# axis³D GTM

Axis3D GTM

Analysis and graphics for geotechnical measurements in tunneling
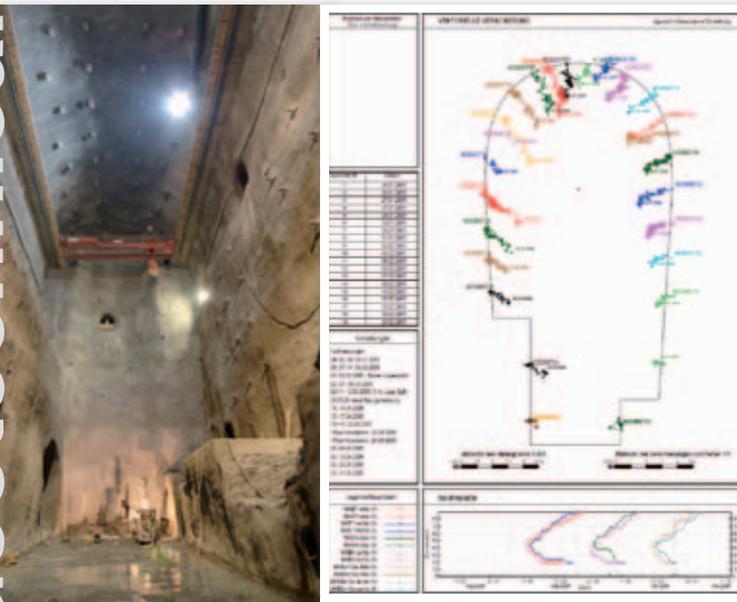
Up-to-date results: Early detection of risks increases the safety of humans and structures.

Efficient workflows: Data structure is designed individually by the user according to project requirements.

Comprehensive graphics: Quick and easy interpretation of results by the project engineer.

Coordinate Calculation
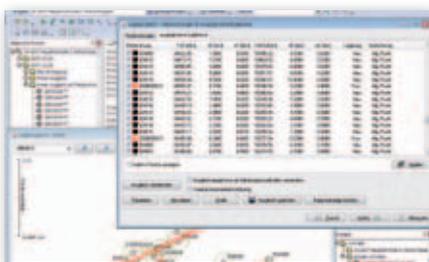
Accurate trigonometric **results** are guaranteed by reliable adjustment routines that take refraction into account.
Easy determination of leveling results as well as the ability to include geotechnical sensor data **minimize analysis effort.** An **intuitive user interface** is the foundation for professional analysis of measurement data.

Data Management
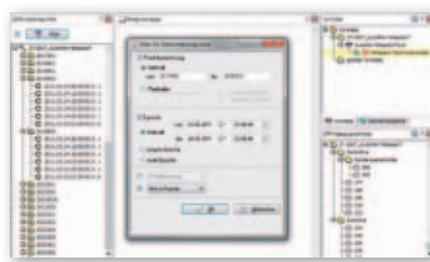
Users can manage large volumes of data **individually** and by **project.**
Coordinates of deformation points; construction-phases; as well as readings from extensometer, anchor load cells, and pressure cells are stored by **epoch.**
Clear data structures give a **quick overview**.

Graphics
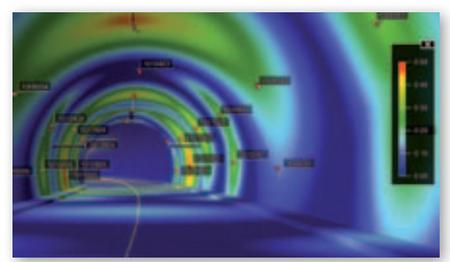
Varied, application-oriented **graphical display options in 2D and 3D** facilitate the interpretation of extensive data sets.

Quick and easy generation of graphics provides up-to-date results and supports **rapid, confident decision-making.**

significant
software

System Information

Hardware (not included)
- PC with at least 2 USB ports
- 21" screen (recommended)
- Three-button mouse

Software
- Axis3D PC software, incl. USB or SD dongle
- Languages: German, English; French (coming soon)
- Operating systems: Windows XP, Windows Vista, Windows 7, Windows 8 (32-bit and 64-bit, respectively)

Related Products
- Axis3D NET - Network Adjustment
- Axis3D SET - Sets of Angles
- Axis3D DGP - Deformation Graphics Professional
- Axis3D DG3 - Deformation Graphics 3D
- Axis3D DGI - Deformation Graphics Import
- Axis3D AMO - Automated Monitoring
- Axis3D OBM - Tunnel Face Monitoring

Applications

Tunneling
Tunnels, caverns, cut and cover construction, above ground structures

Shafts, Open Cuts
Secured slopes, sheet pile, secant pile, and diaphragm walls

Civil Engineering Structures
Bridges, retaining walls, walls, ceilings, building pits

Axis3D GTM Functionality

General
- Easy to use and flexible user interface design
- 3D view of project incl. tunnel geometry, survey points, and sightings

Coordinate Calculations
- Based on data obtained from polar measurements or sets of angles
- Supports Leica GSI8 and GSI16 data format (other manufacturers on request)
- Includes leveling data
- Free Station (3D) with survey point calculation
- Calculation of linked stations with optimized adjustment algorithms
- Automatic recognition of reference and deformation point IDs, even without measured distances
- Calculation of leveling runs

Graphics
- Display objects in 3D, showing deformations (colored surfaces, isolines, vectors)
- Cross sections with deformation vectors
- Time related diagrams for longitudinal, lateral and vertical deformation
- Advancement related graphics (lines of influence): shifts in chainage, offset, and elevation
- Cross-sections for surface monitoring
- Time related graphics for pressure cells and anchor load cells
- Time related graphics for extensometers
- Time related graphics for inclinometers
- Settlement diagrams

Geometry Manager (Axis3D GeoMan)
- Analytical definition of tunnel geometry according to design
- Plausibility tests and 3D visualization
- Highly accurate transformation between project and tunnel coordinate systems

Database
- Time-related management of coordinates, forces, angles and distances, as well as monitoring cross-sections, construction phases, tunnel geometry, etc.
- Individual, project related data structure
- Interfaces for data import/export
- Database synchronization
- SQLite, Oracle, Microsoft SQL-Server, Interbase

Customers

DIBIT Measuring Technique

Kiewit Corporation (USA)

Rhomberg Sersa Rail Group

Stolitzka & Partner Civil Engineers

Vorarlberger Illwerke AG

Contact Information

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