EAC Voting Equipment Conformity Assessment System

(Comparison with similar product approval schemes)

Presented by: Art Wall

Introduction

- **Conformity assessment terms**

- **Conformity assessment guides and standards**

- **EAC conformity assessment program**

- **Similarities of EAC and FCC certification programs**

- **Value of inputs from all stake-holders – manufacturers, labs, certifications, public and state and local governments.**

- **Enforcement and insuring compliance**

- **Conclusions and additional thoughts**

Conformity Assessment Terms

- **<u>Certification</u>** – *a third party conformity assessment activity that is performed by a person or body that is independent of a person or organization that provides that object …*

- **<u>Accredited Laboratory</u>** -- *a conformity assessment body that is determine competent through accreditation to test equipment to a specified standard(s)* **(In some instances, a regulatory authority or specifier may place additional requirements on an accredited laboratory)**

- **<u>Certification Body</u>** -- *a conformity assessment body designated or determined competent to evaluate test data and other specified information and compares it with the appropriate regulations, policies, interpretations, etc. to determine compliance of equipment subject to certification*

Conformity Assessment guides/standards

- **ISO/IEC Standard 17025 -- General requirements for the operation and recognition of calibration and testing laboratory**
- **ISO/IEC Guide 58 -- General requirements for the operation and recognition of calibration and testing laboratory accreditation systems**
- **ISO/IEC Standard 17011 -- General requirements for accreditation bodies accrediting conformity assessment (certification) bodies**
- **ISO/IEC Guide 61 -- General requirements for assessment and accreditation of certification/registration bodies**
- **ISO/IEC Standard 17024 – General requirements for bodies operating certification of persons**

EAC Certification Program -- Key Elements

- **Test laboratory accredited by NIST to ISO Guide 17025 and the EAC as Voting System Test Laboratories**

- **Vendor registered with EAC**

- **Test Plan submitted to EAC for approval**

- **Voting system submitted to recognized test lab for testing to show compliance V.S. 2005 Guidelines**

- **Application and test report submitted to EAC for reviewed by Technical Review team and approval**

- **Upon successful review, EAC certifies Voting System and published list of approved systems.**

- **Quality systems established, which includes audits, to ensure that the voting system sold is representative of the system certified by EAC.**

Federal Communications Commission

- **The FCC is an independent regulatory agency created by the Communications Act of 1934, as amended, to regulate the radio and wire lined communications in the public interest.**

  - Mandatory and voluntary standards have been adopted by the FCC to ensure efficient use of the radio spectrum.

  - An equipment authorization (conformity assessment) system was adopted to ensure compliance with the standards before the equipment can be legally marketed in the U.S.

