SOURCE: **TIA Engineering Committee TR-45**

TITLE: **Quality of Standards**

AGENDA ITEM: **8.2 Quality of Standards**

DOCUMENT FOR:

Decision	
Discussion	
Information	**X**

1. Decision or Action Requested

No decision or action is requested. This contribution presents, for the information of the participants, a report of the TIA Engineering Committee TR-45 on the Quality of Standards.

2. References

Information on TIA TR-45 standards can be found at http://www.tiaonline.org

3. Issues for Discussion

This contribution presents a report of the TIA Engineering Committee TR-45 Location-based Services – Standards Status as of 25 April 2003. The contribution contains the following information.

- An Overview of the TIA Engineering Committee TR-45
- New Paradigms in Standards Development
- Philosophy and Principles
- Example of Standards Development Process
- Global Cooperation
- Enforcement
- Commitment to Quality Standards Development
- A Few References, Acronyms, and Definitions

Engineering Committee TR-45

Quality of Standards
April 2003

Outline

- TIA Engineering Committee TR-45 Overview
- New Paradigms in Standards Development
- Philosophy and Principles
- Example of Standards Development Process
- Global Cooperation
- Enforcement
- Commitment to Quality Standards Development
- A Few References, Acronyms, and Definitions

Engineering Committee TR-45

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LAES Ad Hoc Group

New Paradigms in Standards Development

- Standards development has moved rapidly to a paper-less environment.
- Moving away from face-to-face meetings. And, in some arenas moving toward on-line continuous virtual meetings.
- Shorter schedules have been driven by rapid technology advancements and market pressures.
- New standards are the subject of Financial Analyst scrutiny.
- Global companies are driving global standards.
- Worldwide meetings are increasing expenses and creating delegation burnout.

New Paradigms in Standards Development

(continued)

- There has been an increase in the number of non-accredited fora and coalitions where processes are different and/or vague, in some cases.
- IPR is being used as a strategic weapon in standards.
- There are desires for convergent specifications to support fungible products from multiple sources.
- There are desires for standard functional/physical unbundled interfaces and interconnectivity.
- There are divergent desires for Revolutionary and Evolutionary standards for the future.

Standards Philosophy

"Voluntary consensus standards for products processes and services are at the foundation of the U.S. economy and society. The United States has a proud tradition of developing and using voluntary standards to support the needs of our citizens and the competitiveness of U.S. industry."

ANSI homepage

Guiding Principles

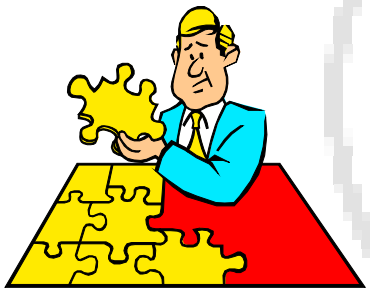
- Decisions are reached through consensus
- Participation is open to all affected parties
- Balance is maintained among competing interests
- The process is transparent
- The process is flexible - allowing the use of different methodologies to meet the needs
- Any patented content must be made available either without compensation or under reasonable terms and conditions.

U.S Standards Organizations

- The American National Standards Institute is the accrediting body for US Standards Development Organizations (e.g. TIA and T1)
- ANSI requires due process procedures to ensure fairness and openness, including:
  - Announcing meetings in advance,
  - Distributing agendas in advance,
  - Adherence to written procedures governing the method used to develop standards, and
  - Giving public notice and opportunity for comment on proposed standards
- The Telecommunications Industry Association is a recognized standards development organization accredited by the American National Standards Institute.
  - 2002 TIA Engineering Manual, 3rd Edition (effective July 1, 2002)

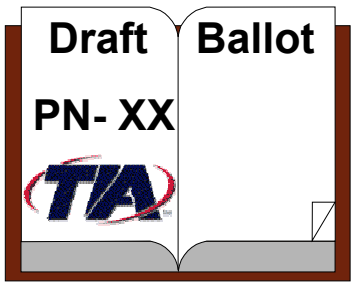
TIA Standards Process

Technical contribution submitted to Engineering Committee or Subcommittee



If supported, Project Initiation Notice (PIN) is completed and submitted for approval

