Project: RP11770 (E05B)

- E05B 49/00 **Electric permutation locks; Circuits therefor {; Mechanical aspects of electronic locks; Mechanical keys therefor (arrangements for sensing or reading record carriers [G06K 7/00](#), ~~G06K 9/00~~; mechanisms including electronic locks actuated by nonmechanical keys such as passive and active electrical keys and other data carriers [G07C 9/00](#), [G07F 7/00](#); electronic switching [H03K 17/00](#))}**

Project: RP11770 (G06F)

- U G06F 17/00 **Digital computing or data processing equipment or methods, specially adapted for specific functions (information retrieval, database structures or file system structures therefor [G06F 16/00](#))**
- U G06F 17/40 · Data acquisition and logging (for input to computer [G06F 3/00](#))
- Q G06F 18/00 **Pattern recognition**

WARNING

Group [G06F 18/00](#) is impacted by reclassification into groups [G06F 18/20](#), [G06F 18/26](#), [G06F 18/27](#) and [G06F 18/30](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q G06F 18/10
- Pre-processing; Data cleansing
- WARNING
Group [G06F 18/10](#) is impacted by reclassification into group [G06F 18/15](#). Groups [G06F 18/10](#) and [G06F 18/15](#) should be considered in order to perform a complete search.
- N G06F 18/15
- • Statistical pre-processing, e.g. techniques for normalisation or restoring missing data
- WARNING
Group [G06F 18/15](#) is incomplete pending reclassification of documents from group [G06F 18/10](#). Groups [G06F 18/10](#) and [G06F 18/15](#) should be considered in order to perform a complete search.
- N G06F 18/20
- Analysing
- WARNING
Groups [G06F 18/20](#), [G06F 18/26](#) and [G06F 18/27](#) are incomplete pending reclassification of documents from group [G06F 18/00](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06F 18/21
- • Design or setup of recognition systems or techniques; Extraction of features in feature space; Blind source separation
- N G06F 18/211
- • • Selection of the most significant subset of features
- N G06F 18/2111
- • • • by using evolutionary computational techniques, e.g. genetic algorithms
- N G06F 18/2113
- • • • by ranking or filtering the set of features, e.g. using a measure of variance or of feature cross-correlation
- N G06F 18/2115
- • • • by evaluating different subsets according to an optimisation criterion, e.g. class separability, forward selection or backward elimination
- Q G06F 18/213
- • • Feature extraction, e.g. by transforming the feature space; Summarisation; Mappings, e.g. subspace methods
- WARNING
Group [G06F 18/213](#) is impacted by reclassification into group [G06F 18/2131](#). Groups [G06F 18/213](#) and [G06F 18/2131](#) should be considered in order to perform a complete search.
- N G06F 18/2131
- • • • based on a transform domain processing, e.g. wavelet transform
- WARNING
Group [G06F 18/2131](#) is incomplete pending reclassification of documents from group [G06F 18/213](#). Groups [G06F 18/213](#) and [G06F 18/2131](#) should be considered in order to perform a complete search.
- N G06F 18/2132
- • • • based on discrimination criteria, e.g. discriminant analysis
- WARNING
Group [G06F 18/2132](#) is impacted by reclassification into groups [G06F 18/2325](#) and [G06F 18/2337](#). Groups [G06F 18/2132](#), [G06F 18/2325](#) and [G06F 18/2337](#) should be considered in order to perform a complete search.
- N G06F 18/21322
- • • • • {Rendering the within-class scatter matrix non-singular}
- N G06F 18/21324
- • • • • • {involving projections, e.g. Fisherface techniques}

- N G06F 18/21326 {involving optimisations, e.g. using regularisation techniques}
- N G06F 18/21328 {involving subspace restrictions, e.g. nullspace techniques}
- N G06F 18/2133 based on naturality criteria, e.g. with non-negative factorisation or negative correlation
- N G06F 18/2134 based on separation criteria, e.g. independent component analysis
- N G06F 18/21342 {using statistical independence, i.e. minimising mutual information or maximising non-gaussianity}
- N G06F 18/21343 {using decorrelation or non-stationarity, e.g. minimising lagged cross-correlations}
- N G06F 18/21345 {enforcing sparsity or involving a domain transformation}
- N G06F 18/21347 {using domain transformations}
- N G06F 18/21348 {overcoming non-stationarity or permutations}
- N G06F 18/2135 based on approximation criteria, e.g. principal component analysis
- N G06F 18/21355 {nonlinear criteria, e.g. embedding a manifold in a Euclidean space}
- N G06F 18/2136 based on sparsity criteria, e.g. with an overcomplete basis
- N G06F 18/2137 based on criteria of topology preservation, e.g. multidimensional scaling or self-organising maps
- N G06F 18/21375 {involving differential geometry, e.g. embedding of pattern manifold}
- N G06F 18/214 Generating training patterns; Bootstrap methods, e.g. bagging or boosting
- N G06F 18/2148 {characterised by the process organisation or structure, e.g. boosting cascade}
- N G06F 18/2155 {characterised by the incorporation of unlabelled data, e.g. multiple instance learning [MIL], semi-supervised techniques using expectation-maximisation [EM] or naïve labelling}
- N G06F 18/2163 {Partitioning the feature space}
- N G06F 18/217 {Validation; Performance evaluation; Active pattern learning techniques}
- N G06F 18/2178 {based on feedback of a supervisor}
- N G06F 18/2185 {the supervisor being an automated module, e.g. intelligent oracle}
- N G06F 18/2193 {based on specific statistical tests}
- N G06F 18/22 Matching criteria, e.g. proximity measures
- N G06F 18/23 Clustering techniques
- N G06F 18/231 Hierarchical techniques, i.e. dividing or merging pattern sets so as to obtain a dendrogram
- Q G06F 18/232 Non-hierarchical techniques

WARNING

Group [G06F 18/232](#) is impacted by reclassification into groups [G06F 18/2325](#) and [G06F 18/2337](#).

Groups [G06F 18/232](#), [G06F 18/2325](#) and [G06F 18/2337](#) should be considered in order to perform a complete search.

- N G06F 18/2321 using statistics or function optimisation, e.g. modelling of probability density functions
- N G06F 18/23211 with adaptive number of clusters
- N G06F 18/23213 with fixed number of clusters, e.g. K-means clustering
- N G06F 18/2323 based on graph theory, e.g. minimum spanning trees [MST] or graph cuts

- N G06F 18/2325 using vector quantisation
WARNING
 Group [G06F 18/2325](#) is incomplete pending reclassification of documents from group [G06F 18/232](#).
 Groups [G06F 18/232](#) and [G06F 18/2325](#) should be considered in order to perform a complete search.
- N G06F 18/2337 using fuzzy logic, i.e. fuzzy clustering
WARNING
 Group [G06F 18/2337](#) is incomplete pending reclassification of documents from group [G06F 18/232](#).
 Groups [G06F 18/232](#) and [G06F 18/2337](#) should be considered in order to perform a complete search.
- N G06F 18/24 . . Classification techniques
- N G06F 18/241 . . . relating to the classification model, e.g. parametric or non-parametric approaches
- N G06F 18/2411 based on the proximity to a decision surface, e.g. support vector machines
- N G06F 18/2413 based on distances to training or reference patterns
- N G06F 18/24133 {Distances to prototypes}
- N G06F 18/24137 {Distances to cluster centroids}
- N G06F 18/2414 {Smoothing the distance, e.g. radial basis function networks [RBFN]}
- N G06F 18/24143 {Distances to neighbourhood prototypes, e.g. restricted Coulomb energy networks [RCEN]}
- N G06F 18/24147 {Distances to closest patterns, e.g. nearest neighbour classification}
- N G06F 18/2415 based on parametric or probabilistic models, e.g. based on likelihood ratio or false acceptance rate versus a false rejection rate
- N G06F 18/24155 {Bayesian classification}
- N G06F 18/243 . . . relating to the number of classes
- N G06F 18/2431 Multiple classes
- N G06F 18/24317 {Piecewise classification, i.e. whereby each classification requires several discriminant rules}
- N G06F 18/24323 {Tree-organised classifiers}
- N G06F 18/2433 Single-class perspective, e.g. one-against-all classification; Novelty detection; Outlier detection
- N G06F 18/245 . . . relating to the decision surface
- N G06F 18/2451 linear, e.g. hyperplane
- N G06F 18/2453 non-linear, e.g. polynomial classifier
- N G06F 18/24765 . . . {Rule-based classification}
- N G06F 18/25 . . Fusion techniques
- N G06F 18/251 . . . {of input or preprocessed data}
- N G06F 18/253 . . . {of extracted features}
- N G06F 18/254 . . . {of classification results, e.g. of results related to same input data}
- N G06F 18/256 {of results relating to different input data, e.g. multimodal recognition}
- N G06F 18/257 . . . {Belief theory, e.g. Dempster-Shafer}
- N G06F 18/259 . . . {Fusion by voting}
- N G06F 18/26 . . Discovering frequent patterns

- N G06F 18/27 · · Regression, e.g. linear or logistic regression
- N G06F 18/28 · · Determining representative reference patterns, e.g. by averaging or distorting; Generating dictionaries
- N G06F 18/285 · · {Selection of pattern recognition techniques, e.g. of classifiers in a multi-classifier system}
- N G06F 18/29 · · {Graphical models, e.g. Bayesian networks}
- N G06F 18/295 · · · {Markov models or related models, e.g. semi-Markov models; Markov random fields; Networks embedding Markov models}
- N G06F 18/30 · Post-processing
- WARNING
Group [G06F 18/30](#) is incomplete pending reclassification of documents from group [G06F 18/00](#).
Groups [G06F 18/00](#) and [G06F 18/30](#) should be considered in order to perform a complete search.
- N G06F 18/40 · Software arrangements specially adapted for pattern recognition, e.g. user interfaces or toolboxes therefor
- N G06F 18/41 · · {Interactive pattern learning with a human teacher}
- N G06F 2123/00 - G06F 2123/00** **Indexing scheme associated with group [G06F 18/00](#), relating to pattern recognition**
- N G06F 2123/00** **Data types**
- N G06F 2123/02 · in the time domain, e.g. time-series data
- N G06F 2218/00 - G06F 2221/00** **Indexing scheme associated with group [G06F 18/00](#), relating to pattern recognition specially adapted for signal processing**
- N G06F 2218/00** **Aspects of pattern recognition specially adapted for signal processing**
- N G06F 2218/02 · Preprocessing
- N G06F 2218/04 · · Denoising
- N G06F 2218/06 · · · by applying a scale-space analysis, e.g. using wavelet analysis
- N G06F 2218/08 · Feature extraction
- N G06F 2218/10 · · by analysing the shape of a waveform, e.g. extracting parameters relating to peaks
- N G06F 2218/12 · Classification; Matching
- N G06F 2218/14 · · by matching peak patterns
- N G06F 2218/16 · · by matching signal segments
- N G06F 2218/18 · · · by plotting the signal segments against each other, e.g. analysing scattergrams
- N G06F 2218/20 · · · by applying autoregressive analysis
- N G06F 2218/22 · Source localisation; Inverse modelling

Project: RP11770 (G06K)**G06K 7/00**

Methods or arrangements for sensing record carriers, {e.g. for reading patterns} (~~G06K 9/00 takes precedence~~; methods or arrangements for marking the record carrier in digital fashion [G06K 1/00](#); [pattern recognition G06F 18/00](#); [arrangements for image or video recognition or understanding G06V 10/00](#); [character recognition, recognising digital ink or document-oriented image-based pattern recognition G06V 30/00](#))

D G06K 9/00 **Methods or arrangements for recognising patterns (methods or arrangements for graph-reading or for converting the pattern of mechanical parameters, e.g. force or presence, into electrical signals G06K 11/00; image or video recognition or understanding G06V; speech recognition G10L 15/00)**

WARNING

Group G06K 9/00 is impacted by reclassification into groups G06V 10/00-G06V 10/98, G06V 20/00-G06V 20/90, G06V 30/00-G06V 30/424 and G06V 40/00-G06V 40/70.

All groups listed in this Warning should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/00](#)>

- D G06K 9/00496
- {Recognising patterns in signals and combinations thereof (analysing specific medical signals, e.g. bioelectric signals, blood pressure A61B 5/00; analysis of chromatographic signals G01N 30/86; processing radar and similar signals G01S; processing seismic signals G01V 1/28, G01V 1/46; writer recognition; reading and verifying signatures G06V 40/30; acoustic speech processing G10L; transmission systems H04B 1/00)}
- <administratively transferred to [G06F 2218/00](#) ADD>
- D G06K 9/00503
- • {Preprocessing, e.g. filtering (electrical circuits for filtering H03H; adaptive filters H03H 21/00; convolution-based filters H03H 17/00, H03H 21/00)}
- <administratively transferred to [G06F 2218/02](#) ADD>
- D G06K 9/0051
- • • {Denoising}
- <administratively transferred to [G06F 2218/04](#) ADD>
- D G06K 9/00516
- • • • {by applying a scale-space analysis, e.g. using wavelet analysis}
- <administratively transferred to [G06F 2218/06](#) ADD>
- D G06K 9/00523
- • {Feature extraction (arrangements for measuring frequencies and for spectral analysis G01R 23/16; algorithms for spectral analysis, digital electric mathematical transforms per se G06F 17/14)}
- <administratively transferred to [G06F 2218/08](#) ADD>
- D G06K 9/0053
- • • {by analysing the shape of a waveform, e.g. extracting parameters relating to peaks}
- <administratively transferred to [G06F 2218/10](#) ADD>
- D G06K 9/00536
- • {Classification; Matching (digital electric correlation G06F 17/15; electronic classification and matching per se G06K 9/62)}
- <administratively transferred to [G06F 2218/12](#) ADD>
- D G06K 9/00543
- • • {by matching peak patterns}
- <administratively transferred to [G06F 2218/14](#) ADD>
- D G06K 9/0055
- • • • {by matching signal segments}
- <administratively transferred to [G06F 2218/16](#) ADD>
- D G06K 9/00557
- • • • • {by plotting the signal segments against each other, e.g. analysing scattergrams}
- <administratively transferred to [G06F 2218/18](#) ADD>
- D G06K 9/00563
- • • • • {by applying autoregressive analysis}
- <administratively transferred to [G06F 2218/20](#) ADD>

- D G06K 9/0057
- • {Source localisation; Inverse modelling (electroencephalography A61B 5/369; source separation G06K 9/624; image reconstruction from projection, e.g. tomography G06T 11/003; beam formers in general G10K 11/34; radio transmission systems for beam forming H04B 7/04)}
- <administratively transferred to [G06F 2218/22](#) ADD>
- D G06K 9/62
- Methods or arrangements for pattern recognition using electronic means
- WARNING
Group G06K 9/62 is impacted by reclassification into groups G06V 10/70, G06V 10/766 and G06V 30/19.
- All groups listed in this Warning should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/00](#)>
- D G06K 9/6201
- • {Matching; Proximity measures}
- WARNING
Group G06K 9/6201 is impacted by reclassification into groups G06V 10/75 and G06V 30/19007.
- Groups G06K 9/6201, G06V 10/75 and G06V 30/19007 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/22](#)>
- D G06K 9/6215
- • • {Proximity measures, i.e. similarity or distance measures}
- WARNING
Group G06K 9/6215 is impacted by reclassification into groups G06V 10/761 and G06V 30/19093.
- Groups G06K 9/6215, G06V 10/761 and G06V 30/19093 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/22](#)>
- D G06K 9/6217
- • {Design or setup of recognition systems and techniques; Extraction of features in feature space; Clustering techniques; Blind source separation (regression analysis G06F 17/18)}
- WARNING
Group G06K 9/6217 is impacted by reclassification into groups G06V 10/70, G06V 10/766 and G06V 30/191.
- All groups listed in this Warning should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/21](#)>
- D G06K 9/6218
- • • {Clustering techniques}
- WARNING
Group G06K 9/6218 is impacted by reclassification into groups G06V 10/762 and G06V 30/19107.
- Groups G06K 9/6218, G06V 10/762 and G06V 30/19107 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/23](#)>
- D G06K 9/6219
- • • • {Hierarchical techniques, i.e. dividing or merging pattern sets so as to obtain a dendrogram}
- WARNING
Group G06K 9/6219 is impacted by reclassification into groups G06V 10/7625 and G06V 30/19107.

Groups G06K 9/6219, G06V 10/7625 and G06V 30/19107 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/231](#)>

- D G06K 9/622 {Non-hierarchical partitioning techniques}

WARNING

Group G06K 9/622 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
Groups G06K 9/622, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/232](#)>

- D G06K 9/6221 {based on statistics}

WARNING

Group G06K 9/6221 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
Groups G06K 9/6221, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/2321](#)>

- D G06K 9/6222 {with an adaptive number of clusters, e.g. ISODATA technique}

WARNING

Group G06K 9/6222 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
Groups G06K 9/6222, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/23211](#)>

- D G06K 9/6223 {with a fixed number of clusters, e.g. K-means clustering}

WARNING

Group G06K 9/6223 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
Groups G06K 9/6223, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/23213](#)>

- D G06K 9/6224 {based on graph theory, e.g. Minimum Spanning Trees [MST], graph cuts, spectral clustering techniques (graph embedding G06K 9/6252; segmentation involving graph-based approaches for general image processing G06T 7/162; segmentation of touching or overlapping patterns involving graph-based approaches G06V 10/267)}

WARNING

Group G06K 9/6224 is impacted by reclassification into groups G06V 10/7635 and G06V 30/19107.
Groups G06K 9/6224, G06V 10/7635 and G06V 30/19107 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/2323](#)>

- D G06K 9/6226 {based on the modelling of probability density functions}

WARNING

Group G06K 9/6226 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
Groups G06K 9/6226, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/2321](#)>

- D G06K 9/6227
- • • {Selection of pattern recognition techniques, e.g. of classifiers in a multi-classifier system}
- WARNING
 Group G06K 9/6227 is impacted by reclassification into groups G06V 10/87 and G06V 30/19113.
 Groups G06K 9/6227, G06V 10/87 and G06V 30/19113 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/285](#)>
- D G06K 9/6228
- • • {Selecting the most significant subset of features (G06K 9/6232 takes precedence)}
- WARNING
 Group G06K 9/6228 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.
 Groups G06K 9/6228, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/211](#)>
- D G06K 9/6229
- • • • {by using evolutionary computational techniques, e.g. genetic algorithms (genetic algorithms per se G06N 3/126)}
- WARNING
 Group G06K 9/6229 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.
 Groups G06K 9/6229, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2111](#)>
- D G06K 9/623
- • • • {by ranking or filtering the set of features, e.g. using a measure of variance or of feature cross-correlation}
- WARNING
 Group G06K 9/623 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.
 Groups G06K 9/623, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2113](#)>
- D G06K 9/6231
- • • • {by evaluating different subsets according to an optimisation criteria such as class separability, e.g. forward selection, backward elimination (linear discriminant analysis G06K 9/6234)}
- WARNING
 Group G06K 9/6231 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.
 Groups G06K 9/6231, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2115](#)>
- D G06K 9/6232
- • • {Extracting features by transforming the feature space, e.g. multidimensional scaling; Mappings, e.g. subspace methods}
- WARNING
 Group G06K 9/6232 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
 Groups G06K 9/6232, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/213](#)>

- D G06K 9/6234 {based on a discrimination criterion, e.g. discriminant analysis (discriminant functions G06K 9/6227)}
- WARNING
Group G06K 9/6234 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6234, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2132](#)>
- D G06K 9/6235 {Rendering the within-class scatter matrix non-singular}
- WARNING
Group G06K 9/6235 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6235, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2132](#)>
- D G06K 2009/6236 {involving a first projection stage, e.g. Fisherface techniques}
- WARNING
Group G06K 2009/6236 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 2009/6236, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2132](#)>
- D G06K 2009/6237 {involving an optimisation, e.g. using regularisation techniques}
- WARNING
Group G06K 2009/6237 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 2009/6237, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2132](#)>
- D G06K 2009/6238 {involving a subspace restriction, e.g. nullspace techniques}
- WARNING
Group G06K 2009/6238 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 2009/6238, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2132](#)>
- D G06K 9/6239 {based on a naturality criterion, e.g. with non-negative factorisation or negative correlation (matrix computation G06F 17/16)}
- WARNING
Group G06K 9/6239 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6239, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2133](#)>
- D G06K 9/624 {based on a separation criterion, e.g. independent component analysis}
- WARNING
Group G06K 9/624 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/624, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/2134](#)>

- D G06K 9/6242
 - {of statistical independence, i.e. minimising mutual information or maximising non-gaussianity}
 - WARNING
Group G06K 9/6242 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6242, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
 - <administratively transferred to [G06F 18/21342](#)>
- D G06K 9/6243
 - {of decorrelation or non-stationarity, e.g. minimising lagged cross-correlations}
 - WARNING
Group G06K 9/6243 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6243, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
 - <administratively transferred to [G06F 18/21343](#)>
- D G06K 9/6244
 - {enforcing sparsity or involving a domain transformation}
 - WARNING
Group G06K 9/6244 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6244, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
 - <administratively transferred to [G06F 18/21345](#)>
- D G06K 9/6245
 - {characterised by a domain transformation}
 - WARNING
Group G06K 9/6245 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6245, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
 - <administratively transferred to [G06F 18/21347](#)>
- D G06K 9/6246
 - {overcoming non-stationarity or permutations (using non-stationarity for separation G06K 9/6244)}
 - WARNING
Group G06K 9/6246 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6246, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
 - <administratively transferred to [G06F 18/21348](#)>
- D G06K 9/6247
 - {based on an approximation criterion, e.g. principal component analysis}
 - WARNING
Group G06K 9/6247 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6247, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
 - <administratively transferred to [G06F 18/2135](#)>

- D G06K 9/6248 {nonlinearly, e.g. embedding a manifold in a Euclidean space (principal curves G06K 9/6251)}
- WARNING
Group G06K 9/6248 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6248, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/21355](#)>
- D G06K 9/6249 {based on a sparsity criterion, e.g. with an overcomplete basis (specific for source separation G06K 9/6244; pictorial communication involving matching pursuit H04N 19/97)}
- WARNING
Group G06K 9/6249 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6249, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2136](#)>
- D G06K 9/6251 {based on a criterion of topology preservation, e.g. multidimensional scaling, self-organising maps}
- WARNING
Group G06K 9/6251 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6251, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2137](#)>
- D G06K 9/6252 {involving differential geometry, e.g. embedding of pattern manifold}
- WARNING
Group G06K 9/6252 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.
Groups G06K 9/6252, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/21375](#)>
- D G06K 9/6253 . . . {User interactive design (G06K 9/6263 takes precedence); Environments; Tool-boxes}
- WARNING
Group G06K 9/6253 is impacted by reclassification into group G06V 10/945.
Groups G06K 9/6253 and G06V 10/945 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/40](#)>
- D G06K 9/6254 {Interactive pattern learning with a human teacher}
- WARNING
Group G06K 9/6254 is impacted by reclassification into groups G06V 10/7788 and G06V 30/19133.
Groups G06K 9/6254, G06V 10/7788 and G06V 30/19133 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/41](#)>

- D G06K 9/6255
- • • {Determining representative reference patterns, e.g. averaging or distorting patterns; Generating dictionaries, e.g. user dictionaries}
- WARNING
Group G06K 9/6255 is impacted by reclassification into groups G06V 10/772 and G06V 30/1914.
Groups G06K 9/6255, G06V 10/772 and G06V 30/1914 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/28](#)>
- D G06K 9/6256
- • • {Obtaining sets of training patterns; Bootstrap methods, e.g. bagging, boosting}
- WARNING
Group G06K 9/6256 is impacted by reclassification into groups G06V 10/774 and G06V 30/19147.
Groups G06K 9/6256, G06V 10/774 and G06V 30/19147 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/214](#)>
- D G06K 9/6257
- • • • {characterised by the organisation or the structure of the process, e.g. boosting cascade (feature selection by floating search G06K 9/6231)}
- WARNING
Group G06K 9/6257 is impacted by reclassification into groups G06V 10/7747 and G06V 30/19147.
Groups G06K 9/6257, G06V 10/7747 and G06V 30/19147 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2148](#)>
- D G06K 9/6259
- • • • {characterised by the incorporation of unlabelled data, e.g. multiple instance learning [MIL], semi-supervised techniques using expectation-maximisation [EM] or naïve labelling (EM techniques G06K 9/6226; validation with "oracles" G06K 9/6263)}
- WARNING
Group G06K 9/6259 is impacted by reclassification into groups G06V 10/7753 and G06V 30/19147.
Groups G06K 9/6259, G06V 10/7753 and G06V 30/19147 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2155](#)>
- D G06K 9/626
- • • {Selecting classification rules}
- WARNING
Group G06K 9/626 is impacted by reclassification into groups G06V 10/765 and G06V 30/19153.
Groups G06K 9/626, G06V 10/765 and G06V 30/19153 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/24765](#)>
- D G06K 9/6261
- • • {partitioning the feature space}
- WARNING
Group G06K 9/6261 is impacted by reclassification into groups G06V 10/765 and G06V 30/19153.
Groups G06K 9/6261, G06V 10/765 and G06V 30/19153 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2163](#)>

- D G06K 9/6262 . . . {Validation, performance evaluation or active pattern learning techniques}
WARNING
 Group G06K 9/6262 is impacted by reclassification into groups G06V 10/776, G06V 10/778, G06V 30/1916, G06V 30/19167 and G06V 30/302.
 All groups listed in this Warning should be considered in order to perform a complete search.
 <administratively transferred to [G06F 18/217](#)>
- D G06K 9/6263 . . . {based on the feedback of a supervisor (relevance feedback in information retrieval G06F 16/00)}
WARNING
 Group G06K 9/6263 is impacted by reclassification into groups G06V 10/7784 and G06V 30/19167.
 Groups G06K 9/6263, G06V 10/7784 and G06V 30/19167 should be considered in order to perform a complete search.
 <administratively transferred to [G06F 18/2178](#)>
- D G06K 9/6264 {the supervisor being an automated "intelligent" module, e.g. "intelligent oracle"}
WARNING
 Group G06K 9/6264 is impacted by reclassification into groups G06V 10/7788 and G06V 30/19167.
 Groups G06K 9/6264, G06V 10/7788 and G06V 30/19167 should be considered in order to perform a complete search.
 <administratively transferred to [G06F 18/2185](#)>
- D G06K 9/6265 {based on a specific statistical test}
WARNING
 Group G06K 9/6265 is impacted by reclassification into groups G06V 10/7796 and G06V 30/19167.
 Groups G06K 9/6265, G06V 10/7796 and G06V 30/19167 should be considered in order to perform a complete search.
 <administratively transferred to [G06F 18/2193](#)>
- D G06K 9/6267 . . {Classification techniques}
WARNING
 Group G06K 9/6267 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6267, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
 <administratively transferred to [G06F 18/24](#)>
- D G06K 9/6268 . . . {relating to the classification paradigm, e.g. parametric or non-parametric approaches}
WARNING
 Group G06K 9/6268 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6268, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
 <administratively transferred to [G06F 18/241](#)>

- D G06K 9/6269 {based on the distance between the decision surface and training patterns lying on the boundary of the class cluster, e.g. support vector machines}
- WARNING
Group G06K 9/6269 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6269, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2411](#)>
- D G06K 9/627 {based on distances between the pattern to be recognised and training or reference patterns}
- WARNING
Group G06K 9/627 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/627, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2413](#)>
- D G06K 9/6271 {based on distances to prototypes}
- WARNING
Group G06K 9/6271 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6271, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/24133](#)>
- D G06K 9/6272 {based on distances to cluster centroids}
- WARNING
Group G06K 9/6272 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6272, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/24137](#)>
- D G06K 9/6273 {Smoothing the distance, e.g. Radial Basis Function Networks}
- WARNING
Group G06K 9/6273 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6273, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2414](#)>
- D G06K 9/6274 {based on distances to neighbourhood prototypes, e.g. Restricted Coulomb Energy Networks}
- WARNING
Group G06K 9/6274 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6274, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/24143](#)>

- D G06K 9/6276 {based on distances to closest patterns, e.g. nearest neighbour classification}
- WARNING
Group G06K 9/6276 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6276, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/24147](#)>
- D G06K 9/6277 {based on a parametric (probabilistic) model, e.g. based on Neyman-Pearson lemma, likelihood ratio, receiver operating characteristic [ROC] curve plotting a false acceptance rate [FAR] versus a false reject rate [FRR] (segmentation involving probabilistic approaches for general image processing G06T 7/143; segmentation of touching or overlapping patterns involving probabilistic approaches G06V 10/26; image connectivity analysis involving probabilistic approaches, e.g. Markov Random Fields techniques, G06V 10/457)}
- WARNING
Group G06K 9/6277 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6277, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2415](#)>
- D G06K 9/6278 {Bayesian classification}
- WARNING
Group G06K 9/6278 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6278, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/24155](#)>
- D G06K 9/6279 . . . {relating to the number of classes}
- WARNING
Group G06K 9/6279 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6279, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/243](#)>
- D G06K 9/628 {Multiple classes}
- WARNING
Group G06K 9/628 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/628, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/2431](#)>
- D G06K 9/6281 {Piecewise classification, i.e. whereby each classification requires several discriminant rules}
- WARNING
Group G06K 9/6281 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.

Groups G06K 9/6281, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/24317](#)>

- D G06K 9/6282 {Tree-organised sequential classifiers}

WARNING

Group G06K 9/6282 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6282, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/24323](#)>

- D G06K 9/6284 {Single-class perspective, e.g. one-against-all classification; Novelty detection; Outlier detection}

WARNING

Group G06K 9/6284 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6284, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/2433](#)>

- D G06K 9/6285 . . . {relating to the decision surface}

WARNING

Group G06K 9/6285 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6285, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/245](#)>

- D G06K 9/6286 {Linear, e.g. hyperplane}

WARNING

Group G06K 9/6286 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6286, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/2451](#)>

- D G06K 9/6287 {Non-linear, e.g. polynomial classifier (G06K 9/6284 takes precedence; classifier with multiple radial basis functions G06K 9/6273)}

WARNING

Group G06K 9/6287 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6287, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.

<administratively transferred to [G06F 18/2453](#)>

- D G06K 9/6288 . . {Fusion techniques, i.e. combining data from various sources, e.g. sensor fusion (data unmixing G06K 9/624; bootstrap techniques, e.g. boosting G06K 9/6256; image matching G06V 30/192; fusion of acoustic speaker inputs G10L 17/10)}

WARNING

Group G06K 9/6288 is impacted by reclassification into groups G06V 10/80 and G06V 30/1918.

Groups G06K 9/6288, G06V 10/80 and G06V 30/1918 should be considered in order to perform a complete search:

<administratively transferred to [G06F 18/25](#)>

- D G06K 9/6289
 - • {of input or preprocessed data (imaging spectrometers G01J 3/2823; image fusion in general and biomedical image fusion G06T 5/50; processing and conversion of colour signals H04N 1/46)}

WARNING

Group G06K 9/6289 is impacted by reclassification into groups G06V 10/803 and G06V 30/1918.
Groups G06K 9/6289, G06V 10/803 and G06V 30/1918 should be considered in order to perform a complete search:

<administratively transferred to [G06F 18/251](#)>

- D G06K 9/629
 - • {of extracted features}

WARNING

Group G06K 9/629 is impacted by reclassification into groups G06V 10/806 and G06V 30/1918.
Groups G06K 9/629, G06V 10/806 and G06V 30/1918 should be considered in order to perform a complete search:

<administratively transferred to [G06F 18/253](#)>

- D G06K 9/6292
 - • {of classification results, e.g. of classification results related to same input data (G06K 9/6256 takes precedence)}

WARNING

Group G06K 9/6292 is impacted by reclassification into groups G06V 10/809 and G06V 30/1918.
Groups G06K 9/6292, G06V 10/809 and G06V 30/1918 should be considered in order to perform a complete search:

<administratively transferred to [G06F 18/254](#)>

- D G06K 9/6293
 - • • {of classification results relating to different input data, e.g. multimodal recognition}

WARNING

Group G06K 9/6293 is impacted by reclassification into groups G06V 10/811 and G06V 30/1918.
Groups G06K 9/6293, G06V 10/811 and G06V 30/1918 should be considered in order to perform a complete search:

<administratively transferred to [G06F 18/256](#)>

- D G06K 2009/6294
 - • {belief theory, e.g. Dempster-Shafer}

WARNING

Group G06K 2009/6294 is impacted by reclassification into groups G06V 10/814 and G06V 30/1918.
Groups G06K 2009/6294, G06V 10/814 and G06V 30/1918 should be considered in order to perform a complete search:

<administratively transferred to [G06F 18/257](#)>

- D G06K 2009/6295
 - • {fusion by voting}

WARNING

Group G06K 2009/6295 is impacted by reclassification into groups G06V 10/817 and G06V 30/1918.
Groups G06K 2009/6295, G06V 10/817 and G06V 30/1918 should be considered in order to perform a complete search:

<administratively transferred to [G06F 18/259](#)>

- D G06K 9/6296
- {Graphical models, e.g. Bayesian networks (probabilistic networks per se G06N 7/005)}
- WARNING
Group G06K 9/6296 is impacted by reclassification into groups G06V 10/84 and G06V 30/19187.
Groups G06K 9/6296, G06V 10/84 and G06V 30/19187 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/29](#)>
- D G06K 9/6297
- • {Markov models or related models, e.g. semi-Markov models; Markov random fields; networks embedding Markov models (segmentation involving probabilistic approaches for general image processing G06T 7/143; segmentation of touching or overlapping patterns involving probabilistic approaches G06V 10/26; image connectivity analysis involving probabilistic approaches, e.g. Markov Random Fields G06V 10/457; application of Markov models to acoustic speech recognition G10L 15/00)}
- WARNING
Group G06K 9/6297 is impacted by reclassification into groups G06V 10/85 and G06V 30/19187.
Groups G06K 9/6297, G06V 10/85 and G06V 30/19187 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/295](#)>
- D G06K 9/6298
- {Statistical pre-processing, e.g. techniques for normalisation or restoring missing data}
- WARNING
Group G06K 9/6298 is impacted by reclassification into groups G06V 10/72 and G06V 30/19193.
Groups G06K 9/6298, G06V 10/72 and G06V 30/19193 should be considered in order to perform a complete search.
- <administratively transferred to [G06F 18/10](#)>
- G06K 11/00**
- Methods or arrangements for graph-reading or for converting the pattern of mechanical parameters, e.g. force or presence, into electrical signal (combined with character or pattern recognition G06K 9/00; feelers for copying devices on machine tools [B23Q 35/00](#); arrangements for measuring areas [G01B](#); measuring force [G01L](#); adapted as input devices to computers [G06F 3/00](#); combined with pattern recognition [G06F 18/00](#); arrangements for image or video recognition or understanding [G06V 10/00](#); character recognition, recognising digital ink or document-oriented image-based pattern recognition [G06V 30/00](#); systems for transmitting the position of an object with respect to a predetermined reference system, e.g. teleautographic system, [G08C 21/00](#))**
- WARNING
This group and its subgroups are no longer used for the classification of new documents as from 1 January 2006. Documents relating to methods and arrangements for input to a computer are classified under [G06F 3/033](#) and [G06F 3/041](#)
- U G06K 19/00**
- Record carriers for use with machines and with at least a part designed to carry digital markings**
- U G06K 19/06
- characterised by the kind of the digital marking, e.g. shape, nature, code
- U G06K 19/067
- • Record carriers with conductive marks, printed circuits or semiconductor circuit elements, e.g. credit or identity cards {also with resonating or responding marks without active components}

- U G06K 19/07 · · · with integrated circuit chips
- U G06K 19/0716 · · · · {at least one of the integrated circuit chips comprising a sensor or an interface to a sensor}
- G06K 19/0718 · · · · · {the sensor being of the biometric kind, e.g. fingerprint sensors (fingerprint sensors in general, see G06K 9/00; fingerprint sensors in general G06V 40/13; biometric access-control systems in general, see G07C 9/00)}

Project: RP11770 (G06V)**G06V 10/00 Arrangements for image or video recognition or understanding (character recognition in images or video G06V 30/10)**WARNING

Groups [G06V 10/00](#), [G06V 10/74](#), [G06V 10/77](#), [G06V 10/7792](#), [G06V 10/82](#) and [G06V 10/86](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP11770 in addition to RP11902 (G06V)

- G06V 10/10 · Image acquisition (document image scanning and transmission [H04N 1/00](#); control of digital cameras [H04N 5/232](#)[H04N 23/60](#))

WARNING

Group [G06V 10/10](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/10](#) is also impacted by reclassification into groups [G06V 10/00](#), [G06V 10/70](#) - [G06V 10/87](#), [G06V 10/88](#) - [G06V 10/92](#), [G06V 30/14](#) - [G06V 30/158](#), [G06V 30/199](#) and [G06V 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP11770 (G06V)

- G06V 10/12 · · Details of acquisition arrangements; Constructional details thereof

WARNING

Group [G06V 10/12](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/12](#) is also impacted by reclassification into groups [G06V 10/14](#) and [G06V 30/142](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/14 · · · Optical characteristics of the device performing the acquisition or on the illumination arrangements

WARNING

Group [G06V 10/14](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 10/12](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/12](#) and [G06V 10/14](#) should be considered in order to perform a complete search.

- G06V 10/141 · · · · Control of illumination

WARNING

Group [G06V 10/141](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

- Group [G06V 10/141](#) is also impacted by reclassification into group [G06V 30/1431](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/141](#) and [G06V 30/1431](#) should be considered in order to perform a complete search.
- G06V 10/143
- • • Sensing or illuminating at different wavelengths
- WARNING
Group [G06V 10/143](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/143](#) is also impacted by reclassification into group [G06V 30/1429](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/143](#) and [G06V 30/1429](#) should be considered in order to perform a complete search.
- G06V 10/145
- • • Illumination specially adapted for pattern recognition, e.g. using gratings
- WARNING
Group [G06V 10/145](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/145](#) is also impacted by reclassification into group [G06V 30/1434](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/145](#) and [G06V 30/1434](#) should be considered in order to perform a complete search.
- G06V 10/147
- • • Details of sensors, e.g. sensor lenses (fingerprint or palmpoint sensors [G06V 40/13](#); vascular sensors [G06V 40/145](#); eye sensors [G06V 40/19](#))
- WARNING
Group [G06V 10/147](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/147](#) is also impacted by reclassification into groups [G06V 30/1429](#) and [G06V 30/1437](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/16
- • {using multiple overlapping images; Image stitching}
- WARNING
Group [G06V 10/16](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/16](#) is also impacted by reclassification into group [G06V 30/141](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/16](#) and [G06V 30/141](#) should be considered in order to perform a complete search.
- G06V 10/17
- • {using hand-held instruments}
- WARNING
Group [G06V 10/17](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/17](#) is also impacted by reclassification into group [G06V 30/142](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/17](#) and [G06V 30/142](#) should be considered in order to perform a complete search.
- G06V 10/19
- • {by sensing codes defining pattern positions}
- WARNING
Group [G06V 10/19](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/19](#) is also impacted by reclassification into group [G06V 30/1426](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/19](#) and [G06V 30/1426](#) should be considered in order to perform a complete search.

G06V 10/20

- Image preprocessing

WARNING

Group [G06V 10/20](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/20](#) is also impacted by reclassification into groups [G06V 10/00](#), [G06V 10/70 - G06V 10/87](#), [G06V 10/88 - G06V 10/92](#), [G06V 30/16 - G06V 30/168](#), [G06V 30/199](#) and [G06V 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/22

- • by selection of a specific region containing or referencing a pattern; Locating or processing of specific regions to guide the detection or recognition

WARNING

Group [G06V 10/22](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/22](#) is also impacted by reclassification into group [G06V 30/1444](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/22](#) and [G06V 30/1444](#) should be considered in order to perform a complete search.

G06V 10/225

- • • {based on a marking or identifier characterising the area}

WARNING

Group [G06V 10/225](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/225](#) is also impacted by reclassification into group [G06V 30/1448](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/225](#) and [G06V 30/1448](#) should be considered in order to perform a complete search.

