Abstract

Speech to text conversion is the process of converting spoken words into written texts. In this paper, a voice encryption system is developed as a real-time software application. Basically, the speech is taken as an input and is encoded to be decoded by authenticated users only. The algorithm used to perform this cryptography is Advanced Encryption Standards (AES). This algorithm has its own particular structure to encrypt and decrypt sensitive data and is applied in hardware and software all over the world. We take the information in the form of audio as an input using a microphone which is to be transmitted over the channel to the intended receiver. The audio input is converted into text format which ensures speech-to-text conversion. Then, the text is encrypted using the AES algorithm to form cipher text. This cipher text is sent over a channel to the receiver. The receiver requests to perform decryption of the information only if he has the correct secret key otherwise the request is declined. If the key matches, the decryption is successful and the receiver get the message as text. For 128 bit, about 2^{128} attempts are needed to break. This makes it very difficult to hack it as a result it is very safe protocol.
References


Index Terms

Computer Science Security

Keywords

Speech-to-text (STT)