Telco Geodata Products & Solutions

As 5G and other wireless networking technologies continue to advance, network planners are faced with increasing challenges posed by new trends, such as high-frequency spectra usage and proliferation of small cells across suburban morphologies. The level of model fidelity needed to effectively optimize these networks to improve coverage, bandwidth, and latency has drastically increased, as well as the sensitivity of these models to urban change. Access to accurate and highly detailed geodata for use in your planning software is critical to help you achieve optimal usage of network infrastructure investment. Advanced, current geodata packages from DigitalGlobe provide quality-at-scale to help you efficiently plan the networks of tomorrow.

Features & benefits

- Highly accurate 3D polygon models (buildings, foliage, and bridges) and mesh terrain models
- Cost efficient, consistent coverage across urban, suburban, and rural morphologies
- Rapid delivery at massive geographic scale by leveraging multi-view photogrammetry capabilities
- Compatible with typical software packages
- Suitable for point-to-point/point-to-multipoint or for RAN network planning
- Reduced costs associated with iteration and field validation
- Fewer network capital equipment costs associated overbuilt networks

With more than 100 PB of imagery data in our cloud-based library and access to advanced multi-view photogrammetry technologies, we produce highly accurate digital elevation models at massive scale. These models serve as the basis to extract height data, clutter data, 3D polygon models, and other data sets of critical interest for wireless network planning geodata packages. Our advanced change detection capabilities provide proactive refresh of these geodata products, as well.
Available geodata options include:

**3D Polygon Models**
Developed from highly accurate building footprints and elevation models, 3D building models show an LOD 2 representation of buildings with multiple roof features. Foliage and bridge models are also available.

**2D Linear Vectors**
Feature numerous map elements, including roads, bridges, rivers, and coastlines.

**Clutter Data (Digital Land Use)**
Classification of the built environment, foliage, and other surface features suitable for RF Propagation modeling, with resolution options ranging from 50 cm to 10 m

**Digital Height Models (DHM)**
Highly accurate “2.5D” representation of the built environment with highly accurate height values and a range of bin sizes available from 50 cm to 10 m, and height accuracies as good as 2 m

**Digital Terrain Models (DTM)**
3D mesh representation of the Earth’s surface without man-made structures

**Ortho Imagery**
High-resolution satellite imagery to accompany the DTM

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**Compatibility**
DigitalGlobe geodata is suitable for use in major line-of-sight and RF propagation modeling software packages including:

- RF propagation
  - Forsk Atoll
  - InfoVista Planet
  - EDX SignalPro
  - TEOCO Asset

- **Point-to-point / multipoint**
  - Pathloss
  - Fork Atoll Microwave
  - InfoVista Ellipse

**Delivery Methods**
- FTP
- Hard drive

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**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>3D Polygon Models</th>
<th>DHM</th>
<th>DTM</th>
<th>Clutter data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spatial resolution</strong></td>
<td>1:5,000 level</td>
<td>50 cm - 20 m</td>
<td>50 cm - 20 m</td>
<td>50 cm - 20 m</td>
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<tr>
<td><strong>Best horizontal accuracy</strong></td>
<td>2 m RSME</td>
<td>2 m RSME</td>
<td>2 m RSME</td>
<td>2 m RSME</td>
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<tr>
<td><strong>Best vertical accuracy</strong></td>
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<td>2 m RSME</td>
<td>2 m RSME</td>
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<tr>
<td><strong>File format</strong></td>
<td>TAB, shape, KML</td>
<td>BIL or GeoTiff</td>
<td>BIL or GeoTiff</td>
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<tr>
<td><strong>Min order size</strong></td>
<td>25 sq km</td>
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<td>25 sq km</td>
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</tbody>
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DigitalGlobe offers a number of geodata product suites and options to suit your needs. Contact us to discuss specific options suitable for your usage.