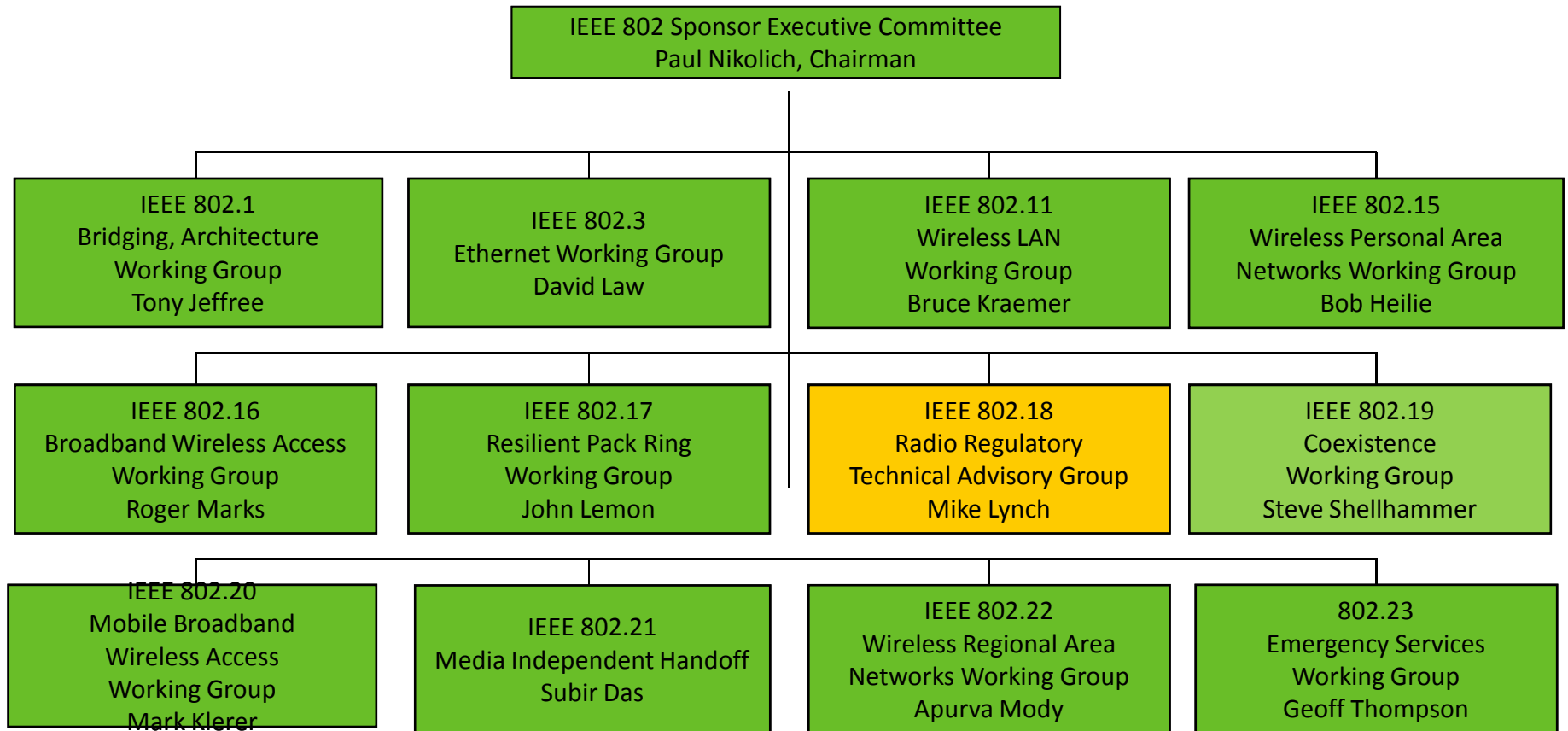# IEEE 802 LAN/MAN Standards Committee

March 2011 802 Workshop

Agenda

- 1) Welcome-- PaulN 5 min
2) IEEE, IEEE-SA Overview--~~Bob Grow~~ PaulN 5 min
3) 802- process overview--~~JonR~~ PaulN 5 min
4) SA/802-policy and procedure--~~MatS~~ PaulN 5 min
5) 802 Architecture and 802.1 TonyJ 30 min
7) 802.3 -- DavidL 30 min
8) 802.11 -- BruceK 30 min

