

Project 25 Compliance Assessment Program (P25 CAP)
Question and Answers
Issued 7/5/17

Q1. Will the test case updates in *TIA-102.CABC-B Interoperability Testing for Voice Operation in Trunked Systems* require retesting for the 2016 Compliance Assessment Bulletins (CABs)?

A1. The Office for Interoperability and Compatibility (OIC) does not find the changes between TIA-102.CABC-A and TIA-102.CABC-B to be significant enough to warrant trunked interoperability retesting for the 2016 CABs. If interoperability issues do arise in the future, and they are related to the P25 CAP test cases that make use of CABC-B, OIC will request the effected equipment be retested.

Q2. Can the private label manufacturer use the original equipment manufacturer (OEM) equipment's [P25 Compliance Assessment Program] compliance?

A2. If the firmware and hardware of the OEM and relabeled equipment are identical, the private label manufacturer has a choice:

a) Submit a Suppliers' Declaration of Compliance (SDOC) and Summary Test Report (STR) for the relabeled equipment and, in the STR, refer to the Detailed Test Report numbers and test case results of the OEM equipment. (No additional testing needs to be done.)

OR

b) Submit an SDOC for the relabeled equipment and, in that SDOC, refer to the STR number of the OEM equipment with an SDOC signature confirming compliance of the relabeled equipment. (No additional testing needs to be done.)

Q3. Will the P25 CAP compliance for a 'P25 module' that is taken out of P25 CAP approved equipment carry over to new equipment (unique Federal Communications Commission((FCC) ID) when the 'P25 module' is used in the new equipment?

A3. Since the manufacturer is obtaining a new FCC ID number, the manufacturer sees the equipment as new, not simply relabeled equipment. Without knowing more about the P25 CAP functionality of the 'RF module,' the new equipment with the RF module would have to undergo P25 CAP compliance testing. Some of the compliance testing may not need to be redone if the P25 module was previously P25 CAP tested on a standalone basis. (Vendor will have to certify equipment was previously tested and point to an approved STR/SDOC.)

Q4. If three stations are not available for testing P25 CAP Conventional Interoperability, can a waiver be obtained using just one station to satisfy the requirement?

A4. The P25 CAP requires that a subscriber be tested against three station repeaters, each from a different manufacturer.

Q5. If I have a Subscriber Unit (SU) that has only the firmware for trunking and all of the necessary testing has been done, can it be listed? If in the future the firmware is updated to include conventional operation, can the listing be modified with the proper STR submittal?

A5. For the 700 MHz band, P25 conventional interoperability testing is required by FCC Part 2.1033 and Part 90.548. For any frequency band, DHS OIC requires P25 trunking performance testing with P25 trunking interoperability testing. For any P25 CAP situation: (1) the P25 equipment manufacturer must submit a STR document with receiver and transmitter performance test case results indicating a Pass, Fail or Unsupported result for each operational frequency band included in the equipment and marketed as P25 by the manufacturer; and (2) the P25 equipment manufacturer must submit a STR document with conventional and trunking interoperability test case results indicating a Pass, Fail or Unsupported outcome. DHS OIC would be hesitant to approve P25 subscriber equipment without any P25 conventional capability.

Q6. Am I correct that an STR must be submitted for each frequency band?

A6. A single STR permits a table for each frequency band supported by the equipment or model class under test. The STR template has example tables with frequency band labels that must be changed to match the equipment under test. For multiband equipment, if the performance test cases and the test case results are identical, the number of tables reporting test case results can be reduced. For example, if the multiband equipment is VHF and 700/800 MHz capable, a single receiver performance table could be provided if the equipment has the same test case result for all the test cases in all frequency bands of the equipment. A single table is possible because the P25 CAP receiver performance test cases are identical for all the frequency bands. This is in contrast to the transmitter performance test cases. Separate transmitter performance tables are expected (one for each band) since there are different test cases related to the frequency band of the transmitter. P25 CAP interoperability testing, also reported in the STR, is structured to be independent of equipment frequency band.

Q7. As an approved independent P25 testing laboratory can I, before I get my ISO/IEC 17025 Accreditation, test a SU to the P25-CAB-CAI_TEST_REQ August 2016 and get the SDOC and STR posted?

