

**ECLA****EUROPEAN CLASSIFICATION****G06T**

**IMAGE DATA PROCESSING OR GENERATION, IN GENERAL**  
 (specially adapted for particular applications, see the relevant subclasses, e.g. G06K, G09G, H04N) [N9408]

**[N: WARNING]**

The following IPC groups are not used in the internal ECLA classification scheme.  
 Subject matter covered by these groups is classified in the following ECLA groups:  
[G06T1/40](#) covered by [G06T1/20](#)  
 ]

**Notes**

1. This subclass covers:
  - arrangements for geometrically modelling objects, whether the final model is used for display of an image of the object or for some other purpose, such as manufacture of a corresponding object;
  - arrangements for analysing the geometric attributes of an image of an object.
2. This subclass does not cover:
  - reading or recognising printed or written characters or recognising patterns, e.g. fingerprints, which is covered by subclass G06K;
  - modification of image data to allow display using multiple viewports, which is covered by subclass G09G;
  - circuits for generating functions for visual indicators, which are covered by subclass G09G;
  - scanning of documents or the like in pictorial communication, which is covered by subclass H04N.

**G06T1/00**

**General purpose image data processing** [N9411]

**G06T1/00A**

- . [N: Image acquisition] [N9411]

**G06T1/00E**

- . [N: Image feed-back for automatic industrial control, e.g. robot with camera (robots [B25J19/02B4](#))] [N9411]

**G06T1/00W**

- . [N: Image watermarking] [N0004]

**G06T1/00W2**

- . . [N: Adaptive watermarking, e.g. Human Visual System (HVS)-based watermarking] [N0610]

**G06T1/00W2S**

- . . . [N: Output size adaptive watermarking] [N0610]

**G06T1/00W4**

- . . [N: Fragile watermarking, e.g. so as to detect tampering] [N0610]

**G06T1/00W6**

- . . [N: Robust watermarking, e.g. average attack or collusion attack resistant] [N0610]

**G06T1/00W6C**

- . . . [N: Compression invariant watermarking] [N0610]

**G06T1/00W6G**

- . . . [N: Geometric transform invariant watermarking, e.g. affine transform invariant] [N0610]

**G06T1/00W6M**

- . . . [N: using multiple or alternating watermarks] [N0610]

**G06T1/00W6T**

- . . . [N: using multiple thresholds] [N0610]

**G06T1/00W8**

- . . [N: Time domain based watermarking, e.g. watermarks spread over several images] [N0610]

