

UNIVERSITI TEKNOLOGI MARA

**SPEECH USER INTERFACES FOR
AN APPLICATION OF ROUTE NAVIGATION
SYSTEM**

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ABSTRACT

Speech Technology has become increasingly important both in personal use and in industrial. The technology has been improving and an Automatic Speech Recognition (ASR) has been used widely in recent years. The purpose of this study is to develop a knowledge base for route navigation system and to construct the dialogs for supporting route navigation process in speech application. The study emphasizes the construction of speech dialogs in Malay Language that cover the lack of capabilities of ASR System in general and tested the 'live system' by speech with several users. A prototype of a Phone-based Speech Assisted System is developed from which a knowledge base of rules was constructed using Rapid Application Developer (RAD Application) as a toolkit for development of Speech Application. The simulation was done to test the effectiveness of the dialogs design and the application itself. Assumption has been made, as Malay Speech Recognition already exists. The data was collected through an observation of Shah Alam area, while questionnaires were distributed to investigate user behavior in route findings process. Prior to the development of navigational and wayfinding behavior among Malaysian community, it is crucial to study the navigational and wayfinding knowledge and the spatial representation of wayfinding behavior among them.