

DSP APPROACH TO SPEECH SYNTHESIS FOR INDIAN LANGUAGES:
ORIYA- A CASE STUDY

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ABSTRACT

Indian Languages are phonetic by nature. During Oriya Speech Synthesis system utterance of consonant by three different speakers are taken into consideration for an experimental standardization. Initial unintentional noise is first cleared from the wave file by passing it through filters of specific requirement. Speech signals like other signals being in wave form have information regarding frequency, amplitude, pitch and timber bearing in it the acoustic value for the phonemes and diaphones. The merging of such wave files as per requirement generates modified consonants influenced by matras, phalas and yuktaksharas in the form of desired speech output. To achieve this goal we have analyzed the frequency and pitch of a particular speaker using Short Time Fourier Transform (STFT). We computed the energy associated with the signal by power Spectral Density function and subsequently digital filters are designed to utter desired output of a particular consonant thus a word and then sentence uttered by the speakers.