

Abstract

For more than half a century, Forward Error Correction Convolutional Codes (FEC-CC) have been in use to provide reliable data communication over various communication networks. The recent high increase of mobile communication services that require both bandwidth intensive and interactive Real Time Applications (RTAs) impose an increased demand for fast and reliable wireless communication networks. Transmission burst errors; data decoding complexity and jitter are identified as key factors influencing the quality of service of RTAs implementation over wireless transmission media. This paper reviews FEC-CC as one of the most commonly used algorithm in Forward Error Correction for the purpose of improving its operational performance. Under this category, we have analyzed various previous works for their strengths and weaknesses in decoding FEC-CC. A comparison of various decoding algorithms is made based on their decoding computational complexity.

Index Terms

FEC, Convolutional Codes, Real Time Applications, Burst errors, Sequential Decoding, Viterbi Decoding.