

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS (NOTES omitted)

### INSTRUMENTS

**G06** **COMPUTING; CALCULATING; COUNTING** (score computers for games [A63B 71/06](#), [A63D 15/20](#), [A63F 1/18](#); combinations of writing implements with computing devices [B43K 29/08](#))  
(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**

- 1/0007 . {Image acquisition}
- 1/0014 . {Image feed-back for automatic industrial control, e.g. robot with camera ([robots B25J 19/023](#))}
- 1/0021 . {Image watermarking}
- 1/0028 . . {Adaptive watermarking, e.g. Human Visual System [HVS]-based watermarking}
- 1/0035 . . . {Output size adaptive watermarking}
- 1/0042 . . {Fragile watermarking, e.g. so as to detect tampering}
- 1/005 . . {Robust watermarking, e.g. average attack or collusion attack resistant}
- 1/0057 . . . {Compression invariant watermarking}
- 1/0064 . . . {Geometric transform invariant watermarking, e.g. affine transform invariant}
- 1/0071 . . . {using multiple or alternating watermarks}
- 1/0078 . . . {using multiple thresholds}
- 1/0085 . . {Time domain based watermarking, e.g. watermarks spread over several images}
- 1/0092 . . {Payload characteristic determination in a watermarking scheme, e.g. number of bits to be embedded}
- 1/20 . Processor architectures; Processor configuration, e.g. pipelining
- 1/60 . Memory management

#### **3/00 Geometric image transformation in the plane of the image**

- 3/0006 . {Affine transformations ([G06T 3/4038](#), [G06T 3/0068](#) take precedence)}
- 3/0012 . {Context preserving transformation, e.g. by using an importance map ([G06T 3/0062](#) takes precedence)}
- 3/0018 . . {Fisheye, wide-angle transformation}
- 3/0025 . . {Detail-in-context presentation ([G06T 3/0018](#) takes precedence)}
- 3/0031 . {for topological mapping of a higher dimensional structure on a lower dimensional surface}
- 3/0037 . . {Reshaping or unfolding a 3D tree structure onto a 2D plane}
- 3/0043 . . {Surface of revolution to planar image transformation}

- 3/005 . {for projecting an image on a non-planar surface, e.g. a geodetic screen}
- 3/0056 . {the transformation method being selected according to the characteristics of the input image}
- 3/0062 . {Panospheric to cylindrical image transformation}
- 3/0068 . {for image registration, e.g. elastic snapping}
- 3/0075 . . {using affine transformations}
- 3/0081 . . {by elastic snapping}
- 3/0087 . {Spatio-temporal transformations, e.g. video cubism}
- 3/0093 . {for image warping, i.e. transforming by individually repositioning each pixel}
- 3/20 . Linear translation of a whole image or part thereof, e.g. panning
- 3/40 . Scaling the whole image or part thereof
- 3/4007 . . {Interpolation-based scaling, e.g. bilinear interpolation ([G06T 3/4015](#), [G06T 3/403](#) take precedence)}
- 3/4015 . . {Demosaicing, e.g. colour filter array [CFA], Bayer pattern}
- 3/4023 . . {Decimation- or insertion-based scaling, e.g. pixel or line decimation}
- 3/403 . . {Edge-driven scaling}
- 3/4038 . . {for image mosaicing, i.e. plane images composed of plane sub-images}
- 3/4046 . . {using neural networks}
- 3/4053 . . {Super resolution, i.e. output image resolution higher than sensor resolution}
- 3/4061 . . . {by injecting details from a different spectral band}
- 3/4069 . . . {by subpixel displacement}
- 3/4076 . . . {by iteratively correcting the provisional high resolution image using the original low-resolution image}
- 3/4084 . . {Transform-based scaling, e.g. FFT domain scaling}
- 3/4092 . . {Image resolution transcoding, e.g. client/server architecture}
- 3/60 . Rotation of a whole image or part thereof
- 3/602 . . {Block rotation, e.g. by recursive reversing or rotating}

3/604	. . {using a CORDIC [COordinate Rotation Digital Compute] device}				by aspects covered by groups <a href="#">G06T 7/11</a> , <a href="#">G06T 7/12</a> or <a href="#">G06T 7/13</a> should also be classified in any of the relevant groups <a href="#">G06T 7/136</a> - <a href="#">G06T 7/194</a> .
