International Committee on
Global Navigation Satellite Systems

ICG IDM Workshop
Geneva, Switzerland

July 14-15, 2014

AGENDA

DAY 1: Monday, 14 July Location: ITU HQ, Room E

0930 Introduction

Opening Remarks

Approval of the Agenda

0945   GNSS Providers Update and Discussion

- Updates on IDM from Providers

- Discussion: Outcome from previous Workshop: **GNSS as International Critical Infrastructure:** *GNSS providers should study the issue of critical infrastructure and the importance of GNSS service to national critical infrastructure. Questions to address could include:*

1. *Is GNSS itself critical infrastructure or does it provide services that enable other sectors of critical infrastructure?*

2. *Is there such thing as international critical infrastructure?*

1115 Radionavigation Satellite Service (RNSS) Spectrum Protection

•Presentation: U.S. update on Adjacent Band Compatibility Study: Doug Pederson

•Discussion: Standardization of laws regarding interference and use of interference devices

1330 Concepts for IDM

•Presentation: EU-funded DETECTOR Project:
Mark Dumville (NSL)

• Presentation: Crowd sourcing concepts and techniques used for interference detection: *Tom Stansell*

•Presentation: Technology of radio interference and ionospheric scintillation monitoring: *ZHEN Weimin*

•Presentation: Experimental grid radio monitoring network for low power spectrum monitoring:
LIU Zhijian

DAY 2: Tuesday, 15 July Location: ITU HQ, Room E

0930 IDM Reporting

Discussion: Establishing routine communications among the centers

Concepts for developing a common IDM reporting standard

Develop a common set of information to be reported to GNSS civil service centers

Presentation: Galileo Service Center: Dominic Hayes

1115 IDM Task Force Work Plan

Review status of ICG-8 recommendation 3.2: **GNSS Interference Detection Reporting Procedures:**

Working Group A should form a Task Force on GNSS Interference Detection reporting procedures and system development

- *Initially, the task force will focus on developing a common set of information to be reported to GNSS civil service centers*

- *Next, the task force will focus on establishing routine communications among the centers*

- *Finally the task force will develop guidelines for common capabilities to be considered in the development of future national IDM networks*

- Opportunities for further international collaboration and cooperation

1330 Workshop Views and Recommendations

Views and recommendations for future actions

Discussion of UN Workshop benefits

Recent Activity

Service Center Cooperation

- March 2014 tele-conference between Galileo Service Center and GPS U.S. Coast Guard Navigation Center
  - Established cooperation between centers
  - Discussion included handling of inquiries received by centers
  - GSC developed detailed process for handling of inquiries and intends to present it to WG-C of ICG-9

- May 2014 NAVCEN Visit to CSNO Test and Assessment Research Center (TARC)
  - CO NAVCEN and DOT PNT Program Manager met with Officials at TARC
  - Also met with Deputy Director of the China Maritime Safety Administration
  - Typical GNSS Service Center Duties may be split between TARC and MSA

PNT Providers
Public Contact Information

ICG IDM Workshop

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Beidou

China Satellite Navigation Office (CSNO)
Test and Assessment Research Center (TARC)

BEIDOU
http://en.beidou.gov.cn/index.html

Galileo

European GNSS Agency Galileo Service Center

GALILEO
http://www.gsc-europa.eu/

GALILEO CONSTELLATION STATUS
http://www.gsc-europa.eu/system-status/Constellation-Information

GALILEO HELP DESK
http://www.gsc-europa.eu/helpdesk/contact-form

GLONASS

Roscosmos GLONASS Analysis/Information Center

GLONASS
http://glonass-iac.ru/en/

GLONASS CONSTELLATION STATUS
http://glonass-iac.ru/en/GLONASS/

GLONASS REPORT A PROBLEM
http://glonass-iac.ru/en/feedback/report3.php

GPS

GPS, U.S. Coast Guard Navigation Center

GPS
http://www.navcen.uscg.gov/

CONSTELLATION STATUS
http://www.navcen.uscg.gov/?Do=constellationStatus

INQUIRIES/PROBLEM REPORTS
http://www.navcen.uscg.gov/?pageName=gpsUserInput

IRNSS

The Indian Space Research Organization (ISRO) Navigation Centre

IRNSS
http://www.isro.org/satellites/irnss.aspx

QZSS

QZSS

http://www.qzs.jp/en/services/index.html

QZSS INQUIRIES

https://www.qzs.jp/en/inquiry/index.html

1. Recommendation: To invite each ICG Member to prepare a presentation for the ICG-9 WG-A meeting addressing the following questions:

   - Do you consider Global Navigation Satellite Systems or their services to be National Critical Infrastructure? How does your response impact the protection of your GNSS components and its services in your nation?
   - What do you consider to be the definition of "International Critical Infrastructure"?

2. Action: In the interest of increasing GNSS spectrum protection, the ICG WG-A Compatibility Subgroup should study the potential to designate RNSS allocations in each currently used band as safety of life service. Recommendation: Potentially, national telecommunication administrations could be asked to initiate studies in the ITU-R related to potential regulatory changes regarding the RNSS safety of life allocations/service.

3. Conclusion: Encourage all ICG members to perform and share Adjacent Band Compatibility Studies in all RNSS bands (L, S, and C) with other ICG participants.

4. Recommendation: ICG Member countries should provide information at ICG-9 as to whether it is legal within their country to: manufacture, sell domestically, export, purchase, own, or use GNSS jammers

5. Conclusion: ICG participants should consider a review of whether existing limits on spurious emissions in the RNSS bands are sufficient to protect GNSS reception and offer conclusions of the reviews to WG-A at ICG-9.

6. Conclusion: The Workshop participants encourage system providers and user community members to evaluate the interference detection and characterization capabilities of the EU-funded DETECTOR project and consider testing a similar capability in other regions.

7. Recommendation: System providers and user community member states are encouraged to work with industry groups to determine if standards for crowd sourcing interference detection techniques should be developed and cost-effectively implemented by mobile telecom service providers.

Note: IDM Task Force recommendation

8. Recommend: The ICG Executive Secretariat, in coordination with the IDM taskforce, should organize United Nations workshops on IDM for governments of user community member nations to protect the worldwide utility and benefits of GNSS.

There was discussion in the IDM Task Force that other technologies should be considered as well.

Recommendation: Encourage ICG members to investigate the feasibility of grid network technologies for GNSS interference detection and localization, together with relevant business models.