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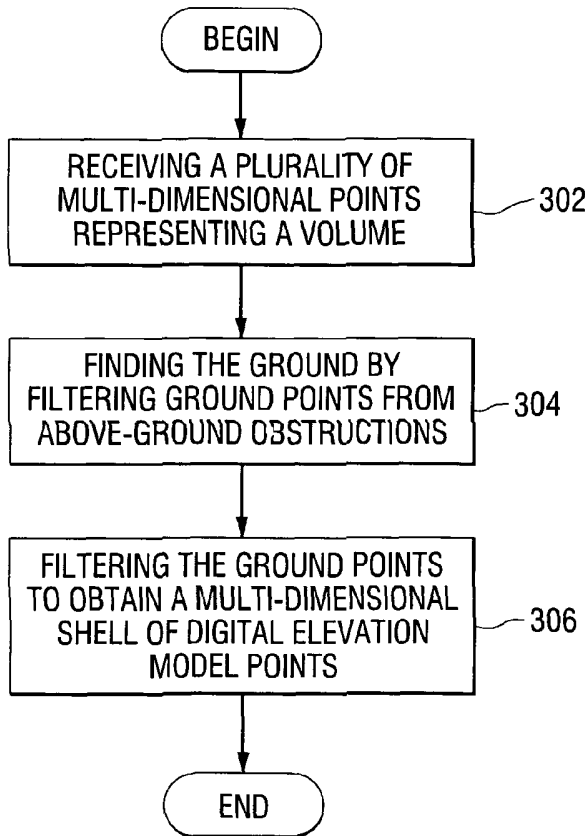
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[Continued on next page]

(54) Title: BARE EARTH DIGITAL ELEVATION MODEL EXTRACTION FOR THREE-DIMENSIONAL REGISTRATION FROM TOPOGRAPHICAL POINTS



(57) Abstract: A method (300) for extracting a digital elevation model from a plurality of raw topographical points representing a plurality of frames representing a plurality of perspectives of a multi-dimensional object comprising a surface and above-surface obstructions, comprises steps or acts of: finding the surface (304) by filtering out data points produced by the above-surface obstructions to provide a plurality of surface data points representing the surface; and filtering the surface data points (306) with a competitive filter to provide a multi-dimensional surface shell of digital elevation model data points. The above-described method can also be carried out by a specialized or programmable information processing system (200) or as a set of instructions in a computer-readable medium such as a CD ROM or DVD or the like.

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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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USPC: 382/154, 103,104,106,260,276;701/213,223;175/24,45;342/191;345/419;702/5,9;715/964.
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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,995,681 A (LEE et al) 30 November 1999 (30.11.1999), the entire specification .	1-8
A	US 5,430,806 A (NETTLES) 04 July 1995(04.07.1995), the entire specification.	1-8
A	US 5,844,614 A (CHONG et al) 01 December 1998 (01.12.1998), the entire specification .	1-8
A	US 5,831,724 A (CORDES) 03 November 1998 (03.11.1998), the entire specification.	1-8

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	Symbol
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Sheela Chawan Telephone No. 571-272-7446 <div style="text-align: right; font-family: cursive; font-size: 1.2em; margin-top: 10px;"> Sheela Chawan </div>
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