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LLP, P.O. Box 60610, Palo Alto, California 94306 (US).(81) Designated States (unless otherwise indicated, for every
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KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
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RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
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ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: HYBRID BAND INTELLIGENT BACKHAUL RADIO

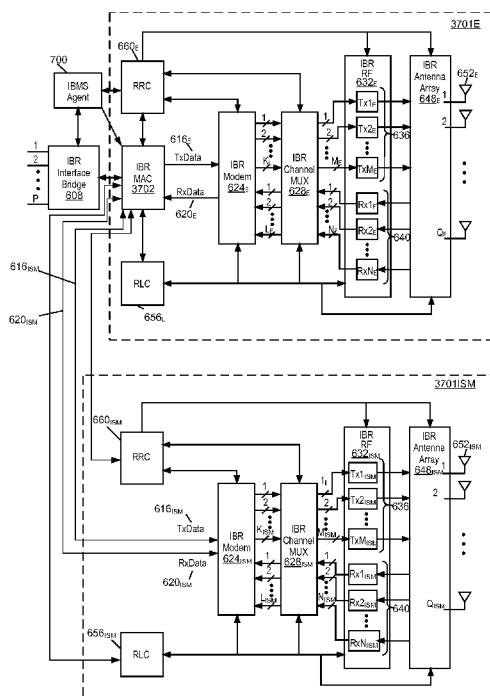
(57) Abstract: A hybrid band intelligent backhaul radio (HB-IBR) is dis-
closed that is a combination of two radios operating in different bands. Em-
bodiments include a dual radio configuration wherein a first radio operates in
a non-line of sight (NLOS) radio link configuration and a second ancillary ra-
dio operates in a near line of sight or line of sight configuration (n)LOS. For
example, the HB-IBR may have an Intelligent Backhaul Radio (IBR) operat-
ing in the non-line of sight mode of operation within the 5.8 GHz unlicensed
band, and have an ancillary radio link operating in the FCC part 101 E band
of operation at 60 GHz. A common medium access control (MAC) block
may be utilized between the dual radios.

Fig. 37

**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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- *with international search report (Art. 21(3))*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 13/29731

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04W 4/00 (2013.01)

USPC - 370/277

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)

IPC(8): H04W 4/00 (2013.01)

USPC: 370/277

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

IPC(8): H04W 4/00 (2013.01) (keyword limited - see terms below)

USPC: 370/252, 277, 310, 329, 331, 338 (keyword limited - see terms below)

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

PatBase, PubWEST(PGPB,USPT,USOC,EPAB,JPAB), Google Scholar

terms: backhaul, medium, media access control, E band, frequency, radio parameter, intelligent, share, common, same, antenna, link, RLC, line of sight, demodulate, modulate, motor, servo, packet latency, MPLS, DSCP, TOS, 802.1p, COS, IntServ, DiffServ, QOS, GOS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2011/0182174 A1 (Pi et al.) 28 July 2011 (28.07.2011), entire document, especially; para [0007]-[0008], [0015], [0031]-[0034], [0039]-[0041], [0044], [0049]-[0054], [0057], [0075]-[0076], [0079]-[0083], Fig. 4	1, 2, 5, 11, 12, 19-48 ----- 3, 4, 6-10, 13-18
Y	US 5,579,367 A (Raymond et al.) 26 November 1996 (26.11.1996), entire document, especially; col 2, ln 12 - col 4, ln 45, Fig. 1, 2	3, 4, 8, 9, 14-18
Y	US 2006/0056365 A1 (Das et al.) 16 March 2006 (16.03.2006), entire document, especially; para [0031]-[0032], [0050], [0087], [0104], [0140], Fig. 1	6, 7, 10, 13
A	US 2008/0014948 A1 (Scheinert et al.) 17 January 2008 (17.01.2008), entire document	1 - 48
X, P	US 8,385,305 B1 (Negus et al.) 26 February 2013 (26.02.2013), entire document	1 - 48

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"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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