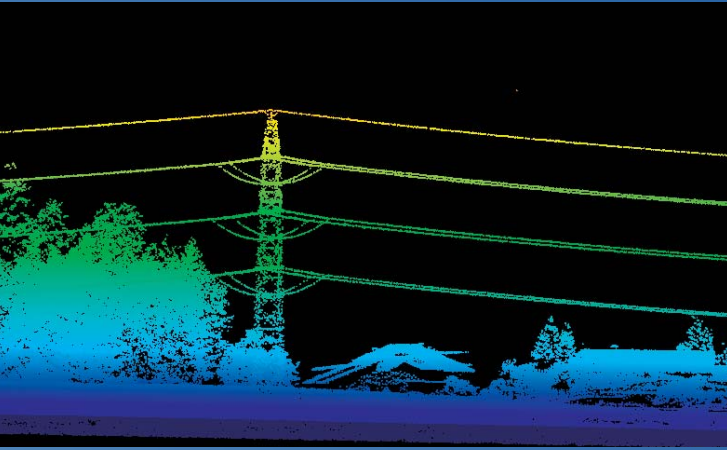




DESIGNED FOR PRECISION

Airborne Laser Scanning & Aerial Images

Rapid, Cost-Efficient & Economical
Data Acquisition Of Both During The Same Flight



3D point cloud high voltage power line

COMPLETE SOLUTIONS

- Exact flight planning concerning the conditions of the terrain, requested project parameters and aviation controls
- Consistent laser data acquisition
- Capturing of aerial images (RGB or IR) simultaneously
- High precision data processing
- Comprehensive quality control
- Capability for huge projects

APPLICATIONS

INFRASTRUCTURE INSPECTION

- Complete 3D capture of power line infrastructure
- Highway and railroad mapping
- Pipeline monitoring and leak detection

CONSTRUCTION & BUILDING SECTOR

- 3D City modeling and building reconstruction
- City and urban planning
- Inspection of monuments
- Measurements for noise protection
- Analysis of solar energy capabilities (qualification of roof areas)

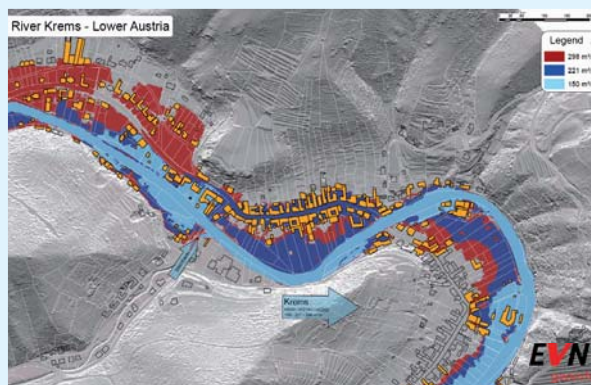
ENVIRONMENTAL MONITORING

- Geo-hazard management
- Rockslide simulations
- Flooding calculations
- Avalanche surveys
- Forest/agriculture inventory
- Archeological analysis

Inventory map



Flood mapping river Krems, Austria



3D model of railway corridor



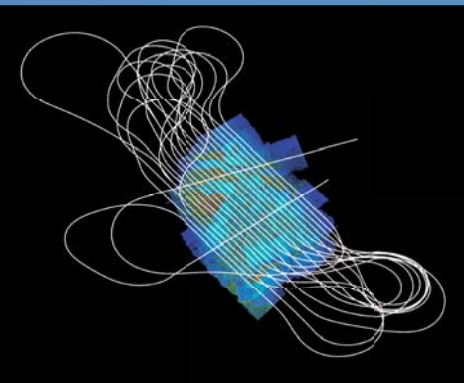
Airborne laser scanning (LiDAR) is a rapid, highly accurate and efficient technology for the geometric mapping of the earth's surface.

OUR STRENGTHS

- High point density - up to 36 points/m²
- Rapid data processing
- Simultaneous recording of aerial images
- High flexibility of aircraft and crew
- Flights in mountainous terrains
- Long endurance missions



Our team combines and optimizes aviation, data acquisition and processing know-how.



