ON SITE TUNNEL SCANNING

The dibit tunnel scanner system provides a complete geometrical and visual depiction of the recorded tunnel surface at a specific time. Tunnel scanner recordings during the various construction phases result in a high-quality as-built documentation. The efficient dibit software allows easy, quick and versatile data evaluations. Building-owners, contractors, designers, geologists, site managers and construction supervisors receive objective comprehensive information about geometry, condition and quality of the tunnel construction work and during all construction phases. The dibit tunnel scanner system is highly capable of complete or partial documentation or quality supervision of new tunnel construction.

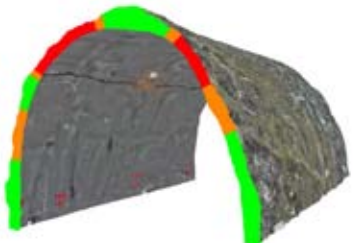
APPLICATIONS

Recording Excavation

- ☐ geological documentation
- ☐ profile check of excavation
- ☐ quantity calculation of additional excavations due to geological conditions

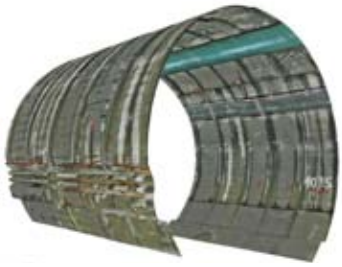
Recording Shotcrete and Smoothing Layer

- ☐ profile check of shotcrete
- ☐ determination of shotcrete thickness
- ☐ calculation of shotcrete quantity
- ☐ determination of tights
- ☐ profile- and smoothness check of the smoothing layer by means of the lath- and / or sphere method



Recording Final Lining

- ☐ profile check of final lining
- ☐ determination of final lining thickness
- ☐ calculation of final lining concrete quantity



ADVANTAGES

- ☐ easily operated by contractors personel
- ☐ short measuring duration per scan: 2 min, fully automatic data processing
- ☐ rapid evaluation can be used for control and steering of excavation works
- ☐ information regarding underbreak and overbreak, as well as shotcrete thickness are vailable immediately after recording of data

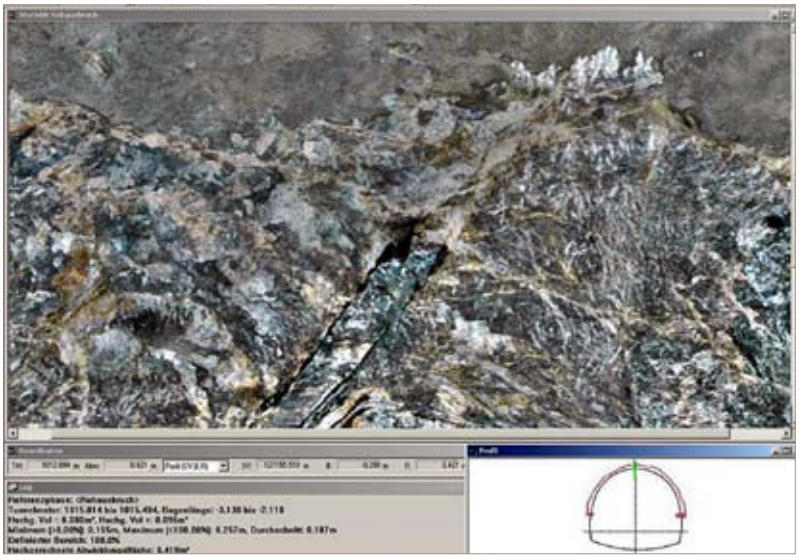
DIBIT SOFTWARE

- ☐ analysis of the tunnel surface in 2D- and 3D-views
- ☐ complete profile checks
- ☐ exact determination of layer thickness
- ☐ exact quantity survey
- ☐ true-color image documentation
- ☐ masking of pipes, cables, etc.
- ☐ supports easy export of co-ordinates

