Veterinary Asset Management Tool

Background

Our customer is a veterinary government agency in the Middle East. They take care of all the animal herds in the country. The animal herds comprise Camel, Equine, Bovine, Ovine and Caprine. The ministry collects and stores details regarding the vaccinations, diseases, treatments, reproduction, etc. Each animal under the agency's purview has a microchip with a preloaded number embedded in its body. This helps the ministry identify and keep track of the animals.

Our client was in need of a centralized system to manage data but with different user privileges. Each group of users such as owner, doctor, ministry personnel, super admin, etc. needs to have their own specific set of privileges. Since much of the work involving animal herds is done in deserts where connectivity is poor, an online solution alone would be ineffective.

Our Solution

We proposed a web-mobile application that would handle the client-server offline syncing operation. This web application can be accessed by the owner, doctor, ministry personnel, admin and self-service staff, with different sets of privileges for the admin, owner, doctor, ministry and self service staff.

We also designed a mobile app exclusively for the doctors. They can use the mobile app while in the field to enter information about the animals and the owners. The data collected and entered via the mobile app is stored on a central server.

Microchips (NFC) with a preloaded number are embedded in the body of the animals. There is also a provision to add images of the animal including the brand marks on the animal's body. The microchip number of an animal can also be entered by scanning the barcode. On entering the herd number of an animal, the app will automatically detect the location using GPS. The app can connect to any Bluetooth printer (provided the printer application is installed in the mobile), and doctors can take print outs of certificates, with the details of both animal and owner, for the animal owners. Using the web application the doctors can add endorsements for a specific animal. Endorsements are details such as vaccinations, disease history, etc.

The application can be used to generate reports on type of vaccination, type of disease, type of treatment and cause of death, based on the relevant data.

The Client-server offline syncing operation of the app supports the offline mode of working to add a new owner and animal to the system. Such details are pushed to the server when the device is connected to it subsequently.

Benefits

Ministry can easily identify and keep track of each animal. Doctors can update information during field visits to remote areas using the offline syncing operation. The ministry can generate reports analyzing the health condition of the animals and proactive treatment plans scheduled if needed.

Challenges

- The major challenge was collecting information regarding the animals their various owners.
- Traditional paper and pen method are impractical because hundreds of animals are micro chipped every day.
- The data collected in such remote areas needs to be secured. Duplication of data while syncing with the central data base needs to be avoided.