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Spectrum Certification

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Report Documentation Page

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Agenda

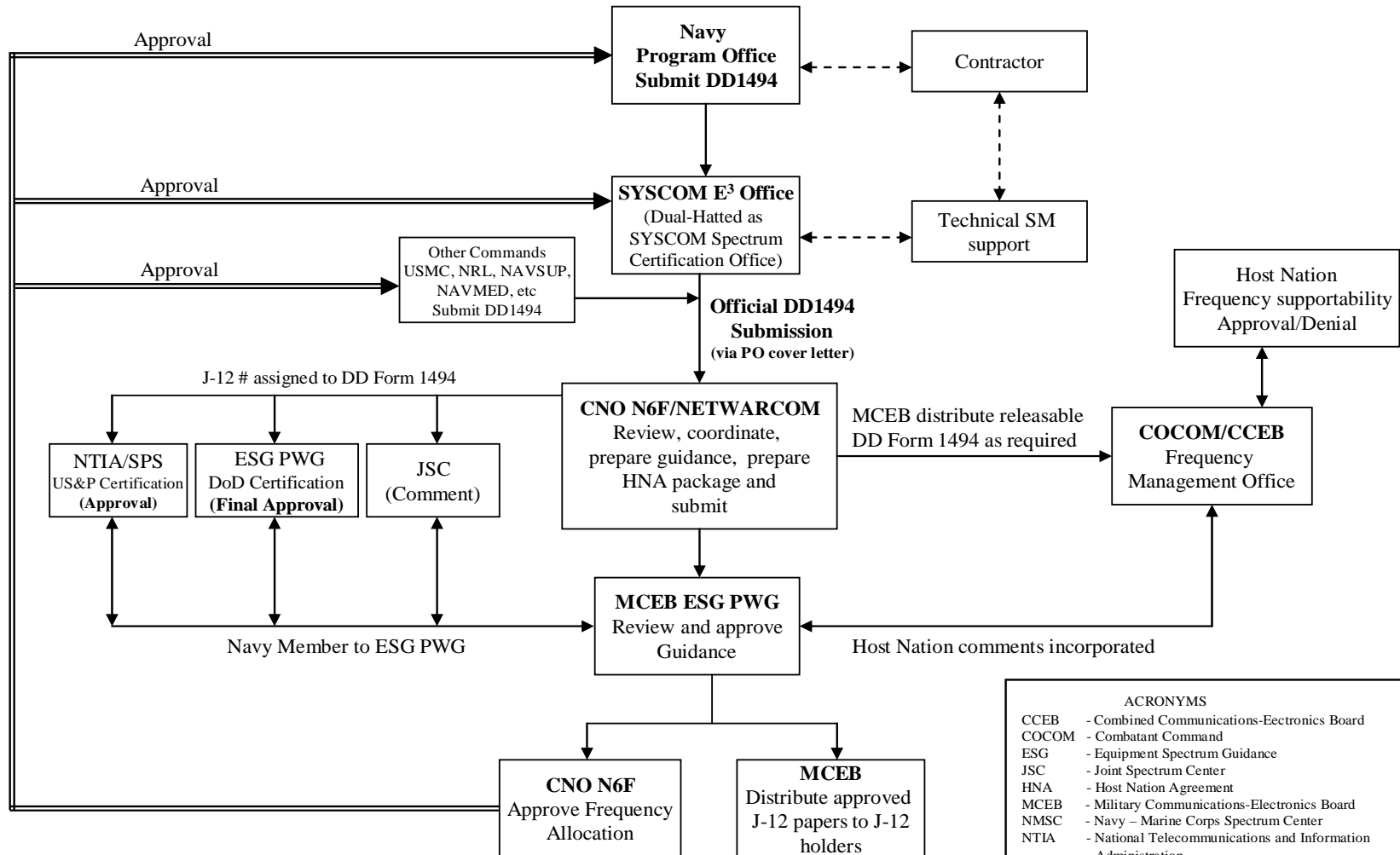


- **Spectrum Certification Process and Submission Timeline**
- **Identification Friend or Foe (IFF) Data Requirements**
- **Data Quality, Discrepancy, and Classification**
- **NTIA Policy**
- **NTIA SPS WG-8**
- **Update on EL-CID and HNSWDO**
- **NMSC Recommendations**



