

SUMMARY OF ANSWERS TO TCB QUESTIONNAIRE

In October, 2005, the Telecommunications Certification Body (TCB) Council initiated a contract to develop a "Code of Good Practice for TCBs." The first step in this process was to interview all TCBs to give each TCB an opportunity to provide input to the "TCB Code" The following is a summary of answers to questions asked by the contractor, Art Wall, to all TCBs who participated in the survey. Twenty-five out of twenty-seven TCBs participated in the survey. Two manufacturer representatives were also interviewed and their comments are included herein. Each TCB and manufacturer was asked a series of 11 questions, answers to which led to additional questions. The questions are shown below in "*bold italics*" followed by a summary of the answers. All specific answers are confidential and are not intended to be divulged here, except in a general sense. It should also be emphasized that the following is a condensation or a sense of the conversations with the TCBs and manufacturers and is not intended to reflect my opinion.

1. Please describe the highlights and attributes of your company.

Most TCB's are small businesses, or in a few instances, a small part of a larger business. Each TCB appears to have found a niche of products or clients which works well for its business model. For many TCBs, approvals of products are used to support the main business of testing; for others, approval of equipment is their main business. All TCBs state that they have a quality system in place.

Most TCBs have two or more reviewers and two or more certifiers; for many TCBs, these functions seem to be inter-changeable. Some TCBs have a distributed operation using more than one location for testing and certification. All TCBs use the internet for operations.

A few TCBs cite customer service and quality as their stated purpose; while others are willing to live with a low error rate. Several stated that reputation is important for continued operation. Several TCBs mentioned that they perform an internal audit on an annual basis. One TCB stated that they paid for an external audit of their processes to assure a quality system. The same TCB mentioned that almost every meeting deals with quality.

Two or more TCBs stated that they have the client sign a detailed Agreement (mentioned in Guide 65) giving expectations, etc. Several TCBs mentioned that they have training for their customers, who for the most part are laboratories representing manufacturers. Several TCBs had a detailed complaint handling process for tracking and handling mistakes complete with a spreadsheet showing the steps for identifying, tracking and resolving the complaints. A number of TCBs stated that they have a 7 working day turn around time; whereas, some TCBs stated that they have a 2 day, or less, turn around time.

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Several European TCBs stated that the majority of the devices they approved for the US market come from Asia. Other European TCBs report a European client base.

The two manufacturers interviewed have a number of divisions with multiple plants at different locations. As a result, each manufacturer uses a number of TCBs, but there is some attempt to consolidate the number of TCBs used. In most cases, the accredited lab acts as their agent. Both manufacturers state that they need to watch the lab and TCB closely, since the results are not always accurate. One manufacturer stated that it took him two days to review a test report, which had a number of errors.

2. Do you believe that the TCB program is working well? What specifically do you think is working and what changes over the last few years has been worthwhile or helpful? Do you believe that there is room for improvement? If so, what improvements would you like to see?

Almost all TCBs and both manufacturers stated that the TCB program is working well. Several TCBs stated that the program exceeded their expectations. Speed of service and opening up of the FCC process were cited as positive benefits of the TCB program. One TCB stated that the FCC and TCBC have done a great job of organizing and maintaining the program considering resource constraints.

The TCB Council, TCBC training and monthly phone calls were cited as being extremely helpful to the TCBs. Improvements would include release of more restricted products, more enforcement and oversight of TCBs and peer review.

According to several TCBs, timeliness and quality of answers from the FCC is sometimes a problem. One TCB reported that there are problems with unique applications and that the FCC staff takes too long for interpretations. The TCB states that they are now more inclined to push the envelop and make a decision without the FCC. This particular TCB doesn't think the program will last – not a growth business. Several TCBs stated the program is headed off-shore or will not last.

According to a number of TCBs, the FCC Knowledge Data Base (KDB) is extremely helpful, but needs to be strengthened. For many TCBs, the KDB is hard to follow; interpretations are a source of problems and the FCC needs to consolidate its rules and interpretations. One TCB stated that the FCC website has improved, but needs to become more efficient. One European TCB would like to see better dissemination and organization of Rules, interpretations and other information. One TCB stated that the TCBC should develop a standardized checklist, complete with all the interpretations.

Several TCBs requested removal or revision of the sample audit requirement, since the testing of samples is not fundable and the process leads to minimum

audits. Several TCBs reported that they need better guidance for market surveillance.

One TCB stated that the FCC should educate manufacturers and stick to TCB program. One TCB suggested the “exclusion list” should be tailored to the abilities of each TCB: i.e., the FCC should allow TCBs that have the capability to approve more equipment currently on the exclusion list. The SAR part of the program is confusing, at best, according to several TCBs. One TCB recommends the FCC should date all policies and statements.

