

[54] **METHOD OF REMOVING GATED CLOCKS FROM THE CLOCK NETS OF A NETLIST FOR TIMING SENSITIVE IMPLEMENTATION OF THE NETLIST IN A HARDWARE EMULATION SYSTEM**

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[21] Appl. No.: 844

[22] Filed: Feb. 26, 1993

#### Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 13,025, Jan. 29, 1993, abandoned.

[51] Int. Cl.<sup>6</sup> ..... G06G 7/48; G06F 17/00

[52] U.S. Cl. .... 364/578; 364/580; 371/222

[58] Field of Search ..... 364/578-580, 364/232.3, 927.81; 371/16.2, 22.1, 22.2, 23, 27; 340/825.22, 825.06, 825.88, 825.89, 825.83, 825.84; 307/465, 468, 219, 303; 357/45; 395/500; 365/201; 370/13, 14, 17

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##### U.S. PATENT DOCUMENTS

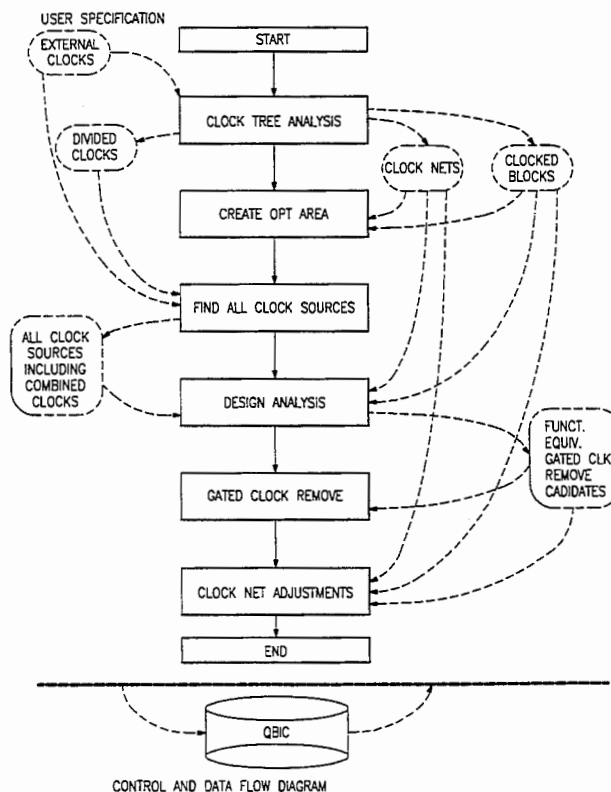
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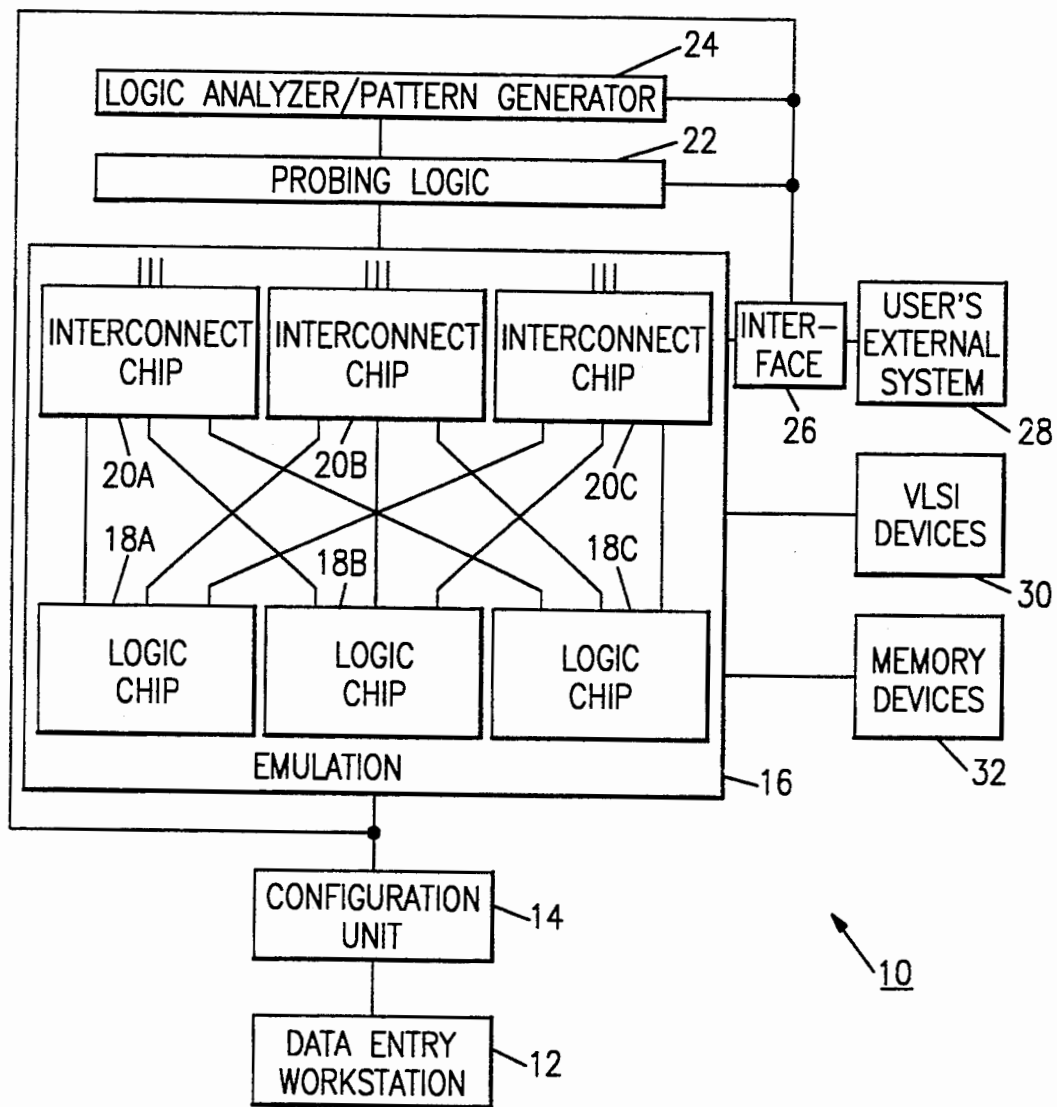
Primary Examiner—Ellis B. Ramirez  
Assistant Examiner—Craig Steven Miller  
Attorney, Agent, or Firm—Lyon & Lyon