Engineering Committees develop technical parameters (Open to world-wide membership)

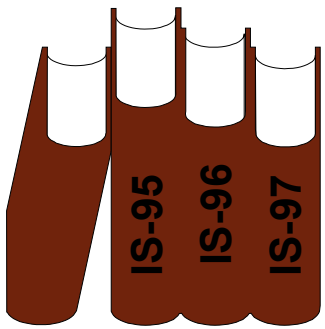


Draft document circulated for ballot to identify unresolved issues and establish consensus

TIA Standards Process (continued)

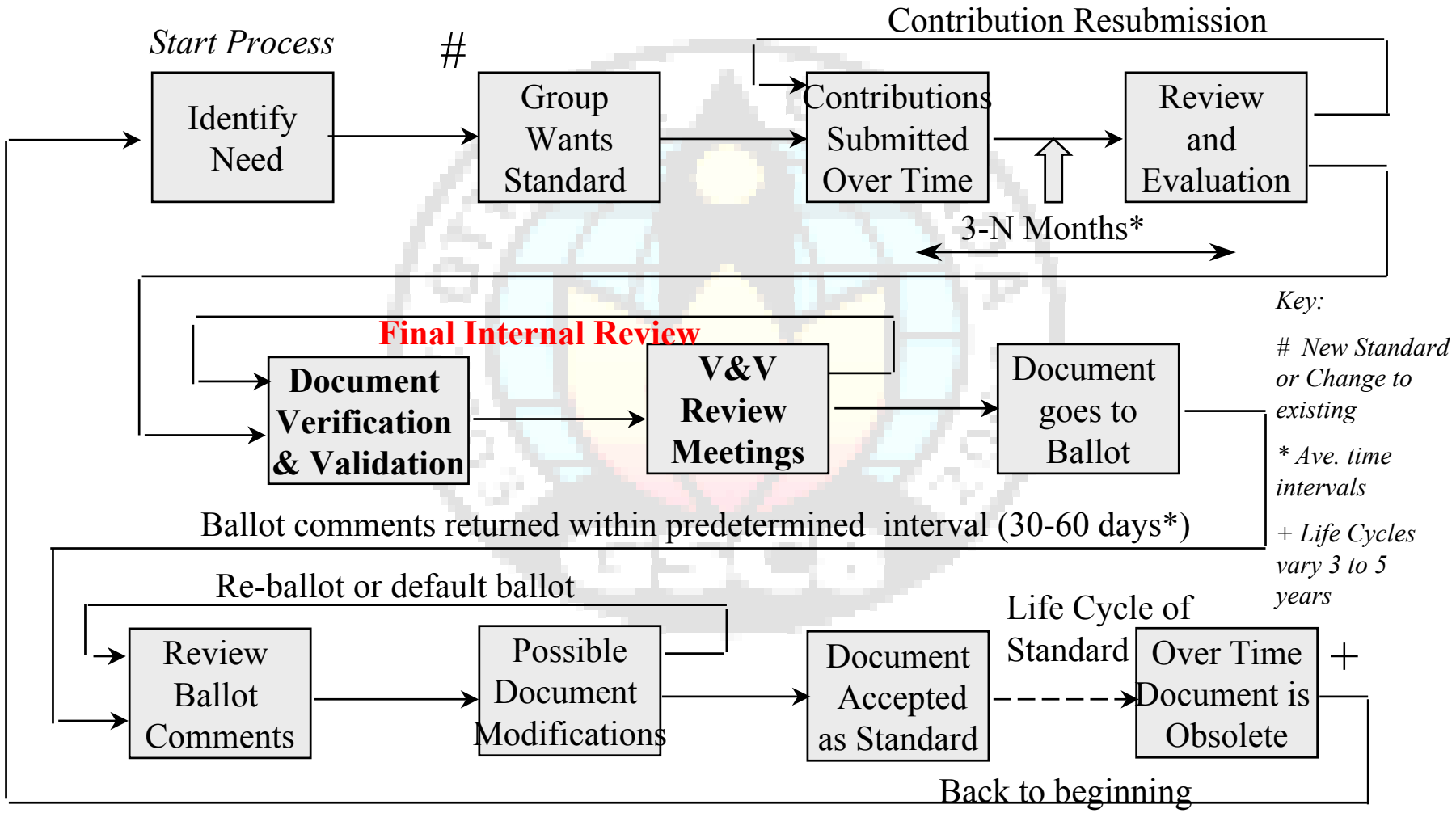
Industry-wide ballot, either a Standards Proposal (SP) or a Project Number (PN), is circulated (Any interested party can secure a copy of the ballot, vote and provide comments.)