One manufacturer stated that new TCB reviewers of applications are not necessarily competent or knowledgeable of the FCC Rules. They also expressed a concern about the consistency and quality of approvals. Some TCBs are interpreting the rules, when the question should go to the FCC for an answer. The manufacturers expressed a need for consistency and exchange of information. One manufacturer mentioned that TCBs operate in their own self-interest and don't share information. This was supported by comments from several TCBs, who were reluctant to share information that might help competitors.

3. *Have manufacturers placed undue pressure on TCBs? Can you provide specific examples? If so, how can this pressure be avoided or managed? (This information will only be used to look for patterns of abuse.)*

Many TCBs report very little pressure from clients (manufacturers or labs representing manufacturers). However, this may not be true for TCBs dealing with Asian labs as their primary customers. Asian labs, they say, go to TCBs who provide the best price, quickest service and ask the minimum number of questions. Several TCBs dealing with Asian Labs report losing clients to other TCBs who are apparently not asking questions. According to these TCBs, pricing is extremely competitive, competition is severe and there is no vendor loyalty. Asian manufacturers sometimes try to lead the process. In the beginning, it took two weeks to review an application; whereas, today manufacturers are demanding same day or 2 day service.

One TCB reported that Asian Labs are competent, have good report formats, but are also extremely competitive and looking for the least amount of resistance for approval of an application. Asian manufacturers are demanding fast service, cheap prices and no or few questions. According to this TCB, these test labs are trying to manipulate the system. Quality is not considered a serious issue for these laboratories.

Many TCBs work with labs to improve quality. Several TCBs, who insist on quality, report losing customers due to time and/or price pressures. In one case, a TCB report that a client returned to the TCB when the client developed a compliance problem. Several TCBs reported losing clients to another TCB for the answers they want. This seems to be less of an issue for TCBs that have an

established or known list of labs submitting reports for approval. One TCB reported bogus data or a forged report. One of the European TCBs reported losing clients to other TCBs because they asked questions and did not accept the initial test report. Another TCB reported that 2 to 3 clients per year have threaten to go elsewhere if the application is scrutinized. Several TCBs have associated labs located in Asia. One TCB reported, that its own labs threaten to go to another TCB who does not ask questions. According to one TCB, application procedures are not being followed and too many corners are being cut in reviewing applications due to competitive pressures leading to lack of adequate review.

One TCB suggested developing a marketing brochure to educate clients, which could include, but not limited to: a code of conduct for the client, a reasonable time frame for approval, general rules for engaging a TCB, general information about program, expectations and limitations of a TCB.

4. Are data and reports received from test laboratories acceptable? Is there a problem with the integrity of some labs?

Those TCBs dealing with limited number or known labs say that these labs are knowledgeable. One TCB reported its own lab lost testing business because the manufacturer did not want all the testing that was required to approve the device. Several TCBs mentioned that most labs are competent, but some are sloppy and inconsistent tending to repeat the same errors. Only in a few instances, does a TCB question the integrity of the lab. In some cases, labs are pressuring the TCBs, particularly the Asian Labs, as mentioned in the answer to question 4, above. The labs also do not want to provide samples and have gone elsewhere as a result.

A number of TCBs reported that documentation for test procedures need to be improved. One TCB reported that some labs have problems understanding the testing requirements. Several TCBs mentioned that labs find the FCC Rules and test procedures overwhelming and difficult to understand. They suggest better documentation and a guide for minimum requirements for testing each type of device. Some TCBs would support an effort to document test procedures. Several TCBs mentioned that they provided training for Labs at least once a year.

The manufacturers stated that some labs are good, but the results of most labs need to be reviewed. One manufacturer stated that some labs are not competent for specific tests and don't know how to perform the test. According to the manufacturers, problem applications are typically lab issues. Information from the manufacturer is not transferred to the TCB for review. Another concern expressed by the manufacturers is that the tests performed are not representative of actual operation. They recommended that the TCB should ask the lab the following two questions: (1) Are the test that were performed on the EUT representative of typical operation; and, (2) Has the manufacturer reviewed and concurred that the tests are reflective of the operation of the equipment?

5. *How can we (as a group) improve the quality and integrity of test data and test reports? How can test labs be informed about the requirements and test procedures to be used?*

Those TCBs that train or work with labs submitting reports for certification seem to have less of a problem with the quality of test reports. According to one European TCB, each TCB should be responsible for helping the test labs to ensure quality.

