

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 September 2011 (01.09.2011)

(10) International Publication Number
WO 2011/106591 A3

(51) International Patent Classification:
H04L 29/10 (2006.01) **H04L 29/04** (2006.01)
H04L 12/24 (2006.01)

(21) International Application Number:
PCT/US2011/026162

(22) International Filing Date:
25 February 2011 (25.02.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/308,868 26 February 2010 (26.02.2010) US
61/308,867 26 February 2010 (26.02.2010) US

(71) Applicant (for all designated States except US): **NET OPTICS, INC [US/US]**; 5303 Betsy Ross Drive, -, Santa Clara, California 95054 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MATITYAHU, El-dad [US/US]**; c/o Net Optics, Inc., Legal Department,

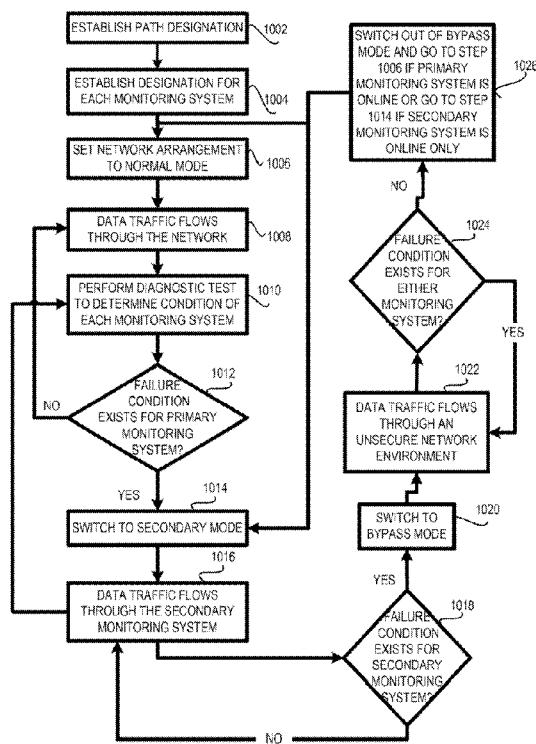
5303 Betsy Ross Drive, Santa Clara, California 95054 (US). **SHAW, Robert [US/US]**; c/o Net Optics, Inc., Legal Department, 5303 Betsy Ross Drive, Santa Clara, California 95054 (US). **CARPIO, Dennis [US/US]**; c/o Net Optics, Inc., Legal Department, 5303 Betsy Ross Drive, Santa Clara, California 95054 (US). **HUI, Siuman [US/US]**; c/o Net Optics, Inc., Legal Department, 5303 Betsy Ross Drive, Santa Clara, California 95054 (US). **LIAN, Wei [US/US]**; c/o Net Optics, Inc., Legal Department, 5303 Betsy Ross Drive, Santa Clara, California 95054 (US).

(74) Agent: **NGUYEN, Joseph A.**; PO Box 700640, -, San Jose, California 95170 (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, 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,

[Continued on next page]

(54) Title: IBYPASS HIGH DENSITY DEVICE AND METHODS THEREOF



(57) Abstract: A high density network arrangement for managing an integrated secured multiple networks arrangement is provided. The arrangement includes a power module for providing power to a circuitry of the high density network arrangement. The arrangement also includes a plurality of network interfaces, wherein each network interface of the plurality of network interfaces is configured for coupling with a network arrangement. The arrangement further includes a processor for providing processing capability to the high density network arrangement. The arrangement yet also includes logic arrangement for managing data traffic flowing through the plurality of network interfaces, wherein the data traffic is configured to traverse the high density network arrangement between the plurality of network arrangement interfaces irrespective whether the power is provided to the circuitry of the high density network arrangement.

NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, 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.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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).

