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(54) Title: SYSTEM AND METHOD FOR PARALLEL PROCESSING USING DYNAMICALLY CONFIGURABLE PROACTIVE CO-PROCESSING CELLS

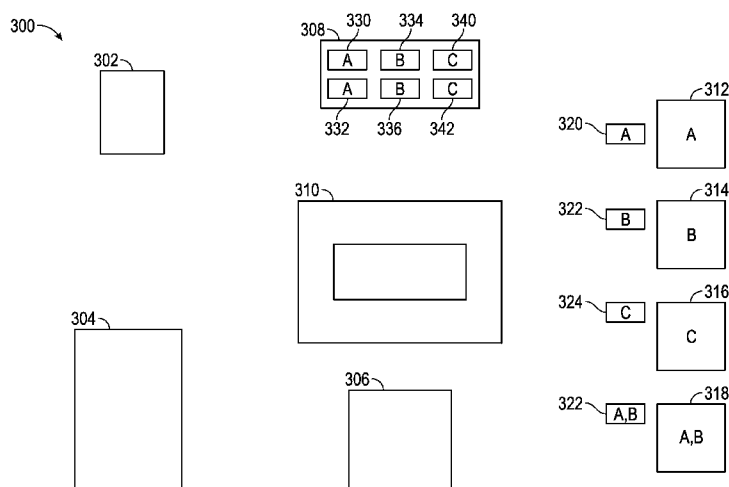


FIG. 3

(57) Abstract: A parallel processing architecture includes a CPU, a task pool populated by the CPU, and a plurality of autonomous co-processing cells each having an agent configured to proactively interrogate the task pool to retrieve tasks appropriate for a particular so-processor. Each co-processor communicates with the task pool through a switching fabric, which facilitates connections for data transfer and arbitration between all system resources. Each so-processor notifies the task pool when a task or task thread is completed, whereupon the task pool notifies the CPU.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US15/39993

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 9/46, 9/50, 9/54 (2015.01)

CPC - G06F 9/4843, 9/5044, 9/546

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 9/30, 9/46, 9/48, 9/50, 9/54 (2015.01)

CPC: G06F 9/4843, 9/4881, 9/5044, 9/50, 9/546

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

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

PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data)

Keywords: parallel, processor, thread, task, pool, core, cell, notification, complete, scheduler, controller, dispatch, distribute, agent, message, queue

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 2001/0000194 A1 (SEQUEIRA, W.) 05 April 2001; figures 2, 3B, 3C, 4A, 4; paragraphs [0043], [0044], [0055], [0057].	1-6, 9-11, 13, 16, 18, 20 ----- 7-8, 12, 14-15, 17, 19
Y	US 2013/0160026 A1 (KUESEL, J. et al.) 20 June 2013; figure 3.	7
Y	US 2013/0036425 A1 (ZIMMERMANN, M.) 07 February 2013; figure 1; paragraphs [0024], [0026].	8, 14-15, 17, 19
Y	US 8,108,867 B2 (ROBISON, A.) 31 January 2012; figure 1; column 3, lines 57-62; column 4, lines 4-16.	12

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

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