 Rev 1 – 08/16/05 - HSB

EMC Environment
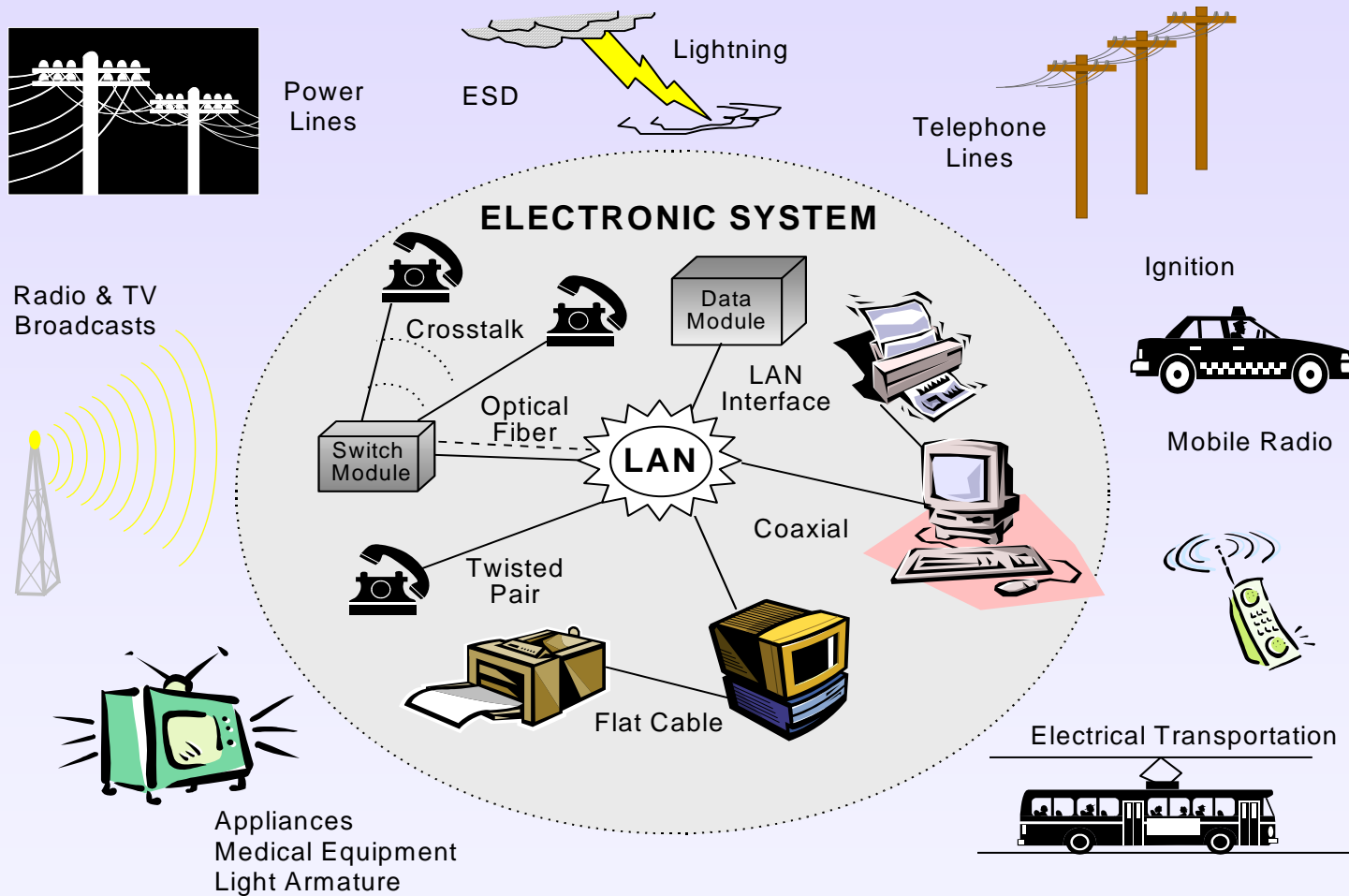
FCC Regulations

(Title 47 of the Code of Federal Regulations)
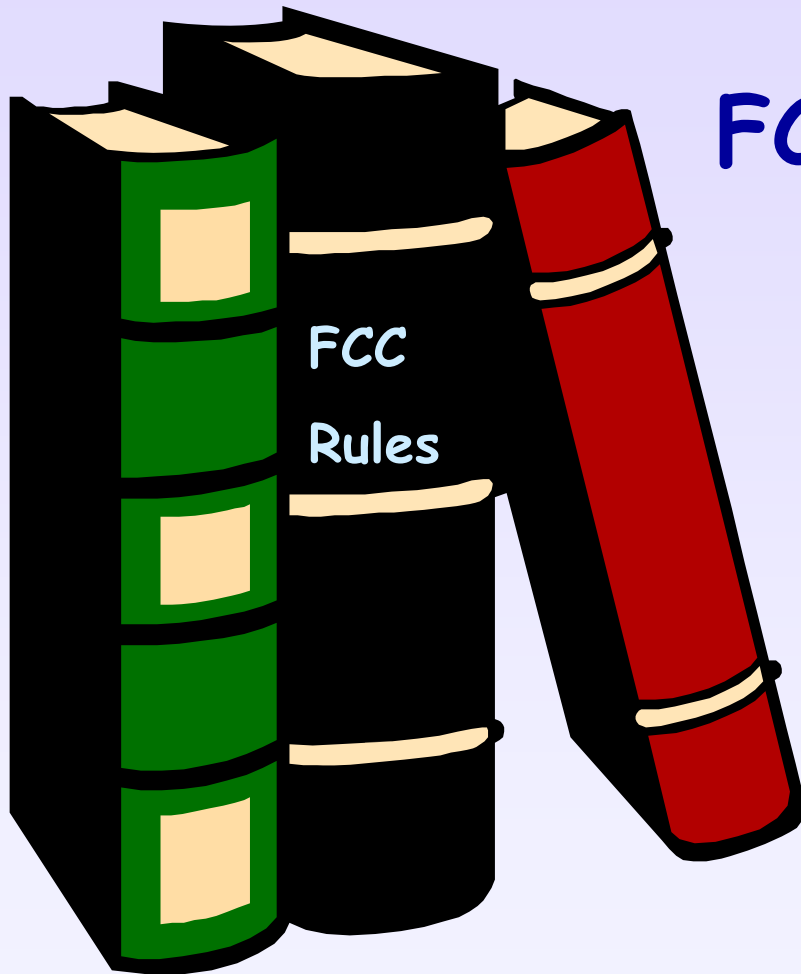
FCC Rules Specify:

