

Abstract

One of the features of the telecommunication technologies are used at present is the SMS (Short Message Service). The costs required for the use of SMS itself are relatively affordable, so that society in general prefer to use SMS in conveying information they want to convey. On an SMS, the information may be sent is limited to 160 characters only. Under certain conditions, an SMS that was sent has a sequence of up to 180 characters, so the SMS will be calculated as shipping cost 2 SMS. In order to streamline the use of space is the number of characters that can be accommodated by a SMS, SMS compression technique to be the right solution for this problem.

Base on it, the author tried to implement methods of ACHA (Arithmetic Coding Hybrid Ario) in compression of SMS on your Android smartphone. ACHA method originating from Arithmetic Coding, which is a method that works by converting a string into a decimal value in the range of values 0 and 1. However, the results of compression of SMS Arithmetic Coding requires additional space for table data characters that are used in the process of compression. Therefore, it is necessary a strategy that's right for the efficiency of the use of space characters at the SMS number is very limited.

In the process of the efficiency of the use of space characters in SMS, the author applied the method which is capable of producing output ACHA digit decimal Arithmetic Coding in the form of data representation that is more efficient in the use of space characters in SMS. On the method of ACHA, there are 4 key components which became a major influence in the use of the method of ACHA. The four essential components are precision regulator parameter CN (Code Number), DUK (Upa Series Configuration), variation characters of TPKU, and a length character content of an SMS. SMS compression ratio produced by ACHA method capable of achieving 35.62%, while the cost of SMS sending, SMS capable of resulting compressed is N-2 cost amount of SMS from the SMS cost at N the beginning time of SMS sent is 4 or 5 SMS fees.

Keywords: *Arithmetic Coding*, Android, character, compression, decompression