Latest Rulemakings – Licensed Devices

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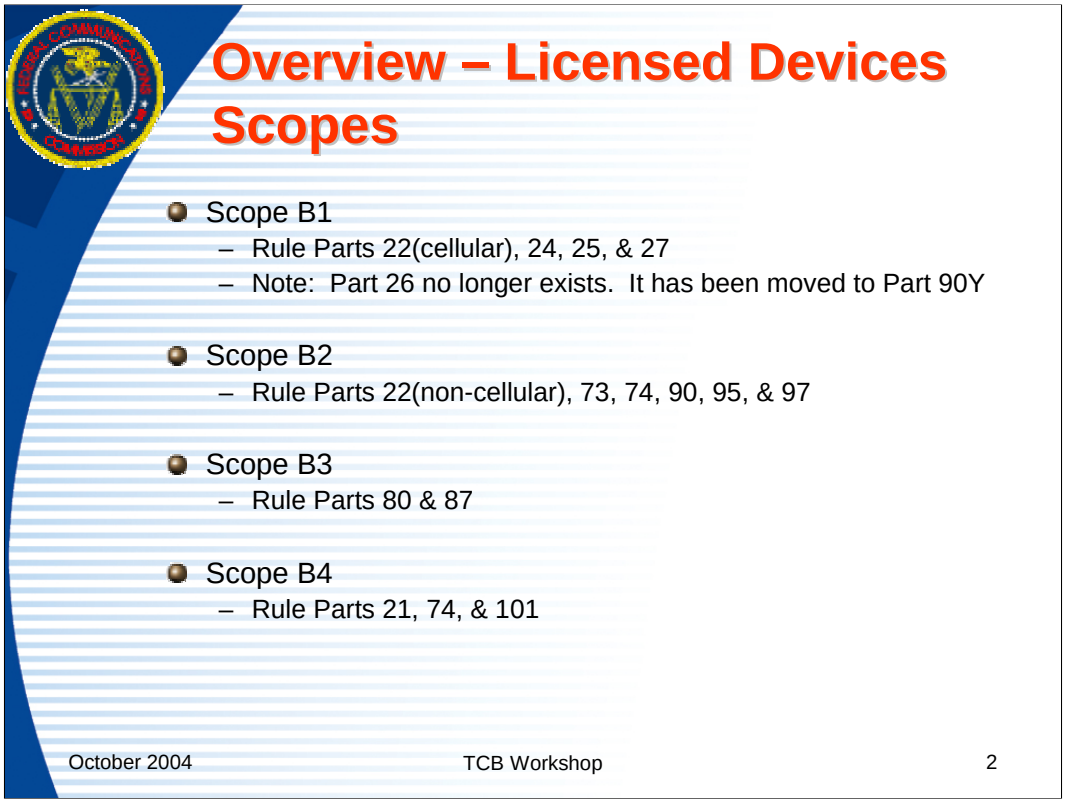
Laboratory Division



The presentation is broken down by Scope of Authorization. These are the four scopes for licensed devices and the rule parts that are associated with them. Not all rule parts have changes.

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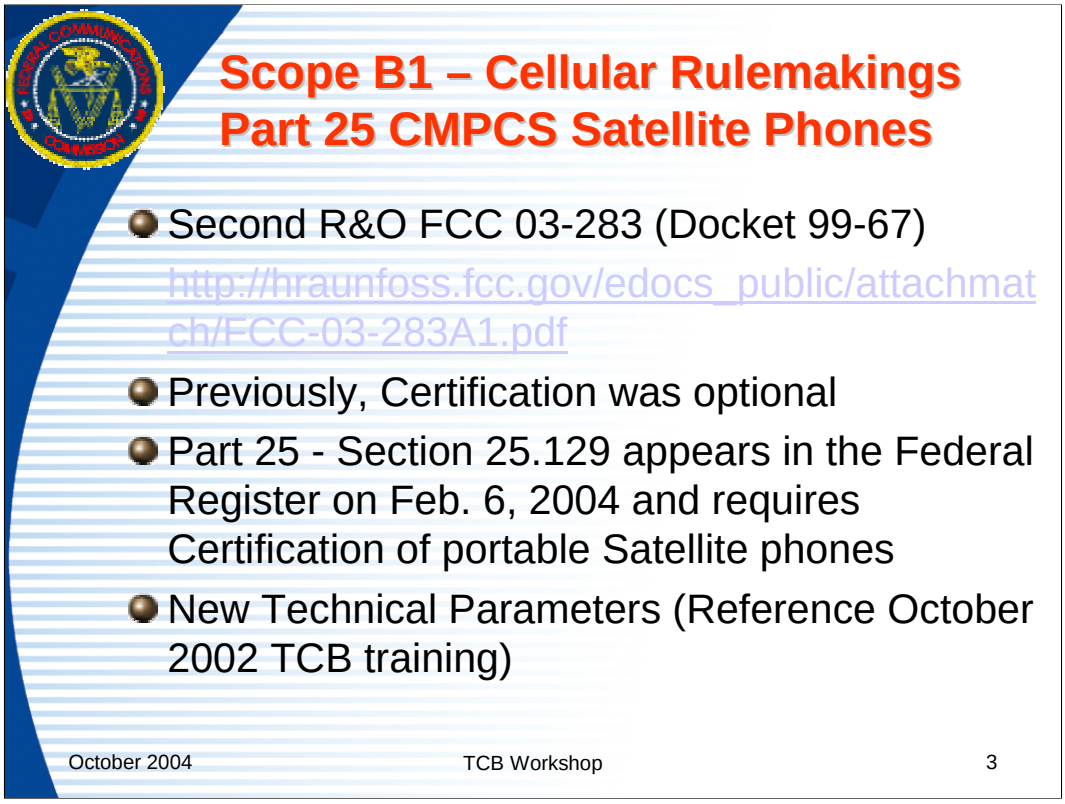


Global Mobile Personal Communications by Satellite (CMPCS) - defined as comprehensively referring to all communication services provided directly to end users by *any* satellite system (global or otherwise), regardless of whether the users' terminals are mobile or fixed

Section 25.133 of the Commission's rules requires earth-station licensees to certify that their transmitters have been tested and found within 2 dB of emission limits specified in other sections.[1] Unlike the certification rules in Part 2, however, Section 25.133 does not require submission of test data and does not require any equipment authorization to be obtained prior to importation, distribution, sale, or offer for sale

[1] 47 C.F.R. § 25.133; *see also* 47 C.F.R. § 25.132 (prescribing testing requirement for C-band and Ku-band earth-station transmitters).

