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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 May 2003 (08.05.2003)

PCT

(10) International Publication Number
WO 03/038647 A2

(51) International Patent Classification[7]: G06F 15/78

(21) International Application Number: PCT/US02/34292

(22) International Filing Date: 25 October 2002 (25.10.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/017,031 30 October 2001 (30.10.2001) US

(71) Applicant: **INTEL CORPORATION (a Delawware Corporation)** [US/US]; 2200 Mission College Boulevard, Santa Clara, CA 95052 (US).

(72) Inventor: **KISS, David**; 2708 Barnstead Place, El Dorado Hills, CA 95762 (US).

(74) Agents: **TROP, Timothy, N.**; Trop, Pruner & Hu, P.C., 8554 Katy Freeway, Suite 100, Houston, TX 77024 et al. (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.

(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), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (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 "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 03/038647 A2

(54) Title: PACKAGED COMBINATION MEMORY FOR ELECTRONIC DEVICES

(57) Abstract: A variety of different types of memory (16, 18, 20, 22), providing a complete memory solution, may be packaged together with a processor (14). As a result, a variety of different memory needs may be available in one package (10), particularly for portable applications. The packaged integrated circuit (10) may include a cross-point memory (16), and a volatile memory (22).