



# Migrating to Narrowband

SCIP Conference  
Austin, Texas

August 24, 2010

# Migrating to Narrowband

- On July 2, 1991, The Commission released a Notice of Inquiry to gather information on how to promote more efficient use of the frequency bands below 512 MHz allocated to the private land mobile radio (PLMR) services.
- In 1995 the Federal Communications Commission began the Refarming process by adopting measures to promote highly effective and efficient use of the PLMR spectrum and facilitate the introduction of advanced technologies into the PLMR services
- In December 2004, the Federal Communications Commission (FCC) mandated that all private Land Mobile Radio (LMR) users operating below 512 MHz move to 12.5 kHz narrowband voice channels and highly efficient data channel operations by January 1, 2013
- As of Tuesday, August 24, 2010, there are only **859 days** (2.3 years) until this mandate goes into effect.



# Migrating to Narrowband



## PUBLIC NOTICE

Federal Communications Commission  
445 12th St., S.W.  
Washington, D.C. 20554

News Media Information 202 / 418-0500  
Internet: <http://www.fcc.gov>  
TTY: 1-888-835-5322

DA 09-2589

Released: December 11, 2009

**LICENSEES, FREQUENCY COORDINATORS, AND EQUIPMENT MANUFACTURERS  
REMINDED OF NARROWBAND MIGRATION DEADLINES IN THE 150-174 MHz AND 421-  
512 MHz BANDS**

**Final Narrowbanding Deadlines are approaching!**



# Migrating to Narrowband

- Failure to transition to Narrowband Emissions by January 1, 2013 could result in enforcement actions by the FCC.
  - Admonishments
  - Monetary Forfeitures – up to **\$10,000** per day!
  - License Revocation and confiscation of equipment



# Migrating to Narrowband

- FCC mandates channel efficiency, not channel width
- Efficiencies that meet FCC certification rules after Jan. 1, 2011:
  - VOICE:
    - 1 voice channel per 12.5kHz of bandwidth
    - 2 or more voice channels per 25.0kHz of bandwidth
  - DATA:
    - 4800 bps per 6.25k channel
    - 9600 bps per 12.5k channel
    - 19200 bps per 25k channel
- **THERE IS NO FCC MANDATE TO GO TO DIGITAL (PROJECT 25) BY 2013;**

***However...***



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- The State of Texas SCIP plan:

## **VISION STATEMENT**

By January 2015, provide all public safety and critical infrastructure responders at all levels of government, including local, county, special districts, tribal, state, and federal, with the highest level of real-time direct interoperable voice and data radio communications utilizing Standards-Based Systems and incorporating the 700 MHz public safety frequencies.

