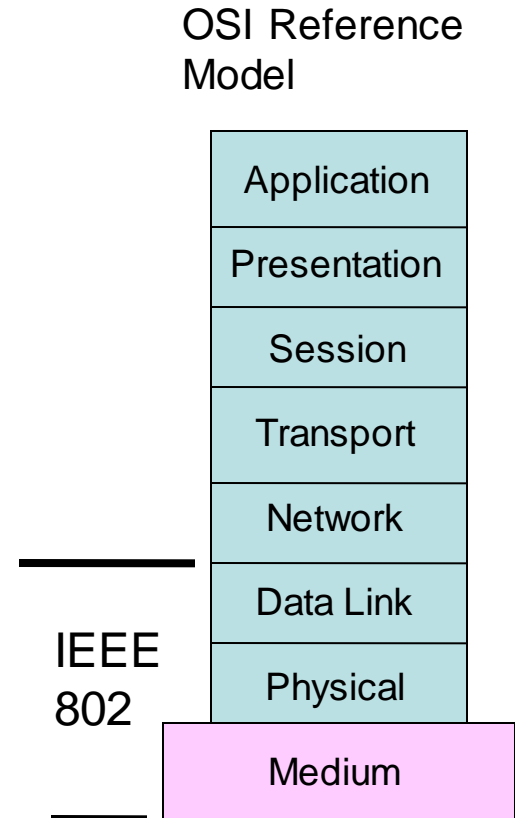# IEEE 802 Overview

www.ieee802.org

# Contents

- Introduction to IEEE 802
- Introduction to IEEE standards process
- Getting more information