G06T1/00W10	<ul style="list-style-type: none"> <li>· [N: Payload characteristic determination in a watermarking scheme, e.g. number of bits to be embedded] [N0610]</li> </ul>
G06T1/20	<ul style="list-style-type: none"> <li>· Processor architectures; Processor configuration, e.g. pipelining (<a href="#">architectures of general purpose stored programme computers G06F15/76</a>) [N9411]</li> </ul>
G06T1/60	<ul style="list-style-type: none"> <li>· Memory management [N9411]</li> </ul>
<b>G06T3/00</b>	<b>Geometric image transformation in the plane of the image, e.g. from bit-mapped to bit-mapped creating a different image [N9408]</b>
G06T3/00A	<ul style="list-style-type: none"> <li>· [N: Affine transformations (<a href="#">G06T3/40M</a>, <a href="#">G06T3/00R</a> take precedence)] [N9408] [C1002]</li> </ul>
G06T3/00C	<ul style="list-style-type: none"> <li>· [N: Context preserving transformation, e.g. by using an importance map (<a href="#">G06T3/00P</a> takes precedence)] [N1002]</li> </ul>
G06T3/00C2	<ul style="list-style-type: none"> <li>· [N: Fisheye, wide-angle transformation] [N1004]</li> </ul>
G06T3/00C4	<ul style="list-style-type: none"> <li>· [N: Detail-in-context presentation (<a href="#">G06T3/00C2</a> takes precedence)] [N1004]</li> </ul>
G06T3/00F	<ul style="list-style-type: none"> <li>· [N: for topological mapping of a higher dimensional structure on a lower dimensional surface] [N1002] [C1004]</li> </ul>
G06T3/00F2	<ul style="list-style-type: none"> <li>· [N: Reshaping or unfolding a 3D tree structure onto a 2D plane] [N1004]</li> </ul>
G06T3/00F4	<ul style="list-style-type: none"> <li>· [N: Surface of revolution to planar image transformation] [N1004]</li> </ul>
G06T3/00G	<ul style="list-style-type: none"> <li>· [N: for projecting an image on a non-planar surface, e.g. a geodetic screen] [N1002]</li> </ul>
G06T3/00N	<ul style="list-style-type: none"> <li>· [N: the transformation method being selected according to the characteristics of the input image] [N1002]</li> </ul>
G06T3/00P	<ul style="list-style-type: none"> <li>· [N: Panoramic to cylindrical image transformation] [N1002]</li> </ul>
G06T3/00R	<ul style="list-style-type: none"> <li>· [N: for image registration, e.g. elastic snapping] [N1002]</li> </ul>
G06T3/00R2	<ul style="list-style-type: none"> <li>· [N: using affine transformations] [N1004]</li> </ul>
G06T3/00R4	<ul style="list-style-type: none"> <li>· [N: by elastic snapping] [N1004]</li> </ul>
G06T3/00S	<ul style="list-style-type: none"> <li>· [N: Spatio-temporal transformations, e.g. video cubism] [N1002]</li> </ul>
G06T3/00W	<ul style="list-style-type: none"> <li>· [N: for image warping, i.e. transforming by individually repositioning each pixel] [N1002]</li> </ul>
G06T3/20	<ul style="list-style-type: none"> <li>· Linear translation of a whole image or part thereof, e.g. panning [N9408]</li> </ul>
G06T3/40	<ul style="list-style-type: none"> <li>· Scaling the whole image or part thereof [N9408]</li> </ul>
G06T3/40B	<ul style="list-style-type: none"> <li>· [N: Interpolation-based scaling, e.g. bilinear interpolation (<a href="#">G06T3/40C</a>, <a href="#">G06T3/40E</a> take precedence)] [N0607] [C0908]</li> </ul>
G06T3/40C	<ul style="list-style-type: none"> <li>· [N: Demosaicing, e.g. colour filter array [CFA], Bayer pattern] [N0607] [C0908]</li> </ul>
G06T3/40D	<ul style="list-style-type: none"> <li>· [N: Decimation- or insertion-based scaling, e.g. pixel or line decimation] [N0607] [C0908]</li> </ul>
G06T3/40E	<ul style="list-style-type: none"> <li>· [N: Edge-driven scaling] [N0607] [C0908]</li> </ul>
G06T3/40M	<ul style="list-style-type: none"> <li>· [N: for image mosaicing, i.e. plane images composed of plane sub-images] [N1002]</li> </ul>

