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12/396,844 3 March 2009 (03.03.2009) US
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US 12/396,844 (CON)  
Filed on 3 March 2009 (03.03.2009)
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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- 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))
- (88) **Date of publication of the international search report:**  
12 November 2009

(54) **Title:** COEXISTENCE AND COLLOCATION OF REMOTE NETWORK AND LOCAL NETWORK RADIOS

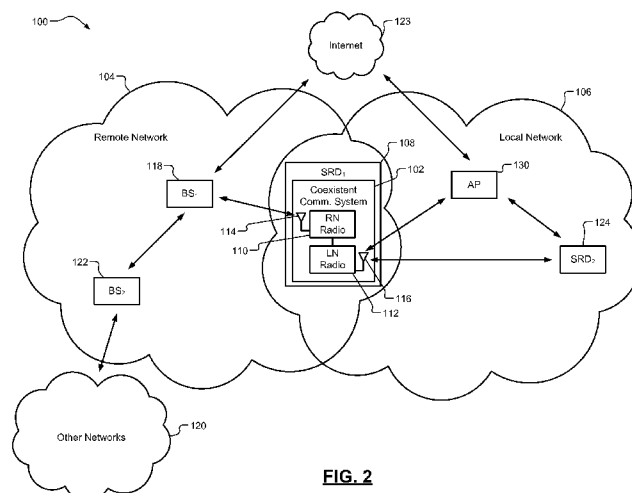


FIG. 2

(57) **Abstract:** A coexistent communication system (102) of a first network device (108) includes a remote network radio (110). The remote network radio has a remote transmission distance, operates based on remote network protocols, and communicates with a base station (118) using a first communication link corresponding to a first frequency band. A local network radio (112) has a local transmission distance and is collocated with the remote network radio. The local network radio operates based on local network protocols that are different than the remote network protocols and communicates with a second network device (130, 124) using a second communication link corresponding to a second frequency band. A control module at least one of schedules communication on the first communication link and the second communication link and adjusts a transmission parameter of one of the remote network radio and the local network radio. Transmission distance of the remote network radio is greater than transmission distance of the local network radio.

WO 2009/114370 A3

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2009/036106

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. H04W16/14

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

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/183338 A1 (SINGH MANONEET [US] ET AL) 9 August 2007 (2007-08-09) abstract	1-3,20
Y	paragraphs [0010], [0023], [0024], [0032], [0035] - [0037], [0042], [0044], [0055], [0063]; figure 8	4,5
X	EP 1 876 764 A (FUJITSU LTD [JP]) 9 January 2008 (2008-01-09) abstract paragraphs [0014], [0028] - [0034], [0039] - [0048]	1-3,20
X	EP 0 892 568 A (ALSTHOM CGE ALCATEL [FR]) 20 January 1999 (1999-01-20) abstract column 2, line 19 - column 4, line 27 column 6, line 31 - column 7, line 50	1,20
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Further documents are listed in the continuation of Box C.       See patent family annex.

\* Special categories of cited documents:

<p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*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)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p>	<p>*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</p> <p>*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</p> <p>*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.</p> <p>*&amp;* document member of the same patent family</p>
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Date of the actual completion of the international search  <p style="text-align: center;">19 June 2009</p>	Date of mailing of the international search report  <p style="text-align: center;">28/09/2009</p>
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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  <p style="text-align: center;">Sidoti, Filippo</p>
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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2009/036106

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2005/007979 A1 (TSIEN CHIH C [US] ET AL) 13 January 2005 (2005-01-13) abstract paragraphs [0001], [0015] - [0020]	4,5

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2009/036106

## 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 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.:

1-5, 20

### 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: 1-5, 20

System with remote and local radio whereby coexistence is enhanced by means of frequency/channel selection for the local radio.

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2. claims: 1, 6-18

System with remote and local radio whereby coexistence is allowed by means of activity coordination

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3. claims: 1, 19

System with remote and local radio whereby coexistence of remote and local radio network is made compatible with system reach by means of power level adjustment.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2009/036106

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007183338	A1	09-08-2007	EP 1982479 A1 22-10-2008
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US 2005007979	A1	13-01-2005	CN 1836459 A 20-09-2006
			EP 1645158 A2 12-04-2006
			WO 2005009068 A2 27-01-2005
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