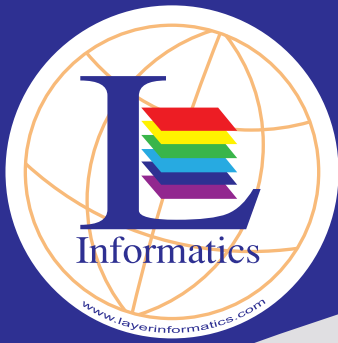
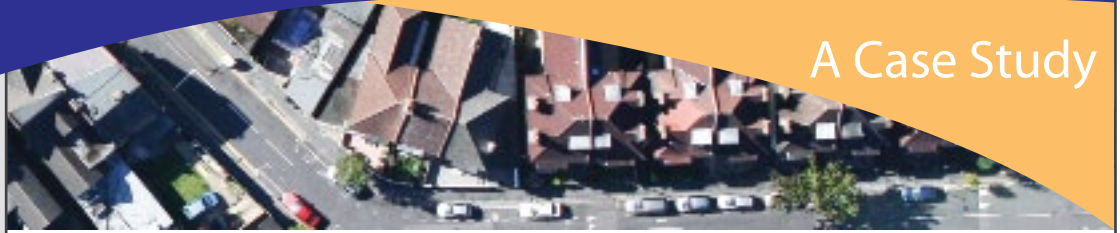




4cm ORTHOPHOTOGRAPHY OF A NUMBER OF CITIES IN UK USING DIGITAL PHOTOGRAMMETRY

A Case Study



CHALLENGES:

- The terrain was completely built-up and there were building disturbance in the orthos owing to sudden undulations and were rectified through many iterations of DTM smoothening and patch works.
- Seamlining to avoid busy streets and elevated structures was extremely difficult with 4cm imagery on a built up terrain.
- The images had a time difference and hence misalignments due to the lean difference in the final mosaics were fixed by using one of the ortho imageries to an extent they can be hidden.
- Mosaicking was done with least feather to avoid building duplicates at seam joints and hence even minor radiometric differences between the imageries became clearly visible (which could have been avoided by using high feathers) and were manually cleared in an image editing software.

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INTRODUCTION:

The scope of the project is to produce 4cm orthophotography of a number of towns and cities throughout UK from aerial imageries acquired with a Vexcel Ultracam digital camera.

KEY ASPECTS:

- Automatic creation and manual editing of DTM.
- Digital orthophotos at 4cm pixel size.

METHODOLOGY:

● Ortho DTM

- The DTM to be created for Orthophotography was automatically generated and manually edited to an accuracy of +/- 6cm on ground.
- The final DTM consisted of regular grid of points to spacing of 5m and was delivered in ASCII grid format.

● Digital Orthophotos

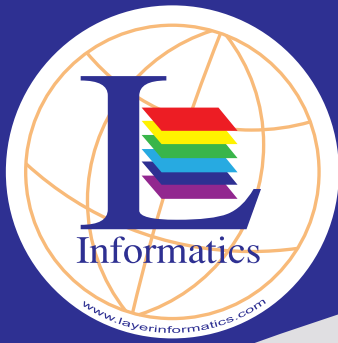
- The images were orthorectified at 4cm GSD.
- Seamlines were drawn along the overlaps and manually edited followed by the mosaicking of the tiles.
- The ortho tiles were then corrected for seamline errors, Color balanced and edge matched in an image editing software.
- The tiles were then taken through a final global radiometric adjustment.

The ortho tiles were delivered in tif and tfw formats.

TECHNOLOGY:

- Imagestation Products.
- Microstation.
- Adobe Photoshop.





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TESTIMONIALS:

We were extremely pleased with your quality and management of 4cm ortho projects. We will be happy to continue our relationship.

APPLICATION:

- Urban Planning which includes Landuse, natural resources, roadway design, transportation, asset management, change analysis, etc.
- A base map to provide accurate information to GIS.

SCREEN SHOTS:



UK Office:

Edinburgh EH2 4AT,
Scotland, UK.

US Office:

Scranton, PA 18505

Middle East Office:

Doha, Qatar.



Layer Informatics Pvt. Ltd.
Vision Through Mapping