G06V 10/23

- • • {based on positionally close patterns or neighbourhood relationships}

WARNING

Group [G06V 10/23](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/23](#) is also impacted by reclassification into group [G06V 30/1452](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/23](#) and [G06V 30/1452](#) should be considered in order to perform a complete search.

G06V 10/235

- • • {based on user input or interaction}

WARNING

Group [G06V 10/235](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/235](#) is also impacted by reclassification into group [G06V 30/1456](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/235](#) and [G06V 30/1456](#) should be considered in order to perform a complete search.

G06V 10/24

- • Aligning, centring, orientation detection or correction of the image

WARNING

Group [G06V 10/24](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/24](#) is also impacted by reclassification into group [G06V 30/146](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/24](#) and [G06V 30/146](#) should be considered in order to perform a complete search.

G06V 10/242

- • • {by image rotation, e.g. by 90 degrees}

WARNING

Group [G06V 10/242](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/242](#) is also impacted by reclassification into group [G06V 30/1463](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/242](#) and [G06V 30/1463](#) should be considered in order to perform a complete search.

G06V 10/243

- • • {by compensating for image skew or non-uniform image deformations}

WARNING

Group [G06V 10/243](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/243](#) is also impacted by reclassification into group [G06V 30/1475](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/243](#) and [G06V 30/1475](#) should be considered in order to perform a complete search.

G06V 10/245

- • • {by locating a pattern; Special marks for positioning}

WARNING

Group [G06V 10/245](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/245](#) is also impacted by reclassification into groups [G06V 30/1448](#), [G06V 30/1465](#), [G06V 30/1468](#), [G06V 30/1475](#) and [G06V 30/1478](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/247

- • • {by affine transforms, e.g. correction due to perspective effects; Quadrilaterals, e.g. trapezoids}

WARNING

Group [G06V 10/247](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/247](#) is also impacted by reclassification into group [G06V 30/1607](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/247](#) and [G06V 30/1607](#) should be considered in order to perform a complete search.

G06V 10/248

- • • {by interactive preprocessing or interactive shape modelling, e.g. feature points assigned by a user}

WARNING

Group [G06V 10/248](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/248](#) is also impacted by reclassification into group [G06V 30/1613](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/248](#) and [G06V 30/1613](#) should be considered in order to perform a complete search.

- G06V 10/25
- Determination of region of interest [ROI] or a volume of interest [VOI]
- WARNING
 Group [G06V 10/25](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/25](#) is also impacted by reclassification into group [G06V 30/147](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/25](#) and [G06V 30/147](#) should be considered in order to perform a complete search.
- G06V 10/255
- {Detecting or recognising potential candidate objects based on visual cues, e.g. shapes}
- WARNING
 Group [G06V 10/255](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/255](#) is also impacted by reclassification into group [G06V 30/1473](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/255](#) and [G06V 30/1473](#) should be considered in order to perform a complete search.
- G06V 10/26
- Segmentation of patterns in the image field; Cutting or merging of image elements to establish the pattern region, e.g. clustering-based techniques; Detection of occlusion
- WARNING
 Group [G06V 10/26](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/26](#) is also impacted by reclassification into group [G06V 30/148](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/26](#) and [G06V 30/148](#) should be considered in order to perform a complete search.
- G06V 10/267
- {by performing operations on regions, e.g. growing, shrinking or watersheds}
- WARNING
 Group [G06V 10/267](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/267](#) is also impacted by reclassification into group [G06V 30/15](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/267](#) and [G06V 30/15](#) should be considered in order to perform a complete search.
- G06V 10/273
- {removing elements interfering with the pattern to be recognised}
- WARNING
 Group [G06V 10/273](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/273](#) is also impacted by reclassification into group [G06V 30/155](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/273](#) and [G06V 30/155](#) should be considered in order to perform a complete search.
- G06V 10/28
- Quantising the image, e.g. histogram thresholding for discrimination between background and foreground patterns
- WARNING
 Group [G06V 10/28](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/28](#) is also impacted by reclassification into group [G06V 30/162](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/28](#) and [G06V 30/162](#) should be considered in order to perform a complete search.

G06V 10/30

- Noise filtering

WARNING

Group [G06V 10/30](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/30](#) is also impacted by reclassification into group [G06V 30/164](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/30](#) and [G06V 30/164](#) should be considered in order to perform a complete search.

G06V 10/32

- Normalisation of the pattern dimensions

WARNING

Group [G06V 10/32](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/32](#) is also impacted by reclassification into group [G06V 30/166](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/32](#) and [G06V 30/166](#) should be considered in order to perform a complete search.

G06V 10/34

- Smoothing or thinning of the pattern; Morphological operations; Skeletonisation

WARNING

Group [G06V 10/34](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/34](#) is also impacted by reclassification into group [G06V 30/168](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/34](#) and [G06V 30/168](#) should be considered in order to perform a complete search.

G06V 10/36

- Applying a local operator, i.e. means to operate on image points situated in the vicinity of a given point; Non-linear local filtering operations, e.g. median filtering

WARNING

Group [G06V 10/36](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/36](#) is also impacted by reclassification into group [G06V 30/20](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/36](#) and [G06V 30/20](#) should be considered in order to perform a complete search.

G06V 10/40

- Extraction of image or video features

WARNING

Group [G06V 10/40](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/40](#) is also impacted by reclassification into groups [G06V 10/54](#) and [G06V 30/18](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/42

- Global feature extraction by analysis of the whole pattern, e.g. using frequency domain transformations or autocorrelation

WARNING

Group [G06V 10/42](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/42](#) is also impacted by reclassification into group [G06V 30/186](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/42](#) and [G06V 30/186](#) should be considered in order to perform a complete search.

G06V 10/421

- • • {by analysing segments intersecting the pattern}

WARNING

Group [G06V 10/421](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/421](#) is also impacted by reclassification into group [G06V 30/184](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/421](#) and [G06V 30/184](#) should be considered in order to perform a complete search.

G06V 10/422

- • • for representing the structure of the pattern or shape of an object therefor

WARNING

Group [G06V 10/422](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/422](#) is also impacted by reclassification into group [G06V 30/18162](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/422](#) and [G06V 30/18162](#) should be considered in order to perform a complete search.

G06V 10/424

- • • Syntactic representation, e.g. by using alphabets or grammars

WARNING

Group [G06V 10/424](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/424](#) is also impacted by reclassification into group [G06V 30/18171](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/424](#) and [G06V 30/18171](#) should be considered in order to perform a complete search.

G06V 10/426

- • • Graphical representations

WARNING

Group [G06V 10/426](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/426](#) is also impacted by reclassification into group [G06V 30/18181](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/426](#) and [G06V 30/18181](#) should be considered in order to perform a complete search.

G06V 10/431

- • • {Frequency domain transformation; Autocorrelation}

WARNING

Group [G06V 10/431](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/431](#) is also impacted by reclassification into group [G06V 30/187](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/431](#) and [G06V 30/187](#) should be considered in order to perform a complete search.

G06V 10/435

- • • {Computation of moments}

WARNING

Group [G06V 10/435](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/435](#) is also impacted by reclassification into group [G06V 30/188](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/435](#) and [G06V 30/188](#) should be considered in order to perform a complete search.

G06V 10/44

- • Local feature extraction by analysis of parts of the pattern, e.g. by detecting edges, contours, loops, corners, strokes or intersections; Connectivity analysis, e.g. of connected components

WARNING

Group [G06V 10/44](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/44](#) is also impacted by reclassification into groups [G06V 30/1801](#), [G06V 30/182](#), [G06V 30/1823](#), [G06V 30/1826](#), [G06V 30/1829](#), [G06V 30/1831](#), [G06V 30/1834](#) and [G06V 30/1837](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/443

- • • {by matching or filtering}

WARNING

Group [G06V 10/443](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/443](#) is also impacted by reclassification into group [G06V 30/18019](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/443](#) and [G06V 30/18019](#) should be considered in order to perform a complete search.

G06V 10/446

- • • • {using Haar-like filters, e.g. using integral image techniques}

WARNING

Group [G06V 10/446](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/446](#) is also impacted by reclassification into group [G06V 30/18029](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/446](#) and [G06V 30/18029](#) should be considered in order to perform a complete search.

G06V 10/449

- • • • {Biologically inspired filters, e.g. difference of Gaussians [DoG] or Gabor filters}

WARNING

Group [G06V 10/449](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/449](#) is also impacted by reclassification into group [G06V 30/18038](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/449](#) and [G06V 30/18038](#) should be considered in order to perform a complete search.

G06V 10/451

- • • • • {with interaction between the filter responses, e.g. cortical complex cells}

WARNING

Group [G06V 10/451](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/451](#) is also impacted by reclassification into group [G06V 30/18048](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/451](#) and [G06V 30/18048](#) should be considered in order to perform a complete search.

- G06V 10/454
- • • • • {Integrating the filters into a hierarchical structure, e.g. convolutional neural networks [CNN]}
- WARNING
 Group [G06V 10/454](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/454](#) is also impacted by reclassification into group [G06V 30/18057](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/454](#) and [G06V 30/18057](#) should be considered in order to perform a complete search.
- G06V 10/457
- • • {by analysing connectivity, e.g. edge linking, connected component analysis or slices}
- WARNING
 Group [G06V 10/457](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/457](#) is also impacted by reclassification into group [G06V 30/18076](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/457](#) and [G06V 30/18076](#) should be considered in order to perform a complete search.
- G06V 10/46
- • Descriptors for shape, contour or point-related descriptors, e.g. scale invariant feature transform [SIFT] or bags of words [BoW]; Salient regional features (colour feature extraction [G06V 10/56](#))
- WARNING
 Group [G06V 10/46](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/46](#) is also impacted by reclassification into group [G06V 30/182](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/46](#) and [G06V 30/182](#) should be considered in order to perform a complete search.
- G06V 10/462
- • • {Salient features, e.g. scale invariant feature transforms [SIFT]}
- WARNING
 Group [G06V 10/462](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/462](#) is also impacted by reclassification into group [G06V 30/18143](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/462](#) and [G06V 30/18143](#) should be considered in order to perform a complete search.
- G06V 10/464
- • • • {using a plurality of salient features, e.g. bag-of-words [BoW] representations}
- WARNING
 Group [G06V 10/464](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/464](#) is also impacted by reclassification into group [G06V 30/18152](#).
 Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/464](#) and [G06V 30/18152](#) should be considered in order to perform a complete search.
- G06V 10/467
- • • {Encoded features or binary features, e.g. local binary patterns [LBP]}
- WARNING
 Group [G06V 10/467](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
 Group [G06V 10/467](#) is also impacted by reclassification into group [G06V 30/18133](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/467](#) and [G06V 30/18133](#) should be considered in order to perform a complete search.

- G06V 10/469
- • • {Contour-based spatial representations, e.g. vector-coding}
- WARNING
Group [G06V 10/469](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/469](#) is also impacted by reclassification into group [G06V 30/1823](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/469](#) and [G06V 30/1823](#) should be considered in order to perform a complete search.
- G06V 10/471
- • • • {using approximation functions}
- WARNING
Group [G06V 10/471](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/471](#) is also impacted by reclassification into group [G06V 30/1829](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/471](#) and [G06V 30/1829](#) should be considered in order to perform a complete search.
- G06V 10/473
- • • • {using gradient analysis}
- WARNING
Group [G06V 10/473](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/473](#) is also impacted by reclassification into group [G06V 30/1831](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/473](#) and [G06V 30/1831](#) should be considered in order to perform a complete search.
- G06V 10/476
- • • • {using statistical shape modelling, e.g. point distribution models}
- WARNING
Group [G06V 10/476](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/476](#) is also impacted by reclassification into group [G06V 30/1834](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/476](#) and [G06V 30/1834](#) should be considered in order to perform a complete search.
- G06V 10/478
- • • • {Contour-based spectral representations or scale-space representations, e.g. by Fourier analysis, wavelet analysis or curvature scale-space [CSS]}
- WARNING
Group [G06V 10/478](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/478](#) is also impacted by reclassification into groups [G06V 30/1826](#) and [G06V 30/1837](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/48
- • by mapping characteristic values of the pattern into a parameter space, e.g. Hough transformation
- WARNING
Group [G06V 10/48](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/48](#) is also impacted by reclassification into group [G06V 30/18067](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/48](#) and [G06V 30/18067](#) should be considered in order to perform a complete search.

G06V 10/50

- by performing operations within image blocks; by using histograms, e.g. histogram of oriented gradients [HoG]; by summing image-intensity values; Projection analysis

WARNING

Group [G06V 10/50](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/50](#) is also impacted by reclassification into group [G06V 30/18086](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/50](#) and [G06V 30/18086](#) should be considered in order to perform a complete search.

G06V 10/507

- {Summing image-intensity values; Histogram projection analysis}

WARNING

Group [G06V 10/507](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/507](#) is also impacted by reclassification into group [G06V 30/18095](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/507](#) and [G06V 30/18095](#) should be considered in order to perform a complete search.

G06V 10/513

- {Sparse representations}

WARNING

Group [G06V 10/513](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/513](#) is also impacted by reclassification into group [G06V 30/1819](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/513](#) and [G06V 30/1819](#) should be considered in order to perform a complete search.

G06V 10/52

- Scale-space analysis, e.g. wavelet analysis (multi-scale boundary representations [G06V 10/42](#))

WARNING

Group [G06V 10/52](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/52](#) is also impacted by reclassification into group [G06V 30/189](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/52](#) and [G06V 30/189](#) should be considered in order to perform a complete search.

G06V 10/56

- relating to colour

WARNING

Group [G06V 10/56](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/56](#) is also impacted by reclassification into group [G06V 30/18105](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/56](#) and [G06V 30/18105](#) should be considered in order to perform a complete search.

G06V 10/58

- relating to hyperspectral data

WARNING

Group [G06V 10/58](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/58](#) is also impacted by reclassification into group [G06V 30/18114](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/58](#) and [G06V 30/18114](#) should be considered in order to perform a complete search.

G06V 10/60

- relating to illumination properties, e.g. using a reflectance or lighting model

WARNING

Group [G06V 10/60](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Group [G06V 10/60](#) is also impacted by reclassification into group [G06V 30/18124](#).

Groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/60](#) and [G06V 30/18124](#) should be considered in order to perform a complete search.

G06V 10/62

- relating to a temporal dimension, e.g. time-based feature extraction; Pattern tracking

WARNING

Group [G06V 10/62](#) is incomplete pending reclassification of documents from group [G06K-9/00](#)[G06F 18/00](#).

Groups [G06K-9/00](#)[G06F 18/00](#) and [G06V 10/62](#) should be considered in order to perform a complete search.

G06V 10/70

- using pattern recognition or machine learning (optical pattern recognition or electronic computations therefor [G06V 10/88](#))

WARNING

Groups [G06V 10/70](#) and [G06V 10/766](#) are incomplete pending reclassification of documents from groups [G06K-9/00](#)[G06F 18/00](#), [G06K-9/62](#)[G06F 18/00](#), [G06K-9/6217](#)[G06F 18/21](#), [G06V 10/10](#), [G06V 10/20](#) and [G06V 30/194](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/72

- Data preparation, e.g. statistical preprocessing of image or video features

WARNING

Group [G06V 10/72](#) is incomplete pending reclassification of documents from groups [G06K-9/00](#)[G06F 18/00](#), [G06K-9/6298](#)[G06F 18/10](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U G06V 10/74

- Image or video pattern matching; Proximity measures in feature spaces

G06V 10/75

- Organisation of the matching processes, e.g. simultaneous or sequential comparisons of image or video features; Coarse-fine approaches, e.g. multi-scale approaches; using context analysis; Selection of dictionaries

WARNING

Group [G06V 10/75](#) is incomplete pending reclassification of documents from groups [G06K-9/00](#)[G06F 18/00](#), [G06K-9/6201](#)[G06F 18/22](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/75](#) is also impacted by reclassification into groups [G06V 30/19007](#), [G06V 30/192](#), [G06V 30/196](#) and [G06V 30/198](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/751 {Comparing pixel values or logical combinations thereof, or feature values having positional relevance, e.g. template matching}
- WARNING
 Group [G06V 10/751](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/751](#) is also impacted by reclassification into group [G06V 30/19013](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/7515 {Shifting the patterns to accommodate for positional errors}
- WARNING
 Group [G06V 10/7515](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/7515](#) is also impacted by reclassification into group [G06V 30/1902](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/752 {Contour matching}
- WARNING
 Group [G06V 10/752](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/752](#) is also impacted by reclassification into group [G06V 30/19027](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/753 {Transform-based matching, e.g. Hough transform}
- WARNING
 Group [G06V 10/753](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/753](#) is also impacted by reclassification into group [G06V 30/19033](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/754 {involving a deformation of the sample pattern or of the reference pattern; Elastic matching}
- WARNING
 Group [G06V 10/754](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/754](#) is also impacted by reclassification into group [G06V 30/1904](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/755 {Deformable models or variational models, e.g. snakes or active contours}
- WARNING
 Group [G06V 10/755](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/755](#) is also impacted by reclassification into group [G06V 30/19047](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/7553
 - • • • {based on shape, e.g. active shape models [ASM]}
 - WARNING
 - Group [G06V 10/7553](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 - Group [G06V 10/7553](#) is also impacted by reclassification into group [G06V 30/19053](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/7557
 - • • • {based on appearance, e.g. active appearance models [AAM]}
 - WARNING
 - Group [G06V 10/7557](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 - Group [G06V 10/7557](#) is also impacted by reclassification into group [G06V 30/1906](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/757
 - • • • {Matching configurations of points or features}
 - WARNING
 - Group [G06V 10/757](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 - Group [G06V 10/757](#) is also impacted by reclassification into group [G06V 30/19067](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/758
 - • • • {Involving statistics of pixels or of feature values, e.g. histogram matching}
 - WARNING
 - Group [G06V 10/758](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 - Group [G06V 10/758](#) is also impacted by reclassification into group [G06V 30/19073](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/759
 - • • • {Region-based matching}
 - WARNING
 - Group [G06V 10/759](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 - Group [G06V 10/759](#) is also impacted by reclassification into group [G06V 30/1908](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/76
 - • • • {based on eigen-space representations, e.g. from pose or different illumination conditions; Shape manifolds}
 - WARNING
 - Group [G06V 10/76](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/76](#) is also impacted by reclassification into group [G06V 30/19087](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/761
- • {Proximity, similarity or dissimilarity measures}
- WARNING
- Group [G06V 10/761](#) is incomplete pending reclassification of documents from groups [G06K 9/00 G06F 18/00](#), [G06K 9/6215 G06F 18/22](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/762
- • using clustering, e.g. of similar faces in social networks
- WARNING
- Group [G06V 10/762](#) is incomplete pending reclassification of documents from groups [G06K 9/00 G06F 18/00](#), [G06K 9/6218 G06F 18/23](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/7625
- • {Hierarchical techniques, i.e. dividing or merging patterns to obtain a tree-like representation; Dendograms}
- WARNING
- Group [G06V 10/7625](#) is incomplete pending reclassification of documents from groups [G06K 9/00 G06F 18/00](#), [G06K 9/6219 G06F 18/231](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/763
- • {Non-hierarchical techniques, e.g. based on statistics of modelling distributions}
- WARNING
- Group [G06V 10/763](#) is incomplete pending reclassification of documents from groups [G06K 9/00 G06F 18/00](#), [G06K 9/622 G06F 18/232](#), [G06K 9/6221 G06F 18/2321](#), [G06K 9/6222 G06F 18/23211](#), [G06K 9/6223 G06F 18/23213](#), [G06K 9/6226 G06F 18/2321](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/7635
- • {based on graphs, e.g. graph cuts or spectral clustering}
- WARNING
- Group [G06V 10/7635](#) is incomplete pending reclassification of documents from groups [G06K 9/00 G06F 18/00](#), [G06K 9/6224 G06F 18/2323](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/764
- • using classification, e.g. of video objects
- WARNING
- Group [G06V 10/764](#) is incomplete pending reclassification of documents from groups [G06K 9/00 G06F 18/00](#), [G06K 9/6267 G06F 18/24](#), [G06K 9/6268 G06F 18/241](#), [G06K 9/6269 G06F 18/2411](#), [G06K 9/627 G06F 18/2413](#), [G06K 9/6271 G06F 18/24133](#), [G06K 9/6272 G06F 18/24137](#), [G06K 9/6273 G06F 18/2414](#),

[G06K-9/6274](#)[G06F 18/24143](#), [G06K-9/6276](#)[G06F 18/24147](#),
[G06K-9/6277](#)[G06F 18/2415](#), [G06K-9/6278](#)[G06F 18/24155](#),
[G06K-9/6279](#)[G06F 18/243](#), [G06K-9/628](#)[G06F 18/2431](#),
[G06K-9/6281](#)[G06F 18/24317](#), [G06K-9/6282](#)[G06F 18/24323](#),
[G06K-9/6284](#)[G06F 18/2433](#), [G06K-9/6285](#)[G06F 18/245](#),
[G06K-9/6286](#)[G06F 18/2451](#), [G06K-9/6287](#)[G06F 18/2453](#), [G06V 10/10](#) and
[G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/765

- • • {using rules for classification or partitioning the feature space}

WARNING

Group [G06V 10/765](#) is incomplete pending reclassification of documents from groups [G06K-9/00](#)[G06F 18/00](#), [G06K-9/626](#)[G06F 18/24765](#),
[G06K-9/6261](#)[G06F 18/2163](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/768

- • • {using context analysis, e.g. recognition aided by known co-occurring patterns}

WARNING

Group [G06V 10/768](#) is incomplete pending reclassification of documents from groups [G06K-9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/768](#) is also impacted by reclassification into group [G06V 30/262](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U G06V 10/77

- • • Processing image or video features in feature spaces; using data integration or data reduction, e.g. principal component analysis [PCA] or independent component analysis [ICA] or self-organising maps [SOM]; Blind source separation

G06V 10/771

- • • Feature selection, e.g. selecting representative features from a multi-dimensional feature space

WARNING

Group [G06V 10/771](#) is incomplete pending reclassification of documents from groups [G06K-9/00](#)[G06F 18/00](#), [G06K-9/6228](#)[G06F 18/211](#),
[G06K-9/6229](#)[G06F 18/2111](#), [G06K-9/623](#)[G06F 18/2113](#),
[G06K-9/6231](#)[G06F 18/2115](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/7715

- • • {Feature extraction, e.g. by transforming the feature space, e.g. multi-dimensional scaling [MDS]; Mappings, e.g. subspace methods}

WARNING

Group [G06V 10/7715](#) is incomplete pending reclassification of documents from groups [G06K-9/00](#)[G06F 18/00](#), [G06K-9/6232](#)[G06F 18/213](#),
[G06K-9/6234](#)[G06F 18/2132](#), [G06K-9/6235](#)[G06F 18/21322](#),
[G06K-2009/6236](#)[G06F 18/21324](#), [G06K-2009/6237](#)[G06F 18/21326](#),
[G06K-2009/6238](#)[G06F 18/21328](#), [G06K-9/6239](#)[G06F 18/2133](#),
[G06K-9/624](#)[G06F 18/2134](#), [G06K-9/6242](#)[G06F 18/21342](#),
[G06K-9/6243](#)[G06F 18/21343](#), [G06K-9/6244](#)[G06F 18/21345](#),
[G06K-9/6245](#)[G06F 18/21347](#), [G06K-9/6246](#)[G06F 18/21348](#),
[G06K-9/6247](#)[G06F 18/2135](#), [G06K-9/6248](#)[G06F 18/21355](#),
[G06K-9/6249](#)[G06F 18/2136](#), [G06K-9/6251](#)[G06F 18/2137](#),
[G06K-9/6252](#)[G06F 18/21375](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/772

- • Determining representative reference patterns, e.g. averaging or distorting patterns; Generating dictionaries

WARNING

Group [G06V 10/772](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6255](#)[G06F 18/28](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/774

- • Generating sets of training patterns; Bootstrap methods, e.g. bagging or boosting

WARNING

Group [G06V 10/774](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6256](#)[G06F 18/214](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/7747

- • • {Organisation of the process, e.g. bagging or boosting}

WARNING

Group [G06V 10/7747](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6257](#)[G06F 18/2148](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/7753

- • • {Incorporation of unlabelled data, e.g. multiple instance learning [MIL]}

WARNING

Group [G06V 10/7753](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6259](#)[G06F 18/2155](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/776

- • Validation; Performance evaluation

WARNING

Group [G06V 10/776](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6262](#)[G06F 18/217](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 10/778

- • Active pattern-learning, e.g. online learning of image or video features

WARNING

Group [G06V 10/778](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6262](#)[G06F 18/217](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/7784 {based on feedback from supervisors}
- WARNING
Group [G06V 10/7784](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6263](#)[G06F 18/2178](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/7788 {the supervisor being a human, e.g. interactive learning with a human teacher}
- WARNING
Group [G06V 10/7788](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6254](#)[G06F 18/41](#), [G06K 9/6264](#)[G06F 18/2185](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/7796 {based on specific statistical tests}
- WARNING
Group [G06V 10/7796](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6265](#)[G06F 18/2193](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/80 . . . Fusion, i.e. combining data from various sources at the sensor level, preprocessing level, feature extraction level or classification level (multimodal speaker identification or verification [G10L 17/10](#))
- WARNING
Group [G06V 10/80](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6288](#)[G06F 18/25](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/803 {of input or preprocessed data}
- WARNING
Group [G06V 10/803](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6289](#)[G06F 18/251](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/806 {of extracted features}
- WARNING
Group [G06V 10/806](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/629](#)[G06F 18/253](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/809
- • • {of classification results, e.g. where the classifiers operate on the same input data}
- WARNING
- Group [G06V 10/809](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6292](#)[G06F 18/254](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/811
- • • • {the classifiers operating on different input data, e.g. multi-modal recognition}
- WARNING
- Group [G06V 10/811](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6293](#)[G06F 18/256](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/814
- • • • {using belief theory, e.g. Dempster-Shafer}
- WARNING
- Group [G06V 10/814](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 2009/6294](#)[G06F 18/257](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/817
- • • • {by voting}
- WARNING
- Group [G06V 10/817](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 2009/6295](#)[G06F 18/259](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/84
- • using probabilistic graphical models from image or video features, e.g. Markov models or Bayesian networks
- WARNING
- Group [G06V 10/84](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6296](#)[G06F 18/29](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/85
- • • {Markov-related models; Markov random fields}
- WARNING
- Group [G06V 10/85](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6297](#)[G06F 18/295](#), [G06V 10/10](#) and [G06V 10/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/87
- {using selection of the recognition techniques, e.g. of a classifier in a multiple classifier system}
- WARNING
Group [G06V 10/87](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06K 9/6227](#) [G06F 18/285](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/88
- Image or video recognition using optical means, e.g. reference filters, holographic masks, frequency domain filters or spatial domain filters
- WARNING
Group [G06V 10/88](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
Group [G06V 10/88](#) is also impacted by reclassification into groups [G06V 30/199](#) and [G06V 30/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/89
- {using frequency domain filters, e.g. Fourier masks implemented on spatial light modulators}
- WARNING
Group [G06V 10/89](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
Group [G06V 10/89](#) is also impacted by reclassification into group [G06V 30/199](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/893
- • {characterised by the kind of filter}
- WARNING
Group [G06V 10/893](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
Group [G06V 10/893](#) is also impacted by reclassification into group [G06V 30/199](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/895
- • • {the filter being related to phase processing, e.g. phase-only filters}
- WARNING
Group [G06V 10/895](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
Group [G06V 10/895](#) is also impacted by reclassification into group [G06V 30/199](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/898
- • • {combination of filters, e.g. phase-only filters}
- WARNING
Group [G06V 10/898](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
Group [G06V 10/898](#) is also impacted by reclassification into group [G06V 30/199](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 10/92
- {using spatial domain filters, e.g. joint transform correlators}
- WARNING
Group [G06V 10/92](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#) and [G06V 10/20](#).
Group [G06V 10/92](#) is also impacted by reclassification into group [G06V 30/199](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/94
- Hardware or software architectures specially adapted for image or video understanding
- WARNING
Groups [G06V 10/94](#), [G06V 10/95](#) and [G06V 10/955](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 10/945
- {User interactive design; Environments; Toolboxes}
- WARNING
Group [G06V 10/945](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06K 9/6253](#)[G06F 18/40](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6253](#)[G06F 18/40](#) and [G06V 10/945](#) should be considered in order to perform a complete search.
- G06V 10/96
- Management of image or video recognition tasks
- WARNING
Group [G06V 10/96](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 10/96](#) should be considered in order to perform a complete search.
- G06V 10/98
- Detection or correction of errors, e.g. by rescanning the pattern or by human intervention; Evaluation of the quality of the acquired patterns
- WARNING
Group [G06V 10/98](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 10/98](#) is also impacted by reclassification into group [G06V 30/12](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/98](#) and [G06V 30/12](#) should be considered in order to perform a complete search.

Project: RP11770 in addition to RP11902 (G06V)

- G06V 20/00
- Scenes; Scene-specific elements (control of digital cameras
[H04N 5/232](#)[H04N 23/60](#))**
- NOTE
In this group, the following term is used with the meaning indicated:
- "scene" is a visual representation of the world or of some elements of it, as captured by a sensor or generated by a computer.
- WARNING
Group [G06V 20/00](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 20/00](#) is also impacted by reclassification into groups [G06V 20/05](#), [G06V 20/50](#), [G06V 20/60](#), [G06V 20/66](#), [G06V 20/69](#), [G06V 20/693](#), [G06V 20/695](#), [G06V 20/698](#) and [G06V 20/70](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP11770 (G06V)

- G06V 20/05
- Underwater scenes
- WARNING
Group [G06V 20/05](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 20/00](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 20/00](#) and [G06V 20/05](#) should be considered in order to perform a complete search.
- G06V 20/10
- Terrestrial scenes (scenes under surveillance with static cameras [G06V 20/52](#); scenes perceived from the exterior of a vehicle [G06V 20/56](#); scenes perceived from the interior of a vehicle [G06V 20/59](#))
- WARNING
Groups [G06V 20/10](#), [G06V 20/176](#), [G06V 20/182](#), [G06V 20/188](#) and [G06V 20/194](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/13
- • Satellite images
- WARNING
Group [G06V 20/13](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Group [G06V 20/13](#) is also impacted by reclassification into group [G06V 20/17](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 20/13](#) and [G06V 20/17](#) should be considered in order to perform a complete search.
- G06V 20/17
- • taken from planes or by drones
- WARNING
Group [G06V 20/17](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 20/13](#).
Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 20/13](#) and [G06V 20/17](#) should be considered in order to perform a complete search.
- G06V 20/20
- in augmented reality scenes
- WARNING
Group [G06V 20/20](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 20/20](#) should be considered in order to perform a complete search.
- G06V 20/30
- in albums, collections or shared content, e.g. social network photos or video
- WARNING
Group [G06V 20/30](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).
Groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 20/30](#) should be considered in order to perform a complete search.

- G06V 20/35
- {Categorising the entire scene, e.g. birthday party or wedding scene}
- WARNING
Groups [G06V 20/35](#), [G06V 20/36](#), [G06V 20/38](#) and [G06V 20/39](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/40
- in video content (extracting overlay text [G06V 20/62](#); video retrieval [G06F 16/70](#); processing of video elementary streams in video servers [H04N 21/234](#); processing of video elementary streams in video clients [H04N 21/44](#))
- WARNING
Groups [G06V 20/40](#), [G06V 20/41](#), [G06V 20/42](#), [G06V 20/43](#), [G06V 20/44](#), [G06V 20/46](#), [G06V 20/47](#), [G06V 20/48](#) and [G06V 20/49](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/50
- Context or environment of the image
- WARNING
Group [G06V 20/50](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 20/00](#). Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 20/00](#) and [G06V 20/50](#) should be considered in order to perform a complete search.
- G06V 20/52
- • Surveillance or monitoring of activities, e.g. for recognising suspicious objects (recognising microscopic objects [G06V 20/69](#))
- WARNING
Groups [G06V 20/52](#), [G06V 20/53](#) and [G06V 20/54](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/56
- • exterior to a vehicle by using sensors mounted on the vehicle
- WARNING
Groups [G06V 20/56](#), [G06V 20/58](#), [G06V 20/582](#), [G06V 20/584](#), [G06V 20/586](#) and [G06V 20/588](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/59
- • inside of a vehicle, e.g. relating to seat occupancy, driver state or inner lighting conditions
- WARNING
Groups [G06V 20/59](#), [G06V 20/593](#) and [G06V 20/597](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/60
- Type of objects
- WARNING
Groups [G06V 20/60](#), [G06V 20/66](#), [G06V 20/69](#), [G06V 20/693](#), [G06V 20/695](#) and [G06V 20/698](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 20/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 20/62
- Text, e.g. of license plates, overlay texts or captions on TV images
- WARNING
Groups [G06V 20/62](#), [G06V 20/625](#), [G06V 20/63](#) and [G06V 20/635](#) are incomplete pending reclassification of documents from group [G06K 9/00](#) [G06F 18/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/64
- Three-dimensional objects
- WARNING
Groups [G06V 20/64](#), [G06V 20/647](#) and [G06V 20/653](#) are incomplete pending reclassification of documents from group [G06K 9/00](#) [G06F 18/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 20/68
- Food, e.g. fruit or vegetables
- WARNING
Group [G06V 20/68](#) is incomplete pending reclassification of documents from group [G06K 9/00](#) [G06F 18/00](#).
Groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 20/68](#) should be considered in order to perform a complete search.
- G06V 20/70
- Labelling scene content, e.g. deriving syntactic or semantic representations
- WARNING
Group [G06V 20/70](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 20/00](#).
Groups [G06K 9/00](#) [G06F 18/00](#), [G06V 20/00](#) and [G06V 20/70](#) should be considered in order to perform a complete search.
- G06V 20/80
- Recognising image objects characterised by unique random patterns
- WARNING
Group [G06V 20/80](#) is incomplete pending reclassification of documents from group [G06K 9/00](#) [G06F 18/00](#).
Groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 20/80](#) should be considered in order to perform a complete search.
- G06V 20/90
- Identifying an image sensor based on its output data
- WARNING
Group [G06V 20/90](#) is incomplete pending reclassification of documents from group [G06K 9/00](#) [G06F 18/00](#).
Groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 20/90](#) should be considered in order to perform a complete search.

G06V 30/00

Character recognition; Recognising digital ink; Document-oriented image-based pattern recognition (scanning, transmission or reproduction of documents or the like [H04N 1/00](#))

NOTE

This group covers recognition of characters or digital ink, where the characters or the digital ink can include representations in three dimensions, e.g. as written by performing gestures in the air.

WARNING

Groups [G06V 30/00](#), [G06V 30/412](#), [G06V 30/413](#), [G06V 30/414](#), [G06V 30/416](#), [G06V 30/418](#), [G06V 30/42](#), [G06V 30/422](#) and [G06V 30/424](#) are incomplete pending reclassification of documents from group ~~G06K 9/00~~[G06F 18/00](#). All groups listed in this Warning should be considered in order to perform a complete search.

G06V 30/10

- Character recognition

WARNING

Group [G06V 30/10](#) is incomplete pending reclassification of documents from group ~~G06K 9/00~~[G06F 18/00](#).

