

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 October 2001 (18.10.2001)

PCT

(10) International Publication Number
WO 01/78309 A3

(51) International Patent Classification⁷: **H04L 12/56**,
29/12

(21) International Application Number: PCT/IB01/00697

(22) International Filing Date: 4 April 2001 (04.04.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/547,034 11 April 2000 (11.04.2000) US

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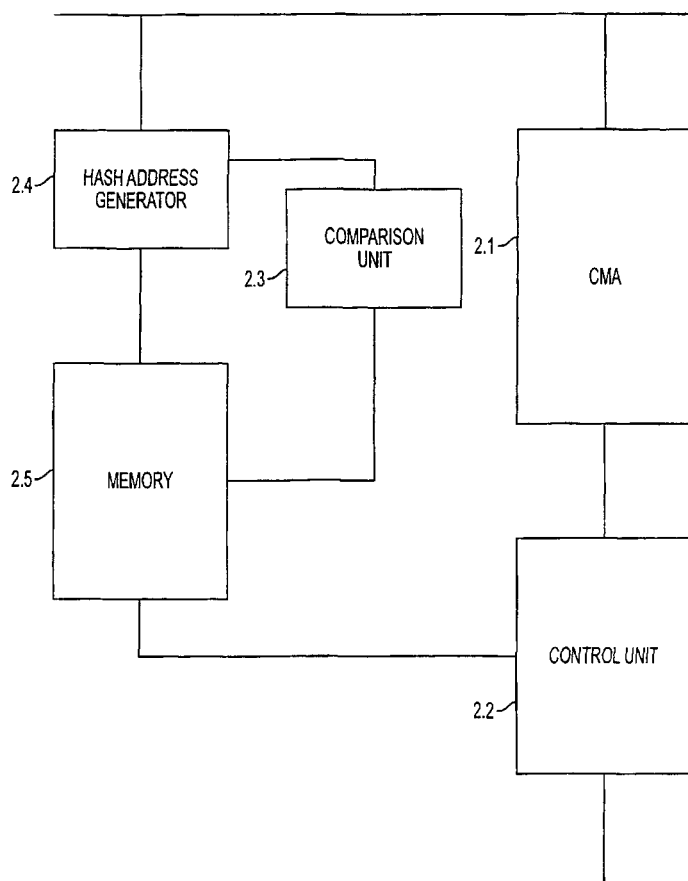
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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,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

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(54) Title: A METHOD AND APPARATUS FOR WIRE-SPEED APPLICATION LAYER CLASSIFICATION OF DATA PACKETS



(57) Abstract: A data packet classifier to classify a plurality of N-bit input tuples, said classifier comprising a hash address, a memory and a comparison unit. The hash address generator generate a plurality of M-bit hash addresses from said plurality of N-bit input tuples, wherein M is significantly smaller than N. The memory has a plurality of memory entries and is addressable by said plurality of M-bit hash addresses, each such address corresponding to a plurality of memory entries, each of said plurality of memory entries capable of storing one of said plurality of N-bit tuples and an associated process flow information. The comparison unit determines if an incoming N-bit tuple can be matched with a stored N-bit tuple. The associated process flow information is output if a match is found and wherein a new entry is created in the memory for the incoming N-bit tuple if a match is not found.

WO 01/78309 A3



Published:

- with international search report
- 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:

16 May 2002