

Adaptive Stream-based Entropy Coding

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Stream-based Lossless Data Compression ASE Coding

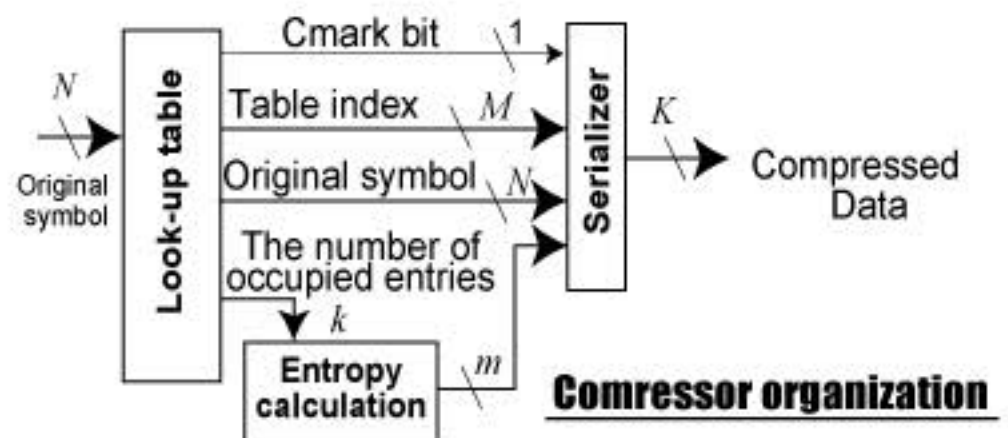
ASE Coding is a stream-based lossless compression method. Hardware implementation is very easy and works with 250MHz on FPGA.

Problem to be solved

Conventional compression algorithms **require memory** and are not suitable for **hardware implementation.**

Solution

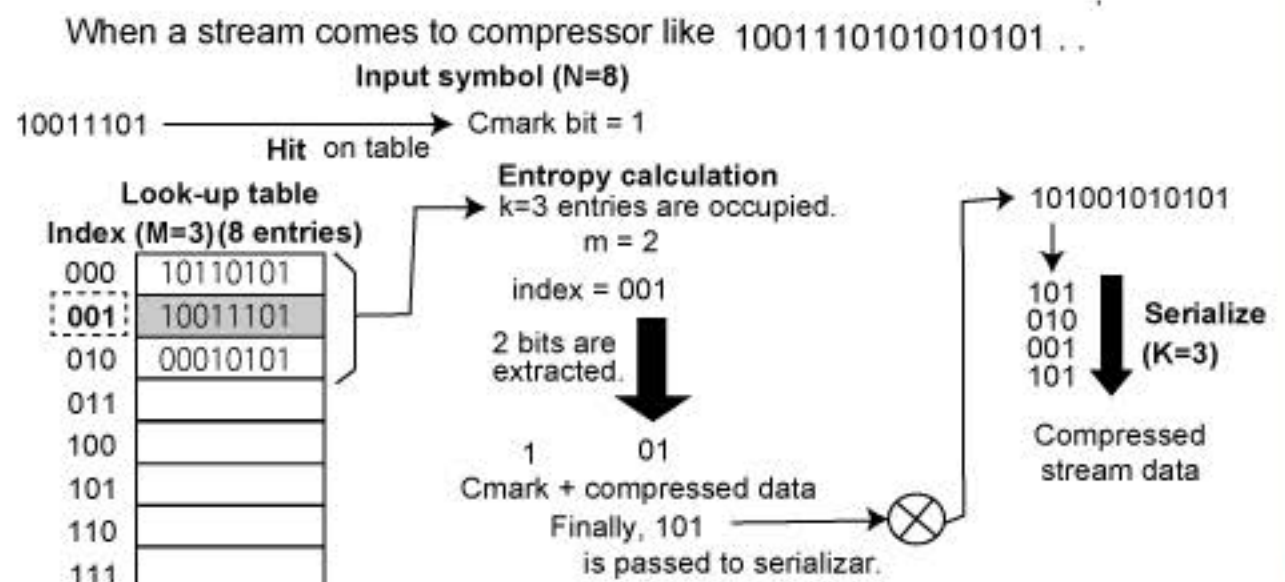
Use a **fixed-size look-up table** which can be implemented with **registers.**



Entropy Coding Method

Calculate **entropy** from the number of symbols registered in the lookup-table.

Convert symbol into a **index value** of look-up table and encode with the number of bits based on entropy.



Performance Evaluation

Real time video compression performance

