



Radio Monitoring



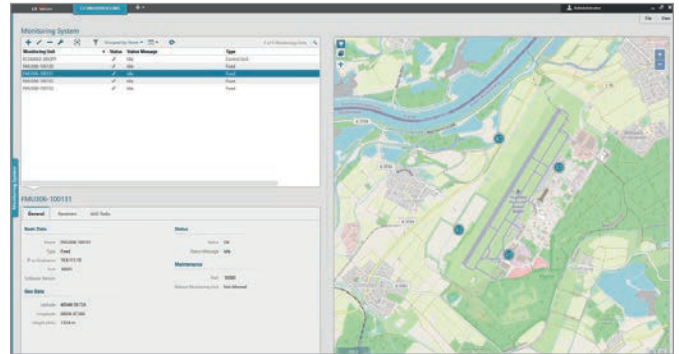
Centralized management of monitoring units & measurement analysis



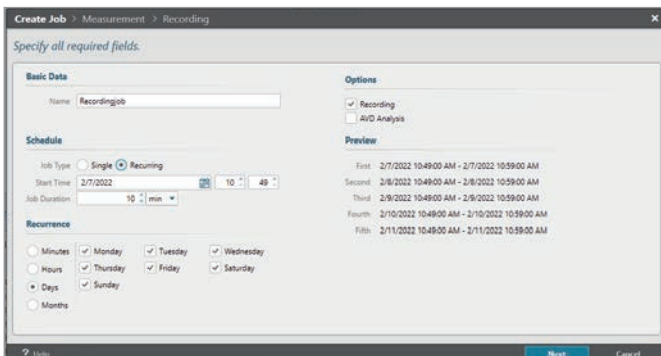
LS OBSERVER
Central Monitoring Software (CMS)

LS OBSERVER **CENTRAL MONITORING SOFTWARE (CMS)**

- Management of networked monitoring units
- Control of LS OBSERVER and 3rd party (e.g. R&S) equipment
- Spectrum management interface
- User management
- Job scheduling

