

Geospatial Solutions for Network Planning

Terrain Models, Clutter Data & Digital Mapping for Wireless Applications

Communication users demand a reliable and efficient service, so effective planning is vital for providers to deliver dependable services in a rapid and cost-effective manner.

Geospatial solutions have proven to be a crucial element to enable accurate network planning for both fixed and mobile wireless environments.

Infoterra understands that its customers require improved time-to-market and optimal coverage, so offers a portfolio of highly accurate mapping datasets to support successful planning activities.

To optimise network planning of the next-generation mobile telecommunication systems, such as WiMAX, it is essential that network planners take advantage of up-to-date, accurate & cost-effective geospatial solutions.

Infoterra's team of spatial data specialists has developed a range of products tailored to meet the ever-increasing demands, line-of-sight being a particular requirement, of the next generation wireless networks.

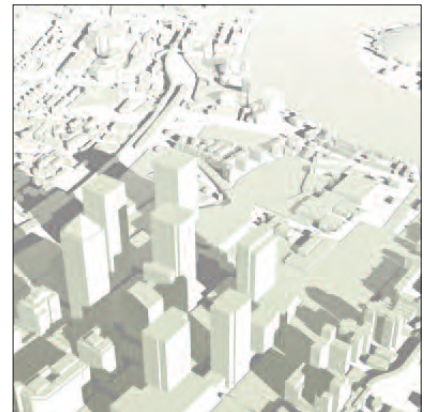
This range of products can be provided to planners as standalone datasets or combined together to form a package of geo-referenced data such as:

- orthorectified aerial photography
- 3D city vector models
- digital terrain models
- digital surface models
- clutter data



5m clutter data (London)

These products have been used to successfully plan wireless technologies such as GSM, GSM-R, Tetra, 3G, PMP, wireless broadband & WiMAX.



3D city vector model (Canary Wharf)

Infoterra has an extensive archive of geospatial data covering the UK & Ireland, with all major towns & cities at high resolution. This data store is constantly updated & enhanced, as Infoterra is committed to an ongoing acquisition programme.

Infoterra offers consistent mapping datasets for any region of the world and continues to develop its range of mapping solutions to support the roll-out and optimisation of mobile telecommunication programmes.

Imagery

Orthorectified aerial photography has proved to be an invaluable resource to help determine the demographics of a particular area and the suitability of a building for positioning a transmitter.

Infoterra provides aerial photography for the UK & Ireland, with selected regions available off-the-shelf at 25cm & 12.5cm resolution. This imagery is available in a variety of formats and is geo-referenced to enable further data layers to be overlaid.

Satellite imagery can be captured at regional & national level at a range of resolutions to support telecommunication applications.

3D City Vector Models

3D vector models of cities are crucial for network planning when a ray tracing technique is being used for wireless broadband systems.

Infoterra has created 3D city vector models for all of the major towns & cities within the UK and Ireland. This data contains building polygons, vegetation boundaries & road centrelines, all attributed with accurate height data.

Height Data

Digital Terrain Models (DTM)

Digital terrain models, created using precise lidar height data, represent the true elevation of the ground above sea level.

As network planners often need to calculate transmission for propagation predictions in near

'real-time', Infoterra supplies DTM data at resolutions ranging from 1m to 100m.

Digital Surface Models (DSM)

Digital surface models are a combination of the true surface of the ground and above ground features, such as buildings & vegetation. The height data is captured using lidar at 1m & 2m horizontal spacing with a vertical accuracy of +/-25cm.

DSM data can be provided at different resolutions to support accelerated prediction time and specific network planning applications.

Clutter Data

Using a range of data sources & techniques, Infoterra generates high resolution clutter data and landuse classification datasets, to support planning across the entire spectrum of wireless communication systems.

High resolution DSM & orthorectified aerial photography is used to create high resolution clutter data at 1m to 5m, which is essential for optimising wireless broadband and WiMax networks. Satellite imagery is used to derive datasets over large geographic areas and can be supplied at resolutions ranging from 10m to 100m.

Formats

Infoterra's team of geospatial analysts has gained unparalleled knowledge in an extensive variety of radio network planning tools, formats & requirements.

Infoterra has also been involved in benchmarking the requirements for WiMAX & associated wireless broadband technologies.

Available data formats include PlaNET, ASSET, ATOLL, A955, EET, DXF, ICS Telecom, NPS/X, Odyssey, Tornado, ASCII Grid, Arc/Info & MapInfo.

Hosting & Delivery

Infoterra operates Europe's largest commercial geospatial hosting & archiving facility - storing & managing over a thousand terabytes of geospatial data, and delivering this data in a secure, rapid and cost-effective way.



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GeoStore® has been developed to provide immediate access to professional geospatial data products. With a range of services, formats & methods of payments, GeoStore delivers a flexible and cost effective service.

Infoterra's geospatial knowledge & expertise supports successful network planning across the entire range of wireless technologies.

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