

CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS (NOTES omitted)

INSTRUMENTS

G06 COMPUTING; CALCULATING; COUNTING (NOTES omitted)

G06T IMAGE DATA PROCESSING OR GENERATION, IN GENERAL

WARNING

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

[G06T 1/40](#)

covered by

[G06T 1/20](#)

1/00	General purpose image data processing	3/0056	. {the transformation method being selected according to the characteristics of the input image}
1/0007	. {Image acquisition}	3/0062	. {Panospheric to cylindrical image transformation}
1/0014	. {Image feed-back for automatic industrial control, e.g. robot with camera (robots B25J 19/023)}	3/0068	. {for image registration, e.g. elastic snapping}
1/0021	. {Image watermarking}	3/0075	. . {using affine transformations}
1/0028	. . {Adaptive watermarking, e.g. Human Visual System [HVS]-based watermarking}	3/0081	. . {by elastic snapping}
1/0035	. . . {Output size adaptive watermarking}	3/0087	. {Spatio-temporal transformations, e.g. video cubism}
1/0042	. . {Fragile watermarking, e.g. so as to detect tampering}	3/0093	. {for image warping, i.e. transforming by individually repositioning each pixel}
1/005	. . {Robust watermarking, e.g. average attack or collusion attack resistant}	3/20	. Linear translation of a whole image or part thereof, e.g. panning
1/0057	. . . {Compression invariant watermarking}	3/40	. Scaling the whole image or part thereof
1/0064	. . . {Geometric transfor invariant watermarking, e.g. affine transform invariant}	3/4007	. . {Interpolation-based scaling, e.g. bilinear interpolation (G06T 3/4015 , G06T 3/403 take precedence)}
1/0071	. . . {using multiple or alternating watermarks}	3/4015	. . {Demosaicing, e.g. colour filter array [CFA], Bayer pattern}
1/0078	. . . {using multiple thresholds}	3/4023	. . {Decimation- or insertion-based scaling, e.g. pixel or line decimation}
1/0085	. . {Time domain based watermarking, e.g. watermarks spread over several images}	3/403	. . {Edge-driven scaling}
1/0092	. . {Payload characteristic determination in a watermarking scheme, e.g. number of bits to be embedded}	3/4038	. . {for image mosaicing, i.e. plane images composed of plane sub-images}
1/20	. Processor architectures; Processor configuration, e.g. pipelining	3/4046	. . {using neural networks}
1/60	. Memory management	3/4053	. . {Super resolution, i.e. output image resolution higher than sensor resolution}
3/00	Geometric image transformation in the plane of the image	3/4061	. . . {by injecting details from a different spectral band}
3/0006	. {Affine transformations (G06T 3/4038 , G06T 3/0068 take precedence)}	3/4069	. . . {by subpixel displacement}
3/0012	. {Context preserving transformation, e.g. by using an importance map (G06T 3/0062 takes precedence)}	3/4076	. . . {by iteratively correcting the provisional high resolution image using the original low-resolution image}
3/0018	. . {Fisheye, wide-angle transformation}	3/4084	. . {Transform-based scaling, e.g. FFT domain scaling}
3/0025	. . {Detail-in-context presentation (G06T 3/0018 takes precedence)}	3/4092	. . {Image resolution transcoding, e.g. client/server architecture}
3/0031	. {for topological mapping of a higher dimensional structure on a lower dimensional surface}	3/60	. Rotation of a whole image or part thereof
3/0037	. . {Reshaping or unfolding a 3D tree structure onto a 2D plane}	3/602	. . {Block rotation, e.g. by recursive reversing or rotating}
3/0043	. . {Surface of revolution to planar image transformation}	3/604	. . {using a CORDIC [COordinate Rotation Digital Compute] device}
3/005	. {for projecting an image on a non-planar surface, e.g. a geodetic screen}	3/606	. . {Rotation by memory addressing or mapping}

