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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, 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, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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.
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[Continued on next page]

(54) Title: CHANNEL BONDING

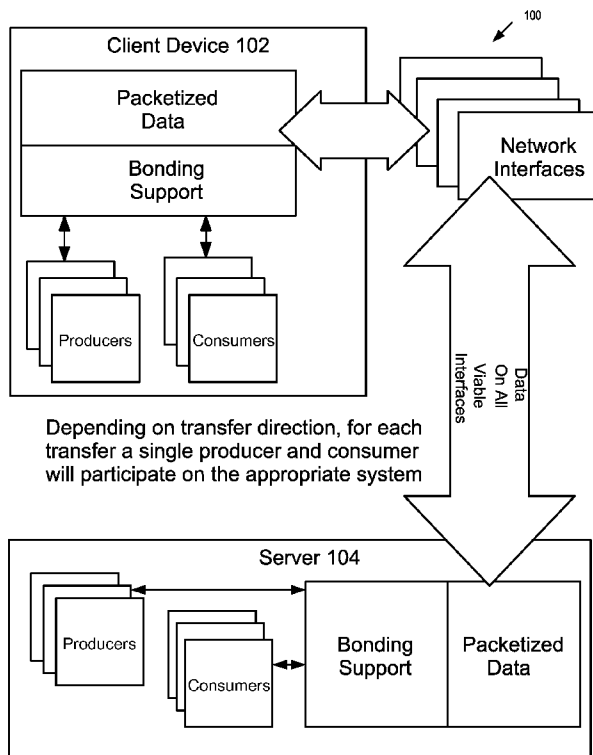
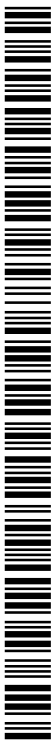


FIG. 1

(57) Abstract: A system and method for channel bonding is disclosed. The system and method enable transmission of data across multiple connections using multiple network interfaces. Further, the system and method are configured to handle slow or problematic connections and are configured to dynamically modify the bit rate of one or more media data streams.





SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
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19 November 2015

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2015/023067

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04L12/707
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

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	<p>Andrijana Popovska Avramova ET AL: "Modeling of Bandwidth Aggregation over Heterogeneous Wireless Access Networks", Proceedings of OPNETWORK 2012, 31 August 2012 (2012-08-31), pages 1-5, XP055197363, Washington, DC Retrieved from the Internet: URL:http://orbit.dtu.dk/fedora/objects/orbit:114177/datastreams/file_10410339/content [retrieved on 2015-06-22] page 3, column 1, line 8 - line 9; figure 5 page 1, column 2, line 33 page 2, column 1, line 6 - line 8 page 2, column 2, line 14 - line 16 page 2, column 1, line 13 - line 14 page 2, column 1, line 23 - line 26 -/--</p>	1-6

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 application or patent 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>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 23 June 2015	Date of mailing of the international search report 18/09/2015
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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 Bos, Jürgen
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2015/023067

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p style="text-align: center;">-----</p> <p>Anonymous: "Ethernet OAM Technology White Paper, S-Series Switch", 30 May 2013 (2013-05-30), pages 1-95, XP055197599, Huawei Industrial Base Bantian, Longgang Shenzhen 518129 People's Republic of China Retrieved from the Internet: URL:http://e.huawei.com/en/marketing-material/global/products/enterprise_network/switches/s9700/hw_276251 [retrieved on 2015-06-23] Chapter 7.3.1.; page 68</p>	6
A	<p style="text-align: center;">-----</p> <p>US 2005/185621 A1 (SIVAKUMAR RAGHUPATHY [US] ET AL) 25 August 2005 (2005-08-25) the whole document</p> <p style="text-align: center;">-----</p>	1-6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2015/023067

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.:

1-6

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: 1-6

Apparatus for streaming data over multiple network connections to a remote device with a relative performance evaluation of the different network connections.

2. claims: 7-12

Apparatus for streaming data over multiple network connections to a remote device operating a non-performing network connection into test mode.

3. claims: 13-16

Apparatus for streaming data over multiple network connections to a remote device with a bit rate selection algorithm taking into account previous bit rates.

4. claims: 17-26

Apparatus determining a bit rate change on a network connection to a remote device based on the fill level of a data stream buffer.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2015/023067

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005185621	A1	25-08-2005	
		AU 2005215043 A1	01-09-2005
		CA 2556420 A1	01-09-2005
		EP 1738493 A2	03-01-2007
		JP 2007527170 A	20-09-2007
		KR 20070011315 A	24-01-2007
		US 2005185621 A1	25-08-2005
		WO 2005079534 A2	01-09-2005