A7. No. The testing necessary for SDOC and STRs based on the 2016 CABs must be performed by an ISO/IEC 17025 accredited test lab and recognized by DHS OIC as a P25 Test Laboratory.

Q8. I have a conventional SU for which we have completed the performance testing and the direct mode Interoperability, but due to the availability of conventional repeaters we will not be able to get the interoperability testing (IOT) done in time for the 8/31/2017 deadline. Will it be acceptable to file a STR and SDOC with only the performance and direct mode IOT, and then update them as soon as is possible with the repeater mode IOT?

A8. If the manufacturer has declared the conventional subscriber to have no capability for conventional operation through a repeater (i.e., a simplex only subscriber), then each of the conventional repeater

interoperability test case results for that subscriber would be 'Unsupported.' If the conventional subscriber does have P25 conventional repeater capability, the repeater test cases must be performed.

Q9. Is it correct that the direct mode interoperability testing MUST comply with the rule of three?

A9. Yes. The Conventional Direct Mode Interoperability test is subject to the rule of three.

Q10. Is it acceptable to post the questions and answers that I am receiving on my company's website?

A10. Yes. Answers to questions presented to DHS OIC may be reposted.

Q11. If I used a pair of test sets configured as a conventional repeater, would that be acceptable to replace one repeater in the rule of three?

A11. The use of laboratory test equipment as a P25 repeater is under discussion and is not an approved test method at this time. DHS OIC hopes to get a decision as soon as an analysis to determine the capability of the test set to complete the tests required is completed.

Q12. For conventional IOT: I have tested SU-A in the direct mode with SU-A, SU-B, SU-C, SU-D and then I tested SU-A in the repeater mode with SU-A, SU-B, SU-C, SU-D. Does this meet the requirement of the rule of three?

A12. For subscriber direct mode testing: Yes.

For conventional subscriber/repeater interoperability testing: A subscriber is tested against at least three repeaters, each repeater from three different manufacturers.

For conventional repeater/subscriber interoperability testing: A repeater is tested against at least three subscribers, each subscriber from three different manufacturers.

Q13. Regarding document P25-CAB-SDOC_REQ_0.pdf, Section 2.8 states:

"In the event that the tests performed on product(s) given in Figure 4 are interoperability tests, the other devices that the product under test was tested against will be listed following the list of references."

This document does not include requirements for listing references nor does it explain what references would be of interest.

A13. Text will be modified to the following:

"In the event that the tests performed on product(s) given in Figure 4 are interoperability tests, the other devices that the product under test was tested against will be listed."

Q14. How will DHS OIC inform P25 CAP stakeholders (i.e., manufacturers and test lab managers) and the public when document (CAB) revisions have been posted?

A14. DHS OIC will place update notices on the P25 CAP web page under Program Updates when new documents are posted on <https://www.dhs.gov/science-and-technology/p25-cap>. OIC will make every effort to notify all interested parties, including via emails and information pushes through the Telecommunications Industry Association (TIA)/P25 Technology Industry Group (PTIG) and the National Public Safety Telecommunications Council (NPSTC).

Q15. Regarding document P25-CAB-SDOC_REQ_0.pdf, Section 2.9 “Declaration of Compliance,” multiple interpretations of the information being required in the Declaration of Compliance section of an SDOC are possible due to unclear requirement statements. Regarding the following requirement statement:

“In the event that other devices are tested in addition to the product under test, the product name will be used in place of a simple reference to the products listed.”

1. Is the phrase “the product name” referring to the product under test?
2. In the phrase “in place of a simple reference to the products listed” the meaning of “products listed” is not clear. Is the phrase referring to the other devices that may be tested in addition to the product under test (as in the case of interoperability testing)?

A15 (1) and A15 (2). Text will be modified to the following:

“In the event that other devices are tested in addition to the product under test, the other devices’ product names will be used in the product list.”

Q16. Regarding document P25-CAB-SDOC_REQ_0.pdf, Section 2.9 “Declaration of Compliance,” multiple interpretations of the information being required in the Declaration of Compliance section of an SDOC are possible due to unclear requirement statements. Figures 8, 9 and 10 provide example declaration statements that identify CABs or relevant CAB sections, but sometimes the examples reference STRs or STR sections and sometimes the examples reference DTRs. In addition to relevant CABs or CAB sections, is the Declaration of Compliance required to reference STRs or DTRs or both?