3/608	. . {Skewing or deskewing, e.g. by two-pass or three-pass rotation}		classified in any of the relevant groups G06T 7/136 - G06T 7/194 .
5/00	Image enhancement or restoration		
5/001	. {Image restoration}	7/11	. . Region-based segmentation
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 5/357 - H04N 5/365)}	7/12	. . Edge-based segmentation
5/003	. . {Deblurring; Sharpening (vibration or motion blur correction for cameras comprising an electronic image sensor H04N 5/23264)}	7/13	. . Edge detection
5/004	. . . {Unsharp masking}	7/136	. . involving thresholding
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 , scratch removal for cinematographic films scanned by electronic image sensor H04N 5/253)}	7/143	. . involving probabilistic approaches, e.g. Markov random field [MRF] modelling
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)}	7/149	. . involving deformable models, e.g. active contour models
5/007	. {Dynamic range modification (applied in cameras using an electronic image sensor H04N 5/2355 , H04N 5/2356)}	7/155	. . involving morphological operators
5/008	. . {Local, e.g. shadow enhancement}	7/162	. . involving graph-based methods
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 5/235)}	7/168	. . involving transform domain methods
5/10	. by non-spatial domain filtering {(applied in cameras using an electronic image sensor H04N 5/23229 , H04N 5/235 , H04N 5/253 , H04N 5/367)}	7/174	. . involving the use of two or more images
5/20	. by the use of local operators {(applied in cameras using an electronic image sensor H04N 5/23229 , H04N 5/235 , H04N 5/253 , H04N 5/367)}	7/181	. . involving edge growing; involving edge linking
5/30	. . Erosion or dilatation, e.g. thinning	7/187	. . involving region growing; involving region merging; involving connected component labelling
5/40	. by the use of histogram techniques {(applied in cameras using an electronic image sensor H04N 5/23229 , H04N 5/235)}	7/194	. . involving foreground-background segmentation
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 5/235)}	7/20	. Analysis of motion (motion estimation for coding, decoding, compressing or decompressing digital video signals H04N 19/43 , H04N 19/51)
7/00	Image analysis	7/207	. . for motion estimation over a hierarchy of resolutions (multi-resolution motion estimation or hierarchical motion estimation for coding, decoding, compressing or decompressing digital video signals H04N 19/53)
7/0002	. {Inspection of images, e.g. flaw detection}	7/215	. . Motion-based segmentation
7/0004	. . {Industrial image inspection}	7/223	. . using block-matching
7/0006	. . . {using a design-rule based approach}	7/231	. . . using full search
7/0008	. . . {checking presence/absence}	7/238	. . . using non-full search, e.g. three-step search
7/001	. . . {using an image reference approach}	7/246	. . using feature-based methods, e.g. the tracking of corners or segments
7/0012	. . {Biomedical image inspection}	7/248	. . . {involving reference images or patches}
7/0014	. . . {using an image reference approach}	7/251	. . . {involving models}
7/0016	. . . . {involving temporal comparison}	7/254	. . involving subtraction of images
7/10	. Segmentation; Edge detection (motion-based segmentation G06T 7/215)	7/262	. . using transform domain methods, e.g. Fourier domain methods
	NOTE	7/269	. . using gradient-based methods
	In this group, multi-aspect classification is applied, so that subject matter characterised by aspects covered by groups G06T 7/11 , G06T 7/12 or G06T 7/13 should also be	7/277	. . involving stochastic approaches, e.g. using Kalman filters
		7/285	. . using a sequence of stereo image pairs
		7/292	. . Multi-camera tracking
		7/30	. Determination of transform parameters for the alignment of images, i.e. image registration
		7/32	. . using correlation-based methods
		7/33	. . using feature-based methods
		7/337	. . . {involving reference images or patches}
		7/344	. . . {involving models}
		7/35	. . using statistical methods
		7/37	. . using transform domain methods
		7/38	. . Registration of image sequences
		7/40	. Analysis of texture (depth or shape recovery from texture G06T 7/529)
		7/41	. . based on statistical description of texture
		7/42	. . . using transform domain methods
		7/44	. . . using image operators, e.g. filters, edge density metrics or local histograms
		7/45	. . . using co-occurrence matrix computation
		7/46	. . . using random fields
		7/48	. . . using fractals

