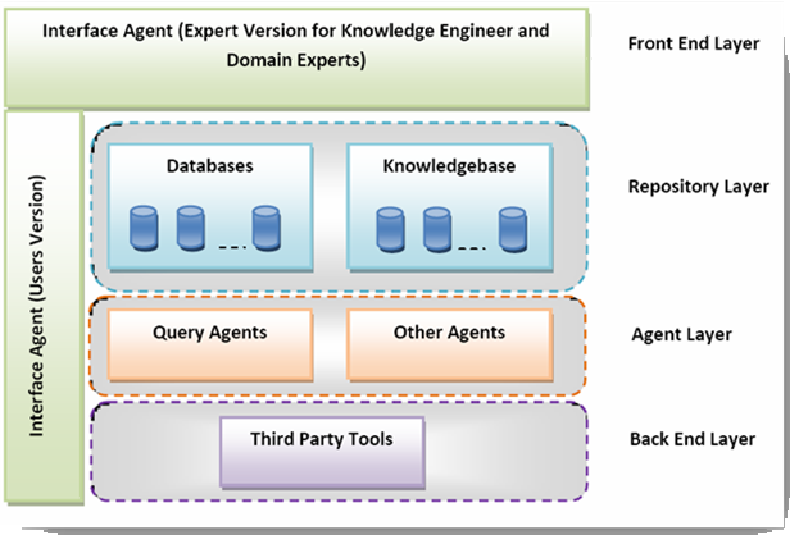
A Multi-Agent Framework for Agricultural Activities

Traditionally the main storage area of knowledge was in people's head. This knowledge was passed down to generations as word of mouth. As years went by this kind of knowledge storage and passing down has taken drastic changes. Various means of data storage and dissemination of information have exponentially grown in the last few decades alone. Not just the volume of the data the different mediums of information sources are also increasing.

The increasing volume and diversity of data is demanding new approaches for data extraction. With the lack of education and limited computer resource availabilities in rural areas manually querying multiple data sources on the internet is time consuming and laborious process. The number of information sources is growing exponentially and traditional information systems do not scale well to increasing demands. Internet search engines get data from multiple data sources, but they provide very limited capabilities for combining, processing and organizing information. Search engines find data based on the content of keywords; however no consideration is given to context of the search.



Intelligent multi-agent based framework provides a promising approach to this problem. **Multiple agents** developed using protégé cooperate with each other to retrieve knowledge from different information sources. Hybrid data retrieval approach utilizing the benefits Web and Knowledge bases is used for optimal results. Technologies like **Ontologies** to **store knowledge** and experience on **the Web** are incorporated into the design to make the application more effective and knowledge oriented. The system also employs **fuzzy linguistics approach** when appropriate to handle uncertainty and vagueness in user inputs. Some of the agents developed are application specific ; however, the framework and a few agents are generic in nature and can be used to developed other application to manage volume of unstructured information on the Web.