Flight path & point density

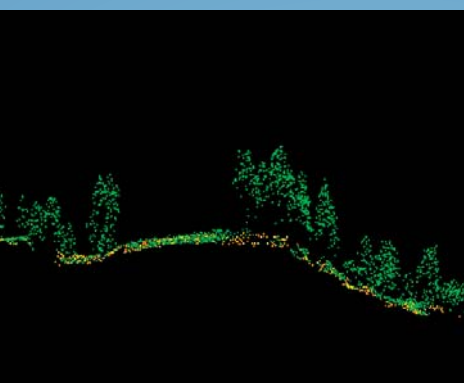


RGB image Uno City, Vienna

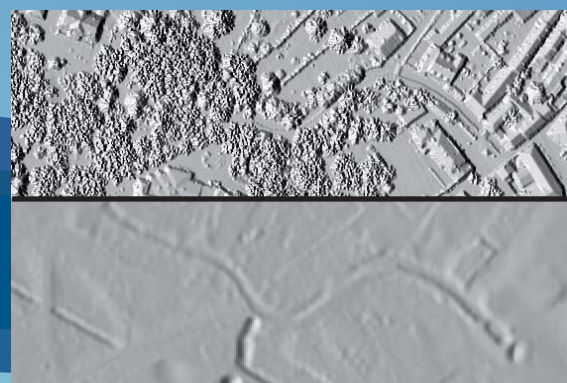


Source: Stadt Wien, MA 41 - Stadtvermessung

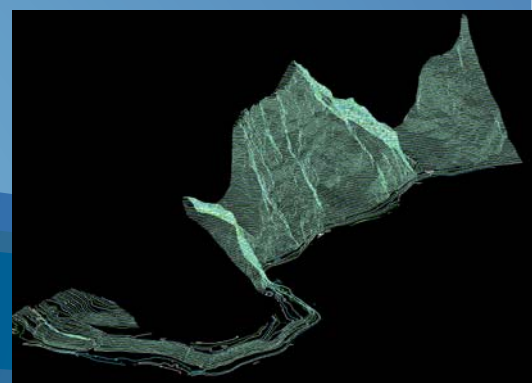
3D point cloud Uno City, Vienna



3D point cloud - profile view

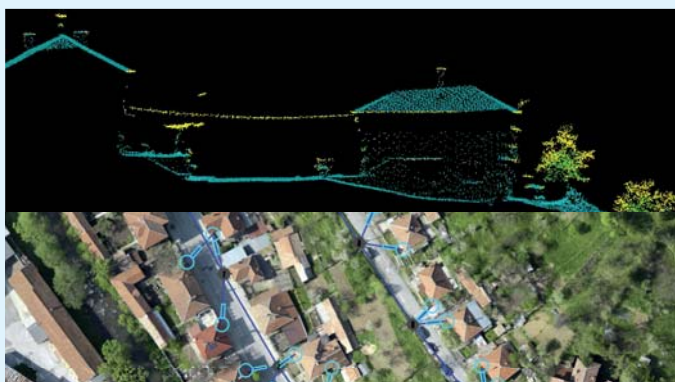


top: Digital surface model / bottom: Digital terrain model

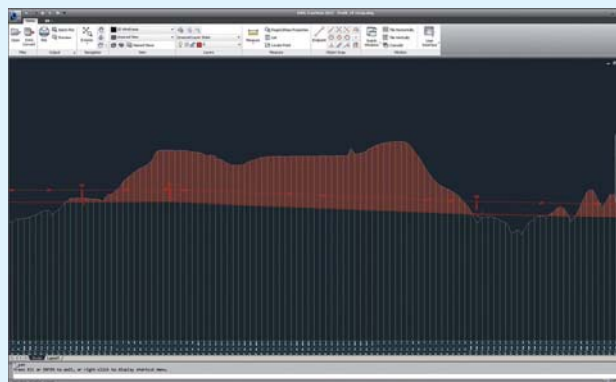


Contour lines Gesäuse, Austria

Low voltage power line (3D point cloud + vectorized view)

