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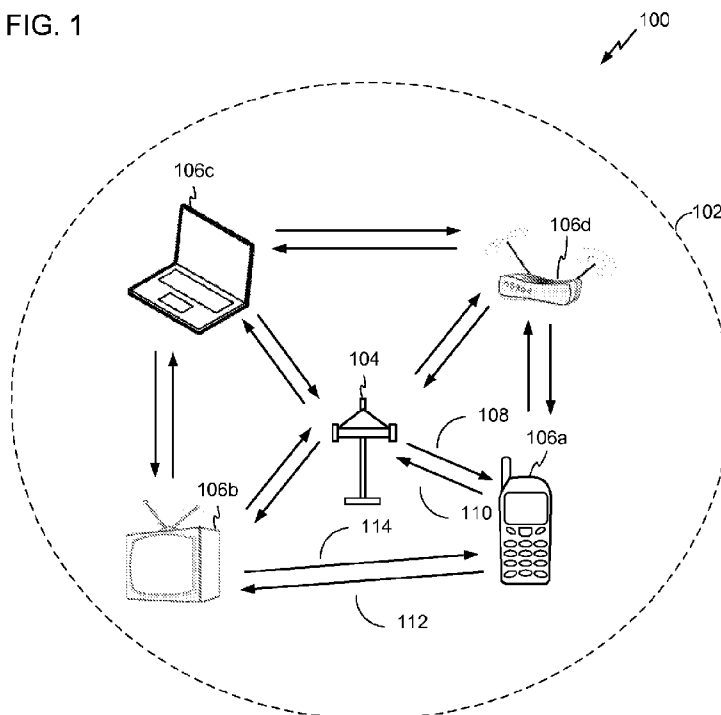
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[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR PEER-TO-PEER COMMUNICATION

FIG. 1



(57) Abstract: Methods, devices, and computer program products for peer-to-peer communication are described herein. In one aspect, an apparatus includes a receiver and processor. The receiver is configured to receive a first data unit from a first device. The first data unit includes a Media Access Control (MAC) address of the first device and data. The processor is configured to generate a device address of the processor and a device address of the first device, and provide the generated device address of the processor, the generated device address of the first device, and the data of the first data unit to an application executable on the processor.



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).

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

INV. H04L29/12 H04W8/28 H04L29/08
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)

H04L 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 practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WENIGER K ET AL: "ADDRESS AUTOCONFIGURATION IN MOBILE AD HOC NETWORKS: CURRENT APPROACHES AND FUTURE DIRECTIONS", IEEE NETWORK, IEEE SERVICE CENTER, NEW YORK, NY, US, vol. 18, no. 4, 1 July 2004 (2004-07-01), pages 6-11, XP001220887, ISSN: 0890-8044, DOI: 10.1109/MNET.2004.1316754 page 6 - page 8 ----- -/--	1-20



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

18 July 2013

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/021446

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WANGI N I C ET AL: "Address autoconfiguration in wireless ad hoc networks: protocols and techniques [accepted from open call]", IEEE WIRELESS COMMUNICATIONS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 14, no. 1, 1 February 2008 (2008-02-01), pages 70-80, XP011204555, ISSN: 1536-1284 page 71 - page 73 -----	1-20
X	US 2002/039357 A1 (LIPASTI JAAKKO [FI] ET AL) 4 April 2002 (2002-04-04) paragraph [0026] - paragraph [0085] -----	1,2,6, 10,11, 15,19,20
A	CHESHIRE APPLE COMPUTER B ABOBA MICROSOFT CORPORATION E GUTTMAN SUN MICROSYSTEMS S: "Dynamic Configuration of IPv4 Link-Local Addresses; rfc3927.txt", 20050501, 1 May 2005 (2005-05-01), pages 1-33, XP015054862, ISSN: 0000-0003 page 1 - page 17 -----	1-20
X	CHESHIRE M KROCHMAL APPLE INC S: "Multicast DNS; draft-cheshire-dnsext-multicastdns-15.txt" MULTICAST DNS; DRAFT-CHESHIRE-DNSEXT-MULTICASTDNS-15.TXT, INTERNET ENGINEERING TASK FORCE, IETF; STANDARDWORKINGDRAFT, INTERNET SOCIETY (ISOC) 4, RUE DES FALAISES CH- 1205 GENEVA, SWITZERLAND, 10 December 2011 (2011-12-10), pages 1-72, XP015079710, [retrieved on 2011-12-10] sections 3, 7 and 9 -----	24-27
X	Apple: "Bonjour Overview", 23 May 2006 (2006-05-23), pages 1-32, XP055062472, Retrieved from the Internet: URL: http://www.filibeto.org/unix/macos/lib/dev/documentation/Cocoa/Conceptual/NetServices/NetServices.pdf [retrieved on 2013-05-10] page 10 - page 15 page 18 - page 28 -----	21-23

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/021446

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: 1-20

Claims 1-20 are directed to the generation of a local address and of a remote device address at an apparatus including a processor receiving a data unit from a remote device. This is done by receiving a data unit from a device, the first data unit comprising a MAC address of the first device and data; generating a device address of the processor and a device address of the first device; and providing the generated device address of the processor, the generated device address of the remote device, and the data of the data unit to an application executable on the processor.

2. claims: 21-23

Claims 21-23 are directed to the generation of an advertisement message at a wireless apparatus including a processor. This is done by generating a network address of the processor and a service name of the processor; and transmitting an advertisement message comprising the generated network address of the processor and the generated service name of the processor.

3. claims: 24-27

Claims 24-27 are directed to the improvement of the reliability of responses to service discovery messages at a wireless apparatus. This is done by receiving a service discovery message from a first device, the service discovery message requesting a service in the wireless communication network; determining whether a second device has transmitted a response message in response to the service discovery message, the response message indicating a request by the first device for the service and at least one device that provides the service; and transmitting the response message in response to determining that the second device has not transmitted the response message.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/021446

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002039357 A1	04-04-2002	AU 9192401 A	08-04-2002
		EP 1329061 A1	23-07-2003
		FI 20002157 A	30-03-2002
		US 2002039357 A1	04-04-2002
		WO 0228034 A1	04-04-2002