#### [57] ABSTRACT

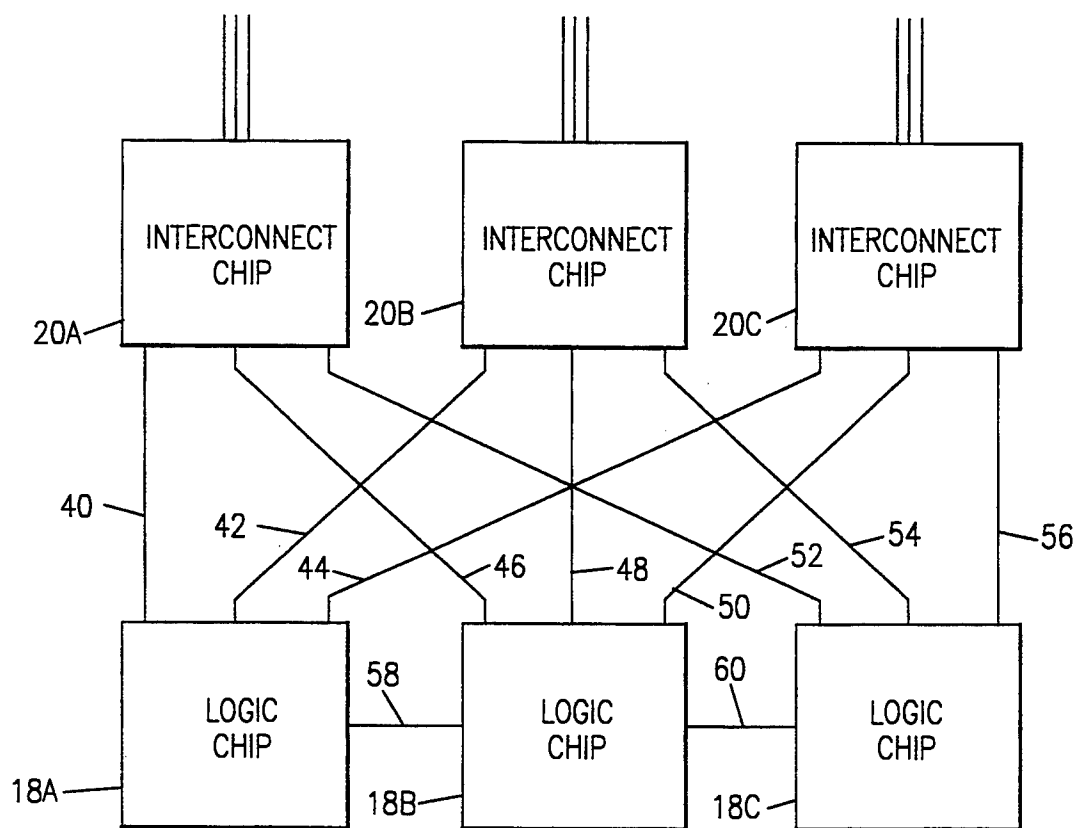
An emulation system and method that reduces or eliminates the number of timing errors such as hold time violations when implementing a netlist description of an integrated circuit. The emulation system comprises a plurality of reprogrammable logic circuits and a plurality of reprogrammable interconnect circuits. The netlist description is optimized to reduce the number of timing violations by removing the occurrences of gated clocks from the netlist, partitioning the netlist description by taking into account the occurrence of timing violations and ensuring that retain state nets are implemented properly.

