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[Continued on next page]

(54) Title: SYSTEM-ON-CHIP FABRIC, AS WELL AS METHOD AND SYSTEM FOR PRODUCING IT

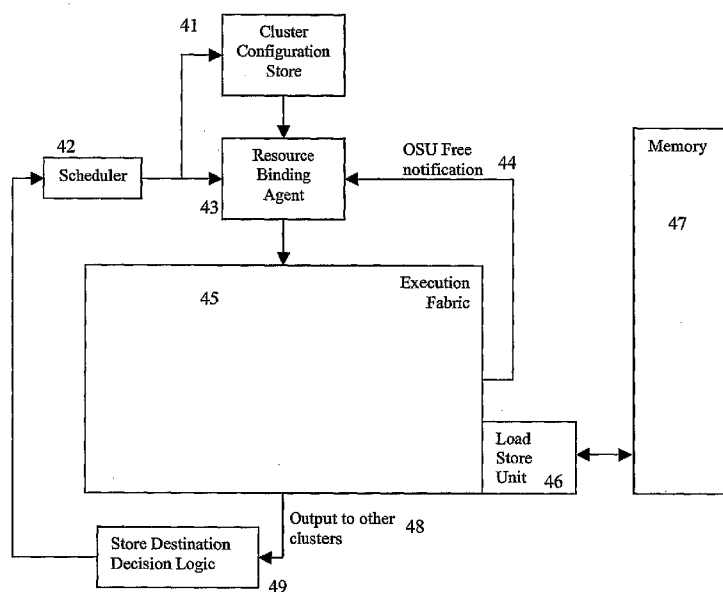


Fig-4

(57) Abstract: This invention provides a fabric within a SoC framework, along with a system and method, in which resources can be composed as computational structures that best match the application's needs. The fabric, disclosed herein, contains compute, storage and communication resources that can be aggregated at runtime to perform specific application tasks. The system comprises of a scheduler (42), a cluster configuration store (41), an execution fabric (45) containing a plurality of computational resources, a resource binding agent (43), a Load Store Unit (46), and Store Destination Decision Logic (49). The method of the present invention comprises the steps of developing High Level Language (HLL) descriptions of applications modules; converting the HLL description of the modules of the application to an intermediate representation; compiling into clusters using the dataflow graph of the application; performing binding operations; and Performing controlled dataflow execution wherein a set of clusters are scheduled and executed on the fabric.

**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))*
- *of inventorship (Rule 4.17(iv))*

- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>8</sup>: **G06F 15/76** (2006.01); **G06F 9/30** (2006.01); **G06F 17/50** (2006.01)

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<sup>8</sup>: G06F

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)

EPODOC, WPI, IEEE Xplore, esp@cenet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 2005/0283768 A1 (OZONE) 22 December 2005 (22.12.2005) <i>abstract, paragraphs 11-15; figs. 1, 3-5, 8, 13, 14</i>	1-7, 9-13, 16 8, 14, 15, 17
Y A	US 6175948 B1 (MILLER et al.) 16 January 2001 (16.01.2001) <i>abstract; claims 1, 3</i>	1-7, 9-13, 16 8, 14, 15, 17
Y A	US 2005/0021871 A1 (GEORGIU et al.) 27 January 2005 (27.01.2005) <i>abstract, figs. 5, 8</i>	1-7, 9-13, 16 8, 14, 15, 17

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

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2004/004008 A1 (KONINKL PHILIPS ELECTRONICS NV) 8 January 2004 (08.01.2004) <i>abstract, figs. 1-4</i>  -----	1-17

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Information on patent family members

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