

An aerial night view of a city with numerous skyscrapers and buildings. The sky is dark with a visible starry pattern. Two large communication towers with red lattice structures are prominent on the left and right sides. White glowing arcs connect various points across the city, representing a network. A semi-transparent globe is visible in the lower right quadrant. The overall color palette is dark blue and black with white highlights.

ViewRAN

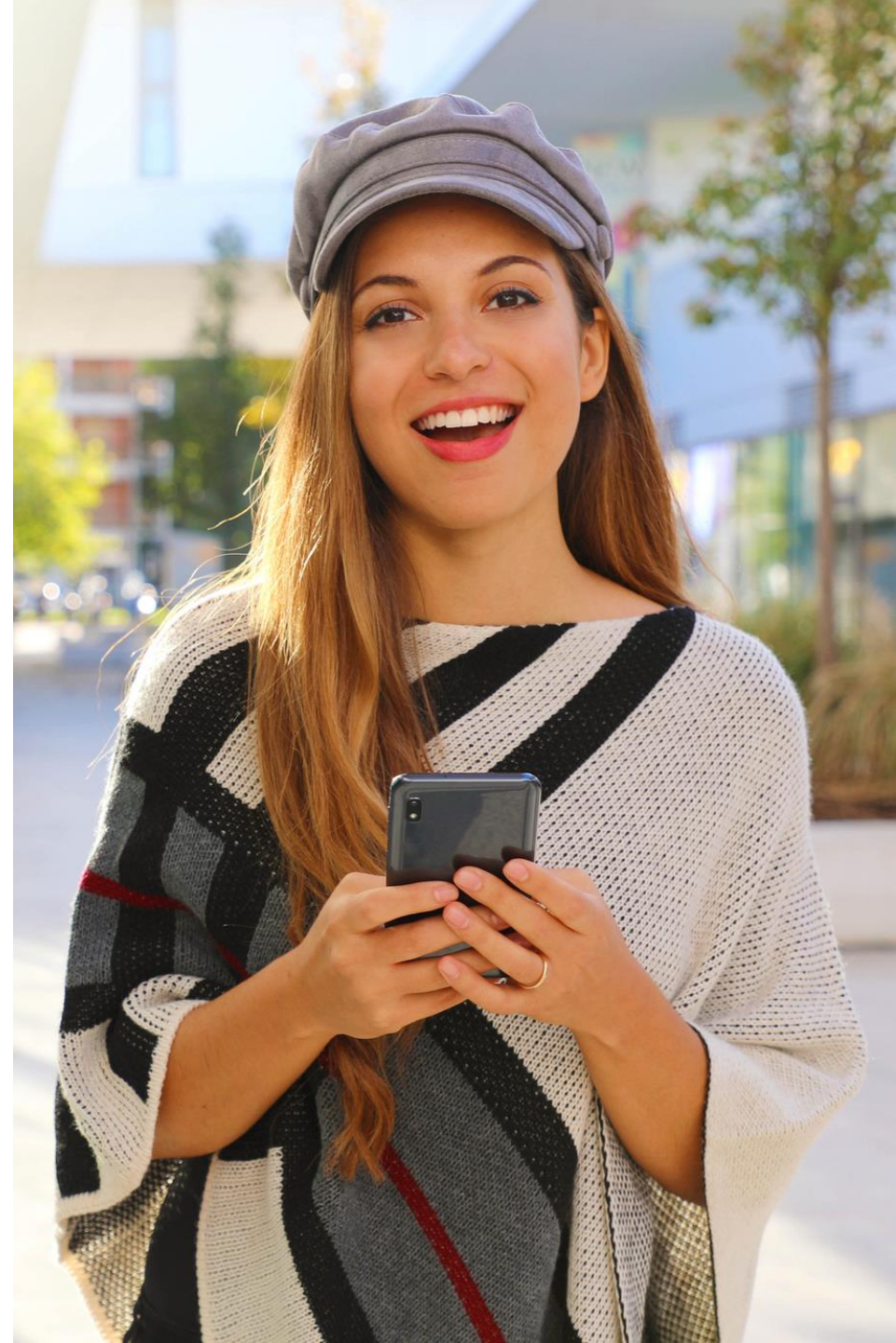
Empowering networks

Key benefits

ViewRAN empowering networks for better customer experience & lower churn rate

ViewRAN solutions powered by Elastic:

- Precise 24/7 RAN monitoring with instant prompts and insights for Mobile Network Operators
- Insightful diagnostics
- Unparalleled effectiveness (less than a second response time)
- Cost effectiveness (a few servers only)

