Krishi-Mitra: An ICT enabled Interface for Farmers

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Abstract

Application of IT is associated with markets in the developed countries where capital intensive method of agricultural production is followed. However, in a country like India where rural base is wide, its relevance cannot be overlooked. In addition to facilitating farmers in improving the efficiency and productivity of agriculture and allied activities, the potential of IT lies in bringing about an overall qualitative improvement in life by providing timely and quality information inputs for decision making; IT can also be effectively used to strengthen the supply chain for agro based companies for leading to better price realization by farmers. Rapid growth in the field of ICT helps in basic aspects of mankind like- agriculture, education, healthcare etc. However, the moderate technical growth of ICT applications is confined to the community of a limited number of people, who live in digital pockets.

KeyWords:- *Information and communication technology, human computer interaction, Internet, information retrieval, farming, Agriculture information system, iconic interface.*

1. INTRODUCTION

The availability and accessibility of information are the crucial points in taking the optimal decision at right time. Nowadays, advancement of ICT make possible to retrieve almost any information from the global repository so, they are unable to access required information on the Farming life cycle, seed selection, pesticides, market price etc. from the internet. As a consequence, they are not capable to take optimal decisions at different stages of farming life cycle, which make huge impact on the farmers revenue. Developed interface for the Indian farmer community to access the agricultural information from the global internet repository and store them into local repository. The proposed interface is critically evaluated with the farmer from different states of India. The evaluation results proved the effectiveness of the proposed interface. User can only interact with the system through icons and results back with their intended agricultural information in Indian language text and spoken forms both. To access the intended agricultural information from internet and local repository, users have to form proper query. The query is generated by selecting the corresponding icon(s) displayed in the interface. We proposed to develop an iconic interface which is integrated with speech based interaction in Indian languages. The proposed interface is critically evaluated with the farmer from different states of India. We have also included a feature of weather forecasting which will help all the farmers to work according to weather prediction and get a fruitful results. With respect to this farmer got an amazing option of predicting the future lines of production based on previous data and history populated in the system. So system will gain knowledge about the process and ins outs once farmer feeds in their previous experience. Now a days our main source of health that we getting our farmer they are not getting information related to market rate, weather and government schema.

2. LITERATURE SURVEY

In early days farmer usage the information in internet is primarily maintained in English. So, a large number of people are deprived from the benefit of internet due to technical and English language illiteracy. This scenario is very bad in developing country like India where nearly 76 % are English

illiterate Moreover, a large percentage of the English literate people are also unable to find their exact need form the large database of internet due to lack of proficient knowledge in English. Indian farmers belong to such type of people who are not much sound in both technical as well as in English.

- In [1] their work has presented the essential agriculture information is very useful to a farmer for taking effective decision thus we proposed to develop an iconic interface which is integrated with speech based interaction in Indian languages. The proposed interface is critically evaluated with the farmer from different states of India. The evaluation results proved the effectiveness of the proposed interface.

- In [2] their work has presented farmers need information at all stages of the farming life cycle to make optimal decisions. The required information includes not only prior knowledge but also real time (dynamic) information such as market prices and current production levels. Some valuable information needed by the farmers is produced by government organizations and is available in different locations in different formats.

- In [3] their work has presented resent our experiences with GappaGoshti – our rural social networking platform. There are several services that have become popular in the digital citizen circles, such as Twitter and Facebook. These platforms started off with just a social aspect, but they have also been used effectively for business.

