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10-2011-0050412 27 May 2011 (27.05.2011) KR(71) Applicant (for all designated States except US): **SAM-SUNG ELECTRONICS CO., LTD.** [KR/KR]; 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742 (KR).

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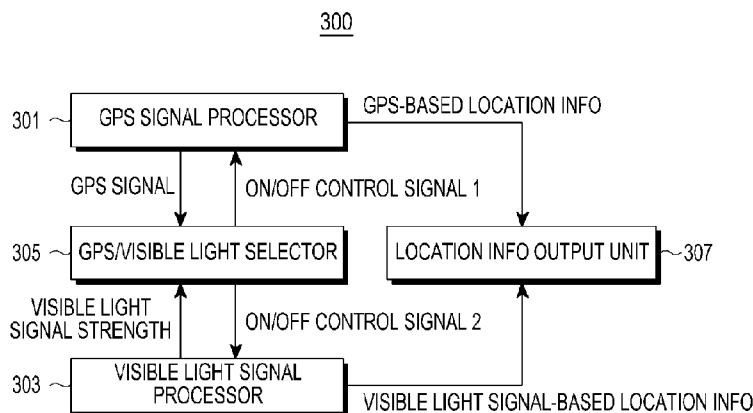
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(54) Title: APPARATUS AND METHOD FOR IDENTIFYING LOCATION INFORMATION BY USING VISIBLE LIGHT COMMUNICATION AND GPS

[Fig. 3]



(57) Abstract: The present disclosure relates to an apparatus and a method for identifying location information by using visible light communication and a GPS (Global Positioning System). The apparatus includes: a GPS signal processor for receiving a GPS signal, and identifying location information; a visible light signal processor for receiving a visible light signal, and identifying location information; a GPS/visible light selector for identifying strengths of signals provided by the GPS signal processor and the visible light signal processor, and controlling an operation of the GPS signal processor and an operation of the visible light signal processor; and a location information output unit for outputting the at least one location information provided by the GPS signal processor and the visible light signal processor.

A. CLASSIFICATION OF SUBJECT MATTER**G01S 19/03(2010.01)i**

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)

G01S 19/03; H04B 10/10; H04B 7/185; H04W 4/02; H04B 10/04; G01S 1/70; G01S 5/02; G01C 21/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: GPS, visible light, location

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	JP 2010-107235 A (PANASONIC ELECTRIC WORKS CO., LTD. et al.) 13 May 2010 See paragraph [0022]-[0025] , [0041], claims 1-4 and figures 1-2.	1-3, 12-13 4-11, 14-33
A	US 2009-0149202 A1 (HILL, LAWRENCE W. et al.) 11 June 2009 See abstract, claims 1-32 and figure 3c.	1-33
A	US 6674400 B1 (HYNES, MARK W.) 06 January 2004 See abstract, claims 1-20 and figure 1.	1-33
A	KR 10-2011-0017791 A (SAMSUNG ELECTRONICS CO., LTD.) 22 February 2011 See claims 1-26 and figures 1a-7.	1-33



Further documents are listed in the continuation of Box C.



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* Special categories of cited documents:

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2010-107235 A	13.05.2010	None	
US 2009-0149202 A1	11.06.2009	WO 2009-076156 A2 WO 2009-076156 A3	18.06.2009 30.12.2009
US 6674400 B1	06.01.2004	None	
KR 10-2011-0017791 A	22.02.2011	US 2011-0038638 A1	17.02.2011