



**Federal Communications Commission
Public Safety and Homeland Security Bureau**



VHF/UHF Narrowbanding Information for Public Safety Licensees

December 2010



Outline



- **Narrowbanding Basics**
- Narrowbanding Deadlines
- How to Prepare for Narrowbanding
- Modifying Licenses to Reflect Narrowbanding
- Additional Information Resources



Narrowbanding Basics



- Who is required to narrowband?
 - All Public Safety and Industrial/Business licensees in the 150-174 MHz (VHF) and 421-512 MHz (UHF) bands
- What is required?
 - By January 1, 2013, licensees must migrate their systems from 25 kHz (wideband) to 12.5 kHz (narrowband) channel bandwidth or a technology that achieves equivalent efficiency



Benefits of Narrowbanding



- Narrowbanding ensures more efficient use of the spectrum and greater spectrum access for public safety and non-public safety users
- Will relieve congestion in and result in increased channel availability for public safety VHF/UHF systems
- Narrowbanding has been consistently supported by the public safety community, including APCO, NPSTC, and other organizations



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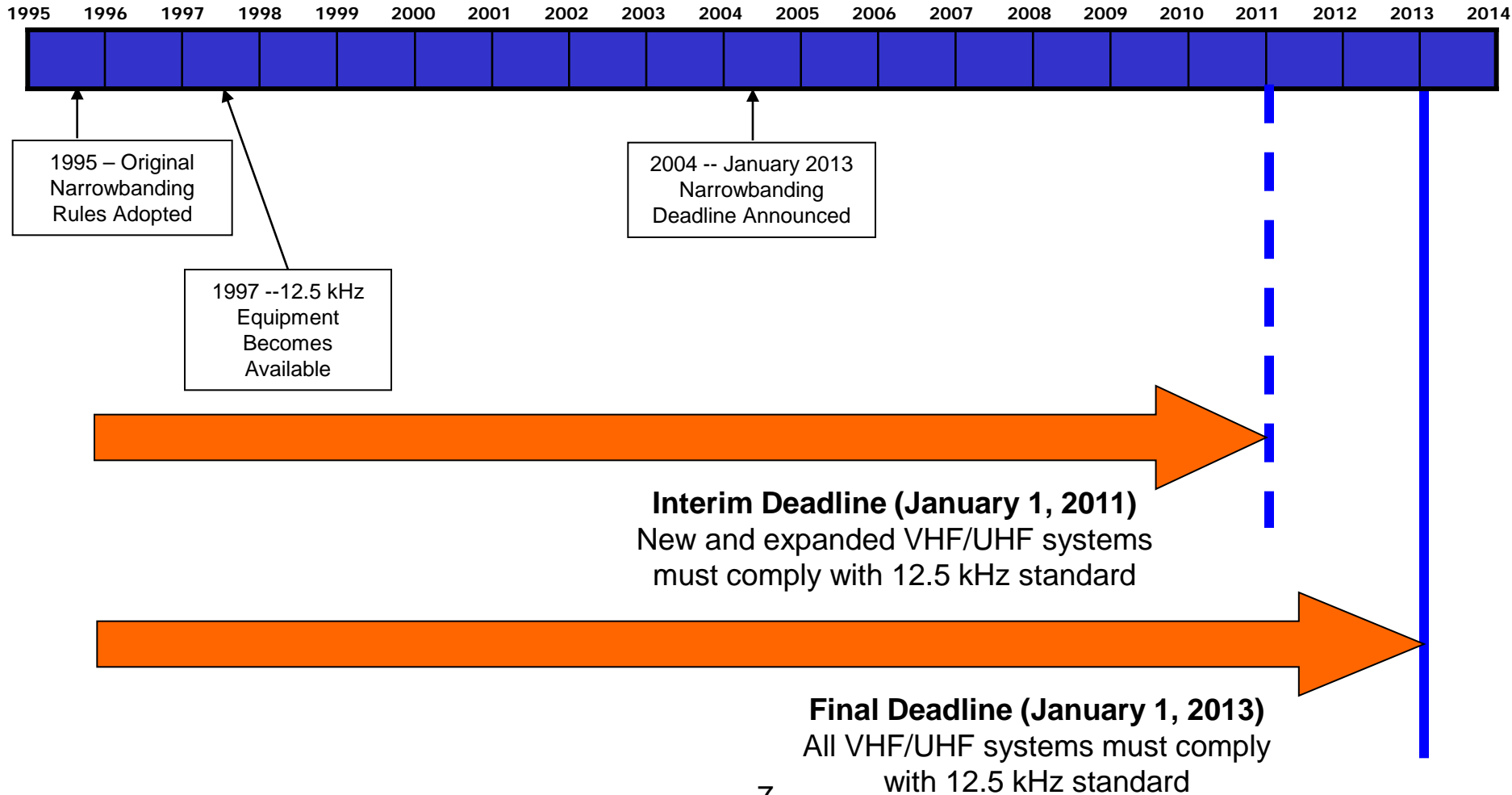
Narrowbanding Deadlines



