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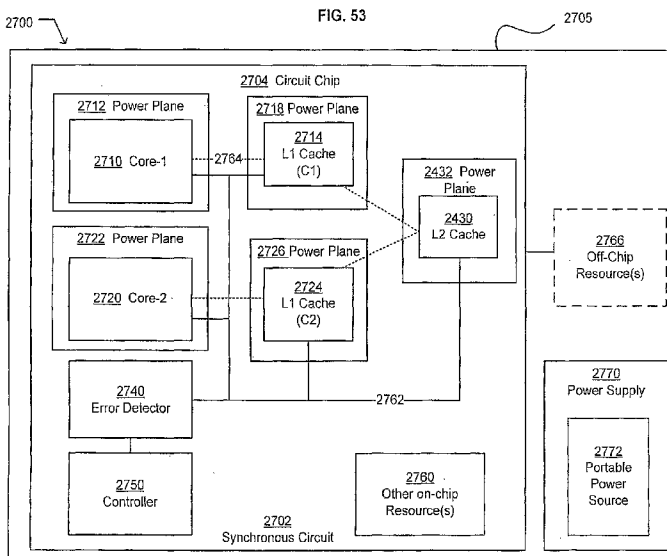
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(54) Title: POWER SPARING SYNCHRONOUS APPARATUS



(57) Abstract: Embodiments include a system, an apparatus, a device, and a method. An apparatus includes a synchronous circuit including a first subcircuit powered by a first power plane having a first power plane voltage and a second subcircuit powered by a second power plane having a second power plane voltage. The apparatus also includes an error detector operable to detect an incidence of a computational error occurring in the first subcircuit. The apparatus includes a controller operable to change the first power plane voltage based upon the detected incidence of a computational error. The apparatus also includes a power supply configured to electrically couple with a portable power source and operable to provide a selected one of at least two voltages to the first power plane in response to the controller.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/02298

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **G06F 12/00(2006.01)**

USPC: 711/163
 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)
 U.S. : 711/163; 714/14; 713/300, 310, 330, 340

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)
 Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,774,736 A (WRIGHT et al.) 30 June 1998 (30.06.1998), entire document.	1-22
Y	US 5,526,313 A (ETOH et al.) 11 June 1996 (11.06.1996), entire document.	1-22
Y	US 6,924,790 B1 (BI) 02 August 2005 (02.08.2005), entire document.	3 and 14

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

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent published on or after the international filing date	"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
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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INTERNATIONAL SEARCH REPORT

International application No.

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Continuation of B. FIELDS SEARCHED Item 3:

EAST: US-PGPUB; USPAT; USOCR

Search terms: power plane, processor, processing, look\$3, check\$4, detect\$7, discover\$3, error, erron\$5, fail\$5, arithm\$7, fault, lockstep, lock-step, synchron\$7, duplex, primary, secondary, process\$7, DMR, TMR, dual, triple, tri, modular, redundan\$5, volt\$3, reduc\$3, drop\$3, lesser\$3, decreas\$4, increas\$4, adjust\$3, modif\$7, alter\$3, chang\$3, vary\$3, varie\$3, voltage, potential, comput\$7, calculat\$3