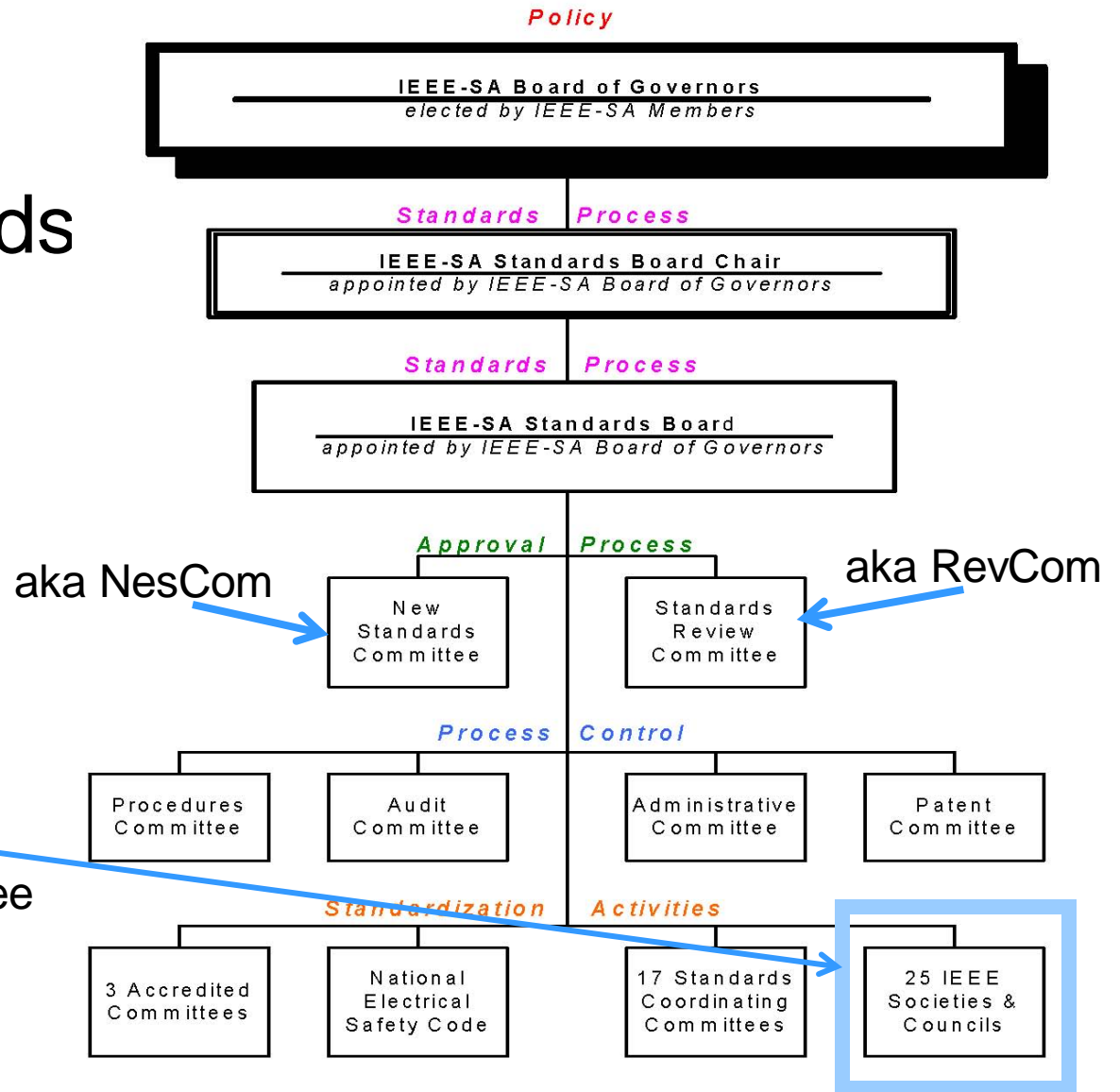# Introduction to IEEE 802

# Who we are

- IEEE Project 802 LAN/MAN Standards Committee (aka IEEE 802 or LMSC)
  - Develop LAN and MAN standards
  - Mainly for link and physical layers of the network stack
  - In operation since March 1980

OSI Reference Model

| OSI Reference Model |
|---|
| Application |
| Presentation |
| Session |
| Transport |
| Network |
| Data Link |
| Physical |
| Medium |

IEEE 802

# IEEE Standards Organization

**IEEE 802**



**Policy**

IEEE-SA Board of Governors
*elected by IEEE-SA Members*

**Standards Process**

IEEE-SA Standards Board Chair
*appointed by IEEE-SA Board of Governors*

**Standards Process**

IEEE-SA Standards Board
*appointed by IEEE-SA Board of Governors*

**Approval Process**

aka NesCom

New Standards Committee

Standards Review Committee

aka RevCom

**Process Control**

Procedures Committee

Audit Committee

Administrative Committee

Patent Committee

**Standardization Activities**

IEEE 802 is here: a standards committee formed by the Computer Society

3 Accredited Committees

National Electrical Safety Code

17 Standards Coordinating Committees

25 IEEE Societies & Councils

# Some terms

- PAR – Project Authorization Request – the document that authorizes work on a project.

- CSD – Criteria for Standards Development – the basis for determining whether to forward a PAR.

- WG - Working Group – responsible for developing standards in an area

- TAG – Technical Advisory Group – experts on a topic area that crosses working groups – may develop a recommended practice.

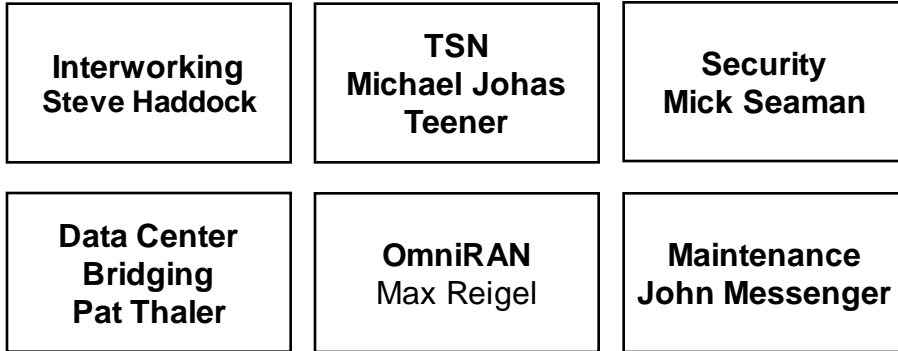- Task Group or task force – a part of a working group which focuses on a particular project.

