TUNNEL INFORMATION SYSTEM

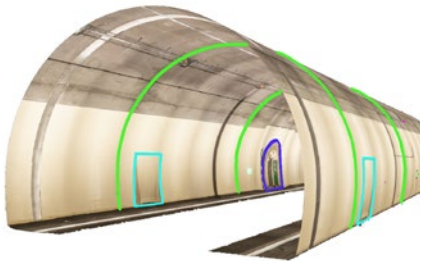
The dibit TIS is a powerful database application for efficient managment of tunnel related data. dibit TIS provides the capability to map objects of interest such as defects, structure elements, repairs etc. on a digital tunnel surface generated from a tunnel scan. In the course of mapping, object related data such as crack lengths, can be calculated and stored in the database. The dibit TIS also provides the function to compare different digital tunnel surfaces and the capability to map changes as well as to generate standardized reports. A key advantage of dibit TIS is that it provides a comprehensive and impartial view with regard to the tunnel condition for the user.




APPLICATIONS

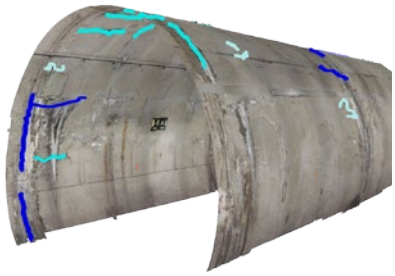
As-built Documentation

- ☐ mapping of structure elements
  e.g. blocks, segments, niches
- ☐ mapping of material zones, e.g.
  concrete, shotcrete, rock, brick
- ☐ mapping of tunnel installations
  e.g. utility cables, illumination
- ☐ production of as-built plots



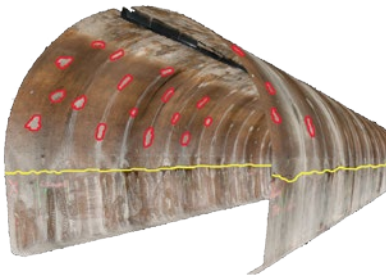
Tunnel Inspection

- ☐ mapping of defects
  e.g. cracks, spalling, water ingress
- ☐ mapping of defect changes
  e.g. crack elongation, additonal cracks
- ☐ production of actual condition plots
- ☐ production of alteration plots



Tunnel Rehabilitation / Repair

- ☐ mapping of rehabilitation areas
  e.g. cracks, spalling, water ingress
- ☐ quantification of repair work for tendering
- ☐ calculation of actual repair quantities
  e.g. total length of cracks, area of spalling
- ☐ production of rehab/repair plots



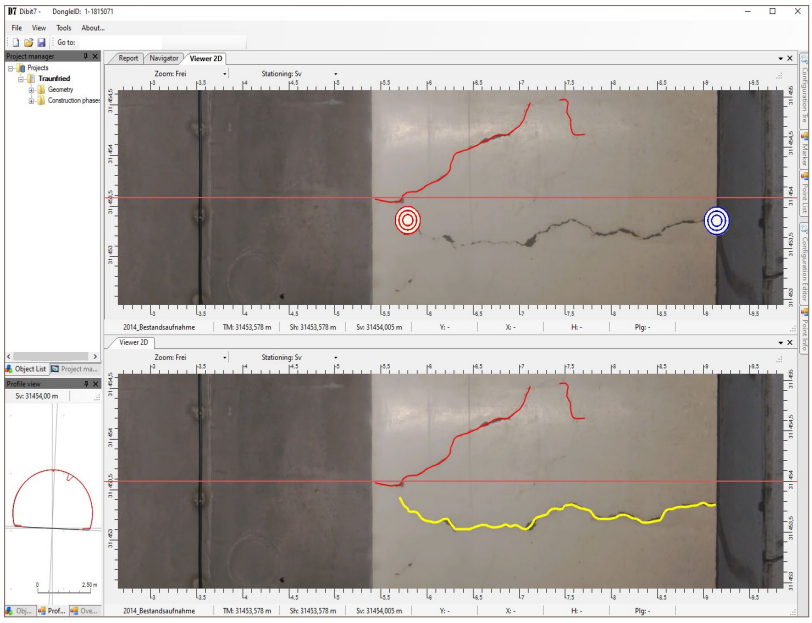
DIBIT SOFTWARE

- ☐ provides for analysis of the tunnel surface in 2D- and 3D-views
- ☐ easy mapping with standardized object types
- ☐ predefined objects available
- ☐ automated calculation of statistic values for objects
- ☐ comparing function for different recordings
- ☐ automated report generation
- ☐ automated generation of plots
- ☐ data export to AutoCAD

ADVANTAGES

- ☐ image resolution up to 1 x 1 mm
- ☐ semi automated crack detection
- ☐ 3D tunnel inspection on computer screen
- ☐ fast and easy workflow
- ☐ sustainable and effective compilation of mapped objects overt ime

