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FCC Update

US Federal Communications Commission
Office of Engineering and Technology (OET)

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Note: The views expressed in this presentation are those of the author and may not necessarily represent the views of the Federal Communications Commission

Overview

- FCC Equipment Authorization Overview
- Certification and Testing
- Market Surveillance
- Recent areas of activity
- Additional Information Sources

FCC Regulations

- Federal Communications Commission (FCC) regulates the private sector telecommunications industry, in the public interest

  – The Commission establishes **technical regulations** for transmitters and other equipment to minimize their potential for causing interference to radio services.

  – The Commission administers an **authorization program** to ensure that equipment reaching the market complies with the technical requirements.

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FCC Lab Principal functions

- Technical Studies supporting regulatory policies and rulemaking
- Equipment Authorization including monitoring Telecommunication Certification Bodies
- Post-grant sampling and market surveillance
- Providing comprehensive and timely information to stakeholders including certification bodies, test firms, manufacturers and users of equipment
  - www.fcc.gov/kdb
  - www.fcc.gov/oet

Regulatory Principles

- Rely on market forces to ensure compliance whenever possible

- Minimal technical, administrative and operational rules to control interference

- Encourage innovation through flexibility

- Adjust the rules periodically in response to technology advances and other developments

- Broad rules provide a framework for the private sector to develop detailed standards

FCC Regulations

Title 47 of the Code of Federal Regulations (47CFR) contain among other aspects the following:

- Transmitter specifications
- Radio Services
- EMC specifications
- Telephone Terminal Equipment requirements
- Test Methods
- Equipment Authorization Requirements
- Marketing and Importation Rules

Equipment Authorization Program

- The FCC currently has two equipment authorization approval programs
  1. **Certification**
  2. **Supplier Declaration of Conformity (SDoC)**
- The product approval requirement is specified in the rule part under which equipment operates.
- Many products today fall under multiple rules and are permitted to use both procedures.
- Each of the programs involve the use of **Test Laboratories**
- The certification program requires an independent third party recognized by the FCC and known as a **Telecommunication Certification Bodies (TCBs)** to approve the device.
- Equipment Authorization home page: https://www.fcc.gov/oet/ea

Certification Program
Testing and Certification

- All testing of Certified devices must be done by accredited and FCC recognized testing laboratories
  - Accredited to ISO/IEC 17025
  - The FCC currently recognizes about 588 accredited test firms
  - Test firms may be recognized for up to 18 scopes but not all test firms are recognized for all scopes
- All authorization of devices subject to FCC Certification requirements, for marketing devices in the US, must be done by an accredited certification body that is FCC recognized
  - A total of 41 Telecommunication Certification Bodies (TCBs) have been recognized by the FCC (22 domestic, 19 foreign)
  - A TCB is an independent third-party certification body accredited to international standards
  - ISO/IEC 17065 and ISO/IEC 17025
  - Manufacturers are not permitted to become a TCB

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Major FCC Conformity Assessment Body (CAB) Procedure Related Publications

