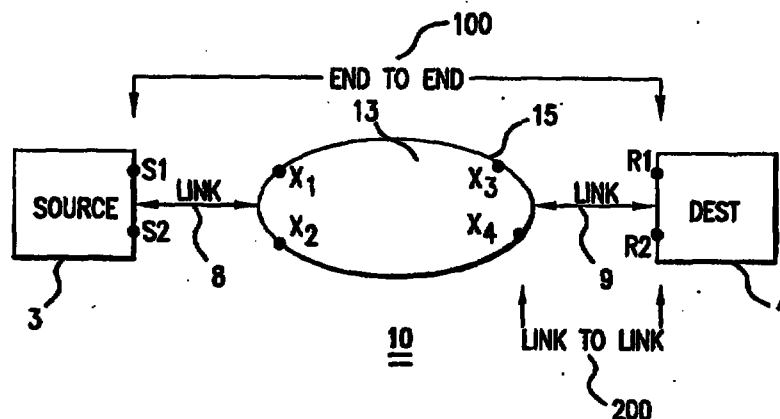




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04Q 11/00, 11/04, H04J 3/14, 3/24		A1	(11) International Publication Number: WO 00/13455
			(43) International Publication Date: 9 March 2000 (09.03.00)
(21) International Application Number: PCT/US99/17229 (22) International Filing Date: 30 July 1999 (30.07.99) (30) Priority Data: 09/141,136 27 August 1998 (27.08.98) US (71) Applicant: INTEL CORPORATION [US/US]; 2200 Mission College Boulevard, P.O. Box 58119, Santa Clara, CA 95052-8119 (US). (72) Inventors: DROTTAR, Ken; 10423 NW Royal Rose Court, Portland, OR 94229 (US). DUNNING, David, S.; 14055 NW Evergreen Street, Portland, OR 97229 (US). CAMERON, Donald, F.; 3435 N.W. Vaughan, Portland, OR 97210 (US). (74) Agents: HELLER, Paul, H. et al.; Kenyon & Kenyon, Suite 700, 1500 K Street, N.W., Washington, DC 20005 (US).		(81) Designated States: AE, 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, UZ, VN, YU, ZA, ZW. ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.	

(54) Title: **METHOD AND APPARATUS FOR INPUT/OUTPUT LINK RETRY, FAILURE AND RECOVERY IN A COMPUTER NETWORK**



(57) Abstract

Method for transmitting data from a source (3) to a destination (4) node including an intermediary point and packet sequence number. A copy of the packet is stored in a buffer at the source node until receiving an acknowledgment that it was successfully received by the intermediary point. The intermediate point assigns an intermediate point sequence number to the packet and a copy of the packet is retained in a buffer until receiving an acknowledgment from the next delivery point. The packet in the buffer is de-allocated once it is successfully received. Upon receipt of an error indication, each packet is retransmitted. At the receiving end, all received packets following the packet associated with the error indication are dropped until successfully receiving a retransmitted version of the packet. A single negative acknowledgment indicates that the packet associated with the negative acknowledgment includes at least one error and to simultaneously indicate that all previous packets received prior to the packet associated with the negative acknowledgment were received correctly. An independent link sequence number is assigned to each packet before transmitting.