Group [G06V 30/10](#) is also impacted by reclassification into groups [G06V 30/12](#), [G06V 30/127](#), [G06V 30/133](#), [G06V 30/14](#), [G06V 30/141](#), [G06V 30/142](#), [G06V 30/1423](#), [G06V 30/1426](#), [G06V 30/1429](#), [G06V 30/1431](#), [G06V 30/1434](#), [G06V 30/1437](#), [G06V 30/144](#), [G06V 30/1444](#), [G06V 30/1448](#), [G06V 30/1452](#), [G06V 30/1456](#), [G06V 30/146](#), [G06V 30/1463](#), [G06V 30/1465](#), [G06V 30/1468](#), [G06V 30/147](#), [G06V 30/1473](#), [G06V 30/1475](#), [G06V 30/1478](#), [G06V 30/148](#), [G06V 30/15](#), [G06V 30/153](#), [G06V 30/155](#), [G06V 30/158](#), [G06V 30/16](#), [G06V 30/1607](#), [G06V 30/1613](#), [G06V 30/162](#), [G06V 30/164](#), [G06V 30/166](#), [G06V 30/168](#), [G06V 30/18](#), [G06V 30/1801](#), [G06V 30/18019](#), [G06V 30/18029](#), [G06V 30/18038](#), [G06V 30/18048](#), [G06V 30/18057](#), [G06V 30/18067](#), [G06V 30/18076](#), [G06V 30/18086](#), [G06V 30/18095](#), [G06V 30/18105](#), [G06V 30/18114](#), [G06V 30/18124](#), [G06V 30/18133](#), [G06V 30/18143](#), [G06V 30/18152](#), [G06V 30/18162](#), [G06V 30/18171](#), [G06V 30/18181](#), [G06V 30/1819](#), [G06V 30/182](#), [G06V 30/1823](#), [G06V 30/1826](#), [G06V 30/1829](#), [G06V 30/1831](#), [G06V 30/1834](#), [G06V 30/1837](#), [G06V 30/184](#), [G06V 30/186](#), [G06V 30/187](#), [G06V 30/188](#), [G06V 30/189](#), [G06V 30/19](#), [G06V 30/19007](#), [G06V 30/19013](#), [G06V 30/1902](#), [G06V 30/19027](#), [G06V 30/19033](#), [G06V 30/1904](#), [G06V 30/19047](#), [G06V 30/19053](#), [G06V 30/1906](#), [G06V 30/19067](#), [G06V 30/19073](#), [G06V 30/1908](#), [G06V 30/19087](#), [G06V 30/19093](#), [G06V 30/191](#), [G06V 30/19107](#), [G06V 30/19113](#), [G06V 30/1912](#), [G06V 30/19127](#), [G06V 30/19133](#), [G06V 30/1914](#), [G06V 30/19147](#), [G06V 30/19153](#), [G06V 30/1916](#), [G06V 30/19167](#), [G06V 30/19173](#), [G06V 30/1918](#), [G06V 30/19187](#), [G06V 30/19193](#), [G06V 30/192](#), [G06V 30/194](#), [G06V 30/195](#), [G06V 30/196](#), [G06V 30/198](#), [G06V 30/1983](#), [G06V 30/1985](#), [G06V 30/1988](#), [G06V 30/199](#), [G06V 30/20](#), [G06V 30/22](#), [G06V 30/222](#), [G06V 30/224](#), [G06V 30/2247](#), [G06V 30/2253](#), [G06V 30/226](#), [G06V 30/2264](#), [G06V 30/2268](#), [G06V 30/2272](#), [G06V 30/2276](#), [G06V 30/228](#), [G06V 30/24](#), [G06V 30/242](#), [G06V 30/244](#), [G06V 30/2445](#), [G06V 30/245](#), [G06V 30/2455](#), [G06V 30/246](#), [G06V 30/248](#), [G06V 30/2504](#), [G06V 30/2528](#), [G06V 30/2552](#), [G06V 30/26](#), [G06V 30/262](#), [G06V 30/268](#), [G06V 30/274](#), [G06V 30/28](#), [G06V 30/287](#), [G06V 30/293](#), [G06V 30/30](#), [G06V 30/302](#), [G06V 30/304](#), [G06V 30/32](#), [G06V 30/333](#), [G06V 30/347](#), [G06V 30/36](#), [G06V 30/373](#) and [G06V 30/387](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/12
- • Detection or correction of errors, e.g. by rescanning the pattern
- WARNING
Group [G06V 30/12](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/98](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/127
- • • {with the intervention of an operator}
- WARNING
Group [G06V 30/127](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/987](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/133
- • • {Evaluation of quality of the acquired characters}
- WARNING
Group [G06V 30/133](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/993](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/14
- • Image acquisition
- WARNING
Groups [G06V 30/14](#), [G06V 30/1423](#), [G06V 30/144](#), [G06V 30/153](#) and [G06V 30/158](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/141
- • • {using multiple overlapping images; Image stitching}
- WARNING
Group [G06V 30/141](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#), [G06V 10/16](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/142
- • • using hand-held instruments; Constructional details of the instruments
- WARNING
Group [G06V 30/142](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#), [G06V 10/12](#), [G06V 10/17](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1426
- • • • {by sensing position defining codes on a support}
- WARNING
Group [G06V 30/1426](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/10](#), [G06V 10/19](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1429
- • • {Identifying or ignoring parts by sensing at different wavelengths}
- WARNING
 Group [G06V 30/1429](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#), [G06V 10/143](#), [G06V 10/147](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1431
- • • {Illumination control}
- WARNING
 Group [G06V 30/1431](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#), [G06V 10/141](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1434
- • • {Special illumination such as grating, reflections or deflections, e.g. for characters with relief}
- WARNING
 Group [G06V 30/1434](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#), [G06V 10/145](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1437
- • • {Sensor details, e.g. position, configuration or special lenses ([G06V 30/1429](#) takes precedence)}
- WARNING
 Group [G06V 30/1437](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#), [G06V 10/147](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1444
- • • {Selective acquisition, locating or processing of specific regions, e.g. highlighted text, fiducial marks or predetermined fields}
- WARNING
 Group [G06V 30/1444](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#), [G06V 10/22](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1448
- • • • {based on markings or identifiers characterising the document or the area}
- WARNING
 Group [G06V 30/1448](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/10](#), [G06V 10/225](#), [G06V 10/245](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1452
- • • {based on positionally close symbols, e.g. amount sign or URL-specific characters}
- WARNING
- Group [G06V 30/1452](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/23](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1456
- • • {based on user interactions}
- WARNING
- Group [G06V 30/1456](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/235](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/146
- • • Aligning or centring of the image pick-up or image-field
- WARNING
- Group [G06V 30/146](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/24](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1463
- • • {Orientation detection or correction, e.g. rotation of multiples of 90 degrees}
- WARNING
- Group [G06V 30/1463](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/242](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1465
- • • {by locating a pattern ([G06V 30/1475](#) takes precedence; centring within a document with a marking [G06V 30/1448](#))}
- WARNING
- Groups [G06V 30/1465](#) and [G06V 30/1468](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/245](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/147
- • • {Determination of region of interest}
- WARNING
- Group [G06V 30/147](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/25](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1473 {Recognising objects as potential recognition candidates based on visual cues, e.g. shapes}
- WARNING
Group [G06V 30/1473](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/255](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1475 {Inclination or skew detection or correction of characters or of image to be recognised}
- WARNING
Group [G06V 30/1475](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/243](#), [G06V 10/245](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1478 {of characters or characters lines}
- WARNING
Group [G06V 30/1478](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/245](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/148 Segmentation of character regions
- WARNING
Group [G06V 30/148](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/26](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/15 {Cutting or merging image elements, e.g. region growing, watershed or clustering-based techniques}
- WARNING
Group [G06V 30/15](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/267](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/155 {Removing patterns interfering with the pattern to be recognised, such as ruled lines or underlines}
- WARNING
Group [G06V 30/155](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/273](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/16
- • Image preprocessing
- WARNING
Group [G06V 30/16](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/20](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1607
- • • {Correcting image deformation, e.g. trapezoidal deformation caused by perspective}
- WARNING
Group [G06V 30/1607](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/20](#), [G06V 10/247](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1613
- • • {Interactive preprocessing or shape modelling, e.g. assignment of feature points by a user}
- WARNING
Group [G06V 30/1613](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/20](#), [G06V 10/248](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/162
- • • Quantising the image signal
- WARNING
Group [G06V 30/162](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/20](#), [G06V 10/28](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/164
- • • Noise filtering
- WARNING
Group [G06V 30/164](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/20](#), [G06V 10/30](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/166
- • • Normalisation of pattern dimensions
- WARNING
Group [G06V 30/166](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/20](#), [G06V 10/32](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/168
- • • Smoothing or thinning of the pattern; Skeletonisation
- WARNING
Group [G06V 30/168](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/20](#), [G06V 10/34](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/18
 - Extraction of features or characteristics of the image

WARNING
Group [G06V 30/18](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/40](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1801
 - • {Detecting partial patterns, e.g. edges or contours, or configurations, e.g. loops, corners, strokes or intersections (extracting features by contour coding [G06V 30/182](#))}

WARNING
Group [G06V 30/1801](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/44](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/18019
 - • • {by matching or filtering}

WARNING
Group [G06V 30/18019](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/443](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/18029
 - • • • {filtering with Haar-like subimages, e.g. computation thereof with the integral image technique}

WARNING
Group [G06V 30/18029](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/446](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/18038
 - • • • {Biologically-inspired filters, e.g. difference of Gaussians [DoG], Gabor filters}

WARNING
Group [G06V 30/18038](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/449](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/18048
 - • • • • {with interaction between the responses of different filters, e.g. cortical complex cells}

WARNING
Group [G06V 30/18048](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/451](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/18057 {Integrating the filters into a hierarchical structure, e.g. convolutional neural networks [CNN]}
- WARNING
Group [G06V 30/18057](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/454](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18067 {by mapping characteristic values of the pattern into a parameter space, e.g. Hough transformation}
- WARNING
Group [G06V 30/18067](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/48](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18076 {by analysing connectivity, e.g. edge linking, connected component analysis or slices}
- WARNING
Group [G06V 30/18076](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/457](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18086 . . . {by performing operations within image blocks or by using histograms}
- WARNING
Group [G06V 30/18086](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/50](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18095 {Summing image-intensity values; Projection and histogram analysis}
- WARNING
Group [G06V 30/18095](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/507](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18105 . . . {related to colour}
- WARNING
Group [G06V 30/18105](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/56](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18114 . . . {involving specific hyperspectral computations of features}
- WARNING
Group [G06V 30/18114](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/58](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/18124
- • • {related to illumination properties, e.g. according to a reflectance or lighting model}
- WARNING
Group [G06V 30/18124](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/60](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18133
- • • {regional/local feature not essentially salient, e.g. local binary pattern}
- WARNING
Group [G06V 30/18133](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/467](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18143
- • • {Extracting features based on salient regional features, e.g. scale invariant feature transform [SIFT] keypoints}
- WARNING
Group [G06V 30/18143](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/462](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18152
- • • • {Extracting features based on a plurality of salient regional features, e.g. "bag of words"}
- WARNING
Group [G06V 30/18152](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/464](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18162
- • • {related to a structural representation of the pattern}
- WARNING
Group [G06V 30/18162](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/422](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18171
- • • • {Syntactic representation, e.g. using a grammatical approach}
- WARNING
Group [G06V 30/18171](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/424](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/18181
- • • • {Graphical representation, e.g. directed attributed graph}
- WARNING
Group [G06V 30/18181](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/426](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1819 . . . {sparse representations}
- WARNING
Group [G06V 30/1819](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/513](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/182 . . . by coding the contour of the pattern
- WARNING
Group [G06V 30/182](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/44](#), [G06V 10/46](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1823 {using vector-coding}
- WARNING
Group [G06V 30/1823](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/44](#), [G06V 10/469](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1826 {analysing the spectrum of the contour, e.g. Fourier expansion}
- WARNING
Group [G06V 30/1826](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/44](#), [G06V 10/478](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1829 {using an approximation function}
- WARNING
Group [G06V 30/1829](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/44](#), [G06V 10/471](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1831 {using gradient analysis}
- WARNING
Group [G06V 30/1831](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/44](#), [G06V 10/473](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1834 {using statistical shape modelling, e.g. point distribution model}
- WARNING
Group [G06V 30/1834](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/44](#), [G06V 10/476](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1837
- • • {using wavelet analysis}
- WARNING
Group [G06V 30/1837](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/44](#), [G06V 10/478](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/184
- • • by analysing segments intersecting the pattern
- WARNING
Group [G06V 30/184](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/421](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/186
- • • by deriving mathematical or geometrical properties from the whole image
- WARNING
Group [G06V 30/186](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/42](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/187
- • • {Frequency domain transformation; Autocorrelation}
- WARNING
Group [G06V 30/187](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/431](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/188
- • • {Computation of moments}
- WARNING
Group [G06V 30/188](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/435](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/189
- • • {Scale-space domain transformation, e.g. with wavelet analysis}
- WARNING
Group [G06V 30/189](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/52](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19
- • Recognition using electronic means
- WARNING
Group [G06V 30/19](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/62](#)[G06F 18/00](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19007
- • • {Matching; Proximity measures}
- WARNING
Group [G06V 30/19007](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6204](#)[G06F 18/22](#), [G06V 10/75](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19013 {Comparing pixel values or logical combinations thereof, or feature values having positional relevance, e.g. template matching (specially adapted for image segmentation [G06T 7/10](#); specially adapted for the analysis of motion [G06T 7/20](#); specially adapted for image alignment [G06T 7/30](#); specially adapted for the calculation of depth from stereo images [G06T 7/50](#); specially adapted for position determination [G06T 7/70](#))}

WARNING

Group [G06V 30/19013](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/751](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1902 {Shifting or otherwise transforming the patterns to accommodate for positional errors}

WARNING

Group [G06V 30/1902](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/7515](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19027 {Matching of contours}

WARNING

Group [G06V 30/19027](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/752](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19033 {by mapping curve parameters onto an accumulator array, e.g. generalised Hough Transform}

WARNING

Group [G06V 30/19033](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/753](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1904 {involving a deformation of the sample or reference pattern; Elastic matching}

WARNING

Group [G06V 30/1904](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/754](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19047 {based on a local optimisation criterion, e.g. "snakes", i.e. active contour models of the pattern to be recognised}
- WARNING
Group [G06V 30/19047](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/755](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19053 {based on shape statistics, e.g. active shape models of the pattern to be recognised}
- WARNING
Group [G06V 30/19053](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/7553](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1906 {based also on statistics of image patches, e.g. active appearance models of the pattern to be recognised}
- WARNING
Group [G06V 30/1906](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/7557](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19067 {Matching configurations of points or features, e.g. constellation matching}
- WARNING
Group [G06V 30/19067](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/757](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19073 {Comparing statistics of pixel or of feature values, e.g. histogram matching}
- WARNING
Group [G06V 30/19073](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/758](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1908 {Region based matching}
- WARNING
Group [G06V 30/1908](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/759](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19087 . . . {based on parametric eigenspace representations, e.g. eigenspace representations using pose or illumination parameters; Shape manifold}
- WARNING
Group [G06V 30/19087](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/76](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19093 . . . {Proximity measures, i.e. similarity or distance measures}
- WARNING
Group [G06V 30/19093](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6215](#)[G06F 18/22](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/191 . . . {Design or setup of recognition systems or techniques; Extraction of features in feature space; Clustering techniques; Blind source separation}
- WARNING
Group [G06V 30/191](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6217](#)[G06F 18/21](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19107 . . . {Clustering techniques}
- WARNING
Group [G06V 30/19107](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6218](#)[G06F 18/23](#), [G06K 9/6219](#)[G06F 18/231](#), [G06K 9/622](#)[G06F 18/232](#), [G06K 9/6221](#)[G06F 18/2321](#), [G06K 9/6222](#)[G06F 18/23211](#), [G06K 9/6223](#)[G06F 18/23213](#), [G06K 9/6224](#)[G06F 18/2323](#), [G06K 9/6226](#)[G06F 18/2321](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19113 . . . {Selection of pattern recognition techniques, e.g. of classifiers in a multi-classifier system}
- WARNING
Group [G06V 30/19113](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6227](#)[G06F 18/285](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1912 . . . {Selecting the most significant subset of features ([G06V 30/19127](#) takes precedence)}
- WARNING
Group [G06V 30/1912](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6228](#)[G06F 18/211](#), [G06K 9/6229](#)[G06F 18/2111](#), [G06K 9/623](#)[G06F 18/2113](#), [G06K 9/6231](#)[G06F 18/2115](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19127
 - • • {Extracting features by transforming the feature space, e.g. multidimensional scaling; Mappings, e.g. subspace methods}
 - WARNING
 - Group [G06V 30/19127](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6232](#)[G06F 18/213](#), [G06K 9/6234](#)[G06F 18/2132](#), [G06K 9/6235](#)[G06F 18/21322](#), [G06K 2009/6236](#)[G06F 18/21324](#), [G06K 2009/6237](#)[G06F 18/21326](#), [G06K 2009/6238](#)[G06F 18/21328](#), [G06K 9/6239](#)[G06F 18/2133](#), [G06K 9/624](#)[G06F 18/2134](#), [G06K 9/6242](#)[G06F 18/21342](#), [G06K 9/6243](#)[G06F 18/21343](#), [G06K 9/6244](#)[G06F 18/21345](#), [G06K 9/6245](#)[G06F 18/21347](#), [G06K 9/6246](#)[G06F 18/21348](#), [G06K 9/6247](#)[G06F 18/2135](#), [G06K 9/6248](#)[G06F 18/21355](#), [G06K 9/6249](#)[G06F 18/2136](#), [G06K 9/6251](#)[G06F 18/2137](#), [G06K 9/6252](#)[G06F 18/21375](#) and [G06V 30/10](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19133
 - • • {Interactive pattern learning with a human teacher}
 - WARNING
 - Group [G06V 30/19133](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6254](#)[G06F 18/41](#) and [G06V 30/10](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1914
 - • • {Determining representative reference patterns, e.g. averaging or distorting patterns; Generating dictionaries, e.g. user dictionaries}
 - WARNING
 - Group [G06V 30/1914](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6255](#)[G06F 18/28](#) and [G06V 30/10](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19147
 - • • {Obtaining sets of training patterns; Bootstrap methods, e.g. bagging or boosting}
 - WARNING
 - Group [G06V 30/19147](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6256](#)[G06F 18/214](#), [G06K 9/6257](#)[G06F 18/2148](#), [G06K 9/6259](#)[G06F 18/2155](#) and [G06V 30/10](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19153
 - • • {using rules for classification or partitioning the feature space}
 - WARNING
 - Group [G06V 30/19153](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/626](#)[G06F 18/24765](#), [G06K 9/6261](#)[G06F 18/2163](#) and [G06V 30/10](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/1916 . . . {Validation; Performance evaluation}
- WARNING
Group [G06V 30/1916](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6262](#)[G06F 18/217](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19167 . . . {Active pattern learning}
- WARNING
Group [G06V 30/19167](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6262](#)[G06F 18/217](#), [G06K 9/6263](#)[G06F 18/2178](#), [G06K 9/6264](#)[G06F 18/2185](#), [G06K 9/6265](#)[G06F 18/2193](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19173 . . . {Classification techniques}
- WARNING
Group [G06V 30/19173](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6267](#)[G06F 18/24](#), [G06K 9/6268](#)[G06F 18/241](#), [G06K 9/6269](#)[G06F 18/2411](#), [G06K 9/627](#)[G06F 18/2413](#), [G06K 9/6274](#)[G06F 18/24133](#), [G06K 9/6272](#)[G06F 18/24137](#), [G06K 9/6273](#)[G06F 18/2414](#), [G06K 9/6274](#)[G06F 18/24143](#), [G06K 9/6276](#)[G06F 18/24147](#), [G06K 9/6277](#)[G06F 18/2415](#), [G06K 9/6278](#)[G06F 18/24155](#), [G06K 9/6279](#)[G06F 18/243](#), [G06K 9/628](#)[G06F 18/2431](#), [G06K 9/6284](#)[G06F 18/24317](#), [G06K 9/6282](#)[G06F 18/24323](#), [G06K 9/6284](#)[G06F 18/2433](#), [G06K 9/6285](#)[G06F 18/245](#), [G06K 9/6286](#)[G06F 18/2451](#), [G06K 9/6287](#)[G06F 18/2453](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1918 . . . {Fusion techniques, i.e. combining data from various sources, e.g. sensor fusion}
- WARNING
Group [G06V 30/1918](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6288](#)[G06F 18/25](#), [G06K 9/6289](#)[G06F 18/251](#), [G06K 9/629](#)[G06F 18/253](#), [G06K 9/6292](#)[G06F 18/254](#), [G06K 9/6293](#)[G06F 18/256](#), [G06K 2009/6294](#)[G06F 18/257](#), [G06K 2009/6295](#)[G06F 18/259](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/19187 . . . {Graphical models, e.g. Bayesian networks or Markov models}
- WARNING
Group [G06V 30/19187](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6296](#)[G06F 18/29](#), [G06K 9/6297](#)[G06F 18/295](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/19193
- • • {Statistical pre-processing, e.g. techniques for normalisation or restoring missing data}
- WARNING
- Group [G06V 30/19193](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06K 9/6298](#)[G06F 18/10](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/192
- • • using simultaneous comparisons or correlations of the image signals with a plurality of references
- WARNING
- Group [G06V 30/192](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/75](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/194
- • • References adjustable by an adaptive method, e.g. learning
- WARNING
- Group [G06V 30/194](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 30/10](#).
- Group [G06V 30/194](#) is also impacted by reclassification into groups [G06V 10/70](#) and [G06V 10/766](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/195
- • • {using a resistor matrix}
- WARNING
- Group [G06V 30/195](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 30/10](#).
- Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 30/10](#) and [G06V 30/195](#) should be considered in order to perform a complete search.
- G06V 30/196
- • • using sequential comparisons of the image signals with a plurality of references
- WARNING
- Groups [G06V 30/196](#) and [G06V 30/198](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#), [G06V 10/75](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/1983
- • • {Syntactic or structural pattern recognition, e.g. symbolic string recognition}
- WARNING
- Groups [G06V 30/1983](#), [G06V 30/1985](#) and [G06V 30/1988](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 30/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/199
- Arrangements for recognition using optical reference masks, e.g. holographic masks
- WARNING
Group [G06V 30/199](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/20](#), [G06V 10/88](#), [G06V 10/89](#), [G06V 10/893](#), [G06V 10/895](#), [G06V 10/898](#), [G06V 10/92](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/20
- Combination of acquisition, preprocessing or recognition functions
- WARNING
Group [G06V 30/20](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 10/10](#), [G06V 10/20](#), [G06V 10/36](#), [G06V 10/88](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/22
- characterised by the type of writing
- WARNING
Groups [G06V 30/22](#), [G06V 30/222](#), [G06V 30/226](#), [G06V 30/2264](#), [G06V 30/2268](#), [G06V 30/2272](#), [G06V 30/2276](#) and [G06V 30/228](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/224
- of printed characters having additional code marks or containing code marks
- WARNING
Groups [G06V 30/224](#), [G06V 30/2247](#) and [G06V 30/2253](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#), [G06V 30/10](#) and [G06V 30/40](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/24
- characterised by the processing or recognition method (segmentation of character regions [G06V 30/148](#))
- WARNING
Groups [G06V 30/24](#), [G06V 30/242](#), [G06V 30/244](#), [G06V 30/2445](#), [G06V 30/245](#), [G06V 30/2455](#), [G06V 30/246](#), [G06V 30/248](#), [G06V 30/2504](#), [G06V 30/2528](#) and [G06V 30/2552](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/26
- Techniques for post-processing, e.g. correcting the recognition result
- WARNING
Groups [G06V 30/26](#), [G06V 30/268](#) and [G06V 30/274](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06F 18/00](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- G06V 30/262
- • using context analysis, e.g. lexical, syntactic or semantic context
- WARNING
Group [G06V 30/262](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06V 10/768](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/28
- • specially adapted to the type of the alphabet, e.g. Latin alphabet
- WARNING
Groups [G06V 30/28](#), [G06V 30/287](#) and [G06V 30/293](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/30
- • based on the type of data
- WARNING
Groups [G06V 30/30](#) and [G06V 30/304](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/302
- • Images containing characters for discriminating human versus automated computer access
- WARNING
Group [G06V 30/302](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#), [G06K 9/6262](#) [G06F 18/217](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/32
- • Digital ink
- WARNING
Groups [G06V 30/32](#), [G06V 30/333](#), [G06V 30/347](#), [G06V 30/36](#), [G06V 30/373](#) and [G06V 30/387](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/40
- Document-oriented image-based pattern recognition
- WARNING
Group [G06V 30/40](#) is incomplete pending reclassification of documents from group [G06K 9/00](#) [G06F 18/00](#).
Group [G06V 30/40](#) is also impacted by reclassification into groups [G06V 30/224](#), [G06V 30/2247](#), [G06V 30/2253](#) and [G06V 30/41](#). All groups listed in this Warning should be considered in order to perform a complete search.
- G06V 30/41
- • Analysis of document content (recognition of printed characters based on code marks [G06V 30/224](#))
- WARNING
Group [G06V 30/41](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) [G06F 18/00](#) and [G06V 30/40](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 30/40](#) and [G06V 30/41](#) should be considered in order to perform a complete search.

G06V 40/00

Recognition of biometric, human-related or animal-related patterns in image or video data

WARNING

Groups [G06V 40/00](#), [G06V 40/10](#), [G06V 40/103](#), [G06V 40/107](#), [G06V 40/11](#), [G06V 40/113](#), [G06V 40/117](#), [G06V 40/12](#), [G06V 40/1306](#), [G06V 40/1312](#), [G06V 40/1318](#), [G06V 40/1324](#), [G06V 40/1329](#), [G06V 40/1335](#), [G06V 40/1341](#), [G06V 40/1347](#), [G06V 40/1353](#), [G06V 40/1359](#), [G06V 40/1365](#), [G06V 40/1371](#), [G06V 40/1376](#), [G06V 40/1382](#), [G06V 40/1388](#), [G06V 40/1394](#), [G06V 40/14](#), [G06V 40/15](#), [G06V 40/155](#), [G06V 40/16](#), [G06V 40/161](#), [G06V 40/162](#), [G06V 40/164](#), [G06V 40/165](#), [G06V 40/166](#), [G06V 40/167](#), [G06V 40/168](#), [G06V 40/169](#), [G06V 40/171](#), [G06V 40/172](#), [G06V 40/173](#), [G06V 40/174](#), [G06V 40/175](#), [G06V 40/176](#), [G06V 40/178](#), [G06V 40/179](#), [G06V 40/18](#), [G06V 40/19](#), [G06V 40/193](#), [G06V 40/197](#), [G06V 40/20](#), [G06V 40/23](#), [G06V 40/25](#), [G06V 40/28](#), [G06V 40/30](#), [G06V 40/33](#), [G06V 40/37](#), [G06V 40/376](#), [G06V 40/382](#), [G06V 40/388](#), [G06V 40/394](#), [G06V 40/40](#), [G06V 40/45](#), [G06V 40/50](#), [G06V 40/53](#), [G06V 40/55](#), [G06V 40/58](#), [G06V 40/60](#), [G06V 40/63](#), [G06V 40/67](#) and [G06V 40/70](#) are incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U G06V 40/10
 - Human or animal bodies, e.g. vehicle occupants or pedestrians; Body parts, e.g. hands
- U G06V 40/12
 - • Fingerprints or palmprints
- G06V 40/13
 - • • Sensors therefor

WARNING

Group [G06V 40/13](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 40/13](#) is also impacted by reclassification into group [G06V 40/145](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 40/13](#) and [G06V 40/145](#) should be considered in order to perform a complete search.

- U G06V 40/14
 - • Vascular patterns
- G06V 40/145
 - • • Sensors therefor

WARNING

Group [G06V 40/145](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#)[G06F 18/00](#) and [G06V 40/13](#).

Groups [G06K 9/00](#)[G06F 18/00](#), [G06V 40/13](#) and [G06V 40/145](#) should be considered in order to perform a complete search.

Project: RP11770 (G07B)

- U G07B 17/00
 - **Franking apparatus (printing aspects [B41](#))**
- U G07B 17/00459
 - {Details relating to mailpieces in a franking system}
- G07B 17/00661
 - • {Sensing or measuring mailpieces (weighing [G01G 19/00](#); ~~methods or arrangements for reading or recognising printed or written characters or for recognising patterns [G06K 9/00](#)~~)}

G07B 17/00733

- {Cryptography or similar special procedures in a franking system}

NOTE

References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

- secret or secure communication [H04L 9/00](#)
- mechanisms actuated by objects other than coins to free or to actuate vending, hiring, coin or paper currency dispensing or refunding apparatus for cashless transactions only [G07F 7/10](#)
- access-control involving the use of a pass in combination with an identity-check of the pass-holder by means of personal physical data, e.g. characteristic facial curves, hand geometry, voice spectrum, fingerprints [G07C 9/00](#)
- ~~methods or arrangements for reading or recognising printed or written characters or for recognising~~ *recognising characters or patterns* [G06K 9/00](#) *in general* [G06F 18/00](#), [G06V 30/00](#)
- random or pseudo-random generators [G06F 7/58](#)
- circuits generating pulses having a predetermined statistical distribution [H03K 3/84](#)
- multiple service credit cards with protecting memory zones [G07F 7/10](#)
- security arrangements for protecting computers or computer systems against unauthorised activity [G06F 21/00](#)
- record carriers with conductive marks and special arrangements for circuits, e.g. for protecting identification code in memory [G06K 19/073](#)
- error detection and error correction [G06F 11/00](#)
- coding, decoding or code conversion, for error detection or error correction [H03M 13/00](#)

Project: RP11770 (G07C)

G07C 9/00

Individual registration on entry or exitNOTES

1. This group covers:
 - controlling and registering access of persons to restricted areas or devices
2. This group does not cover:
 - electric permutation locks using mechanical keys, covered by [E05B 49/00](#);
 - apparatus actuated by coded identity cards or credit cards, to free or actuate vending, hiring or money-dispensing, covered by [G07F 7/08](#);
 - access to facilities or services by means of coins or tokens, covered by [G07F 17/00](#);
 - arrangements actuated by coded cards for dispensing or receiving money and posting such transactions to existing accounts, e.g. automatic teller machines, covered by [G07F 19/00](#)
3. Attention is drawn to the following places, which may be of interest for search:
 - [G06K 7/00](#), [G06K 19/00](#) arrangements for sensing or reading record carriers
 - [H03K 17/00](#) electronic switching
 - ~~G06K 9/00 biometric sensors, recognising biometric patterns~~
 - *G06V 40/00 recognition of biometric, human-related or animal-related patterns in image or video data*
 - [A61B 5/117](#) biometric identification used for diagnostic purposes
 - [G06F 1/00](#) access to data processing equipment

- G07C 9/00174
- {Electronically operated locks; Circuits therefor; Nonmechanical keys therefor, e.g. passive or active electrical keys or other data carriers without mechanical keys (mechanical locks with electric permutation [E05B 49/00](#); arrangements for sensing or reading record carriers [G06K 7/00](#), ~~G06K 9/00~~; electronic switching [H03K 17/00](#))}

Project: RP11770 (G09B)

- U G09B 5/00** **Electrically-operated educational appliances (working with questions and answers [G09B 7/00](#); simulators [G09B 9/00](#); advertising or displaying in general [G09F](#))**
- NOTE
Group [G09B 5/08](#) takes precedence over groups [G09B 5/02](#) - [G09B 5/06](#).
- G09B 5/04
- with audible presentation of the material to be studied (~~reading and recognising printed or written characters [G06K 9/00](#)~~; sound recording or reproducing [G11B](#))
- G09B 21/00** **Teaching, or communicating with, the blind, deaf or mute (audible presentation of material to be studied [G09B 5/04](#); devices or methods for replacing direct visual or auditory perception by another kind of perception [A61F 9/08](#), [A61F 11/04](#); audible indication of meter readings or of colour [G01D 7/12](#); watches for blind persons [G04B 25/02](#); ~~methods or arrangements for reading or recognising printed or written characters [G06K 9/00](#)~~; speech analysis, speech recognition [G10L](#); sound-recording or reproducing, per se [G11B](#))**

Project: RP11770 (G10H)

- U G10H 2220/00** **Input/output interfacing specifically adapted for electrophonic musical tools or instruments**
- U G10H 2220/155
- User input interfaces for electrophonic musical instruments (graphical user interfaces specifically adapted for electrophonic musical instruments [G10H 2220/091](#); input means in general [G06F 3/00](#))
- G10H 2220/441
- Image sensing, i.e. capturing images or optical patterns for musical purposes or musical control purposes (image analysis, inspection, positioning or tracking [G06T 7/00](#), ~~pattern recognition~~ [recognising music \[G06K 9/00\]\(#\)](#) ~~notations [G06V 30/304](#)~~)

Project: RP11770 (H01J)

- U H01J 49/00** **Particle spectrometers or separator tubes**
- NOTE
In classifying particle separators, no distinction is made between spectrometry and spectrography, the difference being only in the manner of detection which in the first case is electrical and in the second case is by means of a photographic film.
- U H01J 49/0027
- {Methods for using particle spectrometers}
- H01J 49/0036
- {Step by step routines describing the handling of the data generated during a measurement (~~recognising patterns in signals [G06K 9/00496](#)~~)}

Project: RP11770 (H04H)

- U H04H 60/00** **Arrangements for broadcast applications with a direct linking to broadcast information or broadcast space-time; Broadcast-related systems**
- U H04H 60/56
- Arrangements characterised by components specially adapted for monitoring, identification or recognition covered by groups [H04H 60/29](#)-[H04H 60/54](#)

- H04H 60/59
- • of video ~~{{recognising characters or patterns in general G06K 9/00}}~~ *recognising characters or patterns in general G06F 18/00, G06V 20/00}}*

Project: RP11770 (H04N)

- U H04N 1/00 Scanning, transmission or reproduction of documents or the like, e.g. facsimile transmission; Details thereof**
- U H04N 1/00127
- {Connection or combination of a still picture apparatus with another apparatus, e.g. for storage, processing or transmission of still picture signals or of information associated with a still picture}
- U H04N 1/00326
- • {with a data reading, recognizing or recording apparatus, e.g. with a bar-code apparatus (arrangements for the associated working of recording or reproducing apparatus with related apparatus [G11B 31/00](#))}
- U H04N 1/00328
- • • {with an apparatus processing optically-read information}
- H04N 1/00331
- • • • {with an apparatus performing optical character recognition (~~arrangements for recognising printed or written characters G06K 9/00~~ *character recognition G06V 30/10*)}
- H04N 1/00336
- • • • {with an apparatus performing pattern recognition, e.g. of a face or a geographic feature (~~arrangements for recognising patterns G06K 9/00~~ *image or video recognition or understanding of scenes G06V 20/00*)}
- U H04N 1/0035
- {User-machine interface; Control console (input or output arrangements for computers [G06F 3/00](#))}
- U H04N 1/00352
- • {Input means ([H04N 1/00411](#) takes precedence; input arrangements for computers [G06F 3/00](#))}
- H04N 1/00355
- • • {Mark-sheet input (sensing record carriers [G06K 7/00](#); ~~recognising printed or written characters G06K 9/00~~; *character recognition G06V 30/10*; *document-oriented image-based pattern recognition G06V 30/40*)}
- U H04N 1/00838
- {Preventing unauthorised reproduction}
- U H04N 1/0084
- • {Determining the necessity for prevention}
- H04N 1/00843
- • • {based on recognising a copy prohibited original, e.g. a banknote (~~recognising characters or patterns G06K 9/00~~; *pattern authentication and markers therefor, forgery detection G06V 20/95*; *character recognition G06V 30/10*; *document-oriented image-based pattern recognition G06V 30/40*; testing paper currency or similar valuable papers for genuineness [G07D 7/00](#))}

Project: RP11771 (H04J)

- U H04J 11/00 Orthogonal multiplex systems, {e.g. using WALSH codes}([H04J 13/00](#) takes precedence)**
- H04J 11/0023
- {Interference mitigation or co-ordination (~~traffic scheduling H04W 72/082~~; ~~H04W 72/1226~~; ~~power management H04W 52/00~~; *direct sequence spread spectrum [DSSS] systems H04B 1/7097*; *frequency hopping H04B 1/713*; allocation criteria for ingress interference avoidance [H04L 5/0062](#); frequency allocation criteria for requirements on out-of-channel emissions [H04L 5/0066](#); ~~peak power aspects in multicarrier modulation H04L 27/2614~~; arrangements for removing intersymbol interference or baseband equalisers [H04L 25/03006](#); ~~direct sequence spread spectrum [DSSS] systems H04B 1/7097~~; ~~frequency hopping H04B 1/713~~; *peak power aspects in multicarrier modulation H04L 27/2614*; *power management H04W 52/00*; *traffic scheduling H04W 72/54, H04W 72/541*)}

Project: RP11771 (H04L)

- U H04L 5/00 Arrangements affording multiple use of the transmission path**

- U H04L 5/003 · {Arrangements for allocating sub-channels of the transmission path}
- U H04L 5/0058 · · {Allocation criteria}
- H04L 5/0069 · · · {Allocation based on distance or geographical location (allocation based on terminal or device properties in general, [H04W 72/048](#)[H04W 72/51](#))}

Project: RP11771 (H04W)

- U H04W 28/00 Network traffic or resource management**
 - U H04W 28/02 · Traffic management, e.g. flow control or congestion control
 - H04W 28/0215 · · {based on user or device properties, e.g. MTC-capable devices (services for machine-to-machine communication [M2M] or machine type communication [MTC] [H04W 4/70](#); wireless resource selection or allocation plan definition based on terminal or device properties [H04W 72/048](#)[H04W 72/51](#))}
 - H04W 28/0231 · · {based on communication conditions (dynamic wireless traffic scheduling definition based on channel quality criteria [H04W 72/1226](#)[H04W 72/54](#))}
 - H04W 28/0278 · · {using buffer status reports (dynamic wireless traffic scheduling definition [H04W 72/1205](#)[H04W 72/12](#))}
 - U H04W 28/08 · · Load balancing or load distribution
 - WARNING**
 - Group [H04W 28/08](#) is impacted by re-classification into groups [H04W 28/0804](#) - [H04W 28/0846](#) and groups [H04W 28/0858](#) - [H04W 28/0992](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.
 - H04W 28/0804 · · · {between access entities (reselecting a network for handling traffic [H04W 36/22](#); wireless resource allocation where an allocation plan is defined based on load [H04W 72/0486](#)[H04W 72/52](#))}
 - WARNING**
 - Groups [H04W 28/0804](#) - [H04W 28/0823](#) are incomplete pending re-classification of documents from group [H04W 28/08](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.
-
- U H04W 36/00 Hand-off or reselection arrangements**
- NOTE**
- In this group, local priority rules supersede the first-place priority rule (FPPR) applying throughout [H04W](#)
- U H04W 36/0005 · {Control or signalling for completing the hand-off}
- H04W 36/0007 · · {for multicast or broadcast services, e.g. MBMS (multicast or broadcast application services [H04W 4/06](#); resource management for broadcast services [H04W 72/005](#)[H04W 72/30](#); connection management for selective distribution or broadcast [H04W 76/40](#))}
- M H04W 72/00 Local resource management, e.g. wireless traffic scheduling or selection or allocation of wireless resources**
- NOTE**
- In this group, local priority rules supersede the first-place priority rule (FPPR) applying throughout [H04W](#)
- D H04W 72/005 · {Resource management for broadcast services}
- <administratively transferred to [H04W 72/30](#)>

- C H04W 72/02
- Selection of wireless resources by user or terminal
- WARNING**
Group [H04W 72/02](#) is impacted by reclassification into group [H04W 72/40](#). Groups [H04W 72/02](#) and [H04W 72/40](#) should be considered in order to perform a complete search.
- C H04W 72/04
- Wireless resource allocation
- WARNING**
Group [H04W 72/04](#) is impacted by reclassification into groups [H04W 72/11](#), [H04W 72/115](#) and [H04W 72/40](#). All groups listed in this Warning should be considered in order to perform a complete search.
- D H04W 72/0406
- ~~{involving control information exchange between nodes}~~
<administratively transferred to [H04W 72/20](#)>
- D H04W 72/0413
- ~~{in uplink direction of a wireless link, i.e. towards network}~~
<administratively transferred to [H04W 72/21](#)>
- D H04W 72/042
- ~~{in downlink direction of a wireless link, i.e. towards terminal}~~
<administratively transferred to [H04W 72/23](#)>
- D H04W 72/0426
- ~~{between access points}~~
<administratively transferred to [H04W 72/27](#)>
- D H04W 72/0433
- ~~{between access point and access point controlling device}~~
<administratively transferred to [H04W 72/29](#)>
- C H04W 72/044
- ~~{where an allocation plan is defined}~~ based on the type of the allocated resource
- WARNING**
Group [H04W 72/044](#) is impacted by reclassification into group [H04W 72/0457](#). Groups [H04W 72/044](#) and [H04W 72/0457](#) should be considered in order to perform a complete search.
- M H04W 72/0446
- ~~{the resource being a slot, sub-slot or frame}~~ Resources in time domain, e.g. slots or frames
- M H04W 72/0453
- ~~{the resource being a frequency, carrier or frequency band}~~ Resources in frequency domain, e.g. a carrier in FDMA
- N H04W 72/0457
- ~~Variable allocation of band or rate~~
- WARNING**
Group [H04W 72/0457](#) is incomplete pending reclassification of documents from group [H04W 72/044](#). Groups [H04W 72/044](#) and [H04W 72/0457](#) should be considered in order to perform a complete search.
- U H04W 72/046
- ~~{the resource being in the space domain, e.g. beams}~~
- U H04W 72/0466
- ~~{the resource being a scrambling code}~~
- U H04W 72/0473
- ~~{the resource being transmission power}~~
- D H04W 72/048
- ~~{where an allocation plan is defined based on terminal or device properties}~~
<administratively transferred to [H04W 72/51](#)>
- D H04W 72/0486
- ~~{where an allocation plan is defined based on load}~~
<administratively transferred to [H04W 72/52](#)>

- D H04W 72/0493
- {where an allocation plan is defined based on a resource usage policy}
<administratively transferred to [H04W 72/53](#)>
- D H04W 72/06
- {where an allocation plan is defined} based on a ranking criteria of the wireless resources
<administratively transferred to [H04W 72/563](#)>
- D H04W 72/08
- {where an allocation plan is defined} based on quality criteria
<administratively transferred to [H04W 72/54](#)>
- D H04W 72/082
- • {using the level of interference}
<administratively transferred to [H04W 72/541](#)>
- D H04W 72/085
- • {using measured or perceived quality}
<administratively transferred to [H04W 72/542](#)>
- D H04W 72/087
- • {using requested quality}
<administratively transferred to [H04W 72/543](#)>
- D H04W 72/10
- {where an allocation plan is defined} based on priority criteria
<administratively transferred to [H04W 72/56](#)>
- N H04W 72/11
- *Semi-persistent scheduling*
WARNING
Group [H04W 72/11](#) is incomplete pending reclassification of documents from group [H04W 72/04](#).
Groups [H04W 72/04](#) and [H04W 72/11](#) should be considered in order to perform a complete search.
- N H04W 72/115
- *Grant-free or autonomous transmission*
WARNING
Group [H04W 72/115](#) is incomplete pending reclassification of documents from group [H04W 72/04](#).
Groups [H04W 72/04](#) and [H04W 72/115](#) should be considered in order to perform a complete search.
- C H04W 72/12
- ~~{Dynamic}~~ Wireless traffic scheduling ~~{; Dynamically-scheduled allocation on shared channel}~~
WARNING
Group [H04W 72/12](#) is impacted by reclassification into groups [H04W 72/40](#), [H04W 72/50](#), [H04W 72/51](#) and [H04W 72/512](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- D H04W 72/1205
- {Schedule definition, set-up or creation}
<administratively transferred to [H04W 72/12](#)>
- M H04W 72/121
- • {for groups of terminals or users}
- M H04W 72/1215
- • {for collaboration of different radio technologies}
- M H04W 72/1221
- • {based on age of data to be sent}
- D H04W 72/1226
- • {based on channel quality criteria, e.g. channel state dependent scheduling}
<administratively transferred to [H04W 72/54](#)>
- D H04W 72/1231
- • • {using measured or perceived quality}
<administratively transferred to [H04W 72/542](#)>
- D H04W 72/1236
- • • {using requested quality}
<administratively transferred to [H04W 72/543](#)>

- D H04W 72/1242 . . . {based on precedence or priority of the traffic information}
<administratively transferred to [H04W 72/569](#)>
- D H04W 72/1247 . . . {based on priority of the information source or recipient}
<administratively transferred to [H04W 72/566](#)>
- D H04W 72/1252 . . . {based on load}
<administratively transferred to [H04W 72/52](#)>
- D H04W 72/1257 . . . {based on resource usage policy}
<administratively transferred to [H04W 72/535](#)>
- M H04W 72/1263 . . . {Schedule usage, i.e. actual mapping of traffic onto schedule *Mapping of traffic onto schedule, e.g. scheduled allocation or multiplexing of flows; Multiplexing of flows into one or several streams; Mapping aspects; Scheduled allocation*}
- M H04W 72/1268 . . . {of uplink data flows}
- M H04W 72/1273 . . . {of downlink data flows}
- D H04W 72/1278 . . . {Transmission of control information for scheduling}
<administratively transferred to [H04W 72/20](#)>
- D H04W 72/1284 . . . {in the uplink, i.e. from terminal to network}
<administratively transferred to [H04W 72/21](#)>
- D H04W 72/1289 . . . {in the downlink, i.e. towards the terminal}
<administratively transferred to [H04W 72/23](#)>
- D H04W 72/1294 {using a grant or specific channel (H04W 72/14 takes precedence)}
<administratively transferred to [H04W 72/23](#)>
- D H04W 72/14 . . . using a grant {or specific} channel
<administratively transferred to [H04W 72/23](#)>
- Q H04W 72/20 . Control channels or signalling for resource management
WARNING
Group [H04W 72/20](#) is impacted by reclassification into groups [H04W 72/25](#), [H04W 72/27](#) and [H04W 72/29](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04W 72/21 . . . in the uplink direction of a wireless link, i.e. towards the network
- Q H04W 72/23 . . . in the downlink direction of a wireless link, i.e. towards a terminal
WARNING
Group [H04W 72/23](#) is impacted by reclassification into groups [H04W 72/231](#) and [H04W 72/232](#).
Groups [H04W 72/23](#), [H04W 72/231](#) and [H04W 72/232](#) should be considered in order to perform a complete search.
- N H04W 72/231 . . . the control data signalling from the layers above the physical layer, e.g. RRC or MAC-CE signalling
WARNING
Group [H04W 72/231](#) is incomplete pending reclassification of documents from group [H04W 72/23](#).
Groups [H04W 72/23](#) and [H04W 72/231](#) should be considered in order to perform a complete search.