A new Section 25.129 appears in the Federal Register on Feb. 6, 2004, and reads as follows:

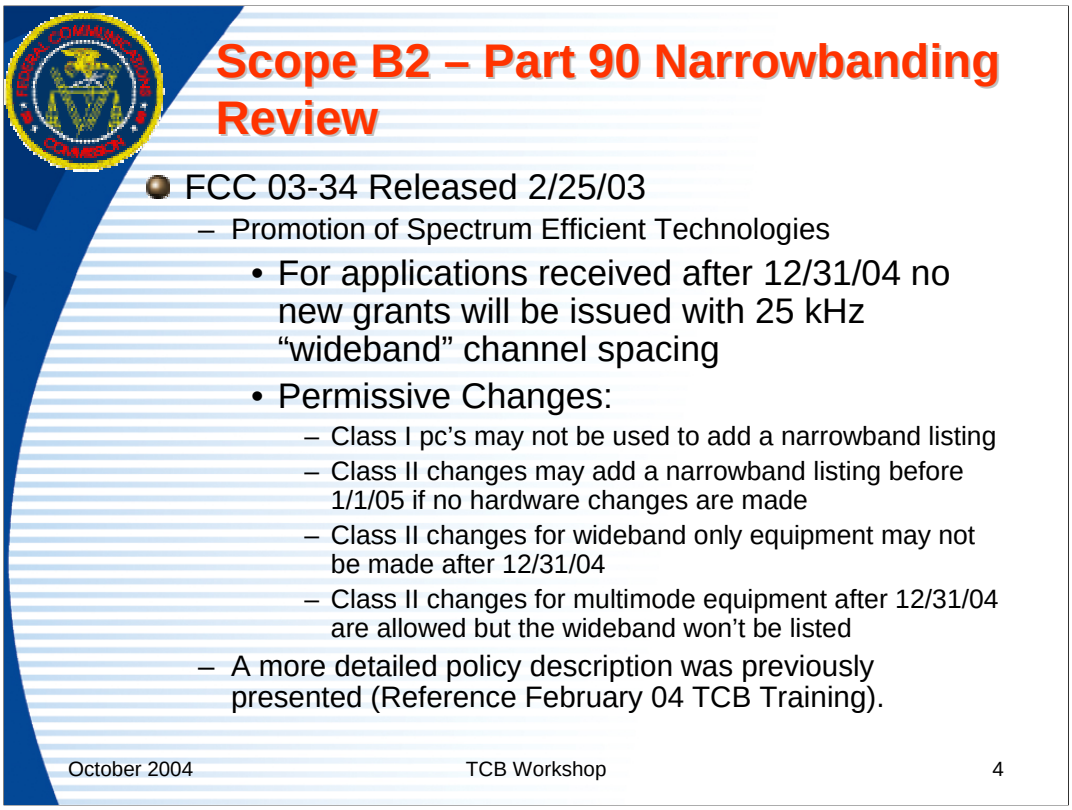
§25.129 Equipment authorization for portable earth-station transceivers

(a) Except as expressly permitted by §2.803 or §2.1204, prior authorization must be obtained pursuant to the equipment certification procedure in Part 2, Subpart J of this chapter for importation, sale or lease in the United States, or offer, shipment, or distribution for sale or lease in the United States of portable earth-station transceivers subject to regulation under Part 25. This requirement does not apply, however, to devices imported, sold, leased, or offered, shipped, or distributed for sale or lease before November 20, 2004.

(b) For purposes of this section, an earth-station transceiver is portable if it is a "portable device" as defined in §2.1093(b), *i.e.*, if its radiating structure(s) would be within 20 centimeters of the operator's body when the transceiver is in operation.

(c) In addition to the information required by §1.1307(b) and §2.1033(c), applicants for certification required by this section shall submit any additional equipment test data necessary to demonstrate compliance with pertinent standards for transmitter performance prescribed in §25.138, §25.202(f), §25.204, §25.209, and §25.216 and shall submit the statements required by §2.1093(c).

(d) Applicants for certification required by this section must submit evidence that the devices in question are designed for use with a satellite system that may lawfully provide service to users in the United States pursuant to an FCC license or order reserving spectrum.



FCC 03-34 implements a date when refarming band (150-174, 421-512 MHz) equipment will no longer be authorized. This includes permissive changes and original grants. This is an attempt to push users to the more efficient technology. It is expected that the same process will occur to move users from 12.5 kHz down to 6.25 kHz channels at some point in the future.

There have been some reconsideration petitions filed which are related to this.

Scope B2 – Part 90 Narrowbanding New Issues

- Policy is currently under review for manufacturer and public safety concerns
- Petitions for reconsideration have been submitted requesting an extension of the January 1, 2005 cutoff deadline
- NPRM expected eminently – watch the FCC web site for news

Scope B2 Part 90 – Public Safety 800 MHz

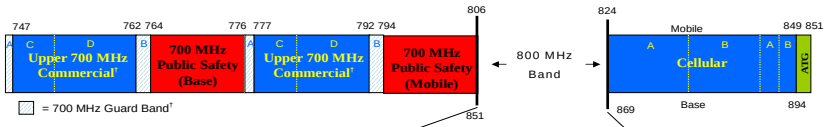
- FCC 04-168 (Docket 02-55) – Improving Public Safety Communications in the 800 MHz Band

  http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-168A1.pdf

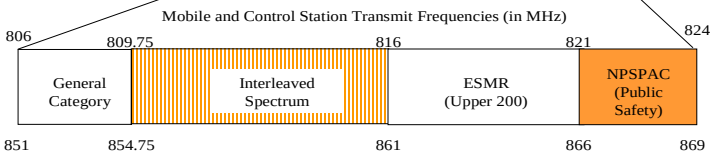
- Nextel Re-banding to 1.9 GHz
- Nextel is still negotiating with the FCC over issues raised by this R&O
- ISDN Grants can still be issued

