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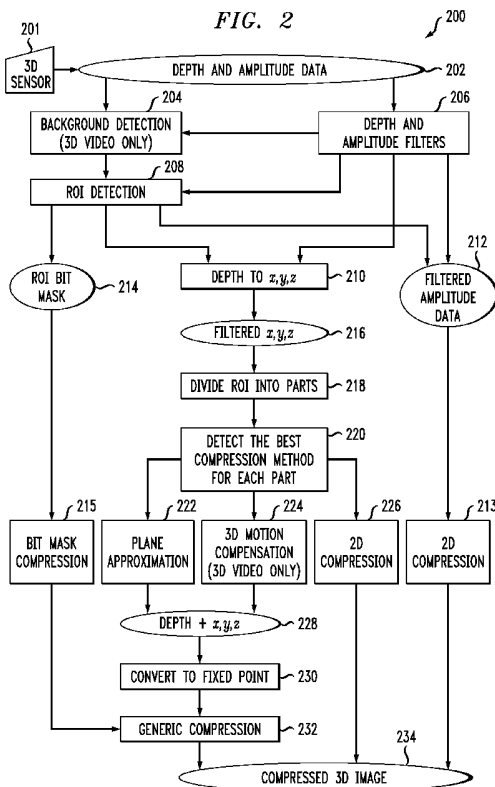
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(54) Title: DEPTH IMAGE COMPRESSION AND DECOMPRESSION UTILIZING DEPTH AND AMPLITUDE DATA



(57) Abstract: In one embodiment, an image processing system comprises an image processor configured to obtain depth and amplitude data associated with a depth image, to identify a region of interest based on the depth and amplitude data, to separately compress the depth and amplitude data based on the identified region of interest to form respective compressed depth and amplitude portions, and to combine the separately compressed portions to provide a compressed depth image. The image processor may additionally or alternatively be configured to obtain a compressed depth image, to divide the compressed depth image into compressed depth and amplitude portions, and to separately decompress the compressed depth and amplitude portions to provide respective depth and amplitude data associated with a depth image. Other embodiments of the invention can be adapted for compressing or decompressing only depth data associated with a given depth image or sequence of depth images.





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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04N 19/00 (2014.01)  
USPC - 382/232

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC(8) - G06K 9/46; H04N 19/00, 19/17, 19/44, 19/136 (2014.01)  
USPC - 382/103, 154, 173, 232, 233

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
CPC - G06K 9/46; H04N 19/00, 19/00139, 19/0026, 19/00533 (2014.02)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Orbit, Google Patents, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,111,979 A (KATTO) 29 August 2000 (29.08.2000) entire document	17-21 --- 1-12, 14-16
Y	US 2012/0114180 A1 (KATZ et al.) 10 May 2012 (10.05.2012) entire document	1-16
Y	US 2011/0187860 A1 (ANTIKIDIS et al.) 04 August 2011 (04.08.2011) entire document	8-9, 11, 13
Y	US 2013/0033582 A1 (SUN et al.) 07 February 2013 (07.02.2013) entire document	2
Y	US 2009/0175548 A1 (FUKUHARA et al.) 09 July 2009 (09.07.2009) entire document	6
Y	US 2009/0060354 A1 (XIAO et al.) 05 March 2009 (05.03.2009) entire document	7, 10-11

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	
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