

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
18 December 2003 (18.12.2003)

PCT

(10) International Publication Number
WO 2003/104965 A3

(51) International Patent Classification⁷: **G06F 3/033**,
G06T 7/00, G01S 3/784

(21) International Application Number:
PCT/GB2003/002533

(22) International Filing Date: 9 June 2003 (09.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0213215.7 8 June 2002 (08.06.2002) GB

(71) Applicant (*for NI only*): **HALLAM, Arnold, Vincent**
[GB/GB]; 5 The Quadrant, Coventry CV1 2EL (GB).

(71) Applicants and

(72) Inventors: **LIPMAN, Robert, Michael** [IL/IL]; 2-B
Sorotzkin St., 94423 Jerusalem (IL). **LIPMAN, Sarah,
Michelle** [IL/IL]; 2-B Sorotzkin St., 94423 Jerusalem (IL).

(74) Agents: **HALLAM, Arnold, Vincent et al.**; Marks &
Clerk, 144 New Walk, Leicester LE1 7JA (GB).

(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, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, 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, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

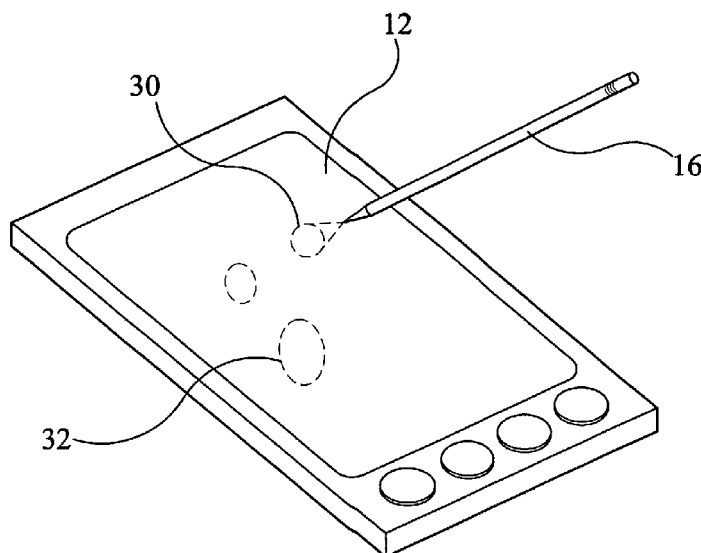
Published:

- *with international search report*
- *before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments*

(88) Date of publication of the international search report:
10 June 2004

[Continued on next page]

(54) Title: COMPUTER NAVIGATION



(57) **Abstract:** An electronic device (10) comprises a display (12) for displaying data stored on said electronic device (10); input means (16); sensing means (20) for sensing the three-dimensional position of the input means (16) relative to said device (10); and control means for controlling the data displayed on said display (12) in dependence on the three-dimensional position of the input means (16) relative to said device (10). The input means (16) includes a source of electromagnetic radiation for directing an infrared conical beam onto the display (12). The sensing means (20) can sense the elliptical eccentricity of the electromagnetic radiation incident on the display (12) to determine the angle at which it strikes the display (12), and can sense the area of the electromagnetic radiation incident on the display (12) to determine the distance of the input means (16) from the display (12).

WO 2003/104965 A3



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.