

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 May 2001 (10.05.2001)

PCT

(10) International Publication Number
WO 01/33770 A3

- (51) International Patent Classification⁷: H04L 12/28
- (21) International Application Number: PCT/US00/30394
- (22) International Filing Date:
3 November 2000 (03.11.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/163,257 3 November 1999 (03.11.1999) US
- (71) Applicant (for all designated States except US): ITT MANUFACTURING ENTERPRISES, INC. [US/US]; 1105 North Market Street, Suite 1217, Wilmington, DE 19801 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): WHITEHILL, Eric, A. [US/US]; 6021 Highgate Place, Fort Wayne, IN 46815 (US). DEMPSEY, Tim [US/US]; 2229 Hearthstone Drive, Fort Wayne, IN 46804 (US).
- (74) Agents: FINNAN, Patrick, J. et al.; Epstein, Edell, Shapiro & Finnan, LLC, Suite 400, 1901 Research Boulevard, Rockville, MD 20850 (US).
- (81) Designated States (national): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
18 April 2002
- 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.



WO 01/33770 A3

(54) Title: METHODS AND APPARATUS FOR COORDINATING CHANNEL ACCESS TO SHARED PARALLEL DATA CHANNELS

(57) Abstract: A network of nodes communicates using plural, shared parallel data channels and a separate reservation channel. Access to the data channels is coordinated among the nodes by communicating message requests and corresponding replies on the reservation channel. In addition to a primary transmitter/receiver (e.g., a modem), each node includes a secondary receiver that permits each node to continuously monitor the reservation channel. When not engaged in a message transfer on one of the data channels, the primary receiver monitors the reservation channel. If the primary becomes engaged in a message transfer, the secondary receiver is activated and monitors the reservation channel. Use of the secondary receiver avoids loss of channel access information resulting from use of a single receiver for both the reservation and data transfer mechanisms. By transmitting requests for channel access on the reservation channel and continuously monitoring the reservation channel, message collisions are dramatically reduced.

INTERNATIONAL SEARCH REPORT

International Application No

PC1/US 00/30394

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/28

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 H04L H04Q

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)

WPI Data, PAJ, EPO-Internal, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 513 841 A (NIPPON ELECTRIC CO) 19 November 1992 (1992-11-19) column 1, line 1 -column 2, line 51 column 4, line 24 -column 5, line 45 ---	1, 20, 39
A	WO 98 39936 A (TOMLINSON KERRY JOHN ; SALBU RES AND DEV PTY LTD (ZA); LARSEN JAMES) 11 September 1998 (1998-09-11) page 1, line 1 -page 5, line 22 page 20, line 13 - line 22 ---	1, 20, 39
A	US 4 736 371 A (TEJIMA SHUNICHIRO ET AL) 5 April 1988 (1988-04-05) abstract column 1, line 7 -column 2, line 68 column 3, line 67 -column 5, line 12 column 8, line 22 - line 39 ---	1, 20, 39
	-/--	

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.
- *G* document member of the same patent family

Date of the actual completion of the international search

17 January 2002

Date of mailing of the international search report

24/01/2002

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

Vaskimo, K

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/30394

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 794 154 A (BAR-ON DAVID ET AL) 11 August 1998 (1998-08-11) column 1, line 6 -column 2, line 56 -----	1, 20, 39

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/30394

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0513841	A	19-11-1992	JP 2692418 B2	17-12-1997
			JP 4341024 A	27-11-1992
			AU 651689 B2	28-07-1994
			AU 1636192 A	19-11-1992
			CA 2068915 A1	18-11-1992
			DE 69225265 D1	04-06-1998
			DE 69225265 T2	27-08-1998
			EP 0513841 A2	19-11-1992
			US 5363428 A	08-11-1994
			WO 9839936	A
AU 6630798 A	22-09-1998			
BR 9808149 A	28-03-2000			
CN 1255261 T	31-05-2000			
EP 0965203 A2	22-12-1999			
WO 9839936 A2	11-09-1998			
HU 0000860 A2	28-08-2000			
JP 2001513968 T	04-09-2001			
NO 994198 A	27-10-1999			
PL 335646 A1	08-05-2000			
US 4736371	A	05-04-1988	JP 1704659 C	27-10-1992
			JP 3062329 B	25-09-1991
			JP 62168435 A	24-07-1987
			JP 1704660 C	27-10-1992
			JP 3062330 B	25-09-1991
			JP 62199129 A	02-09-1987
			JP 1803569 C	26-11-1993
			JP 5013409 B	22-02-1993
			JP 63009322 A	16-01-1988
			JP 1704657 C	27-10-1992
			JP 3062328 B	25-09-1991
			JP 62157428 A	13-07-1987
			AU 582723 B2	06-04-1989
			AU 6705986 A	02-07-1987
			CA 1261080 A1	26-09-1989
			DE 3688732 D1	26-08-1993
			DE 3688732 T2	27-01-1994
EP 0228709 A2	15-07-1987			
US 5794154	A	11-08-1998	GB 2303763 A	26-02-1997