

# **Progress report regarding development of new Recommendation for protection GNSS spectrum**

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Bangalore, India, 9-13 December 2019

# Background

At ICG-11 (November 2016, Sochi, Russia), **Recommendation 11S.1 "IMT-GNSS compatibility"** was approved.

At ICG-12 (December 2017, Kyoto, Japan), **Recommendation 12S.1 "RNSS protection criteria"** was approved.

At the 12th Baška GNSS Conference (May 2018), it was proposed to begin work on a **new ICG Recommendation** to protect the GNSS spectrum from radio interference from other services other than the radionavigation satellite service.

The ICG-13 in Xian (November 2018) supported work on the development of new **ICG Recommendation**.

The ICG-14 is invited to consider the progress report regarding development of new **ICG Recommendation** for protection GNSS spectrum from radio interference from other services other than the radionavigation satellite service.

# New ICG Recommendation

**Objective:** GNSS spectrum protection from non-RNSS radio services interference.

## **Issues under consideration:**

- Acceptable levels of protection from interference and measurement methods;
- Monitoring of interference environment;
- Identification of interference sources;
- Recommendations on the elimination/minimization of interference impact.

## **First steps:**

- Systematization and categorization of various types of interference;
- Systematization and categorization of various types of GNSS receivers.

# Conception of new Recommendation



 **SYSTEMATIZATION**

 **IDENTIFICATION**

 **MONITORING**



# Current material



## Systematization of Information on Various Types of GNSS Receivers and Various Types of Interference

Dr. D. Aronov  
E. Zheltonogov

Baška, Croatia, 12-15 May 2019

Presentation «Systematization of Information on Various Types of GNSS Receivers and Various Types of Interference» was presented in 2019.



International Committee on GNSS (ICG)  
Working Group 5

IDM Subgroup

## Actual issues of navigation conditions monitoring

Alexey MURAVYEV  
Sergey SILIN  
NAVIS Inc.

Презентация «Actual Issues of Navigation Conditions Monitoring» was presented in 2019.



ICG WORKING GROUP 5  
Systems, Signals, and Services  
ICG-13 Meeting  
Xi'an, China  
06-08 November 2018

IDM Task Force

*Draft document*

## Assessment of electromagnetic and interference environment at the point of location of measurement in GNSS frequency bands

Dr. Stanislav Kizima, ITU-expert  
Dmitriy ARONOV, Geysen-Telecom, Ltd

ITU-R in 2019 approved Report SM.2454-0 «Spectrum monitoring techniques in the radionavigation-satellite service frequency bands».



# Further actions

To continue systematization of protection criteria, and approaches to interference estimation depending on the types of RNSS receivers for elaboration reference values of the electromagnetic environment for their subsequent monitoring to protect GNSS spectrum from radio interference from other radio services other than the radionavigation satellite service.

To clarify, if necessary, material on spectrum monitoring techniques in the frequency bands of the radio navigation satellite service.

ICG participants are invited to supplement the proposed material regarding possible types of receivers, and their protection criteria for various types of interference, including established limits in their countries (if available) and also spectrum monitoring techniques.

**Thanks for your attention!**

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