- N H04W 72/232
- • the control data signalling from the physical layer, e.g. DCI signalling
- WARNING
Group [H04W 72/232](#) is incomplete pending reclassification of documents from group [H04W 72/23](#).
Groups [H04W 72/23](#) and [H04W 72/232](#) should be considered in order to perform a complete search.
- N H04W 72/25
- • between terminals via a wireless link, e.g. sidelink
- WARNING
Group [H04W 72/25](#) is incomplete pending reclassification of documents from group [H04W 72/20](#).
Groups [H04W 72/20](#) and [H04W 72/25](#) should be considered in order to perform a complete search.
- N H04W 72/27
- • between access points
- WARNING
Group [H04W 72/27](#) is incomplete pending reclassification of documents from group [H04W 72/20](#).
Groups [H04W 72/20](#) and [H04W 72/27](#) should be considered in order to perform a complete search.
- N H04W 72/29
- • between an access point and the access point controlling device
- WARNING
Group [H04W 72/29](#) is incomplete pending reclassification of documents from group [H04W 72/20](#).
Groups [H04W 72/20](#) and [H04W 72/29](#) should be considered in order to perform a complete search.
- N H04W 72/30
- Resource management for broadcast services
- N H04W 72/40
- Resource management for direct mode communication, e.g. D2D or sidelink
- WARNING
Group [H04W 72/40](#) is incomplete pending reclassification of documents from groups [H04W 72/02](#), [H04W 72/04](#) and [H04W 72/12](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04W 72/50
- Allocation or scheduling criteria for wireless resources
- WARNING
Group [H04W 72/50](#) is incomplete pending reclassification of documents from group [H04W 72/12](#).
Groups [H04W 72/12](#) and [H04W 72/50](#) should be considered in order to perform a complete search.
- Q H04W 72/51
- • based on terminal or device properties
- WARNING
Group [H04W 72/51](#) is incomplete pending reclassification of documents from group [H04W 72/12](#).
Group [H04W 72/51](#) is also impacted by reclassification into group [H04W 72/512](#).
Groups [H04W 72/12](#), [H04W 72/51](#) and [H04W 72/512](#) should be considered in order to perform a complete search.

- N H04W 72/512
- • • for low-latency requirements, e.g. URLLC
- WARNING
Group [H04W 72/512](#) is incomplete pending reclassification of documents from groups [H04W 72/12](#) and [H04W 72/51](#).
Groups [H04W 72/12](#), [H04W 72/51](#) and [H04W 72/512](#) should be considered in order to perform a complete search.
- N H04W 72/52
- • based on load
- N H04W 72/53
- • based on regulatory allocation policies
- N H04W 72/535
- • {based on resource usage policies}
- Q H04W 72/54
- • based on quality criteria
- WARNING
Group [H04W 72/54](#) is impacted by reclassification into group [H04W 72/541](#).
Groups [H04W 72/54](#) and [H04W 72/541](#) should be considered in order to perform a complete search.
- N H04W 72/541
- • • using the level of interference
- WARNING
Group [H04W 72/541](#) is incomplete pending reclassification of documents from group [H04W 72/54](#).
Groups [H04W 72/54](#) and [H04W 72/541](#) should be considered in order to perform a complete search.
- N H04W 72/542
- • • using measured or perceived quality
- N H04W 72/543
- • • based on requested quality, e.g. QoS
- Q H04W 72/56
- • based on priority criteria
- WARNING
Group [H04W 72/56](#) is impacted by reclassification into group [H04W 72/566](#).
Groups [H04W 72/56](#) and [H04W 72/566](#) should be considered in order to perform a complete search.
- N H04W 72/563
- • • of the wireless resources
- N H04W 72/566
- • • of the information or information source or recipient
- WARNING
Group [H04W 72/566](#) is incomplete pending reclassification of documents from group [H04W 72/56](#).
Groups [H04W 72/56](#) and [H04W 72/566](#) should be considered in order to perform a complete search.
- N H04W 72/569
- • • • {of the traffic information}

Project: RP11901 (A01M)

- U A01M 7/00** **Special adaptations or arrangements of liquid-spraying apparatus for purposes covered by this subclass**
- A01M 7/0003
- {Atomisers or mist blowers (**single-unit, i.e. unitary, hand-held apparatus in which flow of liquid or other fluent material is produced by the operator at the moment of use** [B05B 11/00](#)**single-unit hand-held apparatus in which flow of contents is produced by the muscular force of the operator at the moment of use** [B05B 11/00](#))}
- U A01M 9/00** **Special adaptations or arrangements of powder-spraying apparatus for purposes covered by this subclass**

A01M 9/0007

- {Pneumatic dusters (electrostatic spraying apparatus [B05B 5/00](#); ~~single unit, i.e. unitary, hand-held apparatus, in which flow of fluent material is produced by the operator at the moment of use B05B 11/00~~; *single-unit hand-held apparatus in which flow of contents is produced by the muscular force of the operator at the moment of use [B05B 11/00](#)*)}

Project: RP11901 (B05B)**M B05B**

SPRAYING APPARATUS; ATOMISING APPARATUS; NOZZLES (~~{sprayers or atomisers specially adapted for therapeutic purposes [A61M 11/00](#);~~ spray-mixers with nozzles [B01F 25/72](#); processes for applying liquids or other fluent materials to surfaces by spraying [B05D](#) ~~{; nozzles specially adapted for injection moulding of plastics or substances in a plastic state [B29C 45/1603](#), [B29C 45/20](#); nozzles specially adapted for windscreen washers [B60S 1/52](#)}; means for pumping fluids [F04](#); valves, e.g. water-taps, [F16K](#))~~

NOTES

1. This subclass covers particularly apparatus for the release or projection of drops or droplets into the atmosphere or into a chamber to form a mist or the like. For this purpose, the materials to be projected may be suspended in a stream of gas or vapour.
2. Attention is drawn to the Note following the title of class [B05](#).
3. In this subclass, "means for controlling volume of flow" is used in the most general meaning and includes also means allowing only starting and stopping the flow
4. In this subclass, the meaning of the expression "apparatus carried on or by a person" includes all apparatus comprising at least one container for the material to be sprayed carried on or by a person during use
5. In this subclass, the word "container" is to be understood as the innermost enclosure containing the material to be sprayed

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M B05B 3/00

Spraying or sprinkling apparatus with moving outlet elements or moving deflecting elements (~~[B05B 5/00](#) takes precedence~~); ~~Spraying or sprinkling heads with rotating elements located upstream the outlet~~

M B05B 3/02

- with rotating elements (*electric spraying discharge apparatus characterised by having rotary outlet or deflecting elements [B05B 5/04](#)*)

U B05B 9/00

Spraying apparatus for discharge of liquids or other fluent material, without essentially mixing with gas or vapour ([B05B 11/00](#) takes precedence)

U B05B 9/03

- characterised by means for supplying liquid or other fluent material {([B05B 9/002](#) takes precedence)}

U B05B 9/04

- · with pressurised or compressible container (aerosol containers [B65D 83/14](#)); with pump

U B05B 9/0403

- · · {with pumps for liquids or other fluent material ([B05B 9/043](#) takes precedence)}

B05B 9/0426

- · · {with a pump attached to the spray gun or discharge device (single-units hand-held apparatus in which the flow is effected by a pump [B05B 11/30](#) [B05B 11/10](#))}

- C B05B 11/00** **Single-unit, i.e. unitary, hand-held apparatus {comprising a container and a discharge nozzle attached thereto}, in which flow of liquid or other fluent material *contents* is produced by {the muscular energy of} *the muscular force of* the operator at the moment of use {or by an equivalent manipulator independent from the apparatus (apparatus with an external source or the possibility of permanent accumulation of pressure for discharging the liquid or fluid material B05B 7/00, B05B 9/00)}**
- WARNING**
Group B05B 11/00 is impacted by reclassification into group B05B 11/01. Groups B05B 11/00 and B05B 11/01 should be considered in order to perform a complete search.
- B05B 11/0005 • {Components or details (of single units wherein the flow is effected by a pump ~~B05B 11/3042~~*B05B 11/1042*)}
 - B05B 11/0008 • {Sealing or attachment arrangements between sprayer and container (between pump and container ~~B05B 11/3043~~*B05B 11/1043*)}
 - B05B 11/0027 • {Means for neutralising the actuation of the sprayer (pump locking means ~~B05B 11/3059~~*B05B 11/1059*); Means for preventing access to the sprayer actuation means}
 - B05B 11/0029 • • {Valves not actuated by pressure (~~automatically opened during actuation of a spray pump B05B 11/3053~~; ~~B05B 11/0032~~, ~~B05B 11/0094~~ take precedence; *automatically opened during actuation of a spray pump B05B 11/1053*)}
 - B05B 11/0032 • • {Manually actuated means located downstream the discharge nozzle for closing or covering it, e.g. shutters; (automatically removed during actuation of a spray pump ~~B05B 11/3053~~*B05B 11/1053*)}
 - U B05B 11/0037 • {Containers (for several components ~~B05B 11/0078~~)}
 - U B05B 11/0039 • • {associated with means for compensating the pressure difference between the ambient pressure and the pressure inside the container, e.g. pressure relief means}
 - M B05B 11/0041 • • • {compensating underpressure without contact of the fluid remaining in the container with the atmospheric air (*B05B 11/026 and B05B 11/028 take precedence*)}
 - U B05B 11/00411 • • • • {the means being an inert gas}
 - D B05B 11/00412 • • • • {~~the means being a collapsible or foldable bag or membrane~~
<administratively transferred to ~~B05B 11/026~~>
 - D B05B 11/00414 • • • • • {~~the bag or membrane being inverted during the outflow of the liquid or other fluent material~~
<administratively transferred to ~~B05B 11/027~~>
 - D B05B 11/00416 • • • • • {~~the means being a following piston~~
<administratively transferred to ~~B05B 11/028~~>
 - D B05B 11/00418 • • • • • {~~located on top of the remaining liquid or other fluent material~~
<administratively transferred to ~~B05B 11/029~~>
 - B05B 11/0054 • • {Cartridges, i.e. containers specially designed for easy attachment to or easy removal from the rest of the sprayer (attachment arrangements between pump and container ~~B05B 11/3043~~*B05B 11/1043*)}
 - B05B 11/0062 • {Outlet valves actuated by the pressure of the fluid to be sprayed (fluid-actuated pump outlet valve arrangements ~~B05B 11/3016~~*B05B 11/1016*, ~~B05B 11/3022~~*B05B 11/1022*, ~~B05B 11/3097~~*B05B 11/1033*, ~~B05B 11/3033~~*B05B 11/1036*, ~~B05B 11/3036~~*B05B 11/104*, ~~B05B 11/304~~*B05B 11/1064*, ~~B05B 11/3064~~*B05B 11/1097*)}

- U B05B 11/0064
 - • • {Lift valves ([B05B 11/007](#) takes precedence)}
- B05B 11/0067
 - • • • {having a valve seat located downstream the valve element (*take precedence*)}(~~B05B 11/3016, B05B 11/3036 take precedence~~)}
- B05B 11/0078
 - • {Arrangements for separately storing several components (arrangements for pumping several liquids or other fluent materials from several containers ~~B05B 11/3081~~ [B05B 11/1081](#))}
- U B05B 11/0097
 - • {Means for filling or refilling the sprayer (through additional openings in the container [B05B 11/0056](#))}
- N B05B 11/01
 - *characterised by the means producing the flow*
 - WARNING
 - Group [B05B 11/01](#) is incomplete pending reclassification of documents from group [B05B 11/00](#).*
 - Groups [B05B 11/00](#) and [B05B 11/01](#) should be considered in order to perform a complete search.*
- M B05B 11/02
 - • • ~~the flow being effected by a follower~~ *Membranes or pistons acting on the contents inside the container*, e.g. *membrane, floating piston, in container for liquid or other fluent material* *follower pistons*
- M B05B 11/025
 - • • • {with stepwise advancement of the ~~follower~~ *piston*, e.g. for spraying a predetermined quantity of ~~the liquid or other fluid material~~ *content*}
- N B05B 11/026
 - • • • {*Membranes separating the content remaining in the container from the atmospheric air to compensate underpressure inside the container*}
- N B05B 11/027
 - • • • • {*inverted during outflow of content*}
- N B05B 11/028
 - • • • {*Pistons separating the content remaining in the container from the atmospheric air to compensate underpressure inside the container*}
- N B05B 11/029
 - • • • • {*located on top of the remaining content*}
- M B05B 11/04
 - • • • ~~the flow being effected by deformation of container for liquid or other fluent material~~ *Deformable containers producing the flow, e.g. squeeze bottles*
- M B05B 11/041
 - • • • • {designed for spraying particulate material ([B05B 11/045](#) takes precedence)}
- M B05B 11/042
 - • • • • {the spray being effected by a gas or vapour flow in the nozzle, spray head, outlet or dip tube}
- M B05B 11/043
 - • • • • {designed for spraying a liquid ([B05B 11/046](#) takes precedence)}
- M B05B 11/045
 - • • • • {designed for spraying particulate material ([B05B 11/046](#) takes precedence)}
- M B05B 11/046
 - • • • • {the gas or vapour flow coming from a source where the gas or vapour is not in contact with the liquid or other fluent material to be sprayed, e.g. from a compressive bulb, an air pump or an enclosure surrounding the container}
- M B05B 11/047
 - • • • • {characterised by the outlet or venting means ([B05B 11/041](#) and [B05B 11/042](#) take precedence)}
- M B05B 11/048
 - • • • • {characterised by the container, e.g. this latter being surrounded by an enclosure, or the means for deforming it ([B05B 11/041](#), [B05B 11/046](#) take precedence)}
- M B05B 11/06
 - • • • • ~~the spray being effected by a gas or vapour flow {from a source where the gas or vapour is not in contact with the liquid or other fluent material to be sprayed}~~ *Gas or vapour producing the flow*, e.g. from a compressible bulb, ~~{an air pump or an enclosure surrounding the container or air pump}~~ (~~B05B 11/046 and B05B 11/3087 take precedence~~)}
- M B05B 11/061
 - • • • • {characterised by the means producing the gas or vapour pressure}
- M B05B 11/062
 - • • • • {designed for spraying particulate material}

- M B05B 11/064 {the particulate material being stored in several discrete quantities delivered one at a time}
- M B05B 11/065 {the particulate material being separated from a main storage in discrete quantities delivered one at a time}
- M B05B 11/067 {the particulate material being separated from the main storage by a dosing device}
- M B05B 11/068 {comprising a liquid-absorbent material}
- N B05B 11/10 *Pump arrangements for transferring the contents from the container to a pump chamber by a sucking effect and forcing the contents out through the dispensing nozzle*
- N B05B 11/1001 {Piston pumps ([B05B 11/1087](#), [B05B 11/1088](#), [B05B 11/109](#) take precedence)}
- N B05B 11/1002 {the direction of the pressure stroke being substantially perpendicular to the major axis of the container ([B05B 11/1009](#), [B05B 11/1015](#) take precedence)}
- N B05B 11/1004 {comprising a movable cylinder and a stationary piston}
- N B05B 11/1005 {with means for adjusting or modifying pump stroke}
- N B05B 11/1007 {by adjusting or modifying the pump end-of-sucking-stroke position}
- N B05B 11/1008 {by adjusting or modifying the pump end-of-dispensing-stroke position}
- N B05B 11/1009 {actuated by a lever}
- N B05B 11/1011 {without substantial movement of the nozzle in the direction of the pressure stroke}
- N B05B 11/1012 {the pump chamber being arranged substantially coaxially to the neck of the container ([B05B 11/1011](#) takes precedence)}
- N B05B 11/1014 {the pump chamber being arranged substantially coaxially to the container}
- N B05B 11/1015 {actuated without substantial movement of the nozzle in the direction of the pressure stroke ([B05B 11/1011](#) takes precedence)}
- N B05B 11/1016 {the outlet valve having a valve seat located downstream a movable valve element controlled by a pressure actuated controlling element ([B05B 11/1022](#), [B05B 11/1023](#) take precedence)}
- N B05B 11/1018 {and the controlling element cooperating with means for opening or closing the inlet valve ([B05B 11/1019](#) takes precedence)}
- N B05B 11/1019 {the inlet valve moving concurrently with the controlling element during whole pressure and aspiration strokes, e.g. a cage for an inlet valve ball being part of the controlling element}
- N B05B 11/1021 {having an outlet valve which is a gate valve ([B05B 11/1023](#), [B05B 11/1038](#) take precedence)}
- N B05B 11/1022 {actuated by pressure}
- N B05B 11/1023 {having an outlet valve opened by deformation or displacement of the piston relative to its actuating stem}
- N B05B 11/1025 {a spring urging the outlet valve in its closed position ([B05B 11/1026](#) takes precedence)}
- N B05B 11/1026 {the piston being deformable and its deformation allowing opening of the outlet}
- N B05B 11/1028 {Pumps having a pumping chamber with a deformable wall ([B05B 11/1087](#) take precedence)}
- N B05B 11/1029 {actuated by a lever}
- N B05B 11/103 {without substantial movement of the nozzle in the direction of the pressure stroke}

- N B05B 11/1032 {actuated without substantial movement of the nozzle in the direction of the pressure stroke ([B05B 11/103](#) takes precedence)}
- N B05B 11/1033 {the deformable wall, the inlet and outlet valve elements being integrally formed, e.g. moulded}
- N B05B 11/1035 {the pumping chamber being a bellow}
- N B05B 11/1036 {the outlet valve being opened in the direction opposite to the fluid flow downstream the outlet valve by the pressure acting on a valve controlling element}
- N B05B 11/1038 {Pressure accumulation pumps, i.e. pumps comprising a pressure accumulation chamber}
- N B05B 11/1039 {the outlet valve being mechanically opened after a defined accumulation stroke}
- N B05B 11/104 {the outlet valve being opened by pressure after a defined accumulation stroke}
- N B05B 11/1042 {Components or details}
- N B05B 11/1043 {Sealing or attachment arrangements between pump and container (sealing arrangements around pump actuating stem [B05B 11/105](#))}
- N B05B 11/1045 {the pump being preassembled as an independent unit before being mounted on the container ([B05B 11/1047](#), [B05B 11/1049](#) take precedence)}
- N B05B 11/1046 {the pump chamber being arranged substantially coaxially to the neck of the container ([B05B 11/1049](#) takes precedence)}
- N B05B 11/1047 {the pump being preassembled as an independent unit before being mounted on the container}
- N B05B 11/1049 {Attachment arrangements comprising a deformable or resilient ferrule clamped or locked onto the neck of the container by displacing, e.g. sliding, a sleeve surrounding the ferrule}
- N B05B 11/105 {Sealing arrangements around pump actuating stem}
- N B05B 11/1052 {Actuation means (locking means therefor [B05B 11/1059](#); the dispensing stroke being affected by the stored energy of a spring [B05B 11/109](#))}
- N B05B 11/1053 {combined with means, other than pressure, for automatically opening a valve during actuation; combined with means for automatically removing closures or covers from the discharge nozzle during actuation}
- N B05B 11/1054 {the valve being located upstream of an outlet valve}
- N B05B 11/1056 {comprising rotatable or articulated levers ([B05B 11/1053](#) takes precedence; lever actuated piston pumps [B05B 11/1009](#); lever actuated pumps with deformable chamber [B05B 11/1029](#))}
- N B05B 11/1057 {Triggers, i.e. actuation means consisting of a single lever having one end rotating or pivoting around an axis or a hinge fixedly attached to the container, and another end directly actuated by the user}
- N B05B 11/1059 {Means for locking a pump or its actuation means in a fixed position ([B05B 11/1091](#) takes precedence)}
- N B05B 11/106 {in a retracted position, e.g. in an end-of-dispensing-stroke position}
- N B05B 11/1061 {Pump priming means}
- N B05B 11/1063 {Air exhausted from the pump chamber being discharged into the container during priming}
- N B05B 11/1064 {Pump inlet and outlet valve elements integrally formed of a deformable material (pump chambers having a deformable wall integrally formed with inlet and outlet valve elements [B05B 11/1033](#))}

- N B05B 11/1066 {Pump inlet valves ([B05B 11/1018](#), [B05B 11/1019](#), [B05B 11/1064](#) take precedence)}
- N B05B 11/1067 {actuated by pressure}
- N B05B 11/1069 {the valve being made of a resiliently deformable material or being urged in a closed position by a spring}
- N B05B 11/107 {Gate valves; Sliding valves}
- N B05B 11/1071 {Two inlet valves being placed in a supply conduit one upstream of the other}
- N B05B 11/1073 {Springs}
- N B05B 11/1074 {located outside pump chambers}
- N B05B 11/1076 {Traction springs, e.g. stretchable sleeve}
- N B05B 11/1077 {characterised by a particular shape or material ([B05B 11/1076](#) takes precedence)}
- N B05B 11/1078 {Vacuum chambers acting like springs}
- N B05B 11/108 {Means for counting the number of dispensing strokes}
- N B05B 11/1081 {Arrangements for pumping several liquids or other fluent materials from several containers, e.g. for mixing them at the moment of pumping}
- N B05B 11/1083 {in adjustable proportion}
- N B05B 11/1084 {each liquid or other fluent material being pumped by a separate pump}
- N B05B 11/1085 {the pumps being coaxial}
- N B05B 11/1087 {Combination of liquid and air pumps}
- N B05B 11/1088 {the pump being a double-acting pump}
- N B05B 11/109 {the dispensing stroke being affected by the stored energy of a spring ([B05B 11/1088](#) takes precedence)}
- N B05B 11/1091 {being first hold in a loaded state by locking means or the like, then released ([B05B 11/1092](#) takes precedence)}
- N B05B 11/1092 {automatically released from a loaded state at the end of the loading stroke}
- N B05B 11/1094 {having inlet or outlet valves not being actuated by pressure or having no inlet or outlet valve}
- N B05B 11/1095 {with movable suction side}
- N B05B 11/1097 {with means for sucking back the liquid or other fluent material in the nozzle after a dispensing stroke}
- N B05B 11/1098 {Air being permanently entrapped or sucked into the liquid pump chamber}
- D B05B 11/30 . {the flow being effected by a pump}
<administratively transferred to [B05B 11/10](#)>
- D B05B 11/3001 . . {Piston pumps ([B05B 11/3087](#), [B05B 11/3088](#), [B05B 11/309](#) take precedence)}
<administratively transferred to [B05B 11/1001](#)>
- D B05B 11/3002 {the direction of the pressure stroke being substantially perpendicular to the major axis of the container ([B05B 11/3009](#), [B05B 11/3015](#) take precedence)}
<administratively transferred to [B05B 11/1002](#)>
- D B05B 11/3004 {comprising a movable cylinder and a stationary piston}
<administratively transferred to [B05B 11/1004](#)>
- D B05B 11/3005 {with means for adjusting or modifying pump stroke}
<administratively transferred to [B05B 11/1005](#)>

- D B05B 11/3007 {by adjusting or modifying the pump end-of-sucking-stroke position}
<administratively transferred to [B05B 11/1007](#)>
- D B05B 11/3008 {by adjusting or modifying the pump end-of-dispensing-stroke position}
<administratively transferred to [B05B 11/1008](#)>
- D B05B 11/3009 {actuated by a lever}
<administratively transferred to [B05B 11/1009](#)>
- D B05B 11/3011 {without substantial movement of the nozzle in the direction of the pressure stroke}
<administratively transferred to [B05B 11/1011](#)>
- D B05B 11/3012 {the pump chamber being arranged substantially coaxially to the neck of the container (B05B 11/3011 takes precedence)}
<administratively transferred to [B05B 11/1012](#)>
- D B05B 11/3014 {the pump chamber being arranged substantially coaxially to the container}
<administratively transferred to [B05B 11/1014](#)>
- D B05B 11/3015 {actuated without substantial movement of the nozzle in the direction of the pressure stroke (B05B 11/3011 takes precedence)}
<administratively transferred to [B05B 11/1015](#)>
- D B05B 11/3016 {the outlet valve having a valve seat located downstream a movable valve element controlled by a pressure actuated controlling element (B05B 11/3022, B05B 11/3023 take precedence)}
<administratively transferred to [B05B 11/1016](#)>
- D B05B 11/3018 {and the controlling element cooperating with means for opening or closing the inlet valve (B05B 11/3019 takes precedence)}
<administratively transferred to [B05B 11/1018](#)>
- D B05B 11/3019 {the inlet valve moving concurrently with the controlling element during whole pressure and aspiration strokes, e.g. a cage for an inlet valve ball being part of the controlling element}
<administratively transferred to [B05B 11/1019](#)>
- D B05B 11/3021 {having an outlet valve which is a gate valve (B05B 11/3023, B05B 11/3038 take precedence)}
<administratively transferred to [B05B 11/1021](#)>
- D B05B 11/3022 {actuated by pressure}
<administratively transferred to [B05B 11/1022](#)>
- D B05B 11/3023 {having an outlet valve opened by deformation or displacement of the piston relative to its actuating stem}
<administratively transferred to [B05B 11/1023](#)>
- D B05B 11/3025 {a spring urging the outlet valve in its closed position (B05B 11/3026 takes precedence)}
<administratively transferred to [B05B 11/1025](#)>
- D B05B 11/3026 {the piston being deformable and its deformation allowing opening of the outlet}
<administratively transferred to [B05B 11/1026](#)>
- D B05B 11/3028 {Pumps having a pumping chamber with a deformable wall (B05B 11/3087 take precedence)}
<administratively transferred to [B05B 11/1028](#)>

- D B05B 11/3029 . . . {actuated by a lever}
<administratively transferred to [B05B 11/1029](#)>
- D B05B 11/303 {without substantial movement of the nozzle in the direction of the pressure stroke}
<administratively transferred to [B05B 11/103](#)>
- D B05B 11/3032 {actuated without substantial movement of the nozzle in the direction of the pressure stroke (B05B 11/303 takes precedence)}
<administratively transferred to [B05B 11/1032](#)>
- D B05B 11/3033 {the deformable wall, the inlet and outlet valve elements being integrally formed, e.g. moulded}
<administratively transferred to [B05B 11/1033](#)>
- D B05B 11/3035 {the pumping chamber being a bellow}
<administratively transferred to [B05B 11/1035](#)>
- D B05B 11/3036 {the outlet valve being opened in the direction opposite to the fluid flow downstream the outlet valve by the pressure acting on a valve controlling element}
<administratively transferred to [B05B 11/1036](#)>
- D B05B 11/3038 . . . {Pressure accumulation pumps, i.e. pumps comprising a pressure accumulation chamber}
<administratively transferred to [B05B 11/1038](#)>
- D B05B 11/3039 {the outlet valve being mechanically opened after a defined accumulation stroke}
<administratively transferred to [B05B 11/1039](#)>
- D B05B 11/304 {the outlet valve being opened by pressure after a defined accumulation stroke}
<administratively transferred to [B05B 11/104](#)>
- D B05B 11/3042 . . . {Components or details}
<administratively transferred to [B05B 11/1042](#)>
- D B05B 11/3043 {Sealing or attachment arrangements between pump and container (sealing arrangements around pump actuating stem B05B 11/305)}
<administratively transferred to [B05B 11/1043](#)>
- D B05B 11/3045 {the pump being preassembled as an independent unit before being mounted on the container (B05B 11/3047, B05B 11/3049 take precedence)}
<administratively transferred to [B05B 11/1045](#)>
- D B05B 11/3046 {the pump chamber being arranged substantially coaxially to the neck of the container (B05B 11/3049 takes precedence)}
<administratively transferred to [B05B 11/1046](#)>
- D B05B 11/3047 {the pump being preassembled as an independent unit before being mounted on the container}
<administratively transferred to [B05B 11/1047](#)>
- D B05B 11/3049 {Attachment arrangements comprising a deformable or resilient ferrule clamped or locked onto the neck of the container by displacing, e.g. sliding, a sleeve surrounding the ferrule}
<administratively transferred to [B05B 11/1049](#)>
- D B05B 11/305 {Sealing arrangements around pump actuating stem}
<administratively transferred to [B05B 11/105](#)>

- D B05B 11/3052 . . . {Actuation means (locking means therefor B05B 11/3059; B05B 11/309 takes precedence)}
<administratively transferred to [B05B 11/1052](#)>
- D B05B 11/3053 . . . {combined with means, other than pressure, for automatically opening a valve during actuation; combined with means for automatically removing closures or covers from the discharge nozzle during actuation}
<administratively transferred to [B05B 11/1053](#)>
- D B05B 11/3054 . . . {the valve being located upstream of an outlet valve}
<administratively transferred to [B05B 11/1054](#)>
- D B05B 11/3056 . . . {comprising rotatable or articulated levers (lever actuated piston pumps B05B 11/3009, lever actuated pumps with deformable chamber B05B 11/3029; B05B 11/3053 take precedence)}
<administratively transferred to [B05B 11/1056](#)>
- D B05B 11/3057 . . . {Triggers, i.e. actuation means consisting of a single lever having one end rotating or pivoting around an axis or a hinge fixedly attached to the container, and another end directly actuated by the user}
<administratively transferred to [B05B 11/1057](#)>
- D B05B 11/3059 . . . {Means for locking a pump or its actuation means in a fixed position (B05B 11/3091 takes precedence)}
<administratively transferred to [B05B 11/1059](#)>
- D B05B 11/306 . . . {in a retracted position, e.g. in an end-of-dispensing-stroke position}
<administratively transferred to [B05B 11/106](#)>
- D B05B 11/3061 . . . {Pump priming means}
<administratively transferred to [B05B 11/1061](#)>
- D B05B 11/3063 . . . {Air exhausted from the pump chamber being discharged into the container during priming}
<administratively transferred to [B05B 11/1063](#)>
- D B05B 11/3064 . . . {Pump inlet and outlet valve elements integrally formed of a deformable material (pump chambers having a deformable wall integrally formed with inlet and outlet valve elements B05B 11/3033)}
<administratively transferred to [B05B 11/1064](#)>
- D B05B 11/3066 . . . {Pump inlet valves (B05B 11/3018, B05B 11/3019, B05B 11/3064 take precedence)}
<administratively transferred to [B05B 11/1066](#)>
- D B05B 11/3067 . . . {actuated by pressure}
<administratively transferred to [B05B 11/1067](#)>
- D B05B 11/3069 . . . {the valve being made of a resiliently deformable material or being urged in a closed position by a spring}
<administratively transferred to [B05B 11/1069](#)>
- D B05B 11/307 . . . {Gate valves; Sliding valves}
<administratively transferred to [B05B 11/107](#)>
- D B05B 11/3071 . . . {Two inlet valves being placed in a supply conduit one upstream of the other}
<administratively transferred to [B05B 11/1071](#)>
- D B05B 11/3073 . . . {Springs}
<administratively transferred to [B05B 11/1073](#)>

- D B05B 11/3074 {located outside pump chambers}
<administratively transferred to [B05B 11/1074](#)>
- D B05B 11/3076 {Traction springs, e.g. stretchable sleeve}
<administratively transferred to [B05B 11/1076](#)>
- D B05B 11/3077 {characterized by a particular shape or material (B05B 11/3076 takes precedence)}
<administratively transferred to [B05B 11/1077](#)>
- D B05B 11/3078 {Vacuum chambers acting like springs}
<administratively transferred to [B05B 11/1078](#)>
- D B05B 11/308 {Means for counting the number of dispensing strokes}
<administratively transferred to [B05B 11/108](#)>
- D B05B 11/3081 {Arrangements for pumping several liquids or other fluent materials from several containers, e.g. for mixing them at the moment of pumping}
<administratively transferred to [B05B 11/1081](#)>
- D B05B 11/3083 {in adjustable proportion}
<administratively transferred to [B05B 11/1083](#)>
- D B05B 11/3084 {each liquid or other fluent material being pumped by a separate pump}
<administratively transferred to [B05B 11/1084](#)>
- D B05B 11/3085 {the pumps being coaxial}
<administratively transferred to [B05B 11/1085](#)>
- D B05B 11/3087 {Combination of liquid and air pumps}
<administratively transferred to [B05B 11/1087](#)>
- D B05B 11/3088 {the pump being a double-acting pump}
<administratively transferred to [B05B 11/1088](#)>
- D B05B 11/309 {the dispensing stroke being effected by the stored energy of a spring (B05B 11/3088 takes precedence)}
<administratively transferred to [B05B 11/109](#)>
- D B05B 11/3091 {being first hold in a loaded state by locking means or the like, then released (B05B 11/3092 takes precedence)}
<administratively transferred to [B05B 11/1091](#)>
- D B05B 11/3092 {automatically released from a loaded state at the end of the loading stroke}
<administratively transferred to [B05B 11/1092](#)>
- D B05B 11/3094 {having inlet or outlet valves not being actuated by pressure or having no inlet or outlet valve}
<administratively transferred to [B05B 11/1094](#)>
- D B05B 11/3095 {with movable suction side}
<administratively transferred to [B05B 11/1095](#)>
- D B05B 11/3097 {with means for sucking back the liquid or other fluent material in the nozzle after a dispensing stroke}
<administratively transferred to [B05B 11/1097](#)>
- D B05B 11/3098 {Air being permanently entrapped or sucked into the liquid pump chamber}
<administratively transferred to [B05B 11/1098](#)>

Project: RP11901 (B65D)

- U B65D 83/00** Containers or packages with special means for dispensing contents (dispensing means incorporated in removable or non-permanently secured container closures [B65D 47/00](#); for shops, stores, offices, bars, or the like [A47F 1/04](#); showcases or show cabinets with dispensing arrangements [A47F 3/02](#); magazines for screws or nuts in combination with spanners, wrenches or screwdrivers [B25B 23/06](#); for use in connection with the handling of sheets, webs, or filamentary material [B65H](#))
- U B65D 83/14** · for delivery of liquid or semi-liquid contents by internal gaseous pressure, i.e. aerosol containers comprising propellant {for a product delivered by a propellant}
- U B65D 83/60** · · Contents and propellant separated
- U B65D 83/64** · · · by piston
- B65D 83/646** · · · · {the piston being provided with a dispensing opening through which the contents are dispensed (containers with such a dispensing piston, adapted for hand-held, manually operated spray apparatus [B05B 11/00418](#)[B05B 11/029](#), in general [B65D 83/0044](#))}

Project: RP11902 (G02B)

- U G02B 7/00** **Mountings, adjusting means, or light-tight connections, for optical elements**
- U G02B 7/28** · Systems for automatic generation of focusing signals
- G02B 7/36** · · using image sharpness techniques {, e.g. image processing techniques for generating autofocus signals (~~in cameras having a solid state image sensor [H04N 5/23212](#)~~; image data processing per se [G06T](#); *in cameras having a solid state image sensor [H04N 23/67](#)*)}
- U G02B 23/00** **Telescopes, e.g. binoculars; Periscopes; Instruments for viewing the inside of hollow bodies; Viewfinders; Optical aiming or sighting devices**
- U G02B 23/24** · Instruments {or systems} for viewing the inside of hollow bodies, e.g. fibrescopes
- U G02B 23/2476** · · {Non-optical details, e.g. housings, mountings, supports}
- G02B 23/2484** · · · {Arrangements in relation to a camera or imaging device (processing or control of video signals generated by an endoscope [H04N 5/232](#)[H04N 23/60](#), [H04N 5/235](#)[H04N 23/70](#))}
- U G02B 27/00** **Optical systems or apparatus not provided for by any of the groups [G02B 1/00](#) - [G02B 26/00](#), [G02B 30/00](#)**
- U G02B 27/64** · Imaging systems using optical elements for stabilisation of the lateral and angular position of the image
- G02B 27/646** · · {compensating for small deviations, e.g. due to vibration or shake (movement of one or more optical elements for control of motion blur in cameras, projectors or printers [G03B 2205/0007](#); image stabilisation in cameras peculiar to the presence or use of an electronic image sensor [H04N 5/23248](#)[H04N 23/68](#))}

Project: RP11902 (G03B)

- G03B 7/00** **Control of exposure by setting shutters, diaphragms or filters, separately or conjointly (control of exposure in television cameras by means of circuitry influencing the optical part of the camera [H04N 5/238](#)[H04N 23/75](#))**
- U G03B 2205/00** **Adjustment of optical system relative to image or object surface other than for focusing**

- U G03B 2205/0007 · Movement of one or more optical elements for control of motion blur (imaging systems in general using optical elements for stabilisation of the position of the image [G02B 27/64](#))
- G03B 2205/0038 · · by displacing the image plane with respect to the optical axis (in case of an electronic image sensor [H04N 5/23248](#)[H04N 23/68](#))

Project: RP11902 (G06T)

- U G06T 5/00 Image enhancement or restoration**
- U G06T 5/001 · {Image restoration}
- G06T 5/002 · · {Denoising; Smoothing (noise processing or correction adapted to be used in an image pickup device containing an electronic image sensor [H04N 5/217](#)[H04N 23/81](#), [H04N 5/357](#)[H04N 25/60](#) - [H04N 5/365](#)[H04N 25/67](#))}
- G06T 5/003 · · {Deblurring; Sharpening (vibration or motion blur correction for cameras comprising an electronic image sensor [H04N 5/23264](#)[H04N 23/682](#))}
- G06T 5/005 · · {Retouching; Inpainting; Scratch removal (detecting, correction, reducing or removing defects, e.g. non-responsive pixels of solid state image sensors [H04N 5/367](#)[H04N 25/68](#), scratch removal for cinematographic films scanned by electronic image sensor [H04N 5/253](#))}
- G06T 5/006 · · {Geometric correction (~~detecting, correcting, reducing or removing artefacts resulting only from the lens unit, e.g. flare, shading, vignetting or "cos4"~~ [H04N 5/3572](#); correction of chromatic aberrations adapted to be used in an image pickup device containing an electronic image sensor [H04N 9/045](#)[H04N 23/10](#); *detecting, correcting, reducing or removing artefacts resulting only from the lens unit, e.g. flare, shading, vignetting or "cos4"* [H04N 25/61](#))}
- G06T 5/007 · · {Dynamic range modification (applied in cameras using an electronic image sensor [H04N 5/2355](#)[H04N 23/741](#), [H04N 5/2356](#)[H04N 23/743](#))}
- G06T 5/009 · · {Global, i.e. based on properties of the image as a whole (applied in cameras using an electronic image sensor [H04N 5/23229](#)[H04N 23/80](#), [H04N 5/235](#)[H04N 23/70](#))}
- G06T 5/10 · · by non-spatial domain filtering {(applied in cameras using an electronic image sensor [H04N 5/23229](#)[H04N 23/80](#), [H04N 5/235](#)[H04N 23/70](#), [H04N 5/253](#), [H04N 5/367](#)[H04N 25/68](#))}
- G06T 5/20 · · by the use of local operators {(applied in cameras using an electronic image sensor [H04N 5/23229](#)[H04N 23/80](#), [H04N 5/235](#)[H04N 23/70](#), [H04N 5/253](#), [H04N 5/367](#)[H04N 25/68](#))}
- G06T 5/40 · · by the use of histogram techniques {(applied in cameras using an electronic image sensor [H04N 5/23229](#)[H04N 23/80](#), [H04N 5/235](#)[H04N 23/70](#))}
- G06T 5/50 · · by the use of more than one image, e.g. averaging, subtraction {(applied in cameras using an electronic image sensor [H04N 5/23229](#)[H04N 23/80](#), [H04N 5/235](#)[H04N 23/70](#))}

Project: RP11902 in addition to RP11770 (G06V)

- G06V 10/10 · Image acquisition (document image scanning and transmission [H04N 1/00](#); control of digital cameras [H04N 5/232](#)[H04N 23/60](#))

WARNING

Group [G06V 10/10](#) is incomplete pending reclassification of documents from group [G06K 9/00](#)[G06F 18/00](#).

