

# Hukum Mere Aaka – A Speech to command Converter

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**Abstract**— Our project Hukum Mere Aaka provides the user with the choice of input with the help of the voice commands rather than using the keyboard and a mouse. Our software provides the user to operate the computer in a hands-free mode for executing the commands. This has enabled us to significantly reduce the waiting time to implement the important functions of a computer and this increases the efficiency as well. Speech to command, is the next step towards automation of computers. This enables the user, to carry out the functions in a quicker manner. Our software detects the command which is given by the user and acts accordingly to complete that function. This opens up a unique opportunity of equality for all individuals who want to use the computer irrespective of their age or literacy or background. We believe, speech to voice command is the future of next-generation computing to make computing easily accessible for all. We have built in voice commands for a number of functions which can be implemented with the help of a couple of words of voice input by the user. The software is programmed to detect these voice inputs. The software covers the voice commands to open website or open important software of Windows like Microsoft paint etc. Features include:

- Opening different application on desktop through voice.
- Performing different functions in a text Editor such as open, save etc.
- Reading out text written in editor.

**Key words:** Hukum Mere Aaka, Voice Recognition

## I. INTRODUCTION

The future is devoted to automation, whichever sector you see, more and more companies are opting for automation rather than increasing manpower for manual labor. Automation has been the key driving force of this new millennium. One of the main reasons that companies have been concentrating on automation is because automation is inclusive. Automation increases the efficiency of any company. With that thought in mind, we have taken our step in automating the computer commands as well as other associated functions of a computer, in a step towards automation.

With the help of our software Hukum Mere Aaka, we have strived hard to provide the opportunity to all to carry out the functions of the computer with the voice command so that even if someone is not that fluent with the operation of the computer he or she is still able to operate the commands of the computer and carry out the functions which they intend to.

With our software speech to command, we have given the extra input option to the users in addition to the keyboard and the mouse, the users are now able to provide the input with the help of the voice commands. Our aim is to automate the functions of a computer with the help of the simple voice commands which anyone can understand and implement.

With the help of the voice commands, we have ensured that the probability of human error is also reduced and more precision is introduced.

## II. PROBLEM STATEMENT

Computer has become a necessity these days rather than a luxury, still if you ask many of the people in the older generation they would exclaim that it is too complicated for them to operate a computer efficiently. With our software, speech to command converter, we have strived very hard to solve this problem since most of the people in the older generation are able to speak at least a few words of English they are able to perform the crucial functions in a computer just by using voice commands instead of having to wade through information on computer drives, file allocation table and file formats. With simple voice commands, it becomes quite easy to give the input to the computer.

Lastly, whichever machine you're using there is always scope for improvement in efficiency and that is what we have tried to achieve with our software speech to voice command, to ensure that a lot less time is required for implementing the commands of the computer and at the same time the entire operation becomes hands-free as well.

With all these significant problems plaguing our country and limiting the computer literacy in our country, we have taken a step towards bringing computers close to the individuals, who have had some kind of limitations due to which they were not able to fluently operate the computers till now.

## III. OBJECTIVE

The objective of Hukum Mere Aaka is to perform action specific to the commands given by the user through voice.

- To help people execute their task efficiently through our software.
- Development of software that can be mainly used as a tool for operating machine through voice.

## IV. EXISTING SYSTEMS

### A. Dragon Naturally Speaking

The industry leading speech recognition software used by doctors, lawyers, and other professionals to convert speech into text. Starting at \$119.99 for the Premium Edition, Dragon has been used by thousands of professionals for dictation and transcription for over 30 years. Runs on both Windows and Mac platforms.

- Dragon gets you, with up to 99% accuracy out of the box
- Create documents 3x faster than typing by hand
- Interactive Tutorial provides simulations to learn and practice good dictation, correction and editing habits so that you can become more proficient with Dragon in record time

### B. Voice Recognition in phones

In 2010, Google added "personalized recognition" to Voice Search on Android phones, so that the software could record users' voice searches and produce a more accurate speech model. The company also added Voice Search to its Chrome browser in mid-2011. How we started with 10 to 100 words, and then graduated to a few thousand and now Google's English Voice Search system incorporates 230 billion words from actual user queries. And now along comes Siri. Like Google's Voice Search, Siri relies on cloud-based processing. It draws what it knows about you to generate a contextual reply, and it responds to your voice input with personality.

### V. METHODOLOGY

This application utilizes the "Command & Control" aspect of speech recognition, that means we must specify a grammar file that contains all the words or names of commands. The format of this file is called as Java Speech Grammar Format (JSGF). After the grammar file, we need to create a configuration file for the recognizer. The configuration file already exists with sphinx4 system which defines names and types of all the components of sphinx4 system and connectivity of these components and configuration of each of them. In this research we can execute various commands such as (open, paint, notepad, g-mail, file) sample prototype to implement this project.

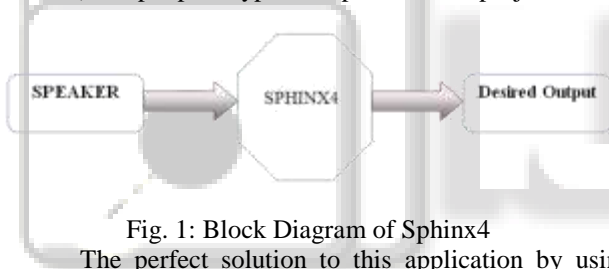


Fig. 1: Block Diagram of Sphinx4

The perfect solution to this application by using advance technology sphinx4 that is a speech recognition system written entirely in the Java(TM) programming language is to add new module of words by create text file named (say) words.txt that contains all the words that user want to say to the computer, thus any number of new words can be added into it, with each word separated with “|” and save this file as hello.GRAM file. This file is known as grammar file.

### VI. CONCLUSION

In our project Hukum Mere Aaka some basic functionalities can be carried out by simply providing voice input commands such as open, search and closing the applications or files present in your computer. This application is run on windows operating system .Basically this application can be used as professional tool in industries to optimize productivity such as various documents or files can be created faster through voice input and hence it reduces human error and allows multi tasking which saves a lot of time

### REFERENCE

- [1] "Speech recognition- The next revolution" 5<sup>th</sup> edition.
- [2] "Fundamentals of Speech Recognition". L. Rabiner & B. Juang. 1993. ISBN: 130151572.

- [3] Charu Joshi "Speech Recognition" Source: <http://www.scribd.com/doc/2586608/speechrecognition.pdf>
- [4] [https://docs.oracle.com/cd/E17802\\_01/products/products/javamedia/speech/forDevelopers/jsapi-doc/](https://docs.oracle.com/cd/E17802_01/products/products/javamedia/speech/forDevelopers/jsapi-doc/)
- [5] <https://www.youtube.com/watch?v=Z0f3vvCJWyo>
- [6] <https://www.youtube.com/watch?v=swuYhvwHw9w>
- [7] [http://en.wikipedia.org/wiki/Speech\\_recognition](http://en.wikipedia.org/wiki/Speech_recognition)
- [8] <http://www.w3.org/TR/jsgf/>
- [9] Stephen Cook ""Speech Recognition HOWTO" Revision v2.0 April 19, 2002 Source: <http://www.scribd.com/doc/2586608/speechrecognitionhowto>