



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04L 29/06, 12/56	A1	(11) International Publication Number: WO 99/13624 (43) International Publication Date: 18 March 1999 (18.03.99)
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(21) International Application Number: PCT/GB98/02727

(22) International Filing Date: 9 September 1998 (09.09.98)

(30) Priority Data:

97306976.8	9 September 1997 (09.09.97)	EP
9725985.7	8 December 1997 (08.12.97)	GB

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(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, 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, ARIPO patent (GH, GM, KE, LS, MW, SD, 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: PACKET NETWORK

(57) Abstract

A new approach to providing both bounded-delay and best-effort operation in a packet network node is described. The bounded-delay mode is capable of providing a firm end-to-end delay bound, but in contrast to the combination of RSVP and Guaranteed service proposed within the IETF, it does this with minimal complexity. Network nodes are provided with dual packet buffers associated with bounded delay and best effort classes of service respectively. Appropriate dimensioning, if necessary enforced through CAC methods, ensure that packets admitted to the bounded delay buffer are provided the firm delay bound. CAC methods are described which are applicable for packet flows as small as a single packet. A means is also offered for removing the traditional network signalling phase. A related architecture for use with hosts is also described.

