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Technology
Unique Core Technology

Same hardware and software for multiple uses, such as:

- Rail
- Road
- Buildings
- Aerial
- Indoor
Full Technology Suite

- **Mobile Mapping System** based on SLAM (Simultaneous Localization and Mapping)
- **Accuracy algorithms** based on PPiMMS (Post Processing)
- **Automated feature recognition and connection to GIS** (based on Magellan)
- **Easy to use web viewing** from standard browser
Rail
Mobile Mapping for Rail

Rail Mount

High Res Point Cloud Data
Mobile Mapping for Rail

High resolution camera system captures broad detail of route

Detailed LiDAR data allows precise analysis of critical features
Mobile Mapping for Rail

LiDAR can be used to extract features such as contours

... and rails
Mobile Scanning in Tunnel

Mobile Scanning in Difficult Area

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Road
Road: Mobile Mapping is fast

~15 minutes of data collection

~1 km

Planimetric View
Looking at Point Clouds

Same data as viewed in 3-D from the “air”. But Mobile System was on the ground when all the data was collected.

3-D view of the point cloud
360 Degree Coverage

Mobile picks up ground, street furniture and wires in one pass
Digital Image

6 mp and 1.3 mp cameras (1.3 mp example below)

6 mp and 1.3 mp cameras (1.3 mp example)
Overhead Images

1.3 and 6 mega pixel digital cameras, up to 5 frames/sec

1.3 mega pixel imagery shown
Mobile Digital Video Image

Acquire Images:

• by distance
• by time
• by frame rate
Road corridor Features
Derived Vectors

Contours, paint lines, hydro lines and POA, visible building outlines, single tree, vegetation, expansion joint, pole XY, 3D centre divider vector, overhead signs, bridge clearances
Vector Extraction
Example: Intensity DEM all points
Vectors & non-ground
Divided Highway: Raw points
Classified Ground Points
Barriers taken from elevation, paint lines taken from intensity.
Extracted Linework
Infrastructure
“Floor Plans for the 21st Century”

Floor Plans, Elevations, and Sections

Online Virtual Tours

3D Models Revit/CAD

Integrated to GIS

Web-Based Panoramic Images
3D Point Clouds
Hi Res 360 Imagery
Virtual Tours
(with measurements)
Standard CAD Drawings
3D Models
Outside
Valuable Client Applications

1. Space Planning/Remodeling/Repurposing
   • Optimize capacity, rev/SF, save time and cost

2. Verify Existing 3D Models/Floor Plans
   • Find potentially expensive mistakes before doing work

3. Construction Documentation
   • Verify compliance/billing, trace back issues in walls, ceilings

4. Asset Management
   • All immediately accessible online, save visits, remeasuring

5. Purchase and Sell properties
   • Remote viewing and evaluation can shorten sell/buy cycles