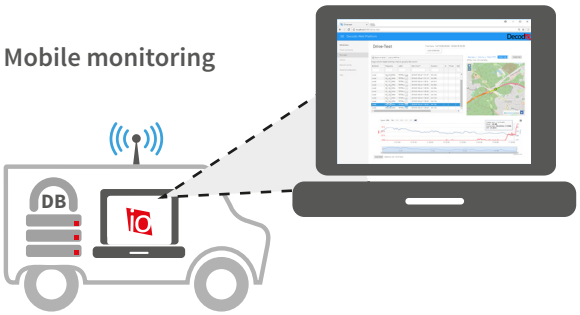
DECODIO RUNNER

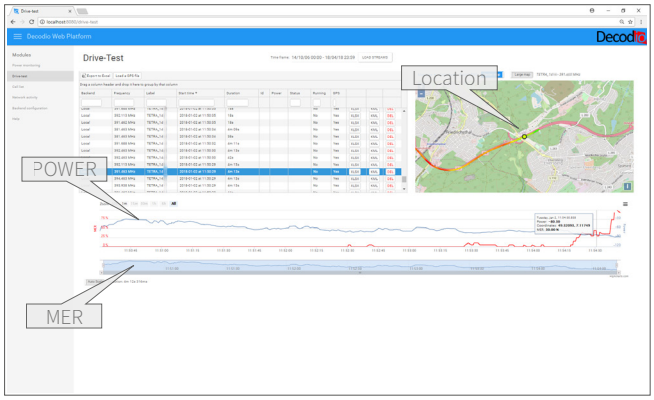
Decodio RUNNER extends the well proven and tested, state of the art air-interface analysis system Decodio NET by a location mapping capability to provide an advanced mobile drive-test solution for network verification, coverage assessment and troubleshooting.

APPLICATIONS

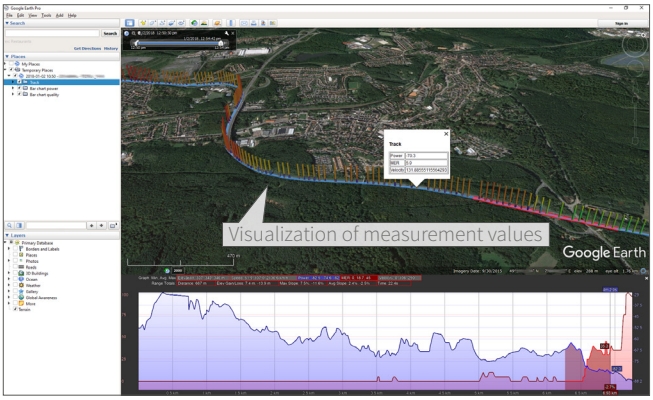
- **Coverage tests**
  perform real-time network coverage tests and get cartographic information with power and quality values
- **Network planning and verification**
  verify your network planning with „real world“ measured coverage parameters
- **Interference tests**
  find interfering channels and signals



A wideband input signal is acquired, channelized and decoded. All protocol data are logged into a database and available for further processing.



Drive test GUI



Data export into Google Earth

HIGHLIGHTS

Wideband, multi-channel drive tests

- do it in one ride!
- multiple receivers can scan multiple channels and protocols
- auto detection of protocol/carrier

Portable and mobile solution

- portable, lightweight solution with high autonomy time
- possible to mount into a measurement vehicle

Professional data acquisition

- Short measurement intervals
- Reliable, stable and calibrated measurement values
- Different measurement triggers (time or position)
- Standard interface for GNSS receiver (NMEA data)

Wide range of post analysis

- the whole measurement can be recorded for post-analysis
- Data export (e.g. Microsoft Excel, Google Earth)
- Protocol dependent events shown on map (e.g. handover)

