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(71) Applicant and

(72) Inventor: **BEDARD, Fernand, D.** [US/US]; 505
Hermleigh Road, Silver Spring, MD 20902 (US).

(74) Agents: **CHESSER, Wilburn, L.** et al.; Piper Rudnick
LLP, 1200 Nineteenth Street, N.W., Washington, DC 20036
(US).

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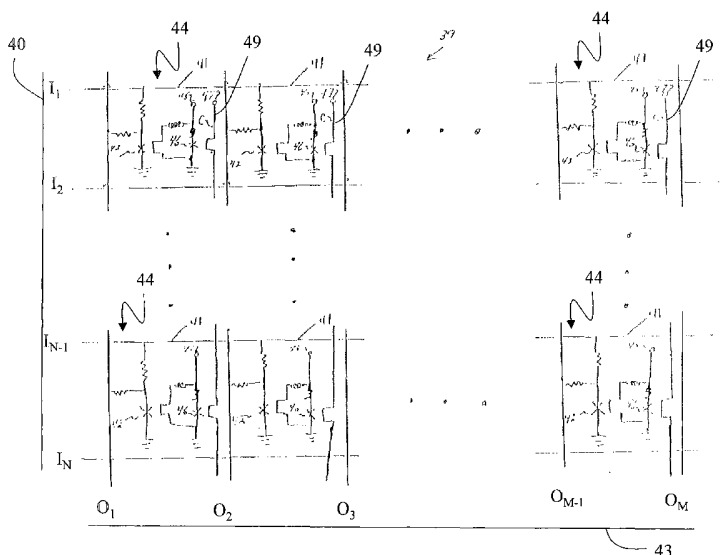
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(54) Title: SUPERCONDUCTIVE CROSSBAR SWITCH



(57) Abstract: A superconductor crossbar switch (39) for connecting a plurality of inputs (Ii 40) with a plurality of outputs (Oi 43), including a switching cell (41) having an input, an output and a circuit for connecting the input with the output for bidirectionally transmitting data therebetween. The connection of the retaining and releasing circuitry of a plurality of cells enables the switch to simultaneously retain a selected cell or cells of a group of cells and disable the remaining cells of that group, whereby a subsequent query on a disabled cell is inoperative until the selected cell or cells is released. The crossbar switch is characterized by latency on the order of nanoseconds, a data rate per channel on the order of gigabits per second, essentially zero crosstalk, and detection of contention in nanoseconds or less and resolution of contention in nanoseconds or less.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/23249

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H03K 19/195; H03K 17/92
 US CL : 326/1-4; 365/160-162,177,182; 257/33,34,36; 375/326,371

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)
 U.S. : 326/1-4; 365/160-162,177,182; 257/33,34,36; 375/326,371

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)
 Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,154,044 A (Herr) 28 November 2000 (28.11.2000), all Figs.	1, 2, 50, 51, 52, 62, 72, 77, and 80
A	US 5,629,889 A (Chandra et al.) 13 May 1997 (13.05.1997), entire document	1-83
A	US 5,247,475 A (Hasunuma et al.) 21 September 1993 (21.09.1993); entire document	1-83
A	US 6,242,939 B1 (Nagasawa et al.) 05 June 2001 (05.06.2001)	1-83

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	"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
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"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	"&"	document member of the same patent family

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Facsimile No. (703)305-3230

Authorized officer

Vibol Tan

Telephone No. (703) 308-0959

Deborah P. Vega
Deborah P. Vega
Paralegal Specialist

Technology Center 2800
(703) 308-3078

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INTERNATIONAL SEARCH REPORT

PCT/US02/23249

Continuation of B. FIELDS SEARCHED Item 3:
EAST, superconductor.