G06T3/40N	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: using neural networks] [N1002]</li> </ul> </li> </ul>
G06T3/40S	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Super resolution, i.e. output image resolution higher than sensor resolution] [N1002]</li> </ul> </li> </ul>
G06T3/40S2	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: by injecting details from a different spectral band] [N1004]</li> </ul> </li> </ul> </li> </ul>
G06T3/40S4	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: by subpixel displacement] [N1004]</li> </ul> </li> </ul> </li> </ul>
G06T3/40S6	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: by iteratively correcting the provisional high resolution image using the original low-resolution image] [N1004]</li> </ul> </li> </ul> </li> </ul>
G06T3/40T	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Transform-based scaling, e.g. FFT domain scaling] [N0607] [C0908]</li> </ul> </li> </ul>
G06T3/40X	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Image resolution transcoding, e.g. client/server architecture] [N1002]</li> </ul> </li> </ul>
G06T3/60	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Rotation of a whole image or part thereof [N9408]</li> </ul> </li> </ul>
G06T3/60B	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Block rotation, e.g. by recursive reversing or rotating] [N0908]</li> </ul> </li> </ul>
G06T3/60C	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: using a CORDIC [COordinate Rotation DIgital Compute] device] [N1002]</li> </ul> </li> </ul>
G06T3/60M	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Rotation by memory addressing or mapping] [N0908]</li> </ul> </li> </ul>
G06T3/60S	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Skewing or deskewing, e.g. by two-pass or three-pass rotation] [N0908]</li> </ul> </li> </ul>
<b>G06T5/00</b>	<b>Image enhancement or restoration, e.g. from bit-mapped to bit-mapped creating a similar image [N9411]</b>
G06T5/00D	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Image restoration] [N9411] [C1207]</li> </ul> </li> </ul>
G06T5/00D1	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Denoising; Smoothing (noise processing or correction adapted to be used in an image pickup device containing and electronic image sensor <a href="#">H04N5/217</a>, <a href="#">H04N5/357</a> to <a href="#">H04N5/365</a>)] [N1204]</li> </ul> </li> </ul> <p>[N: <b>WARNING</b> Not complete pending reclassification; see also group <a href="#">G06T5/00D</a>]</p>
G06T5/00D3	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Deblurring; Sharpening (vibration or motion blur correction for cameras comprising an electronic image sensor <a href="#">H04N5/232S2</a>)] [N1204]</li> </ul> </li> </ul> <p>[N: <b>WARNING</b> Not complete pending reclassification; see also group <a href="#">G06T5/00D</a>]</p>
G06T5/00D3U	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Unsharp masking] [N1204]</li> </ul> </li> </ul> </li> </ul> <p>[N: <b>WARNING</b> Not complete pending reclassification; see also group <a href="#">G06T5/00D</a>]</p>
G06T5/00D5	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Retouching; Inpainting; Scratch removal (detecting, correction, reducing or removing defects, e.g. non-responsive pixels of solid state image sensors <a href="#">H04N5/367</a>, scratch removal for cinematographic films scanned by electronic image sensor <a href="#">H04N5/253</a>)] [N1204]</li> </ul> </li> </ul> <p>[N: <b>WARNING</b> Not complete pending reclassification; see also group <a href="#">G06T5/00D</a>]</p>
G06T5/00G	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>[N: Geometric correction (detecting, correcting, reducing or removing artefacts resulting only from the lens unit, e.g. flare, shading, vignetting or "cos4" <a href="#">H04N5/357A</a>, correction of chromatic aberrations adapted to be used in an image pickup device containing and electronic image sensor <a href="#">H04N9/04B</a>)] [N9411] [C1207]</li> </ul> </li> </ul>

- G06T5/00M
  - [N: Dynamic range modification (applied in cameras using an electronic image sensor [H04N5/235N](#), [H04N5/235P](#))] [N1204]
  - [N: **WARNING**  
Not complete pending reclassification; see also groups [G06T5/00D](#) and [G06T5/40](#)]
- G06T5/00M1
  - [N: Local, e.g. shadow enhancement] [N1204]
  - [N: **WARNING**  
Not complete pending reclassification; see also group [G06T5/00D](#)]
- G06T5/00M2
  - [N: Global, i.e. based on properties of the image as a whole (applied in cameras using an electronic image sensor [H04N5/232L](#), [H04N5/235](#))] [N1204]
  - [N: **WARNING**  
Not complete pending reclassification; see also group [G06T5/40](#)]
- G06T5/10
  - by non-spatial domain filtering [N: (applied in cameras using an electronic image sensor [H04N5/232L](#), [H04N5/235](#), [H04N5/253](#), [H04N5/367](#))] [N9411] [C1207]
  - [N: **WARNING**  
[N1207]Not complete pending reclassification; see also group [G06T5/00D](#)]
- G06T5/20
  - by the use of local operators [N: (applied in cameras using an electronic image sensor [H04N5/232L](#), [H04N5/235](#), [H04N5/253](#), [H04N5/367](#))] [N9411] [C1207]
- G06T5/30
  - Erosion or dilatation, e.g. thinning [N9411]
- G06T5/40
  - by the use of histogram techniques [N: (applied in cameras using an electronic image sensor [H04N5/232L](#), [H04N5/235](#))] [N9411] [C1207]
- G06T5/50
  - by the use of more than one image, e.g. averaging, subtraction [N: (applied in cameras using an electronic image sensor [H04N5/232L](#), [H04N5/235](#))] [N9411] [C1207]
- G06T7/00**

