



# **2016 MIC MRA International Workshop -Tokyo, Japan FCC Update**

**US Federal Communications  
Commission  
Office of Engineering and Technology**

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# Overview

- FCC Function
- FCC Rulemakings
- Knowledge Database (KDB)
- Certification and MRA Status
- Market Surveillance
- Recent considerations
- Information Sources



# Federal Communications Commission

- Federal Communications Commission (FCC) regulates the private sector telecommunications industry, in the public interest
  - Establishes technical regulations for transmitters and other equipment to minimize their potential for causing interference to radio services.
  - Administers an authorization program to ensure that equipment reaching the market complies with the technical requirements



# OET Lab Principal Functions

- Equipment Authorization including monitoring Telecommunication Certification Bodies (TCBs)
- Ensure compliance through market surveillance and enforcement
- Technical Studies supporting regulatory policies and rulemaking
- Providing web-based comprehensive and timely clarification of technical standards and procedures

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# Review of Equipment Authorization Program

- Presented at June 2012 Commission Meeting
  - First NPRM – TCB Obligations
    - Consider:
      - Refine & codify PBA procedure
      - Clarify TCB obligations for post-grant checks
      - Require accreditation for all test labs
      - Recognize latest industry testing standards
  - Second NPRM – Administrative Procedures
    - Consider:
      - Merge different self-approval procedures
      - Modify permissive change and Software Defined Radio rules
      - Certify modular transmitters for licensed services



# FCC Equipment Authorization Process

- Notice of Proposed Rulemaking (NPRM) FCC 13-19 became Report and Order FCC 14-208
  - Released FCC 13-19 February 15, 2013
    - Also known as ET Docket 13-44
  - FCC 14-208 adopted December 17, 2014
    - Released December 30, 2014
    - Published in the Federal Register June 12, 2015
    - Effective date July 13, 2015
    - Highlights described in following slides
    - Some changes effective immediately and others have specific transition dates
    - FCC update over 70 KDBs to reflect changes
      - KDB updates continue as transition dates pass



# FCC 14-208 Summary

- Equipment Authorization Order overview
  - FCC stopped accepting applications for FCC grants for equipment certification on July 13, 2015
  - TCBs now Certify all equipment
    - Pre-approval guidance (PAG) procedure (formerly Permit but ask) codified and TCB exclusion list eliminated
      - PAG Equipment list and procedures specified in KDB publication
    - TCBs permitted to Dismiss applications not compliant with standards and upload relevant information
      - Limited to applications they approved or been requested to approve
      - Limited to pre-grant and within 30 days after grant
      - Pending system programming
    - Codifies TCB Post Market Surveillance requirements
      - TCBs required to audit 5% of total EMC/Telecom devices they certified annually
        - » 1% of devices with RF exposure compliance requirements
      - TCB may request voucher to obtain product from marketplace
      - System programming changes pending to allow TCBs to request devices through FCC website





# FCC 14-208 Summary 2

- Additional options for addressing TCB Performance issues:
  - Limit scope of deficient TCB
  - Require all deficient TCB grants to be issued through pre-approval guidance procedures
- Update rules to reference current ISO/IEC Standards:
  - ISO/IEC 17011:2004 for Accreditation Bodies
  - ISO/IEC 17025:2005 for Accredited Laboratories
  - ISO/IEC 17065:2012 – TCBs must be accredited by 9/15/2015
- Update requirements for testing laboratories:
  - Require all Certification and DoC testing to be done at accredited lab that is FCC recognized
    - All testing completed by external resources/subcontracted shall be done at a lab that is accredited and FCC recognized
    - FCC KDB 974614 identifies scopes for recognized labs
  - FCC stopped accepting requests for recognition of new 2.948 Listed Test Firms on July 12, 2015
    - Existing 2.948 recognized labs will remain recognized until July 12, 2016