Group [G06V 10/10](#) is also impacted by reclassification into groups [G06V 10/00](#), [G06V 10/70](#) - [G06V 10/87](#), [G06V 10/88](#) - [G06V 10/92](#), [G06V 30/14](#) - [G06V 30/158](#), [G06V 30/199](#) and [G06V 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

G06V 20/00

Scenes; Scene-specific elements (control of digital cameras

~~H04N 5/232~~H04N 23/60)

NOTE

In this group, the following term is used with the meaning indicated:

- "scene" is a visual representation of the world or of some elements of it, as captured by a sensor or generated by a computer.

WARNING

Group [G06V 20/00](#) is incomplete pending reclassification of documents from group ~~[G06K 9/00](#)~~[G06F 18/00](#).

Group [G06V 20/00](#) is also impacted by reclassification into groups [G06V 20/05](#), [G06V 20/50](#), [G06V 20/60](#), [G06V 20/66](#), [G06V 20/69](#), [G06V 20/693](#), [G06V 20/695](#), [G06V 20/698](#) and [G06V 20/70](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP11902 (G11B)

G11B 31/00

Arrangements for the associated working of recording or reproducing apparatus with related apparatus (with cameras or projectors [G03B 31/00](#) {; recording/reproducing of music for electrophonic musical instruments [G10H 1/0033](#); automatic arrangements for answering calls or for recording messages for absent subscribers [H04M 1/64](#); telephonic communication systems adapted for combination with dictation recording and playback systems [H04M 11/10](#); connection of TV recorder with other related apparatus, e.g. TV camera or receiver, in which the TV signal is significantly involved [H04N](#), e.g. ~~[H04N 5/225](#)~~[H04N 23/00](#), [H04N 5/765](#); combination of radio or TV with other apparatus, e.g. with vehicles [H05K 11/00](#)})

Project: RP11902 (H01J)

U H01J 31/00

Cathode ray tubes; Electron beam tubes ([H01J 25/00](#), [H01J 33/00](#), [H01J 35/00](#), [H01J 37/00](#) take precedence; details of cathode ray tubes or of electron beam tubes [H01J 29/00](#))

U H01J 31/08

• having a screen on or from which an image or pattern is formed, picked up, converted, or stored

U H01J 31/26

• • Image pick-up tubes having an input of visible light and electric output (tubes without defined electron beams and having a light ray scanning photo-emissive screen [H01J 40/20](#))

H01J 31/46

• • • Tubes in which electrical output represents both intensity and colour of image {(colour television cameras with only one tube ~~[H04N 9/07](#)~~[H04N 23/12](#))}

Project: RP11902 (H01L)

- U H01L 27/00 **Devices consisting of a plurality of semiconductor or other solid-state components formed in or on a common substrate (details thereof [H01L 23/00](#), [H01L 29/00](#) - [H01L 51/00](#); assemblies consisting of a plurality of individual solid state devices [H01L 25/00](#))**

NOTES

1. In this group, with the exception of groups [H01L 27/115](#) - [H01L 27/11597](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
2. When classifying in this group, subject matter relating to electrically programmable read-only memories is classified in group [H01L 27/115](#), irrespective of the last place priority rule.

- U H01L 27/14 · including semiconductor components sensitive to infra-red radiation, light, electromagnetic radiation of shorter wavelength or corpuscular radiation and specially adapted either for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation (radiation-sensitive components structurally associated with one or more electric light sources only [H01L 31/14](#); couplings of light guides with optoelectronic elements [G02B 6/42](#))
- U H01L 27/144 · · Devices controlled by radiation
- U H01L 27/146 · · · Imager structures
- U H01L 27/14601 · · · · {Structural or functional details thereof}
- H01L 27/14609 · · · · · {Pixel-elements with integrated switching, control, storage or amplification elements (scanning details of imagers [H04N 3/15](#); circuitry of imagers [H04N 5/369](#)[H04N 25/70](#))}

Project: RP11902 (H04N)

- U H04N 1/46 · Colour picture communication systems
- U H04N 1/56 · · Processing of colour picture signals ([H04N 1/52](#) takes precedence)
- U H04N 1/60 · · · Colour correction or control ({[H04N 1/54](#) takes precedence})
- U H04N 1/62 · · · · Retouching, i.e. modification of isolated colours only or in isolated picture areas only
- H04N 1/624 · · · · · {Red-eye correction (control of camera based on recognised facial parts [H04N 5/23219](#)[H04N 23/611](#))}
- U H04N 3/00 Scanning details of television systems; Combination thereof with generation of supply voltages**
- U H04N 3/10 · by means not exclusively optical-mechanical ([H04N 3/36](#) takes precedence)
- H04N 3/14 · · by means of electrically scanned solid-state devices (for picture generation [H04N 5/335](#)[H04N 25/00](#))
- H04N 3/15 · · · {for picture signal generation}
- WARNING
This group is no longer used for classification of new documents as from December 1st, 2009. The backlog is continuously reclassified into group [H04N 5/335](#)[H04N 25/00](#) and subgroups
- U H04N 3/155 · · · · {Control of the image-sensor operation, e.g. image processing within the image-sensor}
- H04N 3/1568 · · · · · {for disturbance correction or prevention within the image-sensor, e.g. biasing, blooming, smearing (correction circuits [H04N 5/2175](#)[H04N 25/62](#))}

- U H04N 5/00** Details of television systems (scanning details or combination thereof with generation of supply voltages [H04N 3/00](#))
- M H04N 5/14 · Picture signal circuitry for video frequency region (~~H04N 5/222~~ takes precedence *cameras or camera modules comprising electronic image sensors, or control thereof H04N 23/00*)
- U H04N 5/20 · · Circuitry for controlling amplitude response
- C H04N 5/202 · · · Gamma control (*circuits for controlling camera response irrespective of the scene brightness H04N 23/82*)
- WARNING**
Group [H04N 5/202](#) is impacted by reclassification into group [H04N 23/82](#). Groups [H04N 5/202](#) and [H04N 23/82](#) should be considered in order to perform a complete search.
- U H04N 5/21 · · Circuitry for suppressing or minimising disturbance, e.g. moiré or halo
- H04N 5/211 · · · {Ghost signal cancellation (~~H04N 5/217~~ [H04N 23/81](#) takes precedence)}
- M H04N 5/213 · · · Circuitry for suppressing or minimising impulsive noise (~~H04N 5/217~~ takes precedence *for suppressing or minimising disturbance in image signal generation H04N 23/81*)
- D H04N 5/217 · · · in picture signal generation (in cameras comprising an electronic image sensor, e.g. in digital cameras, TV cameras, video cameras, camcorders, webcams, or to be embedded in other devices, e.g. in mobile phones, computers or vehicles)
<administratively transferred to [H04N 23/81](#)>
- D H04N 5/2171 · · · · {Dust removal, e.g. from surfaces of image sensor or processing of the image signal output by the electronic image sensor}
<administratively transferred to [H04N 23/811](#)>
- D H04N 5/2173 · · · · {in solid-state picture signal generation}
<administratively transferred to [H04N 25/60](#)>
- D H04N 5/2175 · · · · · {Suppression of excedentary charges, e.g. blooming, smearing (within the image sensor [H04N 3/1556](#), [H04N 3/1568](#))}
<administratively transferred to [H04N 25/62](#)>
- D H04N 5/2176 · · · · · {Correction or equalization of amplitude response, e.g. dark current, blemishes, non-uniformity}
<administratively transferred to [H04N 25/63](#)>
- D H04N 5/2178 · · · · · · {by initial calibration, e.g. with memory means}
<administratively transferred to [H04N 25/67](#)>
- M H04N 5/222 · Studio circuitry; Studio devices; ~~Studio equipment~~ {; ~~Cameras comprising an electronic image sensor, e.g. digital cameras, video cameras, TV cameras, video cameras, camcorders, webcams, camera modules for embedding in other devices, e.g. mobile phones, computers or vehicles~~} *Studio equipment (cameras or camera modules comprising electronic image sensors, or control thereof H04N 23/00)*
- D H04N 5/225 · · Television cameras {; Cameras comprising an electronic image sensor, e.g. digital cameras, video cameras, camcorders, webcams, camera modules specially adapted for being embedded in other devices, e.g. mobile phones, computers or vehicles (constructional details of electronic still picture cameras or digital still picture cameras not peculiar to the presence or use of the electronic image sensor G03B)}
<administratively transferred to [H04N 23/00](#)>

- D H04N 5/2251 . . . {Constructional details}
<administratively transferred to [H04N 23/50](#)>
- D H04N 5/2252 {Housings}
<administratively transferred to [H04N 23/51](#)>
- D H04N 5/22521 {Elements optimizing image sensor operations, e.g. EMF protection, heat transfer, moisture or dust}
<administratively transferred to [H04N 23/52](#)>
- D H04N 5/22525 {Electronic viewfinders}
<administratively transferred to [H04N 23/53](#)>
- D H04N 5/225251 {rotatable or detachable}
<administratively transferred to [H04N 23/531](#)>
- D H04N 5/2253 {Mounting of pick-up device, electronic image sensor, deviation or focusing coils}
<administratively transferred to [H04N 23/54](#)>
- D H04N 5/2254 {Mounting of optical parts, e.g. lenses, shutters, filters or optical parts peculiar to the presence or use of an electronic image sensor}
<administratively transferred to [H04N 23/55](#)>
- D H04N 5/22541 {Optical arrangements for light-field or plenoptic cameras}
<administratively transferred to [H04N 23/957](#)>
- D H04N 2005/2255 . . . {for picking-up images in sites, inaccessible due to their dimensions or hazardous conditions, e.g. endoscope, borescope}
<administratively transferred to [H04N 23/555](#) INV>
- D H04N 5/2256 . . . {provided with illuminating means}
<administratively transferred to [H04N 23/56](#)>
- D H04N 5/2257 . . . {Mechanical and electrical details of cameras or camera modules for embedding in other devices (mounting structure in mobile phone see H04M 1/0264; optical details G03B)}
<administratively transferred to [H04N 23/57](#)>
- D H04N 5/2258 . . . {Cameras using two or more image sensors, e.g. a CMOS sensor for video and a CCD for still image (cameras having one image sensor for each colour H04N 9/045, H04N 9/09)}
<administratively transferred to [H04N 23/45](#)>
- D H04N 5/2259 . . . {Means for changing the camera field of view without moving the camera body, e.g. nutating or panning optics or image sensors (picture signal generation using shifting image sensors H04N 5/349; varying magnification, e.g. angle of view for cameras using only optical means G03B)}
<administratively transferred to [H04N 23/58](#)>
- D H04N 5/228 Circuit details for pick-up tubes
<administratively transferred to [H04N 23/40](#)>
- D H04N 5/2283 {Beam current control}
<administratively transferred to [H04N 23/41](#)>
- D H04N 5/2286 {during retrace periods, e.g. circuits for ACT tubes, leg suppression}
<administratively transferred to [H04N 23/43](#)>

- D H04N 5/232 . . . Devices for controlling television cameras, e.g. remote control ~~{; Control of cameras comprising an electronic image sensor}~~ (H04N 5/235 takes precedence ~~{; Mountings, adjusting means, or light-tight connections, for optical elements G02B 7/00}~~)
<administratively transferred to [H04N 23/60](#)>
- D H04N 5/23203 {Remote-control signaling for television cameras, cameras comprising an electronic image sensor or for parts thereof, e.g. between main body and another part of camera (distributing sync signals to television cameras H04N 5/0733)}
<administratively transferred to [H04N 23/66](#)>
- D H04N 5/23206 {Transmission of camera control signals via a network, e.g. Internet}
<administratively transferred to [H04N 23/661](#)>
- D H04N 5/232061 {using Master/Slave camera arrangements for affecting the control of camera image capture, e.g. placing the camera in a desirable condition to capture a desired image}
<administratively transferred to [H04N 23/662](#)>
- D H04N 5/23209 {for interchangeable parts of camera involving control signals based on electric image signals provided by an electronic image sensor (interchangeably mounting lenses on cameras not involving a control signal based on electric image signals provided by a main electronic image sensor G03B 17/14)}
<administratively transferred to [H04N 23/663](#)>
- D H04N 5/23212 {Focusing based on image signals provided by the electronic image sensor}
<administratively transferred to [H04N 23/67](#)>
- D H04N 5/232121 {and on active ranging signals, e.g. using light or sound signals emitted toward objects}
<administratively transferred to [H04N 23/671](#)>
- D H04N 5/232122 {based on the difference in phase of signals}
<administratively transferred to [H04N 23/672](#)>
- D H04N 5/232123 {based on contrast or high-frequency components of image signals, e.g. hill climbing method}
<administratively transferred to [H04N 23/673](#)>
- D H04N 5/232125 {adjusting depth of field during image capture, e.g. maximizing or setting range based on scene characteristics}
<administratively transferred to [H04N 23/959](#)>
- D H04N 5/232127 {setting of focusing region}
<administratively transferred to [H04N 23/675](#)>
- D H04N 5/232133 {Bracketing relating to the capture of varying focusing conditions}
<administratively transferred to [H04N 23/676](#)>
- D H04N 5/23216 {Control of parameters, e.g. field or angle of view of camera via graphical user interface, e.g. touchscreen}
<administratively transferred to [H04N 23/62](#)>
- D H04N 5/23218 {Control of camera operation based on recognized objects}
<administratively transferred to [H04N 23/61](#)>
- D H04N 5/23219 {where the recognized objects include parts of the human body, e.g. human faces, facial parts or facial expressions}
<administratively transferred to [H04N 23/611](#)>

- D H04N 5/23222 {Computer-aided capture of images, e.g. transfer from script file into camera, check of taken image quality, advice or proposal for image composition or decision on when to take image}
<administratively transferred to [H04N 23/64](#)>
- D H04N 5/23225 {Input of new or changed control program into camera control means}
<administratively transferred to [H04N 23/617](#)>
- D H04N 5/23227 {involving internal camera communication with the image sensor, e.g. synchronizing or multiplexing SSIS control signals}
<administratively transferred to [H04N 23/665](#)>
- D H04N 5/23229 {comprising further processing of the captured image without influencing the image pickup process (image processing in general G06T)}
<administratively transferred to [H04N 23/80](#)>
- D H04N 5/23232 {by using more than one image in order to influence resolution, frame rate or aspect ratio (providing high dynamic range image H04N 5/2355)}
<administratively transferred to [H04N 23/951](#)>
- D H04N 5/23235 {by using a single image in order to influence the resolution}
<administratively transferred to [H04N 23/815](#)>
- D H04N 5/23238 {Control of image capture or reproduction to achieve a very large field of view, e.g. panorama (panoramic or widescreen photography G03B 27/00)}
<administratively transferred to [H04N 23/698](#)>
- D H04N 5/23241 {Control of camera operation in relation to power supply}
<administratively transferred to [H04N 23/65](#)>
- D H04N 5/232411 {where power supply is reduced or conserved by affecting camera operations, e.g. sleep mode, hibernation mode, power off or turning off selective parts of the camera}
<administratively transferred to [H04N 23/651](#)>
- D H04N 5/23245 {Operation mode switching of cameras, e.g. between still/video, sport/normal or high/low resolution mode}
<administratively transferred to [H04N 23/667](#)>
- D H04N 5/23248 {for stable pick-up of the scene in spite of camera body vibration (image-sensor selective scanning *per se* H04N 3/1562)}
<administratively transferred to [H04N 23/68](#)>
- D H04N 5/23251 {Motion detection}
<administratively transferred to [H04N 23/681](#)>
- D H04N 5/23254 {based on the image signal (analysis of motion by image processing in general G06T 7/20)}
<administratively transferred to [H04N 23/6811](#)>
- D H04N 5/23258 {based on additional sensors (cameras when not peculiar to the use or presence of the EIS G03B 2217/005)}
<administratively transferred to [H04N 23/6812](#)>
- D H04N 5/23261 {by distinguishing pan/tilt from motion}
<administratively transferred to [H04N 23/6815](#)>
- D H04N 5/23264 {Vibration or motion blur correction}
<administratively transferred to [H04N 23/682](#)>

- D H04N 5/23267 {performed by a processor, e.g. controlling the readout of an image memory}
<administratively transferred to [H04N 23/683](#)>
- D H04N 5/2327 {performed by controlling the image sensor readout, e.g. by controlling the integration time (controlling the image sensor readout in general H04N 5/345, H04N 5/353)}
<administratively transferred to [H04N 23/684](#)>
- D H04N 5/23274 {by controlling the scanning position, e.g. windowing (windowed readout of image sensor in general H04N 5/3454)}
<administratively transferred to [H04N 23/6842](#)>
- D H04N 5/23277 {by combination of a plurality of images sequentially taken}
<administratively transferred to [H04N 23/6845](#)>
- D H04N 5/2328 {performed by mechanical compensation (stabilization for imaging systems using optical elements in general s G02B 27/646; cameras when not peculiar to the use or presence of the EIS G03B 2205/0007)}
<administratively transferred to [H04N 23/685](#)>
- D H04N 5/23283 {with a variable apex prism}
<administratively transferred to [H04N 23/686](#)>
- D H04N 5/23287 {by shifting the lens/sensor position}
<administratively transferred to [H04N 23/687](#)>
- D H04N 5/2329 {Motion occurring during a rolling shutter mode}
<administratively transferred to [H04N 23/689](#)>
- D H04N 5/23293 {Electronic viewfinders}
<administratively transferred to [H04N 23/63](#)>
- D H04N 5/232933 {Graphical User Interface [GUI] specifically adapted for controlling image capture or setting capture parameters, e.g. using a touchscreen}
<administratively transferred to [H04N 23/631](#)>
- D H04N 5/232935 {for displaying or modifying preview images prior to image capturing, e.g. variety of image resolutions or capturing parameters}
<administratively transferred to [H04N 23/632](#)>
- D H04N 5/232939 {for displaying additional information relating to control or operation of the camera}
<administratively transferred to [H04N 23/633](#)>
- D H04N 5/232941 {Warning indications}
<administratively transferred to [H04N 23/634](#)>
- D H04N 5/232945 {Region indicators or field of view}
<administratively transferred to [H04N 23/635](#)>
- D H04N 5/23296 {Control of means for changing angle of the field of view, e.g. optical zoom objective, electronic zooming or combined use of optical and electronic zooming (optical details of zoom lenses G02B 15/14; optical zooming only for cameras G03B 5/00)}
<administratively transferred to [H04N 23/69](#)>

- D H04N 5/23299 {Controlling the position of the camera for changing the field of view, e.g. panning, tilting or tracking of objects (TV type tracking systems G01S 3/7864; tracking movement of a target in burglar, theft or intruder alarms, using TV cameras G08B 13/19608)}
<administratively transferred to [H04N 23/695](#)>
- D H04N 5/235 Circuitry {or methods} for compensating for variation in the brightness of the object {, e.g. based on electric image signals provided by an electronic image sensor}
<administratively transferred to [H04N 23/70](#)>
- D H04N 5/2351 {Circuitry for evaluating the brightness variations of the object (within the image sensor H04N 5/351; photometry in general G01J 1/00)}
<administratively transferred to [H04N 23/71](#)>
- D H04N 5/2352 {Combination of two or more compensation controls}
<administratively transferred to [H04N 23/72](#)>
- D H04N 5/2353 {by influencing the exposure time, e.g. shutter (H04N 5/2352 takes precedence; within the image sensor H04N 5/353)}
<administratively transferred to [H04N 23/73](#)>
- D H04N 5/2354 {by influencing the scene brightness using illuminating means (H04N 5/2352 takes precedence)}
<administratively transferred to [H04N 23/74](#)>
- D H04N 5/2355 {by increasing the dynamic range of the final image compared to the dynamic range of the electronic image sensor, e.g. by adding correct exposed portions of short and long exposed images (image enhancement in general using more than one image G06T 5/50)}
<administratively transferred to [H04N 23/741](#)>
- D H04N 5/2356 {Bracketing, i.e. taking a series of images with varying exposure conditions}
<administratively transferred to [H04N 23/743](#)>
- D H04N 5/2357 {Detection of flicker frequency or flicker suppression, e.g. due to fluorescent tube illumination}
<administratively transferred to [H04N 23/745](#)>
- D H04N 5/2358 {by influencing at least one of the pick-up tube voltages (H04N 5/2352 takes precedence)}
<administratively transferred to [H04N 23/749](#)>
- D H04N 5/238 by influencing the optical part of the camera, {e.g. diaphragm, intensifier, fibre bundle (H04N 5/2352 takes precedence)}
<administratively transferred to [H04N 23/75](#)>
- D H04N 5/243 by influencing the picture signal {, e.g. signal amplitude gain control (H04N 5/2352 takes precedence)}
<administratively transferred to [H04N 23/76](#)>
- D H04N 5/247 Arrangements of television cameras {(constructional details of cameras H04N 5/2251)}
<administratively transferred to [H04N 23/90](#)>

- C H04N 5/30
- Transforming light or analogous information into electric information (~~H04N 5/222 takes precedence~~; scanning details [H04N 3/00](#); cameras or camera modules comprising electronic image sensors, or control thereof [H04N 23/00](#); circuitry of solid-state image sensors [SSIS] or control thereof [H04N 25/00](#))
- WARNING**
Group [H04N 5/30](#) is impacted by reclassification into group [H04N 25/00](#). Groups [H04N 5/30](#) and [H04N 25/00](#) should be considered in order to perform a complete search.
- C H04N 5/32
- Transforming X-rays ~~{(image transformers [H01J 31/00](#) cameras or camera modules for generating image signals from X-rays [H04N 23/30](#); circuitry of SSIS for transforming X-rays into image signals [H04N 25/30](#))}~~
- WARNING**
Group [H04N 5/32](#) is impacted by reclassification into groups [H04N 23/30](#) and [H04N 25/30](#). Groups [H04N 5/32](#), [H04N 23/30](#) and [H04N 25/30](#) should be considered in order to perform a complete search.
- U H04N 5/3205
- {using subtraction imaging techniques}
- U H04N 5/321
- with video transmission of fluoroscopic images
- WARNING**
Not complete, for documents published prior to June 1996 see also [H04N 5/32](#)
- U H04N 5/325
- Image enhancement, e.g. by subtraction techniques using polyenergetic X-rays
- WARNING**
Not complete, for documents published prior to June 1996 see also [H04N 5/32](#)
- C H04N 5/33
- Transforming ~~infra-red~~infrared radiation (cameras or camera modules for generating image signals from infrared radiation [H04N 23/20](#); circuitry of SSIS for transforming infrared radiation into image signals [H04N 25/20](#))
- WARNING**
Group [H04N 5/33](#) is impacted by reclassification into groups [H04N 23/20](#), [H04N 23/21](#), [H04N 23/23](#), [H04N 25/20](#) and [H04N 25/21](#). All groups listed in this Warning should be considered in order to perform a complete search.
- D H04N 5/332
- {Multispectral imaging comprising at least a part of the infrared region}
- <administratively transferred to [H04N 23/11](#)>
- D H04N 5/335
- using solid-state image sensors [SSIS] ([H04N 5/32](#), [H04N 5/33](#) take precedence)
- NOTE**
In this group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.
- <administratively transferred to [H04N 25/00](#)>
- D H04N 5/3355
- {with digital output of the sensor cell, e.g. dynamic RAM image sensors}
- <administratively transferred to [H04N 25/772](#)>

- D H04N 5/341 Extracting pixel data from an image sensor by controlling scanning circuits, e.g. by modifying the number of pixels having been sampled or to be sampled
<administratively transferred to [H04N 25/40](#)>
- D H04N 5/3415 {for increasing the field of view by combining the outputs of a plurality of sensors, e.g. panoramic imaging (linear arrays using abutted sensors H04N 5/3692)}
<administratively transferred to [H04N 25/41](#)>
- D H04N 5/343 by switching between different modes of operation using different resolutions or aspect ratios, e.g. between still and video mode or between interlaced and non-interlaced mode
<administratively transferred to [H04N 25/42](#)>
- D H04N 5/345 by partially reading an SSIS array {, i.e. by outputting a number of pixels less than the number of pixels present on the image sensor}
<administratively transferred to [H04N 25/44](#)>
- D H04N 5/3452 {by reading contiguous pixels in one direction within a read portion of the array, e.g. without loss of resolution within the read portion, or every other field is skipped}
<administratively transferred to [H04N 25/441](#)>
- D H04N 5/3454 {by reading contiguous pixels in two directions within a read portion of the array, e.g. without loss of resolution in two directions, windowing or electronic zooming}
<administratively transferred to [H04N 25/443](#)>
- D H04N 5/3456 {by skipping some contiguous pixels within the read portion of the array, e.g. with loss of resolution, e.g. skipping or discarding pixels}
<administratively transferred to [H04N 25/445](#)>
- D H04N 5/347 by combining or binning pixels in SSIS
<administratively transferred to [H04N 25/46](#)>
- D H04N 5/349 for increasing resolution by shifting the sensor relative to the scene {, e.g. microscanning}
<administratively transferred to [H04N 25/48](#)>
- D H04N 5/351 Control of the SSIS depending on the scene, e.g. brightness or motion in the scene
<administratively transferred to [H04N 25/50](#)>
- D H04N 5/353 Control of the integration time {(circuitry for compensating for variation in the brightness of the object by influencing the exposure time H04N 5/2353)}
<administratively transferred to [H04N 25/53](#)>
- D H04N 5/3532 {by controlling rolling shutters}
<administratively transferred to [H04N 25/531](#)>
- D H04N 5/3535 {with different integration times within the sensor}
<administratively transferred to [H04N 25/533](#)>
- D H04N 5/3537 {depending on the spectral component}
<administratively transferred to [H04N 25/534](#)>
- D H04N 5/355 Control of the dynamic range
<administratively transferred to [H04N 25/57](#)>

- D H04N 5/35509 {involving a non-linear response}
<administratively transferred to [H04N 25/571](#)>
- D H04N 5/35518 {being of the logarithmic type}
<administratively transferred to [H04N 25/573](#)>
- D H04N 5/35527 {with a response composed of multiple slopes}
<administratively transferred to [H04N 25/575](#)>
- D H04N 5/35536 {involving multiple exposures (combination of exposures for increasing the dynamic range H04N 5/235)}
<administratively transferred to [H04N 25/58](#)>
- D H04N 5/35545 {being simultaneously taken}
<administratively transferred to [H04N 25/581](#)>
- D H04N 5/35554 {with different integration times}
<administratively transferred to [H04N 25/583](#)>
- D H04N 5/35563 {with pixels having different sensibilities within the sensor, e.g. fast/slow pixels, pixels having different sizes}
<administratively transferred to [H04N 25/585](#)>
- D H04N 5/35572 {sequentially taken, e.g. using the combination of odd and even image fields}
<administratively transferred to [H04N 25/587](#)>
- D H04N 5/35581 {with different integration times, e.g. short and long exposures}
<administratively transferred to [H04N 25/589](#)>
- D H04N 5/3559 {by controlling the amount of charge storable in the pixel, e.g. modification of the charge conversion ratio of the floating node capacitance}
<administratively transferred to [H04N 25/59](#)>
- D H04N 5/357 . . . Noise processing, e.g. detecting, correcting, reducing or removing noise
<administratively transferred to [H04N 25/60](#)>
- D H04N 5/3572 {the noise originating only from the lens unit, e.g. flare, shading, vignetting or "cos4" (suppressing or minimizing noise in picture signal generation H04N 5/217; correction of colour aberration from a lens H04N 9/04517)}
<administratively transferred to [H04N 25/61](#)>
- D H04N 5/35721 {involving a transfer function modeling the optical system, e.g. Optical Transfer Function [OTF], Phase Transfer Function [PhTF] or Modulation Transfer Function [MTF]}
<administratively transferred to [H04N 25/615](#)>
- D H04N 5/3575 {involving a correlated sampling function, e.g. correlated double or triple sampling}
<administratively transferred to [H04N 25/616](#)>
- D H04N 5/3577 {for reducing electromagnetic interferences, e.g. EMI reduction, clocking noise}
<administratively transferred to [H04N 25/617](#)>
- D H04N 5/359 applied to excess charges produced by the exposure, e.g. smear, blooming, ghost image, crosstalk or leakage between pixels
<administratively transferred to [H04N 25/62](#)>
- D H04N 5/3591 {for the control of blooming}
<administratively transferred to [H04N 25/621](#)>

- D H04N 5/3592 {by controlling anti-blooming drains}
<administratively transferred to [H04N 25/622](#)>
- D H04N 5/3594 {by evacuation via the output or reset lines}
<administratively transferred to [H04N 25/623](#)>
- D H04N 5/3595 {for the control of smearing, e.g. CCD being still exposed during the charge transfer}
<administratively transferred to [H04N 25/625](#)>
- D H04N 5/3597 {being the residual charges remaining after reading an image, e.g. ghost images or after images}
<administratively transferred to [H04N 25/626](#)>
- D H04N 5/3598 {applied when a phenomenon of inverted contrast occurs, e.g. eclipse phenomenon}
<administratively transferred to [H04N 25/627](#)>
- D H04N 5/361 applied to dark current
<administratively transferred to [H04N 25/63](#)>
- D H04N 5/363 applied to reset noise, e.g. KTC noise {related to CMOS structures}
<administratively transferred to [H04N 25/65](#)>
- D H04N 5/365 applied to fixed-pattern noise, e.g. non-uniformity of response
<administratively transferred to [H04N 25/67](#)>
- D H04N 5/3651 {for non-uniformity detection and correction}
<administratively transferred to [H04N 25/671](#)>
- D H04N 5/3653 {between adjacent sensors or output registers for reading a single image}
<administratively transferred to [H04N 25/672](#)>
- D H04N 5/3655 {by using a reference source}
<administratively transferred to [H04N 25/673](#)>
- D H04N 5/3656 {the reference source being based on the scene itself, e.g. defocusing}
<administratively transferred to [H04N 25/674](#)>
- D H04N 5/3658 {for reducing the column or line fixed pattern noise}
<administratively transferred to [H04N 25/677](#)>
- D H04N 5/367 applied to defects, e.g. non-responsive pixels
<administratively transferred to [H04N 25/68](#)>
- D H04N 5/3675 {by defect estimation performed on the scene signal, e.g. real time or on-the-fly detection}
<administratively transferred to [H04N 25/683](#)>
- D H04N 5/369 SSIS architecture; Circuitry associated therewith
<administratively transferred to [H04N 25/70](#)>
- D H04N 5/3692 {Line sensors}
<administratively transferred to [H04N 25/701](#)>
- D H04N 5/3694 {using abutted sensors forming a long line, e.g. for flat bed scanners}
<administratively transferred to [H04N 25/7013](#)>

- D H04N 5/3696 {SSIS architecture characterized by non-identical, non-equidistant or non-planar pixel layout, sensor embedding other types of pixels not meant for producing an image signal, e.g. fovea sensors or display pixels (Imager structures H01L 27/146)}
<administratively transferred to [H04N 25/702](#)>
- D H04N 5/36961 {the other type of pixels are pixels specially adapted for focusing, e.g. phase difference pixel sets}
<administratively transferred to [H04N 25/704](#)>
- D H04N 5/36963 {Details of pixels used only for dark current, e.g. dummy pixels or optical black pixels}
<administratively transferred to [H04N 25/633](#)>
- D H04N 5/36965 {the other type of pixels are pixels for depth measurement, e.g. RGBZ where Z is the depth pixel or embedded time-of-flight pixels (depth pixels used only for focusing H04N 5/36961)}
<administratively transferred to [H04N 25/705](#)>
- D H04N 5/3698 {Circuitry for controlling the generation or the management of the power supply}
<administratively transferred to [H04N 25/709](#)>
- D H04N 5/372 Charge-coupled device [CCD] sensors; Time delay and integration [TDI] registers or shift registers specially adapted for SSIS ((charge coupled imager structure H01L 27/148))
<administratively transferred to [H04N 25/71](#)>
- D H04N 5/37206 {TDI registers or shift registers specially adapted for SSIS}
<administratively transferred to [H04N 25/711](#)>
- D H04N 5/37213 {Details of transfer/readout registers; Split readout registers and multiple readout registers}
<administratively transferred to [H04N 25/713](#)>
- D H04N 5/3722 using frame interline transfer [FIT]
<administratively transferred to [H04N 25/715](#)>
- D H04N 5/3725 using frame transfer [FT]
<administratively transferred to [H04N 25/72](#)>
- D H04N 5/3728 using interline transfer [IT]
<administratively transferred to [H04N 25/73](#)>
- D H04N 5/374 Addressed sensors, e.g. MOS or CMOS sensors
<administratively transferred to [H04N 25/76](#)>
- D H04N 5/3741 {comprising control or output lines sharing a plurality of functions, e.g. output or driving or reset or power lines}
<administratively transferred to [H04N 25/766](#)>
- D H04N 5/3742 {Details of transfer or readout registers; split readout registers and multiple readout registers}
<administratively transferred to [H04N 25/767](#)>
- D H04N 5/3743 {using TDI registers}
<administratively transferred to [H04N 25/768](#)>
- D H04N 5/3745 having additional components embedded within a pixel or connected to a group of pixels within a sensor matrix, e.g. memories, A/D converters, pixel amplifiers, shared circuits or shared components
<administratively transferred to [H04N 25/77](#)>

- D H04N 5/37452 {comprising additional storage means (by controlling the amount of charges storable in the pixel H04N 5/3559)}
<administratively transferred to [H04N 25/771](#)>
- D H04N 5/37455 {comprising A/D, V/T, V/F, I/T or I/F converters}
<administratively transferred to [H04N 25/772](#)>
- D H04N 5/37457 {comprising amplifiers shared between a plurality of pixels, e.g. at least one part of the amplifier has to be on the sensor array itself}
<administratively transferred to [H04N 25/778](#)>
- D H04N 5/376 Addressing circuits
<administratively transferred to [H04N 25/74](#)>
- D H04N 5/3765 {Timing or clock signal generating circuits}
<administratively transferred to [H04N 25/745](#)>
- D H04N 5/378 Readout circuits, e.g. correlated double sampling [CDS] circuits, output amplifiers or A/D converters
<administratively transferred to [H04N 25/75](#)>
- D H04N 5/379 {Details of the architecture or circuitry being divided to different or multiple substrates, chips or circuit boards, e.g. stacked image sensors (line sensors H04N 5/3694)}
<administratively transferred to [H04N 25/79](#)>
- U H04N 9/00** **Details of colour television systems**
- N H04N 9/01 *Circuitry for demodulating colour component signals modulated spatially by colour striped filters by phase separation*
- N H04N 9/03 *Circuitry for demodulating colour component signals modulated spatially by colour striped filters by frequency separation*
- D H04N 9/04 Picture signal generators
<administratively transferred to [H04N 23/10](#)>
- D H04N 9/045 {using solid-state devices (scanning of colour motion picture films H04N 9/11; Imager structures H01L 27/146)}
<administratively transferred to [H04N 23/10](#)>
- D H04N 9/0451 {characterized by colour imaging operations}
<administratively transferred to [H04N 23/84](#)>
- D H04N 9/04511 {by partially reading a S/S to preserve the colour pattern with or without loss of information}
<administratively transferred to [H04N 25/447](#)>
- D H04N 9/04513 {to modify Gamut}
<administratively transferred to [H04N 23/841](#)>
- D H04N 9/04515 {Demosaicing, e.g. interpolating colour pixel values (Computational demosaicing G06T 3/4015)}
<administratively transferred to [H04N 23/843](#)>
- D H04N 9/04517 {Correcting colour aberration of lenses}
<administratively transferred to [H04N 25/611](#)>
- D H04N 9/04519 {using transfer functions modeling the optical system, e.g. Optical Transfer Function [OTF], Phase Transfer Function [PhTF] or Modulation Transfer Function [MTF]}
<administratively transferred to [H04N 25/6153](#)>

- D H04N 9/04521 {Colour sequential image capture, e.g. using a colour wheel}
<administratively transferred to [H04N 23/125](#)>
- D H04N 9/0455 . . . {Colour filter architecture (colour filters structurally associated with image sensors H01L 27/146)}
<administratively transferred to [H04N 25/11](#)>
- D H04N 9/04551 {Mosaic colour filter}
<administratively transferred to [H04N 25/13](#)>
- D H04N 9/04553 {including elements transmitting or passing infrared wavelengths}
<administratively transferred to [H04N 25/131](#)>
- D H04N 9/04555 {including elements transmitting or passing panchromatic light, e.g. white light}
<administratively transferred to [H04N 25/133](#)>
- D H04N 9/04557 {based on three different wavelength filter elements}
<administratively transferred to [H04N 25/134](#)>
- D H04N 9/04559 {based on four or more different wavelength filter elements}
<administratively transferred to [H04N 25/135](#)>
- D H04N 9/04561 {using complementary colours}
<administratively transferred to [H04N 25/136](#)>
- D H04N 9/04563 {colour separation based on photon absorption depth, e.g. full colour resolution obtained simultaneously at each pixel location}
<administratively transferred to [H04N 25/17](#)>
- D H04N 9/07 . . with one pick-up device only
<administratively transferred to [H04N 23/12](#)>
- D H04N 9/077 . . . whereby the colour signals are characterised by their phase
<administratively transferred to [H04N 9/01](#)>
- D H04N 9/083 . . . whereby the colour signals are characterised by their frequency
<administratively transferred to [H04N 9/03](#)>
- D H04N 9/09 . . with more than one pick-up device
<administratively transferred to [H04N 23/13](#)>
- D H04N 9/093 . . . Systems for avoiding or correcting misregistration of video signals
<administratively transferred to [H04N 23/15](#)>
- D H04N 9/097 . . . Optical arrangements associated therewith, e.g. for beam-splitting, for colour correction
<administratively transferred to [H04N 23/16](#)>
- D H04N 9/10 . . using optical-mechanical scanning means only (H04N 9/11 takes precedence)
<administratively transferred to [H04N 23/17](#)>
- M H04N 9/11 . . Scanning of colour motion picture films, e.g. for telecine
- C H04N 9/64 . . Circuits for processing colour signals ([H04N 9/77](#) takes precedence, [camera processing pipelines for processing colour signals H04N 23/84](#))

WARNING

Group [H04N 9/64](#) is impacted by reclassification into group [H04N 23/84](#). Groups [H04N 9/64](#) and [H04N 23/84](#) should be considered in order to perform a complete search.

