

Arithmetic Encoding

This is a type of lossy compression algorithm used in entropy encoding. The idea is to have a string of characters for reference for encoding and placing a higher probability on often occurring characters and lower for least occurring. So, the higher probability characters will be represented using more bits and less with fewer bits. Arithmetic encoding encodes the entire message using a range of two numbers instead of using codewords. This is only possible if the reference characters are given to the receiver side.

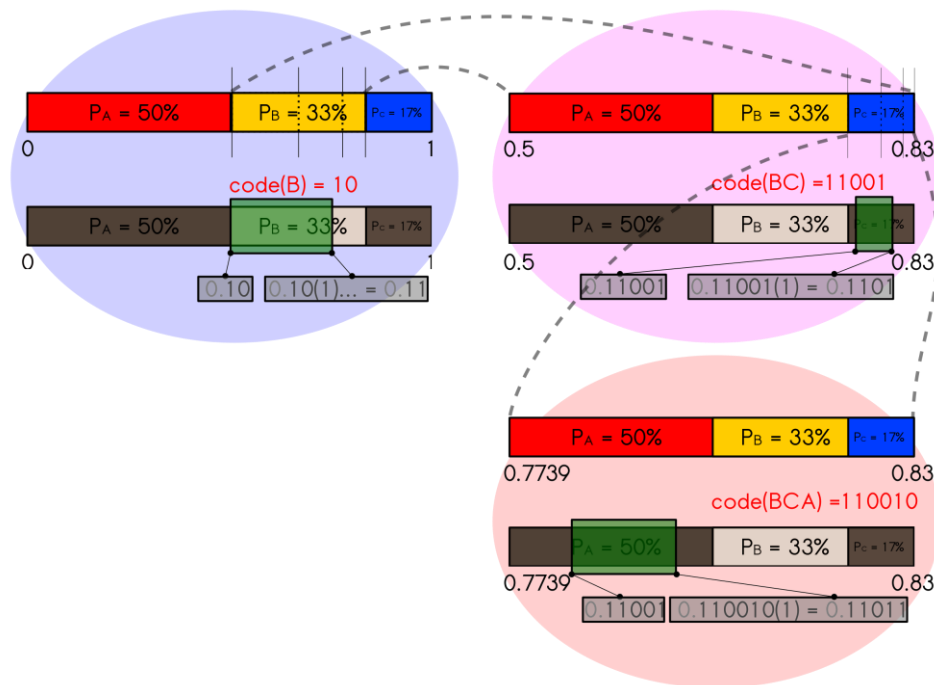


Figure 1: Arithmetic encoding[By Evolution124 - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=19631362>]