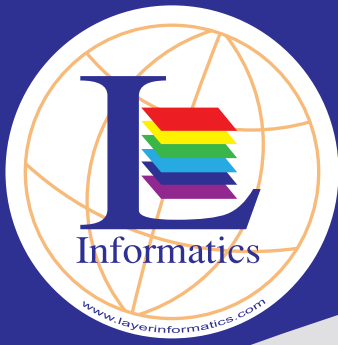
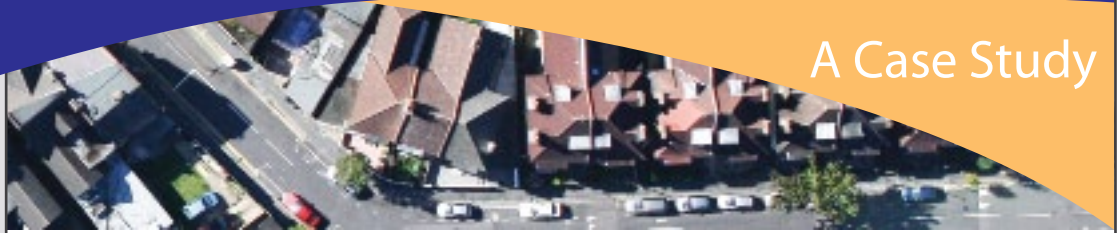




VECTOR EXTRACTION FROM TOPOSHEET

A Case Study



CHALLENGES:

- The first challenge was to integrate or even replace visual interpretation of vector extraction from Topo Sheet.

INTRODUCTION:

A Toposheet is a shortened name for 'Topographic sheet'. They essentially contain information about an area like roads, railways, settlements, canals, rivers, electric poles, post offices etc. According to their usage, they may be available at different scales (e.g. 1:25000, 1: 50000 etc, where the former is a larger scale as compared to the latter). They are made on a suitable projection for that area and contain lat-long information at the corners. Thus any point on it can be identified with its corresponding lat-long, depending upon the scale (i.e. if the scale is large, more accurate lat-long).

KEY ASPECTS:

- Geo-reference
- Data capture
- Attribution
- Drawing Cleanup & Topology
- QC/QA

METHODOLOGY:

➤ Geo-reference

Geo-referencing of Topo-sheet to original / real co-ordinate systems with reference to the control / Grid points available on the map sheet & set projection system.

➤ Data capture

Digitization will be carried out with the reference of legend in the Topo map. Different Features will be captured in different layer such as Settlements, administrative boundaries, Road, railway, river, waterlines, lakes; vegetation, Contours and ridges with reference to Legend represented in the Topo-Sheet.

➤ Attribution

Features having text information shall be considered as attributes & same were attributed respective features.

Example: Contours having elevation height from sea levels are represented as the texts in the Topo-map, same shall be attributed in Vector data. In the same way names of Road, Village, City, River, Streams and canals Etc., shall be attributed in the Vector data.

➤ Drawing Cleanup & Topology

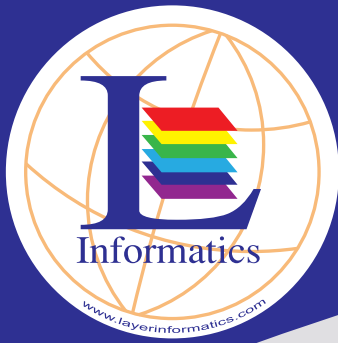
Overshoots, undershoots, overlapping, '0' length objects, dangles, duplicates and pseudo nodes checked & corrected performing the Drawing clean-up task & polygons shall be created for closed area.

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VECTOR EXTRACTION FROM TOPOSHEET

Page 2

TESTIMONIALS:

Layer Informatics unquestionably provides the best service we could expect !

► QC/QA

QC/QA is undertaken after the conversion process and the output was evaluated on the accuracy of drafting, Layerization and Attribution / Annotation of landmarks with reference to check list and acceptance criteria provided / defined by Client.

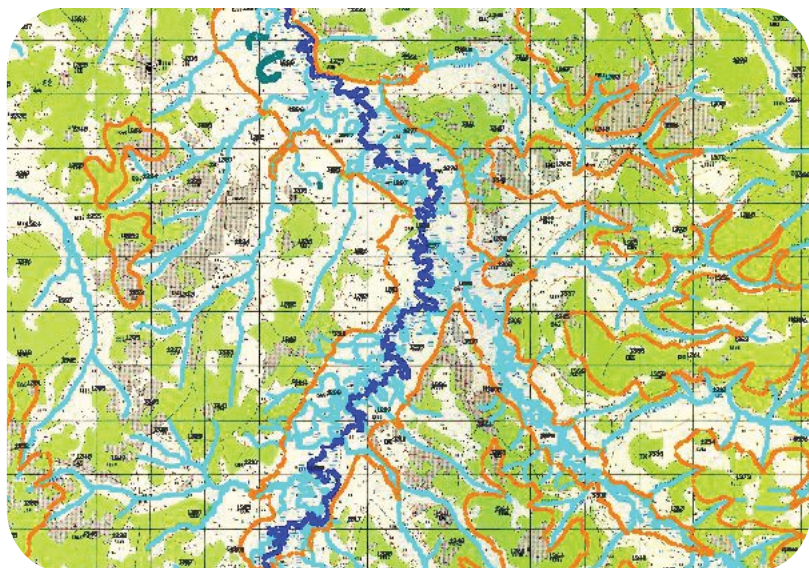
TECHNOLOGY:

- AutoCAD Map 2004
- ArcGIS 9.3
- Global Mapper

APPLICATION:

- Topography is basic to many earth surface processes and thus finds applications in ecology, hydrology, security, agriculture, climatology, geology, pedology, geomorphology and a host of other domains and constitutes the basis for explaining processes and predicting them through the process of modeling.
- A topographic map shows the varying shapes, heights and slopes of a landscape using contour lines .That's why they are so useful for bushwalking, property mapping and even town planning.
- Contours are lines that connect points at the same height above sea level and are plotted using vertical aerial photographs.

SCREEN SHOTS:



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Scotland, UK.

US Office:

Scranton, PA 18505

Middle East Office:

Doha, Qatar.



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