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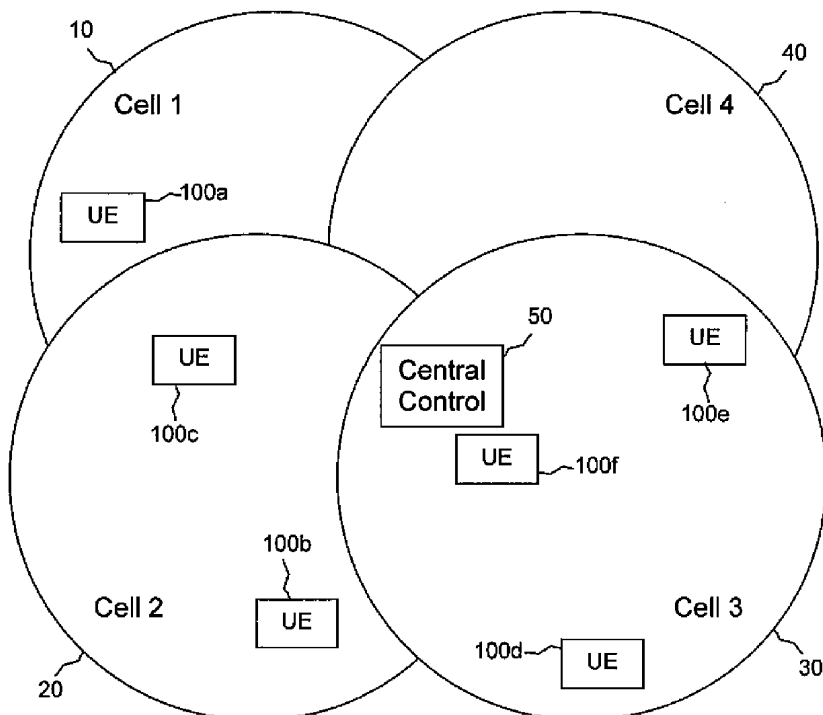
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[Continued on next page]

(54) Title: MULTICAST CONTROL CHANNEL DESIGN



(57) Abstract: A system 700 for providing a multicast control channel (MCCH) including information related to a service is provided. The system 700 includes a processor 720 programmed to promote transmission of a MCCH including a multi-cell information portion 130 that contains information common to a plurality of cells in a wireless telecommunications network, and a cell-specific information portion 120 that contains information specific to one of the cells. A method for providing control information is also provided. The method includes transmitting a multicast control channel (MCCH) including information related to a service, wherein the MCCH has a cell-specific portion 120 that contains information specific to a specific cell in a telecommunications network, and wherein the MCCH has a multi-cell portion 130 that contains information common to a plurality of cells in the telecommunications network.

Figure 1

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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))*
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A. CLASSIFICATION OF SUBJECT MATTER
INV. H04Q7/22

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)
H04Q

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/050718 A1 (CORSON M S [US] ET AL) 9 March 2006 (2006-03-09)	1,2,6,7, 32
Y	abstract paragraph [0016] - paragraph [0053] figures	3-5,7,8
Y	----- US 2003/194992 A1 (KIM SUNG-HOON [KR] ET AL) 16 October 2003 (2003-10-16) abstract paragraph [0015] - paragraph [0047] figures ----- -/--	3,8

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	*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
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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)	*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.
O document referring to an oral disclosure, use, exhibition or other means	* & * document member of the same patent family
P document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Aguilar Cabarrus, E
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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.
Y	MOTOROLA: "R2-061985: MBMS Modulation and Coding State Selection" INTERNET CITATION; [Online] 30 June 2006 (2006-06-30), XP002474733 Cannes, France Retrieved from the Internet: URL:www.3gpp.org> [retrieved on 2008-04-02] the whole document	4,5,7
A	WO 2004/102878 A (SIEMENS AG [DE]; PROCTOR TOBY KIER [GB]; MEMAR MOHAMMAD ALI [AT]; ULRI) 25 November 2004 (2004-11-25) page 4, line 7 - line 32	1-8,32
X	EP 1 353 523 A (SAMSUNG ELECTRONICS CO LTD [KR]) 15 October 2003 (2003-10-15) abstract paragraph [0010] - paragraph [0018] paragraph [0020] - paragraph [0089]	9,19,32
A	ALCATEL SHANGHAI BELL: "Synchronization requirements for MBMS RF combining in LTE SFN" INTERNET CITATION, [Online] 1 September 2006 (2006-09-01), XP002470008 Retrieved from the Internet: URL:http://www.3gpp.org> [retrieved on 2008-02-19] the whole document	9-26,32
A	ALCATEL SHANGHAI BELL: "Inter E-Node B node synchronisation in LTE MBMS" [Online] 1 September 2006 (2006-09-01), 3GPP TSG-RAN WG RAN1 46, R1-061969, TALLINN, ESTONIA, XP002508198 Retrieved from the Internet: URL:http://www.3gpp.org/FTP/tsg_ran/WG1_RL1/TSGR1_46/Docs/> [retrieved on 2008-12-15] the whole document	9-26,32
A	WO 2004/068884 A (SIEMENS AG [DE]; CHOI HYUNG-NAM [DE]; ECKERT MICHAEL [DE]; SCHNIEDENHA) 12 August 2004 (2004-08-12) abstract page 4, line 22 - page 16, line 12	9-26,32

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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.
A	<p>"Tdoc RP-060629 Centralized function for LTE MBMS" 3GPP TSG-RAN MEETIN 33, [Online] 22 September 2006 (2006-09-22), XP002508197 Palms Spring Retrieved from the Internet: URL:http://www.3gpp1.com/ftp/Specs/html-in fo/25813-CRs.htm> [retrieved on 2008-12-15] the whole document</p>	27-32
A	<p>MOTOROLA: "R2-061350 Centralized function for LTE MBMS" [Online] 12 May 2006 (2006-05-12), , XP002471972 Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/WG2_RL 2/TSGR2_53/Documents/> [retrieved on 2008-03-06] the whole document</p>	27-32
A	<p>ALCATEL: "R3-061534 Architecture for content synchronisation" INTERNET CITATION, [Online] 12 May 2006 (2006-05-12), XP002471973 Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/WG3_lu /TSGR3_53bis/docs/> [retrieved on 2008-03-06] the whole document</p>	27-32
A	<p>EP 1 513 368 A (LUCENT TECHNOLOGIES INC [US]) 9 March 2005 (2005-03-09) abstract paragraph [0020] - paragraph [0053]</p>	27-32

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/060457

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: 1-8, 32

Invention I is directed to a system and method for providing a service in which a central control specifies modulation and coding scheme related to transmission of the service and communicates with the plurality of cells to promote the transmission of the service by the plurality of cells using the modulation and coding scheme.

2. claims: 9-26, 32

Invention II is directed to a system and method for providing a multicast control channel having information related to a service, wherein the multicast control channel has a specific cell portion that contains information specific to a specific cell in a telecommunications network and wherein the multicast control channel has a multicell portion that contains information common to a plurality of cells in the telecommunications network.

3. claims: 27-32

Invention III is directed to a system for transmitting channel information comprising a central control in a wireless communications network, the central control having a processor configured to promote a plurality of cells transmitting a multicast control channel, wherein the multicast control channel has a specific cell portion that contains information specific to a specific cell in a telecommunications network and a multicell portion that contains information common to a plurality of cells in the telecommunications network, and wherein the central control is configured to identify a service and promote transmission by cells of the multicast control channel having similar control information related to the service transmitted on a multi-cell information portion.

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