

RIS MF Hi-Mod GROUND PENETRATING RADAR



Geoprojekt is owner of a specialized ground penetrating radar device – the „RIS MF Hi-Mod" with a double antenna system (200/600 MHz, 400/900MHz), manufactured by IDS.



Figure 1: Ground penetrating radar with a single or double antenna system

The device is actually a special type of a geological radar adapted for non-invasive detection of all types of underground utility lines, with emphasis on the detection of underground pipes, ducts and structures.



Figure 2: Employees of Geoprojekt d.d. during field work with a ground penetrating radar

Through the simultaneous use of two antennas minimum resolution is achieved (and maximum sensitivity for detecting of small diameter pipes) and the maximum penetration of the signal up to the depth of 8 m, although the maximum depth to which completely reliable scanning results are guaranteed is 4 m. The final product, a detailed situational display of the positions and depths of all detected utilities, is obtained through computer data processing in the specialized GRED 3D software.

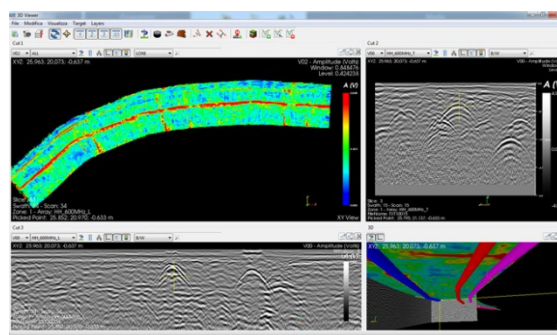


Figure 3: Data processing in GRED 3D software

In addition to the position of the utility lines other descriptive information is also obtained, referring to the type of installations and their depth below ground level. The final installations display can also be adjusted to suit particular investors' needs.

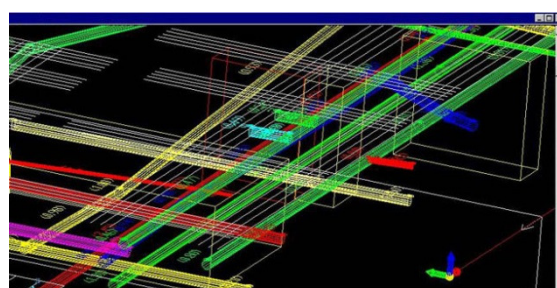


Figure 4: Recorded utility lines shown in AutoCAD software

The application of the device to determine the actual location of utility lines is recommended in the scope of:

- planning and landscaping
- designs
- construction works