

CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS (NOTES omitted)

INSTRUMENTS

G06 COMPUTING; CALCULATING; COUNTING (NOTES omitted)

G06T IMAGE DATA PROCESSING OR GENERATION, IN GENERAL

WARNINGS

- 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](#)
- 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.

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

3/604	. . {using a CORDIC [COordinate Rotation Digital Compute] device}		is also made in relevant groups of G06T 7/136 - G06T 7/194 .
3/606	. . {Rotation by memory addressing or mapping}	7/11	. . Region-based segmentation
3/608	. . {Skewing or deskewing, e.g. by two-pass or three-pass rotation}	7/12	. . Edge-based segmentation
5/00	Image enhancement or restoration	7/13	. . Edge detection
5/001	. {Image restoration}	7/136	. . involving thresholding
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)}	7/143	. . involving probabilistic approaches, e.g. Markov random field [MRF] modelling
5/003	. . {Deblurring; Sharpening (vibration or motion blur correction for cameras comprising an electronic image sensor H04N 5/23264)}	7/149	. . involving deformable models, e.g. active contour models
5/004	. . . {Unsharp masking}	7/155	. . involving morphological operators
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)}	7/162	. . involving graph-based methods
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)}	7/168	. . involving transform domain methods
5/007	. {Dynamic range modification (applied in cameras using an electronic image sensor H04N 5/2355 , H04N 5/2356)}	7/174	. . involving the use of two or more images
5/008	. . {Local, e.g. shadow enhancement}	7/181	. . involving edge growing; involving edge linking
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)}	7/187	. . involving region growing; involving region merging; involving connected component labelling
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)}	7/194	. . involving foreground-background segmentation
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)}	7/20	. Analysis of motion (motion estimation for coding, decoding, compressing or decompressing digital video signals H04N 19/43 , H04N 19/51)
5/30	. . Erosion or dilatation, e.g. thinning	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)
5/40	. by the use of histogram techniques {(applied in cameras using an electronic image sensor H04N 5/23229 , H04N 5/235)}	7/215	. . Motion-based 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)}	7/223	. . using block-matching
7/00	Image analysis	7/231	. . . using full search
7/0002	. {Inspection of images, e.g. flaw detection}	7/238	. . . using non-full search, e.g. three-step search
7/0004	. . {Industrial image inspection}	7/246	. . using feature-based methods, e.g. the tracking of corners or segments
7/0006	. . . {using a design-rule based approach}	7/248	. . . {involving reference images or patches}
7/0008	. . . {checking presence/absence}	7/251	. . . {involving models}
7/001	. . . {using an image reference approach}	7/254	. . involving subtraction of images
7/0012	. . {Biomedical image inspection}	7/262	. . using transform domain methods, e.g. Fourier domain methods
7/0014	. . . {using an image reference approach}	7/269	. . using gradient-based methods
7/0016	. . . . {involving temporal comparison}	7/277	. . involving stochastic approaches, e.g. using Kalman filters
7/10	. Segmentation; Edge detection (motion-based segmentation G06T 7/215)	7/285	. . using a sequence of stereo image pairs
NOTE		7/292	. . Multi-camera tracking
	When classifying in groups G06T 7/11 - G06T 7/13 , classification	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