- C H04N 9/67
- for matrixing (*camera processing pipelines for matrixing of colour signals H04N 23/85*)
- WARNING**
Group H04N 9/67 is impacted by reclassification into group H04N 23/85. Groups H04N 9/67 and H04N 23/85 should be considered in order to perform a complete search.
- C H04N 9/68
- for controlling the amplitude of colour signals, e.g. automatic chroma control circuits (H04N 9/71, H04N 9/73 take precedence; *camera processing pipelines for controlling the colour saturation of colour signals H04N 23/86*)
- WARNING**
Group H04N 9/68 is impacted by reclassification into group H04N 23/86. Groups H04N 9/68 and H04N 23/86 should be considered in order to perform a complete search.
- C H04N 9/69
- for modifying the colour signals by gamma correction (*controlling camera response for colour signals H04N 23/83*)
- WARNING**
Group H04N 9/69 is impacted by reclassification into group H04N 23/83. Groups H04N 9/69 and H04N 23/83 should be considered in order to perform a complete search.
- C H04N 9/72
- for reinsertion of ~~de~~DC and slowly varying components of colour signals (*camera processing pipelines for reinsertion of DC or slowly varying components of colour signals H04N 23/87*)
- WARNING**
Group H04N 9/72 is impacted by reclassification into group H04N 23/87. Groups H04N 9/72 and H04N 23/87 should be considered in order to perform a complete search.
- C H04N 9/73
- ~~colour~~Colour balance circuits, e.g. white balance circuits; ~~or~~ colour temperature control (*camera processing pipelines for colour balance H04N 23/88*)
- WARNING**
Group H04N 9/73 is impacted by reclassification into group H04N 23/88. Groups H04N 9/73 and H04N 23/88 should be considered in order to perform a complete search.
- D H04N 9/735
- {for picture-signal-generators}
- <administratively transferred to [H04N 23/88](#)>
- U H04N 21/00
- Selective content distribution, e.g. interactive television or video on demand [VOD] (real-time bi-directional transmission of motion video data [H04N 7/14](#) {; broadcast or conference over packet switching networks [H04L 12/18](#)})**

NOTES

1. This group covers :

- interactive video distribution processes, systems, or elements thereof, which are characterised by point-to-multipoint system configurations, and which are mainly used for motion video data unidirectional distribution or delivery resulting from interactions between systems operators, e.g. access or service providers, or users e.g. subscribers, and system elements.
- such systems include dedicated communication systems, such as television distribution systems, which primarily distribute or deliver motion video data in the manner indicated, which may, in addition, provide a framework for further, diverse data communications or services in either unidirectional

or bi-directional form. However, video will occupy most of the downlink bandwidth in the distribution process.

- typically, system operators interface with transmitter-side elements or users' interface with receiver-side elements in order to facilitate, through interaction with such elements, the dynamic control of data processing or data flow at various points in the system. This interaction is typically occasional or intermittent in nature.
 - processes, systems or elements thereof specially adapted to the generation, distribution and processing of data, which is either associated with video content, e.g. metadata, ratings, or related to the user or his environment and which has been actively or passively gathered. This data is either used to facilitate interaction or to alter or target the content.
2. In this main group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.
3. In this main group, the following terms and expressions are used with the meaning indicated:
- additional data - designates still pictures, textual, graphical or executable data such as software. It is used to convey supplemental information and can be generated prior to or during the distribution process itself, e.g. metadata, keys.
 - content designates video or audio streams, which may be combined with additional data. Video data will always be present and occupy most of the downlink bandwidth in the distribution process
 - server - designates an apparatus designed for adapting the content received from the content provider to the distribution network. It also manages the distribution to client devices or intermediate components over a network. Further servers may also be present for gathering or generating additional data, e.g. rights management server
 - additional data server - designates a server, which sole purpose is the distribution or management of additional data. It is not in charge of the distribution of video or audio data
 - client - designates an apparatus such as a TV receiver, a set-top-box, a PC-TV, a mobile appliance (e.g. mobile phone or receiver in a vehicle), for receiving video, audio and possibly additional data from one or several servers or intermediate components via a network for further processing, storing or displaying. It can also transmit this data on a home-based local network to further devices, e.g. a home server transmitting video to PCs and set-top-boxes within a home.
 - local network - pertains to a restricted area, e.g. a home or a vehicle, and designates the link between a client and its peripheral devices
 - network - is to be distinguished from "local network": "network" designates the link between the server and the clients, or between the server and the intermediate components, or between the intermediate components and the clients, or between remotely located clients
 - distribution - encompasses broadcasting, multicasting and unicasting techniques for transmitting content from one or more sources to one or more receiving stations. The distribution follows a request by a receiving station to the source, e.g. VOD or from a customization of the content by the source, e.g. targeting advertisements to a demographic group in a unidirectional or bidirectional system. Additionally, distribution encompasses techniques where the client acts as a source and another client acts as a receiving station, e.g. a peer-to-peer system for sharing video among client devices
 - end-user - designates a physical person, e.g. a TV viewer, who consumes the content using the client device. He is the final recipient of the content distributed by the server
 - interaction - covers actions occurring between or among two or more objects that have an effect upon one another, wherein objects comprise

users, system operators, system elements, or content. The user may interact with content locally at the client device, e.g. for requesting additional data stored within the client device. The user may interact with content remotely through a server e.g. for VOD playback control or for uploading video to a server. The client device may interact with the content e.g. selecting content based upon the user profile. The client device may interact with a server using a return channel, e.g. for authenticating client or uploading client hardware capabilities. The server may interact with a client device, e.g. to force a client to tune to an advertisement channel

upstream - designates the direction of data flow towards the source, e.g. a server receiving a request via a mobile phone network.

downstream - designates the direction of data flow towards a client, e.g. a client receiving data originating from a server elementary stream

An elementary stream (ES) as defined by the MPEG system layer designates the output of an audio or video encoder.

- U H04N 21/40
 - Client devices specifically adapted for the reception of or interaction with content, e.g. set-top-box [STB]; Operations thereof
- U H04N 21/41
 - • Structure of client; Structure of client peripherals
- U H04N 21/422
 - • • Input-only peripherals {, i.e. input devices connected to specially adapted client devices}, e.g. global positioning system [GPS] {(input devices also receiving signals from specially adapted client devices [H04N 21/4104](#))}
- H04N 21/4223
 - • • • Cameras ([H04N 5/225](#) [H04N 23/00](#) takes precedence)
- Q **H04N 23/00**
 - **Cameras or camera modules comprising electronic image sensors; Control thereof**
 - **WARNING**
 - Group [H04N 23/00](#) is impacted by reclassification into groups [H04N 23/95](#), [H04N 23/955](#) and [H04N 23/958](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.
- Q H04N 23/10
 - for generating image signals from different wavelengths
 - **WARNING**
 - Group [H04N 23/10](#) is impacted by reclassification into groups [H04N 23/11](#), [H04N 25/10](#) and [H04N 25/17](#).
 - All groups listed in this Warning should be considered in order to perform a complete search.
- Q H04N 23/11
 - • for generating image signals from visible and infrared light wavelengths
 - **WARNING**
 - Group [H04N 23/11](#) is incomplete pending reclassification of documents from group [H04N 23/10](#).
 - Group [H04N 23/11](#) is also impacted by reclassification into group [H04N 25/131](#).
 - Groups [H04N 23/10](#), [H04N 23/11](#) and [H04N 25/131](#) should be considered in order to perform a complete search.
- N H04N 23/12
 - • with one sensor only
- N H04N 23/125
 - • {Colour sequential image capture, e.g. using a colour wheel}
- N H04N 23/13
 - • with multiple sensors
- N H04N 23/15
 - • • Image signal generation with circuitry for avoiding or correcting image misregistration
- N H04N 23/16
 - • • Optical arrangements associated therewith, e.g. for beam-splitting or for colour correction

- N H04N 23/17 • • using opto-mechanical scanning means only
- N H04N 23/20 • for generating image signals from infrared radiation only
- WARNING
Groups [H04N 23/20](#), [H04N 23/21](#) and [H04N 23/23](#) are incomplete pending reclassification of documents from group [H04N 5/33](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 23/21 • • from near infrared [NIR] radiation
- N H04N 23/23 • • from thermal infrared radiation
- N H04N 23/30 • for generating image signals from X-rays
- WARNING
Group [H04N 23/30](#) is incomplete pending reclassification of documents from group [H04N 5/32](#).
Groups [H04N 5/32](#) and [H04N 23/30](#) should be considered in order to perform a complete search.
- N H04N 23/40 • Circuit details for pick-up tubes
- N H04N 23/41 • • {Beam current control}
- N H04N 23/43 • • • {during retrace periods, e.g. circuits for ACT tubes or leg suppression}
- N H04N 23/45 • for generating image signals from two or more image sensors being of different type or operating in different modes, e.g. with a CMOS sensor for moving images in combination with a charge-coupled device [CCD] for still images
- N H04N 23/50 • Constructional details
- N H04N 23/51 • • Housings
- N H04N 23/52 • • Elements optimising image sensor operation, e.g. for electromagnetic interference [EMI] protection or temperature control by heat transfer or cooling elements
- N H04N 23/53 • • of electronic viewfinders, e.g. rotatable or detachable
- N H04N 23/531 • • • {being rotatable or detachable}
- N H04N 23/54 • • Mounting of pick-up tubes, electronic image sensors, deviation or focusing coils
- N H04N 23/55 • • Optical parts specially adapted for electronic image sensors; Mounting thereof
- N H04N 23/555 • • {for picking-up images in sites, inaccessible due to their dimensions or hazardous conditions, e.g. endoscopes or borescopes}
- N H04N 23/56 • provided with illuminating means
- N H04N 23/57 • Mechanical or electrical details of cameras or camera modules specially adapted for being embedded in other devices
- N H04N 23/58 • Means for changing the camera field of view without moving the camera body, e.g. nutating or panning of optics or image sensors
- N H04N 23/60 • Control of cameras or camera modules
- N H04N 23/61 • • based on recognised objects
- N H04N 23/611 • • • where the recognised objects include parts of the human body
- N H04N 23/617 • • Upgrading or updating of programs or applications for camera control
- N H04N 23/62 • • Control of parameters via user interfaces
- N H04N 23/63 • • by using electronic viewfinders
- N H04N 23/631 • • • {Graphical user interfaces [GUI] specially adapted for controlling image capture or setting capture parameters}

- N H04N 23/632 {for displaying or modifying preview images prior to image capturing, e.g. variety of image resolutions or capturing parameters}
- N H04N 23/633 {for displaying additional information relating to control or operation of the camera}
- N H04N 23/634 {Warning indications}
- N H04N 23/635 {Region indicators; Field of view indicators}
- N H04N 23/64 {Computer-aided capture of images, e.g. transfer from script file into camera, check of taken image quality, advice or proposal for image composition or decision on when to take image}
- N H04N 23/65 {Control of camera operation in relation to power supply}
- N H04N 23/651 {for reducing power consumption by affecting camera operations, e.g. sleep mode, hibernation mode or power off of selective parts of the camera}
- N H04N 23/66 {Remote control of cameras or camera parts, e.g. by remote control devices}
- N H04N 23/661 {Transmitting camera control signals through networks, e.g. control via the Internet}
- N H04N 23/662 {by using master/slave camera arrangements for affecting the control of camera image capture, e.g. placing the camera in a desirable condition to capture a desired image}
- N H04N 23/663 {for controlling interchangeable camera parts based on electronic image sensor signals}
- N H04N 23/665 {involving internal camera communication with the image sensor, e.g. synchronising or multiplexing SSIS control signals}
- N H04N 23/667 {Camera operation mode switching, e.g. between still and video, sport and normal or high- and low-resolution modes}
- N H04N 23/67 {Focus control based on electronic image sensor signals}
- N H04N 23/671 {in combination with active ranging signals, e.g. using light or sound signals emitted toward objects}
- N H04N 23/672 {based on the phase difference signals}
- N H04N 23/673 {based on contrast or high frequency components of image signals, e.g. hill climbing method}
- N H04N 23/675 {comprising setting of focusing regions}
- N H04N 23/676 {Bracketing for image capture at varying focusing conditions}
- N H04N 23/68 {for stable pick-up of the scene, e.g. compensating for camera body vibrations}
- N H04N 23/681 {Motion detection}
- N H04N 23/6811 {based on the image signal}
- N H04N 23/6812 {based on additional sensors, e.g. acceleration sensors}
- N H04N 23/6815 {by distinguishing pan or tilt from motion}
- N H04N 23/682 {Vibration or motion blur correction}
- N H04N 23/683 {performed by a processor, e.g. controlling the readout of an image memory}
- N H04N 23/684 {performed by controlling the image sensor readout, e.g. by controlling the integration time}
- N H04N 23/6842 {by controlling the scanning position, e.g. windowing}
- N H04N 23/6845 {by combination of a plurality of images sequentially taken}
- N H04N 23/685 {performed by mechanical compensation}
- N H04N 23/686 {with a variable apex prism}
- N H04N 23/687 {by shifting the lens or sensor position}
- N H04N 23/689 {Motion occurring during a rolling shutter mode}

- N H04N 23/69
 - • Control of means for changing angle of the field of view, e.g. optical zoom objectives or electronic zooming
- N H04N 23/695
 - • Control of camera direction for changing a field of view, e.g. pan, tilt or based on tracking of objects
- N H04N 23/698
 - • for achieving an enlarged field of view, e.g. panoramic image capture
- N H04N 23/70
 - Circuitry for compensating brightness variation in the scene
- N H04N 23/71
 - • Circuitry for evaluating the brightness variation
- N H04N 23/72
 - • Combination of two or more compensation controls
- N H04N 23/73
 - • by influencing the exposure time
- N H04N 23/74
 - • by influencing the scene brightness using illuminating means
- N H04N 23/741
 - • by increasing the dynamic range of the image compared to the dynamic range of the electronic image sensors
- N H04N 23/743
 - • Bracketing, i.e. taking a series of images with varying exposure conditions
- N H04N 23/745
 - • Detection of flicker frequency or suppression of flicker wherein the flicker is caused by illumination, e.g. due to fluorescent tube illumination or pulsed LED illumination
- N H04N 23/749
 - • {by influencing the pick-up tube voltages}
- N H04N 23/75
 - • by influencing optical camera components
- N H04N 23/76
 - • by influencing the image signals
- Q H04N 23/80
 - Camera processing pipelines; Components thereof

WARNING

Group [H04N 23/80](#) is impacted by reclassification into groups [H04N 23/90](#), [H04N 23/95](#), [H04N 23/951](#), [H04N 23/955](#), [H04N 23/957](#), [H04N 23/958](#) and [H04N 23/959](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N H04N 23/81
 - • for suppressing or minimising disturbance in the image signal generation
- N H04N 23/811
 - • • {by dust removal, e.g. from surfaces of the image sensor or processing of the image signal output by the electronic image sensor}
- N H04N 23/815
 - • {for controlling the resolution by using a single image}
- N H04N 23/82
 - • for controlling camera response irrespective of the scene brightness, e.g. gamma correction

WARNING

Group [H04N 23/82](#) is incomplete pending reclassification of documents from group [H04N 5/202](#).

Groups [H04N 5/202](#) and [H04N 23/82](#) should be considered in order to perform a complete search.

- N H04N 23/83
 - • • specially adapted for colour signals

WARNING

Group [H04N 23/83](#) is incomplete pending reclassification of documents from group [H04N 9/69](#).

Groups [H04N 9/69](#) and [H04N 23/83](#) should be considered in order to perform a complete search.

- N H04N 23/84
 - • for processing colour signals

WARNING

Group [H04N 23/84](#) is incomplete pending reclassification of documents from group [H04N 9/64](#).

Groups [H04N 9/64](#) and [H04N 23/84](#) should be considered in order to perform a complete search.

N H04N 23/841

- • • {to modify gamut}

N H04N 23/843

- • • {Demosaicing, e.g. interpolating colour pixel values}

N H04N 23/85

- • • for matrixing

WARNING

Group [H04N 23/85](#) is incomplete pending reclassification of documents from group [H04N 9/67](#).

Groups [H04N 9/67](#) and [H04N 23/85](#) should be considered in order to perform a complete search.

N H04N 23/86

- • • for controlling the colour saturation of colour signals, e.g. automatic chroma control circuits

WARNING

Group [H04N 23/86](#) is incomplete pending reclassification of documents from group [H04N 9/68](#).

Groups [H04N 9/68](#) and [H04N 23/86](#) should be considered in order to perform a complete search.

N H04N 23/87

- • • for reinsertion of DC or slowly varying components of colour signals

WARNING

Group [H04N 23/87](#) is incomplete pending reclassification of documents from group [H04N 9/72](#).

Groups [H04N 9/72](#) and [H04N 23/87](#) should be considered in order to perform a complete search.

N H04N 23/88

- • • for colour balance, e.g. white-balance circuits or colour temperature control

WARNING

Group [H04N 23/88](#) is incomplete pending reclassification of documents from group [H04N 9/73](#).

Groups [H04N 9/73](#) and [H04N 23/88](#) should be considered in order to perform a complete search.

N H04N 23/90

- Arrangement of cameras or camera modules, e.g. multiple cameras in TV studios or sports stadiums

WARNING

Group [H04N 23/90](#) is incomplete pending reclassification of documents from group [H04N 23/80](#).

Groups [H04N 23/80](#) and [H04N 23/90](#) should be considered in order to perform a complete search.

N H04N 23/95

- Computational photography systems, e.g. light-field imaging systems

WARNING

Groups [H04N 23/95](#), [H04N 23/955](#) and [H04N 23/958](#) are incomplete pending reclassification of documents from groups [H04N 23/00](#) and [H04N 23/80](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N H04N 23/951

- • by using two or more images to influence resolution, frame rate or aspect ratio

WARNING

Group [H04N 23/951](#) is incomplete pending reclassification of documents from group [H04N 23/80](#).

Groups [H04N 23/80](#) and [H04N 23/951](#) should be considered in order to perform a complete search.

- N [H04N 23/955](#) • • for lensless imaging
WARNING
Group [H04N 23/955](#) is incomplete pending reclassification of documents from group [H04N 23/00](#).
Groups [H04N 23/00](#) and [H04N 23/955](#) should be considered in order to perform a complete search.
- N [H04N 23/957](#) • • Light-field or plenoptic cameras or camera modules
WARNING
Group [H04N 23/957](#) is incomplete pending reclassification of documents from group [H04N 23/80](#).
Groups [H04N 23/80](#) and [H04N 23/957](#) should be considered in order to perform a complete search.
- N [H04N 23/958](#) • • for extended depth of field imaging
WARNING
Group [H04N 23/958](#) is incomplete pending reclassification of documents from group [H04N 23/00](#).
Groups [H04N 23/00](#) and [H04N 23/958](#) should be considered in order to perform a complete search.
- N [H04N 23/959](#) • • • by adjusting depth of field during image capture, e.g. maximising or setting range based on scene characteristics
WARNING
Group [H04N 23/959](#) is incomplete pending reclassification of documents from group [H04N 23/80](#).
Groups [H04N 23/80](#) and [H04N 23/959](#) should be considered in order to perform a complete search.
- N [H04N 25/00](#) **Circuitry of solid-state image sensors [SSIS]; Control thereof****
WARNING
Group [H04N 25/00](#) is incomplete pending reclassification of documents from group [H04N 5/30](#).
Groups [H04N 5/30](#) and [H04N 25/00](#) should be considered in order to perform a complete search.
- N [H04N 25/10](#) • • for transforming different wavelengths into image signals
WARNING
Groups [H04N 25/10](#) and [H04N 25/17](#) are incomplete pending reclassification of documents from group [H04N 23/10](#).
Groups [H04N 23/10](#), [H04N 25/10](#) and [H04N 25/17](#) should be considered in order to perform a complete search.
- N [H04N 25/11](#) • • Arrangement of colour filter arrays [CFA]; Filter mosaics
- N [H04N 25/13](#) • • • characterised by the spectral characteristics of the filter elements
- N [H04N 25/131](#) • • • including elements passing infrared wavelengths
WARNING
Group [H04N 25/131](#) is incomplete pending reclassification of documents from group [H04N 23/11](#).
Groups [H04N 23/11](#) and [H04N 25/131](#) should be considered in order to perform a complete search.

- N H04N 25/133 . . . including elements passing panchromatic light, e.g. filters passing white light
- N H04N 25/134 . . . {based on three different wavelength filter elements}
- N H04N 25/135 . . . {based on four or more different wavelength filter elements}
- N H04N 25/136 . . . {using complementary colours}
- N H04N 25/17 . . Colour separation based on photon absorption depth, e.g. full colour resolution obtained simultaneously at each pixel location
- N H04N 25/20 . for transforming only infrared radiation into image signals
- WARNING
Groups [H04N 25/20](#) and [H04N 25/21](#) are incomplete pending reclassification of documents from group [H04N 5/33](#).
Groups [H04N 5/33](#), [H04N 25/20](#) and [H04N 25/21](#) should be considered in order to perform a complete search.
- N H04N 25/21 . . for transforming thermal infrared radiation into image signals
- N H04N 25/30 . for transforming X-rays into image signals
- WARNING
Group [H04N 25/30](#) is incomplete pending reclassification of documents from group [H04N 5/32](#).
Groups [H04N 5/32](#) and [H04N 25/30](#) should be considered in order to perform a complete search.
- Q H04N 25/40 . Extracting pixel data from image sensors by controlling scanning circuits, e.g. by modifying the number of pixels sampled or to be sampled
- WARNING
Group [H04N 25/40](#) is impacted by reclassification into group [H04N 25/47](#).
Groups [H04N 25/40](#) and [H04N 25/47](#) should be considered in order to perform a complete search.
- N H04N 25/41 . . {Extracting pixel data from a plurality of image sensors simultaneously picking up an image, e.g. for increasing the field of view by combining the outputs of a plurality of sensors}
- N H04N 25/42 . . by switching between different modes of operation using different resolutions or aspect ratios, e.g. switching between interlaced and non-interlaced mode
- N H04N 25/44 . . by partially reading an SSIS array
- N H04N 25/441 . . . by reading contiguous pixels from selected rows or columns of the array, e.g. interlaced scanning
- N H04N 25/443 . . . by reading pixels from selected 2D regions of the array, e.g. for windowing or digital zooming
- N H04N 25/445 . . . by skipping some contiguous pixels within the read portion of the array
- N H04N 25/447 . . . by preserving the colour pattern with or without loss of information
- N H04N 25/46 . . by combining or binning pixels
- N H04N 25/47 . Image sensors with pixel address output; Event-driven image sensors; Selection of pixels to be read out based on image data
- WARNING
Group [H04N 25/47](#) is incomplete pending reclassification of documents from group [H04N 25/40](#).
Groups [H04N 25/40](#) and [H04N 25/47](#) should be considered in order to perform a complete search.
- N H04N 25/48 . Increasing resolution by shifting the sensor relative to the scene

- Q H04N 25/50
- Control of the SSIS exposure
- WARNING
Group [H04N 25/50](#) is impacted by reclassification into group [H04N 25/51](#). Groups [H04N 25/50](#) and [H04N 25/51](#) should be considered in order to perform a complete search.
- N H04N 25/51
- Control of the gain
- WARNING
Group [H04N 25/51](#) is incomplete pending reclassification of documents from group [H04N 25/50](#). Groups [H04N 25/50](#) and [H04N 25/51](#) should be considered in order to perform a complete search.
- Q H04N 25/53
- Control of the integration time
- WARNING
Group [H04N 25/53](#) is impacted by reclassification into group [H04N 25/532](#). Groups [H04N 25/53](#) and [H04N 25/532](#) should be considered in order to perform a complete search.
- N H04N 25/531
- by controlling rolling shutters in CMOS SSIS
- N H04N 25/532
- by controlling global shutters in CMOS SSIS
- WARNING
Group [H04N 25/532](#) is incomplete pending reclassification of documents from group [H04N 25/53](#). Groups [H04N 25/53](#) and [H04N 25/532](#) should be considered in order to perform a complete search.
- Q H04N 25/533
- by using differing integration times for different sensor regions
- WARNING
Group [H04N 25/533](#) is impacted by reclassification into group [H04N 25/535](#). Groups [H04N 25/533](#) and [H04N 25/535](#) should be considered in order to perform a complete search.
- N H04N 25/534
- depending on the spectral component
- N H04N 25/535
- by dynamic region selection
- WARNING
Group [H04N 25/535](#) is incomplete pending reclassification of documents from group [H04N 25/533](#). Groups [H04N 25/533](#) and [H04N 25/535](#) should be considered in order to perform a complete search.
- N H04N 25/57
- Control of the dynamic range
- N H04N 25/571
- involving a non-linear response
- N H04N 25/573
- {the logarithmic type}
- N H04N 25/575
- {with a response composed of multiple slopes}
- N H04N 25/58
- involving two or more exposures
- N H04N 25/581
- acquired simultaneously
- N H04N 25/583
- with different integration times
- N H04N 25/585
- with pixels having different sensitivities within the sensor, e.g. fast or slow pixels or pixels having different sizes

- N H04N 25/587 acquired sequentially, e.g. using the combination of odd and even image fields
- N H04N 25/589 with different integration times, e.g. short and long exposures
- N H04N 25/59 by controlling the amount of charge storable in the pixel, e.g. modification of the charge conversion ratio of the floating node capacitance
- Q H04N 25/60 . Noise processing, e.g. detecting, correcting, reducing or removing noise
- WARNING
Group [H04N 25/60](#) is impacted by reclassification into groups [H04N 25/61](#) - [H04N 25/69](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 25/61 . . the noise originating only from the lens unit, e.g. flare, shading, vignetting or "cos⁴"
- WARNING
Groups [H04N 25/61](#), [H04N 25/611](#), [H04N 25/615](#) and [H04N 25/6153](#) are incomplete pending reclassification of documents from group [H04N 25/60](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 25/611 . . . Correction of chromatic aberration
- N H04N 25/615 . . . involving a transfer function modelling the optical system, e.g. optical transfer function [OTF], phase transfer function [PhTF] or modulation transfer function [MTF]
- N H04N 25/6153 {for colour signals}
- N H04N 25/616 . . involving a correlated sampling function, e.g. correlated double sampling [CDS] or triple sampling
- WARNING
Group [H04N 25/616](#) is incomplete pending reclassification of documents from group [H04N 25/60](#).
Groups [H04N 25/60](#) and [H04N 25/616](#) should be considered in order to perform a complete search.
- N H04N 25/617 . . for reducing electromagnetic interference, e.g. clocking noise
- WARNING
Group [H04N 25/617](#) is incomplete pending reclassification of documents from group [H04N 25/60](#).
Groups [H04N 25/60](#) and [H04N 25/617](#) should be considered in order to perform a complete search.
- N H04N 25/618 . . for random or high-frequency noise
- WARNING
Group [H04N 25/618](#) is incomplete pending reclassification of documents from group [H04N 25/60](#).
Groups [H04N 25/60](#) and [H04N 25/618](#) should be considered in order to perform a complete search.
- Q H04N 25/62 . . Detection or reduction of noise due to excess charges produced by the exposure, e.g. smear, blooming, ghost image, crosstalk or leakage between pixels
- WARNING
Group [H04N 25/62](#) is incomplete pending reclassification of documents from group [H04N 25/60](#).

Group [H04N 25/62](#) is also impacted by reclassification into groups [H04N 25/621](#), [H04N 25/622](#), [H04N 25/623](#), [H04N 25/625](#), [H04N 25/626](#), [H04N 25/627](#) and [H04N 25/628](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N H04N 25/621

- • • for the control of blooming

WARNING

Groups [H04N 25/621](#), [H04N 25/622](#) and [H04N 25/623](#) are incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/62](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N H04N 25/622

- • • • {by controlling anti-blooming drains}

N H04N 25/623

- • • • {by evacuation via the output or reset lines}

N H04N 25/625

- • • for the control of smear

WARNING

Group [H04N 25/625](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/62](#).

Groups [H04N 25/60](#), [H04N 25/62](#) and [H04N 25/625](#) should be considered in order to perform a complete search.

N H04N 25/626

- • • Reduction of noise due to residual charges remaining after image readout, e.g. to remove ghost images or afterimages

WARNING

Group [H04N 25/626](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/62](#).

Groups [H04N 25/60](#), [H04N 25/62](#) and [H04N 25/626](#) should be considered in order to perform a complete search.

N H04N 25/627

- • • Detection or reduction of inverted contrast or eclipsing effects

WARNING

Group [H04N 25/627](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/62](#).

Groups [H04N 25/60](#), [H04N 25/62](#) and [H04N 25/627](#) should be considered in order to perform a complete search.

N H04N 25/628

- • • for reducing horizontal stripes caused by saturated regions of CMOS sensors

WARNING

Group [H04N 25/628](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/62](#).

Groups [H04N 25/60](#), [H04N 25/62](#) and [H04N 25/628](#) should be considered in order to perform a complete search.

Q H04N 25/63

- • applied to dark current

WARNING

Group [H04N 25/63](#) is incomplete pending reclassification of documents from group [H04N 25/60](#).

Group [H04N 25/63](#) is also impacted by reclassification into groups [H04N 25/633](#), [H04N 25/67](#), [H04N 25/671](#), [H04N 25/672](#), [H04N 25/673](#), [H04N 25/674](#), [H04N 25/677](#), [H04N 25/68](#) and [H04N 25/683](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N H04N 25/633
- • • by using optical black pixels
- WARNING
Group [H04N 25/633](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/63](#).
Groups [H04N 25/60](#), [H04N 25/63](#) and [H04N 25/633](#) should be considered in order to perform a complete search.
- N H04N 25/65
- • applied to reset noise, e.g. KTC noise related to CMOS structures by techniques other than CDS
- WARNING
Group [H04N 25/65](#) is incomplete pending reclassification of documents from group [H04N 25/60](#).
Groups [H04N 25/60](#) and [H04N 25/65](#) should be considered in order to perform a complete search.
- Q H04N 25/67
- • applied to fixed-pattern noise, e.g. non-uniformity of response
- WARNING
Group [H04N 25/67](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/63](#).
Group [H04N 25/67](#) is also impacted by reclassification into groups [H04N 25/671](#), [H04N 25/672](#), [H04N 25/673](#), [H04N 25/674](#), [H04N 25/677](#), [H04N 25/68](#) and [H04N 25/683](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 25/671
- • • for non-uniformity detection or correction
- WARNING
Groups [H04N 25/671](#), [H04N 25/672](#), [H04N 25/673](#), [H04N 25/674](#) and [H04N 25/677](#) are incomplete pending reclassification of documents from groups [H04N 25/60](#), [H04N 25/63](#) and [H04N 25/67](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 25/672
- • • • between adjacent sensors or output registers for reading a single image
- N H04N 25/673
- • • • by using reference sources
- N H04N 25/674
- • • • based on the scene itself, e.g. defocusing
- N H04N 25/677
- • • • for reducing the column or line fixed pattern noise
- Q H04N 25/68
- • applied to defects
- WARNING
Group [H04N 25/68](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#), [H04N 25/63](#) and [H04N 25/67](#).
Group [H04N 25/68](#) is also impacted by reclassification into group [H04N 25/69](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 25/683
- • • by defect estimation performed on the scene signal, e.g. real time or on the fly detection
- WARNING
Group [H04N 25/683](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#), [H04N 25/63](#) and [H04N 25/67](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N H04N 25/69
- • • SSIS comprising testing or correcting structures for circuits other than pixel cells
- WARNING
Group [H04N 25/69](#) is incomplete pending reclassification of documents from groups [H04N 25/60](#) and [H04N 25/68](#). Groups [H04N 25/60](#), [H04N 25/68](#) and [H04N 25/69](#) should be considered in order to perform a complete search.
- N H04N 25/70
- SSIS architectures; Circuits associated therewith
- N H04N 25/701
- • Line sensors
- N H04N 25/7013
- • • {using abutted sensors forming a long line}
- Q H04N 25/702
- • SSIS architectures characterised by non-identical, non-equidistant or non-planar pixel layout
- WARNING
Group [H04N 25/702](#) is impacted by reclassification into groups [H04N 25/703](#), [H04N 25/706](#), [H04N 25/707](#) and [H04N 25/708](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 25/703
- • SSIS architectures incorporating pixels for producing signals other than image signals
- WARNING
Groups [H04N 25/703](#), [H04N 25/706](#), [H04N 25/707](#) and [H04N 25/708](#) are incomplete pending reclassification of documents from group [H04N 25/702](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 25/704
- • • Pixels specially adapted for focusing, e.g. phase difference pixel sets
- N H04N 25/705
- • • Pixels for depth measurement, e.g. RGBZ
- N H04N 25/706
- • • Pixels for exposure or ambient light measuring
- N H04N 25/707
- • • Pixels for event detection
- N H04N 25/708
- • • Pixels for edge detection
- N H04N 25/709
- • Circuitry for control of the power supply
- N H04N 25/71
- • Charge-coupled device [CCD] sensors; Charge-transfer registers specially adapted for CCD sensors
- N H04N 25/711
- • • Time delay and integration [TDI] registers; TDI shift registers
- N H04N 25/713
- • • Transfer or readout registers; Split readout registers or multiple readout registers
- N H04N 25/715
- • • using frame interline transfer [FIT]
- N H04N 25/72
- • • using frame transfer [FT]
- N H04N 25/73
- • • using interline transfer [IT]
- Q H04N 25/74
- • • Circuitry for scanning or addressing the pixel array
- WARNING
Group [H04N 25/74](#) is impacted by reclassification into group [H04N 25/779](#). Groups [H04N 25/74](#) and [H04N 25/779](#) should be considered in order to perform a complete search.
- Q H04N 25/745
- • • {Circuitry for generating timing or clock signals}
- WARNING
Group [H04N 25/745](#) is impacted by reclassification into group [H04N 25/7795](#).

Groups [H04N 25/745](#) and [H04N 25/7795](#) should be considered in order to perform a complete search.

- Q H04N 25/75
- • • Circuitry for providing, modifying or processing image signals from the pixel array
- WARNING
Group [H04N 25/75](#) is impacted by reclassification into group [H04N 25/78](#). Groups [H04N 25/75](#) and [H04N 25/78](#) should be considered in order to perform a complete search.
- N H04N 25/76
- • • Addressed sensors, e.g. MOS or CMOS sensors
- N H04N 25/766
- • • comprising control or output lines used for a plurality of functions, e.g. for pixel output, driving, reset or power
- N H04N 25/767
- • • Horizontal readout lines, multiplexers or registers
- N H04N 25/768
- • • for time delay and integration [TDI]
- N H04N 25/77
- • • Pixel circuitry, e.g. memories, A/D converters, pixel amplifiers, shared circuits or shared components
- N H04N 25/771
- • • • comprising storage means other than floating diffusion
- Q H04N 25/772
- • • • comprising A/D, V/T, V/F, I/T or I/F converters
- WARNING
Group [H04N 25/772](#) is impacted by reclassification into group [H04N 25/773](#). Groups [H04N 25/772](#) and [H04N 25/773](#) should be considered in order to perform a complete search.
- N H04N 25/773
- • • • • comprising photon counting circuits, e.g. single photon detection [SPD] or single photon avalanche diodes [SPAD]
- WARNING
Group [H04N 25/773](#) is incomplete pending reclassification of documents from group [H04N 25/772](#). Groups [H04N 25/772](#) and [H04N 25/773](#) should be considered in order to perform a complete search.
- N H04N 25/778
- • • • comprising amplifiers shared between a plurality of pixels, i.e. at least one part of the amplifier must be on the sensor array itself
- N H04N 25/779
- • • Circuitry for scanning or addressing the pixel array
- WARNING
Group [H04N 25/779](#) is incomplete pending reclassification of documents from group [H04N 25/74](#). Groups [H04N 25/74](#) and [H04N 25/779](#) should be considered in order to perform a complete search.
- N H04N 25/7795
- • • {Circuitry for generating timing or clock signals}
- WARNING
Group [H04N 25/7795](#) is incomplete pending reclassification of documents from group [H04N 25/745](#). Groups [H04N 25/745](#) and [H04N 25/7795](#) should be considered in order to perform a complete search.
- N H04N 25/78
- • • Readout circuits for addressed sensors, e.g. output amplifiers or A/D converters
- WARNING
Group [H04N 25/78](#) is incomplete pending reclassification of documents from group [H04N 25/75](#).

Groups [H04N 25/75](#) and [H04N 25/78](#) should be considered in order to perform a complete search.