Final version of document, with industry consensus, is forwarded to the Telecommunications Standards Subcommittee (TSSC) and ANSI for approval



Published as a TIA Standard

Standards Development Process



Verification & Validation

- There are a number of variations on a basic theme in use within the Subcommittees
- Process is based on a ***Structured Walkthrough*** of the proposed Standard document
- May be conducted outside the meeting by members
- Peer review that must involve “fresh eyes”
- Generates a discrepancy report in standard format where each issue may be identified as editorial, technical or other
- Resolution of issues may be accepted, accepted as amended, rejected, deferred

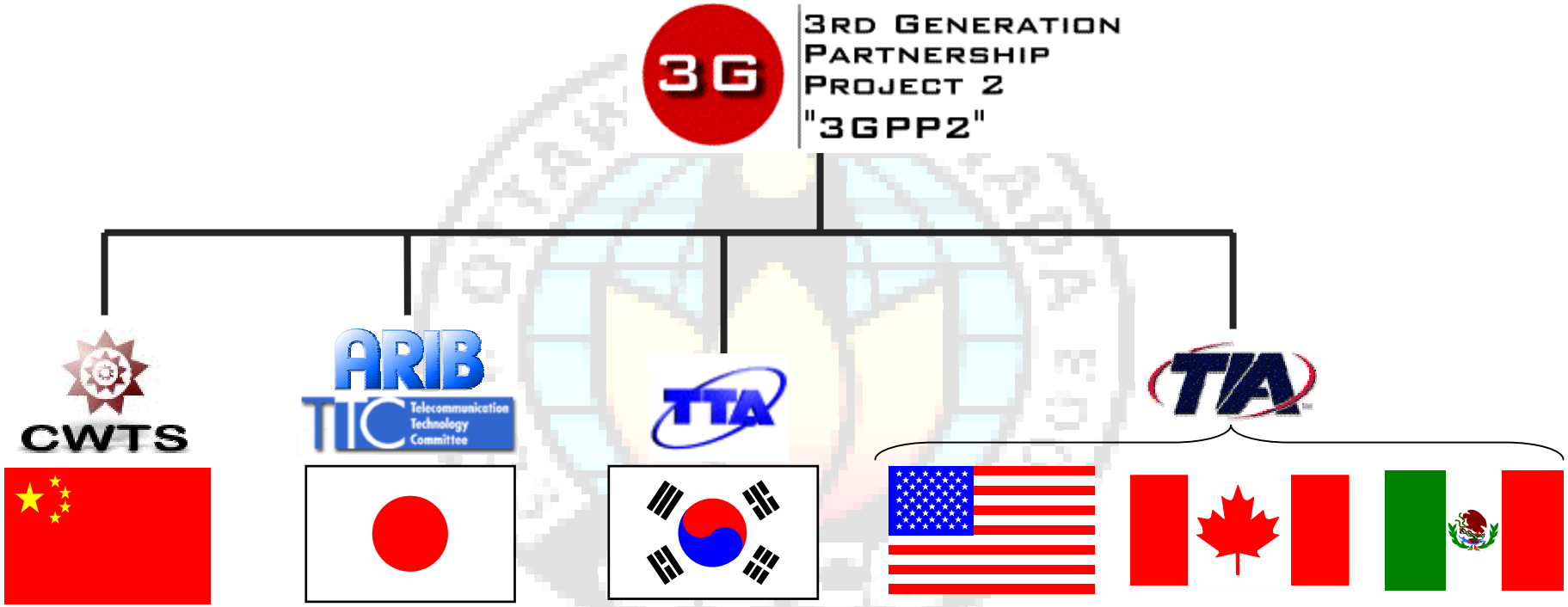
Ties Around the Globe

- TIA TR-45 Engineering Committee membership open to companies world-wide with direct and material interests.
- TIA participates in 3GPP2, which links it with Standards Development Organizations (SDOs) in China, Japan and Korea
- TIA participates in ITU activities through its involvement with the U.S. National Delegation coordinated by the U.S. State Department