A16. Revisions to the P25-CAB-SDOC_REQ will be investigated to remove the references to the DTR reference numbers in the SDOC. Detailed Technical Reports (DTR) reference numbers are listed in the STR that is associated with the SDOC. The DTR reference numbers provide no additional meaningful information in the SDOC.

Q17. Verbal public statements have been made that current 2010 SDOCs/STRs will be pulled in mid-August 2017. Verbal public statements have been made that only new 2016 SDOC/STRs will be posted after mid-August 2017. Verbal public statements have been made that new 2016 SDOCs/STRs must reference new CABs, must include all tests found in new CABs, must reference newly recognized labs and in the case where neither a particular CAB test has changed nor the equipment being reported on

has changed, then re-testing is not required. Are these verbal public statements documented anywhere and, if not, will they be documented somewhere?

A17. P25 CAP testing according to the 2009/2010 CABs (found in the Archive section) and submission of the 2009/2010-based SDOCs and STRs for posting on the Approved Equipment list can continue to occur until 8/31/2017. All SDOCs/STRs based on the 2009/2010 CABs are scheduled to be removed from the Approved Equipment List after 8/31/2017. P25 CAP testing based on the 2016 CABs must be performed by a DHS-recognized P25 test laboratory with an ISO/IEC 17025:2005 accreditation for P25 CAP testing. SDOCs/STRs based on the 2016 CABs and tested at an accredited P25 test lab may be submitted for posting on the Approved Equipment list as soon as they are available from a manufacturer. If additional time is needed to complete submissions based on the 2016 CABs, please send request to P25CAP@hq.dhs.gov. This information will be added to the P25 CAP web page.

Q18. If neither a particular CAB test has changed nor the equipment being reported on has changed, is re-testing required?

A18. No, retesting is not required. The original DTR shall be referenced in the newly submitted STR.

Q19. In the case of trunking interoperability testing, the CAB tests have not changed. Assuming my tested equipment has not changed either, I would like to avoid re-testing; however, the P25 Test lab that produced the past test results may not seek CAP lab recognition renewal. Should that be the case, in the new SDOC/STRs, am I allowed to reference testing performed in a lab whose recognition has expired?

A19. Manufacturers can make use of STR test case results from a DTR produced by a P25 Test Lab that is no longer DHS OIC recognized, assuming the test cases and equipment have not changed. If interoperability issues arise that are in conflict with the DTR results from that original DHS OIC recognized lab, the manufacturer will be required to retest and provide a new SDOC/STR, based on new DTR results.

Q20. When document (CAB) revisions are made, can the changes somehow be identified to avoid side-by-side comparisons to find the changes?

A20. DHS OIC will provide change information within the revisions table, but will not be providing a 'marked-up' document with the 'clean' document. If anyone has questions, please feel free to reach out to OIC via P25CAP@hq.dhs.gov.

Q21. What testing (or retesting) is required by August 31, 2017? The initial guidance was "if the radio changed, or the test changed, you must retest" to comply with the 2016 CABs. Additional guidance stated, "The change in language in the CABs does not constitute a change in the test. No need to retest for these changes, but new tests have been added."

A21. All radios have to be retested since new test cases were added as part of the 2016 CAB. For those test cases that were not changed (i.e., no changes between the 2010 and 2016) and if the vendor confirms the results of those tests would be identical if retested, the vendor need not test but certify the results would be identical by submitting 2016 SDOCs and STR. For example, a radio that was tested to 2010 is still being sold today. If the vendor states the results, if testing were to be run again, would be identical, then they would simply have to test against the new tests included in the 2016 CAB and would reuse the test case results from the 2010 STR. This example also applies to a radio that upgrades firmware. For firmware updates that would not change any of the results in the STR, the radio does not need to be tested.

Q22. Is a GAP analysis available outlining new tests added which necessitate retesting regardless?

A22. The GAP analysis is as follows:

- **Performance test cases:** The performance test cases for the 2016 CABs are the same as the 2010 CAB with one exception. One test case for trunked performance access time was deleted for both the subscriber and repeater.
- **Conventional Interoperability test cases:** The conventional interoperability test cases are all new—these test cases were *not* part of the 2010 CABs.
- **Trunked Interoperability test cases:** The trunked interoperability test cases for the 2016 CABs are the same as the 2010 CABs.