# All those dots….decoder ring

- ➢ 802.1 Bridging and Architecture – generally the top of the link layer
- ➢ 802.3 Ethernet
- ➢ 802.11 Wireless LAN (WLAN)
- ➢ 802.15 Wireless Personal Area Network (WPAN)
- ➢ 802.16 Broadband Wireless Access (BWA)
- ➢ 802.18 Radio Regulatory TAG
- ➢ 802.19 Coexistence
- ➢ 802.21 Media Independent Handover
- ➢ 802.22 Wireless Regional Area Networks (WRAN)
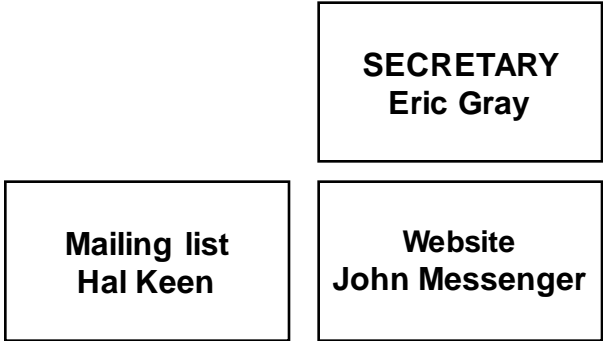- ➢ 802.24 Smart Grid TAG

