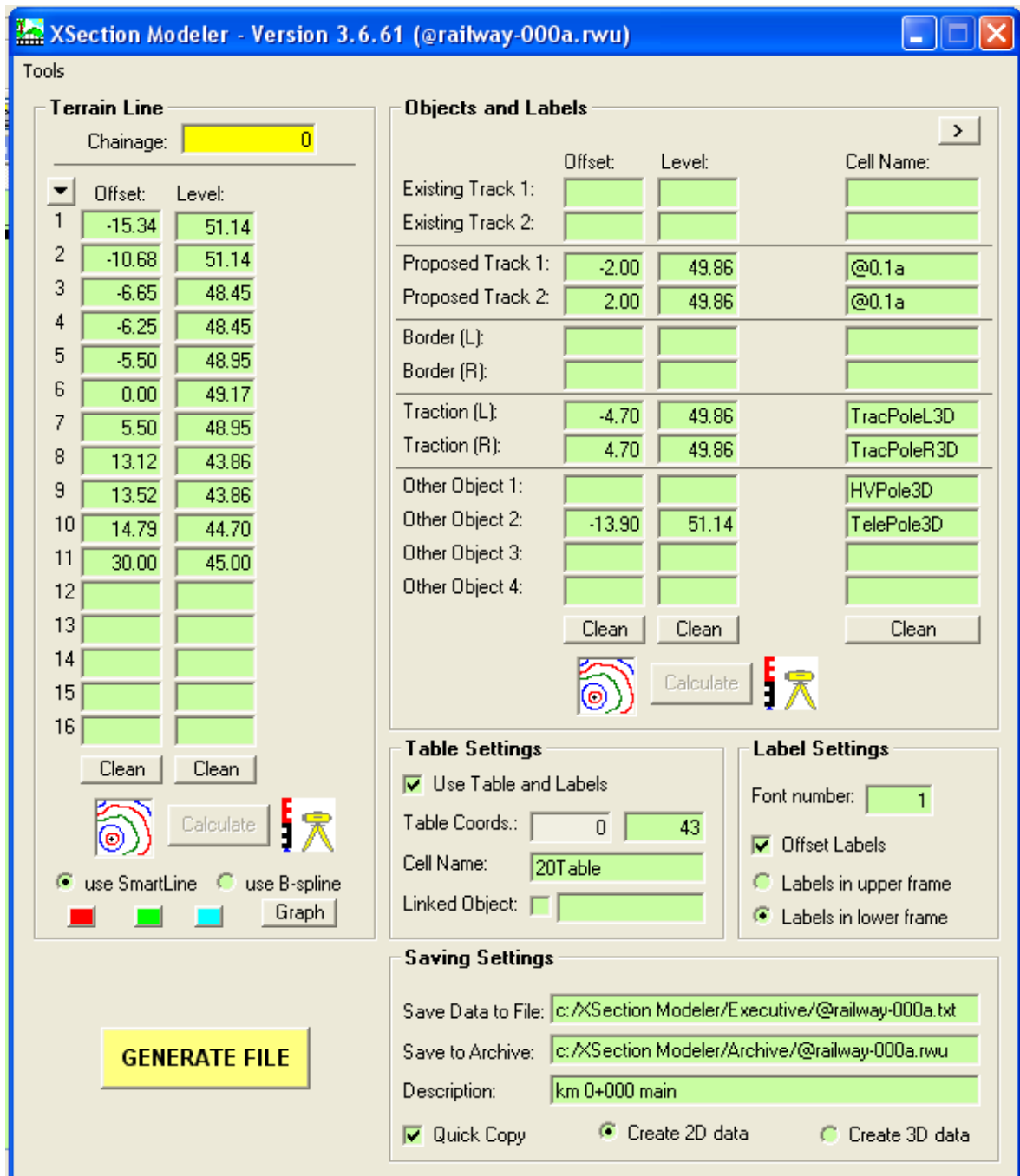


Xsection Modeller – Survey Assistant

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Main window of the application (in a short form):

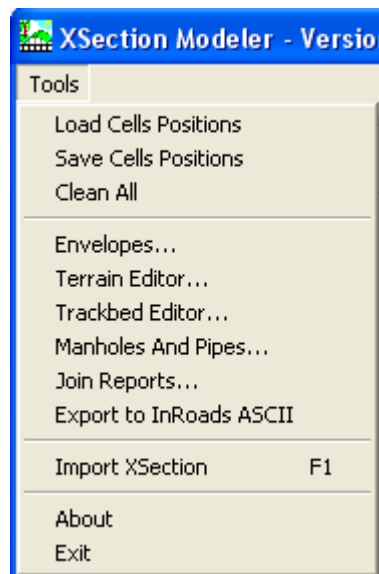


The main purpose of the application is to generate a report that can be fully imported to MicroStation as a drawing of a railway track, road, terrain or any other object. Every drawing is automatically fully labelled with its own frame. Additionally, every 2D or 3D object can be also labelled. There is also possibility to check the ground line in Graph Viewer before generating a report file. The wider form of application allows to define more cells and to export custom key-in to MicroStation.

