



International Committee on  
Global Navigation Satellite Systems

# **GNSS Applications Workshop: Seminar on GNSS Spectrum Protection and Interference Detection and Mitigation**

## **Course Introduction**

**26-27 October 2021**

# Global Perspective

- Global Constellations

- GPS (24+3)
- GLONASS (24+)
- GALILEO (24+3)
- BDS/BEIDOU (27+3 IGSO + 5 GEO)

- Regional Constellations

- QZSS (4+3)
- IRNSS/NAVIC (7)
- Korea – KPS (7)

- Satellite-Based Augmentations

- WAAS (3)
- MSAS (2)
- EGNOS (3)
- GAGAN (3)
- SDCM (3)
- BDSBAS (3)
- KASS (2)
- Australia SBAS (2)



# Seminar History

- Pre-ICG Action Team on GNSS (1999-2005)
  - Regional Meetings 2000-2003
  - Fall 2004: 1<sup>st</sup> effort to develop Workplan for ICG
    - Spectrum protection and Interference detection and mitigation (IDM) drafted into ICG Workplan from the beginning
- Proposal by U.S. for Educational Seminar on Spectrum Protection and IDM at Final Pre-ICG Experts Meeting in 2005
  - Never took place... until 2015!



# Purpose of this Workshop

Describe the importance of GNSS spectrum protection at the National level, and what you can do to reap the benefits of GNSS



# Session Agenda: Day 1

**Day One: Tuesday, 26 October 2021**

## **Subject**

1. Overview

Course Introduction

2. Introduction to GNSS

How GNSS Works and Applications

GNSS Receiver Fundamentals

Introduction to Interference

3. Spectrum Management

What is Spectrum Management

The ITU and Spectrum Management

Introduction to National Spectrum Agencies and National Applications

Q&A Session

Adjourn

**End Day One Session**



# Session Agenda: Day 2

**Day Two: Wednesday, 27 October 2021**

**Subject**

Day 2 Introduction and Recap

4. Spectrum Protection

Introduction to Spectrum "Protection"

ICG Activities and its Role in Spectrum Protection and Interference Detection and Mitigation

Case Studies: Ultra Wide Band & LightSquared

5. Interference Detection and Mitigation

Proliferation of GNSS Jammer Devices

Interference Detection Concepts

Interference Detection and Mitigation and GNSS Jammers

6. Summary/Interactive Discussion

Summary and Q&A Session

**End of Day Two Session/Course Completed**



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