

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/076856 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/US2005/003015

(22) International Filing Date: 26 January 2005 (26.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/773,520 5 February 2004 (05.02.2004) US

(71) Applicant (for all designated States except US): **MI-
CRON TECHNOLOGY, INC.** [US/US]; 8000 Federal
Way South, Boise, Idaho 83716-9632 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **JEDDELOH, Joseph,
M.** [US/US]; 4302 Reiland Lane, Shoreview, MN 55126
(US).

(74) Agents: **BULCHIS, Edward, W.** et al.; Dorsey & Whit-
ney LLP, 1420 Fifth Avenue, Suite 3400, Seattle, Washing-
ton 98101 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

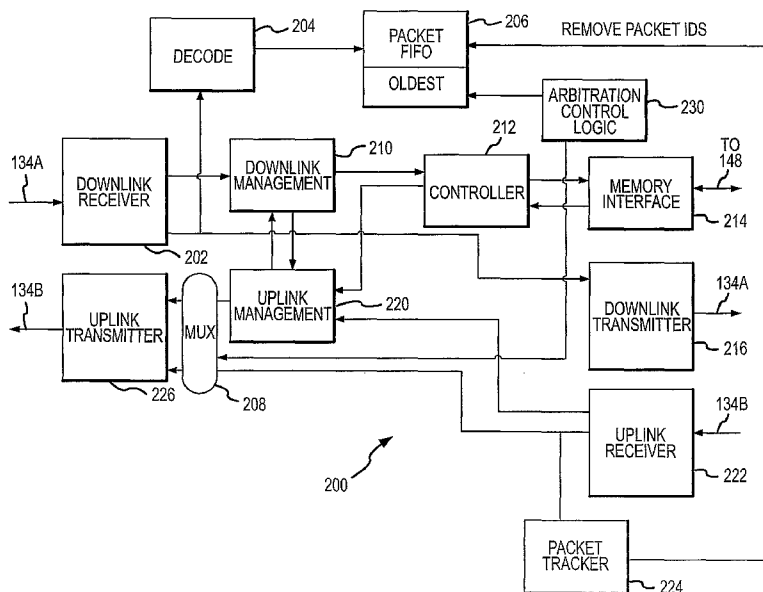
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: ARBITRATION SYSTEM HAVING A PACKET MEMORY AND METHOD FOR MEMORY RESPONSES IN A
HUB-BASED MEMORY SYSTEM



(57) Abstract: A memory hub module includes a decoder that receives memory requests determines a memory request identifier associated with each memory request. A packet memory receives memory request identifiers and stores the memory request identifiers. A packet tracker receives remote memory responses and associates each remote memory response with a memory request identifier and removes the memory request identifier from the packet memory. A multiplexor receives remote memory responses and local memory responses. The multiplexor selects an output responsive to a control signal. Arbitration control logic is coupled to the multiplexor and the packet memory and develops the control signal to select a memory response for output.