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))*

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

19 January 2012

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/026162

A. CLASSIFICATION OF SUBJECT MATTER***H04L 29/10(2006.01)i, H04L 12/24(2006.01)i, H04L 29/04(2006.01)i***

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 29/10; H04L 27/28; H04L 29/06; H04L 9/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 Korean utility models and applications for utility models
 Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 eKOMPASS(KIPO internal) & Keywords: network, arrangement, integrated, tap, port, secure, data, traffic

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2010-0014605 A1 (GEILE MICHAEL J. et al.) 21 January 2010 See abstract, paragraphs [0028]-[0071], claims 1-12, figs. 1-10.	1-20
A	EP 2091199 A2 (ROCKWELL AUTOMATION TECHNOLOGIES, INC.) 19 August 2009 See abstract, paragraphs [0013]-[0031], claims 1-15, figs. 1-7.	1-20
A	US 2008-0072291 A1 (JEFFREY CARLEY) 20 March 2008 See abstract, paragraphs [0040]-[0057], claims 1-23, figs. 1-13.	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 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 2011 (29.11.2011)

Date of mailing of the international search report

30 NOVEMBER 2011 (30.11.2011)

Name and mailing address of the ISA/KR

 Korean Intellectual Property Office
 Government Complex-Daejeon, 189 Cheongsa-ro,
 Seo-gu, Daejeon 302-701, Republic of Korea
 Facsimile No. 82-42-472-7140

Authorized officer

LEE, Saang Woong

Telephone No. 82-42-481-5657



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/026162

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010-0014605 A1	21.01.2010	AU 1995-36349 B2 AU 1996-49158 B2 AU 1997-17117 B2 AU 1998-87136 B2 AU 1998-87137 B2 AU 1998-87141 B2 AU 1998-87142 B2 AU 1998-87143 B2 CA 2205986 C CA 2211117 A1 CA 2211117 C CA 2453896 A1 CA 2453896 C CA 2453897 A1 CA 2453897 C CA 2690127 A1 CN 1084987 C CN 1086877 C CN 1171178 A CN 1171178 C0 CN 1180462 A CN 1180462 C0 CN 1193433 A0 EP 0783809 A1 EP 0783809 A1 EP 0783809 B1 EP 0808534 A2 EP 0809898 A2 EP 1122650 A2 EP 1122650 A3 EP 1229683 A2 EP 1229683 A3 JP 02-986921 B2 JP 10-507051 A JP 10-513622 A JP 2000-049748 A JP 2986921 B2 KR 10-0254067 B1 KR 10-1998-0701998 A TW 409475 A TW 409475 B US 2001-0032334 A1 US 2002-0015477 A1 US 2002-0090909 A1 US 2002-0098795 A1 US 2002-0098796 A1 US 2002-0098797 A1 US 2002-0098798 A1 US 2002-0102937 A1	20.05.1999 25.03.1999 30.11.2000 01.04.1999 25.03.1999 06.05.1999 25.03.1999 25.03.1999 11.04.2006 15.08.1996 03.04.2001 31.07.1997 11.10.2005 31.07.1997 21.09.2010 31.07.1997 15.05.2002 26.06.2002 21.01.1998 29.04.1998 29.04.1998 16.09.1998 29.10.1997 16.07.1997 24.11.1999 14.11.2001 02.01.2004 08.08.2001 16.01.2002 07.08.2002 06.11.2002 01.10.1999 07.07.1998 22.12.1998 18.02.2000 06.12.1999 15.04.2000 25.06.1998 21.10.2000 21.10.2000 18.10.2001 07.02.2002 11.07.2002 25.07.2002 25.07.2002 25.07.2002 25.07.2002 01.08.2002