- Test Firms:
  - Knowledge Database (KDB) Publication 974614
    - Accredited Test Firm Roles and Responsibilities
    - Published 4/02/2019
  - KDB Publication 853844
    - Accredited Test Firm Technical Assessment Checklist
    - Published 3/02/2018
- Telecommunication Certification Bodies (TCBs)
  - KDB Publication 641163
    - TCB Program Roles and Responsibilities
    - Published 4/02/2019
  - KDB Publication 668797
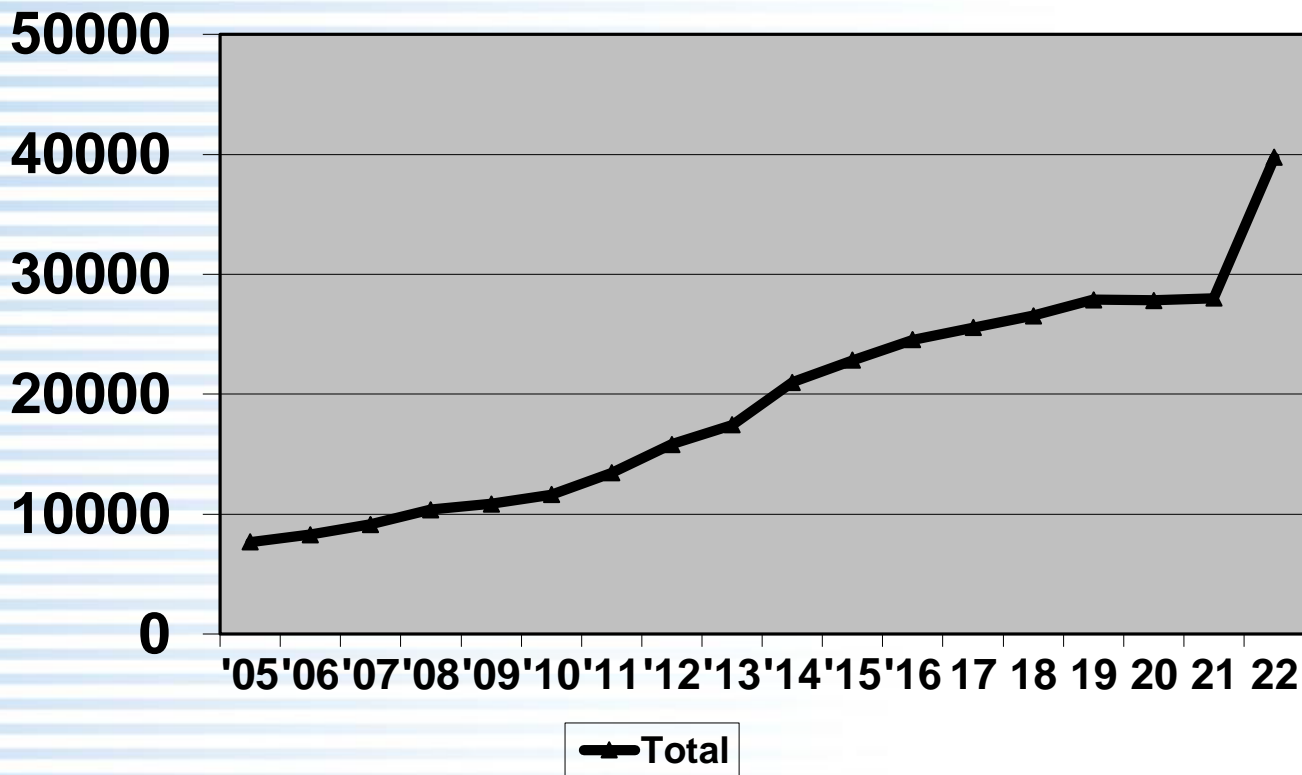   - TCB Program ISO/IEC Guide 65 Technical Assessment Form
    - Published 4/02/2019

FCC Recognized Testing Labs

Region	Accredited Labs
North America	135
Europe (including UK)	82
Asia	365 (Japan-61)
Middle East	6
Total	**588**
Non-MRA FCC directly recognized Labs	**140**

Equipment Authorization Certification Trends (2005 – 2022)

Certification Trends

- All Grants issued by TCBs
  - Grants of Certification in 2022 = 39753
  - Grants of Certification in 2021 = 32243
  - Grants of Certification in 2020 = 27985

OET Laboratory Division
Audits and Market Surveillance

- Overall Goals of the Laboratory
  - Ensure the Integrity of the Grants
  - Ensure Compliance to the Rules
- Test, Evaluate, and Sample Various Types of Authorized Equipment
  - Pre-grant testing
  - Post grant testing
  - Test samples from marketplace
  - Random testing
  - Test samples submitted from Enforcement Bureau
  - Identify and investigate New Technologies
  - Complaints received by public and competitors
- Audit TCB Grants
- Assist the FCC Enforcement Bureau (EB) audit efforts
  - Joint OET/EB projects.
- Help U.S. Customs enforce importation rules

Market Surveillance

- FCC
  - Reviews TCB Grants
  - Requests Samples from Grantees and TCB's
  - Requests audit test results from TCBs
  - Directing specific samples to be tested to TCBs
  - Purchases Samples for testing
  - Focused sampling projects
- TCB
  - FCC requires each TCB to audit 5 % of products they authorized annually
    - 1 % RF Exposure if applicable
    - www.fcc.gov/labhelp KDB Publication 610077 on TCB Surveillance
      - https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?switch=P&id=20540
- Other
  - General public complaints/testing
  - Competitors complaints/testing

Market Surveillance Audit Issues

- FCC Actions
  - Noncompliance issues:
    - Require explanation
    - Monetary fines
    - Confiscate equipment
    - Fix equipment
  - 133 grantee codes deferred in 2022
- TCB Responsibilities
  - Required to report issues to FCC & Grantee and resolutions to FCC
  - TCBs required to test 1978 devices for surveillance in 2022
- Common Issues
  - Applicant Nonresponsive
    - Grantee code deferral
  - Applicant didn't produce or market product
    - Applicant may request dismissal