3/606	. . {Rotation by memory addressing or mapping}				
3/608	. . {Skewing or deskewing, e.g. by two-pass or three-pass rotation}				
<b>5/00</b>	<b>Image enhancement or restoration</b>				
5/001	. {Image restoration}				
5/002	. . {Denoising; Smoothing (noise processing or correction adapted to be used in an image pickup device containing an electronic image sensor <a href="#">H04N 5/217</a> , <a href="#">H04N 5/357</a> - <a href="#">H04N 5/365</a> )}				
5/003	. . {Deblurring; Sharpening (vibration or motion blur correction for cameras comprising an electronic image sensor <a href="#">H04N 5/23264</a> )}				
5/004	. . . {Unsharp masking}				
5/005	. . {Retouching; Inpainting; Scratch removal (detecting, correction, reducing or removing defects, e.g. non-responsive pixels of solid state image sensors <a href="#">H04N 5/367</a> , scratch removal for cinematographic films scanned by electronic image sensor <a href="#">H04N 5/253</a> )}				
5/006	. {Geometric correction (detecting, correcting, reducing or removing artefacts resulting only from the lens unit, e.g. flare, shading, vignetting or "cos4" <a href="#">H04N 5/3572</a> ; correction of chromatic aberrations adapted to be used in an image pickup device containing an electronic image sensor <a href="#">H04N 9/045</a> )}				
5/007	. {Dynamic range modification (applied in cameras using an electronic image sensor <a href="#">H04N 5/2355</a> , <a href="#">H04N 5/2356</a> )}				
5/008	. . {Local, e.g. shadow enhancement}				
5/009	. . {Global, i.e. based on properties of the image as a whole (applied in cameras using an electronic image sensor <a href="#">H04N 5/23229</a> , <a href="#">H04N 5/235</a> )}				
5/10	. by non-spatial domain filtering {(applied in cameras using an electronic image sensor <a href="#">H04N 5/23229</a> , <a href="#">H04N 5/235</a> , <a href="#">H04N 5/253</a> , <a href="#">H04N 5/367</a> )}				
5/20	. by the use of local operators {(applied in cameras using an electronic image sensor <a href="#">H04N 5/23229</a> , <a href="#">H04N 5/235</a> , <a href="#">H04N 5/253</a> , <a href="#">H04N 5/367</a> )}				
5/30	. . Erosion or dilatation, e.g. thinning				
5/40	. by the use of histogram techniques {(applied in cameras using an electronic image sensor <a href="#">H04N 5/23229</a> , <a href="#">H04N 5/235</a> )}				
5/50	. by the use of more than one image, e.g. averaging, subtraction {(applied in cameras using an electronic image sensor <a href="#">H04N 5/23229</a> , <a href="#">H04N 5/235</a> )}				
<b>7/00</b>	<b>Image analysis</b>				
7/0002	. {Inspection of images, e.g. flaw detection}				
7/0004	. . {Industrial image inspection}				
7/0006	. . . {using a design-rule based approach}				
7/0008	. . . {checking presence/absence}				
7/001	. . . {using an image reference approach}				
7/0012	. . {Biomedical image inspection}				
7/0014	. . . {using an image reference approach}				
7/0016	. . . . {involving temporal comparison}				
7/10	. Segmentation; Edge detection ( <a href="#">motion-based segmentation G06T 7/215</a> )				
	<b>NOTE</b>				
	In this group, multi-aspect classification is applied, so that subject matter characterised				
		7/11	. . Region-based segmentation		
		7/12	. . Edge-based segmentation		
		7/13	. . Edge detection		
		7/136	. . involving thresholding		
		7/143	. . involving probabilistic approaches, e.g. Markov random field [MRF] modelling		
		7/149	. . involving deformable models, e.g. active contour models		
		7/155	. . involving morphological operators		
		7/162	. . involving graph-based methods		
		7/168	. . involving transform domain methods		
		7/174	. . involving the use of two or more images		
		7/181	. . involving edge growing; involving edge linking		
		7/187	. . involving region growing; involving region merging; involving connected component labelling		
		7/194	. . involving foreground-background segmentation		