**Image analysis, e.g. from bit-mapped to non bit-mapped [N9411]**
- G06T7/00B
  - [N: Inspection of images, e.g. flaw detection ([G06T7/00P](#) takes precedence)] [N9411] [C0505]
  - [N: **WARNING**  
This group is being reorganised in the 5 following sub-groups]
- G06T7/00B1
  - [N: Industrial image inspection] [N0505]
- G06T7/00B1D
  - [N: using a design-rule based approach] [N0505]
- G06T7/00B1P
  - [N: checking presence/absence] [N0505]
- G06T7/00B1R
  - [N: using an image reference approach (image matching for pattern recognition or image matching in general [G06K9/64A2](#))] [N0505] [C1108]
- G06T7/00B2
  - [N: Biomedical image inspection] [N0505]
  - [N: **WARNING** [N1112]  
Groups [G06T7/00B2R](#) and [G06T7/00B2R1](#) are not complete pending

- reclassification. See also this group  
]
- G06T7/00B2R . . . [N: using an image reference approach (image matching for pattern recognition or image matching in general [G06K9/64A2](#) )] [N1112]
  - G06T7/00B2R1 . . . . [N: involving temporal comparison (change detection in general [G06T7/20](#))] [N1112]
  - G06T7/00C . [N: Camera calibration, e.g. determining intrinsic or extrinsic parameters] [N0505] [C1203]
  - G06T7/00C1 . . [N: Stereo camera calibration, e.g. determination of the transformation between left camera coordinate system and right camera coordinate system (calibration aspects for stereoscopic image generation [H04N13/00S2A7](#))] [N0505] [C1012]
  - G06T7/00D . [N: Determining parameters from multiple pictures (depth or shape from stereo images [G06T7/00R7S](#); depth or shape from multiple images [G06T7/00R7](#); stereo camera calibration [G06T7/00C1](#))] [N9411] [C1012]
  - G06T7/00D1 . . [N: Registration of images, e.g. alignment of images (image matching for pattern recognition or image matching in general [G06K9/64A2](#))] [N0001] [C1108]
  - G06T7/00D1C . . . [N: using correlation-based methods] [N0505]
  - G06T7/00D1F . . . [N: using feature-based methods] [N0505]
  - G06T7/00D1F3 . . . . [N: involving reference images or patches (image matching for pattern recognition or image matching in general [G06K9/64A2](#))] [N1103] [C1108]
  - G06T7/00D1F5 . . . . [N: involving models (model matching for pattern recognition [G06K9/64A2C](#), [G06K9/68C](#))] [N1103]
  - G06T7/00D1S . . . [N: using statistical methods (image matching by comparing statistics of regions for pattern recognition [G06K9/64S](#))] [N1103]
  - G06T7/00D1T . . . [N: using transform-domain based approaches] [N0505]
  - G06T7/00D1Z . . . [N: Registration of image sequences] [N1103]
  - G06T7/00P . [N: Determining position or orientation of objects] [N9411] [C1012]
  - G06T7/00P1 . . [N: using feature-based methods] [N1103]
  - G06T7/00P1E . . . [N: involving reference images or patches (image matching for pattern recognition or image matching in general [G06K9/64A2](#))] [N1103] [C1108]
  - G06T7/00P1M . . . [N: involving models (model matching for pattern recognition [G06K9/64A2C](#), [G06K9/68C](#))] [N1103]
  - G06T7/00P3 . . [N: using statistical methods (image matching by comparing statistics of regions for pattern recognition [G06K9/64S](#))] [N1103]
  - G06T7/00R . [N: Depth or shape recovery] [N0505]
  - G06T7/00R1 . . [N: from shading] [N0505] [C1012]
  - G06T7/00R2 . . [N: from specularities] [N0505]
  - G06T7/00R3 . . [N: from laser ranging and structured images, e.g. interferometry (image acquisition and arrangements for measuring contours or curvatures of an object by projecting a pattern, thereupon [G01B11/25](#))] [N0505] [C1105]
  - G06T7/00R4 . . [N: from texture] [N0505] [C1012]
  - G06T7/00R5 . . [N: from perspective effects, e.g. using vanishing points] [N0505]
  - G06T7/00R6 . . [N: from line drawings] [N0505]
  - G06T7/00R7 . . [N: from multiple images] [N0505]

