Tcp**TUNNEL**

Setting Out and Surveying for Tunnels

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Tunnel survey with either motorized or conventional total stations.

Project Definition

Each project is defined by the horizontal and vertical alignments, superelevations and tunnel templates, that can be converted from a CAD drawing, defined by parameters or points measured with total station.
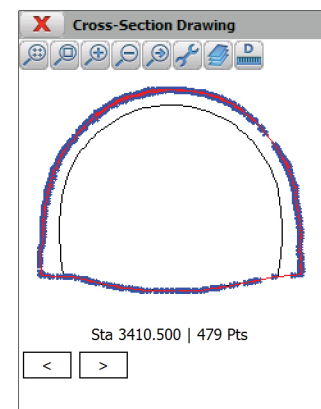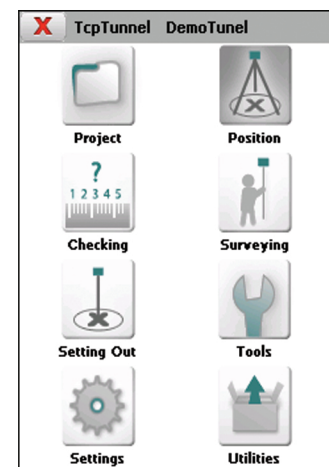
Positioning and Orientation

As a prior step to surveying and setting out, the station should be oriented by coordinates, angle or resection. User can select between local and UTM projected coordinates.

Cross-section Measurement

TcpTunnel performs automatic and unattended cross-section measurement for each station, defined by angle, arc length or height difference intervals. Singular points and roadbed can be measured, and exclusion areas defined as well.

Surveying

The program allows the setting out the excavation front, points of the tunnel's cross-section, road surface, bolts and points of the coordinates file. It provides infor-mation on the elevation difference compared to the the-oretical point.
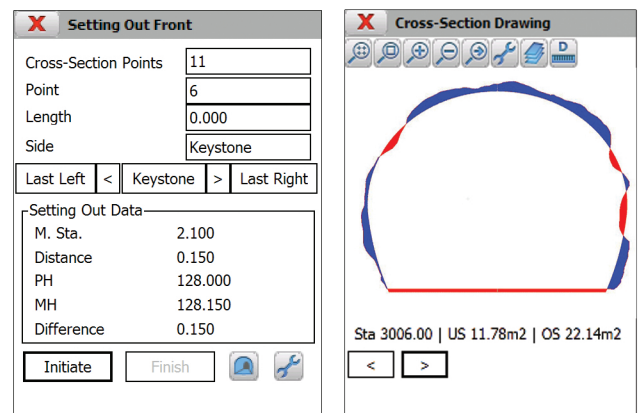

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Surfaces Calculation

The application allows to compare graphically theoretical and measured cross-sections along the alignment, showing in different colors the under-excavation and over-excavation areas with their values for each cross-section.

Utilities

Other available tools are point analysis over the alignment, distance and areas calculation and instrument settings. The program has full control over the total station, including the compensator, laser pointer, measurement with or without prism and battery status, which are constantly monitored.

Setting Out Front

Cross-Section Points	11
Point	6
Length	0.000
Side	Keystone

Last Left | < | Keystone | > | Last Right

Setting Out Data

M. Sta.	2.100
Distance	0.150
PH	128.000
MH	128.150
Difference	0.150

Initiate | Finish

Cross-Section Drawing

Sta 3006.00 | US 11.78m2 | OS 22.14m2

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Requirements[1]

Supported devices	Mobile devices with ARM processor and operating system Microsoft Windows CE/Mobile version 4 or higher.
Supported total stations	The application is compatible with differents models of following brands: Geodimeter, Geomax, Leica, Nikon, Pentax, Sokkia, Spectra, Topcon, Trimble. More details on page product at our website.

[1]This information is for guidance only. More detailed information about TcpTunnel requirements at www.aplitop.com