		7/20	. Analysis of motion ( <a href="#">motion estimation for coding, decoding, compressing or decompressing digital video signals H04N 19/43</a> , <a href="#">H04N 19/51</a> )		
		7/207	. . for motion estimation over a hierarchy of resolutions ( <a href="#">multi-resolution motion estimation or hierarchical motion estimation for coding, decoding, compressing or decompressing digital video signals H04N 19/53</a> )		
		7/215	. . Motion-based segmentation		
		7/223	. . using block-matching		
		7/231	. . . using full search		
		7/238	. . . using non-full search, e.g. three-step search		
		7/246	. . using feature-based methods, e.g. the tracking of corners or segments		
		7/248	. . . {involving reference images or patches}		
		7/251	. . . {involving models}		
		7/254	. . involving subtraction of images		
		7/262	. . using transform domain methods, e.g. Fourier domain methods		
		7/269	. . using gradient-based methods		
		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 ( <a href="#">depth or shape recovery from texture G06T 7/529</a> )		
		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	<ul style="list-style-type: none"> <li>• . . using fractals</li> </ul>	11/003	<ul style="list-style-type: none"> <li>• {Reconstruction from projections, e.g. tomography}</li> </ul>
7/49	<ul style="list-style-type: none"> <li>• . . based on structural texture description, e.g. using primitives or placement rules</li> </ul>	11/005	<ul style="list-style-type: none"> <li>• {Specific pre-processing for tomographic reconstruction, e.g. calibration, source positioning, rebinning, scatter correction, retrospective gating}</li> </ul>
7/50	<ul style="list-style-type: none"> <li>• Depth or shape recovery</li> </ul>	11/006	<ul style="list-style-type: none"> <li>• {Inverse problem, transformation from projection-space into object-space, e.g. transform methods, back-projection, algebraic methods}</li> </ul>
7/507	<ul style="list-style-type: none"> <li>• . . from shading (<a href="#">G06T 7/586</a> takes precedence)</li> </ul>	11/008	<ul style="list-style-type: none"> <li>• {Specific post-processing after tomographic reconstruction, e.g. voxelisation, metal artifact correction}</li> </ul>
7/514	<ul style="list-style-type: none"> <li>• . . from specularities</li> </ul>	11/20	<ul style="list-style-type: none"> <li>• Drawing from basic elements, e.g. lines or circles</li> </ul>
7/521	<ul style="list-style-type: none"> <li>• . . from laser ranging, e.g. using interferometry; from the projection of structured light</li> </ul>	11/203	<ul style="list-style-type: none"> <li>• . {Drawing of straight lines or curves}</li> </ul>
7/529	<ul style="list-style-type: none"> <li>• . . from texture</li> </ul>	11/206	<ul style="list-style-type: none"> <li>• . {Drawing of charts or graphs}</li> </ul>
7/536	<ul style="list-style-type: none"> <li>• . . from perspective effects, e.g. by using vanishing points</li> </ul>	11/40	<ul style="list-style-type: none"> <li>• Filling a planar surface by adding surface attributes, e.g. colour or texture</li> </ul>
7/543	<ul style="list-style-type: none"> <li>• . . from line drawings</li> </ul>	11/60	<ul style="list-style-type: none"> <li>• Editing figures and text; Combining figures or text</li> </ul>
7/55	<ul style="list-style-type: none"> <li>• . . from multiple images</li> </ul>	11/80	<ul style="list-style-type: none"> <li>• Creating or modifying a manually drawn or painted image using a manual input device, e.g. mouse, light pen, direction keys on keyboard</li> </ul>
7/557	<ul style="list-style-type: none"> <li>• . . . from light fields, e.g. from plenoptic cameras</li> </ul>		
7/564	<ul style="list-style-type: none"> <li>• . . . from contours</li> </ul>		
7/571	<ul style="list-style-type: none"> <li>• . . . from focus</li> </ul>		
7/579	<ul style="list-style-type: none"> <li>• . . . from motion</li> </ul>		