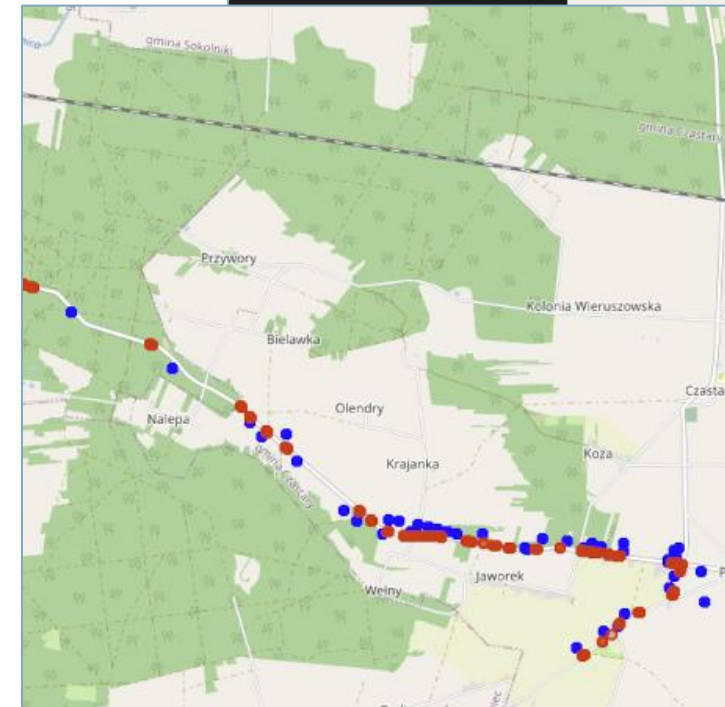
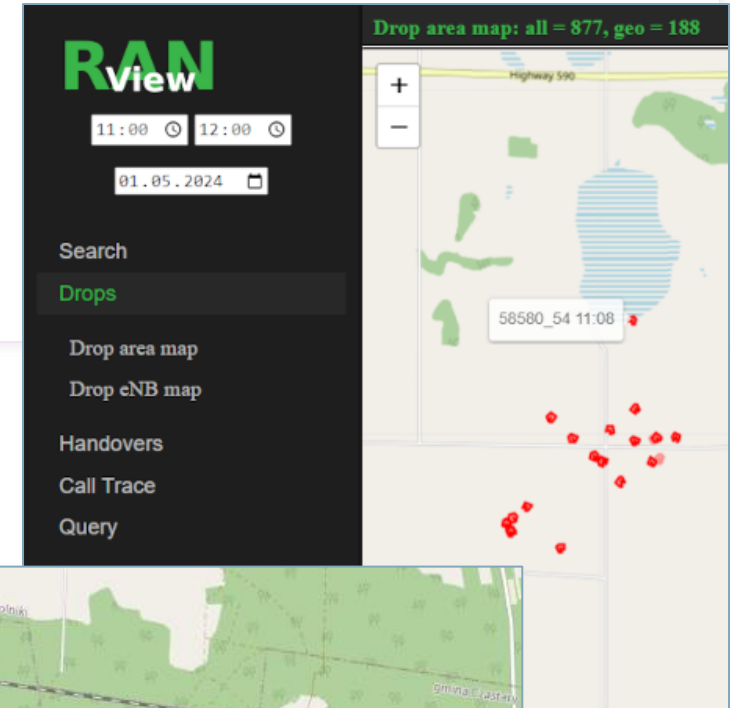


Key feature – precise geolocation

ViewRAN – detecting and visualising network anomalies

ViewRAN revolutionizes 4G/5G network monitoring and analytics, offering unparalleled precision and efficiency in detecting and visualising network anomalies

- Advanced geolocation capabilities
- Unmatched 80m resolution visualization
- Strategic operational insights