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# FCC 14-208 Summary 3

- Codify requirements for recognition of laboratory Accreditation bodies- 47 CFR 2.949
  - Current procedures allow FCC to recognize:
    - Domestic accredited labs
    - Foreign accredited labs under the terms of Government to Government Mutual Recognition Agreement (MRA)
    - Alternative arrangements can be recognized by FCC
      - » Currently no alternative arrangements recognized
  - New procedures allow same options but do not require that FCC develop procedures to recognize accrediting bodies in non MRA countries
    - If procedures to recognize non MRA country labs are developed they will be published but this is not required by FCC 14-208



# FCC 14-208 - Standards Related Issues

- ANSI C63.4-2014 – Testing Unintentional Radiators
  - Replaces ANSI C63.4-2003 and ANSI C63.4-2009 version
  - ANSI C63.4-2014 only option after July 12, 2016
  - Any version of the three test standards may be used before July 13, 2016.
  - Limited exceptions to standards identified in KDB publications
- ANSI C63.10-2013 - Testing Unlicensed Wireless Devices
  - Replaces ANSI C63.10-2009 allowed by DA-09-2478
  - ANSI C63.10-2013 must be used after July 12, 2016.
  - Either standard version may be used before July 13, 2016
- ANSI C63.5-2006 – RF Measurement Antenna Calibration
  - Required by MIC MRA Workshop Tokyo Japan ANSI C63.4-2009, ANSI C63.4-2014 and ANSI C63.10-2013

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# FCC 14-208 - Standards Related Issues 2

- Delegated authority
  - Provides greater flexibility for FCC/OET to use delegated authority to address minor technical issues related to updating standards for Parts 2, 5, 15 and 18.
    - New standards adoption or major standards revisions must still go through rulemaking process
- Site Validation when using ANSI C63.4 or ANSI C63.10
  - 30 MHz to 1 GHz - test facilities for radiated measurements required to meet site validation requirements of ANSI C63.4-2014 after July 12, 2016
  - 1 GHz to 40 GHz - test facilities can use either site validation option in ANSI C63.4-2014 clause 5.5. After transition (3 years) the test facility is required to comply with CISPR 16-1-4:2010-04





# FCC 14-208 Accredited Labs

- Recognition of accredited testing laboratories
  - FCC KDB 974614 will be updated
  - Test firms must be accredited to ISO/IEC 17025 and the FCC requirements and FCC recognized in order for reports to be valid
  - Testing by external resources/subcontracted must be completed by accredited test firm that is FCC recognized
    - This is an expansion of the requirements in ISO/IEC 17025
  - TCBs will be required to verify that a test firm is FCC recognized for scope of testing for test reports they accept and authorize





# FCC 14-208 Accredited Labs II

- Accredited testing laboratory scopes (KDB 974614)
  - 6/23/15 KDB scopes for accredited test firms will be updated soon:
    - Part 15 Unintentional Radiators
    - Part 18 Industrial, Scientific, and Medical Equipment
    - Part 15 Unintentional Radiators except Part 15D
      - Above 26.5 GHz
      - Below 26.5 GHz
    - Part 15 Subpart D (UPCS)
    - Part 15 Subpart E (DFS)
    - Licensed Devices Radio Service Rule Parts
      - Commercial Mobile
      - General Mobile
      - Part 96
      - Maritime and aviation
      - Microwave
      - Broadcast
    - RF Radiation Exposure
    - Part 20 Hearing Aid Compatibility (HAC)
    - Part 20 Signal Boosters

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# FCC 14-208 Accredited Labs III

- Test firms don't need to be accredited to all scopes but must be accredited to everything within each scope they are accredited for
- FCC discussing plan to apply scopes on ~380 current Labs
- Electronic filing system updates in process and expect to be completed before July 12, 2016



# FCC NPRM 15-92

- ET Docket 15-170 became Notice of Proposed Rulemaking (NPRM) 15-92
  - Adopted July 17, 2015
  - Released July 21, 2015
    - Comments due by October 9, 2015
    - Reply comments due by November 9, 2015
  - Proposals
    - Unifying self approval procedures
    - Modular transmitters
    - Software based capabilities
    - Changes to certified equipment



# FCC NPRM 15-92 II

- Proposals (continued)
  - Responsible Parties for certified equipment
    - End products with modular transmitters
    - Modification by third parties
    - Repaired and refurbished equipment
    - Imported equipment
  - Information with applications for certification
  - Confidentiality of applications
  - Grant date/publication date/provisional grant