7/586	<ul style="list-style-type: none"> <li>• . . . from multiple light sources, e.g. photometric stereo</li> </ul>		
7/593	<ul style="list-style-type: none"> <li>• . . . from stereo images</li> </ul>		
7/596	<ul style="list-style-type: none"> <li>• . . . . {from three or more stereo images}</li> </ul>	<b>13/00</b>	<b>Animation</b>
7/60	<ul style="list-style-type: none"> <li>• Analysis of geometric attributes</li> </ul>	13/20	<ul style="list-style-type: none"> <li>• 3D [Three Dimensional] animation</li> </ul>
7/62	<ul style="list-style-type: none"> <li>• . . of area, perimeter, diameter or volume</li> </ul>	13/205	<ul style="list-style-type: none"> <li>• . {driven by audio data}</li> </ul>
7/64	<ul style="list-style-type: none"> <li>• . . of convexity or concavity</li> </ul>	13/40	<ul style="list-style-type: none"> <li>• . . of characters, e.g. humans, animals or virtual beings</li> </ul>
7/66	<ul style="list-style-type: none"> <li>• . . of image moments or centre of gravity</li> </ul>		
7/68	<ul style="list-style-type: none"> <li>• . . of symmetry</li> </ul>	13/60	<ul style="list-style-type: none"> <li>• . . of natural phenomena, e.g. rain, snow, water or plants</li> </ul>
7/70	<ul style="list-style-type: none"> <li>• Determining position or orientation of objects or cameras (<a href="#">camera calibration G06T 7/80</a>)</li> </ul>	13/80	<ul style="list-style-type: none"> <li>• 2D [Two Dimensional] animation, e.g. using sprites</li> </ul>
7/73	<ul style="list-style-type: none"> <li>• . . using feature-based methods</li> </ul>	<b>15/00</b>	<b>3D [Three Dimensional] image rendering</b>
7/74	<ul style="list-style-type: none"> <li>• . . . {involving reference images or patches}</li> </ul>	15/005	<ul style="list-style-type: none"> <li>• {General purpose rendering architectures}</li> </ul>
7/75	<ul style="list-style-type: none"> <li>• . . . {involving models}</li> </ul>	15/02	<ul style="list-style-type: none"> <li>• Non-photorealistic rendering</li> </ul>
7/77	<ul style="list-style-type: none"> <li>• . . using statistical methods</li> </ul>	15/04	<ul style="list-style-type: none"> <li>• Texture mapping</li> </ul>
7/80	<ul style="list-style-type: none"> <li>• Analysis of captured images to determine intrinsic or extrinsic camera parameters, i.e. camera calibration</li> </ul>	15/06	<ul style="list-style-type: none"> <li>• Ray-tracing</li> </ul>
7/85	<ul style="list-style-type: none"> <li>• . {Stereo camera calibration}</li> </ul>	15/08	<ul style="list-style-type: none"> <li>• Volume rendering</li> </ul>
7/90	<ul style="list-style-type: none"> <li>• Determination of colour characteristics</li> </ul>	15/10	<ul style="list-style-type: none"> <li>• Geometric effects</li> </ul>
7/97	<ul style="list-style-type: none"> <li>• {Determining parameters from multiple pictures (depth or shape recovery from multiple images <a href="#">G06T 7/55</a>; stereo camera calibration <a href="#">G06T 7/85</a>)}</li> </ul>	15/20	<ul style="list-style-type: none"> <li>• . . Perspective computation</li> </ul>
<b>9/00</b>	<b>Image coding (bandwidth or redundancy reduction for static pictures <a href="#">H04N 1/41</a>; coding or decoding of static colour picture signals <a href="#">H04N 1/64</a>; methods or arrangements for coding, decoding, compressing or decompressing digital video signals <a href="#">H04N 19/00</a>)</b>	15/205	<ul style="list-style-type: none"> <li>• . . . {Image-based rendering}</li> </ul>
9/001	<ul style="list-style-type: none"> <li>• {Model-based coding, e.g. wire frame (<a href="#">see provisionally also G06T 9/00</a>)}</li> </ul>	15/30	<ul style="list-style-type: none"> <li>• . Clipping</li> </ul>
9/002	<ul style="list-style-type: none"> <li>• {using neural networks}</li> </ul>	15/40	<ul style="list-style-type: none"> <li>• . Hidden part removal</li> </ul>
9/004	<ul style="list-style-type: none"> <li>• {Predictors, e.g. intraframe, interframe coding (<a href="#">see provisionally also G06T 9/00</a>)}</li> </ul>	15/405	<ul style="list-style-type: none"> <li>• . . . {using Z-buffer}</li> </ul>
