Solutions

- Agriculture Cloud Database: agriculture-related spatial data of soil and water resource collection and database management.
- Agriculture Information System: Providing information for multilevel decision making and environment development.

Applying SuperGIS Server, the system adopts GIS as core technology to integrate and geoprocess agriculture-related information including weather, water resource, soil, fertilizer application management, insect pest alert, agriculture disaster prevention.

Results

This project includes two parts, "Agriculture Cloud Database" and "Agriculture Information System", to build the spatial data of most exquisite agriculture information (Agriculture Cloud Database).

In "Agriculture Cloud Database": GIS geoprocessing technology is employed to classify, store and manage geospatial data in cloud database for enhancing integrity and accuracy of agriculture-related digital information in Taiwan.

The agriculture cloud system built with SuperGIS Server takes GIS as core technology to integrate agriculture-related information, including weather, water resource, soil, fertilizer application management, insect pest alert, production marketing, and agriculture disaster prevention.

Case Study

1. GPS Positioning: Users can query a specified tillage by selecting tillage parcel number with GPS function.

2. Tillage Information: After positioning with GPS, users will enter tillage information page. Tillage information includes tillage owner, crops, area, address, etc. By clicking on screen of iPAD, users can modify the data they have recorded.

3. Historical Climate: users can query records of tillage climate change.

4. Weather Forecast: In this page, users can view the relevant area forecast data on GIS and view weather forecasts of 368 townships in Taiwan.

5. Insect Pest Alert: Users can view the relevant area forecast data on GIS. You need the viewer to know the insect pest, primary period of prevention, periodical, etc. of the alert district.

6. Statistics of Losses: Enter Statistics of Losses from Disaster page, users can view damaged area and damage proportion of tillage in each township.

Effects

The agriculture cloud database developed in this project employs GIS technologies from SuperGIS Server to integrate, display, store and manage primary information of agriculture and significantly enhances integrity and accuracy of agriculture-related digital information in Taiwan. With "Agriculture Information Application System" and "Agriculture Information Application", all the data in agriculture cloud database can be integrated into map on GIS for agricultural specialists, tillage managers and farmers to rapidly and effectively query agriculture-related spatial information according to different spatial categories.

Software Used

SuperGIS Server

Goals

In this project, a database and agricultural information system are employed for agricultural cloud. Over the Internet, all the data on agriculture cloud database will be integrated into map through GIS geoprocessing technologies. Thus, agricultural specialists, tillage managers and farmers can effortlessly query agricultural and geospatial-related information such as records of climate change, weather forecasts, water resource, soil, geospatial information, topographic information, and disaster prevention information and so on.

In "Agriculture Information System", to build the spatial data of most exquisite agriculture information (Agriculture Cloud Database).

Software Used

SuperGIS Server

To satisfy the feature of agricultural in-situ application, the system is designed as a web application for both of desktop and App usage.

This App is particularly designed for IPAD and supports agricultural specialists, tillage managers and farmers to query agriculture-related spatial information in specified tillage quickly and efficiently by positioning the tillage with GPS and selecting the information category.

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GIS geoprocessing helps to classify agriculture-related decision data in the database according to Common Land Unit (CLU) and the classified data will be used to display agriculture-related information. In this way, the most exquisite agriculture-related spatial data of management can be built.

In "Agriculture Information System", data on agriculture cloud are integrated into map on GIS for agricultural specialists, tillage managers and farmers to quickly query agriculture-related spatial information such as records of climate change, weather forecasts, water resource, soil, geospatial information, topographic information, disaster prevention information and so on.

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