RESULTS

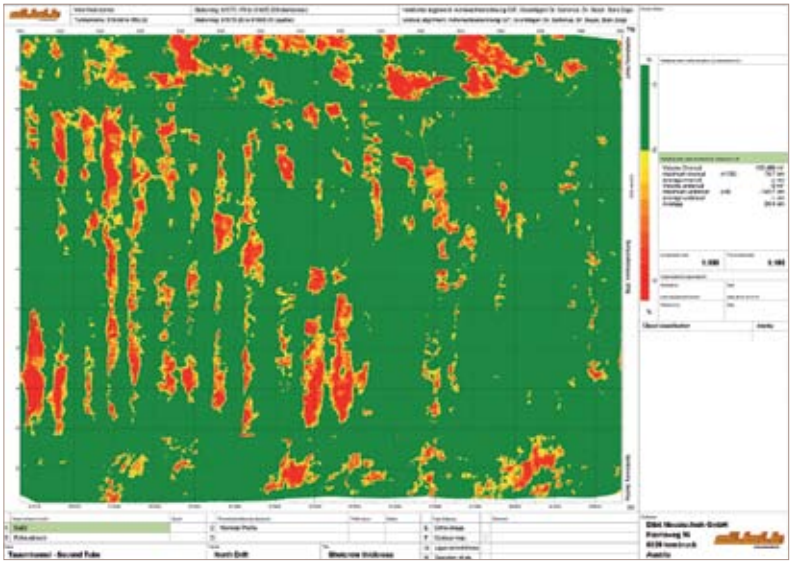
- ☐ comprehensive true-color 3D-model
- ☐ cross sections
- ☐ contour maps
- ☐ ortho-images
- ☐ lists of calculation results in MS Excel format

ON SITE TUNNEL SCANNING



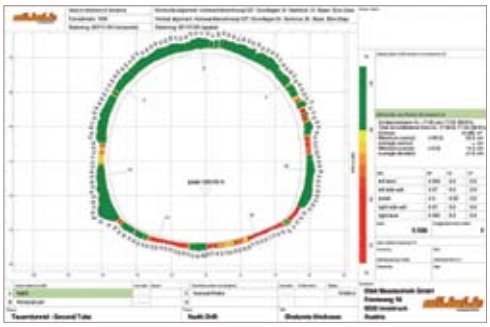
Recording of Excavation

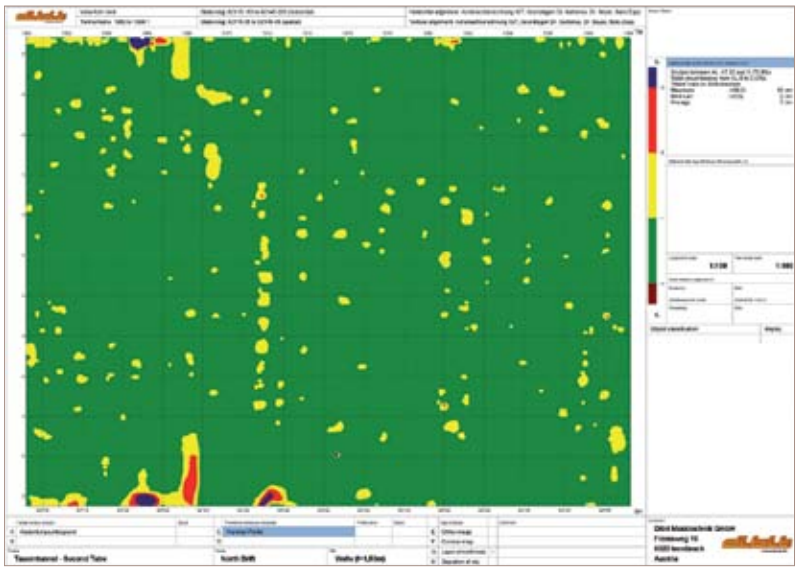
- analysis of excavation using dibit software
- export of tunnel face data for further use in special geological software



Recording of Shotcrete

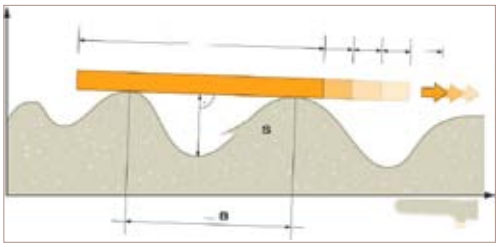
- false-color contour map of shotcrete thickness
- profile plot of shotcrete thickness





Recording of Smoothing Layer

- false-color contour map of smoothness analysis
- principle sketch of smoothness analysis (lath method)



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