DECLARATION

This is to certify that

i) The thesis comprises my original work towards the degree of Master of Engineering in Computer Engineering at Institute of Science and Technology for Advance Research and Studies (ISTAR) and has not been submitted elsewhere for a degree.

ii) Due acknowledgement has been made in the text to all other material used.

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Signature of Student

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ABSTRACT

As the computer hardware and other technology become advanced, computer animation has also advanced. As technology has advanced in area of facial animation, need of technology arise which generates realistic facial animation. To generate realistic face animations it is necessary to generate the movement of lips. The goal of this work is to implement a system to analyse an audio signal containing speech, and produce a classification of lip shape categories i.e. viseme in order to synchronize the lips of a computer generated face with the speech. The thesis describes the work to derive a method that maps speech to lip movements. The method is implemented in Matlab on the Windows platform. The program reads speech from pre-recorded audio files that are transformed into sequence of phonemes using phoneme extraction procedure. We have also identified lip parameters for different viseme classes. Neural network is used to map sequence of phonemes to the corresponding viseme class.

Keywords: phonemes, visemes, neural network

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