- N H04N 25/79
- Arrangements of circuitry being divided between different or multiple substrates, chips or circuit boards, e.g. stacked image sensors

Project: RP11903 in addition to RP11941 (B64C)

M B64C

AEROPLANES; HELICOPTERS (~~air-cushion vehicles B60V~~)

NOTE

As far as possible, classification is made according to constructional features; classification according to particular kinds of aircraft is normally regarded as being of secondary importance, except in cases where this is considered to be the characteristic feature.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B64C 35/02](#) covered by [B64C 35/00](#)

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

Project: RP11903 (B64C)

M B64C 1/00 -
~~B64C 19/00~~
~~B64C 7/00~~

Aircraft structures or fairings (~~boundary-layer controls B64C 21/00~~)

M B64C 5/00

Stabilising surfaces (~~attaching stabilising surfaces to fuselage B64C 1/26~~)

M B64C 5/02

• Tailplanes (~~fins B64C 5/06~~)

M B64C 5/06

• Fins (~~specially for wings B64C 5/08~~ [B64C 5/08](#) takes precedence)

M B64C 5/08

• mounted on, or supported by, wings

U B64C 5/10

• adjustable

M B64C 5/18

• in area (~~attaching stabilising surfaces to fuselage B64C 1/26~~)

U B64C 9/00

Adjustable control surfaces or members, e.g. rudders (trimming stabilising surfaces [B64C 5/10](#))

M B64C 9/08

• bodily displaceable (~~varying camber of wings B64C 3/44~~)

M B64C 9/14

• forming slots (~~boundary-layer control B64C 21/00~~)

M B64C 9/32

• Air braking surfaces (~~braking by parachutes B64D 17/80~~)

M B64C 11/00

Propellers, e.g. of ducted type; Features common to propellers and rotors for rotorcraft (~~rotors specially adapted for rotorcraft B64C 27/32~~)

NOTE

Documents classified in [B64C 11/001](#) - [B64C 11/008](#) which also contain relevant information, covered by other subgroups of [B64C 11/00](#), are also classified in the appropriate subgroup of [B64C 11/00](#)

M B64C 11/46

• Arrangements of, or constructional features peculiar to, multiple propellers {([B64C 11/306](#) takes precedence)}

U B64C 13/00

Control systems or transmitting systems for actuating flying-control surfaces, lift-increasing flaps, air brakes, or spoilers

U B64C 13/02

• Initiating means

U B64C 13/04

• actuated personally

- M B64C 13/14
- • lockable (~~locking in position to suit individual persons B64C 13/06~~)
- U B64C 17/00 **Aircraft stabilisation not otherwise provided for**
- U B64C 17/02
- by gravity or inertia-actuated apparatus
- M B64C 17/06
- • by gyroscopic apparatus (~~automatic pilot control B64C 13/18~~)
- M B64C 17/08
- by ballast supply or discharge (~~for lighter-than-air aircraft B64B~~)
- M B64C 21/00 **Influencing air- flow over aircraft surfaces, not otherwise provided for**
- B64C 25/00
B64C 23/00
- C B64C 21/00 **Influencing air- flow over aircraft surfaces by affecting boundary- layer flow (boundary-layer control in general F15D)**
- WARNING**
Group B64C 21/00 is impacted by reclassification into group B64C 21/01. Groups B64C 21/00 and B64C 21/01 should be considered in order to perform a complete search.
- N B64C 21/01
- Boundary layer ingestion [BLI] propulsion
- WARNING**
Group B64C 21/01 is incomplete pending reclassification of documents from groups B64C 21/00, B64C 21/025, B64C 21/04, B64C 21/06 and B64C 21/08. All groups listed in this Warning should be considered in order to perform a complete search.
- M B64C 21/02
- by use of slot, ducts, porous areas, or the like
- C B64C 21/025
- • {for simultaneous blowing and sucking}
- WARNING**
Group B64C 21/025 is impacted by reclassification into group B64C 21/01. All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 21/04
- • for blowing (~~B64C 21/08 takes precedence~~)
- WARNING**
Group B64C 21/04 is incomplete pending reclassification of documents from group B64C 21/08.
Group B64C 21/04 is also impacted by reclassification into group B64C 21/01.
All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 21/06
- • for sucking (~~B64C 21/08 takes precedence~~ BLI propulsion B64C 21/01)
- WARNING**
Group B64C 21/06 is incomplete pending reclassification of documents from group B64C 21/08.
Group B64C 21/06 is also impacted by reclassification into group B64C 21/01.
All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 21/08
- • adjustable
- WARNING**
Group B64C 21/08 is impacted by reclassification into group B64C 21/04, B64C 21/06 and B64C 21/01.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 23/00** Influencing air-flow over aircraft surfaces, not otherwise provided for
- U B64C 25/00** **Alighting gear (air-cushion alighting gear B60V 3/08)**
- M B64C 25/32 · characterised by *elements which contact* the ground or *like-engaging elements similar surface* (arrester hooks B64C 25/68)
- U B64C 25/34 · · wheeled type, e.g. multi-wheeled bogies
- M B64C 25/36 · · · Arrangements or adaptations of wheels, tyres; or axles in general (construction of wheels or axles B60B; construction of tyres in general B60C)
- M B64C 25/42 · · ~~Arrangements or adaptations~~ *Arrangement or adaptation* of brakes (the ground braking force being regulated, at least in part, by a speed condition; e.g. acceleration or deceleration of the ground-engaging alighting gear; B60T 8/32)
- U B64C 25/44 · · · Actuating mechanisms
- M B64C 25/46 · · · · Brake regulators for preventing skidding or aircraft somersaulting (~~anti-skidding regulators; electric or electronic controllers therefor B60T 8/1703~~)
- M B64C 25/50 · · Steerable undercarriages; Shimmy-damping (~~steering devices applicable to land vehicles B62D~~)
- U B64C 25/54 · · Floats
- M B64C 25/56 · · · inflatable (~~connection of valves to inflatable elastic bodies B60C 29/00~~)
- M B64C 25/58 · · Arrangements or adaptations of shock-absorbers or springs (shimmy-dampers B64C 25/50; ~~vehicle suspension arrangements in general B60G; shock absorber per se F16F~~)
- M B64C 25/68 · · Arrester hooks (~~arresting gear, e.g. on aircraft carriers B64F~~)
- M B64C 27/00** **Aircraft kinds and/or components not otherwise provided for**
~~B64C 99/00~~
B64C 39/00
- M B64C 27/32 · · Rotors (~~features common to rotors and propellers B64C 11/00~~)
- M B64C 27/37 · · having articulated joints (~~B64C 27/33, B64C 27/35 take precedence~~)
- M B64C 27/41 · · · with flapping *hinge* or universal joint, common to the blades
- M B64C 27/52 · · Tilting of rotor bodily relative to fuselage (of ~~see-see~~ saw type construction B64C 27/43)
- U B64C 27/54 · · Mechanisms for controlling blade adjustment or movement relative to rotor head, e.g. lag-lead movement
- M B64C 27/56 · · *Initiating characterised by the control initiating* means, e.g. ~~actuated personally manually actuated~~
- M B64C 27/58 · · Transmitting means, *e.g. interrelated with initiating means or means acting on blades (means acting on blades B64C 27/72)*
- M B64C 27/64 · · · using fluid pressure, *e.g. having fluid power amplification*
- M B64C 27/68 · · · using electrical energy, *e.g. having electrical power amplification*

Project: RP11908 (A23L)

- U A23L 13/00** **Meat products; Meat meal; Preparation or treatment thereof**
- M A23L 13/40 · containing additives (*tenderising meat by using additives A23L 13/72*)

- C A23L 13/70
- Tenderised or flavoured meat pieces, ~~e.g. obtained by injecting solutions~~; Macerating ~~solutions~~ or *marinating solutions specially adapted therefor*
- WARNING**
Group [A23L 13/70](#) is impacted by reclassification into groups [A23L 13/75](#) and [A23L 13/77](#).
Groups [A23L 13/70](#), [A23L 13/75](#) and [A23L 13/77](#) should be considered in order to perform a complete search.
- C A23L 13/72
- • {using additives, e.g. ~~injection solutions~~} *by injection of solutions*
- WARNING**
Group [A23L 13/72](#) is impacted by reclassification into groups [A23L 13/75](#) and [A23L 13/77](#).
Groups [A23L 13/72](#), [A23L 13/75](#) and [A23L 13/77](#) should be considered in order to perform a complete search.
- C A23L 13/74
- • • {using microorganisms or enzymes}
- WARNING**
Group [A23L 13/74](#) is impacted by reclassification into groups [A23L 13/75](#) and [A23L 13/77](#).
Groups [A23L 13/74](#), [A23L 13/75](#) and [A23L 13/77](#) should be considered in order to perform a complete search.
- N A23L 13/75
- • • using macerating or marinating solutions, e.g. marinades containing spices, acids, condiments or flavouring agents
- WARNING**
Group [A23L 13/75](#) is incomplete pending reclassification of documents from groups [A23L 13/70](#), [A23L 13/72](#), [A23L 13/74](#) and [A23L 13/76](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C A23L 13/76
- • {by treatment in a gaseous atmosphere, e.g. ~~aging~~, ~~ageing~~ or ripening; ~~By~~ *by* electrical treatment, irradiation or wave treatment}
- WARNING**
Group [A23L 13/76](#) is impacted by reclassification into groups [A23L 13/75](#) and [A23L 13/77](#).
Groups [A23L 13/76](#), [A23L 13/75](#) and [A23L 13/77](#) should be considered in order to perform a complete search.
- N A23L 13/77
- • by mechanical treatment, e.g. kneading, rubbing or tumbling
- WARNING**
Group [A23L 13/77](#) is incomplete pending reclassification of documents from groups [A23L 13/70](#), [A23L 13/72](#), [A23L 13/74](#) and [A23L 13/76](#).
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP11914 (G06F)

- U G06F 11/00
- Error detection; Error correction; Monitoring (error detection, correction or monitoring in information storage based on relative movement between record carrier and transducer [G11B 20/18](#); monitoring, i.e. supervising the progress of recording or reproducing [G11B 27/36](#); in static stores [G11C 29/00](#))
- NOTE**
In this group the indexing codes of [G06F 1/00](#) - [G06F 15/00](#) are added

- U G06F 11/36 · Preventing errors by testing or debugging software
- U G06F 11/3604 · {Software analysis for verifying properties of programs (byte-code verification [G06F 9/44589](#))}
- G06F 11/3608 · · {using formal methods, e.g. model checking, abstract interpretation (theorem proving ~~G06N 5/006~~ [G06N 5/013](#))}

Project: RP11914 (G06N)

- U G06N 3/00 Computing arrangements based on biological models**
- M G06N 3/004 · {Artificial life, i.e. ~~computers simulating life~~ [computing arrangements simulating life](#)}
 - M G06N 3/006 · {based on simulated virtual individual or collective life forms, e.g. ~~single "avatar", social simulations, virtual worlds~~ [social simulations](#) or particle swarm optimisation} [[PSO](#)]
 - M G06N 3/008 · {based on physical entities controlled by simulated intelligence so as to replicate intelligent life forms, e.g. [based on](#) robots replicating pets or humans in their appearance or ~~behavior~~ [behaviour](#)}
 - M G06N 3/02 · ~~using neural network models~~ [Neural networks](#)
 - C G06N 3/04 · [Architectures](#) [Architecture](#), e.g. interconnection topology

WARNING

Group [G06N 3/04](#) is impacted by reclassification into groups [G06N 3/0464](#), [G06N 3/0475](#), [G06N 3/0495](#) and [G06N 3/0499](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U G06N 3/0409 · · {Adaptive resonance theory [ART] networks}
- U G06N 3/0418 · · {using chaos or fractal principles}
- N G06N 3/042 · · *Knowledge-based neural networks; Logical representations of neural networks*
- D G06N 3/0427 · · {~~in combination with an expert system~~}
- <administratively transferred to [G06N 3/042](#)>
- N G06N 3/043 · · *based on fuzzy logic, fuzzy membership or fuzzy inference, e.g. adaptive neuro-fuzzy inference systems [ANFIS]*
- D G06N 3/0436 · · {~~in combination with fuzzy logic~~}
- <administratively transferred to [G06N 3/043](#)>
- Q G06N 3/044 · · *Recurrent networks, e.g. Hopfield networks*
- WARNING**
- Group [G06N 3/044](#) is impacted by reclassification into group [G06N 3/0442](#). Groups [G06N 3/044](#) and [G06N 3/0442](#) should be considered in order to perform a complete search.*
- N G06N 3/0442 · · *characterised by memory or gating, e.g. long short-term memory [LSTM] or gated recurrent units [GRU]*
- WARNING**
- Group [G06N 3/0442](#) is incomplete pending reclassification of documents from group [G06N 3/044](#). Groups [G06N 3/044](#) and [G06N 3/0442](#) should be considered in order to perform a complete search.*
- D G06N 3/0445 · · {~~Feedback networks, e.g. hopfield nets, associative networks~~}
- <administratively transferred to [G06N 3/044](#)>

- Q G06N 3/045 . . . Combinations of networks
WARNING
 Group [G06N 3/045](#) is impacted by reclassification into group [G06N 3/0455](#).
 Groups [G06N 3/045](#) and [G06N 3/0455](#) should be considered in order to perform a complete search.
- D G06N 3/0454 . . . {using a combination of multiple neural nets}
 <administratively transferred to [G06N 3/045](#)>
- N G06N 3/0455 . . . Auto-encoder networks; Encoder-decoder networks
WARNING
 Group [G06N 3/0455](#) is incomplete pending reclassification of documents from group [G06N 3/045](#).
 Groups [G06N 3/045](#) and [G06N 3/0455](#) should be considered in order to perform a complete search.
- U G06N 3/0463 . . . {Neocognitrons}
- N G06N 3/0464 . . . Convolutional networks [CNN, ConvNet]
WARNING
 Group [G06N 3/0464](#) is incomplete pending reclassification of documents from group [G06N 3/04](#).
 Groups [G06N 3/04](#) and [G06N 3/0464](#) should be considered in order to perform a complete search.
- Q G06N 3/047 . . . Probabilistic or stochastic networks
WARNING
 Group [G06N 3/047](#) is impacted by reclassification into group [G06N 3/0475](#).
 Groups [G06N 3/047](#) and [G06N 3/0475](#) should be considered in order to perform a complete search.
- D G06N 3/0472 . . . {using probabilistic elements, e.g. p-rams, stochastic processors}
 <administratively transferred to [G06N 3/047](#)>
- N G06N 3/0475 . . . Generative networks
WARNING
 Group [G06N 3/0475](#) is incomplete pending reclassification of documents from groups [G06N 3/04](#) and [G06N 3/047](#).
 Groups [G06N 3/04](#), [G06N 3/047](#), and [G06N 3/0475](#) should be considered in order to perform a complete search.
- N G06N 3/048 . . . Activation functions
- D G06N 3/0481 . . . {Non-linear activation functions, e.g. sigmoids, thresholds}
 <administratively transferred to [G06N 3/048](#)>
- M G06N 3/049 . . . {Temporal neural nets *Temporal neural networks*, e.g. delay elements, oscillating neurons, *pulsed inputs*} or *pulsed inputs*
- N G06N 3/0495 . . . Quantised networks; Sparse networks; Compressed networks
WARNING
 Group [G06N 3/0495](#) is incomplete pending reclassification of documents from group [G06N 3/04](#).
 Groups [G06N 3/04](#) and [G06N 3/0495](#) should be considered in order to perform a complete search.

- N G06N 3/0499 . . . Feedforward networks
WARNING
 Group [G06N 3/0499](#) is incomplete pending reclassification of documents from group [G06N 3/04](#).
 Groups [G06N 3/04](#) and [G06N 3/0499](#) should be considered in order to perform a complete search.
- U G06N 3/06 . . Physical realisation, i.e. hardware implementation of neural networks, neurons or parts of neurons
- U G06N 3/061 . . . {using biological neurons, e.g. biological neurons connected to an integrated circuit}
- U G06N 3/063 . . . using electronic means
- D G06N 3/0635 {using analogue means}
 <administratively transferred to [G06N 3/065](#)>
- N G06N 3/065 Analogue means
- U G06N 3/067 . . . using optical means
- U G06N 3/0675 {using electro-optical, acousto-optical or opto-electronic means}
- C G06N 3/08 . . Learning methods
WARNING
 Group [G06N 3/08](#) is impacted by reclassification into groups [G06N 3/0895](#), [G06N 3/09](#), [G06N 3/091](#), [G06N 3/092](#), [G06N 3/094](#), [G06N 3/096](#), [G06N 3/098](#) and [G06N 3/0985](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- M G06N 3/082 . . . {modifying the architecture, e.g. adding ~~or deleting~~, *deleting or silencing* nodes or connections, ~~pruning~~}
- M G06N 3/084 . . . {~~Back-propagation~~} *Backpropagation, e.g. using gradient descent*
- M G06N 3/086 . . . {~~using evolutionary programming~~} *using evolutionary algorithms, e.g. genetic algorithms* } *or genetic programming*
- M G06N 3/088 . . . {~~Non-supervised learning, e.g. competitive learning~~}
- N G06N 3/0895 . . . Weakly supervised learning, e.g. semi-supervised or self-supervised learning
WARNING
 Group [G06N 3/0895](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).
 Groups [G06N 3/08](#) and [G06N 3/0895](#) should be considered in order to perform a complete search.
- N G06N 3/09 . . . Supervised learning
WARNING
 Group [G06N 3/09](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).
 Groups [G06N 3/08](#) and [G06N 3/09](#) should be considered in order to perform a complete search.
- N G06N 3/091 . . . Active learning
WARNING
 Group [G06N 3/091](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).

Groups [G06N 3/08](#) and [G06N 3/091](#) should be considered in order to perform a complete search.

- N G06N 3/092
- • • Reinforcement learning
- WARNING
Group [G06N 3/092](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).
Groups [G06N 3/08](#) and [G06N 3/092](#) should be considered in order to perform a complete search.
- N G06N 3/094
- • • Adversarial learning
- WARNING
Group [G06N 3/094](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).
Groups [G06N 3/08](#) and [G06N 3/094](#) should be considered in order to perform a complete search.
- N G06N 3/096
- • • Transfer learning
- WARNING
Group [G06N 3/096](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).
Groups [G06N 3/08](#) and [G06N 3/096](#) should be considered in order to perform a complete search.
- N G06N 3/098
- • • Distributed learning, e.g. federated learning
- WARNING
Group [G06N 3/098](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).
Groups [G06N 3/08](#) and [G06N 3/098](#) should be considered in order to perform a complete search.
- N G06N 3/0985
- • • Hyperparameter optimisation; Meta-learning; Learning-to-learn
- WARNING
Group [G06N 3/0985](#) is incomplete pending reclassification of documents from group [G06N 3/08](#).
Groups [G06N 3/08](#) and [G06N 3/0985](#) should be considered in order to perform a complete search.
- M G06N 3/10
- • ~~Simulation on general purpose computers~~ *Interfaces, programming languages or software development kits, e.g. for simulating neural networks*
- U G06N 3/12
- using genetic models
- M G06N 3/123
- • ~~{DNA computers, i.e. information processing using biological DNA}~~ *DNA computing*
- M G06N 3/126
- • ~~{Genetic algorithms, i.e. information processing using digital simulations of the genetic system}~~ *Evolutionary algorithms, e.g. genetic algorithms or genetic programming*
- U G06N 5/00**
- Computing arrangements using knowledge-based models**
- D G06N 5/003
- {Dynamic search techniques; Heuristics; Dynamic trees; Branch-and-bound}
- <administratively transferred to [G06N 5/01](#)>
- D G06N 5/006
- • {Automatic theorem proving}
- <administratively transferred to [G06N 5/013](#)>
- N G06N 5/01
- *Dynamic search techniques; Heuristics; Dynamic trees; Branch-and-bound*
- N G06N 5/013
- • {Automatic theorem proving}

- M G06N 5/02 · Knowledge representation; *Symbolic representation*
- M G06N 5/022 · · {Knowledge engineering; -Knowledge acquisition}
- M G06N 5/025 · · · {Extracting rules from data}
- U G06N 5/027 · · {Frames}
- M G06N 5/04 · Inference ~~methods or devices~~ *or reasoning models*
- U G06N 5/041 · · {Abduction}
- U G06N 5/042 · · {Backward inferencing}
- M G06N 5/043 · · {Distributed expert systems; -Blackboards}
- M G06N 5/045 · · {Explanation of inference ~~steps~~; *Explainable artificial intelligence [XAI]; Interpretable artificial intelligence*}
- M G06N 5/046 · · {Forward inferencing; -Production systems}
- M G06N 5/047 · · · {Pattern matching networks; -~~RETE networks~~ *Rete networks*}
- M G06N 5/048 · · {Fuzzy inferencing}
- U G06N 7/00 Computing arrangements based on specific mathematical models**
- D G06N 7/005 · {Probabilistic networks}
 - <administratively transferred to [G06N 7/01](#)>
- N G06N 7/01 · *Probabilistic graphical models, e.g. probabilistic networks*
- U G06N 7/02 · using fuzzy logic (computing arrangements based on biological models [G06N 3/00](#); computing arrangements using knowledge-based models [G06N 5/00](#))
- U G06N 7/04 · · Physical realisation
- M G06N 7/046 · · · {Implementation by means of a neural network (neural networks using fuzzy logic ~~G06N 3/0436~~ *G06N 3/043*)}

Project: RP11915 (H04L)

- U H04L 1/00 Arrangements for detecting or preventing errors in the information received**
{{correcting synchronisation [H04L 7/00](#)}}
- U H04L 1/12 · by using return channel
- U H04L 1/16 · · in which the return channel carries supervisory signals, e.g. repetition request signals
- M H04L 1/1607 · · · {Details of the supervisory signal}
- M H04L 1/18 · · · Automatic repetition systems, e.g. ~~van Duuren system~~ {*Van Duuren systems; ARQ protocols*}
- M H04L 1/1803 · · · · {Stop-and-wait protocols}
- M H04L 1/1806 · · · · {Go-back-N protocols}
- M H04L 1/1809 · · · · {Selective-repeat protocols}
- M H04L 1/1812 · · · · {Hybrid protocols}; *Hybrid automatic repeat request [HARQ]*
- M H04L 1/1822 · · · · {involving configuration of ~~ARQ automatic repeat request [ARQ]~~ with parallel processes}
- M H04L 1/1825 · · · · {Adaptation of specific ARQ protocol parameters according to transmission conditions}
- M H04L 1/1829 · · · · {~~Arrangements specific to~~ *Arrangements specially adapted for* the receiver end}
- M H04L 1/1867 · · · · {~~Arrangements specific to~~ *Arrangements specially adapted for* the transmitter end}

Project: RP11925 (G06Q)

U	G06Q 10/00	Administration; Management
U	G06Q 10/02	• Reservations, e.g. for tickets, services or events
M	G06Q 10/04	• Forecasting or optimisation <i>specially adapted for administrative or management purposes</i> , e.g. linear programming, "travelling salesman problem" or "cutting stock problem" {(data collection specially adapted for marketing, price determination or demand forecasting G06Q 30/02 market predictions or forecasting for commercial activities G06Q 30/0202)}
M	G06Q 10/047	• { Optimisation of routes <i>or paths</i> , e.g. "travelling salesman problem"
M	G06Q 10/06	• Resources, workflows, human or project management, e.g. organising, planning, scheduling or allocating time, human or machine resources; Enterprise <i>or organisation</i> planning; Organisational models {Enterprise or organisation modelling (financial asset management G06Q 40/06)}
		WARNING
		Group G06Q 10/06 is incomplete pending reclassification of documents from group E21B 41/0092 .
		Groups E21B 41/0092 and G06Q 10/06 should be considered in order to perform a complete search.
M	G06Q 10/063	• {Operations research or analysis} <i>Operations research, analysis or management</i>
M	G06Q 10/0631	• • { Resource planning, allocation, <i>distributing</i> or scheduling for a business operation} <i>enterprises or organisations</i>
M	G06Q 10/0633	• • { Workflow analysis
M	G06Q 10/0635	• • { Risk analysis} <i>Risk analysis of enterprise or organisation activities</i>
M	G06Q 10/0637	• • { Strategic management or analysis}, e.g. <i>setting a goal or target of an organisation; Planning actions based on goals; Analysis or evaluation of effectiveness of goals</i>
M	G06Q 10/0639	• • { Performance analysis} <i>Performance analysis of employees; Performance analysis of enterprise or organisation operations</i>
M	G06Q 10/067	• { Business modelling} <i>Enterprise or organisation modelling</i>
M	G06Q 10/08	• Logistics, e.g. warehousing, loading, distribution or shipping or distribution; Inventory or stock management, e.g. order filling, procurement or balancing against orders
M	G06Q 10/083	• { Shipping} <i>Shipping</i>
M	G06Q 10/0831	• • { Overseas transactions
M	G06Q 10/0832	• • { Special goods or special handling procedures}, e.g. <i>handling of hazardous or fragile goods</i>
M	G06Q 10/0833	• • { Tracking} <i>Tracking</i>
M	G06Q 10/0834	• • { Choice of carriers
M	G06Q 10/0835	• • { Relationships between shipper or supplier and carrier} <i>carriers</i>
M	G06Q 10/0836	• • { Central recipient} <i>Recipient</i> pick-ups
M	G06Q 10/0837	• • { Return transactions
M	G06Q 10/087	• { Inventory or stock management, e.g. order filling, procurement, <i>or</i> balancing against orders
M	G06Q 10/0875	• • { Itemization} <i>Itemisation or classification</i> of parts, supplies, or services, e.g. bill of materials

M	G06Q 10/10	<ul style="list-style-type: none"> • Office automation, e.g. computer-aided management of electronic mail or groupware (user-to-user messaging in packet-switching networks, transmitted according to store-and-forward or real-time protocols, e.g. e-mail, H04L 51/00); Time management, e.g. calendars, reminders, meetings or time accounting
M	G06Q 10/101	<ul style="list-style-type: none"> • • {Collaborative creation} Collaborative creation, e.g. joint development of products or services
M	G06Q 10/105	<ul style="list-style-type: none"> • • {Human resources}
M	G06Q 10/1053	<ul style="list-style-type: none"> • • • {Employment or hiring}
M	G06Q 10/1057	<ul style="list-style-type: none"> • • • {Benefits package} Benefits or employee welfare, e.g. insurance, holiday or retirement packages
M	G06Q 10/107	<ul style="list-style-type: none"> • • {Computer} Computer-aided management of electronic mail mailing [e-mailing] (arrangements for user-to-user messaging in packet-switching networks, e.g. e-mail or instant messages, H04L 51/00; network security protocols H04L 63/00; real-time communication protocols in data-switching networks H04L 65/00; network protocols for data-switching network services H04L 67/00)}
M	G06Q 10/109	<ul style="list-style-type: none"> • • {Time management, e.g. calendars, reminders, meetings; or time accounting (organizing, planning, scheduling or allocating time G06Q 10/06)}
M	G06Q 10/1091	<ul style="list-style-type: none"> • • • {Recording time for administrative purposes} or management purposes
M	G06Q 10/1093	<ul style="list-style-type: none"> • • • {Calendar-based scheduling for a person or group} persons or groups
M	G06Q 10/20	<ul style="list-style-type: none"> • {Product} Administration of product repair or maintenance administration}
M	G06Q 10/30	<ul style="list-style-type: none"> • {Product} Administration of product recycling or disposal administration}
M	G06Q 30/00	Commerce, e.g. shopping or e-commerce
C	G06Q 30/01	<ul style="list-style-type: none"> • {Customer relationship, e.g. warranty} Customer relationship services <p>WARNING Group G06Q 30/01 is impacted by reclassification into group G06Q 30/015. Groups G06Q 30/01 and G06Q 30/015 should be considered in order to perform a complete search.</p>
M	G06Q 30/012	<ul style="list-style-type: none"> • • {Product or service warranty} Providing warranty services
M	G06Q 30/014	<ul style="list-style-type: none"> • • {Product recall} Providing recall services for goods or products
N	G06Q 30/015	<ul style="list-style-type: none"> • • Providing customer assistance, e.g. assisting a customer within a business location or via helpdesk <p>WARNING Group G06Q 30/015 is incomplete pending reclassification of documents from group G06Q 30/01. Groups G06Q 30/01 and G06Q 30/015 should be considered in order to perform a complete search.</p>
M	G06Q 30/016	<ul style="list-style-type: none"> • • {Customer service, i.e. after purchase service} After-sales
M	G06Q 30/018	<ul style="list-style-type: none"> • • {Business or product certification or verification} Certifying business or products
M	G06Q 30/0185	<ul style="list-style-type: none"> • • {Product, service or business identity fraud}
M	G06Q 30/02	<ul style="list-style-type: none"> • Marketing, e.g. market research and analysis, surveying, promotions, advertising, buyer profiling, customer management or rewards; Price estimation or determination; Fundraising
M	G06Q 30/0201	<ul style="list-style-type: none"> • • {Market data gathering, market analysis or market modelling} Market modelling; Market analysis; Collecting market data
M	G06Q 30/0202	<ul style="list-style-type: none"> • • {Market predictions or demand forecasting} forecasting for commercial activities
M	G06Q 30/0203	<ul style="list-style-type: none"> • • • {Market surveys or market polls} Market surveys; Market polls

M	G06Q 30/0204	· · · {Market segmentation}
U	G06Q 30/0206	· · · {Price or cost determination based on market factors}
M	G06Q 30/0207	· · · {Discounts or incentives, e.g. coupons, rebates, offers or upsales } or rebates
M	G06Q 30/0208	· · · {Trade or exchange of a good or service for an incentive } goods or services in exchange for incentives or rewards
M	G06Q 30/0211	· · · {Determining discount or incentive effectiveness} Determining the effectiveness of discounts or incentives
M	G06Q 30/0214	· · · {Referral award systems} Referral reward systems
M	G06Q 30/0217	· · · {Giving input on a product or service or expressing a customer desire involving input on products or services} in exchange for an incentive or reward} incentives or rewards
M	G06Q 30/0226	· · · {Frequent usage incentive systems} Incentive systems for frequent usage, e.g. frequent flyer miles programs or point systems}
M	G06Q 30/0234	· · · {Rebate} Rebates after completed purchase, i.e. post transaction awards}
M	G06Q 30/0235	· · · {Including timing, i.e. limited awarding or usage time constraint} constrained by time limit or expiration date
M	G06Q 30/0238	· · · {at point-of-sale [POS]}
M	G06Q 30/0241	· · · {Advertisement} Advertisements
M	G06Q 30/0242	· · · {Determination of advertisement effectiveness} Determining effectiveness of advertisements
M	G06Q 30/0251	· · · {Targeted advertisement} Targeted advertisements
M	G06Q 30/0272	· · · {Period of advertisement exposure}
M	G06Q 30/0273	· · · {Fees for advertisement} Determination of fees for advertising
M	G06Q 30/0279	· · · {Fundraising management}
M	G06Q 30/0282	· · · {Business establishment or product rating or recommendation} Rating or review of business operators or products
M	G06Q 30/0283	· · · {Price estimation or determination}
M	G06Q 30/04	· Billing or invoicing {, e.g. tax processing in connection with a sale}
U	G06Q 30/06	· Buying, selling or leasing transactions
M	G06Q 30/0601	· · · {Electronic shopping} Electronic shopping [e-shopping]
M	G06Q 30/0645	· · · {Rental, i.e. leasing} Rental transactions; Leasing transactions
M	G06Q 30/08	· Auctions {, matching or brokerage (matching or brokerage for stock exchange G06Q 40/04)}
U	G06Q 40/00	Finance; Insurance; Tax strategies; Processing of corporate or income taxes
M	G06Q 40/02	· Banking, e.g. interest calculation, credit approval, mortgages, home banking or on-line banking or account maintenance (credit or loans G06Q 40/03)
D	G06Q 40/025	· · {Credit processing or loan processing, e.g. risk analysis for mortgages} <administratively transferred to G06Q 40/03>
N	G06Q 40/03	· Credit; Loans; Processing thereof
M	G06Q 40/04	· Trading; Exchange, e.g. stocks, commodities, derivatives or currency exchange
M	G06Q 40/06	· Investment, e.g. financial instruments, portfolio management or fund management} Asset management; Financial planning or analysis
M	G06Q 40/08	· Insurance, e.g. risk analysis or pensions {((processing of insurance policies or claims G06Q 10/10)}
M	G06Q 40/10	· {Tax strategies}
M	G06Q 40/12	· {Accounting} Accounting

Project: RP11941 (A63H)

M A63H 27/00 Toy aircraft; Other flying toys (toys with parachutes [A63H 33/20](#)); **Starting or launching devices therefor**

Project: RP11941 in addition to RP11903 (B64C)

M B64C AEROPLANES; HELICOPTERS (~~air-cushion vehicles B60V~~)

NOTE

As far as possible, classification is made according to constructional features; classification according to particular kinds of aircraft is normally regarded as being of secondary importance, except in cases where this is considered to be the characteristic feature.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B64C 35/02](#) covered by [B64C 35/00](#)

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

Project: RP11941 (B64C)

C B64C 1/00 Fuselages; Constructional features common to fuselages, wings, stabilising surfaces **and/or** the like (~~aerodynamical features common to fuselages, wings, stabilising surfaces, and the like B64C 23/00; flight-deck installations B64D~~)

WARNING

Group B64C 1/00 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

C B64C 1/0009 • {Aerodynamic aspects}

WARNING

Group B64C 1/0009 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

C B64C 1/06 • Frames; Stringers; Longerons {; Fuselage sections}

WARNING

Group B64C 1/06 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00-B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00-B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

C B64C 1/061 • • {Frames}

WARNING

Group B64C 1/061 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00-B64U 30/40,

B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00-B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 1/062
 - • {specially adapted to absorb crash loads}

WARNING

Group B64C 1/062 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00-B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 1/063
 - • {Folding or collapsing to reduce overall dimensions, e.g. foldable tail booms (folding or collapsing wings [B64C 3/56](#))}

WARNING

Group B64C 1/063 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 1/064
 - • {Stringers; Longerons}

WARNING

Group B64C 1/064 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 1/065
 - • {Spars}

WARNING

Group B64C 1/065 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 1/068
 - • {Fuselage sections}

WARNING

Group B64C 1/068 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 1/069
 - • {Joining arrangements therefor}

WARNING

Group B64C 1/069 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40,

B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 1/24
 - Steps mounted on, and retractable within, fuselages (~~readily removable B64D-9/00~~)
- C B64C 1/26
 - Attaching the wing or tail units or stabilising surfaces

WARNING
Group B64C 1/26 is impacted by reclassification into groups B64U 20/50 and B64U 30/12 - B64U 30/16. Groups B64C 1/26, B64U 20/50 and B64U 30/12 - B64U 30/16 should be considered in order to perform a complete search.
- C B64C 1/30
 - Parts of fuselage relatively movable to reduce overall ~~size for storage~~ *dimensions of aircraft*

WARNING
Group B64C 1/30 is impacted by reclassification into group B64U 20/50. Groups B64C 1/30 and B64U 20/50 should be considered in order to perform a complete search.
- M B64C 1/32
 - Severable or jettisonable parts of fuselage facilitating emergency escape (~~ejector seats B64D-25/10~~)
- M B64C 1/34
 - comprising inflatable structural components (~~connection of valves to inflatable elastic bodies B60C-29/00~~)
- M B64C 1/36
 - adapted to receive antennas or radomes (~~antennas or radomes per se H01G~~)
- M B64C 1/40
 - Sound or heat insulation {, e.g. using insulation blankets (~~insulating elements for vehicles, in general B60R-13/08~~)}
- M B64C 3/00** **Wings (~~stabilising surfaces B64C 5/00; ornithopter wings B64C 33/02~~)**
- M B64C 3/18
 - Spars; Ribs; Stringers (~~attaching wing unit to fuselage B64C-1/26~~)
- M B64C 3/20
 - Integral or sandwich constructions (~~layered products or sandwich constructions in general B32B~~)
- M B64C 3/30
 - comprising inflatable structural components (~~connection of valves to inflatable elastic bodies B60C-29/00~~)
- M B64C 3/34
 - ~~Integrally-constructed tanks~~ *Tanks constructed integrally with wings*, e.g. for fuel ~~or water~~ (~~other aircraft fuel tanks or fuel systems B64D~~)
- U B64C 3/38
 - Adjustment of complete wings or parts thereof
- U B64C 3/44
 - • Varying camber
- M B64C 3/46
 - • • by inflatable elements (~~connection of valves to inflatable elastic bodies B60C-29/00~~)
- M B64C 3/50
 - • • by leading or trailing edge flaps (~~ailerons B64C-9/00~~)
- M B64C 3/54
 - • Varying in area (~~flaps extendable to increase camber B64C-3/44~~)
- C B64C 3/56
 - • Folding or collapsing to reduce overall dimensions of aircraft

WARNING
Group B64C 3/56 is impacted by reclassification into groups B64U 20/50 and B64U 30/12 - B64U 30/16. Groups B64C 3/56, B64U 20/50 and B64U 30/12 - B64U 30/16 should be considered in order to perform a complete search.
- M B64C 27/00** **Rotorcraft; Rotors peculiar thereto (~~alighting gear B64C 25/00~~)**
- U B64C 27/04
 - Helicopters

- C B64C 27/08
- with two or more rotors
- WARNING**
Group B64C 27/08 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 27/10
- arranged coaxially
- WARNING**
Group B64C 27/10 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 27/20
- Rotorcraft characterised by having shrouded rotors, e.g. flying platforms
- WARNING**
Group B64C 27/20 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.
- M B64C 29/00
- Aircraft capable of landing or taking-off vertically, e.g. vertical take-off and landing [VTOL] aircraft (attitude, flight direction, or altitude control by jet reaction B64C 15/00; rotorcraft B64C 27/00; air-cushion vehicles B60V)**
- U B64C 31/00
- Aircraft intended to be sustained without power plant; Powered hang-glider-type aircraft; Microlight-type aircraft**
- U B64C 31/028
- Hang-glider-type aircraft; Microlight-type aircraft
- M B64C 31/036
- having parachute-type wing (~~parachutes B64D 17/00~~)
- M B64C 31/04
- Man-powered aircraft (~~ornithopters B64C 33/00~~)
- M B64C 31/06
- Kites (~~hang-gliders B64C 31/028~~; toy aspects A63H 27/08; towed targets F41J; for propelling water sports boards B63H 8/10; for propelling vessels B63H 9/069; airborne towed targets, e.g. kites F41J 9/10)
- C B64C 33/00
- Ornithopters**
- WARNING**
Group B64C 33/00 is impacted by reclassification into group B64U 10/40. Groups B64C 33/00 and B64U 10/40 should be considered in order to perform a complete search.
- M B64C 35/00
- Flying-boats; Seaplanes (~~alighting gear B64C 25/00~~)**
- M B64C 37/00
- Convertible aircraft (~~vehicles capable of travelling in or on different media B60F~~)**
- M B64C 37/02
- Flying units formed by separate aircraft (~~towing, air-refuelling, or aircraft-carrying aircraft B64D~~ towing B64D 3/00; aircraft transported by aircraft B64D 5/00; air-refuelling B64D 39/00)

C B64C 39/00 Aircraft not otherwise provided for

WARNING

Group B64C 39/00 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

C B64C 39/001 • {Flying saucers}

WARNING

Group B64C 39/001 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

C B64C 39/003 • {with wings, paddle wheels, bladed wheels, moving or rotating in relation to the fuselage (rotorcraft B64C 27/00, ~~ornithopters B64C 33/00~~; ~~ornithopters B64C 33/00~~)}WARNING

Group B64C 39/003 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

C B64C 39/005 • • {about a horizontal transversal axis}

WARNING

Group B64C 39/005 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

C B64C 39/006 • • {about a vertical axis}

WARNING

Group B64C 39/006 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 39/008
- {about a longitudinal axis}
- WARNING**
Group B64C 39/008 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 39/02
- characterised by special use
- WARNING**
Group B64C 39/02 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 39/022
- {Tethered aircraft}
- WARNING**
Group B64C 39/022 is impacted by reclassification into group B64U 10/60. Groups B64C 39/022 and B64U 10/60 should be considered in order to perform a complete search.
- C B64C 39/024
- {of the remote controlled vehicle type, i.e. RPV}
- WARNING**
Group B64C 39/024 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.
- U B64C 39/026
- {for use as personal propulsion unit}
- C B64C 39/028
- {Micro-sized aircraft}
- WARNING**
Group B64C 39/028 is impacted by reclassification into group B64U 10/80. Groups B64C 39/028 and B64U 10/80 should be considered in order to perform a complete search.
- C B64C 39/029
- {Asymmetrical aircraft}
- WARNING**
Group B64C 39/029 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 39/08 · having multiple wings-~~{(B64C 39/06 takes precedence)}~~
- D B64C 2201/00 Unmanned aerial vehicles; Equipment therefor**
<administratively transferred to [B64U 10/00](#) INV>
- D B64C 2201/02 · characterized by type of aircraft
 <administratively transferred to [B64U 10/00](#) INV>
- D B64C 2201/021 · · Airplanes, i.e. having wings and tail planes
 <administratively transferred to [B64U 10/25](#) INV>
- D B64C 2201/022 · · Balloons, blimps or airships
 <administratively transferred to [B64U 10/30](#) INV>
- D B64C 2201/024 · · Helicopters, or autogiros
 <administratively transferred to [B64U 10/10](#) INV>
- D B64C 2201/025 · · Ornithopters, i.e. generating lift and propulsion by flapping wings or insect like means
 <administratively transferred to [B64U 10/40](#) INV>
- D B64C 2201/027 · · Flying platforms
 <administratively transferred to [B64U 10/13](#) INV>
- D B64C 2201/028 · · of all-wing types
 <administratively transferred to [B64U 10/25](#) INV>
- D B64C 2201/04 · characterized by type of power plant
 <administratively transferred to [B64U 50/00](#) INV>
- D B64C 2201/042 · · by electric motors; Electric power sources therefor, e.g. fuel cells, solar panels or batteries
 <administratively transferred to [B64U 50/19](#) INV>
- D B64C 2201/044 · · by internal combustion engines, e.g. oscillating piston or rotary piston engines
 <administratively transferred to [B64U 50/11](#) INV>
- D B64C 2201/046 · · by rocket engines, ramjets, or pulse-reactors
 <administratively transferred to [B64U 50/15](#) INV>
- D B64C 2201/048 · · by jet turbines, or turbofans
 <administratively transferred to [B64U 50/12](#) INV>
- D B64C 2201/06 · characterized by in-flight supply of energy
 <administratively transferred to [B64U 50/34](#) INV>
- D B64C 2201/063 · · by refueling
 <administratively transferred to [B64U 50/34](#) INV>
- D B64C 2201/066 · · by recharging of batteries, e.g. by induction
 <administratively transferred to [B64U 50/34](#) INV>
- D B64C 2201/08 · characterized by the launching method
 <administratively transferred to [B64U 70/00](#) INV>
- D B64C 2201/082 · · Released from other aircraft
 <administratively transferred to [B64U 70/20](#) INV>
- D B64C 2201/084 · · using catapults
 <administratively transferred to [B64U 70/70](#) INV>
- D B64C 2201/086 · · by taking-off horizontally by own power, e.g. from a runway
 <administratively transferred to [B64U 70/60](#) INV>

- D B64C 2201/088
- • Vertical take-off using special means (for helicopters B64C 2201/024; for balloons B64C 2201/022)
- <administratively transferred to [B64U 70/80](#) INV>
- D B64C 2201/10
- characterised by the lift-producing means
- <administratively transferred to [B64U 30/00](#) INV>
- D B64C 2201/101
- • Lifting aerostatically, e.g. using lighter-than-air gases in chambers
- <administratively transferred to [B64U 10/30](#) INV>
- D B64C 2201/102
- • Deployable wings, e.g. foldable or morphing wings
- <administratively transferred to [B64U 30/12](#) INV>
- D B64C 2201/104
- • Fixed wings
- <administratively transferred to [B64U 30/10](#) INV>
- D B64C 2201/105
- • Inflatable wings
- <administratively transferred to [B64U 30/12](#) INV>
- D B64C 2201/107
- • Parachutes; Parasails; Kites; Membranes
- <administratively transferred to [B64U 10/50](#) INV>
- D B64C 2201/108
- • using rotors, or propellers
- <administratively transferred to [B64U 30/20](#) INV>
- D B64C 2201/12
- adapted for particular use
- <administratively transferred to [B64U 2101/00](#) ADD>
- D B64C 2201/121
- • for dropping bombs; for electronic warfare; Flying bombs
- <administratively transferred to [B64U 2101/15](#) ADD>
- D B64C 2201/122
- • as communication relays, e.g. high altitude platforms
- <administratively transferred to [B64U 2101/20](#) ADD>
- D B64C 2201/123
- • for imaging, or topography
- <administratively transferred to [B64U 2101/30](#) ADD>
- D B64C 2201/125
- • for meteorology
- <administratively transferred to [B64U 2101/35](#) ADD>
- D B64C 2201/126
- • adapted for performing different kinds of missions, e.g. multipurpose use
- <administratively transferred to [B64U 2101/00](#) ADD>
- D B64C 2201/127
- • for photography, or video recording, e.g. by using cameras
- <administratively transferred to [B64U 2101/30](#) ADD>
- D B64C 2201/128
- • for transporting goods other than bombs
- <administratively transferred to [B64U 2101/60](#) ADD>
- D B64C 2201/14
- characterised by flight control
- <administratively transferred to [B64U 2201/00](#) ADD>
- D B64C 2201/141
- • autonomous, i.e. by navigating independently from ground or air stations, e.g. by using inertial navigation systems [INS]
- <administratively transferred to [B64U 2201/10](#) ADD>
- D B64C 2201/143
- • • adapted for flying in formations
- <administratively transferred to [B64U 2201/102](#) ADD>
- D B64C 2201/145
- • • using satellite radio beacon positioning systems, e.g. GPS
- <administratively transferred to [B64U 2201/104](#) ADD>

- D B64C 2201/146
 - Remote controls
 - <administratively transferred to [B64U 2201/20](#) ADD>
- D B64C 2201/148
 - using tethers for connecting to ground station
 - <administratively transferred to [B64U 2201/202](#) ADD>
- D B64C 2201/16
 - characterised by type of propulsion unit
 - <administratively transferred to [B64U 50/00](#) INV>
- D B64C 2201/162
 - using ducted fans or propellers
 - <administratively transferred to [B64U 50/14](#) INV>
- D B64C 2201/165
 - using unducted propellers
 - <administratively transferred to [B64U 50/13](#) INV>
- D B64C 2201/167
 - using rockets, ramjets, pulse jets, plasma, or the like
 - <administratively transferred to [B64U 50/15](#) INV>
- D B64C 2201/18
 - characterised by landing method
 - <administratively transferred to [B64U 70/00](#) INV>
- D B64C 2201/182
 - by being caught in mid-air, or next to the ground, e.g. using a net
 - <administratively transferred to [B64U 70/30](#) INV>
- D B64C 2201/185
 - by deploying parachutes, or the like
 - <administratively transferred to [B64U 70/83](#) INV>
- D B64C 2201/187
 - by landing horizontally, e.g. on a runway
 - <administratively transferred to [B64U 70/60](#) INV>
- D B64C 2201/20
 - Methods for transport, or storage of unmanned aerial vehicles
 - <administratively transferred to [B64U 80/00](#) INV>
- D B64C 2201/201
 - in containers
 - <administratively transferred to [B64U 80/70](#) INV>
- D B64C 2201/203
 - in rucksacks, or bags to be carried by persons
 - <administratively transferred to [B64U 80/60](#) INV>
- D B64C 2201/205
 - by waterborne vehicles, e.g. ships or submarines or by hovercraft
 - <administratively transferred to [B64U 80/84](#) INV>
- D B64C 2201/206
 - by airborne vehicles, e.g. airplanes or helicopters
 - <administratively transferred to [B64U 80/82](#) INV>
- D B64C 2201/208
 - by landborne vehicles, e.g. trucks, lorries, tanks or cars
 - <administratively transferred to [B64U 80/86](#) INV>
- D B64C 2201/22
 - having stealth characteristics
 - <administratively transferred to [B64U 20/10](#) INV>

Project: RP11941 (B64D)

- U B64D 47/00** **Equipment not otherwise provided for**
- C B64D 47/08
 - Arrangements of cameras

WARNING

Group [B64D 47/08](#) is impacted by reclassification into group [B64U 20/87](#). Groups [B64D 47/08](#) and [B64U 20/87](#) should be considered in order to perform a complete search.