3. PROPOSED SYSTEM

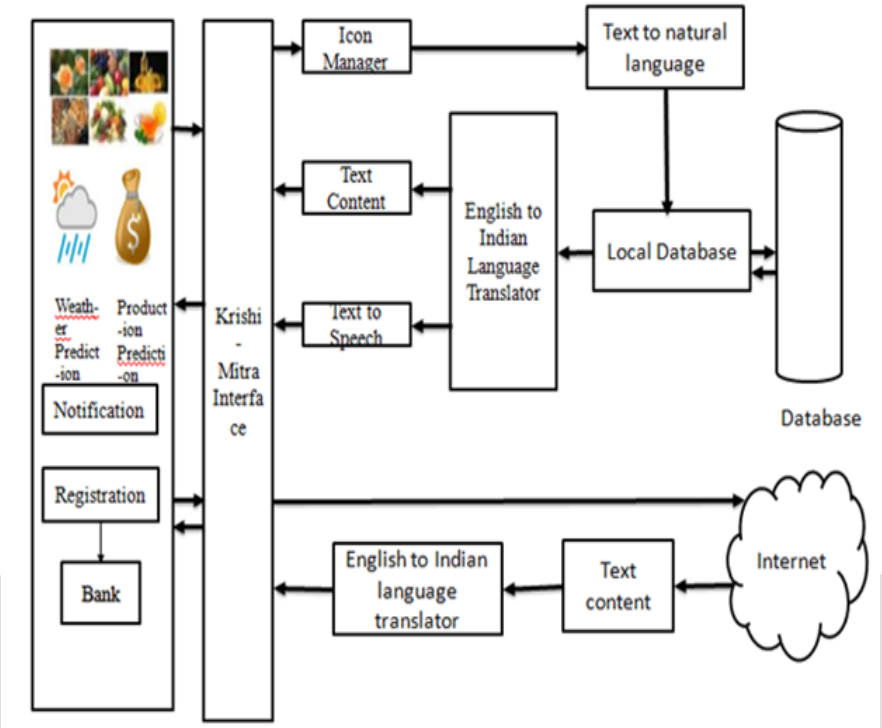
In this proposed we have to implement a system to have an effective vegetable production, weather production and production prediction so farmer can farming safely and produce best product. We are implementing speech converter via this farmer can get information from cloud.

This proposed system also provide iconic interface which is used to provide easy communication between farmers which is educated or uneducated. This system also provide a text to speech engine which is used to translate the textual information into speech. Some user farmers having no capability to read this information or because of time requirement they does not read this information. By using text to speech engine they can listen this information easily. Text to speech engine provide a information in all three basic languages i.e. Marathi, Hindi and English. This also provides the notifications of governments newly released services for farmers and also provides a banks loan details information.

3.1Architecture of proposed system

This architecture contains an Iconic module which contains fruits and vegetables icons. It also contain Registration, Bank, Government, Weather Prediction, Production Prediction modules. The Registration module provides a user registration facility which includes new registration and login facility. Bank module provides a information of government loan related facilities of user. Government module provides a notifications of new services released by government for farmers. Weather prediction provides the information related to climates which is suitable for farming or not. Production prediction provides a information related to market rates of fruits and vegetables in nearer cities. This proposed system provides a text to speech engine to translate textual information into audio formats like Marathi, Hindi and English which is selected by user. For converting information of English to Indian language, English to Indian language convertor is used. This proposed system uses Internet and Database for users required information.

Architecture of proposed system:



Fig, 1 Architecture of proposed system

3.2Algorithmic strategy

- *Hashing Algorithm:-*

The hashing algorithm usage a hash function for different functionalities like Bloom filters, Finding duplicate records, Protecting Data, Finding similar records, Geometric hashing and so on. The hash function is a function that can be used to map data of arbitrary size to data of fixed size. Hash function accelerate table or database lookup by detecting duplicated records in a large file. The hash table map several different keys to the same index. The hash function contains a set of records, rather than a single record. The hash function are used to build caches for large datasets stored in slow medium. This is also used in file comparison. This hash algorithm is used for finding a duplicated records and avoid them. This is also used in system when user enters a User id or Password for registration. It avoid repetition by giving alert of same registration.

4. CONCLUSIONS

An interface to accessing the agricultural information from the global repository of internet and the local repository has been proposed in this paper. The proposed interface is able to overcome the digital and language confinement of the Indian farmers by employing the multiple modes of interaction techniques. The empirical evaluation through large di-versified users reveals that the Krishi-Mitra interface adequately caters the need of the user. The proposed interface is able to overcome the digital and language confinement of the Indian farmers by employing the multiple modes of interaction techniques. The empirical evaluation through large diversified users reveals that the Krishi-Mitra interface adequately caters the need of the user.

5. References

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