

(51) International Patent Classification:
H04B 7/08 (2006.01)(21) International Application Number:
PCT/US2012/048982(22) International Filing Date:
31 July 2012 (31.07.2012)

(25) Filing Language: English

(26) Publication Language: English

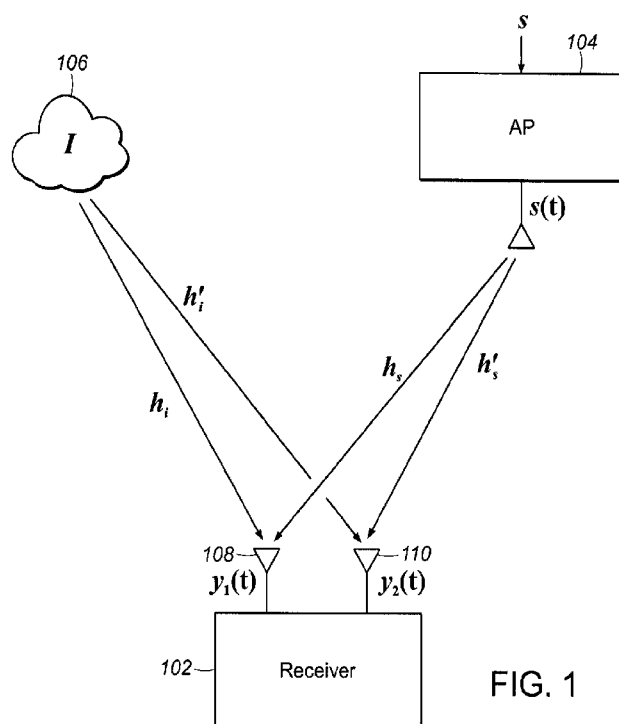
(30) Priority Data:
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(US).(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, 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, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM,
ZW.

[Continued on next page]

(54) Title: CROSS TECHNOLOGY INTERFERENCE CANCELLATION

(57) Abstract: In one aspect, a method for mitigating an
effect of an interfering radio signal at a multiple antenna
receiver includes forming an estimate of a relationship of
the interfering signal among signals received from the
multiple antennas. In general, the interfering signal does
not share the same communication technology as a de-
sired signal. The signals received from the multiple an-
tennas filtered and combined according to the estimate of
the relationship of the interfering channels to reduce an
effect of the interfering signal. Desired data present in
the desired signal represented in the filtered and com-
bined signals is decoded and the estimate of the relation-
ship of the interfering signals is updated according to the
decoding of the desired signal.



(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *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))*

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

(88) Date of publication of the international search report:

25 April 2013

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2012/048982

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04B7/08

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)

H04B H04L H04J

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 practicable, 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	WO 2008/069467 A1 (KOREA ELECTRONICS TELECOMM [KR]; KIM SEONG-RAG [KR]; NAM JUN-YOUNG [KR] 12 June 2008 (2008-06-12)	1-7,9, 10, 15-23, 25,26
Y	page 5 - page 12; figures 1-5 -----	8,11,24
Y	US 2010/172421 A1 (OKAMURA SHUTAI [JP] ET AL) 8 July 2010 (2010-07-08)	11
A	paragraph [0085] - paragraph [0089] paragraph [0123] - paragraph [0125]; figure 9 -----	8,24
A	WO 2006/124810 A2 (QUALCOMM INC [US]; GORE DHANANJAY ASHOK [US]; AGRAWAL AVNEESH [US]) 23 November 2006 (2006-11-23) paragraph [0038] - paragraph [0042] ----- -/-	3-5, 19-21

☒ 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 application or patent 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

29 November 2012

Date of mailing of the international search report

13/03/2013

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2012/048982

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2010/041236 A1 (CERAGON NETWORKS LTD [IL]; ROSENHOUSE ISAAC [IL]; MIZRAHI HAGGAI [IL]) 15 April 2010 (2010-04-15)	8,24
A	pages 12,22 - page 24; figures 1,4 -----	11

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/048982

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.:

1-11, 15-26

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: 1-11, 15-26

Iterative channel estimation, interference cancellation and decoding

2. claims: 12-14

Detection of bidirectional communication between two other stations and transmitting signals based on the detection.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/048982

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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