

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



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

PCT

(10) International Publication Number
WO 01/77820 A2

(51) International Patent Classification⁷: **G06F 9/38**,
9/50, 9/46

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

(21) International Application Number: PCT/US01/01577

(22) International Filing Date: 16 January 2001 (16.01.2001)

(25) Filing Language: English

(26) Publication Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, 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, US, UZ, VN, YU, ZA, ZW.

(30) Priority Data:
09/534,191 24 March 2000 (24.03.2000) US

(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).

(71) Applicant (*for all designated States except US*): **INTEL
CORPORATION** [US/US]; 2200 Mission College Boule-
vard, Santa Clara, CA 95052 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **LEE, Chan, W.**
[KR/US]; 1730 SW Harbor Way, #605, Portland, OR
97201 (US). **HINTON, Glenn** [US/US]; 6130 NW 185th
Avenue, Portland, OR 97229 (US). **KRICK, Robert**
[US/US]; 3003 Waterstone Court, Fort Collins, CO 80525
(US).

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: METHOD AND APPARATUS FOR PARTITIONING A RESOURCE BETWEEN MULTIPLE THREADS WITHIN
A MULTI-THREADED PROCESSOR

(57) Abstract: A method of partitioning a memory resource, associated with a multi-threaded processor, includes defining the mem-
ory resource to include first and second portions that are dedicated to the first and second threads respectively. A third portion of
the memory resource is then designated as being shared between the first and second threads. Upon receipt of an information item,
(e.g., a microinstruction associated with the first thread and to be stored in the memory resource), a history of Least Recently Used
(LRU) portions is examined to identify a location in either the first or the third portion, but not the second portion, as being a least
recently used portion. The second portion is excluded from this examination on account of being dedicated to the second thread.



WO 01/77820 A2