# FCC NPRM 15-92 III

- Proposals (continued)
  - Update certification and self approval procedures
    - Labeling – E-Label
    - Measurement procedures-Add KDBs
    - Rule consolidation-Remove outdated rules
  - Importation rules
    - Form 740
    - Customs bonded warehouse
    - Trade show devices allowance for licensed devices
    - Excluded devices- update list
    - Personal use imports- licensed devices



# Electronic Labeling

- E-Label Act of 2014/FCC NPRM 15-92
  - KDB 784748
    - <https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?switch=P&id=27980>
    - Released July 11, 2014
  - Allows devices with integrated non removable screens to be electronically labeled
    - Must be able to access:
      - Without special access code
      - In less than three steps in device menu
    - Must be secured and unmodifiable
    - Access instructions must be provided to users
    - Must have physical label for importation and purchase
      - BULK IMPORTATION TAKE ADVISORY LABEL WITH CONDITIONS



# FCC Equipment Authorization KDB Webpage

- Knowledge Database (KDB) Publications
  - [www.fcc.gov/labhelp](http://www.fcc.gov/labhelp)
- Draft Publications
  - Review and comment on proposed policies before adoption
  - <https://apps.fcc.gov/oetcf/kdb/reports/PublishedDocumentList.cfm>
- Proposed Draft Publication for update
  - 668797 – TCB ISO/IEC 17065 Technical Assessment Checklist
  - 610077 – TCB Post Market Surveillance