One of the biggest advantages of the program is that the survey levels can be input as absolute values (msl) or readings from the staff.

The application is very good for quick survey measures, additional cross sections measures or "after built" measures. In this case **80%** of time can be saved or even more!

Menu of the application:

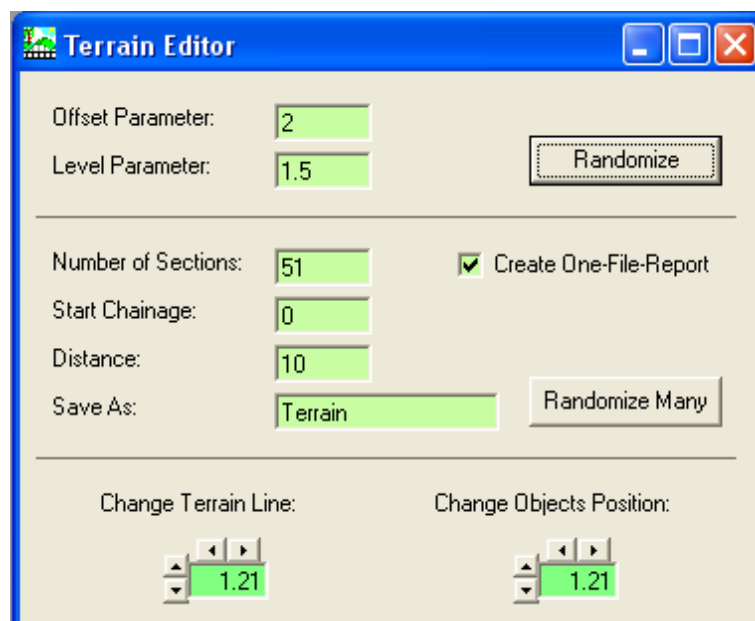


Load Cells Positions – allow loading of an user-defined setting for cells

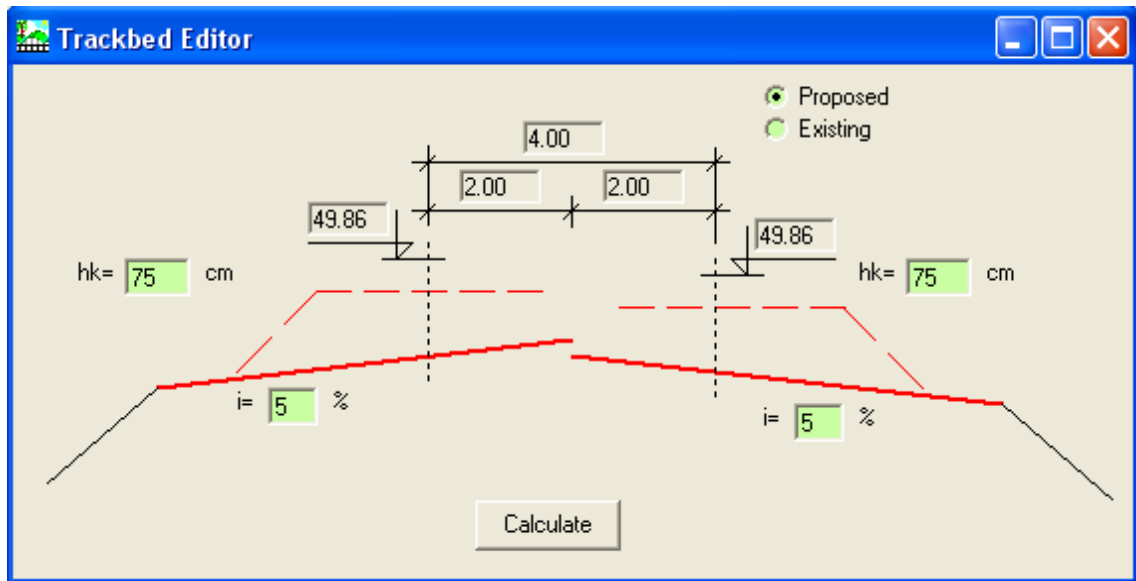
Save Cells Positions – allow saving of an user-defined setting for cells

