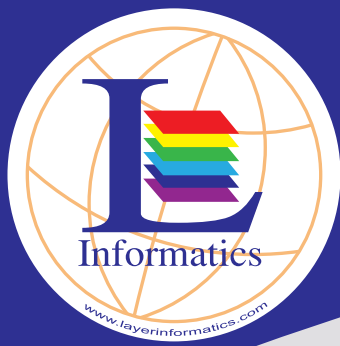




DIGITAL SURFACE MODEL

A Case Study



CHALLENGES:

- ▶ Creating the accurate surface models in the urban areas especially Buildings having a complex shapes was a challenging task.
- ▶ The sharpest changes between the ground & the roof levels needed to be modeled.

INTRODUCTION:

The scope of the project is to auto generate DSM at grid spacing of 20cm and manually edit them to remove the errors.

KEY ASPECTS:

The key objective of this project was to automatically generate the DSM for the entire project & manually edit them to remove the errors & to ensure that the DSM includes all manmade structures, buildings, vegetations etc. The accuracy of the DSM should be such that each point falling on the hard surface, either on the ground or on the roof should be within 6cm. Utmost care should be taken to model the ground correctly as these should be matching exactly to the DTM of these areas.

▶ Services Rendered

- DSM with a regular grid spacing of 20cm.
- DTM with a regular grid spacing of 20cm.

METHODOLOGY:

▶ Preprocessing

An assessment of the supplied inputs is done to ensure all images results are available to initiate the project. A project is Setup with the supplied PATB results and the camera details.

▶ Auto Correlation

Automatic Terrain Extraction is done at a Regular Grid interval of 20cm for DTM.

Automatic Feature Extraction is done at a Regular Grid interval of 20cm for DSM.

▶ Editing

The Auto Correlated DSM & DTM points were evaluated and were manually edited to ensure that they were under the acceptable limits.

▶ QC/QA

A QC checklist was prepared to assess the Editing quality. A random QA was performed to make sure the data was within the acceptance criteria.

TECHNOLOGY:

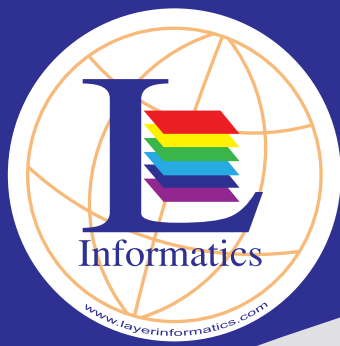
- ▶ Match-T
- ▶ Terrain Editor
- ▶ Microstation V8
- ▶ Terra Model

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DIGITAL SURFACE MODEL

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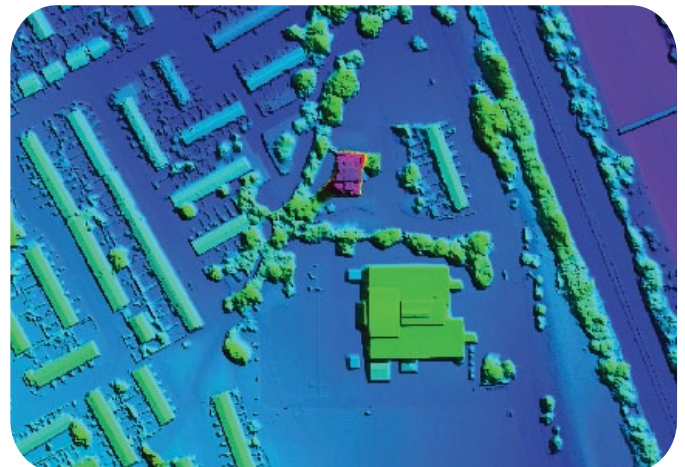
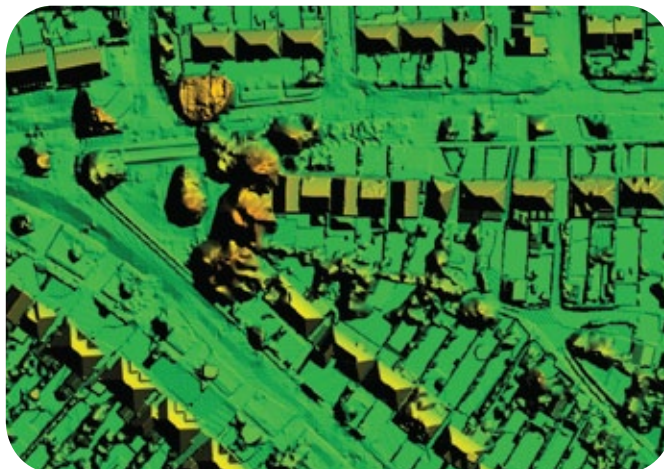
TESTIMONIALS:

We're very pleased with the results. Please extend our thanks to the rest of the team at Layer for a job well done.

APPLICATION:

- Maps covering the administrative boundary of reserve forest and protected forest
- Identification of natural water bodies, large streams etc
- Tidal forest Assessment and Monitoring
- Landscape monitoring
- 3D fly-through
- Simulated environments

SCREEN SHOTS:



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Edinburgh EH2 4AT,
Scotland, UK.

US Office:

Scranton, PA 18505

Middle East Office:

Doha, Qatar.



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