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

(19) World Intellectual Property Organization
International Bureau

PCT

(43) International Publication Date
28 August 2008 (28.08.2008)

(10) International Publication Number
**WO 2008/103231 A3**

(51) **International Patent Classification:**
*G06F 1/32* **(2006.01)** *B60R 16/03* **(2006.01)**
*H02J 9/00* **(2006.01)**

(21) **International Application Number:**
**PCT/US2008/001336**

**(22) International Filing Date:** 31 January 2008 (31.01.2008)

**(25) Filing Language:** English

**(26) Publication Language:** English

**(30) Priority Data:**
11/708,288 20 February 2007 (20.02.2007) US

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(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available):* AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, **HR,** HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, **BJ,** CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*[Continued on next page]*

**(54) Title:** METHOD FOR REDUCING QUIESCENT POWER DRAW AND MACHINE USING SAME

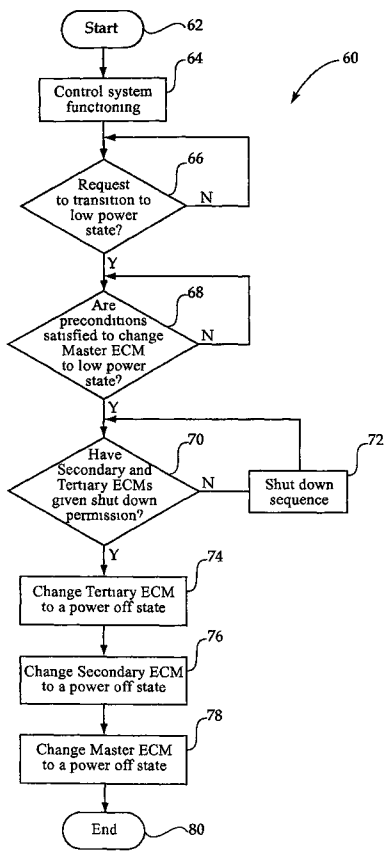



Figure 4

**(57) Abstract:** A machine includes a master electronic control module (40) and at least one secondary electronic control module (42, 44). A method of operating the machine includes steps of determining whether preconditions are satisfied for changing the master electronic control module (40) from an operating state to a low power state, and determining whether preconditions are satisfied for changing the secondary electronic control module (42, 44) from an operating state to a power off state. The method also includes steps of changing the secondary electronic control module (42, 44) from the operating state to the power off state, and changing the master electronic control module (40) from the operating state to the low power state.

WO 2008/103231 A3

**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:**
16 October 2008

# INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/001336

**A. CLASSIFICATION.OF SUBJECT MATTER**
INV. G06F1/32 H02J9/00 B60R16/03

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)
G06F H02J B60R

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 practical, search terms used)
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**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | US 2005/168072 A1 (SAITO HIROYUKI [OP] ET AL) 4 August 2005 (2005-08-04) paragraphs [0131], [0208]; figures 1,28 | 1,2,4, 6-8 |
| X | EP 0 515 042 A (PIONEER ELECTRONIC CORP [JP]) 25 November 1992 (1992-11-25) column 10, line 52 - column 11, line 34; figure 1 | 1,2,4,7, 8 |
| X | US 2003/159076 A1 (DELISLE DAVID J [US] ET AL) 21 August 2003 (2003-08-21) paragraph [0013] | 1,7 |

D Further documents are listed in the continuation of Box C.

X See patent family annex.

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| Date of the actual completion of the International search | Date of mailing of the international search report |
|---|---|
| 27 May 2008 | 14/08/2008 |

| Name and mailing address of the ISA/ | Authorized officer |
|---|---|
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2008/001336

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| US 2005168072 A1 | 04-08-2005 | NONE | |
| EP 0515042 A | 25-11-1992 | DE 69203039 D1 | 27-07-1995 |
| | | DE 69203039 T2 | 22-02-1996 |
| | | JP 4326897 A | 16-11-1992 |
| US 2003159076 A1 | 21-08-2003 | NONE | |