

REGISTER RETIMING TECHNIQUE

ABSTRACT OF THE DISCLOSURE

An electronic automation system performs register retiming on a logic design, which may be a logic design for a programmable logic integrated circuit. Register retiming is a moving or rearranging of registers across combinatorial logic in a design in order to improve a maximum operating frequency or f_{max} . In one implementation, the system includes machine-readable code, which may be stored on a computer-readable medium such as a disk, executing on a computer. The system balances timing in order to trade off delays between critical and noncritical paths. Register retiming may make changes to a design at a gate level.