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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: SELECTIVE ALLOCATION OF DEDICATED CHANNEL (DCH) RESOURCES WITHIN A WIRELESS COMMUNICATIONS SYSTEM

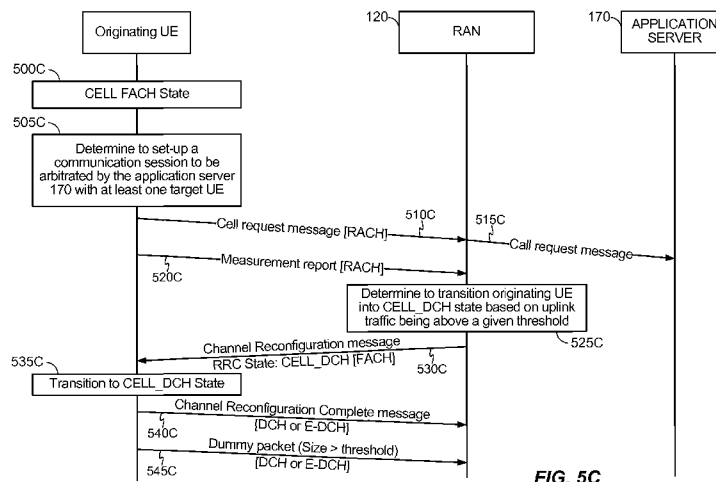


FIG. 5C

(57) Abstract: In an embodiment, a UE determines to transmit a message (e.g., an alert message, a call initiation message). Based on the type of the message to be transmitted, the UE selectively transmits supplemental data configured to prompt an access network to transition the UE to a dedicated channel state (DCS). In another embodiment, an application server configured to arbitrate communication sessions between UEs receives a message for transmission to a target UE. Based on the type of the message to be transmitted to the target UE, the application server selectively transmits, to a serving access network of the target UE, supplemental data configured to prompt the serving access network to transition the target UE to the DCS. In another embodiment, the access network selectively transitions a target UE to the DCS based on whether differently sized messages are received at the access network for transmission to the target UE.

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10 November 2011

# INTERNATIONAL SEARCH REPORT

International application No PCT/US2011/022447
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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. H04W76/04  
 ADD.

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

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/079085 A1 (ERICSSON TELEFON AB L M [SE]; TORSNER JOHAN [FI]; BERGSTROEM JOAKIM [S] 25 August 2005 (2005-08-25) page 1 - page 12 figures 1-7	1-8, 27, 30, 33
Y	-----	12, 13
X	US 2005/141541 A1 (CUNY RENAUD [FI] ET AL) 30 June 2005 (2005-06-30)	9-11, 14-17, 28, 31, 34
Y	paragraph [0043] - paragraph [0070] paragraph [0074] - paragraph [0094] -----	12, 13
X	US 2005/141471 A1 (VIRTANEN TERHI T [FI] ET AL VIRTANEN TERHI TUULIKKI [FI] ET AL) 30 June 2005 (2005-06-30) paragraph [0001] - paragraph [0074] figures 1-7 -----	1, 27, 30, 33
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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 document 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

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Name and mailing address of the ISA/

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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2011/022447

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7 099 346 B1 (KANTERAKIS EMMANUEL [US]) 29 August 2006 (2006-08-29) column 3, line 39 - column 4, line 29 -----	18-26, 29, 32, 35

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2011/022447

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17, 27, 28, 30, 31, 33, 34

Either an UE or an application server sends supplemental data along with a message to the Access Network (AN), said supplemental data indicating a forced transition of an UE to the CELL\_DCH state

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2. claims: 18-26, 29, 32, 35

The AN compares the size of two consecutive messages and decides not to transition an UE to the CELL\_DCH state if the size remains the same.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2011/022447
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005079085	A1	25-08-2005	AT 488115 T 15-11-2010
			AU 2005213104 A1 25-08-2005
			BR PI0507555 A 03-07-2007
			CN 1918923 A 21-02-2007
			EP 1716712 A1 02-11-2006
			JP 4625034 B2 02-02-2011
			JP 2007522763 A 09-08-2007
			KR 20060123542 A 01-12-2006
			US 2007060153 A1 15-03-2007
-----			
US 2005141541	A1	30-06-2005	CN 1918926 A 21-02-2007
			EP 1702484 A1 20-09-2006
			WO 2005064962 A1 14-07-2005
			KR 20070006721 A 11-01-2007
			US 2009257378 A1 15-10-2009
-----			
US 2005141471	A1	30-06-2005	NONE
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US 7099346	B1	29-08-2006	US 2006268717 A1 30-11-2006
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