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DEPARTMENT OF ELECTRONICS AND COMMUNICATION



CERTIFICATE

This is to certify that the project entitled **DRISHTI-an electronic aid for blind** is a bonafide work carried out by

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ABSTRACT

We have made use of Optical Character Recognition (OCR) which is a type of document image analysis where a scanned digital image that contains either machine printed or handwritten script is input into an OCR software engine and translating it into an editable machine readable digital text format. Here matrix matching method of character recognition is used. The characters recognized from the text image are concatenated and given to the text to speech (TTS) system to enable it into audio form.

The text to speech system has several components. A first set of components produces a phonetic transcriptions from the OCR recognized text. The phonetics are produced by a set of grapheme to phoneme rules for regular pronunciation and a lexicon for irregular pronunciations. A second component is the set of phonetic rules which create appropriate allophones by adjusting formant frequencies, aspiration and transition timing and determine phoneme duration and utterance fundamental frequency depending on context. This information is stored in parameters which are sent to the TTS system for audio output.

KEY WORDS: Optical character recognition, matrix matching method, OSTU's method, Bi cubic interpolation method, Text to speech synthesizer.