Navy Spectrum Certification Process

OPNAVINST 2400.20F, 19 July 2007



ACRONYMS	
CCEB	- Combined Communications-Electronics Board
COCOM	- Combatant Command
ESG	- Equipment Spectrum Guidance
JSC	- Joint Spectrum Center
HNA	- Host Nation Agreement
MCEB	- Military Communications-Electronics Board
NMSC	- Navy - Marine Corps Spectrum Center
NTIA	- National Telecommunications and Information Administration
PWG	- Permanent Working Group
SPS	- Spectrum Planning Subcommittee
SYSCOM	- Systems Command
US&P	- United States and Possessions



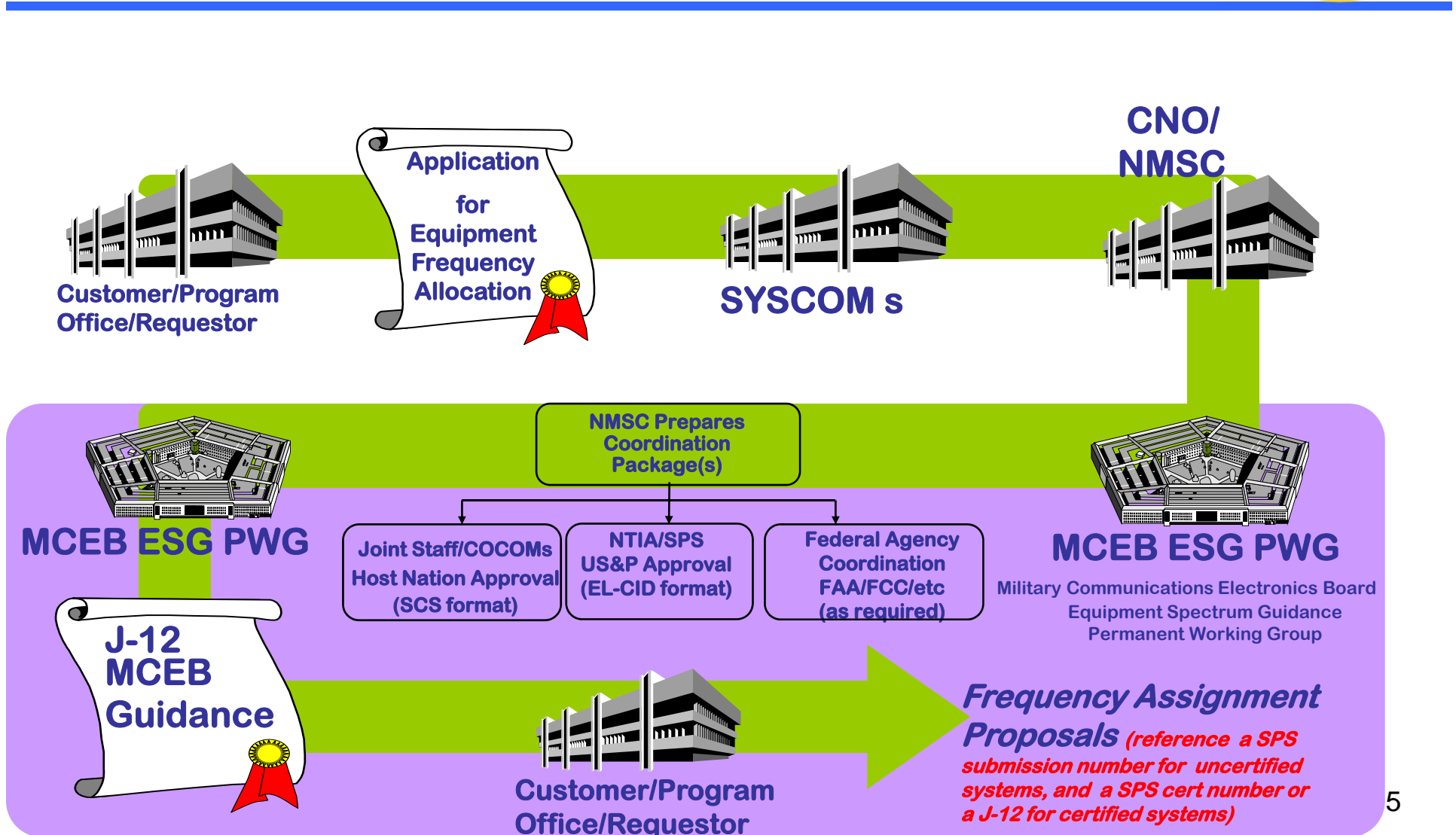
Application for Equipment Frequency Allocation Submission Lead Time Guidelines