- G06T7/00R7C . . . [N: from contours] [N0505]
- G06T7/00R7F . . . [N: from focus] [N0505]
- G06T7/00R7M . . . [N: from motion] [N0505]
- [N: **WARNING** [N1103]  
Not complete pending reclassification; see also group [G06T7/20](#)  
]
- G06T7/00R7P . . . [N: from multiple light sources, e.g. photometric stereo] [N0505]
- G06T7/00R7S . . . [N: from stereo images] [N0505]
- G06T7/00R7S1 . . . . [N: from three or more stereo images] [N0505]
- G06T7/00S . . [N: Segmentation or edge detection (image analysis based on texture or colour features [G06T7/40](#); motion-based segmentation [G06T7/20A](#); separation of touching or overlapping patterns for pattern recognition [G06K9/34](#); extraction of features or characteristics of the image for pattern recognition [G06K9/46](#))] [N0806] [C1108]
- G06T7/00S1 . . [N: Region-based segmentation (image analysis based on texture or colour features [G06T7/40](#); separation of touching or overlapping patterns by cutting or merging for pattern recognition [G06K9/34C](#); quantising the analogue image signal for pattern recognition [G06K9/38](#); extraction of features or characteristics of the image related to colour for pattern recognition [G06K9/46C](#))] [N0806] [C1108]
- G06T7/00S2 . . [N: Edge-based segmentation (detecting partial patterns or configurations [G06K9/46A](#))] [N0806] [C1105]
- G06T7/00S3 . . [N: Edge detection (detecting partial patterns or configurations [G06K9/46A](#))] [N0806] [C1105]
- G06T7/00S4 . . [N: involving probabilistic approaches, e.g. Markov Random Field [MRF] modeling (Markov models or related models or networks embedding Markov models for pattern recognition [G06K9/62G1](#); classification techniques based on a parametric, e.g. probabilistic, model [G06K9/62C1P](#); detecting partial patterns or configurations by analysing connectivity relationship of elements of the pattern [G06K9/46A3](#))] [N0806] [C1105]
- G06T7/00S5 . . [N: involving deformable models, e.g. active contour (pattern recognition techniques involving a deformation of the sample or reference pattern or elastic matching [G06K9/64A2D](#))] [N0806] [C1105]
- G06T7/00S6 . . [N: involving morphological operators (combinations of preprocessing functions using a local operator for pattern recognition [G06K9/56](#))] [N0806] [C1105]
- G06T7/00S7 . . [N: involving graph-based approaches (non-hierarchical partitioning techniques based on graph theory for pattern recognition [G06K9/62B1P2](#))] [N0806] [C1105]
- G06T7/00S8 . . [N: involving transform domain approaches (detecting partial patterns, e.g. edges or contours, using the Hough transform for pattern recognition [G06K9/46A2](#))] [N1106] [C1108]
- G06T7/00S9 . . [N: involving the use of two or more images] [N1106]
- G06T7/20 . . Analysis of motion [N: (movement detection in television systems [H04N5/14M](#); motion estimation for digital video signal compression [H04N7/26M](#); recognizing scenes under surveillance and traffic patterns [G06K9/00V4](#), [G06K9/00V5](#))] [N9411] [C1103]
- [N: **WARNING**  
This group is being reorganised. Documents dealing with shape from motion are reclassified to [G06T7/00R7M](#) and a sub-group [G06T7/20A](#) is created  
]
- G06T7/20A . . [N: Motion-based segmentation] [N0505]
- [N: **WARNING** [N1103]