Key modules & features

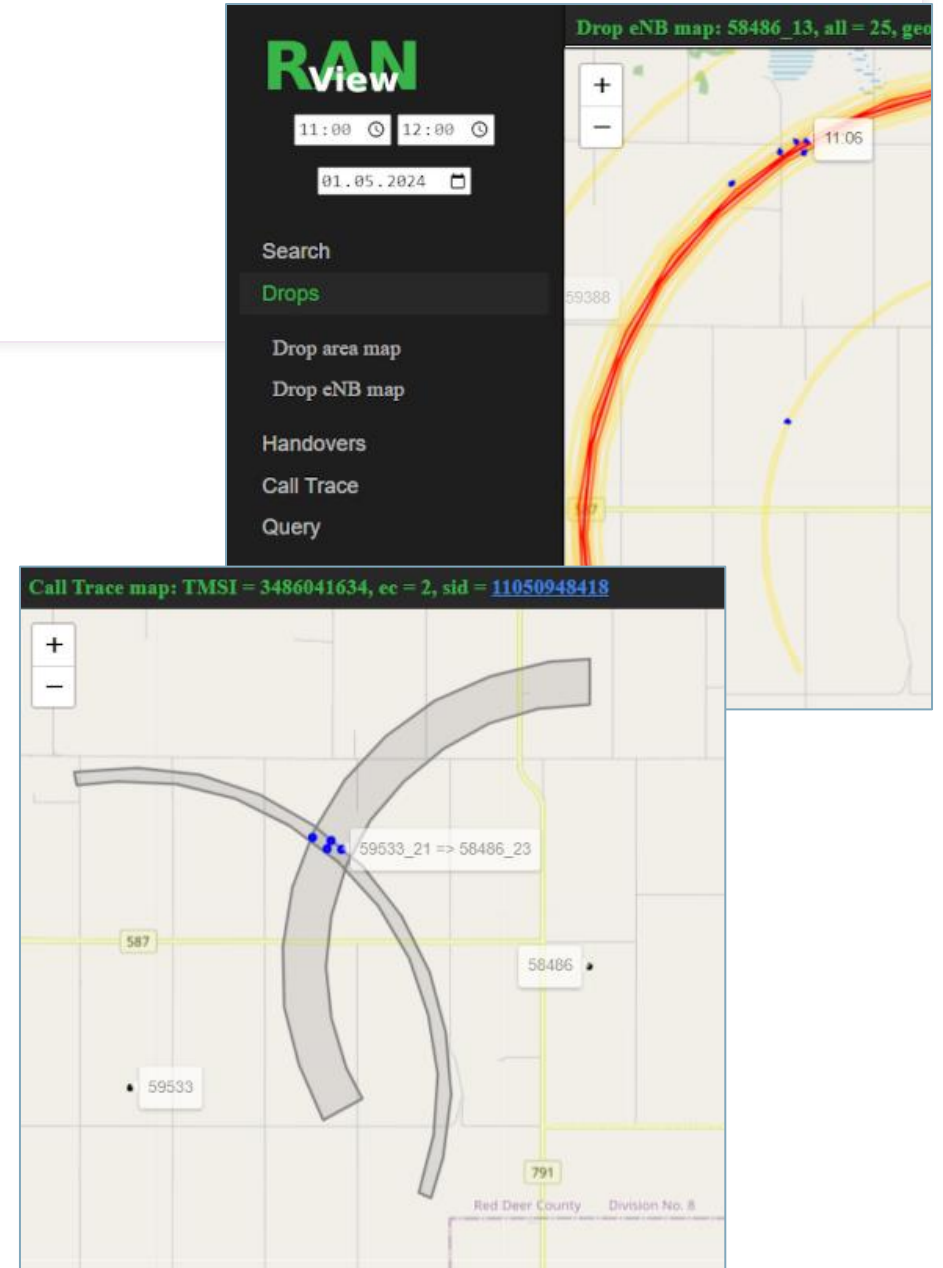
ViewRAN – empowering networks security and enlightening inside

Security anomalies discovery module

Detects security anomalies in the radio network including fake base stations, IMSI catchers and DoS attacks on the air interface

In-depth subscriber and radio interface analysis

Integrates with Wireshark for detailed behaviour analysis of subscribers of the radio interface



Key modules & features

ViewRAN empowering networks with unbeatable efficiency

Redefined efficiency standards

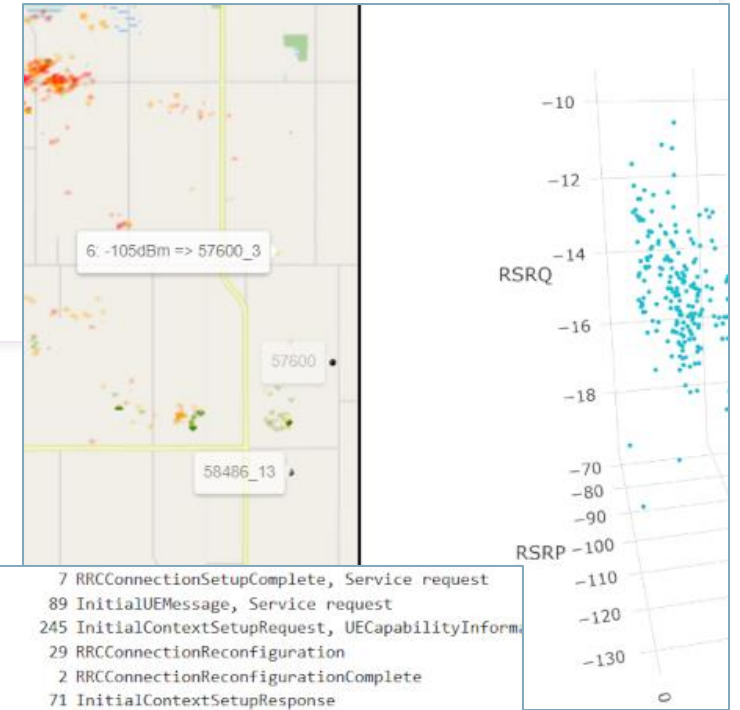
Delivers a month of Geo & Call Flow history for millions of subscribers 24/7 with an unbelievable less than a second response time, utilizing a few servers only

