DTMF

<http://en.wikipedia.org/wiki/Dual-tone_multi-frequency_signaling>

<http://www.mesi.net/MESiWeb/Digit%20Detector%20Preformance%20data.htm>

Dual-tone multi-frequency signaling (DTMF) is used for telecommunication signaling over analog telephone lines in the voice-frequency band between telephone handsets and other communications devices and the switching center. use a mixture of two pure tone (pure sine wave) sounds. The DTMF keypad is laid out in a 4×4 matrix in which each row represents a low frequency and each column represents a high frequency. Pressing a single key sends a sinusoidal tone for each of the two frequencies. For example, the key 1 produces a superimposition of tones of 697 and 1209 hertz (Hz).

Goertzel Algorithm

The Goertzel algorithm is a Digital Signal Processing (DSP) technique that provides a means for efficient evaluation of individual terms of the Discrete Fourier Transform (DFT), thus making it useful in certain practical applications, such as recognition of DTMF tones produced by the buttons pushed on a telephone keypad. Like the DFT, the Goertzel Algorithm analyses one selectable frequency component from a discrete signal.[2][3][4] Unlike direct DFT calculations, the Goertzel algorithm applies a single real-valued coefficient at each iteration, using real-valued arithmetic for real-valued input sequences.

Printable ASCII

<https://www.juniper.net/techpubs/en_US/idp/topics/reference/general/intrusion-detection-prevention-custom-attack-object-extended-ascii.html>

Additive White Gaussian Noise

Matlab function - <http://www.mathworks.com/help/comm/ref/awgn.html>

<http://en.wikipedia.org/wiki/Additive_white_Gaussian_noise>

<http://www.mathworks.com/products/demos/signaltlbx/dtmf/dtmfdemo.html>