

Issues Providing “P25 Compliant” Radios To First Responders

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Why are we here? NPSTC:

1. Understands the industry needs and concerns
2. Got FCC to add P25 on 700 MHz Rules
3. Works with TIA developing basic tests
4. Knows the Importance of CAP to its members
5. Interoperability is key

NPSTC Members would benefit from:

- More LMR equipment tested sooner
- More competitive pricing
- ISSI Tested
- CSSI Tested

First Responder Priorities

1. Communication, Communication, Communication with all agencies at a disaster
2. Access to new technologies readily available now
3. User-Friendly Equipment (plug & play)

Original P25 Objectives- via CAP

Interoperability

Pricing Competition in Procurements

Graceful Migration (Backward & Forward)

Spectrum Efficiency

LMR Manufacturer Priorities

1. Keep testing costs down
2. **52 weeks/yr access to all testing at one location**
3. Opportunity for small radio manufacturers to compete on a level playing field

Interoperability

1. TIA-102 suite of P25 Test standards
 - 80+ Standards documents completed
 - Interoperable digital Project 25 equipment
2. Compliance Assessment Program
 - Improve confidence in purchasing
 - P25 features and services offered comply with P25 standards
 - Capable of interoperating across manufacturers
 - Ability to communicate with all parties
3. Never more important – Terror Risks

New Technologies

1. New products trying to come to market...NOW!!!
 - **But - Can't get proper P25 testing done**
 - New P25 features and services added sooner
 - New options to chose from sooner
 - 700 MHz PS spectrum available for P25 compliant radios
2. Plug and Play = Easier to implement!
3. Affordable = Best Value for end users

P25 CAP is Back

1. New DHS P25 CAP Advisory panel
2. DHS has appointed a new Program Manager
3. New APCO P25 program manager
4. NPSTC asks FCC to require CAP testing (700Mhz)
5. FCC issues R&O (Report & Order)
6. Increased demand for P25 compliance testing by industry and end users

P25 Issues

Radios must be tested to ensure P25 compliance

Can't get new technologies CAP tested, timely, affordably

Manufacturers can't bring new technologies to market

First responders can't deploy enhanced technology

How will ISSI – CSSI testing be accomplished?

Who is best to do CAP Testing?

1. A Competitive Manufacturer?
2. An Independent Lab?
3. Key considerations
 - Cost effective, Timely
 - Impartiality – Unbiased
 - Independent
 - Objective
 - Credible
 - Trustworthy

Competitor's Lab Issues

1. Can I get in, in time? *So sorry, you missed the RFP date*
2. How comfortable are manufacturers testing at a competitor's lab?
3. Opens IP to the competitor
4. "Product issues" exposed to competitor
5. Can a competitor really be objective / impartial?
6. Could testing delays cause missing a big RFP deadline?

Independent Lab Issues

1. No logical viable sustainable business model
2. Low volumes of testing cannot support the investment and staffing, maintenance
3. Start up costs too high
4. Ongoing staffing, ISO audits, SME's, support, all very costly
5. Cost of testing prohibitive to LMR manufacturers, especially small ones
6. Loss of Small LMR co's to P25 costs

Multi-Site Manufacturer Labs vs. One Stop Independent P25Lab

1. P25 Testing must occur at 3 or more labs in 3 different locations at 3 different times
2. CAP ISSI never been done
 - Impractical to Impossible
 - Too difficult logistically
 - Too much cooperation & coordination required between competitors

US Public Safety Communications Investment **ISSUES**

1. Stated PSCR positions are...
 - “Protect your infrastructure investment through the intersection of the two technologies”
 - “Extend the life of your existing system while beginning to build the new.”
2. New First Responder technology has received over \$100M+ via spectrum sale
3. Current LMR infrastructure in need of financial for appropriate P25 Testing. Est \$20-25mm

Solution- One Stop Independent P25 Lab

1. Independent=UNBIASED-IMPARTIAL
2. All LMR Testing under 1 roof, 1 trip
3. ISSI & CSSI testing available
4. Open all year for testing vs 2 weeks per year
5. Fully equipped & Staffed
6. Accredited to ALL P25 Standards & FCC
7. Expected Start up Costs \$5-10M set up
8. \$2-3M / year operational expenses
9. \$4-5mm / yr to test all company's radios

Budget for P25 One Stop Independent Lab

Description	Current Test Volumes	Expected Test Volumes
	Low	High
Start up costs	\$ 5,000,000	\$ 10,000,000
Operational costs/yr	\$ 1,000,000	\$ 3,000,000
All testing /yr covered for LMR mfgs	\$ 2,500,000	\$ 5,000,000
5 year total	\$ 22,500,000	\$ 50,000,000
Avg Cost Yr	\$ 4,500,000	\$ 10,000,000

Current Status P25 - ISSUES?

1. New CABS just published 8/10/16
2. Previously “P25 Accredited” test labs ... expire 8-2017
3. Retesting of all radios to new standards by 8-2017
4. Labs must be re-accredited within 1 year to a new DHS Lab requirement ISO17025
5. Previously accredited labs may continue testing thru Deadline

Field issues force Consideration of Deeper understanding of **Test ISSUES**

1. “Model Class” Test ~ “Test the Parent” and assume “similar-family” models would also pass, *would they really pass?*
2. Firmware changes – Ought they be tested?
3. Theoretical vs Practical application *“This ought to be ok ,so we shouldn’t need to test it” We are motivated (biased) to reduce not increase testing.*
4. Conformance Testing - Not ready, but objective is easier “plug & play” LMR implementations
5. P25 Testing for LMR vendors could become prohibitively expensive to meet “*plug & play*” goal, especially smaller Co

Potential Solution- Federal Funding

solves all the issues:

- New P25 Radios & equipment to First Responders sooner
- Much easier to get through testing for LMR manufacturers
- No testing fees means, Small LMR manufacturers are not put out of business or out of P25 participation
- Keeps Equipment Costs down for Cities – Users
- More testing aids “Plug and Play” objective
- Both Model Class & Firmware changes get tested

Requests of NPSTC

Send a letter of support to DHS

Propose Federal Funding source suggestions

Questions?

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