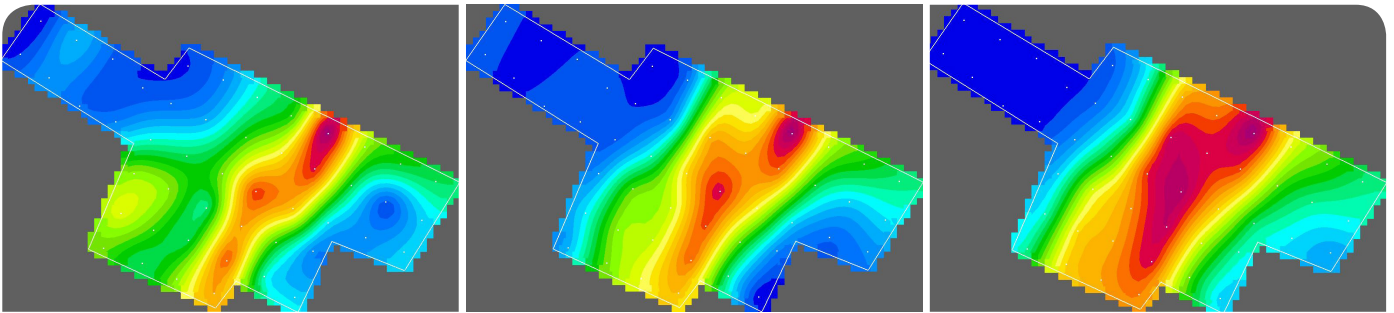
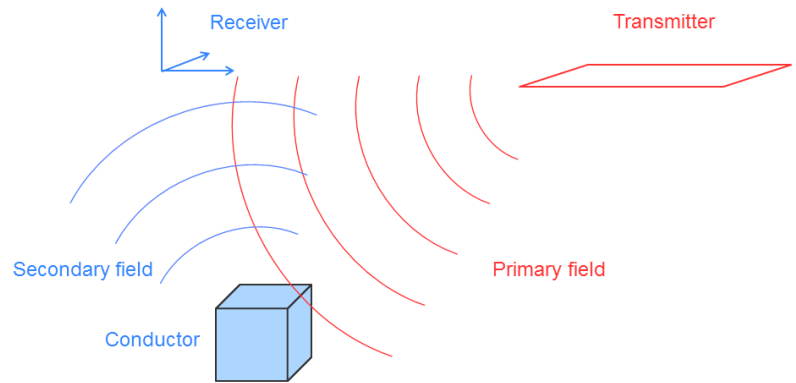


GTK-FrEM

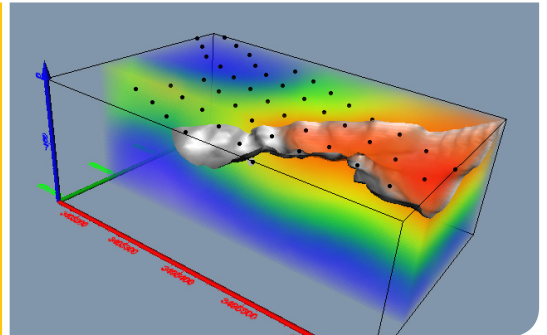
GTK-FrEM is a geophysical measuring method for researching electrical conductivity variations

Measuring system consists of a surface transmitter loop and of a portable receiver. Anomaly field can be separated from the total field and then generated into maps. Anomalies of the highest frequencies are based on information coming from near below the ground surface while anomalies of lower frequencies are coming from deeper (series of figures). 3D-anomaly map is a combination of anomaly maps measured in different frequencies.



Technical information

- 41 measuring frequencies between 100 Hz and 10000 Hz
- 3-component calibrated EM-field
- Loop side length between 10 m and 1000 m
- GPS-location and EM-synchronization
- 3-component magnetic field
- automatic tilt and orientation correction



Measurements can be arranged in two different ways: 1) In a mapping procedure the system uses five different frequencies at the same time. The field work can be done with a walking speed. 2) In a frequency sounding procedure the receiver is on a stand at a measuring station while all 41 frequencies are measured one by one.

Interpretation work is a separate task after

measurements. Modelling can be done with a layered earth model or with a real 3D-modelling applying prism, thin sheet or voxel models.

Investigation depth of the system is hundreds of meters depending for example on transmitter loop size and geological settings of the study site. Also a borehole receiver can be used if needed (diameter 60 mm).

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