       --break--15min

9) 802.15 -- BobH 30 min
10) 802.16-- ~~MatS~~ BruceK 30 min
11) 802.17-- JohnL 10 min
12) 802.18-- MikeL 5 min
13) 802.19-- ~~Tuncer Baykas~~ MikeL 15 min
14) 802.20-- ~~Canchi~~ PaulN 15 min
15) 802.21-- ~~Subir~~ ApurvaM 20 min
16) 802.22-- ApurvaM 20 min
17) 802.23-- GeoffT 10 min
18) Q&A
19) Wrap up--Paul

IEEE 802 Executive Committee

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                    ┌──────────────────────────────────┐
                    │  IEEE 802 Sponsor Executive Committee │
                    │      Paul Nikolich, Chairman         │
                    └──────────────────────────────────┘
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IEEE 802.1 Bridging, Architecture Working Group Tony Jeffree	IEEE 802.3 Ethernet Working Group David Law	IEEE 802.11 Wireless LAN Working Group Bruce Kraemer	IEEE 802.15 Wireless Personal Area Networks Working Group Bob Heilie
IEEE 802.16 Broadband Wireless Access Working Group Roger Marks	IEEE 802.17 Resilient Pack Ring Working Group John Lemon	IEEE 802.18 Radio Regulatory Technical Advisory Group Mike Lynch	IEEE 802.19 Coexistence Working Group Steve Shellhammer
IEEE 802.20 Mobile Broadband Wireless Access Working Group Mark Klerer	IEEE 802.21 Media Independent Handoff Subir Das	IEEE 802.22 Wireless Regional Area Networks Working Group Apurva Mody	802.23 Emergency Services Working Group Geoff Thompson

Appointed members:
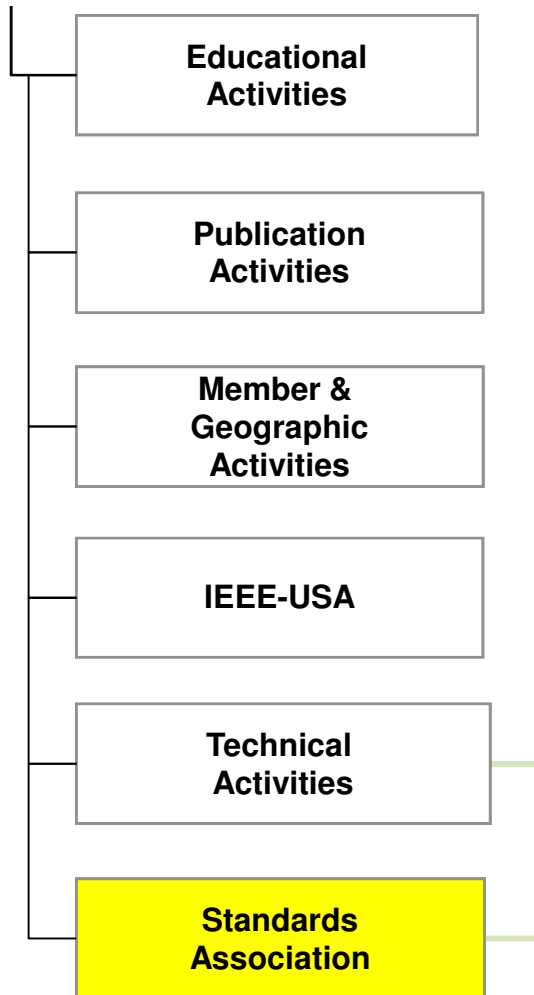
1st VC: Pat Thaler,
Recording Secretary: James Gilb,
Treasurer: Bob Grow,

2nd VC: Mat Sherman,
Executive Secretary: Jon Rosdahl,
Member Emeritus Mtg Mgr: Buzz Rigsbee

IEEE Board of Directors

Educational Activities

Publication Activities

Member & Geographic Activities

IEEE-USA

Technical Activities

Standards Association

How IEEE-802 fits within the high level IEEE Organizational Unit structure

← IEEE 802 LMSC fits here

IEEE Members (December 2009)

North America
229,442 (1%)

Europe
53,215 (3%)

