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(54) **METHOD OF OPTIMIZING
COMBINATIONAL CIRCUITS**

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(57) **ABSTRACT**

A method of simplifying a combinational circuit establishes an initial combinational circuit operable to calculate a set of target signals. A quantity of multiplication operations performed in a first portion of the initial combinational circuit is reduced to create a first, simplified combinational circuit. The first portion includes only multiplication operations and addition operations. A quantity of addition operations performed in a second portion of the first, simplified combinational circuit is reduced to create a second, simplified combinational circuit. The second portion includes only addition operations. Also, the second, simplified combinational circuit is operable to calculate the target signals using fewer operations than the initial combinational circuit.

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