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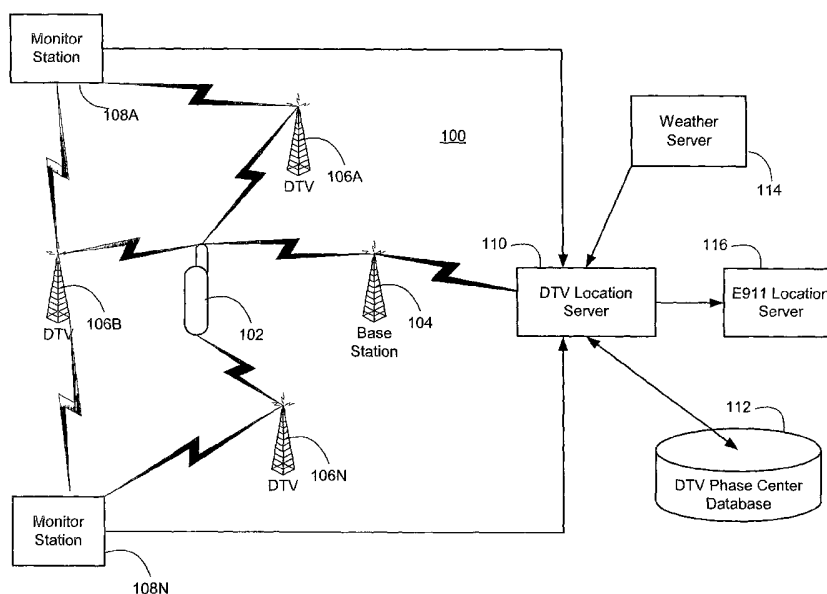
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[Continued on next page]

(54) Title: POSITION LOCATION USING DIGITAL TV SIGNALS



(57) **Abstract:** A method, apparatus, and computer-readable media for determining the position of a user terminal (102) comprises receiving at the user terminal (102) a digital television (DTV) broadcast signal from a DTV transmitter (106A, 106B ..., 106N), wherein the DTV signal comprises an Integrated Services Digital Broadcasting - Terrestrial (ISDB-T) signal; determining a pseudo-range between the user terminal (102) and the DTV transmitter (106A, 106B, ..., 106N) based on a known component in the broadcast DTV signal; and determining a position of the user terminal (102) based on the pseudo-range and a location of the DTV transmitter (106A, 106B, ..., 106N).



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INTERNATIONAL SEARCH REPORT

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PCT/US02/36022

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01S 13/00; H04N 7/173

US CL : 342/357.14; 725/107

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)

U.S. : 342/357.14; 725/107; 348/838; 455/456.1

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)

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 5,510,801 A (ENGELBRECHT et al) 23 April 1996, whole document, abstract, col. 1, ll. 21-28, col. 2, ll. 32-51, col. 2, ll. 56-62, col. 3, ll. 44-62, col. 3, ll. 44-62, col. 4, ll. 53-63, col. 5, ll. 13-30.	1-2, 4-9, 11-14, 16, 17, 19-22, 24-27, 29-31, 33-38, 40-43, 45, 46, 48-51, 53-56, 58-60, 62-67, 69-72, 74, 75, 77-80, 82-85, 87 ----- 3, 10, 15, 18, 23, 28, 32, 39, 44, 47, 52, 57, 61, 68, 73, 76, 81, 86,
Y	US 5,953,311 A (DAVIES et al) 14 September 1999 (14.09.1999), col. 2-3, ll. 49-8.	3, 18, 23, 32, 47, 52, 61, 76, 81
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Y	US 5,504,492 A (CLASS et al) 02 April 1996 (02.04.1996), col. 2, ll. 54-62)	15, 44, 73
Y		

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

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"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

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