

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: PECK, Robert C.  Lee & Hayes, PLLC 601 West Riverside, Ste 1400 Spokane, Washington 99201 USA
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Date of mailing (day/month/year) <b>05 December 2018 (05.12.2018)</b>
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Applicant's or agent's file reference TM2-0445PCT	<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/US2018/043480</b>	International filing date (day/month/year) <b>24 July 2018 (24.07.2018)</b>	Priority date(day/month/year) 03 August 2017 (03.08.2017)
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International Patent Classification (IPC) or both national classification and IPC <b>H04L 29/06(2006.01)i, H04L 29/12(2006.01)i, H04M 7/00(2006.01)i</b>
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Applicant <b>T-MOBILE USA, INC.</b>
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1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.  
For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR International Application Division Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon, 35208, Republic of Korea Facsimile No. +82-42-481-8578	Date of completion of this opinion  05 December 2018 (05.12.2018)	Authorized officer  KIM, Seong Woo  Telephone No. +82-42-481-3348
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2018/043480

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established 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))
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
  - a.  forming part of the international application as filed:
    - in the form of an Annex C/ST.25 text file.
    - on paper or in the form of an image file.
  - b.  furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
  - c.  furnished subsequent to the international filing date for the purposes of international search only:
    - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
    - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/US2018/043480**

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	<u>1-20</u>	YES
	Claims	<u>NONE</u>	NO
Inventive step (IS)	Claims	<u>8-9,18-20</u>	YES
	Claims	<u>1-7,10-17</u>	NO
Industrial applicability (IA)	Claims	<u>1-20</u>	YES
	Claims	<u>NONE</u>	NO

2. Citations and explanations :

Reference is made to the following documents:

- D1: US 2009-0168986 A1 (JAMES JACKSON et al.) 02 July 2009
- D2: US 2011-0103372 A1 (ALEX SHATSKY et al.) 05 May 2011
- D3: US 6611498 B1 (THOMAS E. BAKER et al.) 26 August 2003
- D4: US 2006-0083242 A1 (OLLI M. PULKKINEN) 20 April 2006
- D5: US 2007-0121602 A1 (SAM K. SIN et al.) 31 May 2007

1. Novelty and Inventive Step

1.1 Claims 1-4

1.1.1 Independent Claim 1

D1, which is considered to be the closest prior art to the subject matter of claim 1, discloses a system for routing communication sessions (see paragraph [0009]; and figure 1 in D1) comprising: a processor, a random access memory (RAM), and a read only memory (ROM) storing coded instructions (see paragraph [0052]; and figure 6 in D1) to perform operations comprising: receiving a communication session initiation message for a voice over internet protocol call from a caller at a source telephone number, the communication session initiation message including a destination telephone number and a direct voicemail feature identifier (see claim 1 in D1); inserting a destination identifier in a redirecting number field; replacing a content of a destination field with an identifier associated with a voicemail server containing a voicemail mailbox (see claim 4 in D1); and forwarding the call directly to the voicemail mailbox associated with the destination telephone number (see claim 1 in D1).

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**Supplemental Box**

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Claim 1 differs from D1 in that a system of claim 1 comprises a means for receiving, from a first user device operated by a user, a policy associated with routing one or more communications addressed to a first identifier to a second identifier, the policy indicating a period of time for implementing the routing. However, the feature can be easily derived from D2 which is in the related technical field as D1 (receiving an application policy, the application policy specifying how to modify a session initiation protocol (SIP) message based on a characteristic of the SIP message (see claim 1), wherein a process provides the application policy to a component and applies the application policy to SIP messages, and a provisioning directive contains an application policy with optional and/or routing SIP headers (see paragraph [0057]; and figure 2 in D2)). Accordingly, claim 1 would have been obvious over D1 in view of D2. Therefore, claim 1 lacks an inventive step under PCT Article 33(3).

1.1.2 Dependent Claims 2-4

The additional feature of claim 2 is virtually suggested by the feature of D1 (a feature server is associated with a voicemail mailbox of an IMS device (see paragraph [0023]; and figure 1 in D1)).

The additional feature of claim 3 is virtually suggested by the feature of D2 (a user agent (UA) for communicating with a communications network implementing an Internet protocol (IP) multimedia subsystem (IMS) (see paragraph [0033] in D2)).

The additional feature of claim 4 can be easily derived from the feature of D1 (an identifier associated with a voicemail server containing a voicemail mailbox, and a uniform resource identifier (URI) associated with a destination telephone number (see claims 4-5 in D1)).

Accordingly, claims 2-4 would have been obvious over D1 in view of D2. Therefore, claims 2-4 lack an inventive step under PCT Article 33(3).

