

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 . . [N: Payload characteristic determination in a watermarking scheme, e.g. number of bits to be embedded] [N0610]
- G06T1/20 . Processor architectures; Processor configuration, e.g. pipelining ([architectures of general purpose stored programme computers G06F15/76](#)) [N9411]
- G06T1/60 . Memory management [N9411]
- G06T3/00** **Geometric image transformation in the plane of the image, e.g. from bit-mapped to bit-mapped creating a different image [N9408]**
- G06T3/00A . [N: Affine transformations ([G06T3/40M](#), [G06T3/00R](#) take precedence)] [N9408] [C1002]
- G06T3/00C . [N: Context preserving transformation, e.g. by using an importance map ([G06T3/00P](#) takes precedence)] [N1002]
- G06T3/00C2 . . [N: Fisheye, wide-angle transformation] [N1004]
- G06T3/00C4 . . [N: Detail-in-context presentation ([G06T3/00C2](#) takes precedence)] [N1004]
- G06T3/00F . [N: for topological mapping of a higher dimensional structure on a lower dimensional surface] [N1002] [C1004]
- G06T3/00F2 . . [N: Reshaping or unfolding a 3D tree structure onto a 2D plane] [N1004]
- G06T3/00F4 . . [N: Surface of revolution to planar image transformation] [N1004]
- G06T3/00G . [N: for projecting an image on a non-planar surface, e.g. a geodetic screen] [N1002]
- G06T3/00N . [N: the transformation method being selected according to the characteristics of the input image] [N1002]
- G06T3/00P . [N: Panospheric to cylindrical image transformation] [N1002]
- G06T3/00R . [N: for image registration, e.g. elastic snapping] [N1002]
- G06T3/00R2 . . [N: using affine transformations] [N1004]
- G06T3/00R4 . . [N: by elastic snapping] [N1004]
- G06T3/00S . [N: Spatio-temporal transformations, e.g. video cubism] [N1002]
- G06T3/00W . [N: for image warping, i.e. transforming by individually repositioning each pixel] [N1002]
- G06T3/20 . Linear translation of a whole image or part thereof, e.g. panning [N9408]
- G06T3/40 . Scaling the whole image or part thereof [N9408]
- G06T3/40B . . [N: Interpolation-based scaling, e.g. bilinear interpolation ([G06T3/40C](#), [G06T3/40E](#) take precedence)] [N0607] [C0908]
- G06T3/40C . . [N: Demosaicing, e.g. colour filter array [CFA], Bayer pattern] [N0607] [C0908]
- G06T3/40D . . [N: Decimation- or insertion-based scaling, e.g. pixel or line decimation] [N0607] [C0908]
- G06T3/40E . . [N: Edge-driven scaling] [N0607] [C0908]
- G06T3/40M . . [N: for image mosaicing, i.e. plane images composed of plane sub-images] [N1002]

- G06T3/40N . . [N: using neural networks] [N1002]
- G06T3/40S . . [N: Super resolution, i.e. output image resolution higher than sensor resolution] [N1002]
- G06T3/40S2 . . . [N: by injecting details from a different spectral band] [N1004]
- G06T3/40S4 . . . [N: by subpixel displacement] [N1004]
- G06T3/40S6 . . . [N: by iteratively correcting the provisional high resolution image using the original low-resolution image] [N1004]
- G06T3/40T . . [N: Transform-based scaling, e.g. FFT domain scaling] [N0607] [C0908]
- G06T3/40X . . [N: Image resolution transcoding, e.g. client/server architecture] [N1002]

- G06T3/60 . . Rotation of a whole image or part thereof [N9408]
- G06T3/60B . . [N: Block rotation, e.g. by recursive reversing or rotating] [N0908]
- G06T3/60C . . [N: using a CORDIC [COordinate Rotation DIgital Compute] device] [N1002]
- G06T3/60M . . [N: Rotation by memory addressing or mapping] [N0908]
- G06T3/60S . . [N: Skewing or deskewing, e.g. by two-pass or three-pass rotation] [N0908]

- G06T5/00** **Image enhancement or restoration, e.g. from bit-mapped to bit-mapped creating a similar image [N9411]**

- G06T5/00D . . [N: Image restoration] [N9411] [C1207]
- G06T5/00D1 . . [N: Denoising; Smoothing (noise processing or correction adapted to be used in an image pickup device containing and electronic image sensor [H04N5/217](#), [H04N5/357](#) to [H04N5/365](#))] [N1204]
- [N: **WARNING**
Not complete pending reclassification; see also group [G06T5/00D](#)]
- G06T5/00D3 . . [N: Deblurring; Sharpening (vibration or motion blur correction for cameras comprising an electronic image sensor [H04N5/232S2](#))] [N1204]
- [N: **WARNING**
Not complete pending reclassification; see also group [G06T5/00D](#)]
- G06T5/00D3U . . . [N: Unsharp masking] [N1204]
- [N: **WARNING**
Not complete pending reclassification; see also group [G06T5/00D](#)]
- G06T5/00D5 . . [N: Retouching; Inpainting; Scratch removal (detecting, correction, reducing or removing defects, e.g. non-responsive pixels of solid state image sensors [H04N5/367](#), scratch removal for cinematographic films scanned by electronic image sensor [H04N5/253](#))] [N1204]
- [N: **WARNING**
Not complete pending reclassification; see also group [G06T5/00D](#)]

- G06T5/00G . . [N: Geometric correction (detecting, correcting, reducing or removing artefacts resulting only from the lens unit, e.g. flare, shading, vignetting or "cos4" [H04N5/357A](#), correction of chromatic aberrations adapted to be used in an image pickup device containing and electronic image sensor [H04N9/04B](#))] [N9411] [C1207]

- 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 [G06T/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](#)
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- 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]