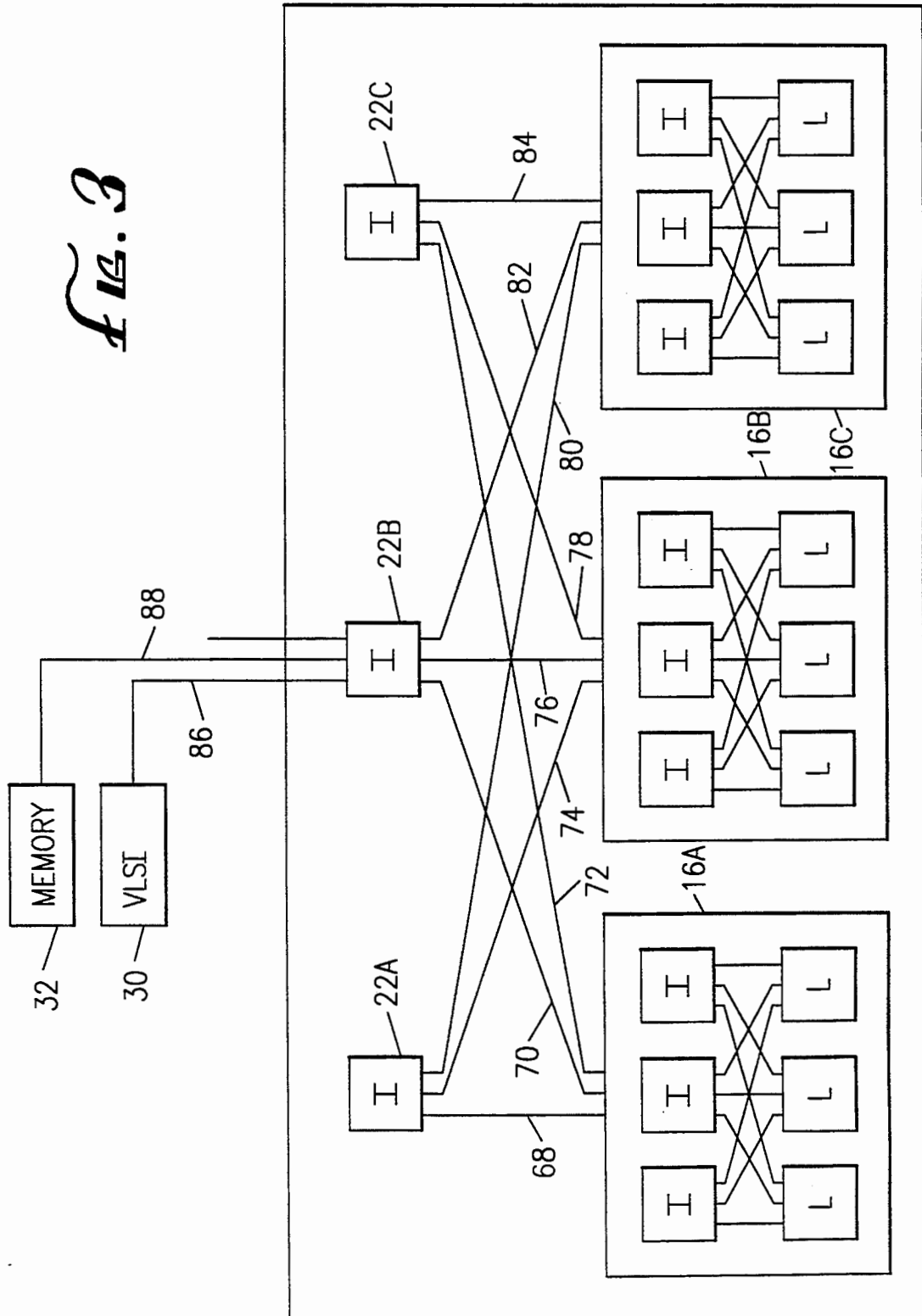
2 Claims, 78 Drawing Sheets



*FIG. 1*

## CONNECTIONS TO EXTERNAL SIGNALS

*FIG. 2*



