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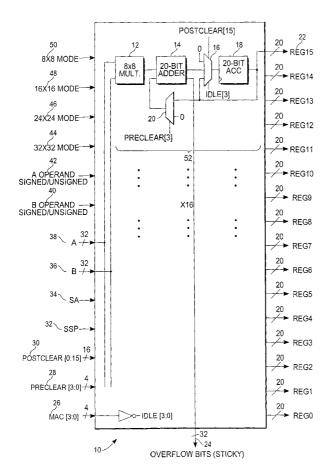
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[Continued on next page]

#### (54) Title: METHOD AND SYSTEM FOR PERFORMING OPERATIONS ON DATA AND TRANSFERRING DATA



(57) Abstract: Methods and systems for performing operations on data, such as parallel integer multiply accumulate operations on packed data and SIMD operations, and transferring data, are provided. A multiple accumulate unit ("MAC") (10) performs operations on packed integer data and allows results to be individually retrieved from registers (22) and the corresponding accumulator (18) cleared after the read cycle. SIMD instructions, including parallel absolute value and parallel conditional move instructions, as well as a method and circuit for saturating results of operations are provided. Scatter/gather mode for DMA transfer of data provides a table of buffer descriptors which may be used in automatic buffer switching and a table of packet descriptors describing location and size of incoming data, thus decoding packet sizes from buffer sizes.

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ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### **Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

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### INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/24667

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A. CLASSIFICATION OF SUBJECT MATTER					
IPC(7) : G06F 7/48 US CL : 708/523,513					
According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELDS SEARCHED					
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Decumentation appelled attached attached attached					
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)					
	JMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where a			Relevant to claim No.	
A	US 2003/0097391 A (SAULSBURY) 22 May 2003,	see the ent	ire document	1-22	
A	YIO C 205 COL 1 (DDY FIG 1) 73 C . 2002			1.00	
A	US 6,385,634 A (PELEG et al ) 7 May 2002, see th	e entire do	cument	1-22	
A	US 6,282,556 A (CHEHRAZI et al) 28 August 2001	l. see the e	ntire document	1-22	
	os s,252,555 ir (criminale) et ally 25 raugust 2001, see the critic document				
A	US 6,230,180 A (MOHAMED) 8 May 2001, see the entire document			1-22	
				<u> </u>	
Further	documents are listed in the continuation of Box C.		See patent family annex.		
* S	pecial categories of cited documents:	"T"	later document published after the in	ternational filing date or priority	
"A" document defining the general state of the art which is not considered to be			date and not in conflict with the application but cited to understand the principle or theory underlying the invention		
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•	which may throw doubts on priority claim(s) or which is cited to		when the document is taken alone		
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"O" document	referring to an oral disclosure, use, exhibition or other means		being obvious to a person skilled in the		
	published prior to the international filing date but later than the	"&"	document member of the same patent	t family	
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## INTERNATIONAL SEARCH REPORT

International application No.

	PC17US04/24667				
Box IV TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)					
The technical features mentioned in the abstract do not include a reference sign between	parentheses (PCT Rule 8.1(d)).				
NEW ABSTRACT Methods and systems for performing operations on data, such as parallel integer multiply ac	cumulate operations on packed data and				
SIMD operations, and transferring data, are provided. A multiply accumulate unit ("MAC") (10) performs operations on packed integer data and allows results to be individually retrieved from registers (22) and the corresponding accumulator (18) cleared after the read cycle. SIMD instructions, including parallel absolute value and parallel conditional move instructions, as well as a method and circuit for saturating results of operations are provided. Scatter/gather mode for DMA transfer of data provides a table of buffer descriptors which may be used in automatic buffer switching and a table of packet descriptors describing location and size of incoming data, thus decoding packet sizes from buffer sizes.					