

Selected Readings in  
**COMPUTING AND  
TELECOMMUNICATIONS**

Editors  
Mira Kartiwi  
Teddy Surya Gunawan  
Aisha Hassan Abdalla Hashim



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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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## **8. PERFORMANCE EVALUATION OF LOSSLESS SPEECH AND AUDIO COMPRESSION ALGORITHMS**

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Teddy Surya Gunawan and Azizullah Saleem

### **ABSTRACT**

The surprising growth of activity in the relatively old subject of speech compression is driven by the insatiable demand for voice communication, by the new generation of technology for cost effective implementation of digital signal processing algorithms, by the need to conserve bandwidth in both wired and wireless telecommunication network and the need to conserve disk space in voice storage systems. Audio compression is performed using numerous steps or operations specified as an algorithm. Audio compression algorithms are implemented in computer software as audio codecs (compression decompressions). In this project, we carry out the performance evaluation of lossless speech and audio compression algorithms. The performance implementation is carried out by selecting and setting up the lossless speech and audio compression algorithms. The analysis of these algorithms is then carried out by using MS-DOS and Matlab.

### **8.1 INTRODUCTION**

There has not been much performance evaluation of lossless codecs algorithms, hence many users don't know the advantages of this algorithm, hence we try to fill in the gap by coming up with evaluation of some open and close lossless audio and speech codecs algorithms. Audio and speech compression is a type of data compression that is created to reduce the transmission bandwidth requirement of digital audio streams and the storage size of audio files. Usually audio compression algorithms are implemented