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/026162

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 2002-0105950 A1	08.08.2002
		US 2002-0106060 A1	08.08.2002
		US 2002-0107979 A1	08.08.2002
		US 2002-0116719 A1	22.08.2002
		US 2002-012421 A1	31.01.2002
		US 2003-0032390 A1	13.02.2003
		US 2007-0110096 A1	17.05.2007
		US 2007-0110220 A1	17.05.2007
		US 2007-0115803 A1	24.05.2007
		US 2007-0116209 A1	24.05.2007
		US 2007-0147229 A1	28.06.2007
		US 2007-0157277 A1	05.07.2007
		US 2007-0157278 A1	05.07.2007
		US 2007-0162943 A1	12.07.2007
		US 2007-0162946 A1	12.07.2007
		US 2007-0174890 A1	26.07.2007
		US 2007-0183591 A1	09.08.2007
		US 2007-0186258 A1	09.08.2007
		US 2007-0186260 A1	09.08.2007
		US 2007-0186261 A1	09.08.2007
		US 2007-0192815 A1	16.08.2007
		US 2007-0195687 A1	23.08.2007
		US 2007-0195689 A1	23.08.2007
		US 2007-0195901 A1	23.08.2007
		US 2007-0195902 A1	23.08.2007
		US 2007-0199034 A1	23.08.2007
		US 2007-0201345 A1	30.08.2007
		US 2007-0201346 A1	30.08.2007
		US 2007-0201347 A1	30.08.2007
		US 2007-0201348 A1	30.08.2007
		US 2007-0201352 A1	30.08.2007
		US 2007-0201573 A1	30.08.2007
		US 2007-0201628 A1	30.08.2007
		US 2007-0204317 A1	30.08.2007
		US 2007-0206491 A1	06.09.2007
		US 2007-0206693 A1	06.09.2007
		US 2007-0211617 A1	13.09.2007
		US 2007-0217324 A1	20.09.2007
		US 2007-0217325 A1	20.09.2007
		US 2007-0223361 A1	27.09.2007
		US 2007-0223362 A1	27.09.2007
		US 2007-0223363 A1	27.09.2007
		US 2007-0230325 A1	04.10.2007
		US 2007-0237066 A1	11.10.2007
		US 2007-0237070 A1	11.10.2007
		US 2007-0237182 A1	11.10.2007
		US 2007-242597 A1	18.10.2007
		US 2007-245394 A1	18.10.2007
		US 2007-248001 A1	25.10.2007
		US 2007-248146 A1	25.10.2007

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/026162

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 2007-253322 A1	01.11.2007
		US 2007-253323 A1	01.11.2007
		US 2007-253500 A1	01.11.2007
		US 2007-263665 A1	15.11.2007
		US 2007-274200 A1	29.11.2007
		US 2007-274202 A1	29.11.2007
		US 2007-280099 A1	06.12.2007
		US 2007-286240 A1	13.12.2007
		US 2007-297527 A1	27.12.2007
		US 2008-025201 A1	31.01.2008
		US 2008-025202 A1	31.01.2008
		US 2008-025284 A1	31.01.2008
		US 2008-031127 A1	07.02.2008
		US 2008-031373 A1	07.02.2008
		US 2008-037412 A1	14.02.2008
		US 2008-037414 A1	14.02.2008
		US 2008-037415 A1	14.02.2008
		US 2008-037663 A1	14.02.2008
		US 2008-040763 A1	14.02.2008
		US 2008-043611 A1	21.02.2008
		US 2008-043612 A1	21.02.2008
		US 2008-043704 A1	21.02.2008
		US 2008-049599 A1	28.02.2008
		US 2008-049603 A1	28.02.2008
		US 2008-049604 A1	28.02.2008
		US 2008-049856 A1	28.02.2008
		US 2008-049860 A1	28.02.2008
		US 2008-056119 A1	06.03.2008
		US 2008-056398 A1	06.03.2008
		US 2008-063010 A1	13.03.2008
		US 2008-082598 A1	03.04.2008
		US 2008-123514 A1	29.05.2008
		US 2008-225690 A1	18.09.2008
		US 2008-225691 A1	18.09.2008
		US 2008-225692 A1	18.09.2008
		US 2008-240214 A1	02.10.2008
		US 2008-240410 A1	02.10.2008
		US 2008-253435 A1	16.10.2008
		US 2008-273607 A1	06.11.2008
		US 2009-067516 A1	12.03.2009
		US 2009-074095 A1	19.03.2009
		US 2009-080505 A1	26.03.2009
		US 2009-080553 A1	26.03.2009
		US 2009-080554 A1	26.03.2009
		US 2009-092040 A1	09.04.2009
		US 2009-122881 A1	14.05.2009
		US 2009-122883 A1	14.05.2009
		US 2009-225818 A1	10.09.2009
		US 2009-238065 A1	24.09.2009
		US 2009-316816 A1	24.12.2009