TIA TR-45 Coordination with 3GPP2

- TR-45 and 3GPP2 have been closely coupled and have undertaken many joint work projects for the last four years.
  - TR-45.2 TSG-N (Core Network)
  - TR-45.4 TSG-A (IOS)
  - TR-45.5 TSG-C (cdma2000)
  - TR-45.6 TSG-P (packet network architecture)
- A recent 3GPP2 organizational change
  - TSG-X TSG-N + TSG-P.
- TIA TR-45 is the standards organization that publishes 3GPP2 specifications.
- TR45 supports the ballot and publication of 3GPP2 specs.
- Clear delineation between TR-45 and 3GPP2 projects.

3GPP2 SDO Partners



ARIB	**Association of Radio Industries and Business (Japan)**
CWTS*	**China Wireless Telecommunication Standard Group (China)**
CCSA	**China Communications Standards Association (China)**
TIA	**Telecommunications Industry Association (NAFTA countries: USA, Canada, Mexico)**
TTA	**Telecommunications Technology Association (Korea)**
TTC	**Telecommunication Technology Committee (Japan)**

* Transfer of OP status to CCSA pending

3GPP2 Process

- 3GPP2 does not set standards, but does publish technical specifications as a cooperative effort of all partner members
- TSGs develop technical specifications
- TSGs' outputs reviewed and approved by Steering Committee per 3GPP2 procedures
- Partners apply national standardization processes to standardize results of work
- Resulting in Globally developed standards for the consumption on a region by region basis

Enforcement

- Voluntary industry standards built on consensus
- Enforcement is largely through individual customer-supplier relationships (subject to negotiation)
- The Marketplace is the ultimate enforcer. If products do not interoperate, customers will not buy them.
- Legal recourse for dangerous products or false compliance claims

Commitment to Quality Standards

- Engineering Committee TR-45 has taken a lead in evolving the current process and improving it to meet the demands of the standards industry.
- Committed to industry standards via active participation in standards development in pace with the global marketplace.
- Leads and supports standards activities around the world to ensure that its standards meet industry needs and government requirements.
- Open, fair, and timely with adherence to due process in the development of quality standards

Improved Quality of Standards

"You cannot improve what you cannot measure."

William Thomson Lord Kelvin, 1895
Peter J. Denning, 1970s

What is the measure of the Quality of a Standard?

A Few References

http://www.3gpp2.org

http://web.ansi.org

http://www.tiaonline.org

http://www.t1.org

A Few Acronyms & Definitions

3GPP2	Third Generation Partnership Project 2
AHG	Ad Hoc Group
ANSI	American National Standards Institute
ARIB	Association of Radio Industries and Business (Japan)
CDMA	Code Division Multiple Access
CCSA	China Communications Standards Association (China)
CWTS	China Wireless Telecommunication Standard Group (China)
ESN	Equipment Serial Number
IP	Intellectual Property Rights
IOS	Inter-Operability Specifications
ITU	International Telecommunications Union
LAES	Lawfully Authorized Electronic Surveillance
OP	Organizational Partner
PCS	Personal Communications Services
PIN	Project Initiation Notice
PN	Project Number
SDO	Standards Developing Organization
SP	Standards Proposal

A Few Acronyms & Definitions

TDMA	Time Division Multiple Access
TIA	Telecommunication Industry Association
TSG	Technical Specification Group
TSSC	Telecommunications Standards Subcommittee
TTA	Telecommunications Technology Association (Korea)
TTC	Telecommunication Technology Committee (Japan)
UIM	Universal Interface Module
V&V	Validation and Verification

Thank you

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