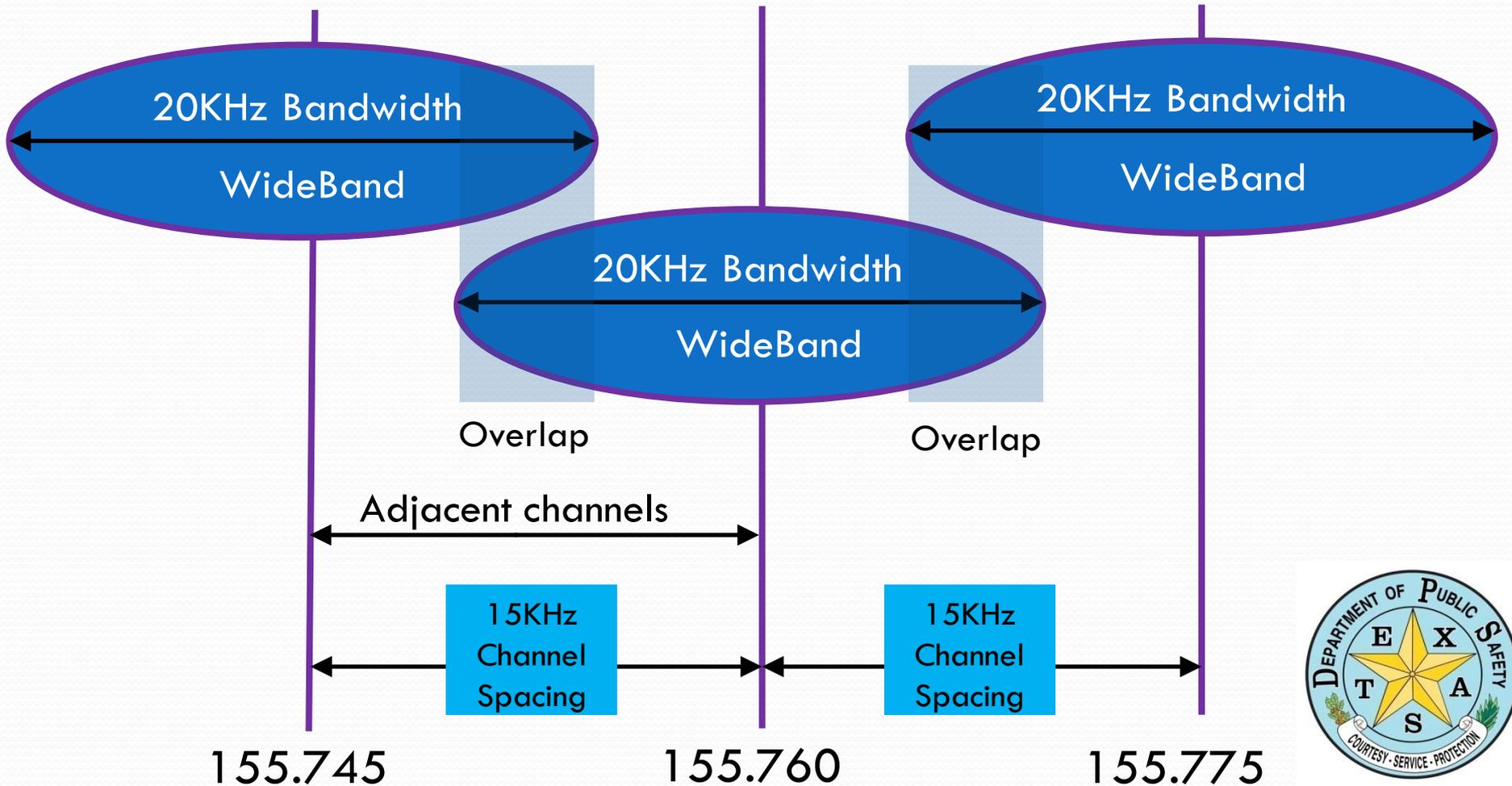
In order to achieve the vision of Standards-based Systems by 2015, the Texas SCIP must establish specific technology solutions for communications interoperability between public safety agencies.

**Texas has adopted the “Project 25 Standards” as the technology solution and long-term interoperability goal for voice public safety agency communications.**



