

# Wojskowy Instytut Łączności - Państwowy Instytut Badawczy

<https://www.wil.waw.pl/wil/publikacje/baza-publicacji/r4855933760,Radio-environment-maps-for-military-cognitive-networks-density-of-small-scale-se.html>  
2022-08-10, 10:44

## Radio environment maps for military cognitive networks: density of small-scale sensor network vs. map quality

### Tytuł

Radio environment maps for military cognitive networks: density of small-scale sensor network vs. map quality

### Typ publikacji

[Artykuł](#)

### Rok

2020

### Data dokładna

2020

### Autorzy słownie

### Autorzy

[Golan Edward](#) [Kaniewski Paweł](#) [Romanik Janusz](#) [Suchański Marek](#)  
[Zubel Krzysztof](#)

### ISBN/ISSN

ISSN: 1687-1472

### Informacje dodatkowe

*EURASIP Journal on Wireless Communications and Networking*, Nr

1

DOI: 10.1186/s13638-020-01803-4

Abstract: In this paper, we present the dependency between density of a sensor network and map quality in the radio environment map (REM)

concept. The architecture of REM supporting military communications systems is described. The map construction techniques based on spatial statistics and transmitter location determination are presented. The problem of REM quality and relevant metrics are discussed. The results of field tests for UHF range with a different number of sensors are shown. Exemplary REM maps with different interpolation algorithms are presented. Finally, the problem of density of a sensor network versus REM map quality is analyzed.

Keywords: Cognitive radio, Radio environment map, Spectrum monitoring, Density of sensor network, Deployment of sensors.

## Powiązane publikacje

-

### Adres url strony

<https://jwcn-urasipjournals.springeropen.com/articles/10.1186/s13638-020-01803-4>