9/005	<ul style="list-style-type: none"> <li>• {Statistical coding, e.g. Huffman, run length coding (<a href="#">see provisionally also G06T 9/00</a>)}</li> </ul>	15/50	<ul style="list-style-type: none"> <li>• Lighting effects</li> </ul>
9/007	<ul style="list-style-type: none"> <li>• {Transform coding, e.g. discrete cosine transform (<a href="#">see provisionally also G06T 9/00</a>)}</li> </ul>	15/503	<ul style="list-style-type: none"> <li>• . {Blending, e.g. for anti-aliasing}</li> </ul>
9/008	<ul style="list-style-type: none"> <li>• {Vector quantisation (<a href="#">see provisionally also G06T 9/00</a>)}</li> </ul>	15/506	<ul style="list-style-type: none"> <li>• . {Illumination models}</li> </ul>
9/20	<ul style="list-style-type: none"> <li>• Contour coding, e.g. using detection of edges</li> </ul>	15/55	<ul style="list-style-type: none"> <li>• . Radiosity</li> </ul>
9/40	<ul style="list-style-type: none"> <li>• Tree coding, e.g. quadtree, octree (<a href="#">see provisionally also G06T 9/00</a>)</li> </ul>	15/60	<ul style="list-style-type: none"> <li>• . Shadow generation</li> </ul>
<b>11/00</b>	<b>2D [Two Dimensional] image generation</b>	15/80	<ul style="list-style-type: none"> <li>• . Shading</li> </ul>
11/001	<ul style="list-style-type: none"> <li>• {Texturing; Colouring; Generation of texture or colour}</li> </ul>	15/83	<ul style="list-style-type: none"> <li>• . . . Phong shading</li> </ul>
		15/87	<ul style="list-style-type: none"> <li>• . . . Gouraud shading</li> </ul>
		<b>17/00</b>	<b>Three dimensional [3D] modelling, e.g. data description of 3D objects</b>
		17/005	<ul style="list-style-type: none"> <li>• {Tree description, e.g. octree, quadtree}</li> </ul>
		17/05	<ul style="list-style-type: none"> <li>• Geographic models</li> </ul>
		17/10	<ul style="list-style-type: none"> <li>• Constructive solid geometry [CSG] using solid primitives, e.g. cylinders, cubes</li> </ul>
		17/20	<ul style="list-style-type: none"> <li>• Finite element generation, e.g. wire-frame surface description, {tessellation}</li> </ul>
		17/205	<ul style="list-style-type: none"> <li>• . {Re-meshing}</li> </ul>
		17/30	<ul style="list-style-type: none"> <li>• Polynomial surface description</li> </ul>
		<b>19/00</b>	<b>Manipulating 3D models or images for computer graphics</b>
		19/003	<ul style="list-style-type: none"> <li>• {Navigation within 3D models or images}</li> </ul>

19/006	• {Mixed reality (object pose determination, tracking or camera calibration for mixed reality G06T 7/00)}	2207/10021	• . . Stereoscopic video; Stereoscopic image sequence
19/20	• Editing of 3D images, e.g. changing shapes or colours, aligning objects or positioning parts	2207/10024	• . Color image
<b>2200/00</b>	<b>Indexing scheme for image data processing or generation, in general</b>	2207/10028	• . Range image; Depth image; 3D point clouds
2200/04	• involving 3D image data	2207/10032	• . Satellite or aerial image; Remote sensing
2200/08	• involving all processing steps from image acquisition to 3D model generation	2207/10036	• . . Multispectral image; Hyperspectral image
2200/12	• involving antialiasing	2207/10041	• . . Panchromatic image
2200/16	• involving adaptation to the client's capabilities	2207/10044	• . . Radar image
2200/21	• involving computational photography	2207/10048	• . Infrared image
2200/24	• involving graphical user interfaces [GUIs]	2207/10052	• . Images from lightfield camera
2200/28	• involving image processing hardware	2207/10056	• . Microscopic image
2200/32	• involving image mosaicing	2207/10061	• . . from scanning electron microscope
2200/36	• Review paper; Tutorial; Survey	2207/10064	• . Fluorescence image
<b>2201/00</b>	<b>General purpose image data processing</b>	2207/10068	• . Endoscopic image