Acquisition Stage	Lead Times	
	Space Systems	Other Systems
Planning or Conceptual (Stage 1) <i>(Radiation not permitted)</i>	Not earlier than seven years before satellite launch	As part of any Capability based AoA and/or pre-MS A activity
Experimental (Stage 2)	No later than four years before satellite launch	Not less than one year before procuring pre-systems acquisition equipment, or MS B
Developmental (Stage 3)	No later than three years before satellite launch	Not less than one year before LRIP, or award of a developmental contract, or MS C
Operational (Stage 4)	No later than two years before satellite launch	At least six months before IOC for all equipment if there are only minor changes from previous stage submissions; one year prior for all other equipment with significant changes, or was not filed previously



Spectrum Certification Process





Identification Friend or Foe (IFF) Data Requirements



- Documented in message 041314Z MAR 11, Best Practices Message to Obtain IFF Spectrum Supportability
 - Program Office is responsible
 - ♦ Obtain DoD AIMS certification in a timely manner IAW program milestone
 - Box Level for Stage 3
 - Platform Level for Stage 4
 - ♦ Provide NMSC
 - Interrogation Scheme
 - Antenna Side Lobe Suppression
 - Power Management
 - Pulse Repetition Rate (PRR)
 - Radar Operates with IFF Interrogator
 - Platform Integration and Interrogation Control
- FAA submitted to SPS in Feb 2011 proposed changes to NTIA Manual Chapters 8 and 10
 - NMSC and IFF Program Offices are working on Navy's position



Data Quality for a New System



- Before submitting to SYSCOMs and NMSC, Program Office is responsible for
 - Running EL-CID Compliance Checks
 - Resolving Technical Compliance Check Failures
 - ◆ Refer to specific standard in NTIA Manual
 - ◆ Identify related data fields which caused compliance check failures
 - ◆ Ensure accuracy of related data fields by checking units for technical specification and EL-CID unit preference, i.e. unit for pulse width could be in microseconds or milliseconds
 - ◆ Verify data with vendor again



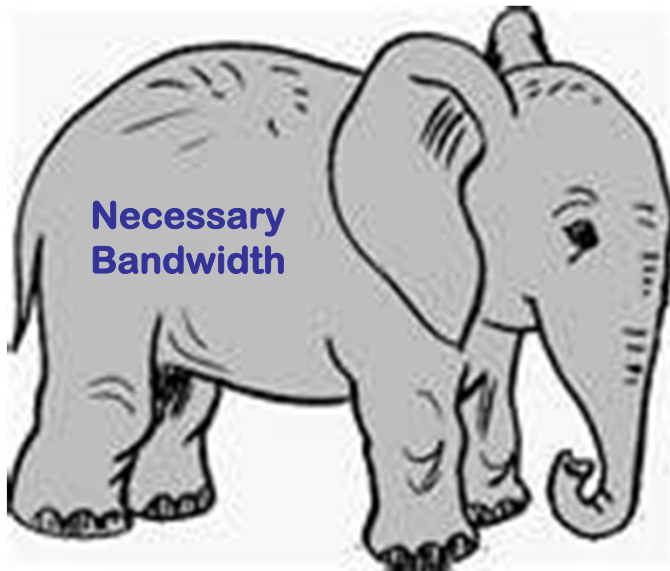
Data Quality for a Note to Holder



- Before submitting to SYSCOMs and NMSC, Program Office
 - Review MCEB Guidance page of the J-12 for approved technical parameters and operating locations
 - Address any NTIA SPS recommendation for subsequent system review
 - ◆ Non-compliance w/ NTIA Standards (Chapter 5 of NTIA Manual)
 - Provide emission bandwidth data when adding an emission designator
 - Review antenna characteristics pages prior to adding a new antenna



Number One Data Discrepancy



Greater
Equal
Less



Occupied
Bandwidth

**Transmitter Necessary Bandwidth
must be less than
or equal to Occupied Bandwidth**



Number Two Data Discrepancy



- An antenna with a 360 degree beamwidth is an Omni antenna
- If you have an Omni antenna then you do NOT have an antenna sidelobe gain
- Recommend to verify antenna mainbeam gain, sidelobe gain and antenna beamwidth