7/49	. . based on structural texture description, e.g. using primitives or placement rules	11/006	. . {Inverse problem, transformation from projection-space into object-space, e.g. transform methods, back-projection, algebraic methods}
7/50	. Depth or shape recovery	11/008	. . {Specific post-processing after tomographic reconstruction, e.g. voxelisation, metal artifact correction}
7/507	. . from shading (G06T 7/586 takes precedence)	11/20	. Drawing from basic elements, e.g. lines or circles
7/514	. . from specularities	11/203	. . {Drawing of straight lines or curves}
7/521	. . from laser ranging, e.g. using interferometry; from the projection of structured light	11/206	. . {Drawing of charts or graphs}
7/529	. . from texture	11/40	. Filling a planar surface by adding surface attributes, e.g. colour or texture
7/536	. . from perspective effects, e.g. by using vanishing points	11/60	. Editing figures and text; Combining figures or text
7/543	. . from line drawings	11/80	. Creating or modifying a manually drawn or painted image using a manual input device, e.g. mouse, light pen, direction keys on keyboard
7/55	. . from multiple images		
7/557	. . . from light fields, e.g. from plenoptic cameras	13/00	Animation
7/564	. . . from contours	13/20	. 3D [Three Dimensional] animation
7/571	. . . from focus	13/205	. . {driven by audio data}
7/579	. . . from motion	13/40	. . of characters, e.g. humans, animals or virtual beings
7/586	. . . from multiple light sources, e.g. photometric stereo	13/60	. . of natural phenomena, e.g. rain, snow, water or plants
7/593	. . . from stereo images	13/80	. 2D [Two Dimensional] animation, e.g. using sprites
7/596	. . . . {from three or more stereo images}		
7/60	. Analysis of geometric attributes	15/00	3D [Three Dimensional] image rendering
7/62	. . of area, perimeter, diameter or volume	15/005	. {General purpose rendering architectures}
7/64	. . of convexity or concavity	15/02	. Non-photorealistic rendering
7/66	. . of image moments or centre of gravity	15/04	. Texture mapping
7/68	. . of symmetry	15/06	. Ray-tracing
7/70	. Determining position or orientation of objects or cameras (camera calibration G06T 7/80)	15/08	. Volume rendering
7/73	. . using feature-based methods	15/10	. Geometric effects
7/74	. . . {involving reference images or patches}	15/20	. . Perspective computation
7/75	. . . {involving models}	15/205	. . . {Image-based rendering}
7/77	. . using statistical methods	15/30	. . Clipping
7/80	. Analysis of captured images to determine intrinsic or extrinsic camera parameters, i.e. camera calibration	15/40	. . Hidden part removal
7/85	. . {Stereo camera calibration}	15/405	. . . {using Z-buffer}
7/90	. Determination of colour characteristics	15/50	. Lighting effects
7/97	. {Determining parameters from multiple pictures (depth or shape recovery from multiple images G06T 7/55 ; stereo camera calibration G06T 7/85)}	15/503	. . {Blending, e.g. for anti-aliasing}
		15/506	. . {Illumination models}
9/00	Image coding (bandwidth or redundancy reduction for static pictures H04N 1/41; coding or decoding of static colour picture signals H04N 1/64; methods or arrangements for coding, decoding, compressing or decompressing digital video signals H04N 19/00)	15/55	. . Radiosity
9/001	. {Model-based coding, e.g. wire frame}	15/60	. . Shadow generation
9/002	. {using neural networks}	15/80	. . Shading
9/004	. {Predictors, e.g. intraframe, interframe coding}	15/83	. . . Phong shading
9/005	. {Statistical coding, e.g. Huffman, run length coding}	15/87	. . . Gouraud shading
9/007	. {Transform coding, e.g. discrete cosine transform}		
9/008	. {Vector quantisation}	17/00	Three dimensional [3D] modelling, e.g. data description of 3D objects
9/20	. Contour coding, e.g. using detection of edges	17/005	. {Tree description, e.g. octree, quadtree}
9/40	. Tree coding, e.g. quadtree, octree	17/05	. Geographic models
		17/10	. Constructive solid geometry [CSG] using solid primitives, e.g. cylinders, cubes
11/00	2D [Two Dimensional] image generation	17/20	. Finite element generation, e.g. wire-frame surface description, {tessellation}
11/001	. {Texturing; Colouring; Generation of texture or colour}	17/205	. . {Re-meshing}
11/003	. {Reconstruction from projections, e.g. tomography}	17/30	. Polynomial surface description
11/005	. . {Specific pre-processing for tomographic reconstruction, e.g. calibration, source positioning, rebinning, scatter correction, retrospective gating}	19/00	Manipulating 3D models or images for computer graphics
		19/003	. {Navigation within 3D models or images}
		19/006	. {Mixed reality (object pose determination, tracking or camera calibration for mixed reality G06T 7/00)}
		19/20	. Editing of 3D images, e.g. changing shapes or colours, aligning objects or positioning parts

