

## ABSTRACT

Booth encoding has been proposed for improving the performance of multiplication of two's complement binary numbers and it has been further improved by the MBE or radix-4 Booth encoding. The Booth encoder plays an important role in the Booth multiplier, which reduces the number of partial product rows by half. An adaptive conditional-probability estimator has to compensate the quantization error of a fixed-width Booth multiplier. The truncation method is performed by keeping the MSB constant and partial product is done in LSB bit which reduces the circuit complexity.