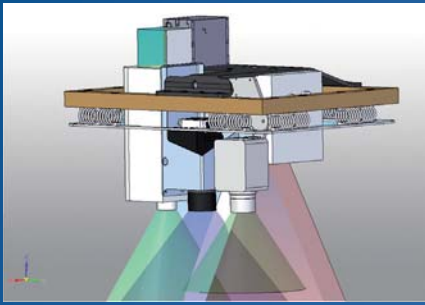


Longitudinal section + quantity calculations



REFERENCES OF THE TEAM

- More than 5.000 km² in the Netherlands (DSM, DTM)
- Baltic Sea coast and cities in Poland
- More than 5.000 km² of Lower Austria (8 points/m², DSM, DTM)
- City of Vienna (12-20 points/m², DSM, DTM)
- Riverbed corridor flights for flooding studies and orthophotos of cities in Romania
- Mountainous terrain flights for rock slide simulations in the Austrian Alps
- 220 km corridor flights for highway construction works in Algeria
- Survey of subsidence and landslip areas for change detection analysis in Austria
- Survey for corridor mapping of railway sections for building/archeological purposes in Austria and Hungary
- Aerial survey flights for snow profile measurements of avalanches in the Austrian Alps
- Island in the Constance for 3d modeling
- Gravel bars at the Rheine
- Torrent and avalanche control Maltatal, Austria
- More than 180 km² for forest mapping
- ...



Sensors with simulated field of views



Airborne surveying equipment mounted in multi-mission aircraft (TECNAM MMA)

EQUIPMENT

CAMERA

- Medium-format digital camera
- 39 Megapixel high resolution
- Loss-free raw data format
- Calibrated camera system

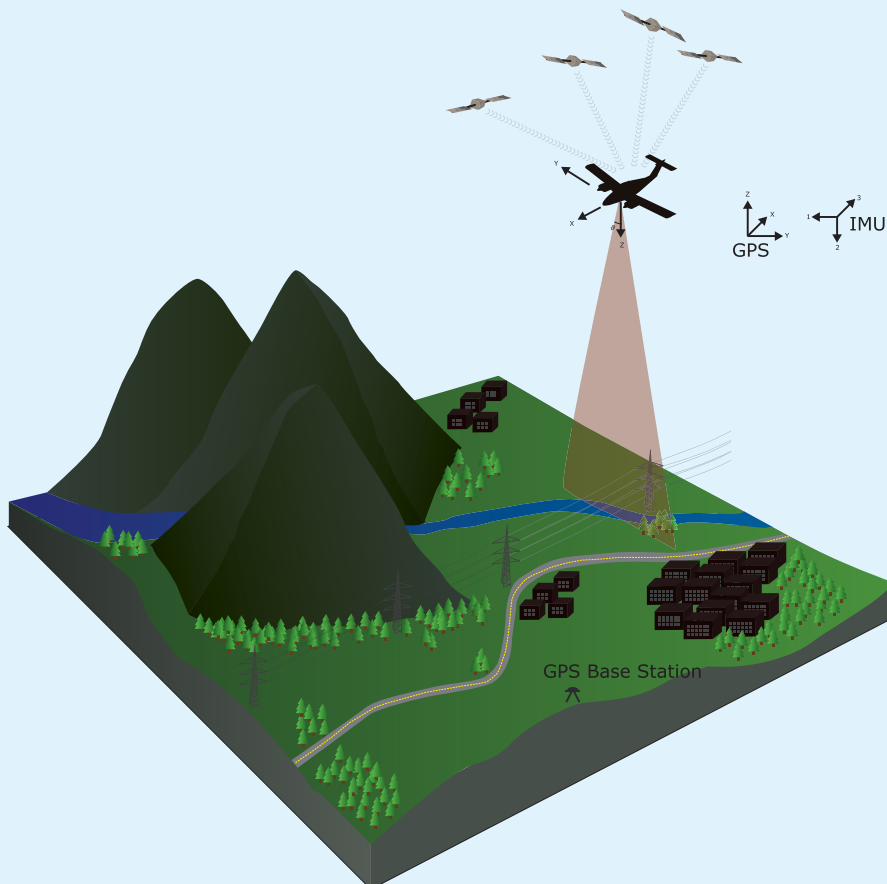
LASER SCANNERS

- Pulse repetition rate of 2x 400 kHz
- Full waveform analysis for unlimited target echoes
- Wide scan field of view up to 60°
- Homogenous point pattern (parallel scan lines)

The high data rate of the Riegl airborne laser scanner is duplicated by using two of them at the same time. Additionally a camera system from IGI is mounted in the aircraft, which enables capturing laser scan and image data simultaneously.



DATA ACQUISITION



ABOUT THE COMPANY

We are an Austrian private limited company based at the Wiener Neustadt Airport. We own and operate a fleet of multi-mission aircraft/ data processing systems for remote sensing applications.

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