Abstract

The residue number system (RNS) has computational advantages for large integer arithmetic because of its parallel carry free, and high-speed arithmetic nature. However, magnitude comparison is a very complex operation for RNS. This paper presents a new comparison algorithm based on the modification of Mixed-Radix Conversion II technique. The new algorithm uses small modulo operations only and has a linear time complexity in terms of the size of the moduli set.

References

3. P. Albicocco, G. C. Cardarilli, A. Nannarelli, and M. Re. Twenty years of research on RNS


**Index Terms**

Computer Science  Algorithms
Keywords

Residue number system, magnitude comparison, mixed-radix conversion, MRC-II