

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 August 2002 (01.08.2002)

PCT

(10) International Publication Number
WO 02/060097 A1

(51) International Patent Classification⁷: **H04B 10/20**,
H04J 14/08, H04L 12/437

Gerald; 675 Greenview Place, Los Altos, CA 94024 (US). **STILES, David**; 21108 Brush Road, Los Gatos, CA 95033 (US).

(21) International Application Number: PCT/US01/50012

(22) International Filing Date:
20 December 2001 (20.12.2001)

(74) Agents: **MALLIE, Michael, J.** et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025 (US).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/258,765 30 December 2000 (30.12.2000) US
09/887,299 22 June 2001 (22.06.2001) US

(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, EC, 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, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

(71) Applicant: **REDBACK NETWORKS INC.** [US/US];
250 Holger Way, San Jose, CA 95134 (US).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

(72) Inventors: **LUFT, Siegfried**; 4228 West 13th Street, Vancouver, British Columbia V6R 2TB (CA). **NEUFELD,**

[Continued on next page]

(54) Title: A METHOD AND APPARATUS FOR VARIABLE RATE PIPES

(57) Abstract: A method, apparatus, and a computer implemented method comprises allocating a pipe (743, 744) from part of a working channel (737) and at least part of a protecting channel (739) of a span of a bi-directional line switched ring (BLSR), the pipe (743, 744) having a bandwidth, transmitting a set of layer 2/3 traffic in the pipe (743, 744), and reducing the pipe's bandwidth when a failure occurs in the ring.



WO 02/060097 A1



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, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Published:

— *with international search report*

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.