G-NetTrack

Android OS application
for mobile network monitoring
G-NetTrack Screenshots
G-NetTrack Features

- Supported technologies: LTE/UMTSGSM/CDMA/EVDO
- Both outdoor and indoor measurements
- Load and visualization of cell data
- Logging of measurements in kml and text files
- Visualization of measurements on map
- Automatic test VOICE, DATA and SMS sequences
- Load of predefined route
• Serving Cell
  • LEVEL (4G-RSRP, 3G-RSCP, 2G-RXLEV)
  • QUAL (4G-RSRQ, 3G-ECNO, 2G-RXQUAL)
  • SNR (4G only)
  • MCC, MNC, CELLID, eNodeBID/RNCID, LAC/TAC

• Neighbor Cells
  • LEVEL (4G-RSRP, 3G-RSCP, 2G-RXLEV)
  • CELL (4G-PCI, 3G-PSC, 2G-CELLID)

• Events
  • Cell Reselection
  • Handovers

• Other
  • downlink/uplink bitrates, speed, technology, phone state, cell layer

G-NetTrack Measurements
• Outdoor measurements – GPS based
  • Distance interval – default 15m (adjustable)
  • Time interval – default 1s (adjustable)

• Indoor Measurements
  • Load floor plan from picture
  • Move and set points on each turn

• Auto Indoor Mode
  • used in tunnels and places with bad GPS coverage
  • when GPS accuracy fails below a threshold the measurements are buffered and when the accuracy is good the measurement are plotted on a straight line between the point of GPS fix loss and recovery
Measurements are written in text and kml logs

- Text Log – tab delimited multipurpose format – useful for MS Excel and database applications. Can be analyzed with G-NetLook Pro
- KML log – for Google Earth visualization
Google Earth

G-NetTrack
Log Analysis Options

G-NetLook (Android OS)
Automatic test sequences

• VOICE CALL - sequence of voice calls with pause
  • Statistics - Call Start, Call Block, Call Drop, Call End
• DATA - sequence of ping, upload and download
  • Statistics - DL/UL bitrate, AVG PING, MIN PING, MAX PING, STDEV PING, PING LOSS
• SMS - sequence of SMS
  • Statistics – SMS delivery
CELL Data import from text cellfile

- Cellfile – text file in tab delimited format
- Cell information in cellfile
  - Geographical – longitude, latitude
  - Network – CELLNAME, MCC, MNC, CELLID, LAC/TAC, eNodeBID, PCI
  - Site specific – azimuth, height, tilt
• Serving Cell information
• Geographical information
• Data connection and DL/UL bitrates
• History log
• Serving Cell level
• Serving Cell information from imported cellfile
• Neighbor Cells levels

G-NetTrack NEI tab
• Cells – different colors for different layers and technologies
• Measurements – thematic maps for LEVEL, QUAL, CELL, SNR, DL/UL BITRATE
• Serving line, distance and bearing information
• Map type – Normal, Satellite, Hybrid, Terrain

G-NetTrack MAP tab
- Voice Call Sequence Stats
- Data Sequence Stats
- SMS Sequence Stats
- Miscellaneous information:
  - IMEI, IMSI, MSISDN, phone type, brand, build etc.

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**G-NetTrack Pro v1.0**

<table>
<thead>
<tr>
<th>Log Status</th>
<th>Not Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Sequence Status</td>
<td>Running - Upload</td>
</tr>
<tr>
<td>Ping AVG, ms</td>
<td>62</td>
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<tr>
<td>Ping MIN, ms</td>
<td>3</td>
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<tr>
<td>Ping MAX, ms</td>
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<tr>
<td>Ping STDEV, ms</td>
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<tr>
<td>Ping Loss, %</td>
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<tr>
<td>Data Test UL, kbps</td>
<td>...</td>
</tr>
<tr>
<td>Data Test DL, kbps</td>
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<tr>
<td>Voice Sequence Status</td>
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<tr>
<td>Voice Calls:</td>
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<tr>
<td>Successful Calls:</td>
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<tr>
<td>Blocked Calls:</td>
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<td>Dropped Calls:</td>
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<td>IMEI:</td>
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<tr>
<td>Current Operator</td>
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</tbody>
</table>

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**G-NetTrack INFO tab**
• Serving Cell information in comfortable style
  • CELLID
  • LAC/TAC
  • eNodeBID/RNCID
  • LEVEL
  • QUAL
  • SNR

G-NetTrack  DRIVE tab
G-NetTrack resources on the web

- **G-NetTrack Pro** video Demonstration
- **G-NetTrack Pro** – indoor measurements video
- **G-NetTrack Pro** – YouTube channel
- **G-NetTrack Facebook** page
- **G-NetTrack Lite** on Google Play – 100,000+ installs
- **G-NetTrack Pro** manual
- **Gyokov Solutions Home Page**
Thank You!

G-NetTrack