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<div style="display: flex; justify-content: space-between;"> <div style="width: 48%; vertical-align: top;"> <p>(21) International Application Number: PCT/US99/20278</p> <p>(22) International Filing Date: 3 September 1999 (03.09.99)</p> <p>(30) Priority Data: .09/150,496 9 September 1998 (09.09.98) US</p> <p>(71) Applicant (for all designated States except US): INTEL CORPORATION [US/US]; 2200 Mission College Boulevard, Santa Clara, CA 95052 (US).</p> <p>(72) Inventors; and (75) Inventors/Applicants (for US only): CRAVER, Scott, A. [US/US]; 42 Afton Drive, Montgomery, IL 60538 (US). YEO, Boon-Lock [SG/US]; 969 Sutter Avenue, Sunnyvale, CA 94086 (US). YEUNG, Minerva, M. [CN/US]; 969 Sutter Avenue, Sunnyvale, CA 94086 (US).</p> <p>(74) Agents: MILLIKEN, Darren, J. et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025 (US).</p> </div> <div style="width: 48%; vertical-align: top;"> <p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, 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, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, 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).</p> <p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 8 June 2000 (08.06.00)</p> </div> </div>		
(54) Title: MULTI-LINEARIZATION DATA STRUCTURE FOR IMAGE BROWSING		
(57) Abstract <p>A method of displaying images is based on both a first linearization (103) and a second linearization (104). In one embodiment, the linearizations are performed by traversing two space-filling curves (103 and 104). In another embodiment, the linearizations are performed by traversing a cluster data structure. More than two linearizations may be displayed.</p>		
<pre> graph TD START([START]) --> 101[101 COMPUTE THE HISTOGRAM H(Ij) OF IMAGE Ij] 101 --> 102[102 TREAT THE K-BIN HISTOGRAM AS A POINT p(j) IN A EUCLIDIAN K-SPACE] 102 --> 103[103 COMPUTE p(j)'S POSITION IN A HILBERT TRAVERSAL OF THE K-SPACE. DENOTE THE POSITION AS H(p(j))] 103 --> 104[104 COMPUTE p(j)'S POSITION IN A PEANO TRAVERSAL OF THE K-SPACE. DENOTE THE POSITION AS P(p(j))] 104 --> 105[105 LOCATE p(j)'S NEIGHBORS IN THE LINKED DATA STRUCTURE, AND UPDATE THEIR LINKS ACCORDING TO H(p(j)) and P(p(j))] 105 --> END([END]) </pre>		

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/20278**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) : G06K 9/54, 9/60

US CL : 707/104, 500, 502; 382/305

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 707/104, 500, 502; 382/305; 345/345, 346, 348

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST, CAS ONLINE, IEEE/IEL ONLINE, PLUS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KUAN et al. Fast k nearest neighbour search for R-tree family Proc. of 1997 International Conference on Information, Communications and Signal Processing. September 1997 pages 924-928	1-21
A	BERCHTOLD et al. Fast parallel similarity search in multimedia database, Proc. of the ACM SIGMOD international conference on management of data, May 1997, pages 1-12	1-21
Y	FALOTUSOS et al. Fractals for Secondary Key Retrieval, Technical Report CS-TR-2242. Univ. of Maryland Institute for Advanced Computer Studies, May 1989. pp 1-17	1-21
A,P	US 5,893,095 A (JAIN et al.) 06 April 1999, ALL	1-21

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

JINGGE WU

Telephone No. (703) 305-3900