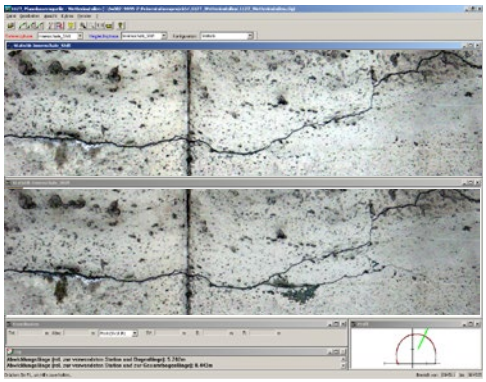
TIS - WORKFLOW AND RESULTS



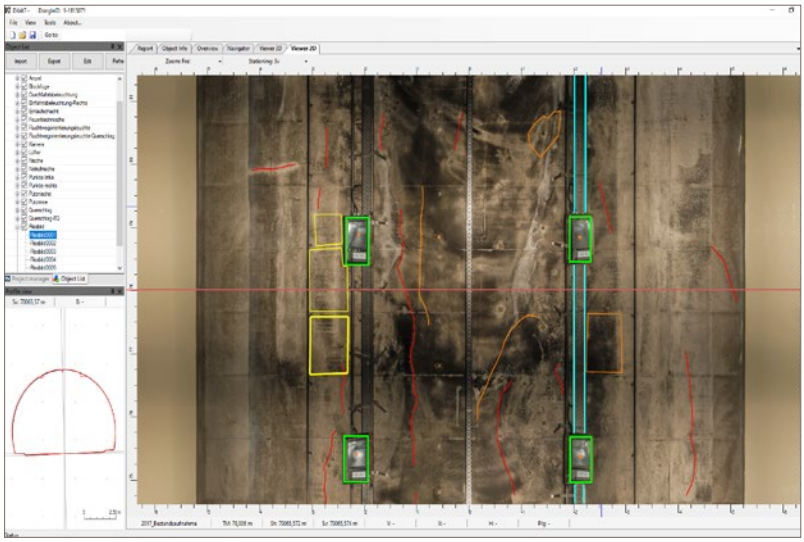
Fast crack dedection (semi-automated)

Map and Compare

- ☐ mapping of objects can be done by redrawing the object on the digital tunnel surface
- ☐ mapping is supported by efficient tools such as automated crack detection or predefined objects



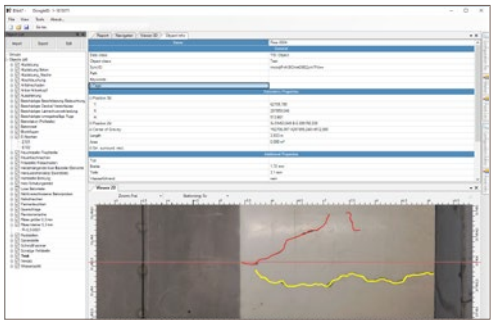
Easy compare of two records



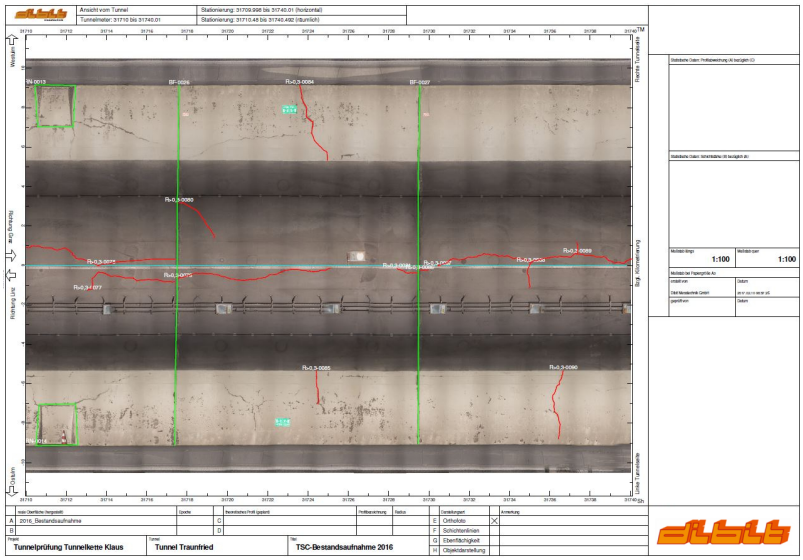
TIS user interface

Database

- ☐ object oriented navigation
- ☐ calculation of statistic values of the mapped objects
- ☐ link to external documents



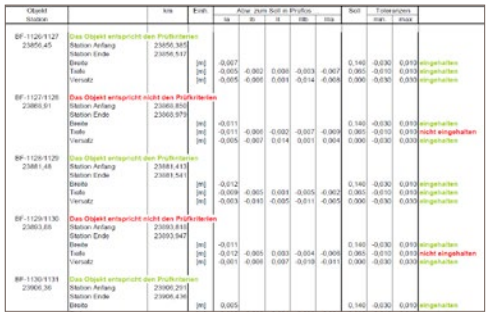
TIS Database



Combination of as-built and actual condition plot

Results

- ☐ as-built drawings
- ☐ actual condition drawings
- ☐ alteration drawings
- ☐ reports



Reports