

Update on the Project 25 Compliance Assessment Program

January 16, 2008
Los Angeles, CA

NIST



NIST Office of Law Enforcement Standards

- NIST is the Nation's lead measurement and standards organization focused on improving the U.S.'s competitive advantage in the global market and improving the quality of life.
- OLES is an Office within NIST that has a specific focus on public safety issues
 - Requirements
 - RDT&E
 - Standards
 - Compliance Assessment
- The OLES Public Safety Communications Program works on behalf of our sponsors at DHS OIC

Standards for Digital LMR (P25)

- P25 remains the “only game in town” for standards related to LMR
- There has been significant progress on key P25 interfaces over the last 24 months (CAI, ISSI, FSSI, CSSI)
- However, laboratory tests, as well as reports from the field, showed that there were inconsistent interpretations of the P25 Common Air Interface (CAI) which led to incompatibilities between manufactures radio.
- Therefore, Congress directed OIC and NIST to develop a Compliance Assessment Program for P25 equipment which could be applied to the acquisition of P25 equipment using federal grant funding

Key P25 CAP Program Features

- The program will review 1st, 2nd, or 3rd party labs who will participate in the CAP program
- Manufacturers must use approved laboratory to participate in the program
- Participating manufacturers must publish a Suppliers Declaration of Compliance (SDoC) with standardized test report
- SDOCs will be housed on a common website, and DHS grantees are expected to purchase equipment with approved SDOCs.
- Initial phase of the program is focused on the Common Air Interface (CAI)

Suppliers Declaration of Compliance



Project 25 Compliance Assessment Program

SUPPLIER'S DECLARATION OF COMPLIANCE (SDoC)

Company Name
Company Department
Street Address
City, State Zip
Name of Authorized Representative
Phone: xxx-xxx-xxxx Fax: xxx-xxx-xxxx
E-mail: authorized_rep@company.com
URL: <http://www.companyname.com>

Product Name: {Name of product}
Installed options: {List of options}

{Company Name} hereby declares that the above referenced product complies with the following Project 25 standards:

RECEIVER TESTS, TIA-102, CAAB-B:

- §3.1.4 Reference Sensitivity under the following test conditions:
- §3.1.5 Faded Reference Sensitivity under standard test conditions
- §3.1.6 Signal Delay Spread Capability under standard test conditions
- §3.1.7 Adjacent Channel Rejection under the following test conditions:
- §3.1.8 Co-Channel Rejection under the following test conditions:
- §3.1.9 Spurious Response Rejection under the following test conditions:
- §3.1.10 Intermodulation Rejection under the following test conditions:
- §3.1.11 Signal Displacement Bandwidth under the following test conditions:
- §3.1.17 Late Entry Unquench Delay under standard test conditions
- §3.1.18 Receiver Throughput Delay under standard test conditions

TRANSMITTER TESTS, TIA-102, CAAB-A:

- §3.2.8 Unwanted Emissions: Adjacent Channel Power Ratio under standard test conditions
- §3.2.12 Transmitter Power and Encoder Attack Time under standard test conditions
- §3.2.14 Transmitter Throughput Delay under standard test conditions
- §3.2.15 Frequency Deviation for C4FM under standard test conditions
- §3.2.16 Modulation Fidelity under standard test conditions
- §3.2.18 Transient Frequency Behavior under standard test conditions

2007-09-28

Issue date

Laboratory's Authorized Representative

Summary Test Report



Project 25 Compliance Assessment
 Interoperability Test Report
 Common Air Interface
 Trunked Mode Operation



Motorola A STRO 25		Radio #1	Radio #2	Radio #3	Radio #4	Radio #5	Radio #6	Radio #7	Radio #8	Radio #9
Test Case	Description	Verdict								
3.1	Basic Group Call Tests									
3.1.1	Basic Group Call Test – One RF Site (Test 1.1)	P	P	P	P	P	P	P	P	P
3.1.2	Talk Group Privacy Test – One RF Site (Test 1.2)	P	P	P	P	P	P	P	P	P
3.1.3	Group Call Late Entry Subscriber Test – Subscriber Initially Set for a Different Talk Group – One RF Site (Test 1.3)	P	P	P	P	P	P	P	P	P
3.1.4	Group Call Late Entry Subscriber Test – Subscriber Initially Involved in a Unit to Unit Call – One RF Site (Test 1.4)	P	P	P	P	P	P	P	P	P
3.1.8	Group Call Late Entry Subscriber Test – Subscriber Initially Involved in a Unit to Unit Call – Two RF Sites (Test 1.8)	P	P	P	P	P	P	P	P	P
3.2	Queued or Denied Group Call Tests									
3.2.1	Busy Queuing and Call Back Test for Group Call – One RF Site (Test 2.1)	P	P	P	P	P	P	P	P	P
3.2.3	Call Originator Subscriber Unit Not Valid Test – One RF Site (Test 2.3)	P	P	P	P	P	P	P	P	P
3.2.4	Target Talk Group Not Valid Test – One RF Site (Test 2.4)	P	P	N/A	P	P	P	P	P	P
3.3	Announcement Group Call Tests									
3.3.1	Basic Announcement Group Call Test – One RF Site (Test 3.1)	P	P	N/A	P	P	P	P	P	P
3.4	Protected Traffic Channel Tests									
3.4.1	Group Call Protected Traffic Channel Test – One RF Site (Test 4.1)	P	P	N/A	P	P	P	P	N/A	P

Project 25 CAP Accomplishments

- Laboratory review process document developed over the last 1.5 years and approved unanimously by industry and government participants in August
- NIST Handbook 153 – Laboratory Recognition Process for Project 25 – Compliance Assessment has been published at www.eeel.nist.gov/oles/public_safety.html
- Over the summer OLES has built a team of certified professionals that will review CAP laboratories
- We expect to begin laboratory reviews by the beginning of 2008.

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