

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference <b>F11016PCT</b>	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. <b>PCT/JP2011/058849</b>	International filing date ( <i>day/month/year</i> ) <b>07 April 2011 (07.04.2011)</b>	Priority date ( <i>day/month/year</i> ) <b>20 April 2010 (20.04.2010)</b>	
International Patent Classification (8th edition unless older edition indicated) <b>See relevant information in Form PCT/ISA/237</b>			
Applicant <b>FUJITSU LIMITED</b>			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report <b>06 November 2012 (06.11.2012)</b>
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  <b>Yukari Nakamura</b>
Facsimile No. +41 22 338 82 70	e-mail: pt07.pct@wipo.int

**PATENT COOPERATION TREATY**

**TRANSLATION**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	<b>17.05.2011</b>
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Applicant's or agent's file reference <b>F11016PCT</b>
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<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/JP2011/058849</b>
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International filing date (day/month/year) <b>07.04.2011</b>
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Priority date (day/month/year) <b>20.04.2010</b>
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International Patent Classification (IPC) or both national classification and IPC <b>H04W36/14 (2009.01) i, H04W4/02 (2009.01) i, H04W36/32 (2009.01) i, H04W76/04 (2009.01) i, H04W88/06 (2009.01) i</b>
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Applicant <b>FUJITSU LIMITED</b>
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1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	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.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2011/058849

**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 43*bis*.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 filed or furnished:
  - a. (means)
    - on paper
    - in electronic form
  
  - b. (time)
    - in the international application as filed
    - together with the international application in electronic form
    - subsequently to this Authority for the purposes of search
  
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 in 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/JP2011/058849
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Box No. V	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>																								
1. Statement	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; vertical-align: top; padding: 2px;">Novelty (N)</td> <td style="padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-10</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table> </td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">Inventive step (IS)</td> <td style="padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-10</td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table> </td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">Industrial applicability (IA)</td> <td style="padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-10</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table> </td> </tr> </table>	Novelty (N)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-10</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table>	Claims	1-10	YES	Claims		NO	Inventive step (IS)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-10</td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table>	Claims		YES	Claims	1-10	NO	Industrial applicability (IA)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-10</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table>	Claims	1-10	YES	Claims		NO
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2. Citations and explanations:	<p style="margin: 0;">Document 1: WO 2009/001400 A1 (FUJITSU LTD.) 31 December 2008, paragraphs [0011]-[0015]</p> <p style="margin: 0;">Document 2: JP 2008-219826 A (NEC INFRONTIA CORP.) 18 September 2008, paragraphs [0018]-[0028]</p> <p style="margin: 0;">Document 3: WO 2009/057544 A1 (MITSUBISHI ELECTRIC CORP.) 07 May 2009, claim 7, fig. 1</p> <p style="margin: 0;">Document 4: JP 2005-303465 A (HITACHI, LTD.) 27 October 2005, abstract</p> <p style="margin: 10px 0 0 0;">(Claims 1 and 5)</p> <p style="margin: 0;">Document 1 cited in the ISR indicates that a mobile terminal measures the moving speed and moving direction of the mobile terminal to predict the place to which the mobile terminal is expected to move ahead, and to calculate the out-of-communication-area time (corresponding to the "suspension period" of the present application) which is the time during which the mobile terminal passes through a non-service area and that the communication is interrupted by shifting to the sleep mode when in the out-of-communication-area time.</p> <p style="margin: 0;">Moreover, it is common practice, as described in document 2, that when a mobile terminal moves out of a</p>																								

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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

wireless communication area in mobile communication, the system issues the instruction to hold communication to the mobile terminal and a receiving terminal thereof, and when moving within a wireless communication area, the system issues the instruction to resume the communication. In the invention described in document 1, a person skilled in the art could have easily provided the configuration to issue instructions to hold and resume communication between the mobile terminal and the receiving terminal at the beginning and the end of the out-of-communication-area time.

Consequently, the invention as in claims 1 and 5 of the invention of the present application does not involve an inventive step.

(Claims 2-4 and 6-8)

Document 3 describes determining the base station of a connection destination on the basis of the history information containing the communication time, position and effective speed of a mobile terminal.

Furthermore, in the communication system described in document 1, when drawing up a communication execution plan, a person skilled in the art could have easily arrived at the configuration to draw up a communication execution plan on the basis of the history information containing the communication time, position and effective speed of a mobile terminal as the invention described in document 3.

(Claims 9 and 10)

It is common practice, as described in document 4 for example, to select a communication protocol on the basis of the remaining capacity of a battery, and draw up a future communication plan, and thus in the invention described in

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International application No.

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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

document 1, when drawing up a communication plan, a person skilled in the art could have easily arrived at the configuration to consider the remaining capacity of a battery.