Scope B2 Part 90 - Public Safety 800 MHz

- Current 800 MHz Band Plan



†700 MHz Commercial and 700 MHz Guard Band do not have specified Base and Mobile channels

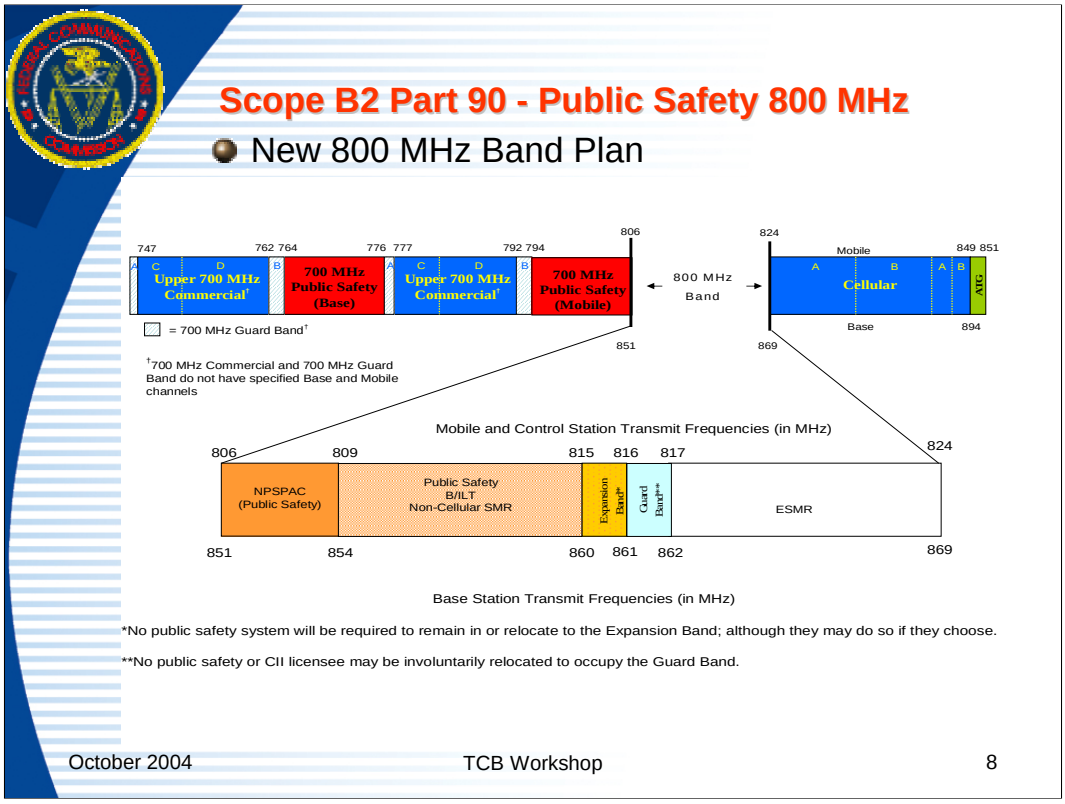


General Category -7.5 MHz
150 Channels
Licensed by EA Blocks of 25 channels (SMR)
Some Incumbent Operators Remain

ESMR/Upper 200 – 10 MHz
200 Channels
Licensed by EA
Non EA incumbents are currently undergoing mandatory relocation

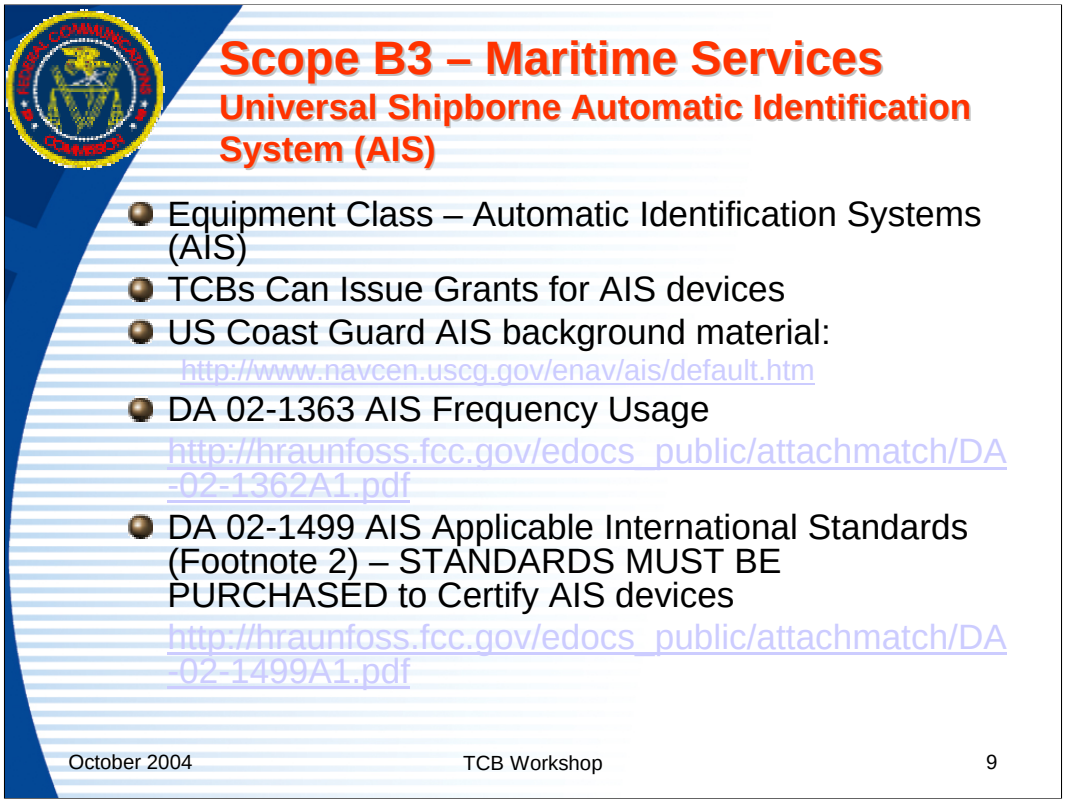
NPSPAC - 6 MHz
225 Channels @ 12.5 kHz spacing
5 Channels @ 25 kHz spacing
5 Mutual Aid Channels

