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[Continued on next page]

- (54) Title: SYSTEM AND METHOD FOR DISTRIBUTED COMPUTATION USING HETEROGENEOUS COMPUTING NODES

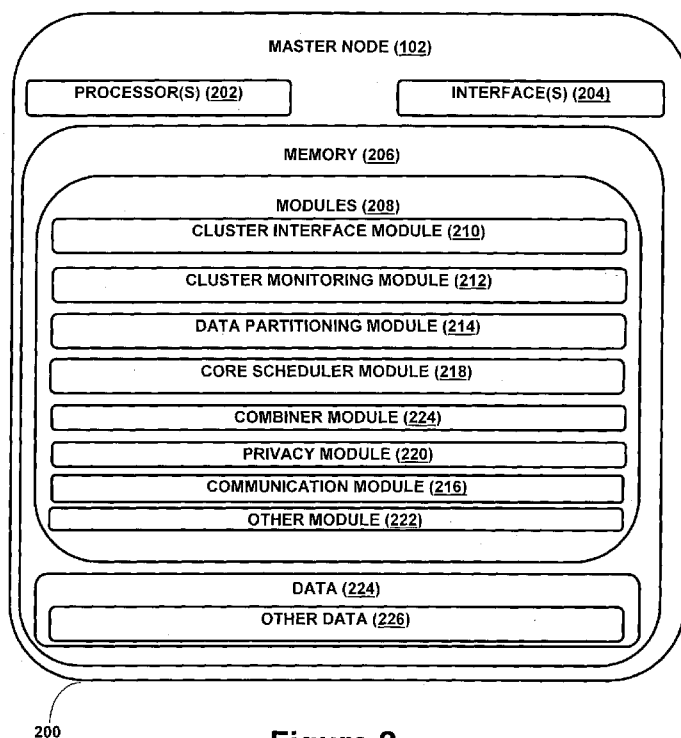


Figure 2

(57) Abstract: Disclosed is a system and method of utilizing plurality of constrained edge devices for distributed computation. The system enables integration of the edge devices like residential gateways and smart phone into a grid of distributed computation. The edged devices with constrained bandwidth, energy, computation capabilities and combination thereof are optimized dynamically based on condition of communication network. The system further enables scheduling and segregation of data, to be analyzed, between the edge devices. The system may further be configured to preserve privacy associated with the data while sharing the data between the plurality of devices during computation.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 21/00 (2015.01)

CPC - G06F 21/62 (2014.11)

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(8) - G06F 9/38, 9/46, 9/50, 11/32, 15/16, 17/30, 21/00; H04B 7/216; H04L 9/32; (2015.01)

USPC - 709/226; 718/102,104; 726/1, 3;

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

CPC - G06F 9/465, 9/505, 9/5044, 9/5066, 21/64, 21/62, 2209/501, 2209/503; G06Q 10/1; H04L 9/3093, 9/3247; Y10S 707/99932 (2014.11) (keyword delimited)

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

Orbit, Google Patents, Google Scholar, Google.

Search terms used: distributed computation, grid computing, heterogenous, privacy, security, optimize, bandwidth, power, data encoding

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/0297441 A1 (Boldyrev et al) 15 November 2012 (15.11.2012) entire document	1-4, 6-8, 10-12, 14-15, 17
Y		5, 9, 13, 16
Y	US 2012/0159506 A1 (Barham et al) 21 June 2012 (21.06.2012) entire document	9, 13
Y	US 8,010,668 B1 (Rothstein et al.) 30 August 2011 (30.08.2011) entire document	5, 16
A	US 2010/0162036 A1 (Linden et al) 24 June 2012 (24.06.2010) entire document	1-17
A	US 8,130,917 B2 (Helbling et al.) 06 March 2012 (06.03.2012) entire document	1-17
A	US 8,392,593 B1 (Wadhwa et al.) 05 March 2013 (05.03.2013) entire document	1-17

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

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"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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