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(54) Title: SHIFT-ADD BASED MULTIPLICATION

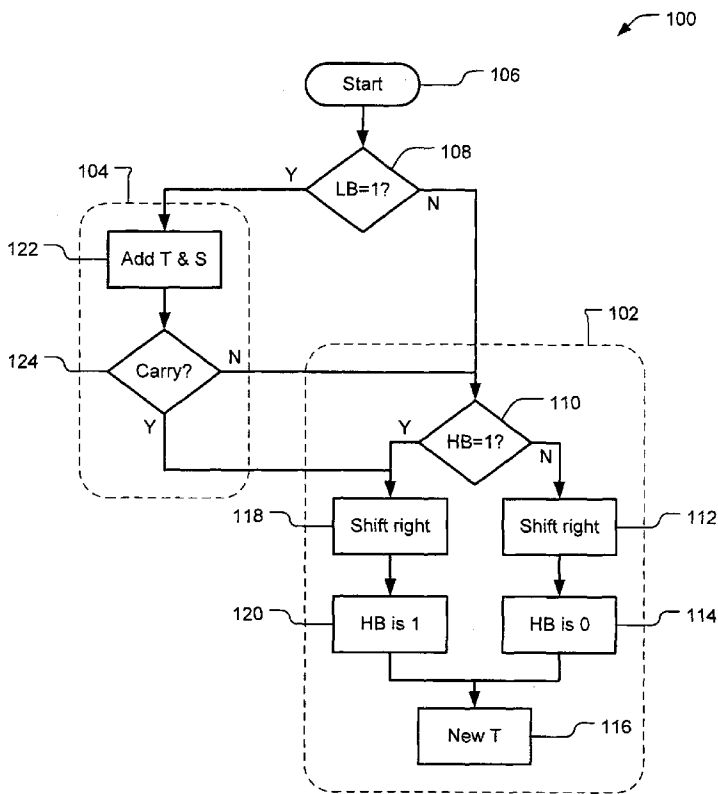


FIG. 6

(57) Abstract: A system for multiplication of multi-bit first and second values. A processor is provided that has first and second memories with bit-positions that can all be zero or one and where the first memory has a low bit (LB). The first value is arranged in the first memory so its LSB is in the first memory LB, and the remaining bit-positions in the first memory are set to zero. The second value is arranged in the second memory such that its LSB is in the bit-position of the second memory that is next higher in order than the MSB of the first value in the first memory, and the remaining bit-positions in the second memory are set to zero. A +\* operation is then performed a quantity of times equaling the number of significant bits in the first value, inclusive, thus obtaining the product of the first and second values.

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**B. FIELDS SEARCHED**

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Korean Utility models and applications for Utility models since 1975

Japanese Utility models and application for Utility models since 1975

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

e-KIPASS(KIPO internal) : "multiplication", "register", "LSB", "MSB", "shift", "add"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,539,685 A (OTAGURO) 23 July 1996 See the abstract, column 9, line 11 - column 10, line 49, and figures 10-12	1-4
A	US 5,535,151 A (KUROKAWA) 9 July 1996 See the abstract, column 3, line 25 - column 6, line 7, and figures 5-7	1-4
A	US 5,117,385 A (GEE) 26 May 1992 See the abstract, column 3, line 23 - column 8, line 12, and figures 2-3	1-4
A	US 6,760,742 B1 (HOYLE) 6 July 2004 See the abstract, column 7, line 22 - column 8, line 49, and figures 5A-6	1-4

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

\* Special categories of cited documents:

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		EP 0447244 A3	06.05.1992
		JP 05-040608 A	19.02.1993
US 6760742 B1	06.07.2004	NONE	