Interleaved Spectrum -12.5 MHz
250 Channels
80 SMR Channels
(Licensed by EA, Some Incumbent Operators Remain)
70 Public Safety Channels
50 Business Channels
50 Industrial Land Transportation Channels

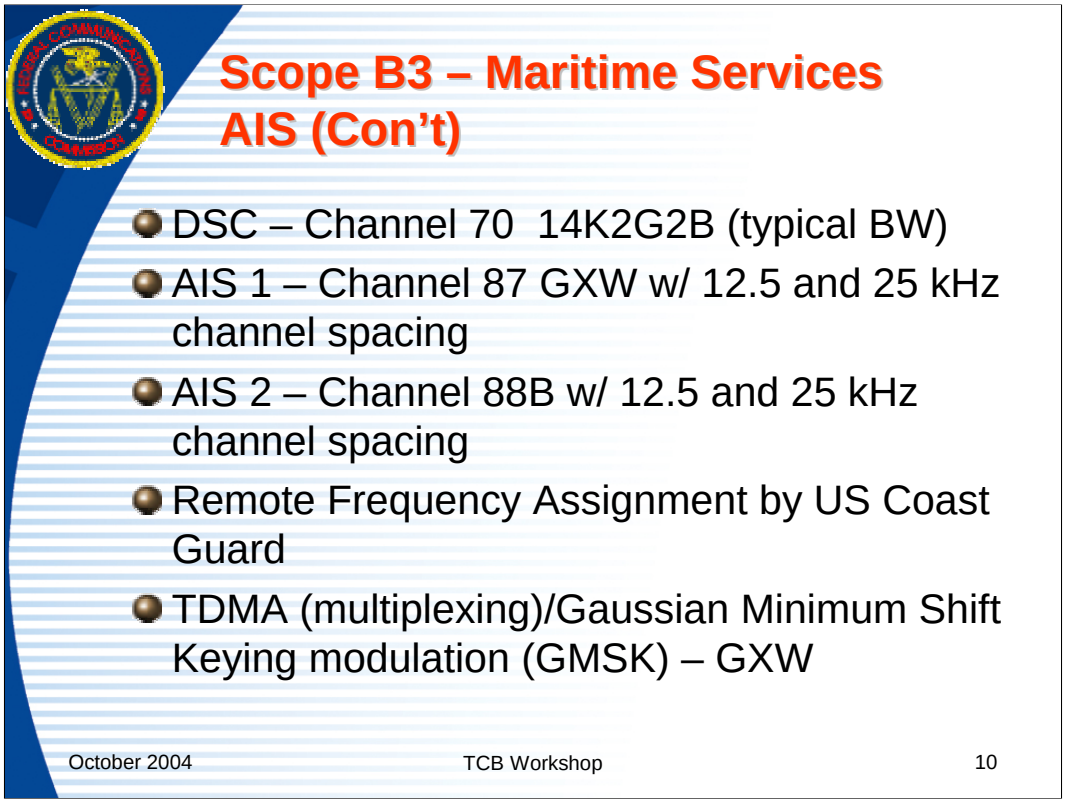


Our plan for reconfiguration of the 800 MHz band is designed to spectrally segregate public safety systems from ESMR and cellular telephone systems. In reaching this spectrum management decision, we are guided by the principle that we can minimize unacceptable interference in the 800 MHz band by placing similar system architectures in like spectrum and isolating dissimilar architectures from one another.

In exchange for the spectrum rights Nextel is surrendering, coupled with the obligations it is incurring to accomplish 800 MHz band reconfiguration, we will modify certain Nextel licenses to provide Nextel with nationwide authority to operate in ten megahertz of spectrum at 1910-1915 MHz/1990-1995 MHz.[1] We require Nextel to reimburse UTAM Inc. (UTAM) for the cost of clearing the 1910-1915 MHz band, and to clear the 1990-2025 MHz band of BAS incumbents within thirty months of the effective date of this *Report and Order.*[2]



Certification of AIS equipment in the United States In June 2002, the FCC released a Notice entitled "Applications For Equipment Authorization Of Universal Shipborne Automatic Identification Systems To be Coordinated with U.S. Coast Guard To Ensure Homeland Security". Pending completion of FCC rulemaking, the FCC Laboratory will coordinate review of applications for certification of AIS equipment with the United States Coast Guard to ensure that the equipment meets all applicable international standards and requirements. Essentially, AIS manufacturers must meet the requirements of the FCC's regulations for equipment authorization, 47 CFR 2 Subpart J (beginning 2.901), and the Coast Guard's Navigational and Vessel Inspection Circular (NVIC) 8-01, Approval of Navigation Equipment for Ships. NVIC 8-01 describes the certification process for AIS and other navigation equipment described under the newly adopted SOLAS V. The Federal Communications Commission has requested comments on how its rules should be amended to accommodate AIS certification, in a further Notice of Proposed Rulemaking under Docket PR 92-257. Until these FCC rules are finally adopted, the procedures described in the FCC Notice and the NVIC should apply.