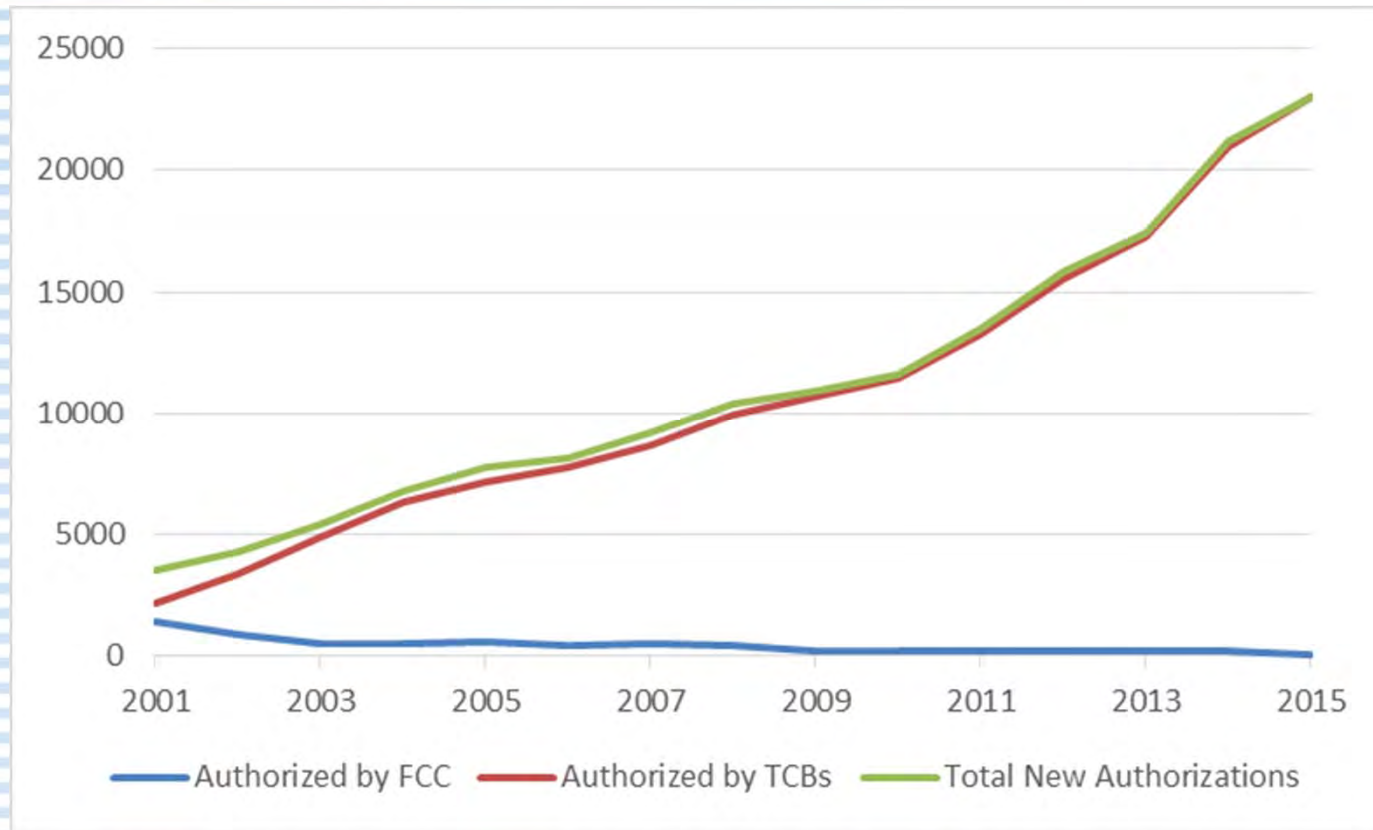
# KDB Updates

- KDB 974614 - Test firm roles and responsibilities
  - Update for FCC 14-208 on June 23, 2015
  - Scopes for test firms
- KDB 853844 – Accredited Test Laboratory Technical Assessors Checklist - New version July 31, 2015
- KDB 641163 TCB Roles and responsibilities
  - Update for FCC 14-208
  - Clarified evaluation/review/certification decision related to ISO/IEC 17065
  - Updated standards versions
  - Clarified TCB scopes in relation to 17025 lab scopes
- KDB 901874 – Telecom MRAs
  - Moved information from FCC website to KDB





# Equipment Authorization Certification Process Trends



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# Phase I/EMC Arrangement MRA Status

- The US has an operational MRA/EMC arrangement for acceptance of test data with the following countries:

- Australia
- Canada
- Chinese Taipei
- European Union
- Hong Kong, China
- Israel
- Japan
  - 74 recognized
- Korea
- Singapore
- Vietnam

<b>Region</b>	<b>Number of Labs FCC Recognized</b>
North America	137
Europe	51
Asia	187
Israel	4
<b>Total</b>	<b>379</b>



# MRA Status

- MRA's for mutual acceptance of approvals are operational with the following countries:
  - Canada
  - European Union
  - Hong Kong, China
  - Singapore
  - Japan
- A total of 38 Telecommunication Certification Bodies (TCBs) have been recognized by the FCC.
  - 20 domestic TCBs
  - 18 foreign TCBs
    - 1 Japan



# Market Surveillance

- FCC
  - Reviews TCB Grants
  - Requests Samples from Grantees and TCB's
  - Purchases Samples
  - Focused sampling projects
  - FCC selectively requesting audit test results from TCBs
  - FCC selectively directing some samples to TCBs
- TCB
  - FCC requires each TCB to audit 5 % of products they authorized annually
    - 1 % RF Exposure if applicable
    - [www.fcc.gov/labhelp](http://www.fcc.gov/labhelp) KDB 610077
      - <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
  - Non compliance issues:
    - Require explanation
    - Monetary fines
    - Confiscate equipment
    - Fix equipment
- TCB Responsibilities
  - Required to report issues to FCC & Grantee and resolutions to FCC
- Common Issues
  - Applicant Non responsive
    - Grantee code deferral
  - Applicant didn't produce or market product
    - Applicant may request dismissal



# Market Surveillance Summary

- Blocked Grantee Codes
  - 172 Grantees blocked in last year
    - Failure to submit samples
    - Invalid contact information
  - Codes unblocked as soon as issue resolved
- TCBS Surveillance 2015
  - Required to audit/sample test 1153 devices
  - Reports due January 31, 2015
    - Reports in process of being evaluated
    - Thru February 18, 2016 33 non-compliances reported and being reviewed

