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12/814,246 11 June 2010 (11.06.2010) US(71) Applicant (for all designated States except US): **INTEL CORPORATION** [US/US]; 2200 Mission College Boulevard, Santa Clara, California 95052 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SAKTHIKUMAR, Palsamy** [IN/US]; 11703 138th Street Ct. E., Puyallup, Washington 98374 (US). **SWANSON, Robert C.** [US/US]; 7142 Grayhawk Lane NE, Olympia, Washington 98516 (US). **ZIMMER, Vincent J.** [US/US]; 1937 S. 369th Street, Federal Way, Washington 98003 (US). **ROTHMAN, Michael A.** [US/US]; 11905 183rd Street East, Puyallup, Washington 98374 (US). **BULUSU, Mallik** [IN/US]; 3243 Lady Fern Lp NW, Olympia, Washington 98502 (US).(74) Agents: **VINCENT, Lester J.** et al.; Blakely Sokoloff Taylor & Zafman, 1279 Oakmead Parkway, Sunnyvale, California 94085 (US).

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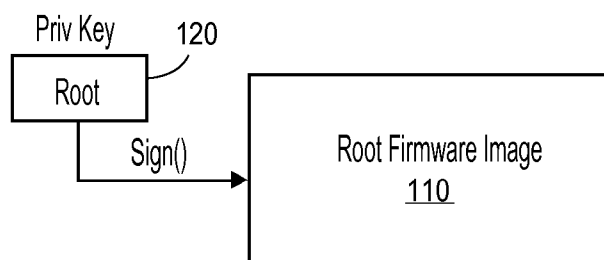
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(54) Title: MULTI-OWNER DEPLOYMENT OF FIRMWARE IMAGES

**FIG. 1**
(PRIOR ART)

(57) Abstract: A method, apparatus, system, and computer program product for multi-owner deployment of firmware images. The method includes obtaining a signed firmware image that comprises a first code module signed by a first code owner and a second code module signed by a second code owner. The method further includes obtaining an updated first code module comprising updated code for the first code module, verifying that the updated first code module is signed by the first code owner, and updating the signed firmware image with the updated first code module in response to verifying that the updated first code module is signed by the first code owner. The signed firmware image may further comprise an access control list that authorizes updates to the first code module by the first code owner and updates to the second code module by the second code owner.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/040020**A. CLASSIFICATION OF SUBJECT MATTER****G06F 9/22(2006.01)i, G06F 9/06(2006.01)i**

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 9/22; G06F 12/16; G06F 9/44; G06F 12/14; G06F 9/00; H04L 9/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: firmware, update, signature, multi-user, software,

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2010-0077199 A1 (HOBSON, L.B. et al.) 25 March 2010 See abstract, paragraphs [0023]-[0026], claim 1, and figures 3,5.	1-16
A	KR 10-2003-0033396 A (GTRAN, INC.) 01 May 2003 See the whole document.	1-16
A	US 05844986A A (DAVIS, D.L.) 01 December 1998 See abstract, column 3 line 47 - column 4 line 46, claims 1,2,6,19, and figure 3.	1-16
A	US 2006-0107071 A1 (GIRISH, M. et al.) 18 May 2006 See abstract, paragraphs [0035]-[0037], claim 1, and figure 4.	1-16
A	US 2008-0052698 A1 (OLSON, K.J. et al.) 28 February 2008 See abstract, paragraphs [0043]-[0044], claims 1,6-7,13, and figures 3-5A.	1-16



Further documents are listed in the continuation of Box C.



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Authorized officer

Hwang, Seung Hee

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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