Project: RP11941 (B64U)**N B64U****UNMANNED AERIAL VEHICLES [UAV]; EQUIPMENT THEREFOR**NOTES

1. This subclass covers:

- vehicles which are specially adapted for unmanned aeronautical use and the equipment therefor.

2. This subclass does not cover:

- computer control systems for the control of position, course, altitude or attitude, which are covered by group [G05D 1/00](#);
- traffic control of UAVs, which is covered by group [G08G 5/00](#).

3. Aircraft or equipment applicable to both manned and unmanned use should be classified in this subclass and in the subclasses of class [B64](#) which are appropriate for the manned use.

4. Details or features of UAVs and their equipment which are not covered by this subclass should be classified in the relevant subclasses of class [B64](#).

5. In this subclass it is desirable to add the indexing codes of group [B64U 2101/00](#), covering particular uses or applications of the UAVs.

Q B64U 10/00**Type of UAV**WARNING

Group [B64U 10/00](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#) and [B64C 39/029](#).

Group [B64U 10/00](#) is also impacted by reclassification into groups [B64U 10/10](#) - [B64U 10/17](#), [B64U 10/20](#), [B64U 10/25](#), [B64U 10/30](#), [B64U 10/40](#), [B64U 10/50](#), [B64U 10/60](#), [B64U 10/70](#), [B64U 10/80](#), [B64U 20/00](#) - [B64U 20/98](#), [B64U 30/00](#) - [B64U 30/40](#), [B64U 40/00](#) - [B64U 40/20](#), [B64U 50/00](#) - [B64U 50/39](#), [B64U 60/00](#) - [B64U 60/70](#), [B64U 70/00](#) - [B64U 70/99](#) and [B64U 80/00](#) - [B64U 80/86](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q B64U 10/10

- Rotorcrafts

WARNING

Group [B64U 10/10](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

Group [B64U 10/10](#) is also impacted by reclassification into groups [B64U 10/11](#), [B64U 10/13](#) - [B64U 10/16](#) and [B64U 10/17](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/11

- Autogyros

WARNING

Group [B64U 10/11](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 10/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q B64U 10/13

- Flying platforms

WARNING

Group [B64U 10/13](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 10/10](#).

Group [B64U 10/13](#) is also impacted by reclassification into groups [B64U 10/14](#) and [B64U 10/16](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/14

- with four distinct rotor axes, e.g. quadcopters

WARNING

Group [B64U 10/14](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 10/10](#) and [B64U 10/13](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/16

- with five or more distinct rotor axes, e.g. octocopters

WARNING

Group [B64U 10/16](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 10/10](#) and [B64U 10/13](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/17

- Helicopters (flying platforms [B64U 10/13](#))

WARNING

Group [B64U 10/17](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 10/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/20

- Vertical take-off and landing [VTOL] aircraft (flying platforms [B64U 10/13](#); helicopters [B64U 10/17](#))

WARNING

Group [B64U 10/20](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#),

[B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#),
[B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#),
[B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q B64U 10/25

- Fixed-wing aircraft (VTOL aircraft [B64U 10/20](#))

WARNING

Group [B64U 10/25](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

Group [B64U 10/25](#) is also impacted by reclassification into group [B64U 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/30

- Lighter-than-air aircraft, e.g. aerostatic aircraft

WARNING

Group [B64U 10/30](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/40

- Ornithopters

WARNING

Group [B64U 10/40](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 33/00](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/50

- Glider-type UAVs, e.g. with parachute, parasail or kite (for landing [B64U 70/83](#))

WARNING

Group [B64U 10/50](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/60

- Tethered aircraft

WARNING

Group [B64U 10/60](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#),

[B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/022](#),
[B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/70

- Convertible aircraft, e.g. convertible into land vehicles

WARNING

Group [B64U 10/70](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 10/80

- UAVs characterised by their small size, e.g. micro air vehicles [MAV]

WARNING

Group [B64U 10/80](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/028](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 20/00

Constructional aspects of UAVs (of lift-producing means [B64U 30/00](#))

WARNING

Groups [B64U 20/00](#), [B64U 20/10](#), [B64U 20/20](#), [B64U 20/30](#), [B64U 20/40](#), [B64U 20/60](#), [B64U 20/65](#), [B64U 20/70](#), [B64U 20/73](#), [B64U 20/75](#), [B64U 20/77](#), [B64U 20/80](#), [B64U 20/83](#), [B64U 20/90](#), [B64U 20/92](#), [B64U 20/94](#), [B64U 20/96](#) and [B64U 20/98](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 20/10

- for stealth, e.g. reduction of cross-section detectable by radars

N B64U 20/20

- for noise reduction

N B64U 20/30

- for safety, e.g. with frangible components (rotor guards [B64U 30/299](#))

N B64U 20/40

- Modular UAVs

N B64U 20/50

- Foldable or collapsible UAVs (with frangible components [B64U 20/30](#))

WARNING

Group [B64U 20/50](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 1/26](#), [B64C 1/30](#), [B64C 3/56](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 20/60 · UAVs characterised by the material
- N B64U 20/65 · · Composite materials
- N B64U 20/70 · Constructional aspects of the UAV body
- N B64U 20/73 · · Monocoque body
- N B64U 20/75 · · the body formed by joined shells or by a shell overlaying a chassis
- N B64U 20/77 · · the body being formed integrally with wings or rotor supports
- N B64U 20/80 · Arrangement of on-board electronics, e.g. avionics systems or wiring
- N B64U 20/83 · · Electronic components structurally integrated with aircraft elements, e.g. circuit boards carrying loads
- N B64U 20/87 · · Mounting of imaging devices, e.g. mounting of gimbals

WARNING

Group [B64U 20/87](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64D 47/08](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 20/90 · Cooling
- N B64U 20/92 · · of avionics
- N B64U 20/94 · · of rotors or rotor motors
- N B64U 20/96 · · using air
- N B64U 20/98 · · using liquid, e.g. using lubrication oil

Q B64U 30/00 Means for producing lift; Empennages; Arrangements thereof**WARNING**

Group [B64U 30/00](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

Group [B64U 30/00](#) is also impacted by reclassification into groups [B64U 30/10](#) - [B64U 30/16](#), [B64U 30/20](#) - [B64U 30/299](#), [B64U 30/30](#) and [B64U 30/40](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q B64U 30/10 · Wings

WARNING

Group [B64U 30/10](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 10/25](#) and [B64U 30/00](#).

Group [B64U 30/10](#) is also impacted by reclassification into groups [B64U 30/12](#) - [B64U 30/16](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q B64U 30/12
- • Variable or detachable wings, e.g. wings with adjustable sweep
- WARNING
- Group [B64U 30/12](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 1/26](#), [B64C 1/30](#), [B64C 3/56](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#) and [B64U 30/10](#).
- Group [B64U 30/12](#) is also impacted by reclassification into groups [B64U 30/14](#) and [B64U 30/16](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 30/14
- • • detachable
- WARNING
- Group [B64U 30/14](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 1/26](#), [B64C 1/30](#), [B64C 3/56](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#), [B64U 30/10](#) and [B64U 30/12](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 30/16
- • • movable along the UAV body
- WARNING
- Group [B64U 30/16](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 1/26](#), [B64C 1/30](#), [B64C 3/56](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#), [B64U 30/10](#) and [B64U 30/12](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- Q B64U 30/20
- Rotors; Rotor supports
- WARNING
- Group [B64U 30/20](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 30/00](#).
- Group [B64U 30/20](#) is also impacted by reclassification into groups [B64U 30/21](#), [B64U 30/24](#), [B64U 30/26](#), [B64U 30/27](#) and [B64U 30/29](#) - [B64U 30/299](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 30/21
- • Rotary wings
- WARNING
- Group [B64U 30/21](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#),

[B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#),
[B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#),
[B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#) and [B64U 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 30/24

- Coaxial rotors

WARNING

Group [B64U 30/24](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#) and [B64U 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 30/26

- Ducted or shrouded rotors

WARNING

Group [B64U 30/26](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#) and [B64U 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 30/27

- Rim-driven rotors

WARNING

Group [B64U 30/27](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#) and [B64U 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 30/29

- Constructional aspects of rotors or rotor supports; Arrangements thereof

WARNING

Groups [B64U 30/29](#) - [B64U 30/299](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 30/00](#) and [B64U 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 30/291

- Detachable rotors or rotor supports

N B64U 30/292

- Rotors or rotor supports specially adapted for quick release

N B64U 30/293

- Foldable or collapsible rotors or rotor supports

N B64U 30/294

- Rotors arranged in the UAV body

N B64U 30/295

- Rotors arranged in the wings

- N B64U 30/296
- • • Rotors with variable spatial positions relative to the UAV body (foldable or collapsible rotors [B64U 30/293](#))
- N B64U 30/297
- • • • Tilting rotors
- N B64U 30/298
- • • Helicopter flybars
- N B64U 30/299
- • • Rotor guards (ducted or shrouded rotors [B64U 30/26](#); guards used as ground propulsion [B64U 60/60](#))
- N B64U 30/30
- Lift-producing means using radial airflow
- WARNING**
- Group [B64U 30/30](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 30/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 30/40
- Empennages, e.g. V-tails (foldable or collapsible UAVs [B64U 20/50](#))
- WARNING**
- Group [B64U 30/40](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 30/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 40/00
- On-board mechanical arrangements for adjusting control surfaces or rotors; On-board mechanical arrangements for in-flight adjustment of the base configuration (control of position, course, altitude or attitude of air or space vehicles, e.g. automatic pilot, [G05D 1/00](#))**
- WARNING**
- Groups [B64U 40/00](#) - [B64U 40/20](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 40/10
- for adjusting control surfaces or rotors
- N B64U 40/20
- for in-flight adjustment of the base configuration
- Q B64U 50/00
- Propulsion; Power supply**
- WARNING**
- Group [B64U 50/00](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).
- Group [B64U 50/00](#) is also impacted by reclassification into groups [B64U 50/10](#) - [B64U 50/19](#), [B64U 50/20](#) - [B64U 50/27](#) and [B64U 50/30](#) - [B64U 50/39](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 50/10

- Propulsion (rotors specially adapted for rotorcraft or VTOL [B64U 30/20](#))

WARNING

Groups [B64U 50/10](#), [B64U 50/11](#), [B64U 50/12](#), [B64U 50/15](#), [B64U 50/16](#) and [B64U 50/18](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 50/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 50/11

- • using internal combustion piston engines

N B64U 50/12

- • using turbine engines, e.g. turbojets or turbofans

Q B64U 50/13

- • using external fans or propellers

WARNING

Group [B64U 50/13](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 50/00](#).

Group [B64U 50/13](#) is also impacted by reclassification into group [B64U 50/14](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 50/14

- • • ducted or shrouded

WARNING

Group [B64U 50/14](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#) and [B64U 50/13](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 50/15

- • using combustion exhausts other than turbojets or turbofans, e.g. using rockets, ramjets, scramjets or pulse-reactors

N B64U 50/16

- • using means other than air displacement or combustion exhaust, e.g. water or magnetic levitation

N B64U 50/18

- • Thrust vectoring

Q B64U 50/19

- • using electrically powered motors

WARNING

Group [B64U 50/19](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 50/00](#).

Group [B64U 50/19](#) is also impacted by reclassification into groups [B64U 50/30](#) - [B64U 50/39](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N [B64U 50/20](#)

- Transmission of mechanical power to rotors or propellers

WARNING

Groups [B64U 50/20](#) - [B64U 50/27](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 50/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N [B64U 50/23](#)

- • with each propulsion means having an individual motor

N [B64U 50/27](#)

- • with a single motor serving two or more rotors or propellers

N [B64U 50/30](#)

- Supply or distribution of electrical power

WARNING

Groups [B64U 50/30](#), [B64U 50/31](#), [B64U 50/32](#) and [B64U 50/33](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#) and [B64U 50/19](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N [B64U 50/31](#)

- • generated by photovoltaics

N [B64U 50/32](#)

- • generated by fuel cells

N [B64U 50/33](#)

- • generated by combustion engines

Q [B64U 50/34](#)

- • In-flight charging (photovoltaics [B64U 50/31](#))

WARNING

Group [B64U 50/34](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#) and [B64U 50/19](#).

Group [B64U 50/34](#) is also impacted by reclassification into groups [B64U 50/35](#), [B64U 50/36](#), [B64U 50/37](#) - [B64U 50/38](#) and [B64U 50/39](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N [B64U 50/35](#)

- • • by wireless transmission, e.g. by induction

WARNING

Group [B64U 50/35](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#), [B64U 50/19](#) and [B64U 50/34](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 50/36

- • • by wind turbines, e.g. ram air turbines [RAT]

WARNING

Group [B64U 50/36](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#), [B64U 50/19](#) and [B64U 50/34](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 50/37

- • Charging when not in flight

WARNING

Groups [B64U 50/37](#) and [B64U 50/38](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#), [B64U 50/19](#) and [B64U 50/34](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 50/38

- • • by wireless transmission

N B64U 50/39

- • Battery swapping

WARNING

Group [B64U 50/39](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#), [B64U 50/19](#) and [B64U 50/34](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 60/00

Undercarriages

WARNING

Groups [B64U 60/00](#) - [B64U 60/70](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 60/10

- specially adapted for use on water

N B64U 60/20

- specially adapted for uneven terrain

N B64U 60/30

- detachable from the body

N B64U 60/40

- foldable or retractable

- N B64U 60/50 • with landing legs
- N B64U 60/55 • • the legs being also used as ground propulsion
- N B64U 60/60 • with rolling cages
- N B64U 60/70 • Movable wings, rotor supports or shrouds acting as ground-engaging elements

Q B64U 70/00 Launching, take-off or landing arrangements

WARNING

Group [B64U 70/00](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

Group [B64U 70/00](#) is also impacted by reclassification into groups [B64U 70/10](#), [B64U 70/20](#), [B64U 70/30](#), [B64U 70/40](#), [B64U 70/50](#), [B64U 70/60](#), [B64U 70/70](#), [B64U 70/80-B64U 70/87](#) and [B64U 70/90 - B64U 70/99](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 70/10 • for releasing or capturing UAVs by hand

WARNING

Group [B64U 70/10](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 70/20 • for releasing or capturing UAVs in flight by another aircraft

WARNING

Group [B64U 70/20](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 70/30 • for capturing UAVs in flight by ground or sea-based arresting gear, e.g. by a cable or a net

WARNING

Group [B64U 70/30](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 70/40
- Landing characterised by flight manoeuvres, e.g. deep stall
- WARNING
- Group [B64U 70/40](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 70/50
- Launching from storage containers, e.g. from submarine missile tubes
- WARNING
- Group [B64U 70/50](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 70/60
- Take-off or landing of UAVs from a runway using their own power
- WARNING
- Group [B64U 70/60](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 70/70
- Launching or landing using catapults, tracks or rails (launching from storage containers [B64U 70/50](#))
- WARNING
- Group [B64U 70/70](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- Q B64U 70/80
- Vertical take-off or landing, e.g. using rockets (rotorcrafts [B64U 10/10](#); VTOL aircraft [B64U 10/20](#))
- WARNING
- Group [B64U 70/80](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).
- Group [B64U 70/80](#) is also impacted by reclassification into group [B64U 70/83](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 70/83

- using parachutes, balloons or the like

WARNING

Group [B64U 70/83](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 70/00](#) and [B64U 70/80](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 70/87

- using inflatable cushions

WARNING

Group [B64U 70/87](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 70/90

- Launching from or landing on platforms

WARNING

Groups [B64U 70/90](#) - [B64U 70/99](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 70/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 70/92

- Portable platforms

N B64U 70/93

- for use on a land or nautical vehicle

N B64U 70/95

- Means for guiding the landing UAV towards the platform, e.g. lighting means

N B64U 70/97

- Means for guiding the UAV to a specific location on the platform, e.g. platform structures preventing landing off-centre

N B64U 70/99

- Means for retaining the UAV on the platform, e.g. dogs or magnets

Q B64U 80/00

Transport or storage specially adapted for UAVs

WARNING

Group [B64U 80/00](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

Group [B64U 80/00](#) is also impacted by reclassification into groups [B64U 80/10](#), [B64U 80/20-B64U 80/25](#), [B64U 80/30](#), [B64U 80/40](#), [B64U 80/50](#), [B64U 80/60](#), [B64U 80/70](#) and [B64U 80/80-B64U 80/86](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 80/10
 - with means for moving the UAV to a supply or launch location, e.g. robotic arms or carousels

WARNING

Group [B64U 80/10](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 80/20
 - with arrangements for servicing the UAV

WARNING

Groups [B64U 80/20](#) and [B64U 80/25](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 80/25
 - for recharging batteries; for refuelling
- N B64U 80/30
 - with arrangements for data transmission

WARNING

Group [B64U 80/30](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 80/40
 - for two or more UAVs

WARNING

Group [B64U 80/40](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 80/50
 - the UAVs being disassembled

WARNING

Group [B64U 80/50](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#),

[B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#),
[B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 80/60

- by wearable objects, e.g. garments or helmets

WARNING

Group [B64U 80/60](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 80/70

- in containers ([B64U 80/60](#) takes precedence)

WARNING

Group [B64U 80/70](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 80/80

- by vehicles

WARNING

Groups [B64U 80/80](#) - [B64U 80/86](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#) and [B64U 80/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 80/82

- • Airborne vehicles

N B64U 80/84

- • Waterborne vehicles

N B64U 80/86

- • Land vehicles

N B64U 2101/00 -
B64U 2101/00

Indexing scheme associated with groups [B64U 10/00](#) - [B64U 80/00](#)

Q B64U 2101/00

UAVs specially adapted for particular uses or applications

WARNING

Group [B64U 2101/00](#) is impacted by reclassification into groups [B64U 2101/05](#), [B64U 2101/10](#), [B64U 2101/15](#) - [B64U 2101/19](#), [B64U 2101/20](#) - [B64U 2101/24](#), [B64U 2101/25](#) - [B64U 2101/29](#), [B64U 2101/30](#) - [B64U 2101/32](#), [B64U 2101/35](#), [B64U 2101/40](#), [B64U 2101/45](#) - [B64U 2101/47](#), [B64U 2101/55](#) - [B64U 2101/58](#), [B64U 2101/60](#) - [B64U 2101/69](#), [B64U 2101/70](#) and [B64U 2101/75](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 2101/05
- for sports or gaming, e.g. drone racing
- WARNING
Group [B64U 2101/05](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).
Groups [B64U 2101/00](#) and [B64U 2101/05](#) should be considered in order to perform a complete search.
- N B64U 2101/10
- for generating power to be supplied to a remote station, e.g. UAVs with solar panels
- WARNING
Group [B64U 2101/10](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).
Groups [B64U 2101/00](#) and [B64U 2101/10](#) should be considered in order to perform a complete search.
- Q B64U 2101/15
- for conventional or electronic warfare
- WARNING
Group [B64U 2101/15](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).
Group [B64U 2101/15](#) is also impacted by reclassification into groups [B64U 2101/16](#), [B64U 2101/17](#), [B64U 2101/18](#) and [B64U 2101/19](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 2101/16
- for controlling, capturing or immobilising other vehicles
- WARNING
Group [B64U 2101/16](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/15](#).
Groups [B64U 2101/00](#), [B64U 2101/15](#) and [B64U 2101/16](#) should be considered in order to perform a complete search.
- N B64U 2101/17
- for detecting, disrupting or countering communications
- WARNING
Group [B64U 2101/17](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/15](#).
Groups [B64U 2101/00](#), [B64U 2101/15](#) and [B64U 2101/17](#) should be considered in order to perform a complete search.
- N B64U 2101/18
- for dropping bombs; for firing ammunition
- WARNING
Group [B64U 2101/18](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/15](#).
Groups [B64U 2101/00](#), [B64U 2101/15](#) and [B64U 2101/18](#) should be considered in order to perform a complete search.
- N B64U 2101/19
- for use as targets or decoys
- WARNING
Group [B64U 2101/19](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/15](#).
Groups [B64U 2101/00](#), [B64U 2101/15](#) and [B64U 2101/19](#) should be considered in order to perform a complete search.

- Q B64U 2101/20
- for use as communications relays, e.g. high-altitude platforms
- WARNING
Group [B64U 2101/20](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).
Group [B64U 2101/20](#) is also impacted by reclassification into groups [B64U 2101/21](#), [B64U 2101/23](#) and [B64U 2101/24](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 2101/21
- for providing Internet access
- WARNING
Group [B64U 2101/21](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/20](#).
Groups [B64U 2101/00](#), [B64U 2101/20](#) and [B64U 2101/21](#) should be considered in order to perform a complete search.
- N B64U 2101/23
- for providing telephone services
- WARNING
Group [B64U 2101/23](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/20](#).
Groups [B64U 2101/00](#), [B64U 2101/20](#) and [B64U 2101/23](#) should be considered in order to perform a complete search.
- N B64U 2101/24
- for use as flying displays, e.g. advertising or billboards
- WARNING
Group [B64U 2101/24](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/20](#).
Groups [B64U 2101/00](#), [B64U 2101/20](#) and [B64U 2101/24](#) should be considered in order to perform a complete search.
- N B64U 2101/25
- for manufacturing or servicing
- WARNING
Groups [B64U 2101/25](#) - [B64U 2101/29](#) are incomplete pending reclassification of documents from group [B64U 2101/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 2101/26
- for manufacturing, inspections or repairs
- N B64U 2101/28
- for painting or marking
- N B64U 2101/29
- for cleaning
- Q B64U 2101/30
- for imaging, photography or videography
- WARNING
Group [B64U 2101/30](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).
Group [B64U 2101/30](#) is also impacted by reclassification into groups [B64U 2101/31](#) and [B64U 2101/32](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 2101/31
- for surveillance
- WARNING
Group [B64U 2101/31](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/30](#).

Groups [B64U 2101/00](#), [B64U 2101/30](#) and [B64U 2101/31](#) should be considered in order to perform a complete search.

N B64U 2101/32

- for cartography or topography

WARNING

Group [B64U 2101/32](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/30](#).

Groups [B64U 2101/00](#), [B64U 2101/30](#) and [B64U 2101/32](#) should be considered in order to perform a complete search.

N B64U 2101/35

- for science, e.g. meteorology

WARNING

Group [B64U 2101/35](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).

Groups [B64U 2101/00](#) and [B64U 2101/35](#) should be considered in order to perform a complete search.

N B64U 2101/40

- for agriculture or forestry operations

WARNING

Group [B64U 2101/40](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).

Groups [B64U 2101/00](#) and [B64U 2101/40](#) should be considered in order to perform a complete search.

N B64U 2101/45

- for releasing liquids or powders in-flight, e.g. crop-dusting

WARNING

Groups [B64U 2101/45](#) and [B64U 2101/47](#) are incomplete pending reclassification of documents from group [B64U 2101/00](#).

Groups [B64U 2101/00](#), [B64U 2101/45](#) and [B64U 2101/47](#) should be considered in order to perform a complete search.

N B64U 2101/47

- for fire fighting

N B64U 2101/55

- for life-saving or rescue operations; for medical use

WARNING

Groups [B64U 2101/55](#) - [B64U 2101/58](#) are incomplete pending reclassification of documents from group [B64U 2101/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B64U 2101/56

- for locating missing persons or animals

N B64U 2101/57

- for bringing emergency supplies to persons or animals in danger, e.g. ropes or life vests

N B64U 2101/58

- for medical evacuation, i.e. the transportation of persons or animals to a place where they can receive medical care

Q B64U 2101/60

- for transporting passengers; for transporting goods other than weapons

WARNING

Group [B64U 2101/60](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).

Group [B64U 2101/60](#) is also impacted by reclassification into groups [B64U 2101/61](#), [B64U 2101/64-B64U 2101/66](#), [B64U 2101/67](#) and [B64U 2101/69](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64U 2101/61
- for transporting passengers
- WARNING
Group [B64U 2101/61](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/60](#).
Groups [B64U 2101/00](#), [B64U 2101/60](#) and [B64U 2101/61](#) should be considered in order to perform a complete search.
- N B64U 2101/64
- for parcel delivery or retrieval
- WARNING
Groups [B64U 2101/64](#) and [B64U 2101/66](#) are incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/60](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64U 2101/66
- • for retrieving parcels
- N B64U 2101/67
- the UAVs comprising tethers for lowering the goods
- WARNING
Group [B64U 2101/67](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/60](#).
Groups [B64U 2101/00](#), [B64U 2101/60](#) and [B64U 2101/67](#) should be considered in order to perform a complete search.
- N B64U 2101/69
- the UAVs provided with means for airdropping goods, e.g. deploying a parachute during descent
- WARNING
Group [B64U 2101/69](#) is incomplete pending reclassification of documents from groups [B64U 2101/00](#) and [B64U 2101/60](#).
Groups [B64U 2101/00](#), [B64U 2101/60](#) and [B64U 2101/69](#) should be considered in order to perform a complete search.
- N B64U 2101/70
- for use inside enclosed spaces, e.g. in buildings or in vehicles
- WARNING
Group [B64U 2101/70](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).
Groups [B64U 2101/00](#) and [B64U 2101/70](#) should be considered in order to perform a complete search.
- N B64U 2101/75
- for extra-terrestrial use, e.g. on the Moon or Mars
- WARNING
Group [B64U 2101/75](#) is incomplete pending reclassification of documents from group [B64U 2101/00](#).
Groups [B64U 2101/00](#) and [B64U 2101/75](#) should be considered in order to perform a complete search.
- N B64U 2201/00** **UAVs characterised by their flight controls**
- N B64U 2201/10
- autonomous, i.e. by navigating independently from ground or air stations, e.g. by using inertial navigation systems [INS]
- N B64U 2201/102
- adapted for flying in formations
- N B64U 2201/104
- using satellite radio beacon positioning systems, e.g. GPS
- N B64U 2201/20
- Remote controls
- N B64U 2201/202
- using tethers for connecting to ground station

Project: N/A (C07F)

U C07F 9/00	Compounds containing elements of Groups 5 or 15 of the Periodic System
U C07F 9/02	· Phosphorus compounds (sugar phosphates C07H 11/04 ; nucleotides C07H 19/00 , C07H 21/00 ; nucleic acids C07H 21/00)
U C07F 9/06	· without P—C bonds
U C07F 9/08	· · Esters of oxyacids of phosphorus {(C07F 9/062 takes precedence)}
U C07F 9/09	· · · Esters of phosphoric acids
C07F 9/093	· · · · {Polyol derivatives esterified at least twice by phosphoric restsacid groups }
U C07F 9/14	· · · · containing P(=O)-halide groups
C07F 9/1403	· · · · · {containing the structure Hal-P(=O)-O-unsaturated acyclic restgroup }
U C07F 9/141	· · · Esters of phosphorous acids
C07F 9/1412	· · · · {Polyol derivatives esterified at least twice by phosphorous acid restsgroups }
U C07F 9/16	· · · Esters of thiophosphoric acids or thiophosphorous acids
U C07F 9/165	· · · · Esters of thiophosphoric acids
C07F 9/1652	· · · · · {Polyol derivatives esterified at least twice by (thio)phosphoric-acid esters thiophosphoric acid groups }
U C07F 9/20	· · · · containing P-halide groups
C07F 9/2003	· · · · · {containing the structure Hal-P-X-unsaturated acyclic restgroup }
U C07F 9/28	· with one or more P—C bonds
U C07F 9/38	· · Phosphonic acids $RP(=O)(OH)_2$; Thiophosphonic acids {, i.e. $RP(=X)(XH)_2$ (X = S, Se)}
U C07F 9/3804	· · · {not used, see subgroups}
U C07F 9/3839	· · · · {Polyphosphonic acids}
C07F 9/3873	· · · · · {containing nitrogen substituents substituent , e.g. N.....H or N-hydrocarbon restgroup which can be substituted by halogen or nitro(so), N.....O, N.....S, N.....C(=X)- (X =O, S)-, N.....N, N...C(=X)...N (X =O, S)}
U C07F 9/40	· · · Esters thereof
U C07F 9/4003	· · · · {the acid moiety containing a substituent or a structure which is considered as characteristic}
U C07F 9/4025	· · · · · {Esters of poly(thio)phosphonic acids}
C07F 9/405	· · · · · · {containing nitrogen substituents substituent , e.g. N.....H or N-hydrocarbon restgroup which can be substituted by halogen or nitro(so), N.....O, N.....S, N.....C(=X)- (X =O, S)-, N.....N, N...C(=X)...N (X =O, S)}
U C07F 9/48	· · Phosphonous acids $R-P(OH)_2$; Thiophosphonous acids {including $RHP(=O)(OH)$; Derivatives thereof}
U C07F 9/4808	· · · {the acid moiety containing a substituent or structure which is considered as characteristic}
C07F 9/4816	· · · · {Acyclic saturated acids or derivatives which can have further substituents on akylalkyl }

Project: N/A (G16)

G16

INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] SPECIALLY ADAPTED FOR SPECIFIC APPLICATION FIELDSNOTES

1. This subclass does not cover:
 - a. ~~pattern recognition, which is covered by group G06K 9/00;~~
 - a. *recognising patterns in general G06F 18/00*
 - b. digital computing or data processing systems or methods specially adapted for administrative, commercial, financial, managerial, supervisory or forecasting purposes, which are covered by subclass [G06Q](#);
 - c. image data processing or generation, which is covered by subclass [G06T](#).
2. In this class, the following terms or expressions are used with the meaning indicated:
 - a. ICT [information and communication technology] also covers IT [information technology];
 - b. "ICT specially adapted for" also covers the expression "digital computing or data processing systems or methods specially adapted for", which is used in group [G06F 17/00](#) and in subclass [G06Q](#).

Project: N/A (H01L)

H01L

SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR (use of semiconductor devices for measuring [G01](#); resistors in general [H01C](#); magnets, inductors, transformers [H01F](#); capacitors in general [H01G](#); electrolytic devices [H01G 9/00](#); batteries, accumulators [H01M](#); waveguides, resonators, or lines of the waveguide type [H01P](#); line connectors, current collectors [H01R](#); stimulated-emission devices [H01S](#); electromechanical resonators [H03H](#); loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers [H04R](#); electric light sources in general [H05B](#); printed circuits, hybrid circuits, casings or constructional details of electrical apparatus, manufacture of assemblages of electrical components [H05K](#); use of semiconductor devices in circuits having a particular application, see the subclass for the application)

NOTES

1. This subclass covers:
 - electric solid state devices which are not covered by any other subclass and details thereof, and includes: semiconductor devices adapted for rectifying, amplifying, oscillating or switching; semiconductor devices sensitive to radiation; electric solid state devices using thermoelectric, superconductive, piezo-electric, electrostrictive, magnetostrictive, galvanomagnetic or bulk negative resistance effects and integrated circuit devices;
 - photoresistors, magnetic field dependent resistors, field effect resistors, capacitors with potential-jump barrier, resistors with potential-jump barrier or surface barrier, incoherent light emitting diodes and thin-film or thick-film circuits;
 - processes and apparatus adapted for the manufacture or treatment of such devices, except where such processes relate to single-step processes for which provision exists elsewhere.
2. In this subclass, the following terms or expressions are used with the meaning indicated:
 - "wafer" means a slice of semiconductor or crystalline substrate material, which can be modified by impurity diffusion (doping), ion implantation or epitaxy, and whose active surface can be processed into arrays of discrete components or integrated circuits;

- "solid state body" means the body of material within which, or at the surface of which, the physical effects characteristic of the device occur. In thermoelectric devices, it includes all materials in the current path. Regions in or on the body of the device (other than the solid state body itself), which exert an influence on the solid state body electrically, are considered to be "electrodes" whether or not an external electrical connection is made thereto. An electrode may include several portions and the term includes metallic regions which exert influence on the solid state body through an insulating region (e.g. capacitive coupling) and inductive coupling arrangements to the body. The dielectric region in a capacitive arrangement is regarded as part of the electrode. In arrangements including several portions, only those portions which exert an influence on the solid state body by virtue of their shape, size, or disposition or the material of which they are formed are considered to be part of the electrode. The other portions are considered to be "arrangements for conducting electric current to or from the solid state body" or "interconnections between solid state components formed in or on a common substrate", i .e. leads;
- "device" means an electric circuit element; where an electric circuit element is one of a plurality of elements formed in or on a common substrate it is referred to as a "component";
- "complete device" is a device in its fully assembled state which may or may not require further treatment, e.g. electroforming, before it is ready for use but which does not require the addition of further structural units;
- "parts" includes all structural units which are included in a complete device;
- "container" is an enclosure forming part of the complete device and is essentially a solid construction in which the body of the device is placed, or which is formed around the body without forming an intimate layer thereon. An enclosure which consists of one or more layers formed on the body and in intimate contact therewith is referred to as an "encapsulation";
- "integrated circuit" is a device where all components, e.g. diodes, resistors, are built up on a common substrate and form the device including interconnections between the components;
- "assembly" of a device is the building up of the device from its component constructional units and includes the provision of fillings in containers.

3. In this subclass, both the process or apparatus for the manufacture or treatment of a device and the device itself are classified, whenever both of these are described sufficiently to be of interest.

4. Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers. In this subclass, the Periodic System used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

H01L 21/301	covered by	H01L 21/30
H01L 21/328	covered by	H01L 29/66075
H01L 21/329	covered by	H01L 29/66083
H01L 21/33	covered by	H01L 29/66227
H01L 21/331	covered by	H01L 29/66234
H01L 21/332	covered by	H01L 29/66363
H01L 21/334	covered by	H01L 29/66075
H01L 21/335	covered by	H01L 29/66409
H01L 21/336	covered by	H01L 29/66477
H01L 21/337	covered by	H01L 29/66893
H01L 21/338	covered by	H01L 29/66848

H01L 21/339	covered by	H01L 29/66946
H01L 21/36-H01L 21/368	covered by	H01L 21/02107
H01L 21/58	covered by	H01L 24/80
H01L 21/66	covered by	H01L 22/00
H01L 21/8242 H01L21/8242	covered by	H01L 27/108
H01L 21/8244 H01L21/8244	covered by	H01L 27/11
H01L 21/8246 H01L21/8246	covered by	H01L 27/112
H01L 21/98	covered by	H01L 25/50
H01L 29/38	covered by	H01L 29/04-H01L 29/365
H01L 29/96	covered by	H01L 29/68-H01L 29/945
H01L 51/30 H01L51/30	covered by	H01L 51/0032
H01L 51/40 H01L51/40	covered by	H01L 51/0001
H01L 51/46 H01L51/46	covered by	H01L 51/0032
H01L 51/48 H01L51/48	covered by	H01L 51/0001
H01L 51/54 H01L51/54	covered by	H01L 51/0032

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}