Clean All – cleans every text window in the main form

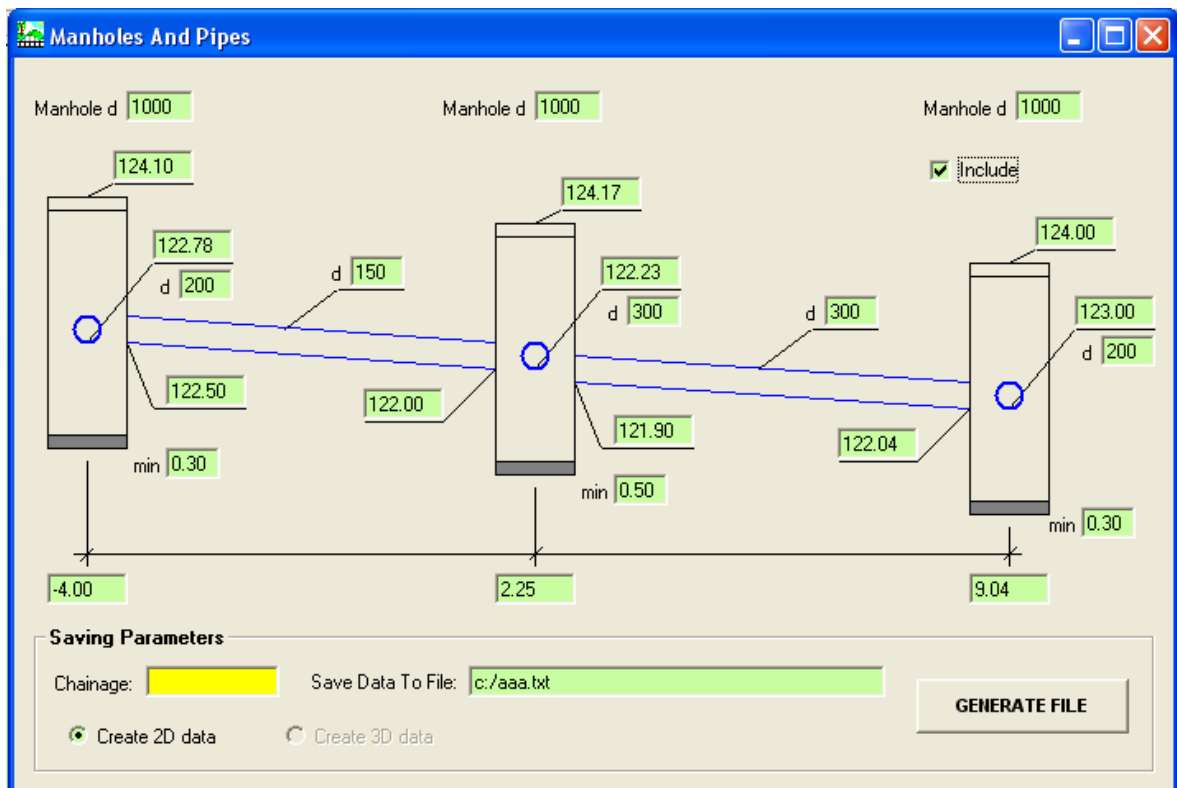
Terrain Editor... - allow creating one or many cross sections of a ground using randomisation; also allow changing position of the terrain line and cells horizontally and vertically



Trackbed Editor... – (in preparation) allow to generate the upper line of the trackbed



Manholes And Pipes... – allow generating 2D and 3D data report with information about storm and sanitary equipment. A drawing with track or road structure can be completed by this functionality.



Envelopes... – allow checking if the envelopes of two tracks intersect each other. There is also a possibility to take into consideration a curvature of the tracks and to add additional object (a structure) to analyse.

The 'Envelopes' window displays the following data:

Envelope 1: C:\Program Files\Reko Engineering\RailLab\skrajnia.xls x= 0 y= 0 E= 90
 Envelope 2: C:\Program Files\Reko Engineering\RailLab\skrajnia.xls x= 3.90 y= 0 E= 110

Coords of Envelopes before Transl.:				Coords of Envelopes after Transl.:			
x1	y1	x2	y2	rx1	ry1	rx2	ry2
0	0.055	0	0.055	-0.003	0.100	3.896	0.110
1.275	0.055	-1.275	0.055	1.269	0.180	2.625	0.012
1.52	0.3	-1.52	0.3	1.498	0.440	2.361	0.238
1.725	0.3	-1.725	0.3	1.703	0.453	2.157	0.222
1.725	1.12	-1.725	1.12	1.651	1.271	2.094	1.039
2	1.12	-2	1.12	1.926	1.288	1.820	1.018
2	3.05	-2	3.05	1.805	3.214	1.672	2.943
1.9	3.85	-1.9	3.85	1.655	4.007	1.710	3.748