# IEEE 802.1 Organization
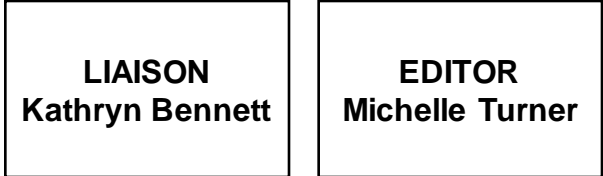
**IEEE 802**

### CHAIR
Glenn Parsons

### VICE CHAIR
John Messenger

## Task Group Chairs

**Interworking**
Steve Haddock

**TSN**
Michael Johas Teener

**Security**
Mick Seaman

**Data Center Bridging**
Pat Thaler

**OmniRAN**
Max Reigel

**Maintenance**
John Messenger

## Appointed Officers

**SECRETARY**
Eric Gray

**Mailing list**
Hal Keen

**Website**
John Messenger

## IEEE-SA staff
### (non voting)

**LIAISON**
Kathryn Bennett

**EDITOR**
Michelle Turner

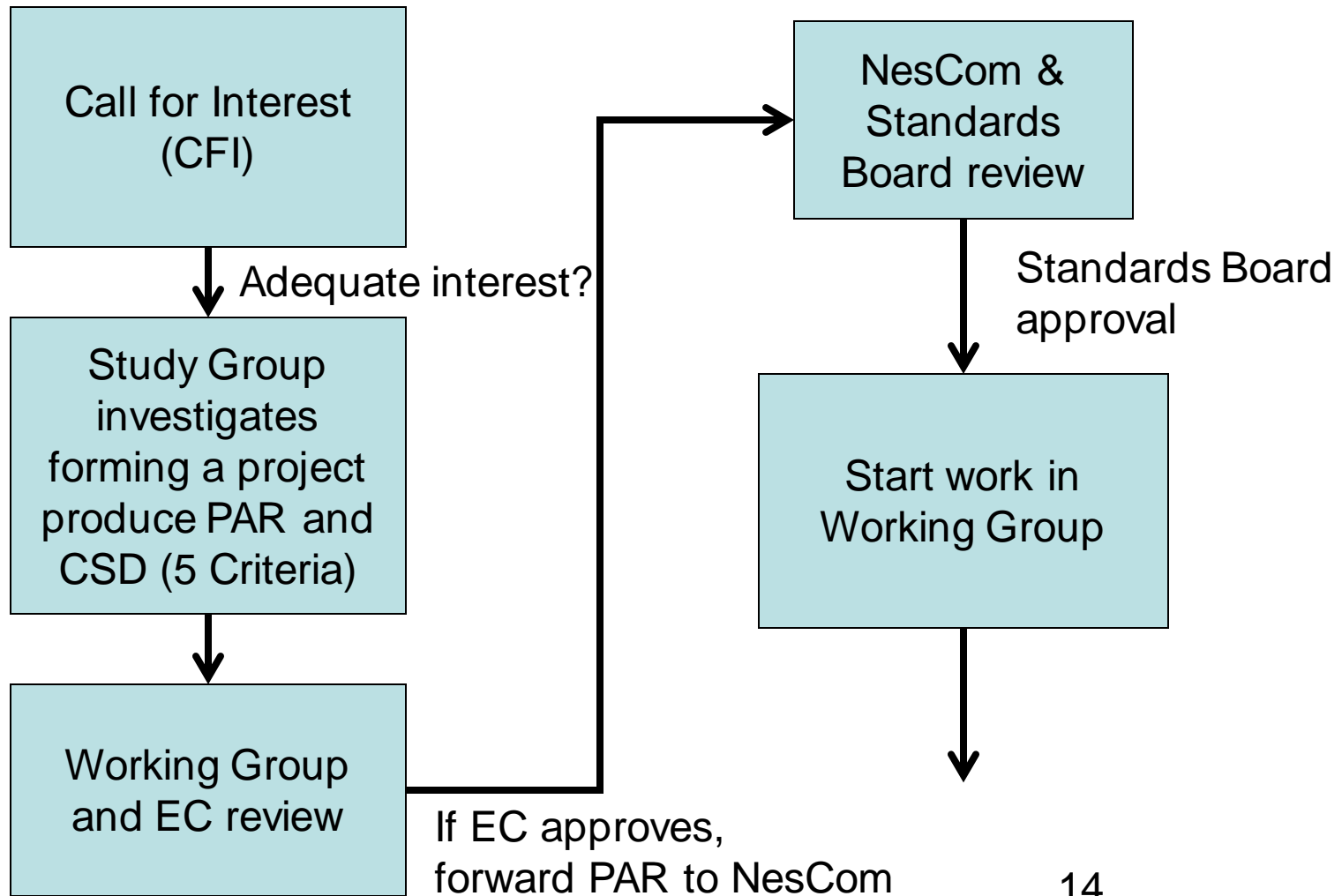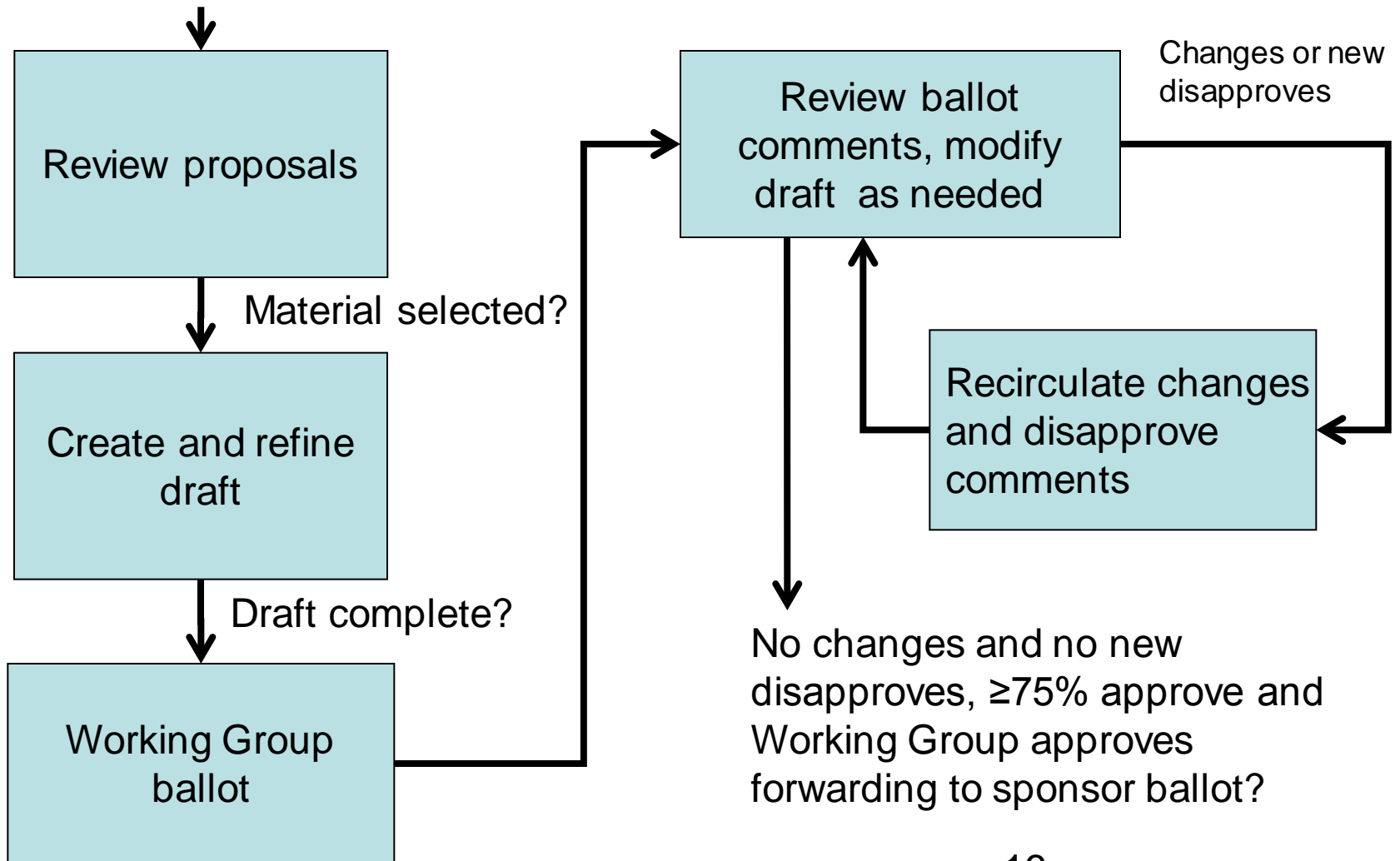# Introduction to IEEE standards process