Africa
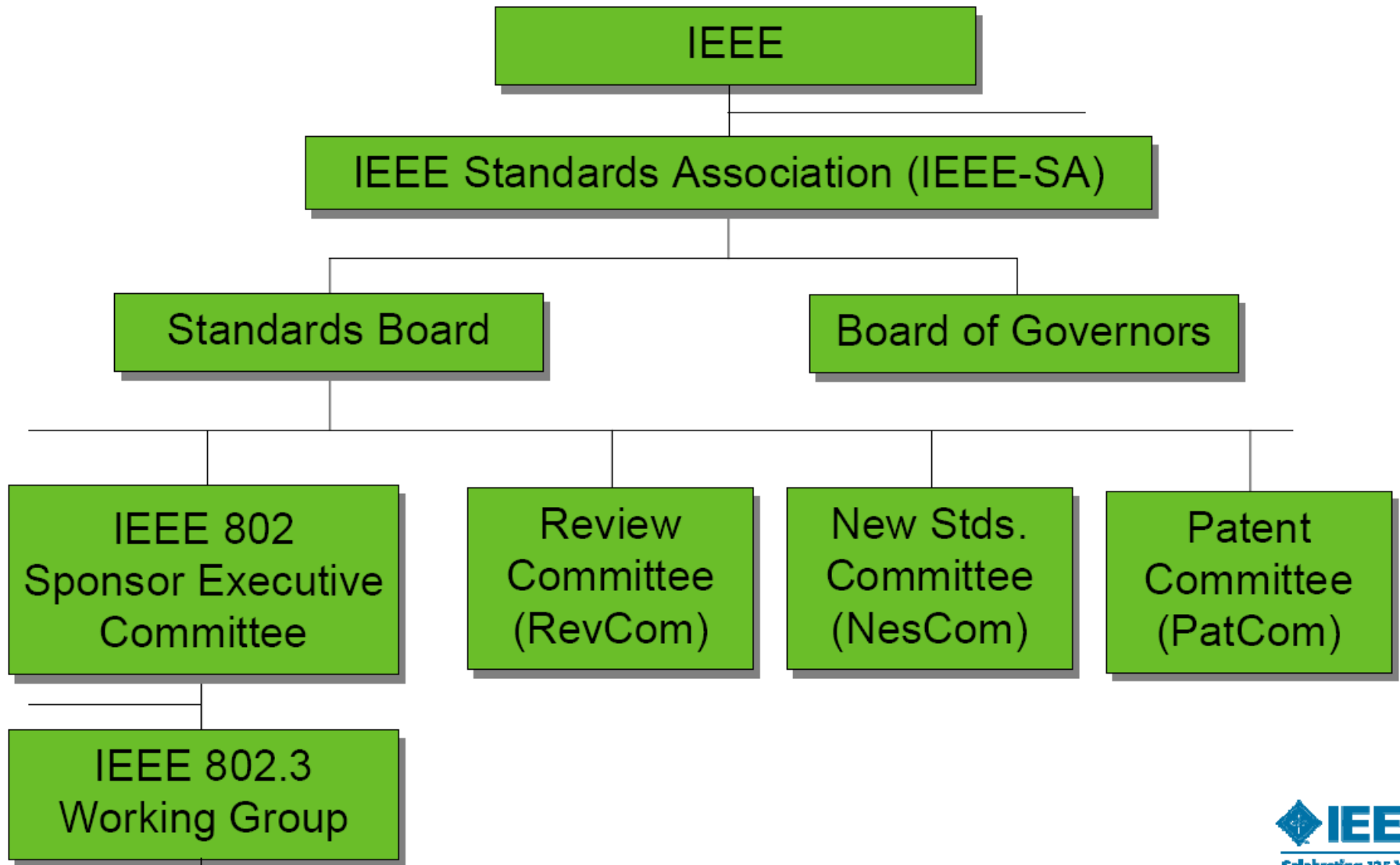5,651 (4%)

Asia
85,116 (12%)

Latin America & Caribbean
14,827 (0.5%)

Oceania
8,340 (6%)

(% Annual Growth in 2009)

IEEE-SA Overview

IEEE Technical Societies/Councils

- Aerospace & Electronic Systems
- Antennas & Propagation
- Broadcast Technology
- Circuits & Systems
- Communications
- Components, Packaging, & Manufacturing Technology
- Computer ← IEEE 802 fits here
- Computational Intelligence
- Consumer Electronics
- Control Systems
- Council on Electronic Design Automation
- Council on Superconductivity
- Dielectrics & Electrical Insulation
- Education
- Electromagnetic Compatibility
- Electron Devices
- Engineering in Medicine & Biology
- Geosciences & Remote Sensing
- Industrial Electronics
- Industry Applications
- Information Theory
- Intelligent Transportation Systems