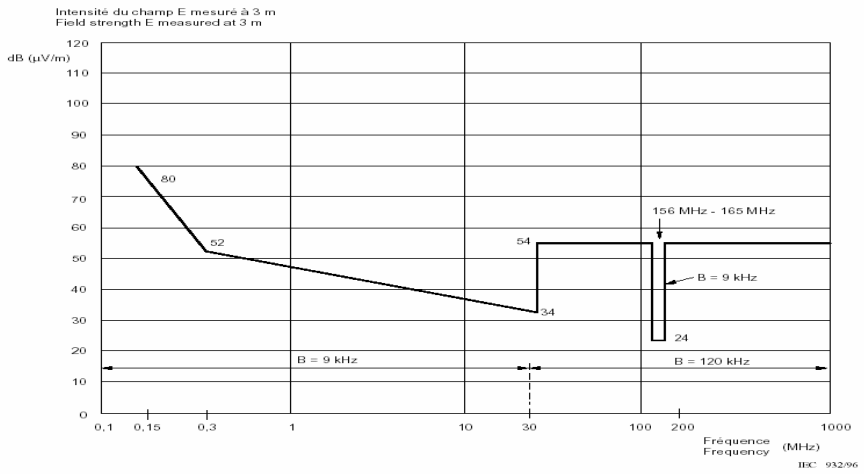
[2] The International standards and requirements identified are: IMO Resolutions A.694(17) and MSC.74(69), Annex 3; ITU-R 1371-1; IEC standards IEC 60945, IEC 61162 and IEC 61993-2.

OBW must be derived from the mask spectral plots (typically -26 dB BW) since this information is not typically provided by AIS applicants

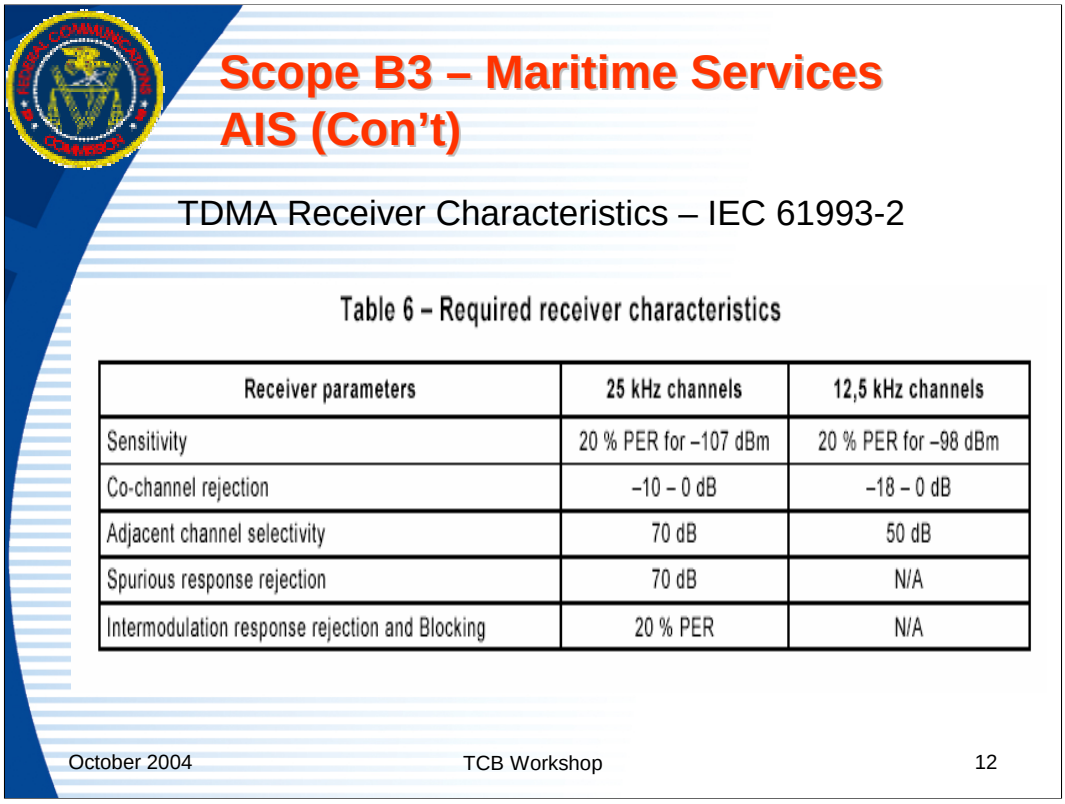
Questions concerning AIS standards may be directed to Tim Maguire of the Wireless Telecommunications Bureau at tim.maguire@fcc.gov and concerning equipment authorization to Andrew Leimer at andrew.leimer@fcc.gov.

Scope B3 – Maritime Services AIS (Con't)

Radiated Emissions Limits – IEC 945



B = bande passante du récepteur de mesure
B = measuring receiver bandwidth



Problems with Receiver Standards – US Coast Guard can issue an approval letter for the following non-compliant standards with a rationale for recommending certification. Grant can be issued under there conditions.