Comprehensive support for major 4G/5G vendors

Fully compatible with leading network infrastructure from Huawei, Ericsson and Nokia

Cutting-edge technology stack

Real-time backend powered by Elasticsearch ensuring extremely responsive and intuitive user experience

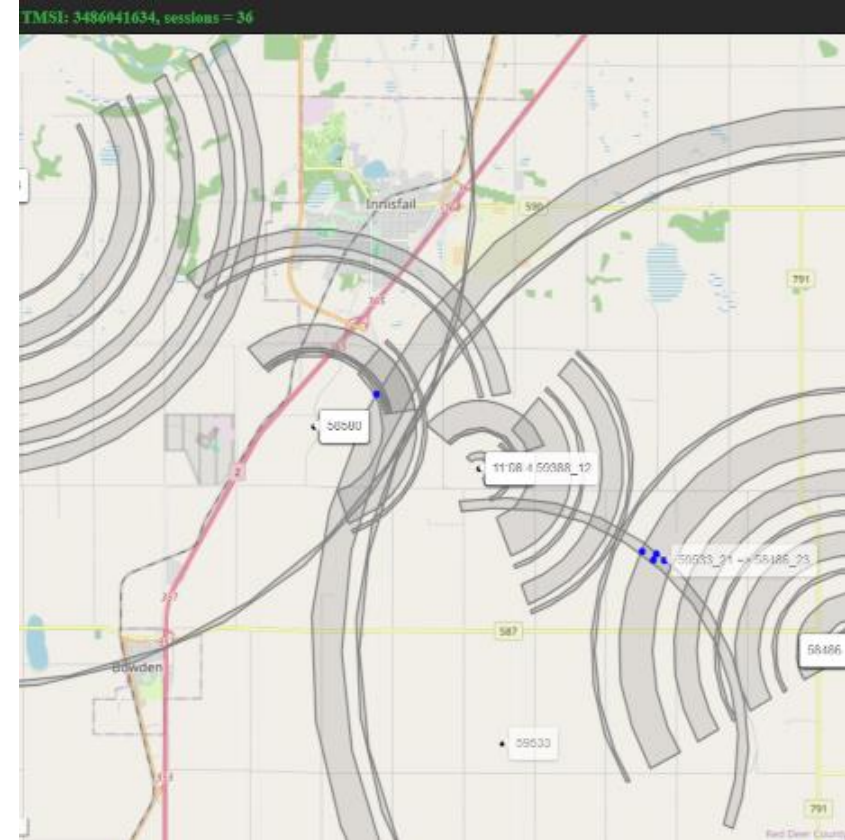


```
NAS-EPS      7 RRCConnectionSetupComplete, Service request
1 S1AP/NAS-EPS 89 InitialUEMessage, Service request
1 S1AP      245 InitialContextSetupRequest, UECapabilityInforma
          29 RRCConnectionReconfiguration
          2 RRCConnectionReconfigurationComplete
1 S1AP      71 InitialContextSetupResponse
1 S1AP      86 CellTrafficTrace
          50 RRCConnectionReconfiguration
          2 RRCConnectionReconfigurationComplete
          4 MeasurementReport
MAC-LTE     22 RAR (RA-RNTI=1, SFN=0, SF=0) (RAPID=0[Group
          15 RRCConnectionReconfiguration
          2 RRCConnectionReconfigurationComplete
          4 MeasurementReport
```

bits), 4 bytes captured (32 bits) on interface unknown, id 5 | 0000 08 0

icch (LTE Radio Resource Control (RRC) protocol)

```
c1 (0)
report-r8 (0)
port-r8
5
ltPCell
result: -87dBm <= RSRP <= -86dBm (54)
result: -11dB <= RSRQ <= -10.5dB (18)
```



ViewRAN

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