- Instrumentation & Measurement
- Lasers & Electro-Optics
- Magnetics
- Microwave Theory & Techniques
- Nanotechnology Council
- Nuclear & Plasma Sciences
- Oceanic Engineering
- Power Electronics
- Power & Energy
- Product Safety Engineering
- Professional Communication
- Reliability
- Robotics & Automation
- Sensors Council
- Signal Processing
- Social Implications of Technology
- Solid-State Circuits
- Systems Council
- Systems, Man, & Cybernetics
- Technology Management Council
- Ultrasonic's, Ferroelectrics, & Frequency Control
- Vehicular Technology
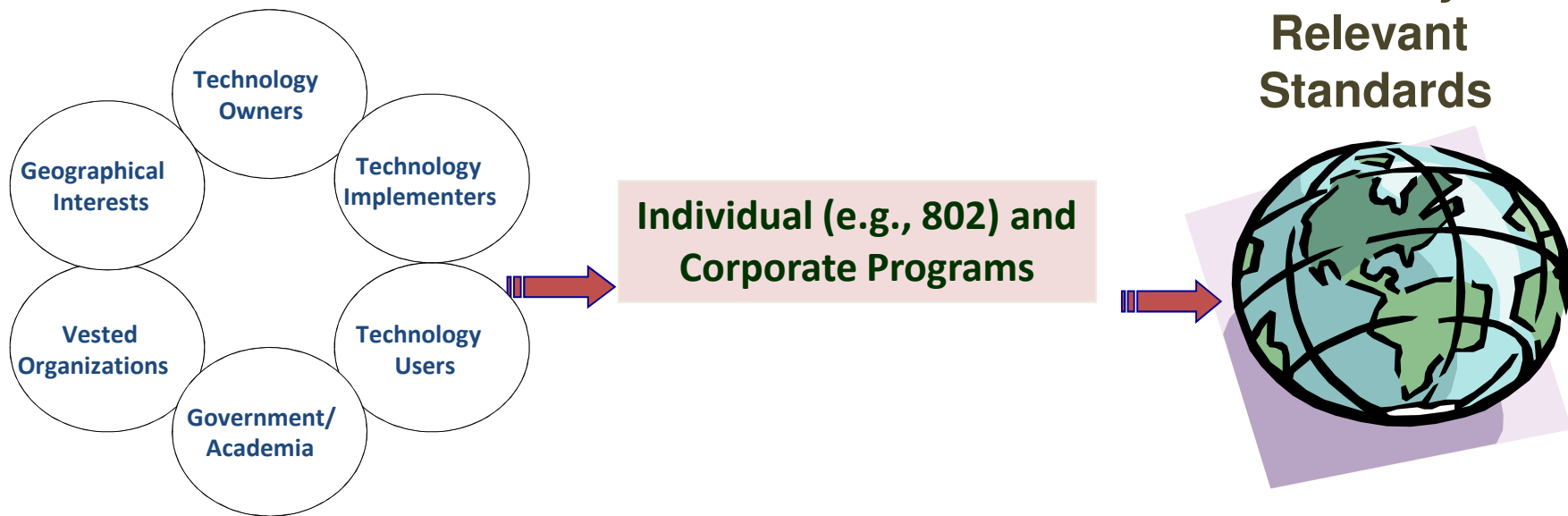
What is a "Standard"?

- IEEE SA definition:

  Technical standards are established norms or requirements.

- They are usually available as **formal documents** that determine uniform criteria, methods, processes and practices for:

  engineering,
  technical,
  performance and
  interoperability ←----IEEE 802 LAN/MAN Standards
  .

  Among their uses are the setting of specifications at the onset of a design, defining constraints during the detailed design process, and serving as benchmarks during testing.

