

Working Group 1: Assured Availability
- Protect The Clear and Truthful Reception of
Radionavigation Signals

1.1 Spectrum Allocation Assurance
(Spectrum Sub-working Group)
Overview - Tuesday, June 3, 2014

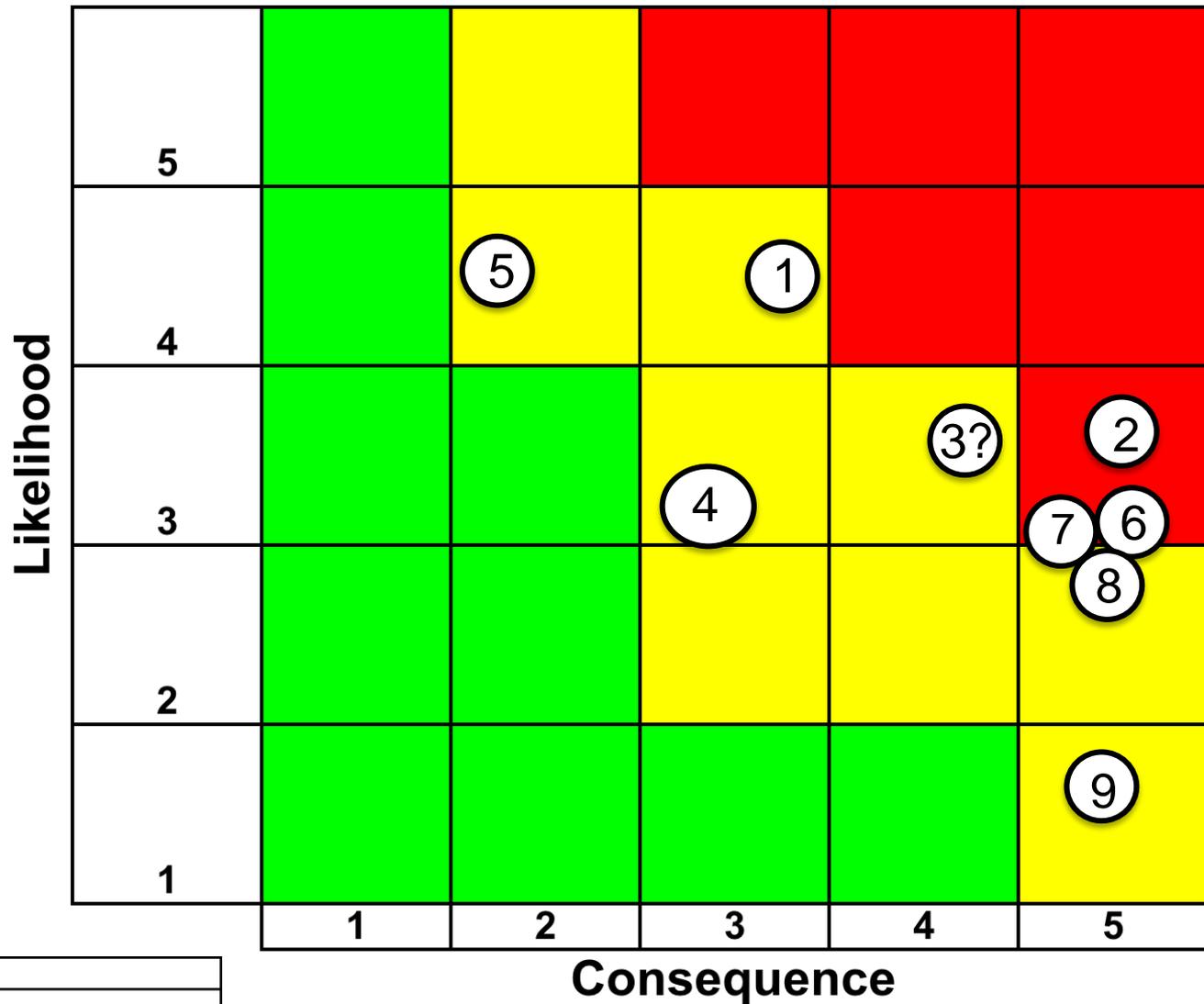
Agenda

- Enforce existing international treaties for GNSS protection
- Presentation by GPSIA on proposed CEPT regulation to allow harmful interference within Europe
- Presentation by Logan Scott on detection and location of GNSS jammers.
- Presentation on Risk Framework for GNSS interference.
- Recommendations

Types of Spectrum Use

	Radio Navigation	Radio Communication
Space Transmitters	GNSS	SATCOM
Ground Transmitters	VOR/DME TACAN	Mobile Broadband

Spectrum
Environment
Risks to GPS



Number	title
1	personal privacy jammers
2	Adjacent Band Compatibility
3	in-band pseudolites in Europe
4	IMES
5	L-band SAR
6	Harm claim thresholds
7	receiver standards
8	spread of the $43+10\log_{10}(P)$ dB OOB default
9	IMT Broadband JTG

Notes:
 5. "SAR" is an EESS (active) service
 6., 7., 8. – See FCC AWS-3 R&O

Recommendation to PNT ExCom: Seek Enforcement of Existing International Protections

- Encourage GNSS providers to work with their respective national and regional regulatory authorities to prevent harmful interference
- International Regulations Exist in the ITU Treaty Already
 - International Table of Frequency Allocations of the Radio Regulations
 - Allocations to ARNS & RNSS
 - Definitions of Harmful Interference
- Potential Remedies for Harmful Interference to GNSS/RNSS Exist
 - ITU Radio Regs include mechanism for addressing Harmful Interference on case-by-case basis
 - ITU procedures – Section VI of Article 15 reinforces the obligation on interferers to eliminate the harmful interference.
 - ITU procedures emphasize cooperation and exchange of information, noting the need for prompt action, but do not include express penalties for violations or continued operation in derogation of the Radio Regs that causes harmful interference

Recommendation to PNT ExCom: Encourage ICG Members to Use and Strengthen Existing Enforcement Mechanisms

National and regional regulators have specific enforcement powers to address harmful interference and violations of ITU Radio Regulations

- Example: CEPT, APT, CTEL, etc.
- Powers held by national regulators include the ability to prohibit the manufacture, importation, marketing, and/or use of devices causing harmful interference
- National and regional regulators can impose penalties for violations of prohibitions on harmful interference
 - These penalties can and have included monetary forfeitures or other civil and even criminal penalties for willful and/or repeated violations

Recommendation to PNT ExCom: Propose ICG Liaison with Regional PTT Administrations

GNSS Protection and Enforcement

- The International Committee on GNSS, which includes all national GNSS operators and providers, should consider outreach to the regional PTT Administrations to discuss GNSS protection within their regional conferences.
- Demarche those European Members State Signatories to the 2004 Joint US-EU agreement about the CEPT administration voting to adopt an ECC recommendation (11) 08 of a framework for “indoor” in-band RNSS pseudolites. E.g., Germany, Finland, Estonia, Denmark
- Encourage specific penalties for unauthorized possession or operation of devices specifically designed or modified to jam GNSS signals.

Recommendation to PNT ExCom: Develop legislation to stop proliferation of GNSS jammers

- Increase existing FCC penalties for unauthorized operation of a GNSS jammer within the United States.
- Establish penalties for the possession of devices specifically designed or modified for GNSS jamming or spoofing without a license. (FCC/Commerce)
- Ban the import, export, or transit of devices specifically designed or modified to jam or spoof GNSS signals without a license. (Commerce or State)