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# Recent Concerns/Issues

- RF Exposure
  - Wireless chargers
    - How to test and fit in existing rules
    - Part 15/18
    - Beam forming chargers
    - 6.78 MHz high power chargers
  - 60 GHz devices
  - 5G (fifth generation) mobile devices
  - HDMI Dongles



# Recent Concerns/Issues II

## ● Standards

- ANSI C63.26-2015 published 1/15/2016
  - FCC has not adopted yet
  - Comments submitted in FCC NPRM 15-92
- Under development by ANSI committees
  - ANSI C63.29 – Lighting products
  - ANSI C63.30 – Wireless power transfer products
  - ANSI C63.31 – ISM Equipment (MP-5)





# Training Opportunities

- Monthly conference calls with TCB Council
  - 10:30 AM first Tuesday of every month
- TCB Meetings
  - TCB/FCC workshop twice annually to discuss issues and for training.
    - Next Meeting April 11-14
      - April 11 – Training for new TCB Staff
      - April 12-14 - Regular meeting
- Other training opportunities as necessary
- FCC Knowledge Database
  - [www.fcc.gov/labhelp](http://www.fcc.gov/labhelp)
- Beta Test/Practice Website
  - <http://appsdemo.fcc.gov/oetcf/eas/index.cfm>



# Questions and Answers

**Thanks**

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# Information On Line

- **Equipment Authorization Webpage**
  - Measurement techniques, explanation of EA programs, filing information, MRAs, TCBs, EA announcements, etc.:  
<http://www.fcc.gov/oet/ea/>
- **Procedures for information sharing and distribution**
  - Updated Interpretation Database & new contact desk for web based inquiries: <http://www.fcc.gov/labhelp>
- **OET Info on line (Orders, Public Notices, etc.)**
  - <http://www.fcc.gov/oet/info/>
- **FCC Rules and Regulations:**
  - <http://www.fcc.gov/oet/info/rules>
- **General FCC Information:**
  - <http://www.fcc.gov>
- **FCC MRA Webpage**
  - [www.fcc.gov/oet/ea/mra](http://www.fcc.gov/oet/ea/mra)



# US – Japan Telecom MRA

## **Scope: Telecommunications terminal equipment and radio equipment**

- Limited to radio and telecommunications equipment subject to certification
  - Doesn't include ISM and unintentional radiators.
- United States – FCC Rules (47 CFR)
- Japan – Telecom Business Law, Radio Law, related ordinances
- Regardless of location of the supplier or country of origin of the equipment





# US – Japan Telecom MRA

## ● **Entry into force**

- Signed February 16, 2007 in Washington, D.C. by officials of the U.S. and Japan
- Japan's Parliament (Diet) approved the MRA; June 19, 2007
- Arrangement on Electro-Magnetic Compatibility (EMC): through Exchange of letters Exchange of diplomatic notes – December 2007
  - Official implementation date January 1, 2008

## ● **Information on US-Japan MRA:**

- <http://gsi.nist.gov/global/index.cfm/L1-4/L2-16/L3-92>
- <http://transition.fcc.gov/oet/ea/mra/Japan.html>



# MRA Webpage

- Organizes all FCC related MRA information in one location:
  - [www.fcc.gov/oet/ea/mra](http://www.fcc.gov/oet/ea/mra)
    - Links to agreements
    - Implementation information
      - Accredited CAB requirements
      - Certification Body requirements
        - » TCB Guide 65/17065 Checklist
        - » TCB Roles and Responsibilities
        - » Measure procedures
  - Contact information for stakeholders



# FCC MRA Participation

- **US-EU Mutual Recognition Agreement**
  - Bi-lateral, multi-sector
- **US-EFTA Mutual Recognition Agreement**
  - Bi-lateral, multi-sector
- **US-Japan Telecom MRA**
  - Bi-lateral, single sector
- **Asia Pacific Economic Co-operation (APEC) Mutual Recognition Arrangement**
  - Multi-lateral, single sector
- **Inter-American Telecommunication Commission (CITEL) Mutual Recognition Agreement**
  - Multi-lateral, single sector
- **US – Mexico (signed but not operational yet)**
  - Bilateral, Single sector
- **US – Israel**
  - Bilateral, Single sector