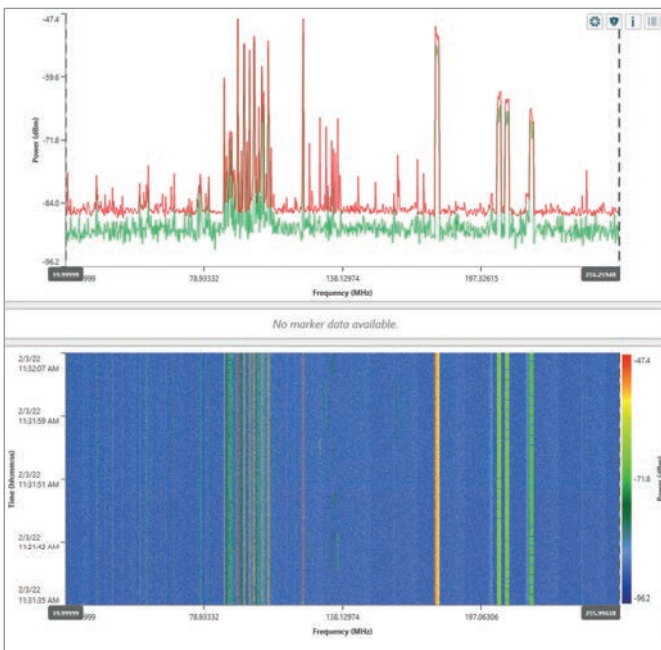


Management of monitoring units

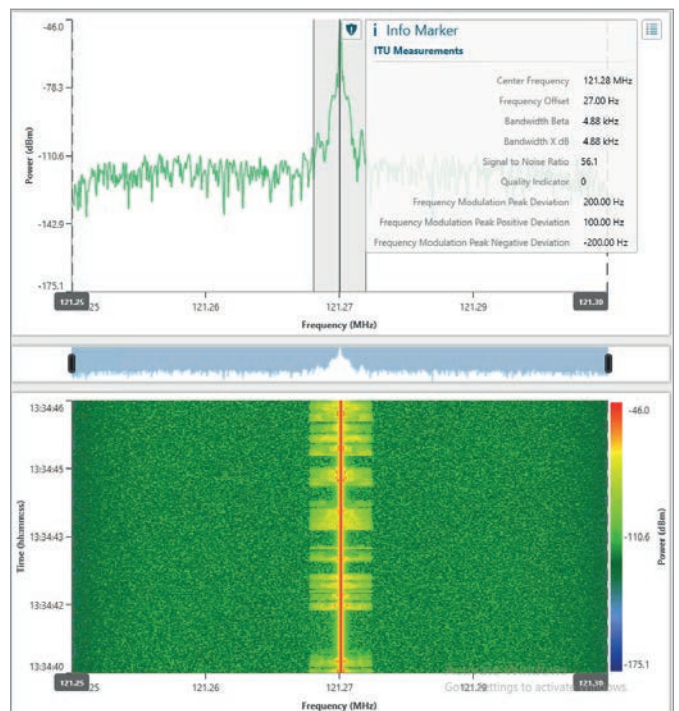


Job definition

- Scan and fixed frequency mode
- ITU compliant signal parameter measurement
- AI based signal classification
- Demodulation
- Channel power measurements

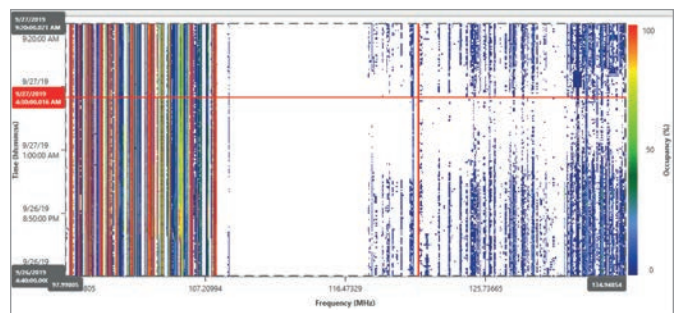


Spectrum scan



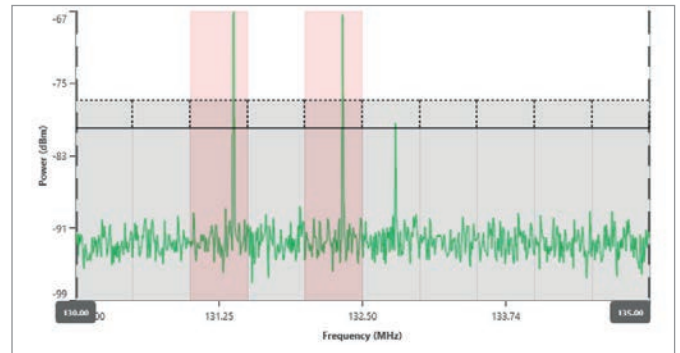
ITU compliant signal parameter measurement

- Recording (spectrum, IQ, occupancy, statistical data)
- Channel occupancy measurements
- Multi-channel analysis



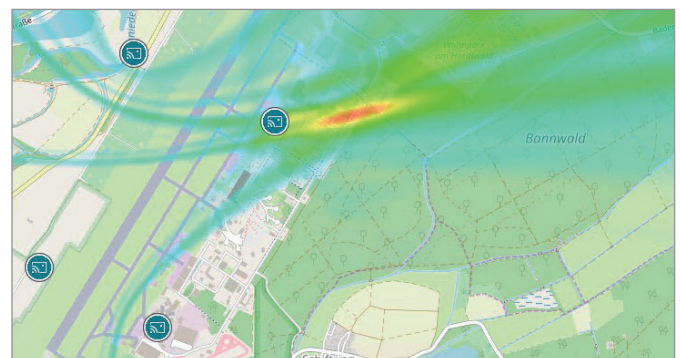
Frequency channel occupancy (FCO) measurement

- Automatic violation detection (AVD)
- AI based smart AVD
- Advanced AVD based on wave propagation calculations