IEEE-802 Supports Standards-Development Constituents

Technology Owners

Geographical Interests

Technology Implementers

Vested Organizations

Technology Users

Government/ Academia

Individual (e.g., 802) and Corporate Programs

Globally Relevant Standards

Recognizing the expanding breadth of constituents and stakeholders in the adoption of global standards
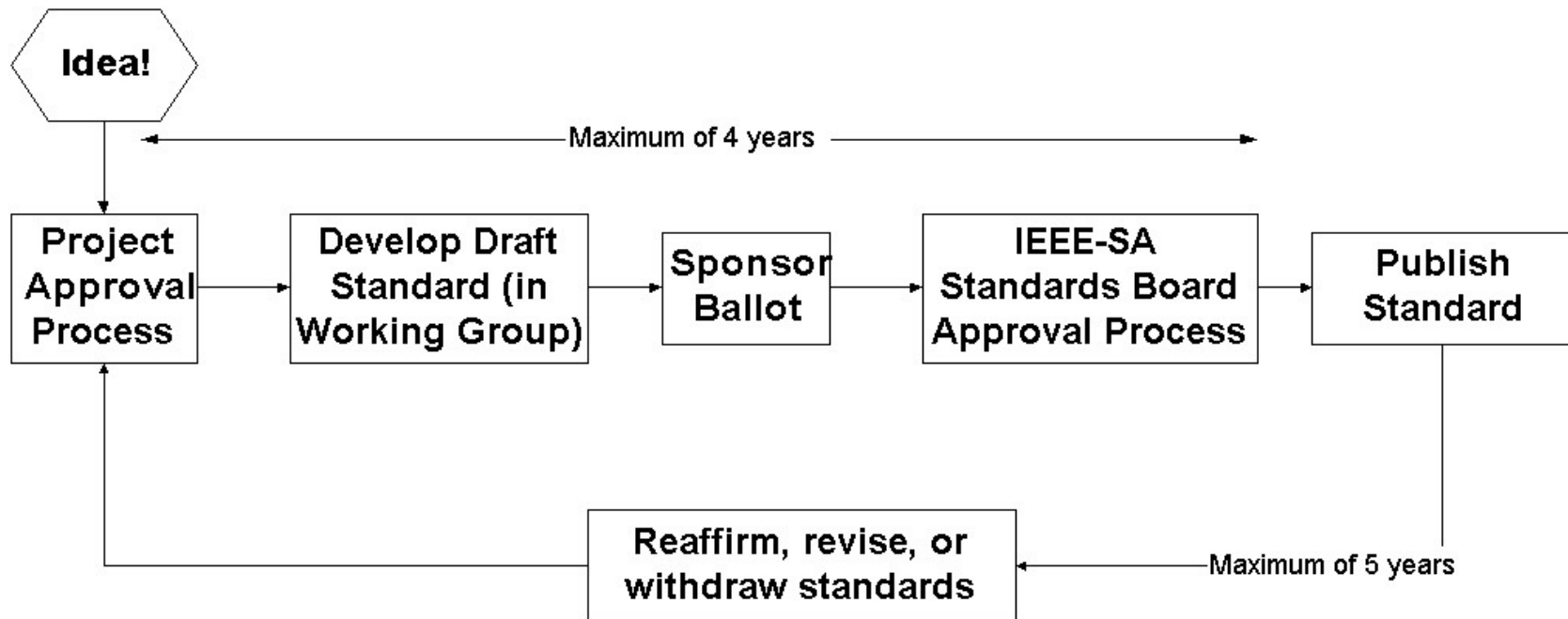
IEEE-SA Values

Five principles guide
IEEE standards development
and ensure adherence requirements of the World Trade
Organization

Consensus	Due process	Openness	Right of appeal	Balance

To ensure

• Collaboration and community building

• Global and timely market relevance

• Technical integrity and excellence

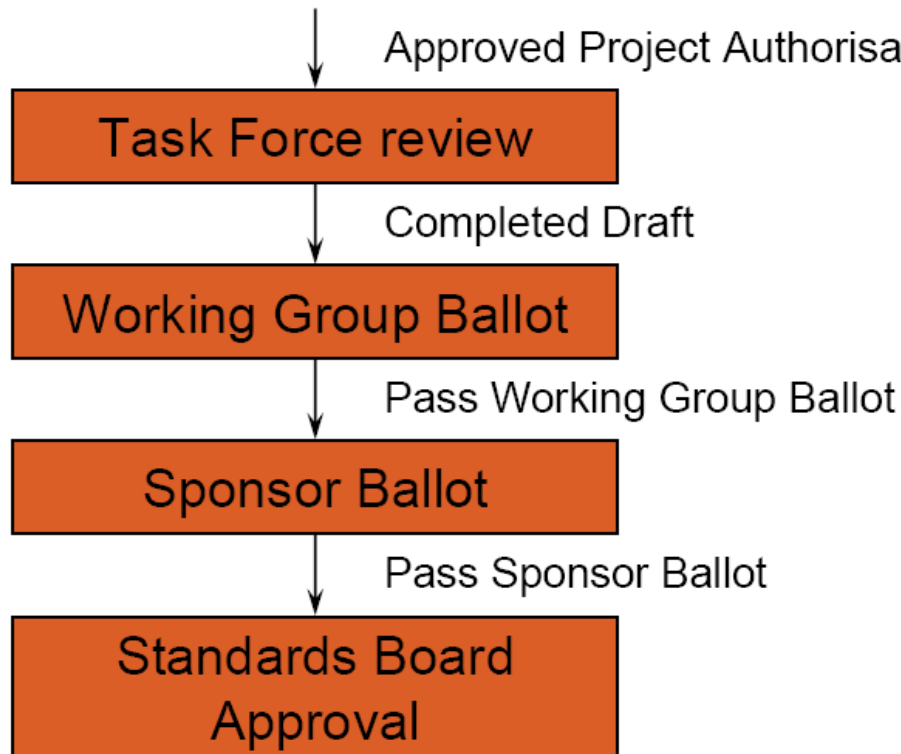# IEEE Standards Development: Process Flow

