PARCEL MAPPING CASE STUDY

OVERVIEW

E-governance is a means of using the GIS to create a more effective management. Typically, land records information is the most requested type of public information. The combination of cloud data and maps allows administration to provide a new level of service, particularly access to land record information, to businesses and the public.

E-governance is making collaboration between government agencies possible in new and powerful ways. The strong data integration abilities of GIS allow end user to capitalize on data existing in legacy systems.

WebGIS effectively providing land-related services such as agriculture parcel subsidy submission. Three categories of e-governance apps have been developed — government to business, government to citizens, and government to government.

From data processing to cartography, automated workflow is modeled and carried out in GIS to improve accuracy and quality and to save labor, time, and money.

GIS provides an integrated workflow for creating and updating the parcel fabric that can be easily shared both within and between organizations.

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APPROACH

- **Project Initiation:** Review of adequacy of resources. Mapping of required quality parameters to existing Quality Policy and Quality Objectives and analyzing scope for improvements in lieu of the present practices.

- **Inventorization:** Data security parameters with the incoming, in production and outgoing data. Finalization of data distribution and flow among the team(s).

- **Internal Training:** Project manager in association with the team leader(s) identifies project specific technical training schedule.

- **Production Monitoring:** Daily production reports are analyzed covering individuals and teams. Timely progress is mapped on the master project plan to analyze slippages and corrective actions discussed. Internal audits happen to check adherence to the defined parameters and non-conformity reports are prepared and acted upon.

APPLICATION FOR PARCEL MAPPING

- Land Use Cover Planning
- Tax Assessment
- Utilities Surveys
- Telecom and Network services
- Environmental Impact Analysis
- Disaster Management
- Flood damage estimation

DELIVERABLES

- shp (ESRI)
- GeoDatabase (ESRI)
- .dwg (AutoCAD)
- Open GIS
- .KMZ
- Colada

CONCLUSION

It allow users to build inventory, analysis of attribute information and graphic display of property parcels for basic land use planning and property value assessment.

Resulted in an improved and more consistent accurate mapping data for location land properties. Improved customer response.

Efficient asset tracking for regulatory reporting and maintenance programs.

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LAND INFORMATION SYSTEM

OBJECTIVE:

- Provides a cartographic record of official and sometimes private land surveys and subdivisions.
- Facilitates the administration and transfer of Crown Lands.
- Records land ownership.
- Assists in the valuation and taxation of land
- Use in Land Revenue System

CLIENT: A GLOBAL LEADER IN LAND BASED SOLUTIONS

Our client is a leading provider of comprehensive digital map information for spatial applications in and location-based service solutions around the world. They provide innovative and cost effective mapping, GIS and AM/FM products and services to the users of land based information. They believe in producing high quality maps with parcel and other relevant information. Principal customers include realtors and realtor associations, commercial realtors and developers, various departments within cities and counties such as municipalities, police, fire, schools, individual consumers and homeowners.

Software Used: AutodeskMap, ArcGIS, Erdas Imagine

Technology: Digital Data conversion, Customised application, Database integration

Area of Interest: Mapped more than 10 Million Parcels.

Counties mapped : Major counties in CA, IL, NY, MI and other states

Duration : Dec 2017 – On going

Team Size: 100+

CartoSolution was chosen to support them in digital parcel mapping of various US counties.

SERVICES:

- Geo-reference the paper parcel maps on the basis of Street center line data
- Digitise the extent of the parcels from parcel paper maps and aerial images in closed polygon shape with high degree of accuracy and interpretation
- Add APN as attribute in the table of parcel layer
- Overlay the vector parcel map on geo-referenced ortho images and position the parcel accurately on image in "Best fit Process".
- Put condominium's APN label Points within common area parcel polygon as point layer in a defined systematic order
- Verify any sort of discrepancies in parcel APN with Situs list
- Create a seamless parcel database for the county
- Integration of other land related database with parcel map dataset

CHALLENGE:

- Some of the paper map pages were quite old and many texts were illegible
- Geo-referencing of map book pages to achieve high quality positional accuracy
- Edge-matching of vector data captured from various map book pages
- Due to real world change it is difficult to match the paper map book parcels shapes with actual shape from ortho photo.
- Positioning of multiple condominiums as stacked features but with different attributes

BENEFITS:

- It allows users to build inventory, analysis of attribute information and graphic display of property parcels for basic land use planning and property value assessment.
- Resulted in an improved and more consistent accurate mapping data for location land properties
- Helpful in valuation of tax for land parcels

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