

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference TM-P0377PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2018/019214	International filing date (<i>day/month/year</i>) 22 February 2018 (22.02.2018)	(Earliest) Priority Date (<i>day/month/year</i>) 10 March 2017 (10.03.2017)
Applicant T-MOBILE USA, INC.		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

the international application in the language in which it was filed

a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

A. CLASSIFICATION OF SUBJECT MATTER**H04W 4/16(2009.01)i, H04W 4/12(2009.01)i, H04W 4/24(2009.01)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)

H04W 4/16; G06Q 50/10; H04L 29/06; H04M 3/42; H04M 1/57; H04W 4/00; H04W 8/24; H04W 4/12; H04W 4/24

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: caller ID, reference, link, and rule

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-2013-0005776 A (BLUERIVER CO., LTD.) 16 January 2013 See paragraphs [0045]-[0066]; claims 1-16; and figure 1.	1
Y		2-3, 8-13, 15
A		4-7, 14
Y	US 7840211 B2 (MARC PLUMB et al.) 23 November 2010 See column 2, line 8 - column 3, line 21; and claims 1-13.	2-3, 8-13, 15
A	WO 03-061244 A1 (AVAYA TECHNOLOGY CORP.) 24 July 2003 See claims 1-21; and figure 5.	1-15
A	US 2015-0163353 A1 (ESNA TECHNOLOGIES INC.) 11 June 2015 See paragraphs [0092]-[0100]; and claims 1-23.	1-15
A	KR 10-0901423 B1 (WOWBIZ CO., LTD.) 05 June 2009 See paragraphs [51]-[59]; and claims 1-3, 5-8, 10-12.	1-15

 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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

04 June 2018 (04.06.2018)

Date of mailing of the international search report

04 June 2018 (04.06.2018)

Name and mailing address of the ISA/KR

International Application Division

Korean Intellectual Property Office

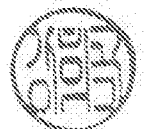
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2018/019214

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2013-0005776 A	16/01/2013	None	
US 7840211 B2	23/11/2010	US 2007-0099600 A1 US 2009-0264135 A1 US 8463251 B2	03/05/2007 22/10/2009 11/06/2013
WO 03-061244 A1	24/07/2003	AU 2003-235612 A1 US 2003-0133553 A1 US 2005-0100150 A1 US 7734028 B2 WO 0306-1244 A1	30/07/2003 17/07/2003 12/05/2005 08/06/2010 24/07/2003
US 2015-0163353 A1	11/06/2015	US 2015-0163354 A1 US 2016-0119470 A1 US 9742907 B2	11/06/2015 28/04/2016 22/08/2017
KR 10-0901423 B1	05/06/2009	JP 05226004 B2 JP 2010-512097 A KR 10-0694534 B1 KR 10-2009-0003468 A US 2010-0035591 A1 WO 2008-069615 A1	03/07/2013 15/04/2010 07/03/2007 12/01/2009 11/02/2010 12/06/2008