Several TCBs suggested that the TCB Council should work to improve the documentation of the test procedures through ANSI C63 and help in the training and education of laboratories. Several TCBs suggested that the test report be standardized for each class of device. One TCB mentioned that documentation is too scattered and that standard test reports should be used. Several TCBs stated that there should be a standard format and checklist for applications; such as, those in EN 300-328 and 301-893. One European TCB stated that we should use the information in a presentation given several years ago by Mr. Daniel Hoolihan on what should be in a test report. (Note: I talked to Mr. Hoolihan who said that particular presentation basically restated what is in Sub-clause 5.10 of ISO/IEC Standard 17025.)

The manufacturers stated that the test procedures provide some guidance, but are not adequate and are very unclear at times. Labs need guidelines for testing products. Most importantly, manufacturers need to check that the tests are reflective of the operation of the device. The manufacturers believe that the labs need additional guidance in testing devices and additional training.

6. *FCC audits have demonstrated consistency and integrity problems with some TCBs. What steps should be taken to improve the consistency and integrity of the TCB program?*

According to one TCB, there are some integrity issues since some TCBs do only what they are forced to do. One TCB said the program is far too complicated leading to inconsistencies. Factors affecting consistency according to one European TCB are: (1) Price; (2) Speed; (3) financial pressure; (4) Test Laboratory; (5) manufacturer pressure; and, (6) complexity of rules. One TCB stated that there should be a model that would be applied to all TCBs by both the FCC and the Accrediting Body. Self-policing may be attractive, but may not be practical. One TCB stated it is the TCBs responsibility to be accurate and to take steps to avoid errors.

Some TCBs look at the competition by reviewing the applications granted by other TCBs; whereas, many TCBs do not track the competition. One TCB suggested defining minimum criteria for certification or minimum check-list for each class of equipment. Several TCBs suggested developing a system to

measure the performance of a TCB, or at least provide more feedback on a regular basis with the results being publicized. Several TCBs and the manufacturers stated that a standardized checklist should be available on the TCBC website.

The manufacturers stated that there is a need for consistency among the TCBs and suggested round-robin applications with a known number of problems. One TCB stated that the Exclusion List is confusing and hard to understand, which can lead to inconsistencies. One TCB mentioned that more detailed checklist should be available and internal procedures should be developed to correct problems.

According to one European TCB, clients see only: (1) time; (2) price; and, (3) maybe quality. This TCB questioned the low price charged by some TCB, which he believes jeopardizes the quality of the review.

7. *Can you think of specific suggestions for improving the consistency of grants of certification?*

Most TCBs and the manufacturers state that the equipment categories and the grant notes are confusing, inconsistent and should be standardized. One TCB stated the FCC should improve or get rid of grant notes. The manufacturers also noted that there are inconsistent grant notes with different TCBs. Several TCBs believe additional training might be helpful, but most believe that the grant notes should be standardized and additional guidance provided. This is particularly true for RF safety. Several TCBs stated that the information on the grant (e.g., equipment category, frequency of operation, and grant notes) should be standardized. One TCB stated that there should be a third party (not the FCC) to review of grants. The manufacturers recommended that the type of device (portable, mobile, etc.) be placed on the grant of certification.

8. *What can the FCC do to improve the TCB program? Can you cite specific suggestions?*

Many TCBs state that the FCC should manage the process and do more audits and enforcement. Several TCBs stated that there is no consequence for doing something wrong or poor performance. The manufacturers recommend additional training for the Labs, additional enforcement and stress the need for consistency.

The following was mentioned by one or TCB as actions that the FCC should take:

- Provide additional guidelines for completing applications (frequency, equipment categories and grant notes)
- Provide more training on modular devices
- Be responsive to inquiries
- Improve KDB, particularly the search function
- More information should be placed in the rules and less reliance on the KDB
- Publish guidelines and improve KDB

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- Increase enforcement and audit oversight
- Make rules and interpretations more consistent
- Make the FCC EAP webpage easier to follow
- Establish a team of government and non-government participants to assist with new technology issues.
- TCBs exhibiting questionable performance should be given the opportunity to have consultations with the auditor or FCC. Make TCB performance information available on-line
- Eliminate 5-day grace period for downloading exhibits
- Provide dummy website (a dummy website is available)
- Develop examination for evaluators
- Document and improve the test procedures, including inter-modulation testing
- The exclusion list is too big and should be reduced
- Develop a yardstick so that TCBs can compare how they are doing
- Provide better documentation; publish standards and policies in a central location
- Collect and publish policy statements. These statements should not be left in presentations.
- FCC presentations should be updated, since most perceive the FCC presentations, especially those on RFI exposure, are confusing and inconsistent
- Publish set-asides and complaints.
- Update TCB exclusion list
- Provide a mechanism for tracking antenna changes or grant note changes when there is a permissive change.