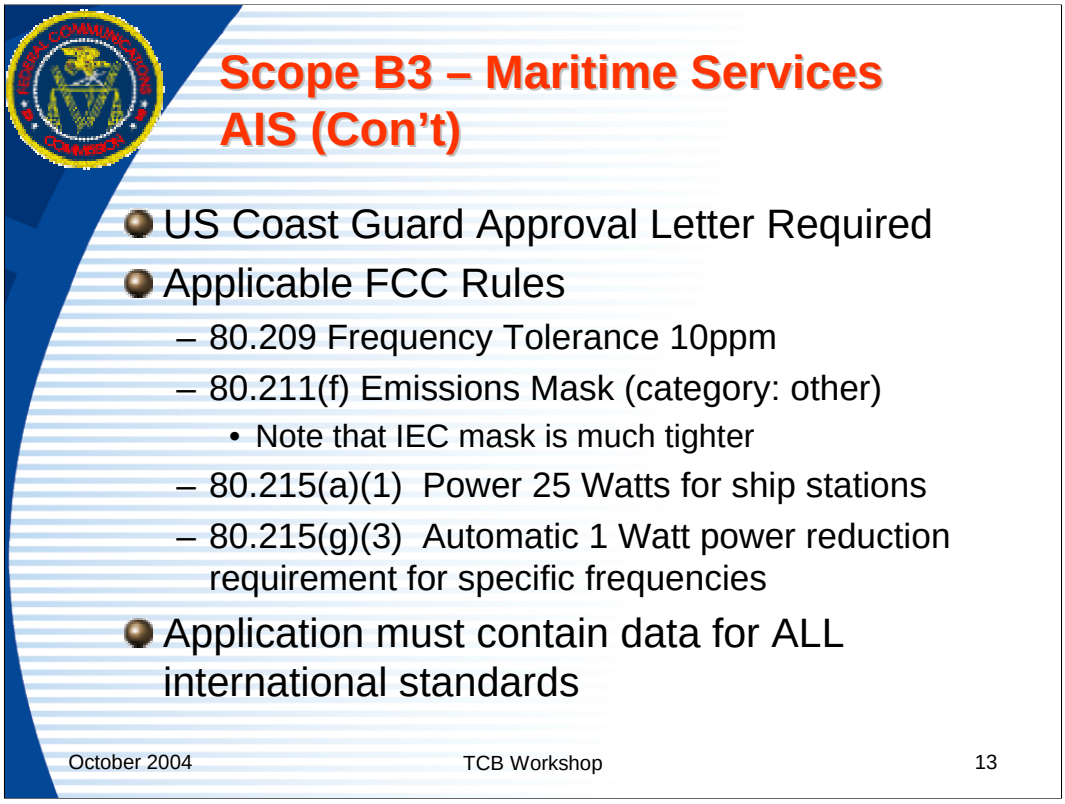
15.3.4 - Co-channel rejection - 25 kHz operation

15.3.5 - Co-channel rejection – 12.5 kHz operation

15.3.6 - Adjacent channel selectivity - 25 kHz operation

15.3.7 - Adjacent channel selectivity – 12.5 kHz operation

15.3.9 - Intermodulation response rejection and blocking



Note: application must include data for all international standards even though some of the standards are not applicable for FCC Certification and will not be reviewed. This is a legal requirement.

Scope B3 – Maritime Services AIS (Con't)

Standard AIS Grant Example

Equipment Class : Automatic Identification Systems

Notes: Shipboum Automatic Identification System (AIS)

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
	80	156 - 163	12.5	150 Hz	15K0GXW
	80	156 - 163	12.5	150 Hz	11K5GXW
	80	156.525	12.5	150 Hz	14K2G2B

The device operates on AIS 1 - Channel 87 (161.975 MHz) and AIS 2 - Channel 88B (162.025 MHz) with remote frequency assignment capability. This device also has DSC capability.

Scope B3 – Maritime Services AIS Issues

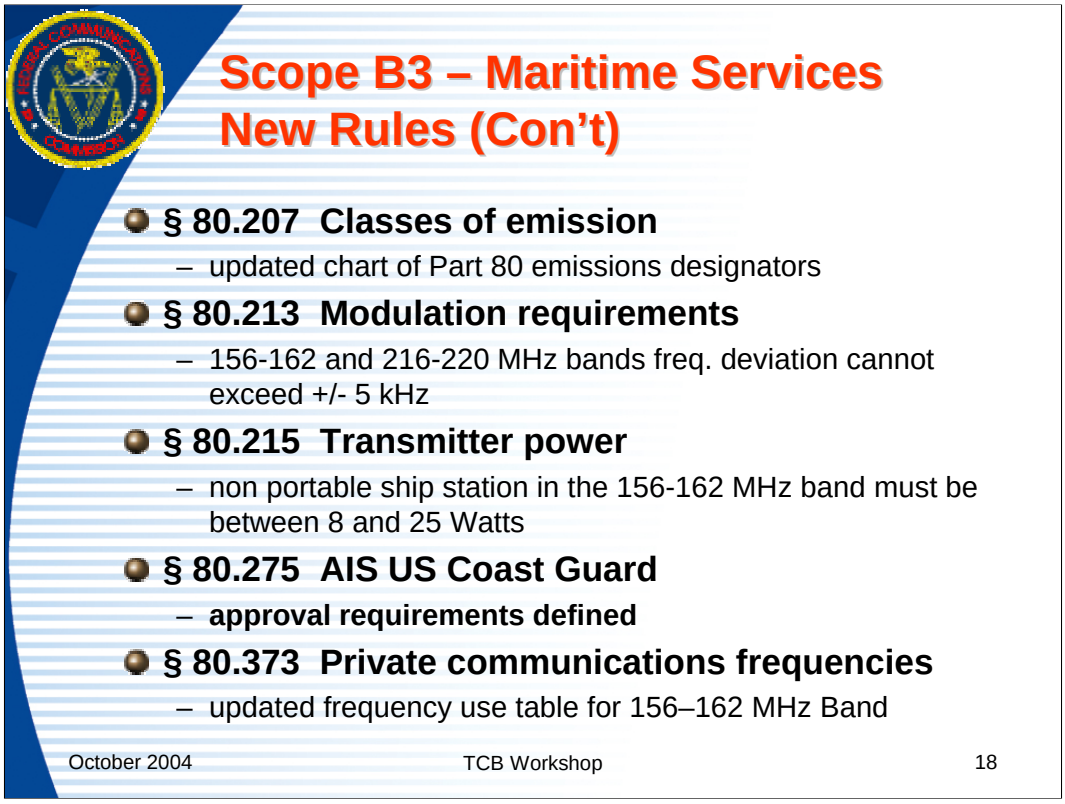
- NPRM – FCC 04-171(Docket 04-257)
- Defines Automated Maritime Telecommunications System (AMTS)
- Defines the scope of ATMS – private land use permitted
- Emergency and distress – ship stations have priority
- Will not effect equipment authorization of AIS devices if adopted

Scope B3 – Maritime Services AIS Issues (con't)

- Order on Reconsideration – FCC 04-109 (Docket 92-257)
- Requests extension of the July 1, 2004 Coast Guard carriage requirement
- Extension to 60 days after date published in the Federal Register
- Will not effect equipment authorization of AIS devices

Scope B3 – Maritime Services New Rules

- Second R&O, Sixth R&O, and Second FNPRM (FCC 04-3)
  - redesignate Channels 75 and 76 for communications related to port operations, and establish requirements for equipment to operate on the channels with reduced carrier power;
  - authorize domestic use of INMARSAT-E emergency position indicating radiobeacons (EPIRBs) and establish standards for such devices
  - establish a new emission mask in Part 80 to accommodate a wide range of data services



§ 80.215 Transmitter power.

