System for continuous EMF monitoring

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Background

• Rapid development of wireless telecommunications services

• Increasing number of transmitting sources of radiation

• Public fear of electromagnetic radiation affects further development of wireless networks
Background

Why EMF monitoring?

Local Government

General Public

Operators

Missing trust

EMF Monitoring System

Local Government

General Public

Operators

RATTEL
Project Scope

4 phases:
I year  (19 + 2)
II year (16 + 2)
III year (26 + 4)
IV year (30 + 0)

100 monitors:
• 92 wide band area monitors
• 8 selective area monitors

Locations criteria:
• Increased sensitivity locations (schools, hospitals, kindergardens)
• Measured EM values
EMF Monitoring System Overview

Sensors
Location of interest

EMF radiation
source

Central server with
database and web access

Results presented through an
intuitive web interface for the public
Wide Band Area Monitor AMB-8059

- Frequency range: 100 kHz to 7 GHz
- One frequency band
- Solar and AC/DC Power Supply
- Measurement range: 0.2 V/m – 200 V/m
- Measurement resolution: 0.01 V/m
- Communication: 2G, 3G, WiFi, Ethernet
Band Selective Area Monitor AMS-8061

- Frequency range: 100 kHz to 6 GHz
- Up to 20 frequency bands
- Solar and AC/DC Power Supply
- Measurement range: 0.01 V/m – 200 V/m
- Measurement resolution: 0.01 V/m
- Communication: 2G, 3G, WiFi, Ethernet
Measurement software
Measurement results
Micro Location 1: Novi Sad

- City: Novi Sad
- Altitude: 122m
- Values (V/m): 0.9 – 1.7

Area Monitor

- AMB-8059
- Probe EP-1B-03
Micro Location 2: Niš

- City: Niš
- Altitude: 76m
- Values (V/m): 1.7 – 4.2

Area Monitor

- AMB-8059
- Probe EP-1B-03
• Value (V/m): 3.4 - 3.8
• 39 Radio systems
• 11 Locations
Publishing results

Check [www.ratel.rs](http://www.ratel.rs) on December 1st 2017

- Transparent results of EM radiation
- Open to implement new sensors from different institutions
Future plans
Thank you!

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