The services of iNovitas AG

The range of services of infra3D includes specialised services in the field of mobile geo-referenced 3D image data recording with maximum availability for comprehensive, efficient analysis and management of infrastructure.

Geo-database for construction project planning and maintenance management project-specific optimisation of the georeferencing precision of a street section from the infra3D database as a dataset for project planning work and planning work, site evaluation and the conservation of value management as well as building inspectorate-related and ownership law-related clarification or complaint management.

GIS Integration
Efficient integration of infra3D service in existing geoinformation systems, such as ArcGIS or Mapfish as well as integration of GIS application modules e.g. pedestrian crossings.

Information Extraction
With the infra3D service, specific information can be extracted automatically from the high-resolution, georeferenced 3D images. For example, the automatic detection of traffic signals including a classification of signal type, signal size and its three-dimensional coordinates.

Anonymisation of Images
All 3D images from the infra3D service can be automated comprehensively and efficiently. Any unwanted information, such as car numbers or faces of people etc. can be extracted and anonymised easily and automatically.

Customizing
Thanks to the open system architecture of the infra3D service, customer-specific developments can also be considered in the web client. The infra3D service also allow efficient integration of or a data exchange with third-party systems.

Our infra3D services in an overview

- infra3D Local
- infra3D City
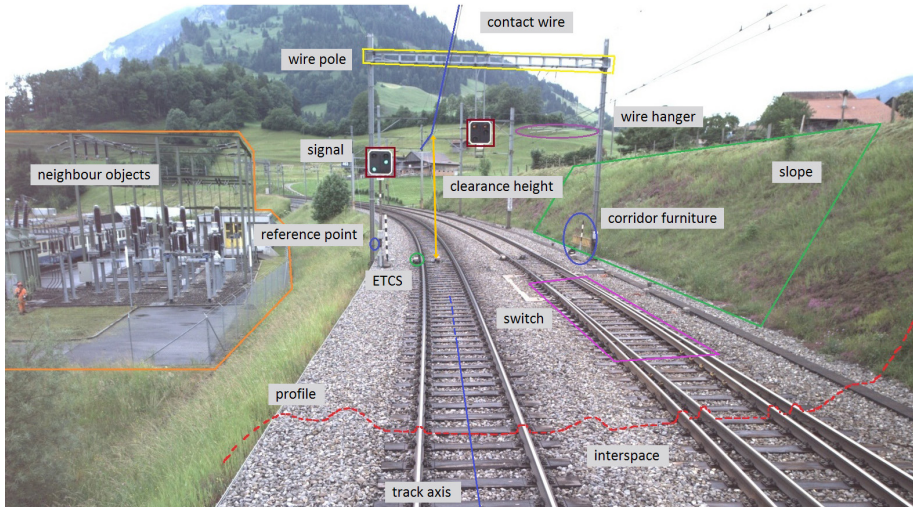- infra3D Road
- infra3D Rail
- infra3D Engineering

Contact

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iNovitas

infra3DRail
be on-site

So that you can supervise your rail infrastructure more flexibly and efficiently, infra3DRail delivers a high-resolution, georeferenced 3D image environment of the rail corridor directly to your workplace or tablet for mobile use. The additional modules give you detailed information on track parameters, clearance or contact wire position and axis position.

As if you were on-site: thanks to the wealth of information, the digital image of your rail corridor with infra3D-Rail offers you various usage options conveniently from your workplace or via mobile use.

Maximum 3D service for maximum available data

From infrastructure management to complex construction project planning - with infra-3DRail, you are on site at all times. The infra3DRail conveniently and efficiently allows the provision of information, mapping of inventory objects or the determination of masses inside the rail corridor on your screen instead of on-site. The infra3DRail sends a highly-detailed digital 3D image of the rail track to your workplace daily. Many work processes, in particular in sustainable management and in the maintenance of your infrastructure installations presume a wide range of spatial data. The infra3DRail allows efficient and flexible extraction of this data in the office when needed.

infra3DRail includes:

- Construction and integration of the acquisition system on available carrier platforms
- Set-up of the rail network and processing of the 3D image database
- Operatio, hosting and support of the infra3DRail
- Updating of the image database as your needs
- Use of the infra3DRail via our standalone web client from a web GIS or an asset management system
- Development and integration of customer specific functions and application modules
- Adoption or extraction of axis data for linear referencing
- Axis, contact wire and clearance analysis made simple
- Precise integration of the 3D image database into your reference coordinate frame

Module	Description
infra3DRail Basic module	**3D geo-image data service:** The rail corridor at your work place at any time - Virtual field surveys and inspections - Infrastructure management - Geodata mapping - Development of project planning

Additional modules:

Module	Description
Virtual Project Space	Construction and configuration of service access for third parties, adapted to the relevant project needs.
Advanced Georeferencing	Precise integration of the image database via the track insurance points (e.g. swiss railway pin) - Accuracy: Position 1-2 cm, height 1 cm
Linear Reference Frame	Depositing the track axies for working by the kilometrage
Clearance Analysis	Implementation of the clearance analysis by the route network
Contact Wire Analysis	Extraction of the contact wire related to - target or actual axis - geodetic reference frame
Nominal/Actual Axis Comparison	Systematic target/actual axis analysis via the route network
Tunnel images*	Use of special tunnel cameras with an active light source
Track Quality Control (TQC)*	Systematic review of specific track parameters: - Extraction of tracke center axis geometry - Longitudinal level - Track gauge - Cant / superelevation - Track twist - Sleeper separation - Sleeper angles

* Additional sensor required