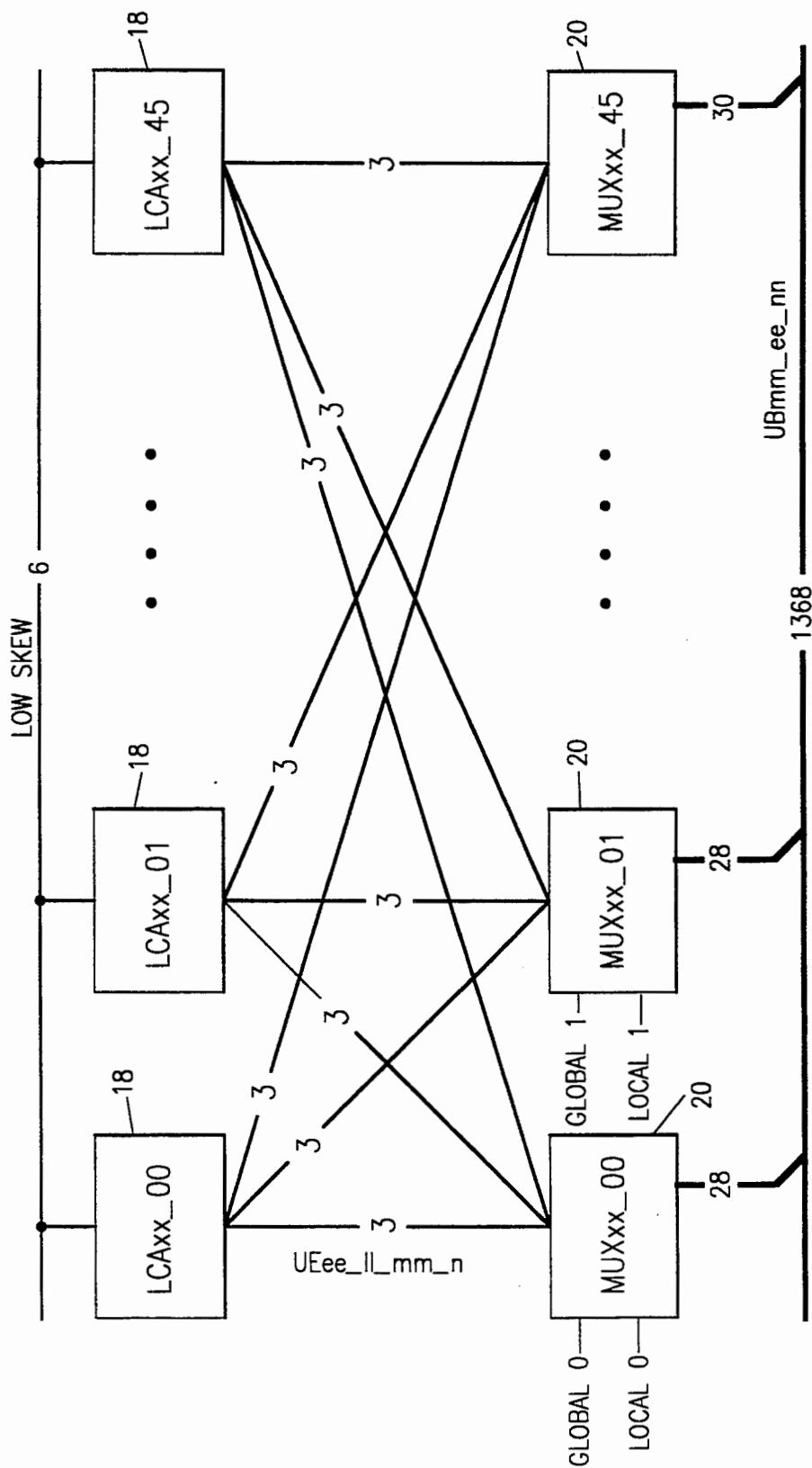


Fig. 4

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