2200/00	Indexing scheme for image data processing or generation, in general	
2200/04	. involving 3D image data	2207/10036 . . . Multispectral image; Hyperspectral image
2200/08	. involving all processing steps from image acquisition to 3D model generation	2207/10041 . . . Panchromatic image
2200/12	. involving antialiasing	2207/10044 . . . Radar image
2200/16	. involving adaptation to the client's capabilities	2207/10048 . . Infrared image
2200/21	. involving computational photography	2207/10052 . . Images from lightfield camera
2200/24	. involving graphical user interfaces [GUIs]	2207/10056 . . Microscopic image
2200/28	. involving image processing hardware	2207/10061 . . . from scanning electron microscope
2200/32	. involving image mosaicing	2207/10064 . . Fluorescence image
2200/36	. Review paper; Tutorial; Survey	2207/10068 . . Endoscopic image
2201/00	General purpose image data processing	2207/10072 . . Tomographic images
2201/005	. Image watermarking	2207/10076 . . . 4D tomography; Time-sequential 3D tomography
2201/0051	. . Embedding of the watermark in the spatial domain	2207/10081 . . . Computed x-ray tomography [CT]
2201/0052	. . Embedding of the watermark in the frequency domain	2207/10084 . . . Hybrid tomography; Concurrent acquisition with multiple different tomographic modalities
2201/0053	. . Embedding of the watermark in the coding stream, possibly without decoding; Embedding of the watermark in the compressed domain	2207/10088 . . . Magnetic resonance imaging [MRI]
2201/0061	. . Embedding of the watermark in each block of the image, e.g. segmented watermarking	2207/10092 Diffusion tensor magnetic resonance imaging [DTI]
2201/0062	. . Embedding of the watermark in text images, e.g. watermarking text documents using letter skew, letter distance or row distance	2207/10096 Dynamic contrast-enhanced magnetic resonance imaging [DCE-MRI]
2201/0063	. . in relation to collusion attacks, e.g. collusion attack resistant	2207/10101 . . . Optical tomography; Optical coherence tomography [OCT]
2201/0064	. . for copy protection or copy management, e.g. CGMS, copy only once, one-time copy	2207/10104 . . . Positron emission tomography [PET]
2201/0065	. . Extraction of an embedded watermark; Reliable detection	2207/10108 . . . Single photon emission computed tomography [SPECT]
2201/0081	. . whereby both original and watermarked images are required at decoder, e.g. destination-based, non-blind, non-oblivious	2207/10112 . . . Digital tomosynthesis [DTS]
2201/0083	. . whereby only watermarked image required at decoder, e.g. source-based, blind, oblivious	2207/10116 . . X-ray image
2201/0201	. . whereby only tamper or origin are detected and no embedding takes place	2207/10121 . . . Fluoroscopy
2201/0202	. . whereby the quality of watermarked images is measured; Measuring quality or performance of watermarking methods; Balancing between quality and robustness	2207/10124 . . . Digitally reconstructed radiograph [DRR]
2201/0203	. . whereby the image with embedded watermark is reverted to the original condition before embedding, e.g. lossless, distortion-free or invertible watermarking	2207/10128 . . . Scintigraphy
2201/0601	. . whereby calibration information is embedded in the watermark, e.g. a grid, a scale, a list of transformations	2207/10132 . . Ultrasound image
2207/00	Indexing scheme for image analysis or image enhancement	2207/10136 . . . 3D ultrasound image
2207/10	. Image acquisition modality	2207/10141 . . Special mode during image acquisition
2207/10004	. . Still image; Photographic image	2207/10144 . . . Varying exposure
2207/10008	. . . from scanner, fax or copier	2207/10148 . . . Varying focus
2207/10012	. . . Stereo images	2207/10152 . . . Varying illumination
2207/10016	. . Video; Image sequence	2207/20 . Special algorithmic details
2207/10021	. . . Stereoscopic video; Stereoscopic image sequence	2207/20004 . . Adaptive image processing
2207/10024	. . Color image	2207/20008 . . . Globally adaptive
2207/10028	. . Range image; Depth image; 3D point clouds	2207/20012 . . . Locally adaptive
2207/10032	. . Satellite or aerial image; Remote sensing	2207/20016 . . Hierarchical, coarse-to-fine, multiscale or multiresolution image processing; Pyramid transform
		2207/20021 . . Dividing image into blocks, subimages or windows
		2207/20024 . . Filtering details
		2207/20028 . . . Bilateral filtering
		2207/20032 . . . Median filtering
		2207/20036 . . Morphological image processing
		2207/20041 . . . Distance transform
		2207/20044 . . . Skeletonization; Medial axis transform
		2207/20048 . . Transform domain processing
		2207/20052 . . . Discrete cosine transform [DCT]
		2207/20056 . . . Discrete and fast Fourier transform, [DFT, FFT]
		2207/20061 . . . Hough transform
		2207/20064 . . . Wavelet transform [DWT]
		2207/20068 . . Projection on vertical or horizontal image axis
		2207/20072 . . Graph-based image processing
		2207/20076 . . Probabilistic image processing
		2207/20081 . . Training; Learning
		2207/20084 . . Artificial neural networks [ANN]

