SPEECH AUXILIATOR

[Project sponsored by Karnataka State Council for Science and Technology, Bangalore

Under 37th Student Project Programme]

Project Report Submitted by

Abhilash Bhat K (4NM10IS002)

Supritha (4NM10IS051)

Pavan Kumar S Rao (4NM10IS025)

Siddharth S (4NM09IS052)

UNDER THE GUIDANCE OF

Mr. Rakesh Joshi U.

Assistant Professor

in partial fulfillment of the requirements for the award of the Degree of

Bachelor of Engineering (Information Science)

from

Visvesvaraya Technological University, Belgaum

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

N.M.A.M. INSTITUTE OF TECHNOLOGY

(An Autonomous Institution under VTU, Belgaum)

(AICTE approved, NBA Accredited, ISO 9001:2008 Certified)

NITTE –574 110, Udupi District, KARNATAKA

April 2014

ABSTRACT

Speech is one of the oldest and most natural means of information exchange between human beings. We as humans speak and listen to each other in human-human interface. For reasons ranging from technological curiosity about the mechanisms for mechanical realization of human speech capabilities, to the desire to automate simple tasks inherently requires human-machine interactions. Keyboard, although a popular medium is not very convenient as it requires a certain amount of skill for effective usage. A mouse on the other hand requires a good hand-eye co-ordination. It is also cumbersome for entering non-trivial amount of text data and hence requires use of an additional media such as keyboard. Physically challenged people find computers difficult to use. People with visual impairments find reading from a monitor difficult.

In order to tackle these problems, this project focuses on developing a Speech Auxiliator which listens to the commands given by the user and accordingly replies to it appropriately and quickly, thus providing natural mode of interaction. Speech Auxiliator is an interface which comprises of Speech Recogniser and Speech Synthesiser. Speech recogniser has the ability to understand the spoken words and processes audio input containing speech by converting it to text and Speech Synthesiser is used for artificial production of human speech which is obtained by converting text into speech. Thus it can read out the textual contents from the screen. Speech Auxiliator has a number of practical implementations for both fun and serious works.