- Not complete pending reclassification; see also group [G06T7/20](#)  
]
- G06T7/20B . . [N: using block-matching] [N9411] [C1012]
- G06T7/20B1 . . . [N: using full search] [N0505]
- G06T7/20B2 . . . [N: using non-full search, e.g. three step search] [N0505]
- G06T7/20C . . [N: using feature-based methods, e.g. corners, segments] [N9411]
- G06T7/20C3 . . . [N: involving reference images or patches ([image matching for pattern recognition or image matching in general G06K9/64A2](#))] [N1103] [C1108]
- [N: **WARNING** [N1103]  
Not complete pending reclassification; see also group [G06T7/20](#)  
]
- G06T7/20C5 . . . [N: involving models ([model matching for pattern recognition G06K9/64A2C, G06K9/68C](#))] [N1103]
- [N: **WARNING** [N1103]  
Not complete pending reclassification; see also group [G06T7/20](#)  
]
- G06T7/20D . . [N: involving subtraction of pictures] [N9411]
- G06T7/20F . . [N: using transform domain based approaches, e.g. Fourier] [N9411]
- G06T7/20G . . [N: using gradient-based methods] [N9411]
- G06T7/20H . . [N: Motion estimation over a hierarchy of resolutions] [N9411]
- G06T7/20K . . [N: involving a stochastic approach, e.g. Kalman filter] [N9411]
- G06T7/20S . . [N: Computing motion from a sequence of stereo images] [N9411]
- G06T7/20U . . [Multi-camera tracking] [N1103]
- [N: **WARNING** [N1103]  
Not complete pending reclassification; see also group [G06T7/20](#)  
]
- G06T7/40 . Analysis of texture [N: ([depth or shape from texture G06T7/00R4](#))] [N9411] [C0505]
- G06T7/40A . . [N: based on statistical texture description] [N0505]
- G06T7/40A1 . . . [N: using transform-domain based approaches] [N0505] [C1109]
- G06T7/40A2 . . . [N: using image operators, e.g. filter, edge density, local histograms] [N0505] [C1109]
- G06T7/40A3 . . . [N: using co-occurrence matrix computation] [N0505]
- G06T7/40A4 . . . [N: using random Fields] [N0505] [C1109]
- G06T7/40A5 . . . [N: using fractals] [N0505]
- G06T7/40B . . [N: based on structural texture description, i.e. primitives and placement rules] [N0505]
- G06T7/40C . . [N: Color analysis] [N0505]
- G06T7/60 . Analysis of geometric attributes, e.g. area, center of gravity or perimeter, from an image [N9411] [C0505]
- G06T7/60A . . [N: Area, perimeter, diameter or volume] [N0505]
- G06T7/60C . . [N: Convexity or concavity] [N0505]
- G06T7/60M . . [N: Center of gravity or moments ([moments specific for pattern recognition, e.g.](#)



- Zernike moments [G06K9/52M](#)] [N0505] [C1108]
- G06T7/60S . . [N: Symmetry] [N0505]
- G06T9/00** **Image coding, e.g. from bit-mapped to non bit-mapped ([N: H04N1/00, H04N19/00 take precedence;] compression in general H03M; compression for image communication H04N) [N1205]**
- G06T9/00F . [N: Model-based coding, e.g. wire frame (see provisionally also [G06T9/00](#))] [C9411]
- G06T9/00N . [N: using neural networks] [N9408]
- G06T9/00P . [N: Predictors, e.g. intraframe, interframe coding (see provisionally also [G06T9/00](#))] [C9411]
- G06T9/00S . [N: Statistical coding, e.g. Huffman, run length coding (see provisionally also [G06T9/00](#))] [C9411]
- G06T9/00T . [N: Transform coding, e.g. discrete cosine transform (see provisionally also [G06T9/00](#))] [C9411]
- G06T9/00V . [N: Vector quantisation (see provisionally also [G06T9/00](#))] [C9411]
- G06T9/20 . Contour coding, e.g. using detection of edges [N9408]
- G06T9/40 . Tree coding, e.g. quadtree, octree (see provisionally also [G06T9/00](#)) [C9411]
- G06T11/00** **2D [Two Dimensional] image generation [N9411] [C0812]**
- G06T11/00C . [N: Texturing; Colouring; Generation of texture or colour] [N9411] [M1207]
- G06T11/00T . [N: Reconstruction from projections, e.g. tomography] [N9411]
- [N: **WARNING**As from 06.2011 documents of this group are being continuously reclassified to its subgroups  
[N1106]  
]
- G06T11/00T1 . . [N: Specific pre-processing for tomographic reconstruction, e.g. calibration, source positioning, rebinning, scatter correction, retrospective gating] [N1106]
- [N: **WARNING**Not complete pending the completion of a reclassification; see also  
G11/00T  
[N1106]  
]
- G06T11/00T3 . . [N: Inverse problem, transformation from projection-space into object-space, e.g. transform methods, back-projection, algebraic methods] [N1106]
- [N: **WARNING**Not complete pending the completion of a reclassification; see also  
[G06T11/00T](#)  
[N1106]  
]
- G06T11/00T5 . . [N: Specific post-processing after tomographic reconstruction, e.g. voxelisation, metal artifact correction] [N1106]



