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(54) METHOD AND APPARATUS FOR CONTROLLING CLOCK CYCLE TIME

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(57) **ABSTRACT**

A circuit and corresponding method control cycle time of an output clock used to clock at least one other circuit. The circuit comprises an agile ring oscillator (ARO) and ARO controller. The ARO includes at least one instance of a first ring oscillator (RO) and second RO that generate high and low phases, respectively, of cycles of the output clock. The ARO controller controls durations of the high and low phases, independently, via first and second control words output to the ARO, respectively. In a present cycle of the output clock, the ARO controller effects a change to the high or low phase, or a combination thereof, in a next cycle of the output clock by updating the first or second control word, or a combination thereof, based on an indication of expected usage of the at least one other circuit in the next cycle. The change improves a performance-to-power ratio of the at least one other circuit.