1.2 Claims 5-12

1.2.1 Independent Claim 5

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D1, which is considered to be the closest prior art to the subject matter of claim 5, discloses a system for routing communication sessions (see paragraph [0009]; and figure 1 in D1) comprising: a processor, a random access memory (RAM), and a read only memory (ROM) storing coded instructions (see paragraph [0052]; and figure 6 in D1) to perform operations comprising: receiving a communication session initiation message for a voice over internet protocol call from a caller at a source telephone number, the communication session initiation message including a destination telephone number and a direct voicemail feature identifier (see claim 1 in D1); inserting a destination identifier in a redirecting number field; replacing a content of a destination field with an identifier associated with a voicemail server containing a voicemail mailbox (see claim 4 in D1); and forwarding the call directly to the voicemail mailbox associated with the destination telephone number (see claim 1 in D1).

Claim 5 differs from D1 in that a system of claim 5 comprises a means for receiving, from a first user device operated by a user, a policy associated with handling one or more communications directed to a first identifier. However, the feature can be easily derived from D2 which is in the related technical field as D1 (receiving an application policy, the application policy specifying how to modify a SIP message based on a characteristic of the SIP message (see claim 1 in D2)). Accordingly, claim 5 would have been obvious over D1 in view of D2. Therefore, claim 5 lacks an inventive step under PCT Article 33(3).

#### 1.2.2 Dependent Claims 6-12

The additional features of claims 6-7, 10 can be easily derived from the feature of D1 (inserting a destination identifier in a redirecting number field, replacing a content of a destination field with an identifier associated with a voicemail server containing a voicemail mailbox; see claim 4, and forwarding a call directly to the voicemail mailbox associated with a destination telephone number (see claim 1 in D1)).

The additional feature of claim 11 can be easily derived from the feature of D2 (retrieving an application policy from a database, the database being provided by at least one of a home subscriber server (HSS) and an application server, the application policy being associated with a UA (see claim 20 in D2)).

The additional feature of claim 12 can be easily derived from the feature of D1 (receiving a

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request for call-directed voicemail, determining a location of a voicemail server associated with a voicemail mailbox of a terminating device, and forwarding a communication session to the voicemail server (see paragraph [0009]; and figure 1 in D1)).

Accordingly, claims 6-7, 10-12 would have been obvious over D1 in view of D2. Therefore, claims 6-7, 10-12 lack an inventive step under PCT Article 33(3).

The additional features of claims 8-9 are not disclosed in any of the documents D1-D5, nor are they obvious to a person skilled in the art. Therefore, claims 8-9 meet the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

### 1.3 Claims 13-20

#### 1.3.1 Independent Claim 13

D1, which is considered to be the closest prior art to the subject matter of claim 13, discloses a method for handling voice over internet protocol telephone calls (see claim 1 in D1) comprising: receiving a communication session initiation message for a voice over internet protocol call from a caller at a source telephone number, the communication session initiation message including a destination telephone number and a direct voicemail feature identifier (see claim 1 in D1); inserting a destination identifier in a redirecting number field; replacing a content of a destination field with an identifier associated with a voicemail server containing a voicemail mailbox (see claim 4 in D1); and forwarding the call directly to the voicemail mailbox associated with the destination telephone number (see claim 1 in D1).

Claim 13 differs from D1 in that a computer-implemented method of claim 13 comprises receiving, from a first user device, a policy associated with handling one or more communications directed to a first identifier. However, the feature can be easily derived from D2 which is in the related technical field as D1 (receiving an application policy, the application policy specifying how to modify a SIP message based on a characteristic of the SIP message (see claim 1 in D2)). Accordingly, claim 13 would have been obvious over D1 in view of D2. Therefore, claim 13 lacks an inventive step under PCT Article 33(3).

#### 1.3.2 Dependent Claims 14-20

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The additional features of claims 14-15 can be easily derived from the feature of D2 (a Functional Component may accept a request by transmitting a 200 OK SIP response, and after receiving the response, a UA may confirm receipt of the 200 OK response by transmitting a SIP ACK request (see paragraph [0079] in D2)).

The additional features of claims 16-17 can be easily derived from the feature of D1 (inserting a destination identifier in a redirecting number field, replacing a content of a destination field with an identifier associated with a voicemail server containing a voicemail mailbox(see claim 4); and forwarding a call directly to the voicemail mailbox associated with a destination telephone number (see claim 1 in D1)).

Accordingly, claims 14-17 would have been obvious over D1 in view of D2. Therefore, claims 14-17 lack an inventive step under PCT Article 33(3).

The additional feature of claim 18 is not disclosed in any of the documents D1-D5, nor is it obvious to a person skilled in the art. Therefore, claim 18 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 19-20 are dependent on claim 18 and therefore meet the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

## 2. Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).