[N: **WARNING** Not complete pending the completion of a reclassification; see also [G06T11/00T](#) [N1106]  
]

- G06T11/20 . Drawing from basic elements, e.g. lines or circles [N9411] [C0812]
- G06T11/20L . . [N: Drawing of straight lines or curves] [N9708]
- G06T11/20T . . [N: Drawing of charts or graphs] [N9708]
- G06T11/40 . Filling a planar surface by adding surface attributes, e.g. colour or texture [N9411] [C0812]
- G06T11/60 . Editing figures and text; Combining figures or text [N9411]
- G06T11/80 . Creating or modifying a manually drawn or painted image using a manual input device, e.g. mouse, light pen, direction keys on keyboard [N9411]

#### **G06T13/00** **Animation** [N0812] [M1012]

- G06T13/20 . 3D [Three Dimensional] animation [N1009]
- G06T13/20A . . [N: driven by audio data] [N1009]
- G06T13/40 . . of characters, e.g. humans, animals or virtual beings [N1009]
- G06T13/60 . . of natural phenomena, e.g. rain, snow, water or plants [N1009]
- G06T13/80 . 2D [Two Dimensional] animation, e.g. using sprites [N1009]

#### **G06T15/00** **3D [Three Dimensional] image rendering** [N9411] [C0812] [M1012]

- G06T15/00A . [N: General purpose rendering architectures] [N9910]
- G06T15/02 . Non-photorealistic rendering [N1011]
- G06T15/04 . Texture mapping [N1011]
- G06T15/06 . Ray-tracing [N1011]
- G06T15/08 . Volume rendering [N1011]
- G06T15/10 . Geometric effects [N9411] [M1012]
- G06T15/20 . . Perspective computation [N9910]
- G06T15/20B . . . [N: Image-based rendering] [N0812]

[N: **WARNING** [N0812]  
This group is not complete pending a reorganisation. See also [G06T15/00](#)  
]

- G06T15/30 . . Clipping [N9910]
- G06T15/40 . . Hidden part removal [N9910]
- G06T15/40A . . . [N: using Z-buffer] [N9910]

- G06T15/50 . Lighting effects [N9411] [C0812]
- G06T15/50B . . [N: Blending, e.g. for anti-aliasing] [N9910]
- G06T15/50M . . [N: Illumination models] [N0812]
- G06T15/55 . . Radiosity [N1011]
- G06T15/60 . . Shadow generation [N9910] [C0812]
- G06T15/80 . . Shading [N1011]
- G06T15/83 . . . Phong shading [N1011]
- G06T15/87 . . . Gouraud shading [N1011]
  
- G06T17/00** **Three dimensional [3D] modelling, e.g. data description of 3D objects [N9411]**
- G06T17/00K . [N: Tree description, e.g. octree, quadtree] [N9411]
- G06T17/05 . Geographic models [N1108]
- G06T17/10 . Constructive solid geometry (CSG) using solid primitives, e.g. cylinders, cubes [N9411]
- G06T17/20 . Finite element generation, e.g. wire-frame surface description, [N: tessellation] [N9411] [M1112]
- G06T17/20R . . [N: Re-meshing] [N1112]
- G06T17/30 . Polynomial surface description [N9411]
  
- G06T19/00** **Manipulating 3D models or images for computer graphics [N1108]**
- [N: **WARNING** [N1108]  
As from August 1, 2011, documents relating to subject matter covered by subgroups [G06T19/00N](#), [G06T19/00R](#) are continuously reclassified to said subgroups  
]
- G06T19/00N . [N: Navigation within 3D models or images] [N1108]  
  
[N: **WARNING** [N1108]  
This group is not complete pending reclassification; see also group [G06T19/00](#)  
]
- G06T19/00R . [N: Mixed reality (object pose determination, tracking or camera calibration for mixed reality [G06T7/00](#))] [N1108]  
  
[N: **WARNING** [N1108]  
This group is not complete pending reclassification; see also group [G06T19/00](#)  
]
- G06T19/20 . Editing of 3D images, e.g. changing shapes or colours, aligning objects or positioning parts [N1108]