2207/20088	. . . Trinocular vision calculations; trifocal tensor	2207/30116	. . . Casting
2207/20092	. . . Interactive image processing based on input by user	2207/30121	. . . CRT, LCD or plasma display
2207/20096	. . . Interactive definition of curve of interest	2207/30124	. . . Fabrics; Textile; Paper
2207/20101	. . . Interactive definition of point of interest, landmark or seed	2207/30128	. . . Food products
2207/20104	. . . Interactive definition of region of interest [ROI]	2207/30132	. . . Masonry; Concrete
2207/20108	. . . Interactive selection of 2D slice in a 3D data set	2207/30136	. . . Metal
2207/20112	. . . Image segmentation details	2207/30141	. . . Printed circuit board [PCB]
2207/20116	. . . Active contour; Active surface; Snakes	2207/30144	. . . Printing quality
2207/20121	. . . Active appearance model [AAM]	2207/30148	. . . Semiconductor; IC; Wafer
2207/20124	. . . Active shape model [ASM]	2207/30152	. . . Solder
2207/20128	. . . Atlas-based segmentation	2207/30156	. . . Vehicle coating
2207/20132	. . . Image cropping	2207/30161	. . . Wood; Lumber
2207/20152	. . . Watershed segmentation	2207/30164	. . . Workpiece; Machine component
2207/20156	. . . Automatic seed setting	2207/30168	. . . Image quality inspection
2207/20161	. . . Level set	2207/30172	. . . Centreline of tubular or elongated structure
2207/20164	. . . Salient point detection; Corner detection	2207/30176	. . . Document
2207/20168	. . . Radial search	2207/30181	. . . Earth observation
2207/20172	. . . Image enhancement details	2207/30184	. . . Infrastructure
2207/20182	. . . Noise reduction or smoothing in the temporal domain; Spatio-temporal filtering	2207/30188	. . . Vegetation; Agriculture
2207/20192	. . . Edge enhancement; Edge preservation	2207/30192	. . . Weather; Meteorology
2207/20201	. . . Motion blur correction	2207/30196	. . . Human being; Person
2207/20204	. . . Removing film grain; Adding simulated film grain	2207/30201	. . . Face
2207/20208	. . . High dynamic range [HDR] image processing	2207/30204	. . . Marker
2207/20212	. . . Image combination	2207/30208	. . . Marker matrix
2207/20216	. . . Image averaging	2207/30212	. . . Military
2207/20221	. . . Image fusion; Image merging	2207/30216	. . . Redeye defect
2207/20224	. . . Image subtraction	2207/30221	. . . Sports video; Sports image
2207/20228	. . . Disparity calculation for image-based rendering	2207/30224	. . . Ball; Puck
2207/30	. . . Subject of image; Context of image processing	2207/30228	. . . Playing field
2207/30004	. . . Biomedical image processing	2207/30232	. . . Surveillance
2207/30008	. . . Bone	2207/30236	. . . Traffic on road, railway or crossing
2207/30012	. . . . Spine; Backbone	2207/30241	. . . Trajectory
2207/30016	. . . Brain	2207/30242	. . . Counting objects in image
2207/30021	. . . Catheter; Guide wire	2207/30244	. . . Camera pose
2207/30024	. . . Cell structures <u>in vitro</u> ; Tissue sections <u>in vitro</u>	2207/30248	. . . Vehicle exterior or interior
2207/30028	. . . Colon; Small intestine	2207/30252	. . . . Vehicle exterior; Vicinity of vehicle
2207/30032	. . . . Colon polyp	2207/30256	. . . . Lane; Road marking
2207/30036	. . . Dental; Teeth	2207/30261	. . . . Obstacle
2207/30041	. . . Eye; Retina; Ophthalmic	2207/30264	. . . . Parking
2207/30044	. . . Fetus; Embryo	2207/30268	. . . . Vehicle interior
2207/30048	. . . Heart; Cardiac		
2207/30052	. . . Implant; Prosthesis	2210/00	Indexing scheme for image generation or computer graphics
2207/30056	. . . Liver; Hepatic	2210/04	. . . Architectural design, interior design
2207/30061	. . . Lung	2210/08	. . . Bandwidth reduction
2207/30064	. . . . Lung nodule	2210/12	. . . Bounding box
2207/30068	. . . Mammography; Breast	2210/16	. . . Cloth
2207/30072	. . . Microarray; Biochip, DNA array; Well plate	2210/21	. . . Collision detection, intersection
2207/30076	. . . Plethysmography	2210/22	. . . Cropping
2207/30081	. . . Prostate	2210/24	. . . Fluid dynamics
2207/30084	. . . Kidney; Renal	2210/28	. . . Force feedback
2207/30088	. . . Skin; Dermal	2210/32	. . . Image data format
2207/30092	. . . Stomach; Gastric	2210/36	. . . Level of detail
2207/30096	. . . Tumor; Lesion	2210/41	. . . Medical
2207/30101	. . . Blood vessel; Artery; Vein; Vascular	2210/44	. . . Morphing
2207/30104	. . . . Vascular flow; Blood flow; Perfusion	2210/52	. . . Parallel processing
2207/30108	. . . Industrial image inspection	2210/56	. . . Particle system, point based geometry or rendering
2207/30112	. . . Baggage; Luggage; Suitcase	2210/61	. . . Scene description
		2210/62	. . . Semi-transparency
		2210/64	. . . Weathering
		2211/00	Image generation