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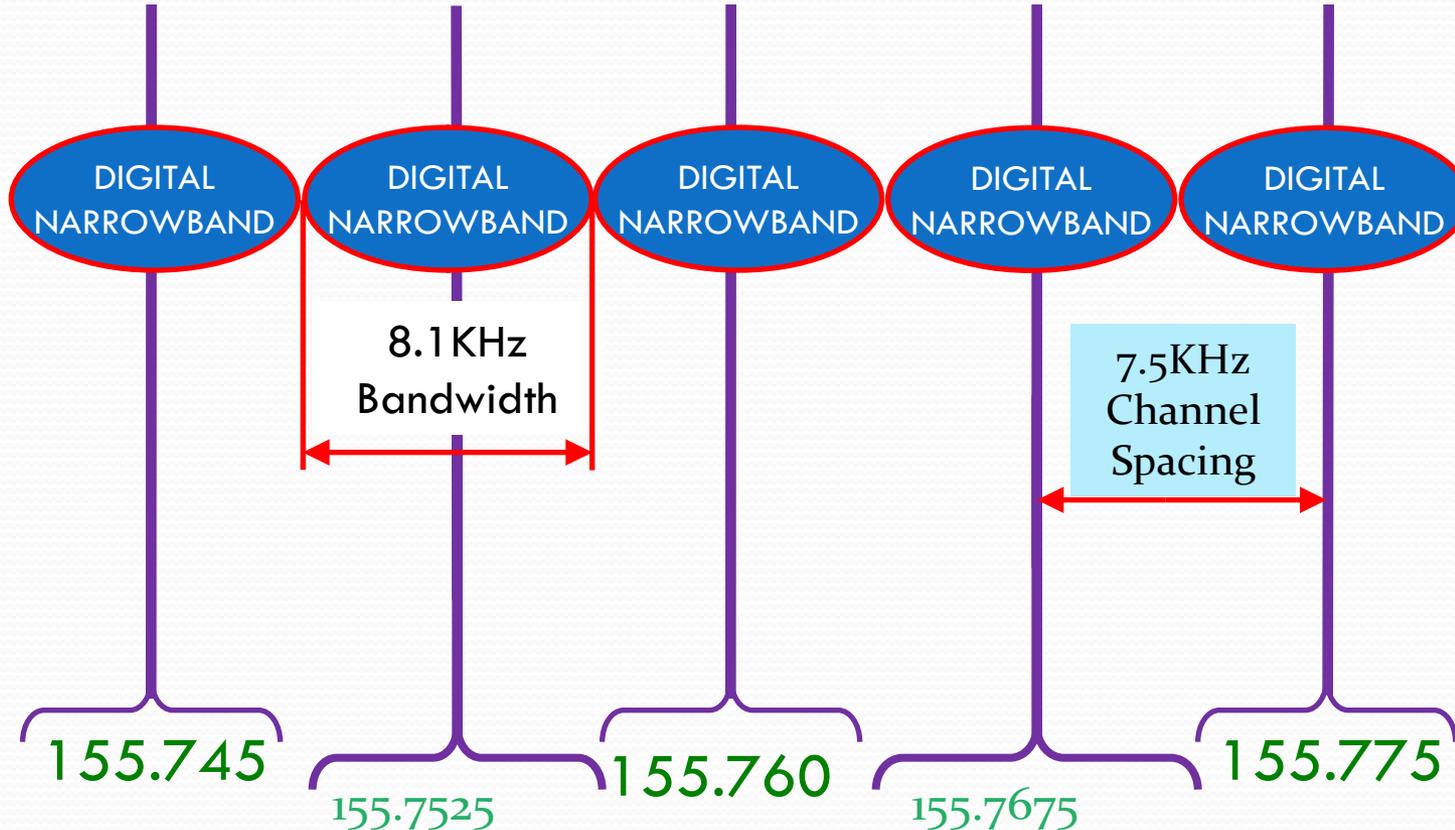
Note: Not able to use adjacent channels at close distances.



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Phase I Digital Modulation allows spectrum efficiency - P25 with C4FM Modulation only requires 8.1KHz Necessary Bandwidth.

Only a very minor overlap in the VHF band.



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- FCC Narrowbanding Requirements
  - **Interim Deadline: January 1, 2011**
    - Applications for new 25 kHz licenses will no longer be accepted  
(must be minimum of 12.5kHz, or meet efficiency standards)
    - Modification to existing 25 kHz licenses that expand interference contour (19 dBu – VHF & 21 dBu – UHF) will not be accepted

**These Deadlines were NOT affected by  
the recent FCC waiver!!**



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- FCC Narrowbanding Requirements
  - **Deadline: January 1, 2013**
    - ALL existing Part 90 licenses in the VHF and UHF bands are required to have implemented equipment designed to operate on channel bandwidths of 12.5 kHz or less (or meet efficiency standards)
    - Traditional Wideband operations will not be authorized after this date.

FCC 10-119 dated June 29, 2010

*The Commission reaffirmed its commitment to timely completion of the migration to 12.5 kHz technology by the January 1, 2013 deadline.*



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- What are you required to do?
  - Add narrowband emissions to your existing license **BEFORE** December 31, 2012 ~ this is NOT optional!
  - All operational equipment must meet new emission standards – 25 KHz emissions must be disabled on existing dual mode equipment after January 1, 2013.



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- FCC Compliance Notification
  - If you are licensed and operating 12.5 KHz or less now -
    - You are in compliance, no further action required
  - If you are operating 25 KHz now –
    - Modify license to add Narrowband emissions before 12/31/12
    - It will NOT be necessary to modify your license to remove the 25 KHz emission designation at this time.



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- You will **NOT** be granted secondary status if you fail to comply with narrowbanding requirements.
- The Commissions rules will prohibit Industrial/Business and Public Safety licensees in the 150-174MHz and 421-512MHz band from operating with wideband channels, even if your license still lists a wideband emission designator.



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## ● Questions?

- Contact Information:

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