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[Continued on next page]

(54) Title: DATA CENTER THERMAL MONITORING

(57) Abstract: A measurement indicative of a temperature of a computer is received and a thermal health value for the computer is calculated based on the measurement.

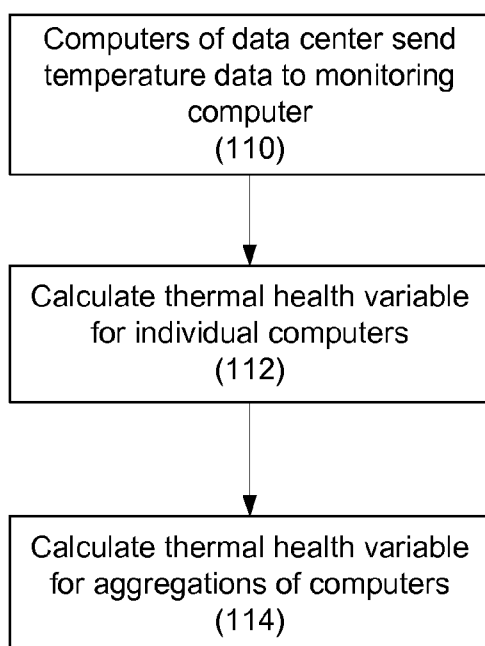


FIG. 4



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ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,
SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/048966**A. CLASSIFICATION OF SUBJECT MATTER****G06F 15/00(2006.01)i, G06F 9/00(2006.01)i, G06F 1/00(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 15/00; G06F 1/00; G06F 1/32; G06F 11/00; H02H 3/05

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)

eKOMPASS(KIPO internal) & Keywords: temperature,performance,monitor

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008-0046766 A1 (CHIEU, TRIEU C. et al.) 21 February 2008 See abstract, figures 1-5 and 8-9, description [0025]-[0044] and claims	1-9, 11-13, 18-26, 28-30
A	US 7360122 B2 (SRIVASTAVA, RAHUL et al.) 15 April 2008 See abstract and claims	1-34
A	US 6338150 B1 (JOHNSON, KARL S. et al.) 08 January 2002 See abstract and claims	1-34
A	US 2005-0289376 A1 (HARTMAN, STEVEN PAUL et al.) 29 December 2005 See abstract and claims	1-34



Further documents are listed in the continuation of Box C.



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Date of the actual completion of the international search

13 JANUARY 2010 (13.01.2010)

Date of mailing of the international search report

14 JANUARY 2010 (14.01.2010)

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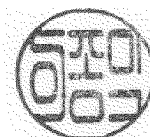
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008-0046766 A1	21.02.2008	CN 101131659 A	27.02.2008
US 7360122 B2	15.04.2008	US 2003-221002 A1 US 2008-215924 A1	27.11.2003 04.09.2008
US 6338150 B1	08.01.2002	AU 1998-84935 B2 AU 747211 B2 CA 2296620 A1 EP 0994700 A4 JP 2001-510150 A US 2002-042896 A1 US 2004-153786 A1 US 2007-101193 A1 US 6681342 B2 US 7552364 B2 WO 1999-003452 A1	17.07.1998 09.05.2002 28.01.1999 18.10.2000 31.07.2001 11.04.2002 05.08.2004 03.05.2007 20.01.2004 23.06.2009 28.01.1999
US 2005-0289376 A1	29.12.2005	US 2008-077282 A1 US 7353409 B2 US 7536571 B2	27.03.2008 01.04.2008 19.05.2009