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Speech Driven User Interface For An Intelligent House

A thesis presented in partial fulfilment of the requirements for the degree of

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Abstract

Speech driven user interface for an intelligent house is one of a number of Graduate research projects at Massey University. It is part of Project 'Smart House'. This thesis details development of a control system whose inputs are speech signal rather than manual.

The control system consists of several sub-systems including speech recognition, command generation, signal transmission, signal reception and command manipulation. The completed speech driven user interface should operate in conjunction with Real-time implementation of a Microphone Array beam-former and Personal identity recognition that were developed concurrently with this project.

The speech recognition and command generation subsystems are implemented on a PC whereas the signal transmission, signal reception and command manipulation subsystems are designed at embedded board level. The remote controller can control some electrical appliances, such as TV and CD player, and switch and dim the light.

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