* * * * *

(g) The carrier power of ship station radiotelephone transmitters, except portable transmitters, operating in the 156-162 MHz band must be at least 8 but not more than 25 watts. Transmitters that use 12 volt lead acid storage batteries as a primary power source must be measured with a primary voltage between 12.2 and 13.7 volts DC. Additionally, unless otherwise indicated, equipment in radiotelephone ship stations operating in the 156-162 MHz band must meet the following requirements:

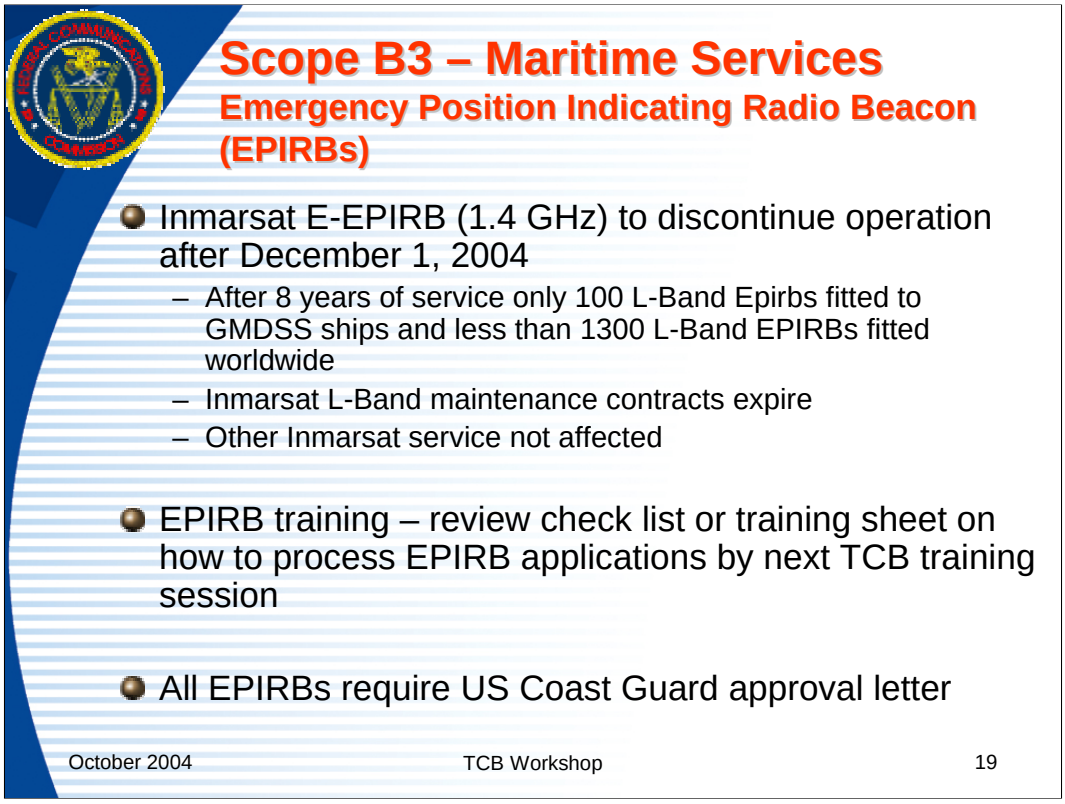
(1) All transmitters and remote control units must be capable of reducing the carrier power to one watt or less;

(2) Except as indicated in (4) of this paragraph, all transmitters manufactured after January 21, 1987, or in use after January 21, 1997, must automatically reduce the carrier power to one watt or less when the transmitter is tuned to 156.375 MHz or 156.650 MHz, and must be provided with a manual override switch which when held by an operator will permit full carrier power operation on 156.375 MHz and 156.650 MHz;

(3) Except as indicated in (4) of this paragraph, all ship station transmitters installed after [one year after the effective date of these rules] must be capable of tuning to 156.775 MHz and 156.825 MHz and must automatically reduce the carrier power to one watt or less, with no manual override capability, when the transmitter is tuned to either 156.775 MHz or 156.825 MHz;

(4) Hand-held portable transmitters are not required to comply with the automatic reduction of carrier power in (g)(2) of this section; and

(5) Transmitters dedicated for use on public correspondence duplex channels as additional equipment to a VHF ship station in the Great Lakes which meet all pertinent rules in this part are not required to reduce their carrier power to one watt.



