

# TELECOM GEODATA SOLUTIONS

RMSI is a leading global supplier of digital map databases to telecom operators and OEM's, addressing their needs of wireless network planning , design and performance optimization.

RMSI offers geodata solutions for fixed wireless (WLL, LMDS) and mobile wireless (GSM, CDMA, TDMA, UMTS and WiMAX) networks. These solutions can be used for multiple wireless applications, ranging from preliminary regional network planning and coverage analysis to micro-cell design, line-of-sight analysis, network expansion, and site acquisition. Additionally, we offer an innovative and cost effective approach for RF (Radio Frequency) network planning.

RMSI has developed one of the largest international inventories of off-the-shelf geodata products in the industry. Our large production capacity ensures that, based on client requirements, we can create customized data within a quick turnaround time, for any country, region or city. Through a rigorous data maintenance program, these data products are regularly updated to provide clients with the most up-to-date data sets.

## GEOSPATIAL DATA SOLUTIONS FOR RF PLANNERS

3D Building Data Package  
Optimized 3D Data Package

2.5 D Data Package  
City Data Package

Regional Data Package  
Population Data Package

Off the Shelf Data Package



### 3D BUILDING DATA PACKAGE

**Area Coverage:** Covers client specified urban city centers

**Resolution:** 1 to 5 meters

**Layers:**

- Digital Terrain Model (DTM)
- Digital Surface Model (DSM)
- Digital Building Height Model (DHM)
- Vegetation Model
- 2D Linear Vector Feature
- Clutter (Land Use)
- Ortho-imagery (Satellite Image/Aerial Photo Backdrop)

**Input Sources:** High resolution stereo satellite imagery (GeoEye-1, WV-1, WV-2), digital aerial imagery, and large scale topographic mapping



### OPTIMIZED 3D BUILDING DATA PACKAGE

**Area Coverage:** Covers client specified dense urban city centers

**Resolution:** 2 - 5 meters

**Layers:**

- Digital Terrain Model (DTM)
- 2D Linear Vector Feature
- Clutter (Land Use)
- Ortho-imagery (Satellite Image/Aerial Photo Backdrop)

**Input Sources:** High resolution Mono satellite imagery (GeoEye-1, WV-1, WV-2) or high-resolution imagery and maps available on public domain as reference





### 2.5D BUILDING DATA PACKAGE

**Area Coverage:** Covers client specified urban areas

**Resolution:** 2 - 5 meters

**Layers:**

- Digital Terrain Model (DTM)
- 2D Linear Vector Feature
- Clutter (Average Height Based)
- Ortho-imagery (Satellite Image/Aerial Photo Backdrop)

**Input Sources:** Alos/Spot images, high-resolution imagery and maps available on public domain- as reference



### IMPROVED URBAN (CITY) DATA PACKAGE

**Area Coverage:** Covers client specified urban and metropolitan areas for the main cities

**Resolution:** 2 - 5 meters

**Layers:**

- Digital Terrain Model (DTM)
- Clutter (Land Use)
- Vector (Linear)
- Ortho-imagery (Satellite Image Backdrop)

**Input Sources:** 1:25,000 scale or better topographic mapping, mid to high resolution satellite imagery (IRS LISS IV, CARTOSAT, Rapid Eye) and other reference mapping



### REGIONAL DATA PACKAGE

**Area Coverage:** Covers large area or whole country

**Resolution:** 10 - 100 meters

**Layers:**

- Digital Terrain Model (DTM)
- Clutter (Land Use)
- Vector (Linear)
- Ortho-imagery (Satellite Image Backdrop)

**Input Sources:** 1:50,000 scale or better topographic mapping, medium resolution satellite imagery (Sentinel 2, LANDSAT Pan Band Merged, Landsat -8), and other reference mapping



### POPULATION DATA PACKAGES

**Area Coverage:** Covers city level to large area or whole country

**Resolution:** 2 - 50 meters

**Layers:**

- Rasterized Population Density Map

**Input Sources:** Latest demographic information, medium resolution satellite imagery (Sentinel 2, LANDSAT Pan Band Merged, Landsat -8), and other reference mapping



### OFF THE SHELF DATA PACKAGES

**Area Coverage:** RMSI has repository of OTS data covering about 5000 cities and 150 countries across the globe

**Resolution:** 2 - 100 meters

**Available Data packages in OTS:**

- 3D City Data
- 2.5 D Data
- City Data
- Regional Data
- Rasterized Population Data

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## SUCCESS STORIES

### Enhanced Countrywide Clutter Data for 4G Network Rollout, UK

One of the largest telecom operators of UK required 2D and 2.5D databases for rolling out next generation network across all important urban areas and countrywide data of UK. RMSI experts created 2D and 2.5D databases (including height parameters) for entire UK and specified 944 urban cities at 25m resolution and 4m resolution respectively, covering approx. 27,500 sq. km.

These databases helped the client's RF planning challenges in urban scenarios where complex man-made structures and vegetation play an important role.



### 3D Data for Rolling out Next Gen Networks, Malta

One of the largest telecom operators of Europe required vector 3D building footprints for Malta. RMSI experts created an innovative and cost effective customized Stereo Suite tool to create 3D data using stereo satellite imagery (GeoEye/WV-02) with a resolution of 0.5m.

The client was provided with DTM, Clutter data and vector data for linear features along with 3D building footprints in lesser turnaround time (as it was based on automatic building height extraction vis-a-vis traditional photogrammetry techniques) that helped in significantly improving its existing network coverage and resulted in a cost effective solution

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## KEY INDUSTRY CHALLENGES

- Highly accurate geodata along with 3D visualization technology are vital for seamless RF planning
- Precise mapping information for built up urban areas
- Typically used 2D data provides less details and low quality
- Budget constraints and timely delivery

## VALUE PROPOSITION

- One of the largest repository of OTS database covering about 5000 major cities and 150 countries across the globe
- Unique QCDS delivery model of execution focusing on all aspects from quality, cost service, and delivery for ensuring client satisfaction
- ISO & CMMi certified process and tools to ensure data quality and security
- 4G and 5G data readiness
- Data compliant with all leading RF planning tools including Planet, ATOLL, and BIL



For further information, please contact [info@rmsi.com](mailto:info@rmsi.com) or visit [www.rmsi.com](http://www.rmsi.com)