

Speech-based Access for Agricultural Commodity Prices in Bengali

Objective

To implement and deploy a speech access based system for users to get prices of agricultural commodities over telephone/mobile. Such systems would provide excellent value-addition to the already existing website <http://www.agmarknet.nic.in/> managed by the Ministry of Agriculture, since no computer, reading or writing skills are required for the proposed system. One possibility is to deploy such systems in Kisan call centers as an aid or assistant to human agents. The languages covered are Bangla, Assamese, Marathi, Tamil, and Telugu. C-DAC Kolkata is responsible for the system development in Bangla Language.

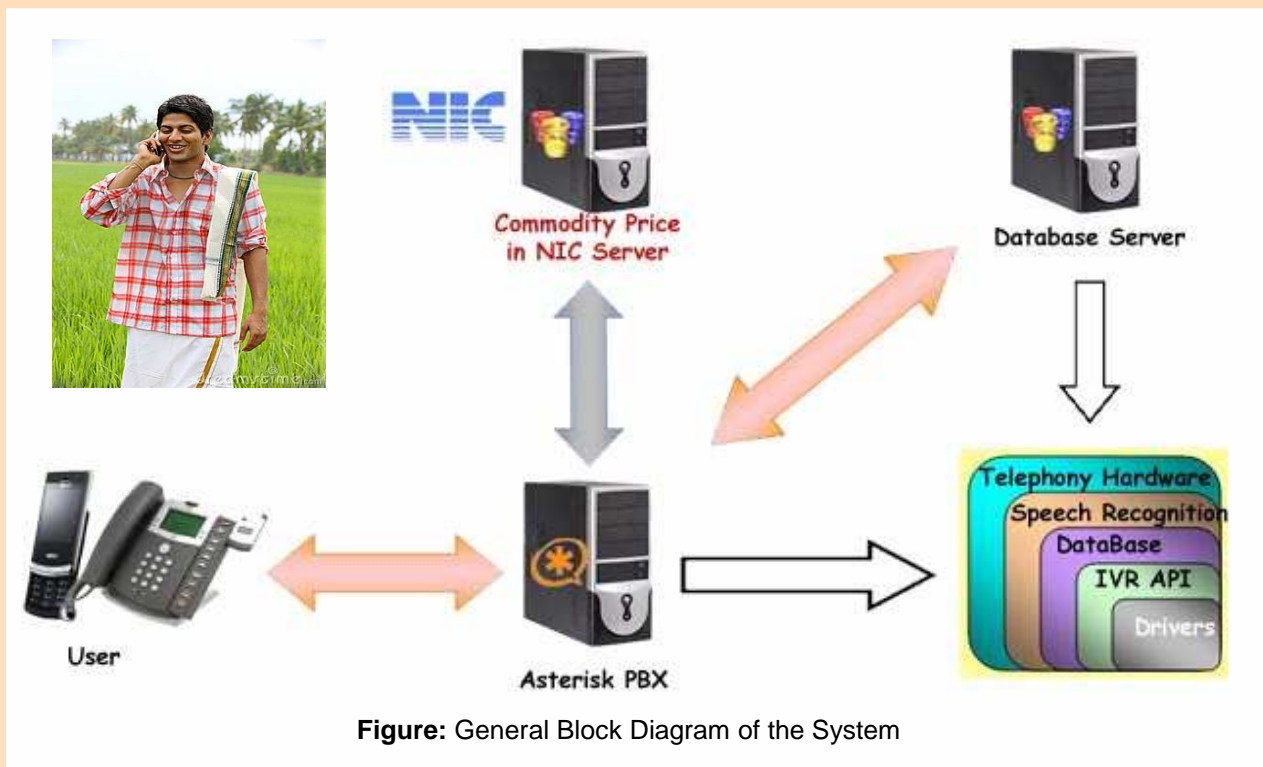


Figure: General Block Diagram of the System

Progress So Far

Built a preliminary system that can recognize all district names of West Bengal and some most frequent commodity names. Pre-recorded prompts are used for asking questions. Hidden Markov Model (HMM) based ASR engines are used for conversion from speech to text. Open source Sphinx (3.0) is used for training HMM models and for decoding.

System Features

- Remote access via mobile or landline phone, no need of computers and internet
- Easy to use: support Voice query and response, no need to type or touch
- 24 x 7 hrs Automated Service, no more waiting for reply from manual operators
- Mother tongue support, Bi-lingual (Bangla & English) prompts for better usability
- Helpful for illiterate and visually impaired farmers
- Toll free service via Kisan Call Centre
- Get a phone, Dial (033)-2357-9009, and within minutes the job is done

Likely End-user(s)

Farmers and other users interested in obtaining the latest prices of agricultural commodities by just speaking over the telephone. This system will be especially useful for those who have no access to computers and Internet, and who may not have the required computer skills and reading/writing skills. Successful completion of this project would also enable development of similar speech-based systems for many other applications like Voice enabled Railway travel enquiry system, Health informatics, Tourist guide, Weather forecasting etc.



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