

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>(51) International Patent Classification <sup>6</sup>:</b><br><b>G06F 9/00, 7/06, 11/10</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 99/63428</b><br><b>(43) International Publication Date:</b> 9 December 1999 (09.12.99)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>(21) International Application Number:</b> PCT/US99/07843<br><b>(22) International Filing Date:</b> 9 April 1999 (09.04.99)<br><b>(30) Priority Data:</b><br>09/087,302      29 May 1998 (29.05.98)      US<br><b>(71) Applicant:</b> MOTOROLA INC. [US/US]; 1303 East Algonquin Road, Schaumburg, IL 60196 (US).<br><b>(72) Inventors:</b> MITRA, Rajat, K.; 3107 Francis Avenue, Mansfield, MA 02048 (US). TANN, Christopher; 377 Manilla Drive, San Jose, CA 95119 (US).<br><b>(74) Agents:</b> WOOD, J., Ray et al.; Motorola Inc., Intellectual Property Dept., 1303 East Algonquin Road, Schaumburg, IL 60196 (US).                                                                                                                                                                                                                                                                                                                                                                 |           | <b>(81) Designated States:</b> 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, UZ, VN, YU, 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).<br><br>Published<br><i>With international search report.</i> |
| <b>(54) Title:</b> SYSTEM, DEVICE, AND METHOD FOR COMMUNICATING WITH AND INITIALIZING A COMPUTER PERIPHERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <pre> graph TD     102[HOST CPU] &lt;--&gt; 108 CPU LOCAL BUS  106[CACHE/BRIDGE]     106 &lt;--&gt; 110 MEMORY BUS  104[MEMORY]     106 &lt;--&gt; 114[PCI BUS]     114 &lt;--&gt; 112_1[PCI PERIPHERAL 112_1]     114 &lt;--&gt; 112_N[PCI PERIPHERAL 112_N]     114 &lt;--&gt; 300[PCI PERIPHERAL 300]     subgraph 800         102         106         104         114         112_1         112_N         300     end       </pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>(57) Abstract</b><br><p>A system (800), device, and method allowing a host device (102) to communicate with, and initialize, an uninitialized peripheral device includes, on the peripheral device (300), logic for storing a separate mask corresponding to each of a plurality of memory locations, and logic, responsive to a request for reading a memory location, for outputting a bit-wise exclusive-OR of data stored in the memory location and the corresponding mask, the mask is equal to a bit-wise exclusive-OR of a predetermined configuration value and a preset value, if the memory location is not preprogrammed with configuration information, the bit-wise exclusive-OR of the data stored in the host device is able to communicate with the peripheral device, the host device programs the peripheral device by storing in the memory location a new data value equal to the bit-wise exclusive-OR of a new configuration value and the corresponding mask.</p> |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |