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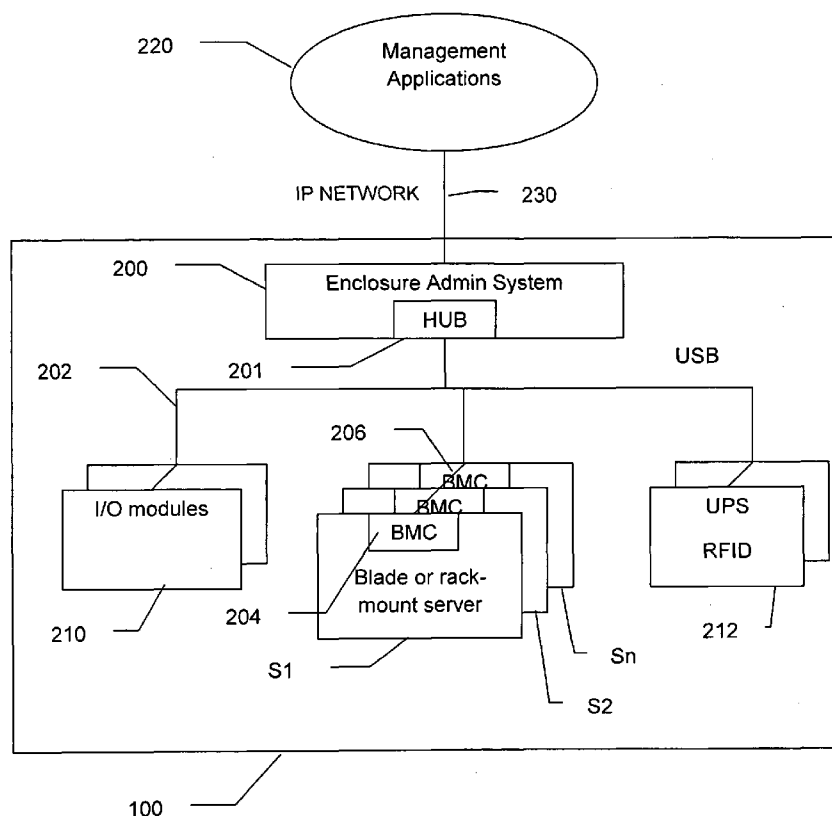
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[Continued on next page]

(54) Title: CENTRALIZED SERVER RACK MANAGEMENT USING USB

FIG. 2



(57) Abstract: A multi-server computing system includes a plurality of server modules (S1-Sn) mounted in an enclosure; each server has a universal serial bus (USB) interface (204). An enclosure onboard administration (OA) module (200) is also mounted in the enclosure and has an addressable communication interface (230) for connection to a remote management system (220) and a USB interface (202) connected to each of the plurality of servers. The USB interface of the enclosure OA operates as a master and the USB interface of each of the plurality of servers acts as a slave to the enclosure OA, such that each of the server modules can be managed by the remote management system using a single communication address.



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).

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Declarations under Rule 4.17:

- *as to the identity of the inventor (Rule 4.17(i))*
- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/007406**A. CLASSIFICATION OF SUBJECT MATTER****G06F 15/00(2006.01)i, G06F 15/16(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)

IPC : G06F

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 since 1975

Japanese Utility Models and applications for utility models since 1975

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

eKIPASS(KIPO internal), Google, IEEE xpl, "USB backplane", "server blade", "management"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006-0236155 A1 (LEE CHUN-LIANG, et al.) 19 October 2006 See abstract, Figures 1-2, description [0004]-[0031], claims	1-11
Y	US 2003-0005196 A1 (REED RICHARD E.) 02 January 2003 See abstract, Figures 1-6, description [0006]-[0024], claims	1-11
Y	US 2006-0095595 A1 (DALTON JAMES WILLIAM,, et al.) 04 May 2006 See abstract, Figure 6, description [0071]-[0086], claims	1-11
Y	US 7003563 B2 (LEIGH KEVIN B., et al.) 21 February 2006 See abstract, Figure 3, description row 52 column 3 - row 29 column 5, claims	1-11

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

* Special categories of cited documents:

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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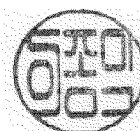
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006-0236155 A1	19.10.2006	NONE	
US 2003-0005196 A1	02.01.2003	NONE	
US 2006-0095595 A1	04.05.2006	NONE	
US 7003563 B2	21.02.2006	US 2003-0088655 A1	08.05.2003