- All licensees must complete narrowbanding to 12.5 kHz by January 1, 2013
 - FCC will also no longer allow manufacture or importation of equipment that includes a 25 kHz mode
- Some interim requirements take effect on January 1, 2011:
 - 12.5 kHz operation required for all new VHF/UHF systems or expansion of existing systems
 - FCC will not certify new equipment that includes a 25 KHz mode



Narrowbanding Timeline





Why Meeting the Deadline Is Important



- After January 1, 2013, FCC interference rules will not protect non-compliant wideband systems from harmful interference
- Systems that fail to narrowband by the deadline could create interference or interoperability problems for systems that have narrowbanded
- Wideband equipment will not be available after January 1, 2013



The Deadline Will Not Be Extended



- The Commission has recently reaffirmed the January 1, 2013 deadline
- Licensees facing unique circumstances may request waivers, but waiver requests must meet a high standard and are not routinely granted
- Licensees concerned about meeting the deadline should focus on planning and preparation
- Informal contact with the Bureau is encouraged prior to any filing



Future Narrowbanding to 6.25 kHz Technology



- Narrowbanding rules provide for eventual migration from 12.5 kHz to 6.25 kHz bandwidth
 - Intended to further increase efficiency and channel availability
- The FCC has not set a deadline for 6.25 kHz implementation
 - No deadline will be established without further notice and comment
- Licensees may narrowband to 6.25 kHz voluntarily
 - All 150-174 MHz and 421-512 MHz equipment certified after January 1, 2013 must include 6.25 kHz capability



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Preparing for Narrowbanding



- Prepare NOW – January 1, 2013 is approaching fast!
- Determine how narrowbanding will affect your system
 - Will existing equipment need replacement/retuning?
 - Will additional sites be needed to maintain coverage?
 - Is coordination with neighboring systems required?
- Develop a compliance plan
 - Timeline
 - Funding requirements
- Contact the Public Safety and Homeland Security Bureau with questions/concerns



Availability of Narrowband Equipment



- All VHF/UHF equipment certified since 1997 has 12.5 kHz capability
 - Many systems have equipment with dual 25 kHz/12.5 kHz capability, making the narrowbanding transition easier
- Check with your vendor to determine whether your existing system equipment is narrowband-capable or needs modification/replacement



Funding Considerations

- Cost of narrowbanding will vary depending on the nature of each licensee's existing system
 - Narrowbanding generally does not require a system upgrade, though licensees may combine narrowbanding with other scheduled upgrades or modifications
 - Narrowbanding costs may be more substantial for older systems that require replacement of existing equipment
- Funding to support narrowbanding may be available through federal grant programs (agency contact information provided in "Additional Information Resources" section)



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Licensing Modifications



- Licensees should modify their licenses to add a narrowband emission designator prior to commencing narrowband operations
 - Licensees may maintain both narrowband and wideband designators on their licenses while they are transitioning their systems
- Once the narrowband transition is complete, licensees should modify their licenses by removing the wideband emission designator
- These actions can be completed online using ULS



Frequency Coordination



- Frequency coordination is not required for addition of narrowband emissions designator or removal of wideband emissions designator, provided no other changes are being made
 - For licensees north of Line A or west of Line C, reduction in bandwidth does not require Canadian coordination
- Frequency coordination is required when narrowbanding is combined with other modifications that alter a station's footprint
 - E.g., changes in location, antenna height, ERP, as well as when switching from analog to digital emissions



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PSHSB Website and Contacts



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Bureau Website:

<http://www.fcc.gov/pshs/public-safety-spectrum/narrowbanding.html>



Other Resources



- http://www.aaacomm.com/fcc_licensing.htm
- <http://www.mrfac.com/Mandatory-Narrowbanding.html>
- <http://www.npstc.org/narrowbanding.jsp>
- <http://www.IMSAsafety.org>



Federal Resources



- DHS
 - Office of Emergency Communications (oeq@hq.dhs.gov)
 - SAFECOM
 - <http://www.safecomprogram.gov/SAFECOM/grant/default.htm>
- FEMA
 - www.fema.gov/grants
 - <http://www.fema.gov/government/grant/iecgp/index.shtm>
 - Interoperable Emergency Communications Grant Program
- DOJ National Institute of Justice
 - <http://www.ojp.usdoj.gov/nij/topics/technology/communication/radios/fcc-narrowbanding.htm>