**HBase Applications, A storage model for images storage and sharing**

1. CDS in Healthcare: Online storage and sharing for medical prescriptions by doctors in the form of images becomes increasingly important for medical organizations or large hospitals. This application presents a distributed architecture based on Hadoop and HBase to support online storage and sharing for medical/prescription images. An experimental system called CloudDICOM is designed and realized based on this architecture.

CDS architecture focuses on designing the architecture, workflow, data schema, and then on analyzing to end user application using CloudDICOM. Firstly, DICOM messages sent by clients will be received, converted and stored into Hadoop and HBase. Then, these messages will be indexed and generated query and index database. The components of DICOM query based on this index are implemented to provide online DICOM query for clients. The test results demonstrate that CloudDICOM can provide online storage and sharing service for large-scale medical images, and support standard DICOM Query.

1. E-government has entered into a new age of mass data. Therefore storing images to manage the emergency events, because the reason of geography and cultural.

E-government information resource sharing, and promote intelligent, individualized, one-stop E-Government information service.

Source: - <http://portal.www.gov.qa/wps/portal/services>

1. CDS a Storage Model of Equipment Data: - China is transforming from “Made in China” to “Created in China”. As technology contents of large machinery and electronic equipment increase continuously, systems become more and more complex. Lots of data are generated during tests, and various kinds of data are widely distributed. Data management problems become more and more prominent, and various kinds of design, simulation, calculation data and test data generated during development become key system contents. How to effectively manage these data becomes one of the key initiatives of integrating IT application with industrialization.

[www.mdpi.com/1999-5903/8/1/6/pdf](http://www.mdpi.com/1999-5903/8/1/6/pdf)

1. Internet of Things (IoT) is playing a more and more important role in modern agriculture development. However, problems of efficient storing and reasoning those massive heterogeneous sensor data collected from variety kinds of sensing equipment need to be resolved to implement Internet of Things in agriculture. This kind application explores the architecture of Internet of Things in agriculture with heterogeneous sensor data, and proposes a design of implementation to Internet of Things in agriculture based on cloud computing. The design is based on two-tier storage structure of HBase, which is a distributed database with high scalability and a distributed programming framework. Hence, this design provides scalable storage, efficient data access, and eases other processing of sensor data.

<https://www.thingworx.com/ecosystem/markets/smart-connected-systems/smart-agriculture/>

1. Another use case could be initiatives to provide online and mobile messaging services to farmers related to agricultural queries, agro vendor’s information to farmers, it provides static data related to soil quality at each region. The system which utilizes real time data of soil quality based on its current properties for decision making has not been implemented. Soil properties determine the quality of soil. The soil pH value and amount of properties like Nitrate, Phosphate and Potassium in the soil is an important factor which determines the soil quality and type of crop production. Real time monitoring of these properties helps to maintain soil health intact by applying only required amount of fertilizers. Soil moisture analysis helps to apply the water whenever necessary avoiding wastage of water. Also environmental conditions such as temperature and moisture also affect the crop production and crop diseases. In this respect we need a dynamic model which collects such real time data. In support to this; all agriculture entities need to be connected to have decision making system to increase the production and ease the distribution of agricultural products from farmers to marketing agencies and from vendors to farmers. Such system will also be responsible for controlling other parameters like agro product rates. Smart mobile phones are available now days to many users including in the rural areas. Beagle black bone is a cheap IoT device which can be interfaced to soil and environmental sensors to collect soil properties and current environmental conditions. This motivates to develop a cost effective and portable sensor kit for sensing the soil properties for current requirements of fertilizers. The soil data from farmlands needs to be collected through sensor kit and sent to AgroCloud storage for further processing.

<http://ijcta.com/documents/volumes/vol6issue3/ijcta2015060303.pdf>

1. The Design and Implementation of Astronomical Multi-Catalog Storage and Cross-Match Based on Hadoop: - With the development of astronomical observation techniques, telescopes around the world continue to release new spectral data. Due to the difference of geographical location and performance of variable telescopes, the catalog data contain different location information and different band information. In order to provide astronomers with more comprehensive astronomical information, celestial information of multi-band needs to be cross-matched. It’s necessary to use distributed and parallel computing techniques to process massive astronomical data. This application propose a solution to store and cross-match multi-catalog astronomical data.