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**P4006**

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**Submitter Email:** roger.oliva.balague@esa.int

**Type of Project:** New IEEE Standard

**Project Request Type:** Initiation / New

**PAR Request Date:** 12 Feb 2021

**PAR Approval Date:** 25 Mar 2021

**PAR Expiration Date:** 31 Dec 2025

**PAR Status:** Active

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**1.1 Project Number:** P4006

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Project Title:** Standard for Remote Sensing Frequency Band Radio Frequency Interference (RFI) Impact Assessment

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**3.1 Working Group:** RFI in Remote Sensing Working Group(GRSS/SC/RFIRSWG)

**3.1.1 Contact Information for Working Group Chair:**

**Name:** Roger Oliva

**Email Address:** roger.oliva.balague@esa.int

**3.1.2 Contact Information for Working Group Vice Chair:**

None

**3.2 Society and Committee:** IEEE Geoscience and Remote Sensing Society/Standards Committee(GRSS/SC)

**3.2.1 Contact Information for Standards Committee Chair:**

**Name:** Siri Jodha Khalsa

**Email Address:** sirijodha.khalsa@ieee.org

**3.2.2 Contact Information for Standards Committee Vice Chair:**

**Name:** Kevin Romero

**Email Address:** romerok1@ca.rr.com

**3.2.3 Contact Information for Standards Representative:**

None

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:**

Sep 2024

**4.3 Projected Completion Date for Submittal to RevCom:** Mar 2025

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 16

**5.2 Scope of proposed standard:** This standard defines the quantitative assessment of man-made RFI in a given frequency band. Specifically, this standard is intended to be used in RFI impact evaluations and monitoring of frequency bands allocated to space-based remote sensing. The standard provides a definition of RFI as it relates to space-based remote sensing operations.

**5.3 Is the completion of this standard contingent upon the completion of another standard?** No

**5.4 Purpose:** This document provides a standard for RFI assessment of the affected frequency bands. This recorded information is to be used to inform policy decision makers and the public regarding the status, over time, of man-made RFI in any given remote sensing frequency band and its impact on remote sensing operations and products.

**5.5 Need for the Project:** The information is needed for frequency managers to allocate the efforts to enforce radio-regulations, for space agencies to determine the remote sensing instruments that will provide more benefit to society, and/or to allocate efforts in RFI mitigation techniques, and for researchers to understand the error quantities associated with their retrievals.

**5.6 Stakeholders for the Standard:** Space agencies, remote sensing researchers and engineers in academia and private sector, government policy makers and frequency managers.

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**6.1 Intellectual Property**

**6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?**

No

### 6.1.2 Is the Standards Committee aware of possible registration activity related to this project?

No

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### 7.1 Are there other standards or projects with a similar scope? Yes

**Explanation:** There is a standard that provides recommended practices for the analysis of interference and coexistence between radio systems. Some of its practices will be applicable for the development of this standard, but the specificity of remote sensing with global range, unique instruments and passive measurements require new definitions for the analysis.

Other Standards define the method to evaluate RFI in terrestrial systems, such as FM and TV broadcast receivers or Power Lines and Substations, but again those recommendations cannot be applied in satellite measurements.

#### 7.1.1 Standards Committee Organization: IEEE Communications Society

**Project/Standard Number:** IEEE Std 1900.2 -2008

**Project/Standard Date:** 27 Mar 2008

**Project/Standard Title:** IEEE Recommended Practice for the Analysis of In-Band and Adjacent Band Interference and Coexistence Between Radio Systems

#### 7.1.2 Standards Committee Organization: Transmission and Distribution Committee of the IEEE Power and Energy Society

**Project/Standard Number:** IEEE Std 430-2017

**Project/Standard Date:** 14 Feb 2017

**Project/Standard Title:** IEEE Standard Procedures for the Measurement of Radio Noise from Overhead Power Lines and Substations

#### 7.1.3 Standards Committee Organization: Standards Development Committee of the IEEE Electromagnetic Compatibility Society

**Project/Standard Number:** IEEE Std 187-2018

**Project/Standard Date:** 15 Feb 2018

**Project/Standard Title:** IEEE Standard for Measurement of Emissions from FM and Television Broadcast Receivers in the Frequency Range of 9 kHz to 40 GHz

### 7.2 Is it the intent to develop this document jointly with another organization? No

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### 8.1 Additional Explanatory Notes: