SiRail Suite
Software package for the railway industry

FULLY AUTOMATED PROCESS

- Automated transformation of the measured data form geocentric coordinate system into user defined projection
- A-posteriori automated adjustment of the as-built track geometry (left/right rail and axis)
- Automated calculation of the track geometry alignment and height elements and parameters
- Batch collision test/simulation for train passage and documentation of the detected infrastructure objects in user defined format
- Deformation analysis of the measured infrastructure objects in the [mm] area
- Automated comparison between designed and as-built

SiRail Suite software package ensures high accurate and qualitative data processing, analysis, and management and encopresis in itself the software modules SiRailScan, SiRailManager and ATrack Suite.

PART OF HEXAGON

- when it has to be **right**

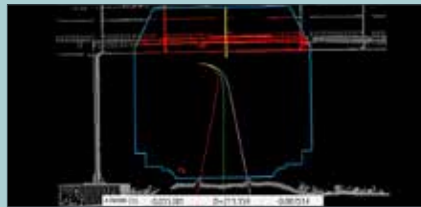**Leica** Geosystems

SiRail Suite

SiRailScan

The innovative software solutions contribute for the improvement in monitoring and control of the railway network conditions, for deformation analysis as well as for volume calculations.

Automated batch process
- Rail geometry adjustment with accuracy and reliability values
- Collision detection with any structure gauge profile
- Detection and documentation of infrastructure objects in chainage based system, in user-defined format
- Tunnel deformation analysis followed by volume calculation and export of the differences between designed and as-built
- Epoch-wise analysis
- Ballast assessment and volume calculation
- Axis based section profiles
- Combination between point cloud and georeferenced images

SiRailManager

The point cloud and database management system for complete national railway track data sets.

- Integration of complete national railway network data
- Maintenance of existing track data and control of any changes
- Integrity of the railway navigation database
- Homogeneous system of geographic position, projection and railway chainage based system (track, station and direction)
- Full automated batch collision detection and analysis with any clearance gauge profile
- Export and documentation of the detected objects
- Combination of web based map services and planimetric images

ATrack Suite

The Software solution created for track reverse engineering and optimisation of algorithms, for railway design and planning, for as-built track geometry recovery and comparison between the designed and as-built track alignment.

This module gives the possibility for automated calculation of the track geometry alignment and height (gradient) parameters. Automated track recognition and calculation including of track elements (e.g. circle, clothoid, straight line), track element parameters (radii, lengths, tangent direction) and main track points (coordinates, kilometre stations).

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