

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 November 2003 (27.11.2003)

PCT

(10) International Publication Number
WO 2003/098962 A3

(51) International Patent Classification⁷: **H04Q 11/00**,
H04J 14/02

(74) Agents: **BRETT, Allan** et al.; Smart & Biggar, P.O. Box
2999, Station D, 900-55 Metcalfe Street, Ottawa, Ontario
K1P 5Y6 (CA).

(21) International Application Number:
PCT/CA2003/000750

(22) International Filing Date: 20 May 2003 (20.05.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/381,376 20 May 2002 (20.05.2002) US

(71) Applicant (for all designated States except US): **MET-
CONNEX INC.** [CA/CA]; 84 Hines Road, Ottawa, Ont-
ario K2K 3G3 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DUCELLIER,
Thomas** [FR/CA]; 415 Besserer Street, Ottawa, Ontario
K1N 6B9 (CA). **HNATIW, Alan** [CA/CA]; 39 Hartin
Street, Stittsville, Ontario K2S 1B9 (CA).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VC, VN, YU, ZA, ZM, ZW.

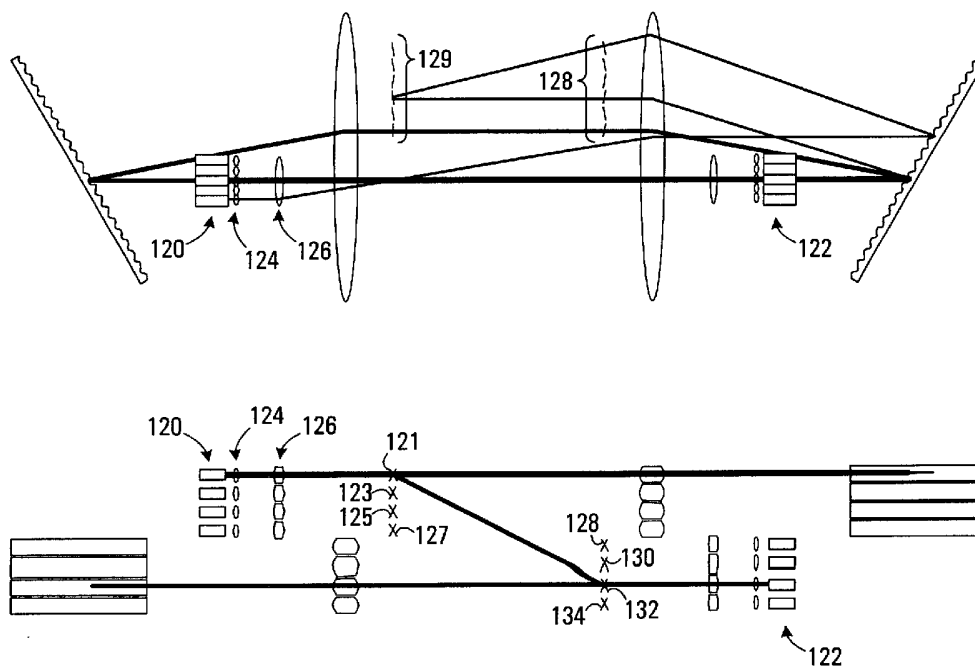
(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: WAVELENGTH CROSS-CONNECT



(57) Abstract: A wavelength cross connect is provided in which wavelength channels are individually switchable from one of a first set of ports to one of a second set of ports. Add and drop capability is provided on the sets of ports. Some embodiments feature a single row of ports, while others feature two dimensional arrays of ports. Some embodiments employ one dispersive element per port, and others employ one dispersive element per row of ports. Embodiments featuring transmissive and non-transmissive switching elements are provided.



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

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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

1 April 2004

INTERNATIONAL SEARCH REPORT

International Application No
PCT/CA 03/00750

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04Q11/00 H04J14/02

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 7 H04Q 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 practical, 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	GB 2 366 105 A (NORTEL NETWORKS LTD) 27 February 2002 (2002-02-27)	1-12
A	figures 3a,3b page 8, line 34 - page 9, line 5 page 10, line 33 - page 11, line 5 -----	13-40
A	US 6 097 859 A (HERITAGE JONATHAN P ET AL) 1 August 2000 (2000-08-01) cited in the application the whole document -----	1-40

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in 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 document 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

2 February 2004

Date of mailing of the international search report

06/02/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Dhondt, E

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 03/00750

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
GB 2366105	A	27-02-2002	CA	2300780 A1		15-09-2001
			FR	2806558 A1		21-09-2001
<hr/>						
US 6097859	A	01-08-2000	US	2003137660 A1		24-07-2003
			US	2003133095 A1		17-07-2003
			US	6289145 B1		11-09-2001
			US	6327398 B1		04-12-2001
			US	2001009596 A1		26-07-2001
			US	2001014196 A1		16-08-2001
			US	2002012489 A1		31-01-2002
			US	2001022876 A1		20-09-2001
			US	2002061160 A1		23-05-2002
<hr/>						