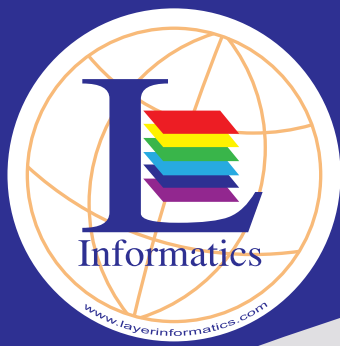




VECTOR EXTRACTION FROM SATELLITE IMAGERY

A Case Study



CHALLENGES:

- The first challenge was to integrate or even replace visual interpretation of vector extraction from satellite imagery. An Interpretation with respect to different feature with low resolution Satellite imagery is very quite challenging

INTRODUCTION:

Raster and vector are the basic data structures for storing and manipulating computerized images and graphical data. The entire major GIS (geographic information systems) and CAD (computer aided design) software packages utilize both structures, allowing vector data to be viewed and analyzed on top of raster images.

KEY ASPECTS:

- Image Pre Processing
- Vector Extraction
- Classification
- Attribution
- Drawing cleanup & Topology
- QC/QA

METHODOLOGY:

➤ Image Preprocessing

In order to derive the vector extraction from satellite image data.

➤ Vector Extraction

Digitization will be carried out based on visual analysis of the imagery of tone, hue, texture, shape, size, pattern, shadow and geographic context. We were better able to integrate our intimate field knowledge into the interpretation process.

➤ Classification

Land use is the human modification of natural environment or wilderness into built environment such as fields, pastures, and settlements. Land cover is the physical material at the surface of the earth included grass, asphalt, trees, bare ground, water, etc.

➤ Attribution

Once the vector features are extracted to line files, they can be attributed to project specifications. This includes having a separate vector file for every vector feature or combining many vector features into one vector file with appropriate attribution. Specific attribution, such as codes and numeric representation, can be added to the vector files attribution table to easily ingest the data into specific applications.

➤ Drawing Cleanup & Topology

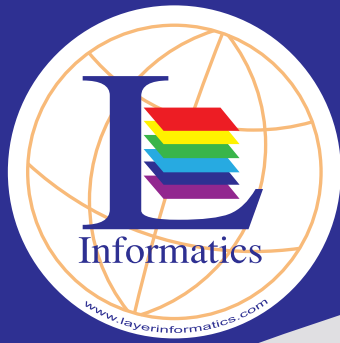
To check the overshoots, undershoots, overlapping, 0length objects, dangles and pseudo nodes Drawing cleanup will be carried out and to create polygon features topology will be done.

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TESTIMONIALS:

Thanks so much. ...That is why I never even look to get prices from other aerial companies. I have had nothing but good experiences with Layer."

► QC/QA

Feature Vector Extraction has several areas that need to be checked to assure a quality GIS Data product. This includes accurate digitization from the source material, built topology, and attribution accuracy.

TECHNOLOGY:

- AutoCAD Map 2004
- ArcGIS 9.3
- Erdas Imagine 9.2

APPLICATION:

- This leads to quick and truthful representation of the real world in the best possible manner. It provides an insight to coordinate relationship among transportation, residential, industrial and recreational land uses.
- Providing broad-scale inventories of natural resources and monitoring environmental issues, including land reclamation, mangrove restoration, disaster relief, water quality and planning economic development.

SCREEN SHOTS:



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US Office:

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Middle East Office:

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