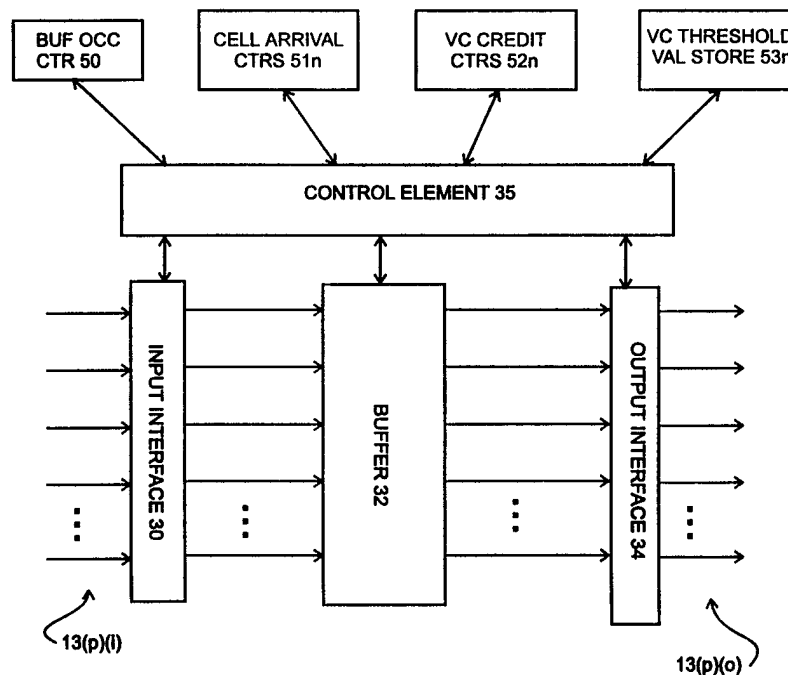




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification <sup>6</sup> : <b>G04F 5/00, G08C 19/00, H04J 3/16, H04L 12/56</b></p>	<p><b>A3</b></p>	<p>(11) International Publication Number: <b>WO 98/27661</b> (43) International Publication Date: 25 June 1998 (25.06.98)</p>
<p>(21) International Application Number: PCT/US97/23286 (22) International Filing Date: 16 December 1997 (16.12.97) (30) Priority Data: 08/768,110 16 December 1996 (16.12.96) US (71) Applicant: CASCADE COMMUNICATIONS CORPORATION [US/US]; 5 Carlisle Road, Westford, MA 01886 (US). (72) Inventors: YANG, Tao; 61 Bogart Crescent, Belleville, Ontario K8P 5E8 (CA). SHUE, Chikong; 9 East Starr Avenue, Andover, MA 01810 (US). ABDELAZIZ, Mohamed; 700 Princeton Boulevard #23, Lowell, MA 01851 (US). (74) Agent: JORDAN, Richard, A.; P.O. Box 81363, Wellesley Hills, MA 02181-0004 (US).</p>	<p>(81) Designated States: AU, CA, JP, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). <b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 3 September 1998 (03.09.98)</p>	

(54) Title: CELL LOSS BALANCE SYSTEM AND METHOD FOR DIGITAL NETWORK



(57) Abstract

A switching node (11(n)) for use in connection with a computer network (10) includes an input interface (30), a buffer (32) and a control element (35). The input interface (30) receives cells from at least one input communication link. The buffer (32) buffers selected cells prior to transmission over at least one output communication link. The control element (35) selectively enables cells received by the input interface (30) to be buffered in the buffer (32) and discards cells if the cell occupancy of the buffer (32) exceeds a predetermined threshold level and receiving a credits value indicating that the switching node (11(n)) has loaded a number of cells into the buffer (32) exceeds a cell loss ratio guarantee provided by the switching node (11(n)).

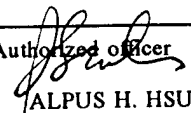
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INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/23286

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(6) :G04F 5/00; G08C 19/00; H04J 3/16; H04L 12/56 US CL :370/230, 235, 395, 412; 395/200.62 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : Please See Extra Sheet. Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched NONE Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) APS: SWITCHING NODE, INPUT, OUTPUT, BUFFER, THRESHOLD, COUNTER, DISCARD?, CELL LOSS (RATE OR RATIO)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,335,222 A (KAMOI ET AL) 02 August 1994, col. 28, line 23 to col. 29, line 26 and Figure 21.	1-3, 9-13, 19-23, 29 & 30
Y, E	US 5,726,987 A (URIU ET AL) 10 March 1998, col. 2, line 17 to col. 4, line 20 and Figure 1.	1-3, 9-13, 19-23, 29 & 30
A	US 5,140,584 A (SUZUKI) 18 August 1992, see entire document.	1-30
A	US 5,179,556 A (TURNER) 12 January 1993, see entire document.	1-30
A	US 5,282,203 A (OOUCHI) 25 January 1994, see entire document.	1-30
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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*P*	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 10 APRIL 1998		Date of mailing of the international search report 09 JUL 1998
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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 5,394,396 A (YOSHIMURA ET AL) 28 February 1995, see entire document.	1-30

**INTERNATIONAL SEARCH REPORT**

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**Minimum documentation searched**

**Classification System: U.S.**

370/230-236, 252, 253, 389, 395, 398, 399, 409, 412, 415, 416, 422, 428, 429; 395/200.43, 200.62, 200.63, 200.64, 200.65, 200.79, 200.8