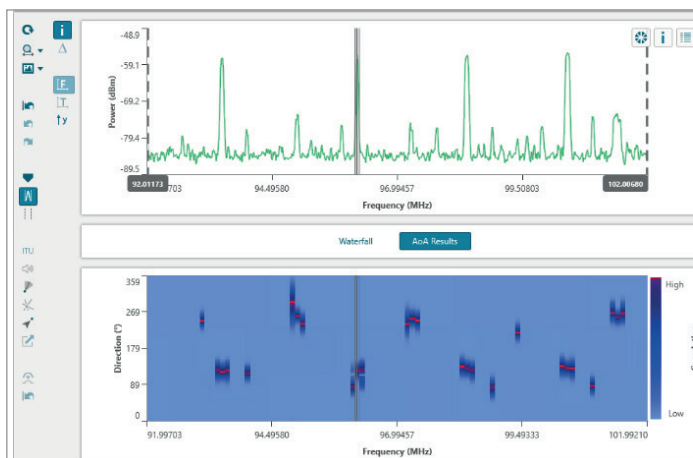


Automatic violation detection (AVD)

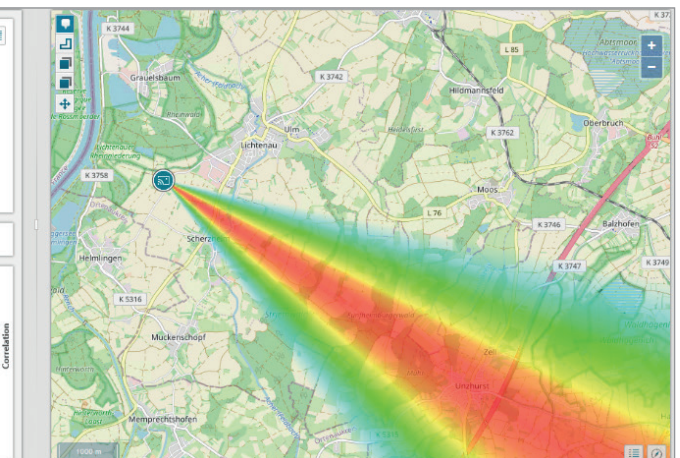
- Direction finding and DF Time Travel®
- Time difference of arrival (TDOA)
- Gain ratio of arrival (GROA+®)
- Homing



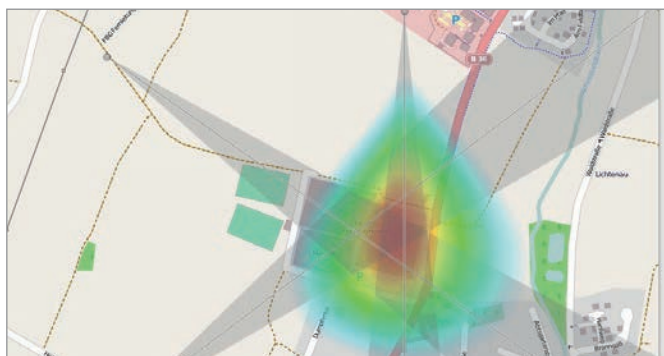
Time difference of arrival (TDOA)



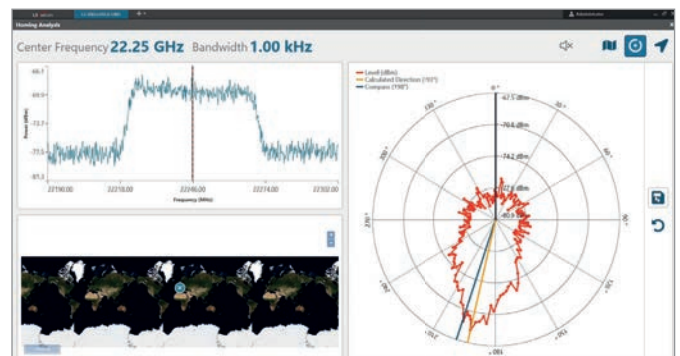
Multi-channel direction finding



Manual direction finding and homing



Triangulation



- Reporting
 - Field strength
 - Occupancy
 - DF results
 - Signal analysis
- Data export