Balloting process
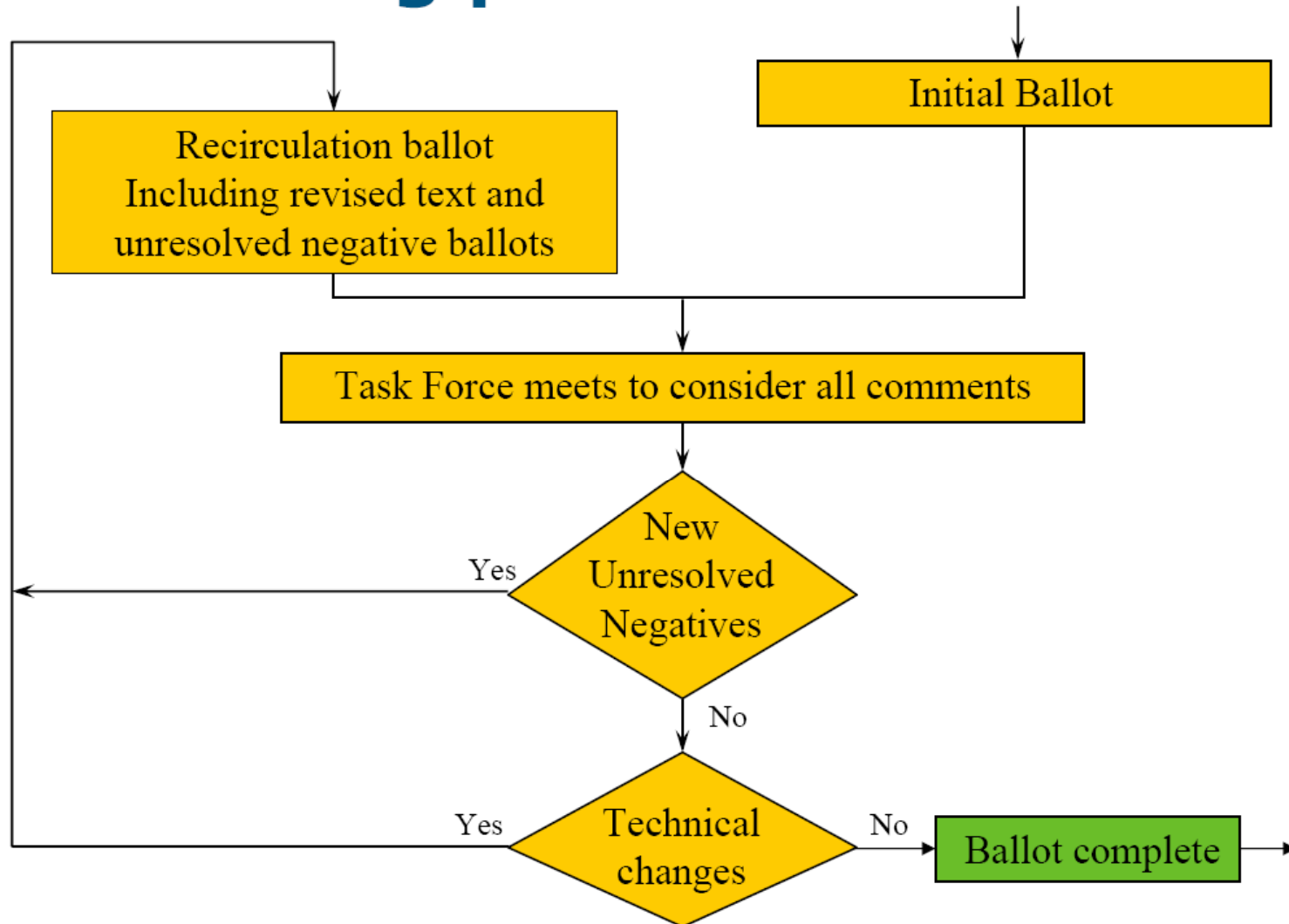
IEEE 802 Standards Development Overview