- Technical Regulations
- Test Methods
- Conformity Assessment Requirements
- Marketing requirements

FCC Rules

Non-compliant equipment

FCC Equipment Authorization Program

The type of approval is specified in the rules for the particular type of device

Transmitters are the only equipment subject to Certification

Certification
(Approved by FCC or TCB)

DoC
(Self-approval using an accredited lab)

SDoC
(Self-approval Database by ACTA)

Verification
(Self-approval)

FCC Certification Process

```
┌─────────────────────────┐
│ ┌─────────────────────┐ │         ┌──────────────┐                    ┌───┐   ┌──────────────┐
│ │ Test and            │ │         │ Submit       │                    │ F │   │ Label        │
│ │ Evaluate Product    │─┼────────▶│ Application  │───────────────────▶│ C │   │ Product and  │
│ │ to Determine        │ │         │ to TCB       │                    │ C │   │ Instructions │
│ │ Compliance          │ │         └──────────────┘               ┌───▶│   │──▶│ in User      │
│ └─────────────────────┘ │                                        │    │ G │   │ Manual       │
│ ┌─────────────────────┐ │                                        │    │ R │   └──────┬───────┘
│ │ Prepare Test        │ │         ┌──────────────┐               │    │ A │          │
│ │ Report and          │─┼────────▶│ Submit       │───────────────┼───▶│ N │   ┌──────▼───────┐