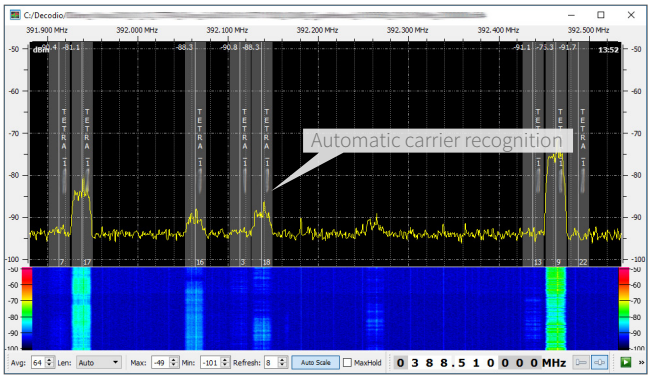
Easy to use

- intuitive and self-explaining drive test application
- ready to go (no timely startup sequences)
- wide range of maps for visualization incl. offline cache (GoogleMaps, OpenStreetMap, MapQuest, SwissTopo)

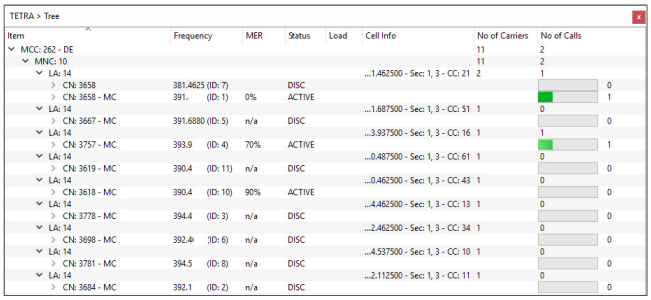
The intuitive application allows a decoding and measurement of up to 255 narrow band channels and an easy detection of spots with weak signal coverage. A data export to 3rd party software such as Microsoft Excel or Google Earth allows different post data analysis workflows. Decodio offers full support for TETRA, Tetrapol, NXDN, DMR, dPMR and P25 protocols.

The power measurements are carried out in time-domain with a sampling rate larger than the signal bandwidth.

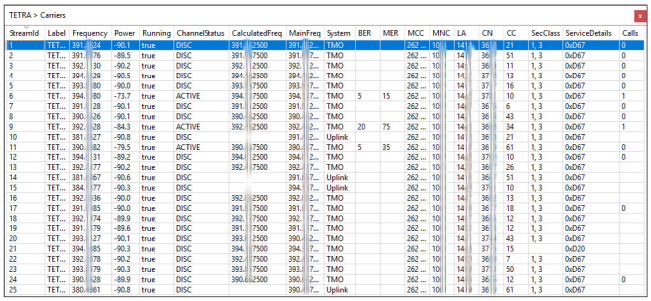
Sampling rate and averaging/quantile values meet the Lee criteria for any given carrier frequency and measurement unit velocity.



Spectrum analysis



TETRA tree-view for network-overview



TETRA carriers

TECHNICAL DATA

Channel bandwidth	8 kHz to 2 MHz
Max. number of channels (in parallel)	255
Measurement triggers	• time based (e.g. every millisecond) • position based (e.g. every meter)
Measurement interval	1 / sampling rate (time-domain measurement)
Measurement sample averaging	10ms - 2sec (calculation of quantiles and averaging)
Measurements	• Power (dBm) • Quality (BER, MER)
Supported maps	• Google Maps • OpenStreetMap • MapQuest • SwissTopo (Switzerland)
NMEA data (GNSS)	• GNSS receiver • Spectrum analysers with GNSS • Network socket
Maximum real-time bandwidth	Up to 40 MHz (depending on receiver)
Supported digital PMR protocols	• TETRA • Tetrapol • NXDN • DMR • dPMR • P25 • Analog modulations • others on request

Decodio AG
Technoparkstrasse 1
8005 Zürich
Switzerland

phone: +41 44 552 08 70
email: info@decodio.com
internet : www.decodio.com