

**Title:** METHOD AND APPARATUS FOR ACQUIRING AVAILABLE CHANNEL INFORMATION IN A WIRELESS LOCAL AREA NETWORK SYSTEM

![Figure 12]

<table>
<thead>
<tr>
<th>Category</th>
<th>Action Value</th>
<th>Dialog Token</th>
<th>White Space Map</th>
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<td>variable</td>
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**Abstract:** Methods and apparatuses for acquiring/providing available channel information using Generic Advertisement Service (GAS) protocol in a wireless local area network (WLAN) are disclosed. AP (Access Point) station has a capability to acquire information for available channels from a database using a specific protocol related to an operation within the White Space (e.g. Access Network Query Protocol (ANQP)). And, non-AP station can retrieve the information for available channels by transmitting a Generic Advertisement Service (GAS) initial request frame to the AP station, wherein the GAS initial request frame comprises an Advertisement Protocol Element whose element ID indicates the specific protocol, and receiving a GAS initial response frame comprising a White Space Map (WSM) the specific protocol. The WSM comprises one or more white space channel units, and each of the white space channel units comprises a channel number field indicating one of the available channels and a power constraint field indicating a maximum allowable power on the indicated channel.
A. CLASSIFICATION OF SUBJECT MATTER

H04B 7/26(2006.01)i, H04W 84/12(2009.01)1, H04W 88/06(2009.01)1, H04W 80/00(2009.01)1

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)

H04B 7/26; H04B 7/00; H04B 1/18

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: TV Withe Space, White Space Map(WSM), GAS(Generic Advertisement Service) request, ANQP(Access Network Query Protocol);

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tbody>
<tr>
<td>A</td>
<td>US 2010-0048234 A1 (SINGH RAJENDRA) 25 February 2010 See Abstract, Fig. 3-5 and paragraphs [0040]-[0049]</td>
<td>1-18</td>
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<td>A</td>
<td>KR 10-2009-0021865 A (SAMSUNG ELECTRONICS CO., LTD. et al.) 04 March 2009 See Fig. 2 and paragraphs [0020]-[0028]</td>
<td>1-18</td>
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☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
  "A" document defining the general state of the art which is not considered to be of particular relevance
  "E" earlier application or patent but published on or after the international filing date
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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

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

26 OCTOBER 2011 (26.10.2011)

Date of mailing of the international search report

26 OCTOBER 2011 (26.10.2011)

Name and mailing address of the ISA/KR

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Form PCT/ISA/210 (second sheet) (July 2009)
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<td>EP 2321965 A1</td>
<td>18.05.2011</td>
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