

PATENT COOPERATION TREATY

† From the
INTERNATIONAL SEARCHING AUTHORITY

To: 100022 31st Floor, Office Tower A, 39 Dongsanhuan Zhonglu, Chaoyang District, 100022, Beijing CHINA KING & WOOD PRC LAWYERS		PCT WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43 <i>bis</i>.1)	
Date of mailing (day/month/year) 23 Sep. 2010 (23.09.2010)		FOR FURTHER ACTION See paragraph 2 below	
Applicant's or agent's file reference EIE090107PCT		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/CN2009/075663	International filing date(day/month/year) 17 Dec. 2009(17.12.2009)	Priority date (day/month/year)	
International Patent Classification (IPC) or both national classification and IPC H04W72/04(2009.01)i			
Applicant NOKIA SIEMENS NETWORKS OY et al.			

1. This opinion contains indications relating to the following items:

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|-------------------------------------|--------------|---|
| ☒ | 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 43 <i>bis</i> .1(a)(i) with regard to novelty, inventive step or 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 66.1*bis*(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/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	Date of completion of this opinion 17 Sep. 2010 (17.09.2010)	Authorized officer REN, Yang Telephone No. (86-10)62411485
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Form PCT/ISA/237(cover sheet)(July 2009)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/CN2009/075663

Box No. I Basis of the 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. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the applicant as filed
 - ☐ filed together with the application in electronic form
 - ☐ furnished 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
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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

1. Statement:

Novelty (N)	Claims	1-38	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-38	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-38	YES
	Claims	NONE	NO

2. Citations and explanations

The cited documents in the written opinion are:

D1: WO2009095814A1; D2: WO2009088334A1; D3: CN101116308A; D4: CN101557581A

D1 discloses a method and apparatus for uplink scheduling in a network that employs relay nodes;

D2 discloses a compressed buffer status reports in LTE;

D3 discloses a buffer parameter signaling method for computer;

D4 discloses a method and device for obtaining buffer status report.

Novelty:

Each of the prior art D1-D4 does not disclose the same technical solutions of the claims 1-38, so the claims 1-38 are novel compared with the prior art, and comply with the PCT 33(2).

Inventive step:

D1 is the closest prior art, which discloses that UEs send their buffer status reports and data to a relay node RN; the RN then sends its own status report to the controlling eNB with the actual buffer occupancy and information about the virtual buffer occupancy (corresponding to send a buffer information report to a system station from a node for relaying communication between at least one user station and the system station or receive a buffer information report from a node for relaying communication between at least one user station and the system station). The differences of claims 1, 2, 21, 22, 33-37 compared with D1 are that: in the claim 1, the report being generated based on a report format used for uplink reporting by a user station, and sending an indication to the system station that the node for relaying has different buffering capabilities than the user station; in the claim 2, the report being generated based on a report format used for uplink reporting by a user station, and receiving an indication that the node for relaying has different buffering capabilities than the user station, determining the buffer capabilities of the node for relaying based on the buffer information report and the indication and controlling communications between the system station and the node for relaying; in the claims 21, 34, the report being generated based on a report format used for uplink reporting by a user station, and the apparatus comprises means for causing sending of an indication to the system station that the node for relaying has different buffering capabilities than the user station; in the claims 22, 35, the report being generated based on a report format used for uplink reporting by a user station, and the apparatus comprises control means; in the claim 33, there is a computer program performing the steps of any of claims 1 to 20, in the claim 36, there is a communication system comprising the apparatus as claimed in any of claim 21 to 32; in the claim 37, the buffer information message comprises an indication that the node for relaying has different buffering capabilities than the user station. The prior art D1-D4 do not teach or fairly suggest the technical solutions defined by claims 1, 2, 21, 22, 33-37, and the technical solutions of the above claims can not be derived from the combination of D1-D4 obviously, so the claims 1, 2, 21, 22, 33-37 have an inventive step and comply with the PCT 33(3).

Because the above independent claims 1, 2, 21, 22, 33-37 have an inventive step, the dependent claims 3-20, 23-32, 38 also have an inventive step and comply with the PCT 33(3).

Industrial applicability

Because the technical solutions defined by claims 1-38 can be made or used in the industry, so the claims 1-38 have industrial applicability and comply with the PCT 33(4).

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The multiple dependent claims 5-13, 16, 17, 19, 20, 33, 25-29, 31 refer to the preceding multiple dependent claims, so the claims 5-13, 16, 17, 19, 20, 33, 25-29, 31 don't meet the requirements of Rule 6.4(a) PCT.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The title of the subject matter of the dependent claim 38 is different from the title of the subject matter of the claim 37 which it refers to, so the claim 38 doesn't meet the requirements of Rule 6 PCT.