Spectrum Field Strength Report

Generated at 2021/07/19 by Administrator using LS OBSERVER CMS 10.1.8.0-24

Office: LS telcom AG
Im Gewerbegebiet 31-33
77839 Lichtenau
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+49 (0) 7227 9535 600
info@lstelcom.com

Remarks: Test report

Measurement Parameters

Monitoring Station

Name: FMU306-100130
Latitude: 49.0817789660441 °
Longitude: 8.7629322236543 °
Receiver: LS Broadband

Data

Type:
Channel Sets: Base, 800 mhz regional

Measurement

Name: 6/14
Mode: Frequency Range
Freq. Range: 80.00 MHz - 470.00 MHz
Stop Width: 4.00 MHz
Start Time: 6/14/2021 1:42:10 PM
Stop Time: 6/14/2021 1:55:09 PM
Duration: 13 Minutes 59 Seconds

Receiver Settings

Attenuation: 0 dB
Gain: No Gain
Reference Level:
Detector Mode: Average
Sweep Time: 1 ms
Sweep Interval: 0 µs

Field strength report header

Monitoring Unit:	FMU306-100130	Analysis:	Start Time:	9/26/2019 2:40:00 PM
Data Type:	FCO 5		End Time:	9/27/2019 7:20:00 AM
Mode:	Frequency Range		Duration:	16 Hours 40 Minutes 0 Second

Channel Name	Main Frequency	Bandwidth	Occupancy [%]		
			Max	Avg	Min
SWR3	98.40000 MHz	150.00000 kHz	100	100	100
Radio Regenbogen	100.40000 MHz	150.00000 kHz	100	100	100
Deutschlandfunk	106.30000 MHz	150.00000 kHz	100	100	100

Occupancy report

Export Measurement

Specify all required fields.

General

Export Format: ☒ CSV ☐ XML
Compression: ☒ Compress File

Limits

Frequency Range: 20.00 MHz - 6.00 GHz
Start Time: 9/7/2020 13:39:50
Stop Time: 9/7/2020 15:44:57

Frequency Downsampling

☐ None ☐ Max ☐ Average ☐ Min
Divide measurement into intervals of 100.00 MHz

Time Downsampling

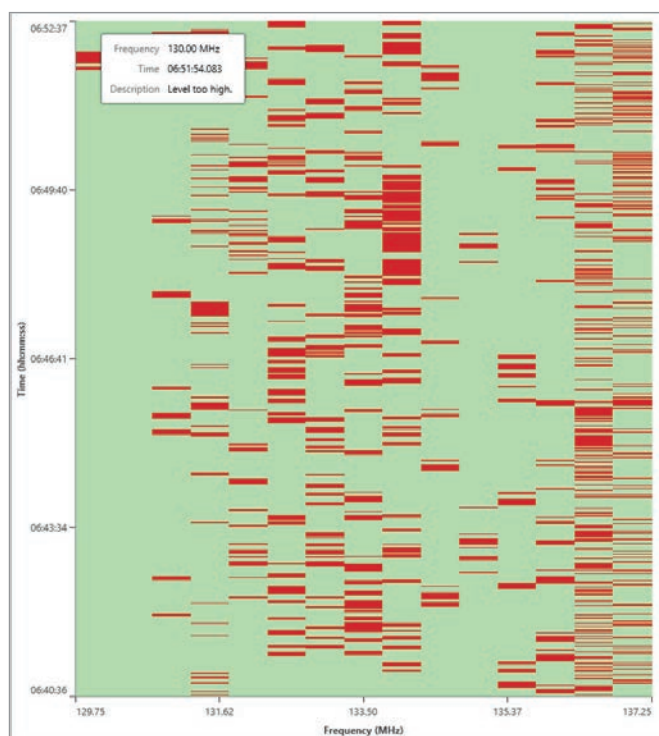
☐ None ☐ Max ☒ Average ☐ Min
☐ One Data Row
☒ Divide individual scans into intervals of 1 min

Estimation

Uncompressed File Size: 1.02 GB

Export Cancel

Measurement data export



AVD alarm report

For more information on products and solutions, please visit our website at www.LStelcom.com or contact us:

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Smart Spectrum Solutions

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