Points of Intersections:
 x0(5,6)=1.800
 y0(5,6)=1.280
 x0(7,7)=1.709
 y0(7,7)=3.723
 NO MORE INTERSECTIONS

Clean Older Graphics

ANALIZE [v]

There is a simple but very useful viewer for checking the intersections. Sending a drawing to MicroStation is also possible by Generate File button.

The 'Envelopes - Drawing' window shows a graphical view of the track envelopes on a grid. Two intersection points are highlighted with red circles. The interface includes navigation controls (L, U, R, D, +, -) and buttons for 'Original View' and 'Generate File'.

Join Reports... - allow joining the MicroStation key-in reports

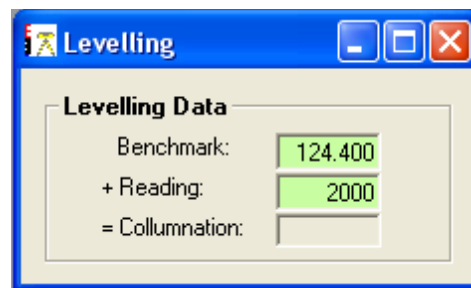
Export to InRoads ASCII – allow creating a *.soe file with data that can be imported to InRoads' cross section model

Import Xsection – one of the main function of the application. Every previously created report can be imported once again to the program and can be edited and saved with changes.

About – calls “about” dialog. Contains also some hints and tricks.

Exit – exits the application

Levelling Mode for input data:



There is a **vba macro** created for managing of display in MicroStation. The macro has very important functionality – triangulating imported terrain model.

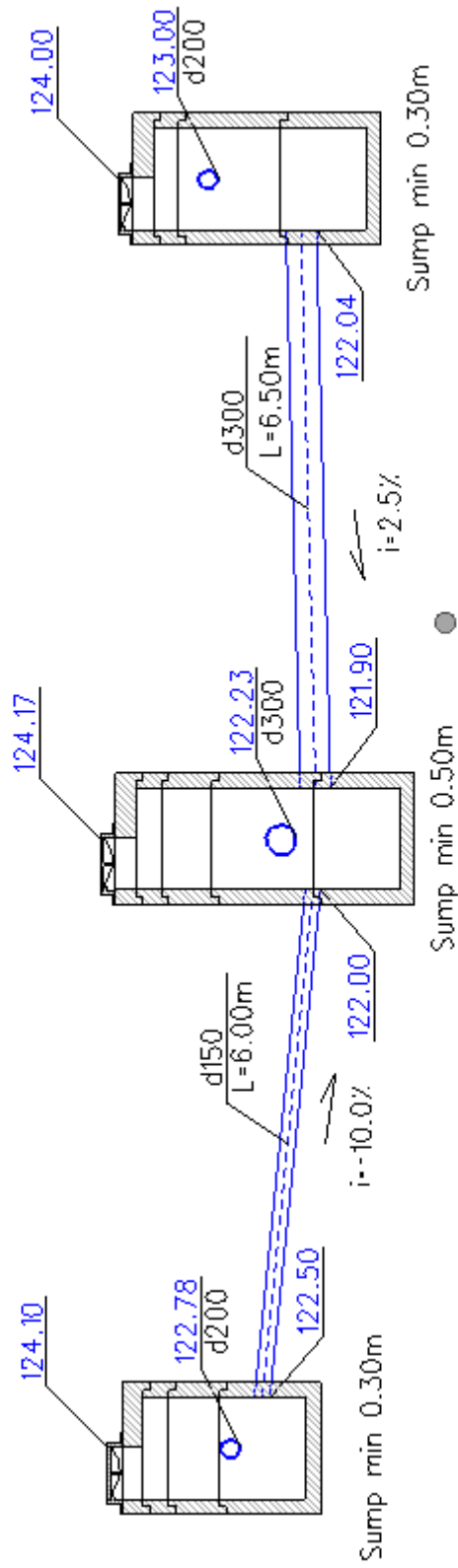


Program is perfect for:

- very quick generating of terrain section from survey data
- generating of cross sections in 2D
- generating of cross sections in 3D
- generating of complete 3D model

EXAMPLES:

1. Drainage drawing created in Xsection Modeler.



3. The whole 3D model.