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/026162

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 6275990 B1	14.08.2001
		US 6279158 B1	21.08.2001
		US 6282683 B1	28.08.2001
		US 6292651 B1	18.09.2001
		US 6330241 B1	11.12.2001
		US 6334219 B1	25.12.2001
		US 6336201 B1	01.01.2002
		US 6366585 B1	02.04.2002
		US 6415133 B1	02.07.2002
		US 6418558 B1	09.07.2002
		US 6467092 B1	15.10.2002
		US 6477354 B1	05.11.2002
		US 6510229 B1	21.01.2003
		US 6535715 B2	18.03.2003
		US 6594322 B2	15.07.2003
		US 6603822 B2	05.08.2003
		US 6606351 B1	12.08.2003
		US 6608835 B2	19.08.2003
		US 6662367 B2	09.12.2003
		US 7002898 B1	21.02.2006
		US 7069577 B2	27.06.2006
		US 7123592 B2	17.10.2006
		US 7280564 B1	09.10.2007
		US 7310522 B2	18.12.2007
		US 7352690 B2	01.04.2008
		US 7352779 B2	01.04.2008
		US 7355963 B2	08.04.2008
		US 7355964 B2	08.04.2008
		US 7385916 B2	10.06.2008
		US 7391711 B2	24.06.2008
		US 7391712 B2	24.06.2008
		US 7394753 B2	01.07.2008
		US 7400572 B2	15.07.2008
		US 7408873 B2	05.08.2008
		US 7414960 B2	19.08.2008
		US 7414961 B2	19.08.2008
		US 7417944 B2	26.08.2008
		US 7420913 B2	02.09.2008
		US 7420914 B2	02.09.2008
		US 7426177 B2	16.09.2008
		US 7436812 B2	14.10.2008
		US 7440391 B2	21.10.2008
		US 7443784 B2	28.10.2008
		US 7480236 B2	20.01.2009
		US 7489623 B2	10.02.2009
		US 7489624 B2	10.02.2009
		US 7492791 B2	17.02.2009
		US 7532566 B2	12.05.2009
		US 7535822 B2	19.05.2009
		US 7539126 B2	26.05.2009

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/026162

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 7548508 B2 US 7580347 B2 US 7596081 B2 US 7623440 B2 US 7672219 B2 US 7675843 B2 US 7697453 B2 US 7706349 B2 US 7756060 B2 US 7773537 B2 US 7872985 B2 US 7881180 B2 US 7881181 B2 US 7912138 B2 US 7936662 B2 US 7957265 B2 US 7983141 B2 US 7995454 B2 US E041771 E1 US E042236 E1 US RE42236 E1	16.06.2009 25.08.2009 29.09.2009 24.11.2009 02.03.2010 09.03.2010 13.04.2010 27.04.2010 13.07.2010 10.08.2010 18.01.2011 01.02.2011 01.02.2011 22.03.2011 03.05.2011 07.06.2011 19.07.2011 09.08.2011 28.09.2010 22.03.2011 22.03.2011
EP 2091199 A2	19.08.2009	CN 101527716 A US 2010-0031340 A1	09.09.2009 04.02.2010
US 2008-0072291 A1	20.03.2008	AU 2003-251521 A1 AU 2003-251521 A8 AU 2003-276819 A1 AU 2003-276819 A8 US 2003-0233583 A1 US 2005-0086494 A1 US 2009-0150977 A1 US 7325140 B2 US 7496950 B2 US 7886340 B2 WO 03-107133 A2 WO 03-107133 A3 WO 03-107629 A2 WO 03-107629 A3	31.12.2003 31.12.2003 31.12.2003 31.12.2003 18.12.2003 21.04.2005 11.06.2009 29.01.2008 24.02.2009 08.02.2011 24.12.2003 24.12.2003 24.12.2003 24.12.2003