Systematic Design of an Approximate Adder The Optimized Lower Part Constant-ORAdder

ABSTRACT

- Instead, this brief generalizes and systematically optimizes an architectural template for approximate adders.

- The outcome, called optimized lower part constant-OR adder, outperforms previous approaches in terms of accuracy and hardware cost.

- In this brief, an optimal approximate adder, through generalizing an architectural template for approximate adders, has been proposed.

EXISTING SYSTEM

- Exploiting the trade off between accuracy and hardware cost has a tremendous potential to improve the efficiency of integrated systems.

- Using this concept, numerous approximate adders have been proposed in the last ten years.

- Although conceptually different, all previous architectures have been obtained with an ad hoc and non systematic methodology.

PROPOSED SYSTEM

- The proposed adder OLOCA shows considerable improvement in both error and hardware cost metrics in comparison with the previously reported best architectures.

- The superiority of OLOCA over the existing approximate adders has been proven presenting the mathematical analysis and further using experimental results.

- The goal of this brief is to improve LOA systematically. First, we generalize the LOA architecture in the form of an architectural template.

HARDWARE REQUIREMENTS

- Processor   -   intel core i3
- RAM   -   2GB
- Hard Disk   -   20 GB

MICANS INFOTECH

SOFTWARE REQUIREMENTS

- Tool   -   MICRO WIND
- Operating system   -   Windows 7,8

REFERENCE

[1] K. Du, P. Varman, and K. Mohanram, "High performance reliable variable latency carry select addition,", Mar. 2012.

[2] I.C.Lin,Y.M.Yang, and C.C.Lin,"High-performance low-power carry speculative addition with variable latency,", Sep. 2015.

[3] M. Shafique, W. Ahmad, R. Hafiz, and J. Henkel, "A low latency generic accuracy configurable adder,", Jun. 2015.

[4] H. R. Mahdiani, A. Ahmadi, S. M. Fakhraie, and C. Lucas, "Bio-inspired imprecise computational blocks for efficient VLSI implementation of soft-computing applications,", Apr. 2010.