Q23. Additional guidance noted, “Regardless of testing, all 2010 STR and SDOCs must be resubmitted in new format. Those not resubmitted would be taken down.” What does this mean exactly?

A23. The SDOCs and STRs for the 2016 CABs need to be submitted in a format that will meet the DHS 508 accessibility requirements. The majority of the 2010 SDOCs and STRs do not meet the 508 requirements and are posted on the DHS web site today under a time-limited waiver. Eventually, the SDOCs and STRs based on 2010 CABs will be removed once the waiver expires. Refer to the previous question for clarification—resubmitting the SDOCs and STR provides the “assurance” from the vendor that tests results will not change.

Q24. Will SDOCs and STRs resubmitted without data for the "added tests" be taken down or not accepted?

A24. DHS expects the SDOCs and STRs submitted according to the 2016 CABs to address all the test cases in the [Baseline Common Air Interface Testing Requirements](#) (P25-CAB-CAI_TEST_REQ). If the equipment is not tested for any of the new test cases in the 2016 CABs, the STR test case result must indicate that the untested test case is ‘Unsupported’. For example, take two “models” of a particular subscriber—one with a screen and full keypad and one without. The vendor can run a single test with the most capable radio but provide documentation to address functional differences between the models where the results will be different.

Q25. Can the legacy data (i.e., the test case results found in the STRs for the 2010 CABs) be resubmitted, in the new format with new tests listed as "not tested"?

A25. If the equipment is not tested for any of the new test cases in the 2016 CABs, the STR test case result must indicate the untested test case is 'Unsupported'. This was done to ensure all tests are conducted and the vendor does not have the option to select which tests he/she wants to run.

Q26. If data for "added tests" is submitted, does existing test data need to be retested or can previous STR data be used to complete a new combined SDOC?

A26. The existing test case results for test cases found in the 2010 CABs can be used in conjunction with the new test case results from the added test cases in the 2016 CABs. See A21 for more information.

Q28. What constitutes a "change in the radio"? Added P25 features and services?

A28. Section 3.8 of the [Summary Test Report \(STR\) Requirements](#) (P25-CAP-STR_REQ) document discusses changes. In short, if capability is added to equipment already listed on the Approved Equipment List and the added capability impacts test case results of the existing SDOC and STR on the website, a new SDOC and STR must be submitted to indicate the new test case results of the equipment. If the capability does not change the SDOC or STR, the radio does not need to be retested.

Q29. Would only the new features and services need to be tested and those results combined with the test case results from the 2010 STR? Or, does the entire radio, including all of its features and services, need to be retested?

A29. If new features and services of the equipment being tested impact the test case results of the previous SDOC and STR, those new features and services must be tested and the test case results submitted in an updated SDOC and STR. See A21 for more information.

Q30. Does an equipment model nomenclature change or new FDD ID for the same model require complete retesting as a "new radio?"

A30. Please review Section 3.8 of the [Summary Test Report \(STR\) Requirements](#) (P25-CAP-STR_REQ) document. The specific reasons behind a change or no change in either model number or FCC ID need to be understood to determine whether the entire equipment requires new testing. Clearly, if it is a new product consisting of new hardware and new software, the equipment needs to be tested. However, when multiple models of equipment are based on a common software and/or hardware platform, it is not always clear which tests need to be retested. If it is unclear, please contact OIC at P25CAP@hq.dhs.gov to ask the question or set up a one on one discussion.

Q31. When it comes to revised firmware, does manufacturer self-declaration of "no impact" still apply or does any new firmware require complete retesting?

A31. The manufacturer is expected to make the determination whether the revised firmware would affect the test case results that were previously submitted with the previous firmware release.

Q32. The initial guidance stated, "It is up to the manufacturer to determine if test results are likely to change, submit the docs and we will advise if not acceptable." Is this accurate?

A32. Correct. The vendor "assures" that the results of the tests will not change by giving OIC a new STR and SDOC. If there is any question concerning retesting of previously approved equipment, please contact OIC at P25CAP@hq.dhs.gov to ask the question or set up a one on one discussion.