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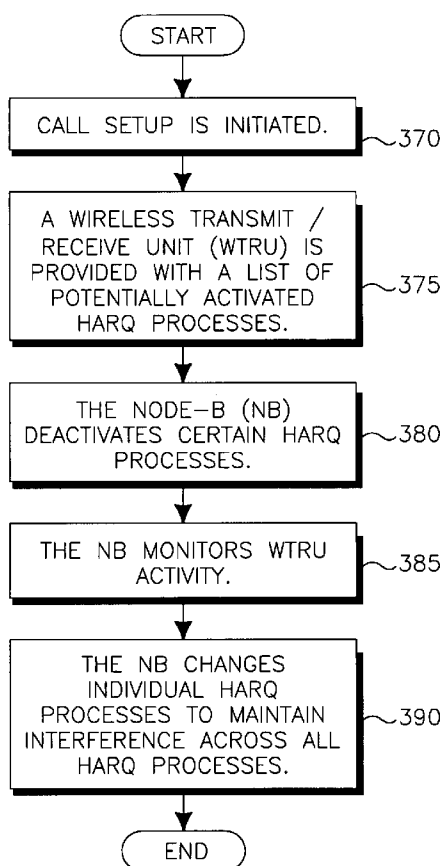
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[Continued on next page]

(54) **Title:** METHOD AND APPARATUS FOR DYNAMICALLY ALLOCATING HARQ PROCESSES IN THE UPLINK



(57) **Abstract:** In a wireless communication system including at least one wireless transmit/receive unit (WTRU) and at least one Node-B (NB), an activation or deactivation state is determined for each of a plurality of HARQ processes. A signal that includes the activation or deactivation state for each of the HARQ processes is transmitted to the WTRU. In response to receiving the signal, the WTRU activates or deactivates a particular HARQ process in accordance with the activation or deactivation state for each of the HARQ processes contained in the received signal. The activation of HARQ processes is considered for non-scheduled transmissions.

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PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA,
ZM, ZW.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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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)
H04L

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)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"HARQ process restriction/reservation for non-scheduled transmissions" 3RD GENERATION PARTNERSHIP PROJECT (3GPP); TECHNICAL SPECIFICATION GROUP (TSG) RADIO ACCESS NETWORK (RAN); WORKING GROUP 2 (WG2), XX, XX, 10 October 2005 (2005-10-10), pages 1-2, XP003009965 the whole document ----- -/--	1-8, 10-12, 14-20, 26-33, 60,61

☒ 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

25 March 2008

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"Universal Mobile Telecommunications System (UMTS); FDD enhanced uplink; Overall description; Stage 2 (3GPP TS 25.309 version 6.6.0 Release 6); ETSI TS 125 309" ETSI STANDARDS, EUROPEAN TELECOMMUNICATIONS STANDARDS INSTITUTE, SOPHIA-ANTIPO, FR, vol. 3-R2, no. V660, March 2006 (2006-03), XP014034283 ISSN: 0000-0001 Section 3.1 Definitions. Section 8. HARQ Protocol Section 9. Node B controlled scheduling Section 10. Non-scheduled transmissions.	1,3-8, 10-12, 14-20, 26-33, 60,61
P,X	WO 2007/052118 A (NOKIA CORP [FI]; NOKIA INC [US]; NAKAMATA MASATOSHI [JP]) 10 May 2007 (2007-05-10) paragraphs [0012], [0013] paragraph [0032] - paragraph [0046] figures 4-7	1-8, 10-12, 14-20, 26-33, 60,61
P,X	WO 2007/027513 A (INTERDIGITAL TECH CORP [US]; PAN JUNG-LIN [US]; TERRY STEPHEN E [US];) 8 March 2007 (2007-03-08) figures 4,7 paragraph [0008] paragraph [0033] - paragraph [0040]	1,3-8, 10-12, 14-20, 26-33, 60,61

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/018474

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 allsearchable 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 reportcovers 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.:

1-33, 60, 61

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: 1-33,60,61

Activation/deactivation of HARQ processes through signalling from the Node B to the WTRU.

2. claims: 34-45

Allocation of System Resource Units to WTRUs entering a cell.

3. claims: 46-53

Allocation of known-controlled pattern/hopping for a WTRU.

4. claims: 54-56

Allocation of HARQ processes through selection probability parameters assigned to each individual HARQ process.

5. claims: 57-59

Activation/deactivation of HARQ processes based on monitoring of an interference level.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/018474

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2007052118	A	10-05-2007	NONE	
WO 2007027513	A	08-03-2007	US 2007049309 A1	01-03-2007