9. *Do you think there is real abuse or lack of integrity with one or more TCBs? If yes, should the TCB Council take a proactive role to address it or let the FCC/Designating Authorities/Accrediting Bodies discover/handle the situation?*

A number of TCBs are unaware of any real abuse of the program. Other TCBs stated that there is abuse or rumors of abuse, but cannot provide documentation. One TCB stated that dismissals should be evidence of abuse by TCBs. They do not believe the TCBC can police TCBs. This should be left for the FCC. One TCB stated that non-TCBs (e.g., manufacturers) should provide peer review. One TCB mentioned that the TCB Council should develop and recommend the use of guidance notes for all TCBs.

Some TCBs believe that TCBC involvement may be questionable and promote mediocrity. Several agreed that the TCBC should take a proactive roll, as it is currently doing, in providing opportunities for training, supporting cooperation with the FCC staff and promoting the "Good Code of Practice". One TCB stated that the TCBC should take a more active role by working with the TCB before it

goes to the FCC for action. One TCB commented that the TCBC can initiate round-table discussions to resolve interpretations, without the FCC.

Several TCBs stated that the TCBC is doing a great job. Several TCBs suggested guidelines for the process with a statement of expectations. Several TCBs suggested “Quality Management” training with suggestions for resolving problems with audits.

10. What elements do you think should be included in the “TCB Code of Good Practices”? What “good practices” would a TCB be willing to share to help the overall program without comprising your competitive position?

Of the eleven questions, this was probably the most difficult for the TCBs to answer. Most TCBs were unclear on how it would be implemented. They stated the Code needs to be a helpful working document that is applied to all TCBs. A number of TCBs stated the “Code” should also be incorporated into the TCB program.

The following items were mentioned by one or more TCB to be included in the “Code”:

- Specific elements of guide 65; e.g., ethics, impartiality, transparency and organizational structure
- Mission statement (vision for public good)
- Internal audits
- Training
- Seeking FCC guidance when necessary
- Timeliness in uploading exhibits
- Publishing price list with conditions for reduction
- Process for handling undue pressure from manufacturers and test labs
- A well defined process to follow
- A guidance document for reviewing applications
- Surveillance testing
- Quality statement about fixing problems
- Minimum turn around time (e.g., 5 business days)
- Updates should be based on changes to the Rules (e.g., new checklist, etc.)
- The addition of consequences for poor performers
- Training and working with test labs
- Approve only devices in which the TCB or test lab has the competence to perform the service
- FCC should provide guidance of relationship with clients
- Teeth in the Code – Code should be self-regulating
- Independence from clients and test labs
- Technical expertise

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11. Do you believe there is a difference in performance or issues between US and non-US CABs?

Initially there was a concern by some US TCBs, but now there is less of a concern with European TCBs. Several non-US TCBs believe that there is no difference between US and non-US TCBs. Several domestic TCBs believe there is a difference in the requirements between European and US TCBs, in the evaluation of the TCB, the number of quality assessors available and information submitted by the TCB. At least one US TCB believes that there are some integrity issues with non-US TCBs. One domestic TCB remarked that there is a difference in the test reports coming from European Labs. Another TCB reports that some foreign TCBs have a number of dismissals. The manufacturers also believe there is a difference between domestic and foreign TCBs in their understanding of the rules and experience with the U.S. system.

According to one European Designating Authority, full assessment is every three years with annual surveillance audits. (This appears to be contrary to 47 CFR 2.962(c)(7)). He also stated that there is no difference between EN45011 and Guide 65, but there is a large difference between the interpretation documents for the Guides. TCBs should prescribe what needs to be the test report, before actually reviewing the test report. One European TCB believes that there is a perception that the FCC scrutinizes foreign TCB more than domestic TCBs.

Most TCBs dealing with Asian Labs are very concerned with the prospect of Asian TCBs. One TCB reported there is a communications barrier and cultural barrier with overseas labs, especially Asian Labs. A number of TCBs expressed a real concern with the MRA process, especially with the Asian economies due to a perceived lack of control and enforcement.

Several TCBs requested more TCBC meetings on the West Coast and European TCBs requested TCBC meetings in Europe, in conjunction with RTTECA meetings.

Two TCBs questioned the competency of some auditors, which implied that additional training or guidance may be needed for one or two auditors. Another TCB suggested that domestic and foreign accreditors should talk with one another to develop a more consistent process. One TCB mentioned that auditors should assess a TCB, but should not state or endorse their opinion on how the program should work. Also, there should be better process or system for monitoring evaluation and certifiers. According to several TCBs, more qualified technical auditors are needed and the audit should emphasize technical issues, as well as quality issues.