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(54) Title: CELLULAR COMMUNICATION SYSTEM UTILIZING UPGRADED MOVING RELAYS AND METHODS USEFUL IN CONJUNCTION THEREWITH



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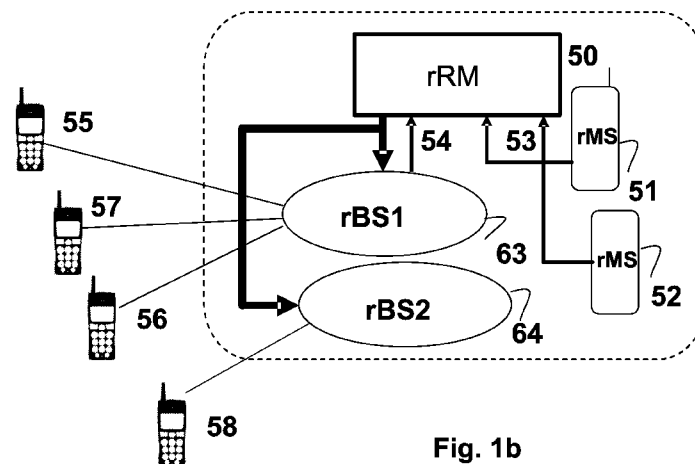


Fig. 1b

(57) Abstract: A moving cellular communication system comprising at least one upgraded moving relay including at least two base station functionalities and at least one mobile station functionality and a relay resource manager, all co-located, wherein each base station functionality from among the at least two base station functionalities of the upgraded moving relay is operative to communicate via antennae with at least one mobile station thereby to define a first radio link therebetween, and wherein each base station functionality has a connection to its co-located relay resource manager, wherein each mobile station functionality of the upgraded moving relay communicates via antennae with a unit which has base station functionality thereby to define at least one second radio link, respectively, wherein the relay resource manager in each individual moving relay comprises a radio resource manager; and functionality for exchanging information with relay resource managers is included in moving relays other than the individual moving relay.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2012/050072

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04B 7/15 (2012.01)

USPC - 455/11.1

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) - H04B 7/14, 7/15, 7/185 (2012.01)

USPC - 455/11.1, 13.1, 25, 561

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)

MicroPatent, IP.com, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0034212 A1 (GAVRILOVICH) 10 February 2011 (10.02.2011) entire document	1-48
Y	US 2011/0038284 A1 (SENARATH et al) 17 February 2011 (17.02.2011) entire document	1-48
Y	US 5,729,826 A (GAVRILOVICH) 17 May 1998 (17.05.2008) entire document	10, 11
Y	US 7,471,626 B2 (NAGHIAN et al) 30 December 2008 (30.12.2008) entire document	12
Y	US 6,278,881 B1 (BALCK) 21 August 2001 (21.08.2001) entire document	13
Y	User Interface for Controlling and Originating One-to-One, One-to-Many, Many-to-One, and Many-to-Many Communication Sessions. Technical Disclosure. IPCOM000029026D. IBM. 11 June 2004. [retrieved on 2009-08-09]. Retrieved from the Internet: <http://www.ip.com/pubview/IPCOM000029026D> entire document	21, 22
Y	WO 2010/087687 A2 (OH et al) 5 August 2010 (05.08.2010) entire document	23, 26
Y	US 7,383,049 B2 (DELOACH, JR. et al) 03 June 2008 (03.06.2008) entire document	30, 40, 45, 46
Y	US 6,408,005 B1 (FAN et al) 18 June 2002 (18.06.2002) entire document	34
Y	US 2004/0136345 A1 (YANO et al) 15 July 2004 (15.07.2004) entire document	35

 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

"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

12 August 2012

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2012/050072

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.: 49-53
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:

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 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.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2012/050072

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 2005/0255851 A1 (SCHREIBER) 17 November 2005 (17.11.2005) entire document	36
Y	US 2009/0201867 A1 (TEO et al) 13 August 2009 (13.08.2009) entire document	44
A	US 2010/0220645 A1 (KWON et al) 02 September 2010 (02.09.2010) entire document	1-48
A	US 2009/0312030 A1 (LEE et al) 17 December 2009 (17.12.2009) entire document	1-48