Antenna mainbeam gain, sidelobe gain and beamwidth should accurately describe the capability



Number Three Data Discrepancy



- Relationship between Receiver Type, IF Selectivity Bandwidth and IF Frequency

The number of IF stages corresponds to the number of IF frequencies and to the number of IF conversions

Successive IF Selectivity Bandwidth data should be no larger than the previous one

Successive IF frequency data should be no larger than the previous one



Data Classification



- **Company Proprietary should only be used during contract competition**
- **Ambiguous Classification Markings**
 - Inconsistent classification markings on Transmitter, Receiver, and Antenna data items
 - Items are not properly marked or not marked at all
- **Downgrading Instructions need to be filled completely:**
 - Classified By:
 - Declassify On:
 - Derived From:
 - Reason:
- **Security Classification Guide update**
 - Presidential Executive Order signed in 2003
 - ♦ Every 5 years or as necessary



NTIA Manual Policy



- **Section 8.2.55 -- Wideband and Narrowband Emission Level and Temporal Measurements in the Navstar Global Positioning System Frequency Bands**
 - **Stage 4 Spectrum Certification for systems operating in the 390-413 MHz, and 960-1710 MHz frequency bands must provide measurements of the wideband emission levels expressed in units of dBW/MHz and narrowband emission levels expressed in units of dBW are required in the 1164-1240 MHz and 1559-1610 MHz frequency bands**
 - **For pulsed systems operating in the 390-413 MHz, and 960-1710 MHz frequency bands, measurements of the temporal characteristics of the emissions in the 1164.45-1188.45 MHz, 1215.6-1239.6 MHz, and 1563.42-1587.42 MHz bands can also be provided**



NTIA SPS WG-8



- Per Navy's request, SPS forms WG-8
- Terms of Reference is in draft
- Advise, assist, and coordinate with NTIA Office of Spectrum Management in improving process used to review requests for certification of spectrum support for systems that use the 1030/1090 MHz frequency pair
- Consider measures that may be taken to facilitate improved collaboration between NTIA, the FAA, the Department of Defense, and any other agencies requesting NTIA certification of spectrum support for 1030/1090 MHz systems
- Formulate recommendations for amending the current procedures and policies applicable to the review of requests for certification of 1030/1090 MHz systems
- Conduct a monthly meeting to review all 1030/1090 MHz systems



Update on EL-CID



- NMSC completed testing EL-CID V6 and NMCI will “push it down” to users soon
- If you currently have EL-CID V5.1 on NMCI computer, you need to save your EL-CID database in another directory prior to NMCI install EL-CID V6 by following instructions at <http://www.ntia.doc.gov/osmhome/elcid/>
- EL-CID V6 Rev. 277 is not backward compatible with V5.1 Rev. 81 nor with any previous V6 revision
- Found discrepancies on some Program Change Requests (PCRs) that were supposed to be fixed in V6 Rev. 277
- Recommend users report discrepancies to EL-CID Help Desk, elcidhelp@jsc-eses.com, and request for an assigned Navy PCR number. Provide the PCR number to Navy SPS WG-5 reps via email, Thu.A.Luu@navy.mil and Adam.Burak@navy.mil



Update on Host Nation Worldwide Database Online (HNSWDO)



- CENTCOM will provide Service Spectrum Management Office (SMO) data for uncertified systems showing up in their AOR
- Service SMO will create draft records for uncertified systems in HNSWDO with ID number begins with A, or AF, or N to differentiate from official host nation coordination requests
- CENTCOM will provide stand-alone spectrum supportability comments
- GEMISIS PO will provide this capability in HNSWDO V.3.1.5
- HNSWDO V3.1.5 Users Acceptance Testing is scheduled in April 2011



NMSC Recommendations



- **Prior to platform integration decision**
 - Review NTIA SPS comments provided on J-12 MCEB Guidance page for approved systems to find any spectrum certification known issues
 - Early coordination with NMSC on spectrum certification
- **Gov't project engineer review application from the vendor prior to submission to SYSCOMs and NMSC**
- **Ensure the unit for each data field in the EL-CID file is accurate**
- **Submission for IFF interrogator and its integrated radar on the same platform should be sent to NMSC at the same time**
- **Operating locations for IFF interrogator and its integrated radar for a platform should be the same and should cover both ground and flight tests**
- **Early HNCR submission to NMSC to receive host nation approval in a timely manner**



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QUESTIONS ?

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