Approved Project Authorisation Request (PAR), 5 Criteria

Task Force review

Completed Draft

Working Group Ballot

Pass Working Group Ballot

Sponsor Ballot

Pass Sponsor Ballot

Standards Board Approval

Votes on technical issues requires a minimum of 75% approval to pass

Work Process

- Activity/Workload
  - Approx 12 new projects approved per year
  - Approx 50 projects simultaneously in process
  - Approx 12 standards approved per year
- 3 Plenary Sessions per year (MAR, JUL, NOV)
  - Entire 802 LMSC assembles
  - Participation around 1000 individuals
- 3 Interim Sessions per year (JAN, MAY, SEP)
  - Individual WGs or collection of WGs
  - Participation numbers varies per group
- Teleconferences
  - many held between sessions, number and frequency depends on project workload

Why have rules?

- Orderly conduct of business

- Foster fairness and openness

- Avoid running afoul of the law
  - Patents
  - Anti-trust
  - Etc.

What are the rules?

- New York State Not-For-Profit Corporation Law
- IEEE Certificate of Incorporation
- IEEE Constitution
- IEEE Bylaws
- IEEE Policies
- IEEE Board of Directors Resolutions

  IEEE

- IEEE Standards Association Operations Manual
- IEEE-SA Board of Governors Resolutions
- IEEE-SA Standards Board Bylaws
- IEEE-SA Standards Board Operations Manual
- IEEE-SA Standards Board Resolutions

  IEEE SA

- IEEE Computer Society (CS) Constitution
- IEEE CS Bylaws
- IEEE CS Policies and Procedures Manual (PPM), Section 10
- IEEE CS Board of Governors Resolutions
- IEEE CS Standards Activities Board Policies and Procedures (SAB P&P)

  IEEE CS

- IEEE Project 802 LAN/MAN Standards Committee (LMSC) Sponsor Policies and Procedures (LMSC P&P)
- IEEE Project 802 LAN/MAN Standards Committee (LMSC) Operations Manual (LMSC OM)
- IEEE Project 802 LAN/MAN Standards Committee (LMSC) Working Group P&P (LMSC WG P&P)
- IEEE 802 LMSC WG Operations Manuals
- *Robert's Rules of Order (Revised)*

  LMSC

  – The recommended guide on questions of parliamentary procedure not addressed above…

What should you know?

- ## Active Participant

  – IEEE Project 802 LAN/MAN Standards Committee (LMSC) Sponsor Policies and Procedures (LMSC P&P)

  – IEEE Project 802 LAN/MAN Standards Committee (LMSC) Operations Manual (LMSC OM)

  – IEEE Project 802 LAN/MAN Standards Committee (LMSC) Working Group P&P (LMSC WG P&P)

  – WG Operations Manuals

  – *Robert's Rules of Order (Revised)*

- ## Additional for Officers

  – IEEE-SA Standards Board Operations Manual

Other important documents

- IEEE 802 LMSC Chair's Guidelines
  - IEEE 802 "Conventions"

- The IEEE-SA Standards Style Manual

IEEE 802 Working Groups

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IEEE 802 Sponsor Executive Committee
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| IEEE 802.1 Bridging, Architecture Working Group | IEEE 802.3 Ethernet Working Group | IEEE 802.11 Wireless LAN Working Group | IEEE 802.15 Wireless Personal Area Networks Working Group |

| IEEE 802.16 Broadband Wireless Access Working Group | IEEE 802.17 Resilient Pack Ring Working Group | IEEE 802.18 Radio Regulatory Technical Advisory Group | IEEE 802.19 Coexistence Working Group |

| IEEE 802.20 Mobile Broadband Wireless Access Working Group | IEEE 802.21 Media Independent Handoff | IEEE 802.22 Wireless Regional Area Networks Working Group | 802.23 Emergency Services Working Group |