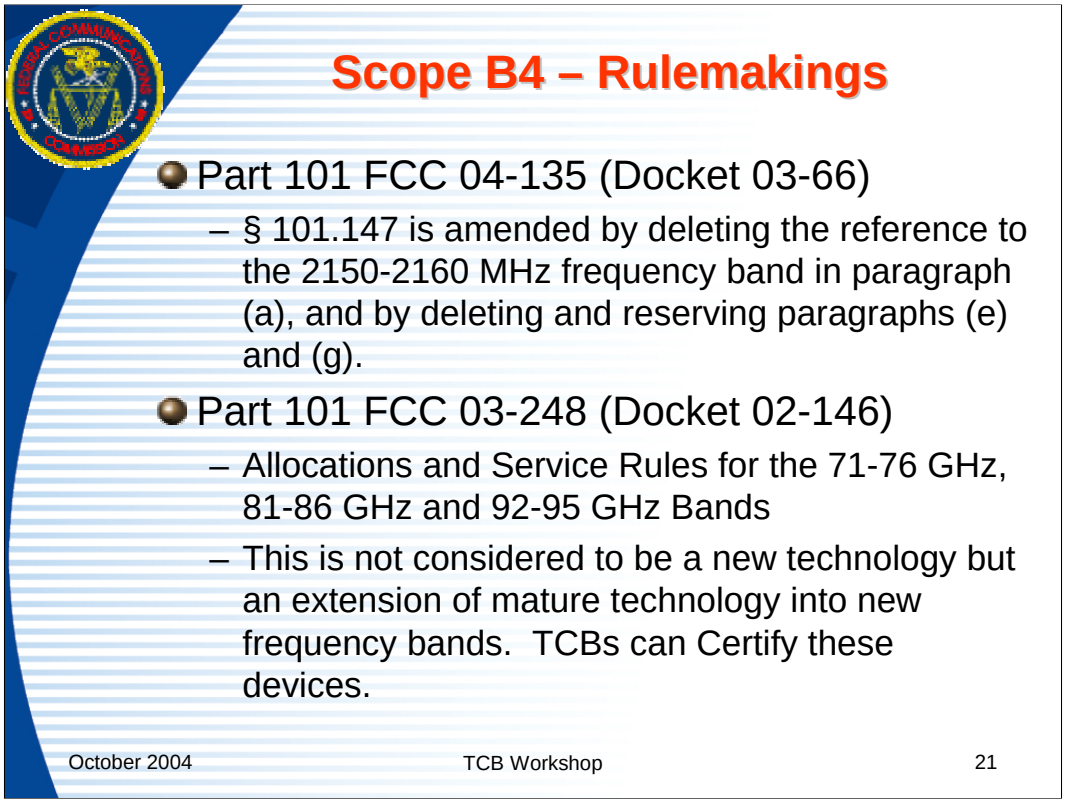
Inmarsat Press Release Extracts:

7th September, 2004. Inmarsat, the Total Communications Network TM via satellite, today announced the December 2006 withdrawal of its Inmarsat EPIRB service and committed to new generation safety service on its I-4 satellites. In almost eight years since its global introduction, the service has less than 1300 users worldwide of which less than 100 are within the merchant marine fleet for which it was designed.

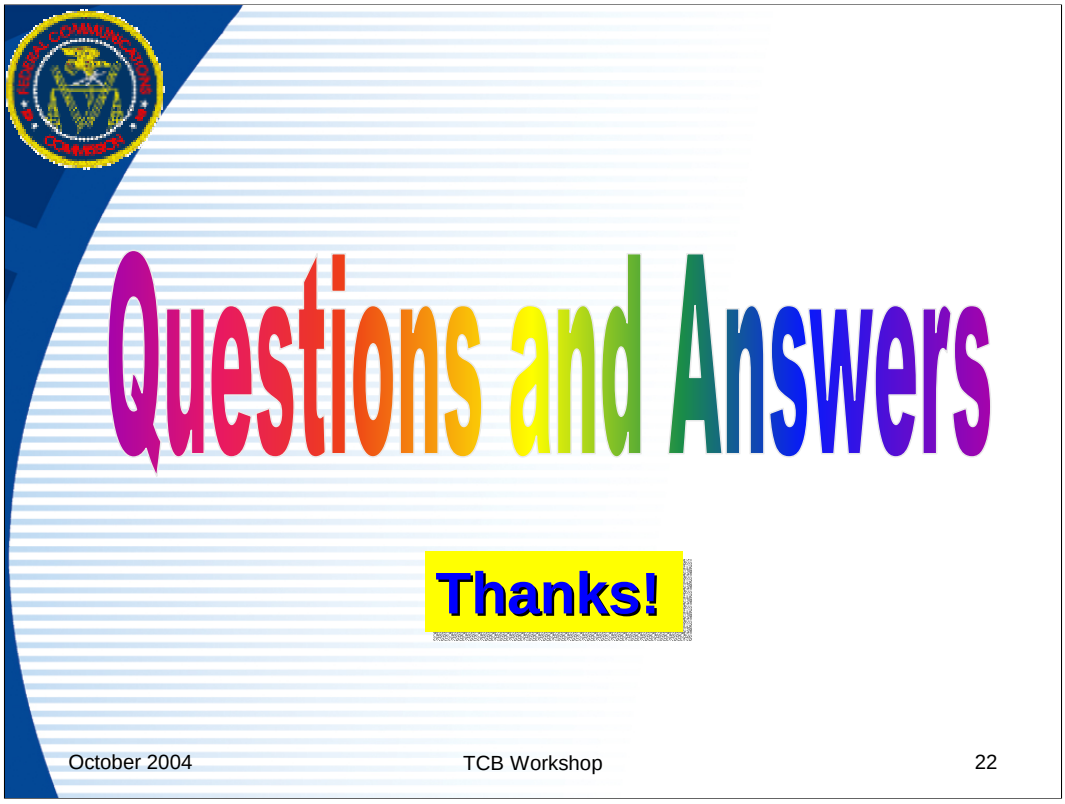
Because of the significantly high costs of continuing to maintain a system that has not been widely adopted as a core element of the GMDSS, Inmarsat has involved its independent oversight body, the International Mobile Satellite Organisation (IMSO) and has advised the Maritime Safety Committee of the International Maritime Organisation (IMO) that the L-Band EPIRB system will be withdrawn from 1 December 2006.

Scope B3 – Aviation Services Part 87 New Rules

- R&O and FNPRM - FCC 03-238 (Docket 01-289) – in effect as of 9/13/04
  http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-238A1.pdf
  - Requires FAA Coordination Prior to FCC Filing
  - Removes waiver requirement for equipment with 8.33 KHz channel spacing
  - Allows for dual spacing transceivers (i.e 25/8.33 KHz)
    - 8.33 KHz operation not allowed in US
  - FNPRM concerning HF Data link Emission J2D
    - Currently requires Waiver - TCB cannot issue Certification
    - 16 QAM Modulation



There are not significant changes to the equipment authorization process in Scope B4 but the licensing process has had a lot of changes and still has pending changes so there may be equipment authorization changes to follow.


Questions and Answers
Thanks!
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