Recent Areas of Activity

- Recent areas of activity at the FCC:
  – KDB Publications

  – Hearing Aid Compatibility Report and Order

  – Standards Notice of Proposed Rulemaking

  – FCC 22-84 – Protecting Against National Security Threats to the Communication Supply Chain through the Equipment Authorization Program

KDB Publications

- Recently Updated
  - KDB 447498 Mobile and Portable Device RF Exposure Procedures
    - https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?switch=P&id=20676
    - D04 Interim General RF Exposure Guidance V01 provided interim guidance posted on January 17, 2023 and effective until further notice
  - KDB 680106 RF Exposure Considerations for Wireless Power Transfer
    - Updated February 16, 2023

- New Publication:
  - KDB 986446 Equipment Authorization Guidance related to FCC 22-84 - Protecting Against National Security Threats…
    - https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?id=325672&switch=P
  - Published January 24, 2023

- Upcoming KDB Draft Publication:
  - 6 GHz Band Automated Frequency Coordination Systems
    - The FCC is drafting a publication for comment on 6 GHz Standard Access points and Fixed Client Devices in preparation for allowing equipment authorizations
  - KDB 996369 Module Certification Procedures update planned soon

Standards for Hearing Aid Compatibility

- FCC Report and Order 21-28
  - https://www.fcc.gov/document/fcc-updates-hearing-aid-compatibility-rules
  - Adopts ANSI C63.19-2019 and transitions from 2011 version
  - Transition for testing deadline: Devices tested to the 2011 standard procedures must be authorized by June 4, 2023
  - See FCC KDB Publication 285076 for more information

Standards NPRM FCC 22-3

- FCC Notice of Proposed Rulemaking (NPRM)
  - Updating References to Standards for Equipment Authorization Program-Adopted January 24, 2022
  - https://docs.fcc.gov/public/attachments/FCC-22-3A1.pdf
  - Comment periods ended May 16, 2022 and FCC reviewing comments and determining next steps
  - NPRM Recommendations:
    - Adopting new standard C63.25.1:2018
      - Site validation procedures for radiated sites from 1-18 GHz
    - Updating currently FCC recognized standard IEEE/ANSI C63.10:2013 to C63.10:2020
      - Procedures for compliance testing of unlicensed wireless devices
    - Updating currently FCC recognized standard ISO/IEC 17011:2004 to 17011:2017
      - Requirements for Accreditation Bodies Accrediting Conformity Assessment Bodies
    - Updating currently FCC recognized standard ISO/IEC 17025:2005 to 17025:2017
      - General Requirements for Competence of Testing and Calibration Labs
    - Proposed to not adopt ANSI C63.4a: 2017

FCC 22-84

- FCC 22-84
  - Protecting Against National Security Threats to the Communications Supply Chain through the Equipment Authorization Program
  - Prohibits authorization of "Covered" Equipment (as identified on the FCC's Covered List established pursuant to the Secure and Trusted Communications Networks Act of 2019)
    - New Rules effective February 6, 2023
    - Further Notice of Proposed Rulemaking (FNPRM)
      - Identified several topics for additional consideration including:
        - » Components, Revocation of existing grants, US point of presence.

FCC 22-84 (cont.)

- Requires all applicants to identify whether the equipment for which authorization is sought was produced by any of the named entities and certify that the equipment is not "Covered"

- Requires all applicants to designate a U.S. Agent for Service of Process

- Additional guidance on FCC OET Website and in KDB Publication 986446

For more information

- **e-CFR**
  - https://www.fcc.gov/general/rules-regulations-title-47
- **Measurement procedures**
  - https://www.fcc.gov/general/equipment-authorization-measurement-procedures
- **Equipment Authorization Page**
  - http://www.fcc.gov/oet/ea/
- **Knowledge Database (KDB)**
  - www.fcc.gov/labhelp or www.fcc.gov/kdb
- **Telephone Terminal Equipment**
  - www.part68.org
- **Using and referencing ISO and IEC standards for technical regulations**
  - https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100358.pdf

KDB Guidance

- For questions about equipment authorization, the FCC has the FCC OET Knowledge Database (KDB)
  - The KDB page the FCC provides links to about 200 general guidance documents on various topics
    - www.fcc.gov/kdb
  - If users can't find the information they are looking for or need a more detailed response, there is a link to "Submit an Inquiry" where users can submit a detailed question and get a more specific response
    - https://apps.fcc.gov/oetcf/kdb/forms/InquiryForm.cfm

Questions and Answers

Thanks