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(54) **ASYNCHRONOUS CONVERSION
 CIRCUITRY APPARATUS, SYSTEMS, AND
 METHODS**

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 claimer.

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327/141; 375/354; 375/370; 365/233; 326/93;
326/39; 455/63.4; 455/115.1; 455/115.3

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See application file for complete search history.

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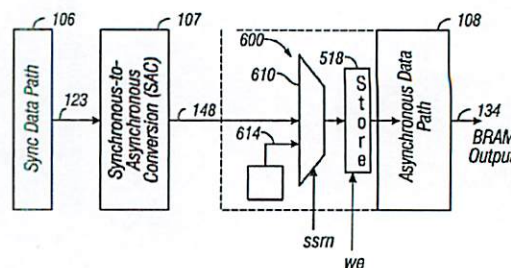
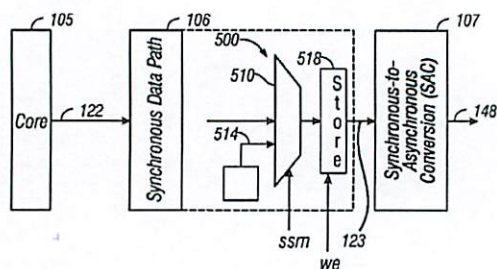
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(57) **ABSTRACT**

Apparatus, systems, and methods operate to receive a suffi-
 cient number of asynchronous input tokens at the inputs of an
 asynchronous apparatus to conduct a specified processing
 operation, some of the tokens decoded to determine an opera-
 tion type associated with the specified processing operation;
 to receive an indication that outputs of the asynchronous
 apparatus are ready to conduct the specified processing
 operation; to signal a synchronous circuit to process data
 included in the tokens according to the specified processing
 operation; and to convert synchronous outputs from the syn-
 chronous circuit into asynchronous output tokens to be pro-
 vided to outputs of the asynchronous apparatus when the
 synchronous outputs result from the specified processing
 operation. Additional apparatus, systems, and methods are
 disclosed.

20 Claims, 9 Drawing Sheets



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