2201/005	• Image watermarking	2207/10072	• . Tomographic images
2201/0051	• . Embedding of the watermark in the spatial domain	2207/10076	• . . 4D tomography; Time-sequential 3D tomography
2201/0052	• . Embedding of the watermark in the frequency domain	2207/10081	• . . Computed x-ray tomography [CT]
2201/0053	• . Embedding of the watermark in the coding stream, possibly without decoding; Embedding of the watermark in the compressed domain	2207/10084	• . . Hybrid tomography; Concurrent acquisition with multiple different tomographic modalities
2201/0061	• . Embedding of the watermark in each block of the image, e.g. segmented watermarking	2207/10088	• . . Magnetic resonance imaging [MRI]
2201/0062	• . Embedding of the watermark in text images, e.g. watermarking text documents using letter skew, letter distance or row distance	2207/10092	• . . . Diffusion tensor magnetic resonance imaging [DTI]
2201/0063	• . in relation to collusion attacks, e.g. collusion attack resistant	2207/10096	• . . . Dynamic contrast-enhanced magnetic resonance imaging [DCE-MRI]
2201/0064	• . for copy protection or copy management, e.g. CGMS, copy only once, one-time copy	2207/10101	• . . . Optical tomography; Optical coherence tomography [OCT]
2201/0065	• . Extraction of an embedded watermark; Reliable detection	2207/10104	• . . Positron emission tomography [PET]
2201/0081	• . whereby both original and watermarked images are required at decoder, e.g. destination-based, non-blind, non-oblivious	2207/10108	• . . Single photon emission computed tomography [SPECT]
2201/0083	• . whereby only watermarked image required at decoder, e.g. source-based, blind, oblivious	2207/10112	• . . Digital tomosynthesis [DTS]
2201/0201	• . whereby only tamper or origin are detected and no embedding takes place	2207/10116	• . . X-ray image
2201/0202	• . whereby the quality of watermarked images is measured; Measuring quality or performance of watermarking methods; Balancing between quality and robustness	2207/10121	• . . Fluoroscopy
2201/0203	• . whereby the image with embedded watermark is reverted to the original condition before embedding, e.g. lossless, distortion-free or invertible watermarking	2207/10124	• . . Digitally reconstructed radiograph [DRR]
2201/0601	• . whereby calibration information is embedded in the watermark, e.g. a grid, a scale, a list of transformations	2207/10128	• . . Scintigraphy
<b>2207/00</b>	<b>Indexing scheme for image analysis or image enhancement</b>	2207/10132	• . . Ultrasound image
2207/10	• Image acquisition modality	2207/10136	• . . 3D ultrasound image
2207/10004	• . Still image; Photographic image	2207/10141	• . . Special mode during image acquisition
2207/10008	• . . from scanner, fax or copier	2207/10144	• . . Varying exposure
2207/10012	• . . Stereo images	2207/10148	• . . Varying focus
2207/10016	• . Video; Image sequence	2207/10152	• . . Varying illumination
		2207/20	• Special algorithmic details
		2207/20004	• . Adaptive image processing
		2207/20008	• . . Globally adaptive
		2207/20012	• . . Locally adaptive
		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	2207/30096	. . .	Tumor; Lesion
2207/20072	. . .	Graph-based image processing	2207/30101	. . .	Blood vessel; Artery; Vein; Vascular
2207/20076	. . .	Probabilistic image processing	2207/30104	. . . .	Vascular flow; Blood flow; Perfusion
2207/20081	. . .	Training; Learning	2207/30108	. . .	Industrial image inspection
2207/20084	. . .	Artificial neural networks [ANN]	2207/30112	. . .	Baggage; Luggage; Suitcase
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	<b>2210/00</b>		<b>Indexing scheme for image generation or computer graphics</b>
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
			2210/41	. . .	Medical
			2210/44	. . .	Morphing
			2210/52	. . .	Parallel processing
			2210/56	. . .	Particle system, point based geometry or rendering

- 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