│ │ Application          │ │         │ Application  │                    │ T │   │ Market       │
│ └─────────────────────┘ │         │ to FCC       │                    │   │   │ Product      │
└─────────────────────────┘         └──────────────┘                    └───┘   └──────────────┘
```
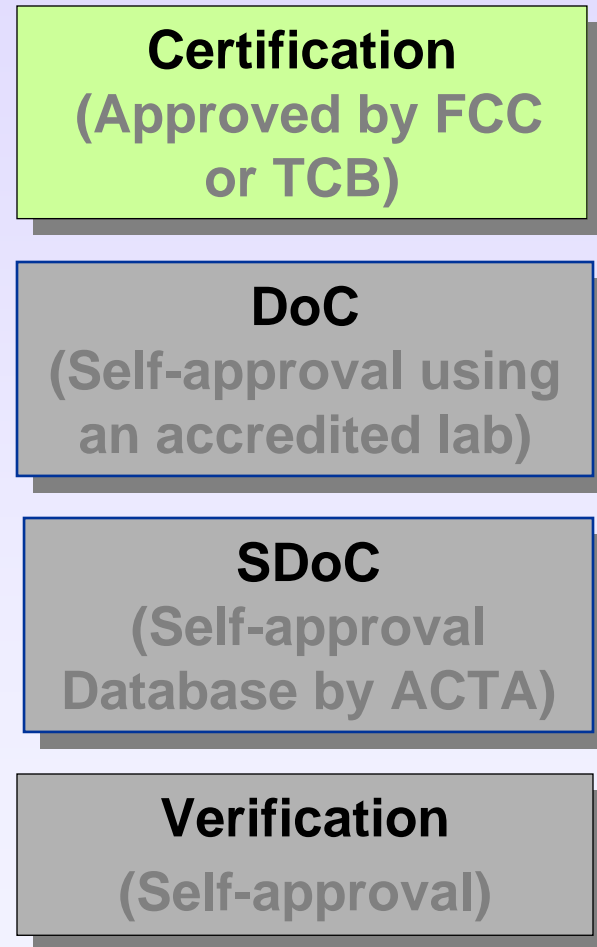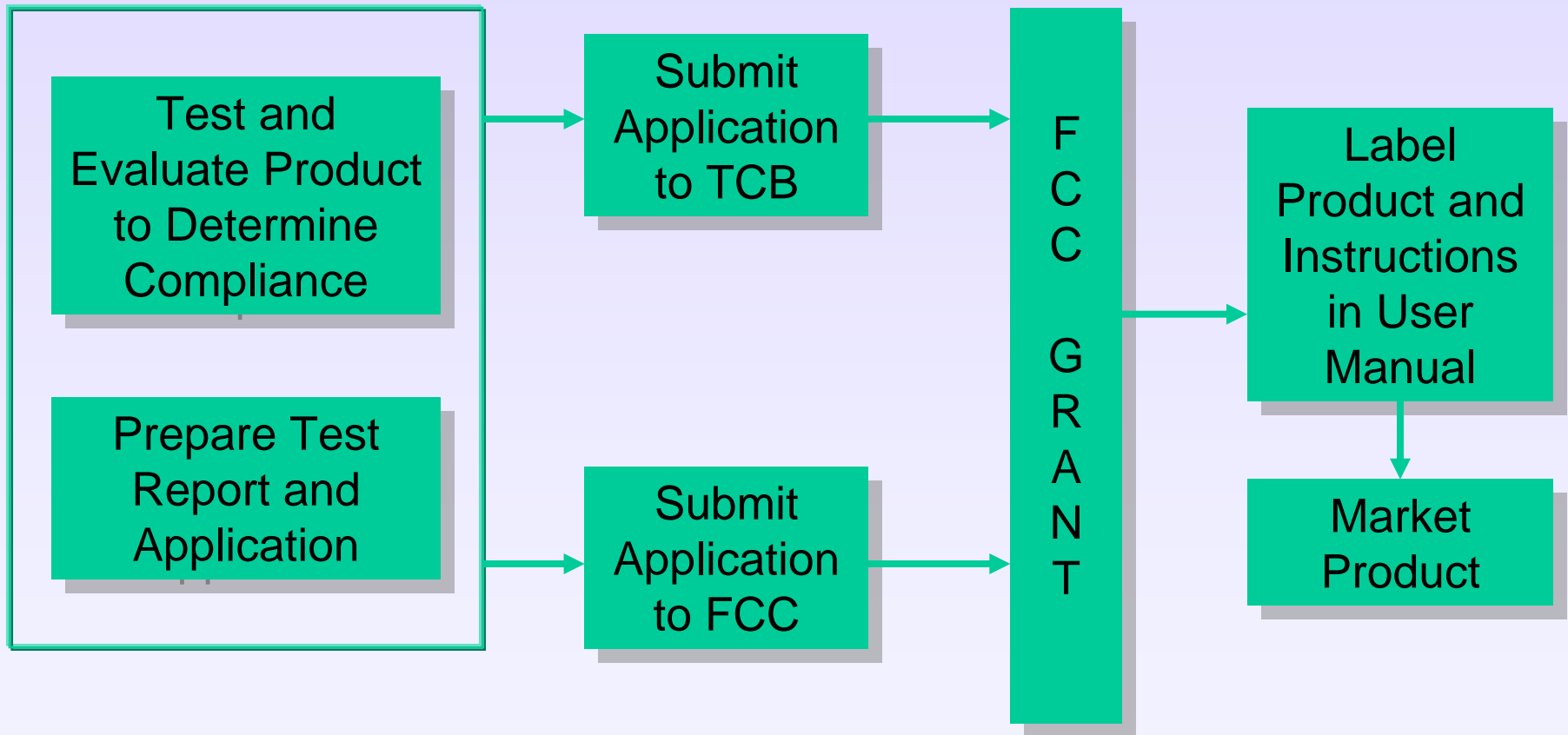
FCC Certification – key elements

- **The equipment standard and test process must be specified**
- **The equipment must be tested by an laboratory accredited (in most cases) to ISO Standard 17025**
- **The test report and application must be submitted to the FCC (or designated TCB) for approval.**
- **A grant of certification is issued by the FCC.**
- **Follow-up audits are performed to ensure continued compliance and appropriate enforcement action is taken, if necessary.**

 Rev 1 – 08/16/05 - HSB

Conclusion

- *A comparison of the key elements of the EAC and FCC certification systems show that they are very similar.*
- *A key element in the development of any certification system should include the participation of all stakeholders, which for Voting Systems include: vendors, test laboratories, NIST, State voting authorities, etc.*
- *A system for disseminating information is considered essential.*
- *A system for determining continued compliance is also considered essential.*

 Rev 1 – 08/16/05 - HSB