

Speech Analysis and Linguistics

Lecture -3

04/08/2022

Production based knowledge

- Speech Excitation
- Vocal Tract

Certain approximations are good (in some cases, rather necessary). Examples of such approximations are short time analysis in which compare the signal on a chunk-by-chunk basis.

Frame is a short segment of observation (for a small fixed time segment)

Speech Production Approximation

Input : $x(n)$ -----> passage of air (before passing the vocal chords)

$x(n)$ -----> $[h(n,m) \text{ a block}]$ -----> $s(n)$, the speech

$s(n) = \sum_{m=-\infty}^{+\infty} h(n,m)x(n-m)$

Speech Excitation

The vocal chords where they vibrate, is the cause for speech excitation