



SOOTHSAYER-RF

TACTICAL RADIO MAPPING

<https://cloudrf.com>

TAK ready

SOOTHSAYER-RF works with ATAK +4.3 and WinTAK without a plugin. Server based, the service operates as a chat-bot and is ready when you are.

Secure

Developed to the CIS L1 Linux security standard. The server has AES-256 disk encryption, role based accounts, TLS 1.2 transport encryption and mutual certificate based authentication on the private TAK server.

Cross platform

As well as TAK you can use the service from a standards based web client on your network. The system can also be driven directly from our unique **Google Earth™ layer**.

BYO & DIY data

Add local LiDAR data to enhance accuracy.

The service can model obstacles at **2 metre resolution** with adjustable attenuation for accurate urban operations using LiDAR and BYO / DIY surface clutter.

Good **route selection** needs more than map reading.

The ability to communicate is critical to a mission's success, yet too often a planned route is incompatible with reliable radio communications.

This issue is compounded with UHF radios in complex or urban environments where short wavelength signals are attenuated significantly by dense materials such as concrete.

No radio, or marketing, can beat physics.



SOOTHSAYER-RF is a scalable, **vendor agnostic**, tactical radio mapping service for closed networks. Designed for radio operators, not scientists, this unique edge capability empowers radio users to **make better decisions, faster**.



Interfaces

- ATAK, WinTAK chatbot
- Cross-platform 3D web interface
- Google Earth™ interface
- OpenAPI 2.0 specification REST API for integration

Inputs

- Frequencies: 2MHz to 100GHz
- RF power: 1mW to 1MW
- Feeder loss options
- Co-ordinates: DD,DMS,MGRS
- Height ceiling: 60,000 ft
- Antenna templates
- Antenna azimuth, tilt, gain
- Custom antenna patterns
- Tx & Rx gains in dBi
- Terrain and climate contexts

Outputs

- dB (PL), dB (S/N), dBm, dBμV/m
- Bit Error Rate & Modulation
- Receiver threshold
- Min resolution: 2m/6ft
- Custom colour schemas
- Max range: 300km / 180Mi
- Profile & Fresnel zone
- Area efficiency & %

Models

General purpose

- ITM / Longley Rice
- ITU-R P.525
- ITU-R P.529
- Line-of-sight
- Plane Earth Loss

Cellular

- Okumura-Hata
- COST231-Hata
- Egli VHF/UHF

Microwave

- Stanford Interim (SUI)



DSM/LiDAR & Clutter

- BYO DSM system and interface drawing tools.
- 9 classes for trees, timber, brick, concrete and metal, Manual density override

Security

- AES-256 disk encryption, Role based accounts, TLS 1.2 transport encryption, mutual RSA certificates for TAK server, E-purge

Standards

- HTML5, KML, KMZ, CoT, JSON, GeoJSON, GeoTIFF, SHP, PNG, HTTP, WMS, ISO-8601, EPSG 4326, EPSG 3857, CoT XML

Host requirements

- VMware host, 4 x 2.4GHz CPU, 8GB Memory, 200GB disk space

Options

- WMS OSM tile server, Global LiDAR & buildings, Radio templates