- 2211/40 . Computed tomography
- 2211/404 . . Angiography
- 2211/408 . . Dual energy
- 2211/412 . . Dynamic
- 2211/416 . . Exact reconstruction
- 2211/421 . . Filtered back projection [FBP]
- 2211/424 . . Iterative
- 2211/428 . . Real-time
- 2211/432 . . Truncation
- 2211/436 . . Limited angle

2213/00 Indexing scheme for animation

- 2213/04 . Animation description language
- 2213/08 . Animation software package
- 2213/12 . Rule based animation

2215/00 Indexing scheme for image rendering

- 2215/06 . Curved planar reformation of 3D line structures
- 2215/08 . Gnomonic or central projection
- 2215/12 . Shadow map, environment map
- 2215/16 . Using real world measurements to influence rendering

2219/00 Indexing scheme for manipulating 3D models or images for computer graphics

- 2219/004 . Annotating, labelling
- 2219/008 . Cut plane or projection plane definition
- 2219/012 . Dimensioning, tolerancing
- 2219/016 . Exploded view
- 2219/021 . Flattening
- 2219/024 . Multi-user, collaborative environment
- 2219/028 . Multiple view windows (top-side-front-sagittal-orthogonal)
- 2219/20 . Indexing scheme for editing of 3D models
- 2219/2004 . . Aligning objects, relative positioning of parts
- 2219/2008 . . Assembling, disassembling
- 2219/2012 . . Colour editing, changing, or manipulating; Use of colour codes
- 2219/2016 . . Rotation, translation, scaling
- 2219/2021 . . Shape modification
- 2219/2024 . . Style variation