# Principles of the process

- Due process – procedures are publicly available and followed consistently

- Consensus – requiring agreement of a majority or supermajority – for technical decisions here ≥75%

- Openness – ensuring materially interested and affected parties can participate

- Balance – representation from all interested parties without overwhelming influence from any one party

- Right of appeal – process to ensure due process

# IEEE 802 standards development life cycle – part 1

Call for Interest (CFI)

Adequate interest?

Study Group investigates forming a project produce PAR and CSD (5 Criteria)

Working Group and EC review

If EC approves, forward PAR to NesCom

NesCom & Standards Board review

Standards Board approval

Start work in Working Group

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# IEEE 802 standards development life cycle – part 2

**Review proposals**

Material selected?

**Create and refine draft**

Draft complete?

**Working Group ballot**

**Review ballot comments, modify draft as needed**

Changes or new disapproves

**Recirculate changes and disapprove comments**

No changes and no new disapproves, ≥75% approve and Working Group approves forwarding to sponsor ballot?

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# IEEE 802 standards development life cycle – part 3



```
Request EC approve forward to sponsor ballot
         │
         ▼   EC approval?
   Sponsor ballot ◄──┐
         │           │  Changes or
         ▼           │  new
   Review ballot ────┘  disapproves
   comments, modify
   draft as needed
         │
         │  No changes and no
         │  new disapproves,
         │  ≥75% approve
         └──────────────────┐
                            │
   Request EC approve forward to RevCom
         │
         ▼
   RevCom approval
         │
         ▼
   Standards Board approval
         │
         ▼
   Prepare for publication
         │
         ▼
   Published standard
```

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# Voting and membership

- Voters have responsibility to vote on letter ballots
- Three levels of voting occur in IEEE 802 standards development:
  - Sponsor ballot
    - Open to all interested parties
      - Via IEEE SA-membership or paying a per ballot fee
    - Participation requires an IEEE Web Account
  - Working group
    - Requirements on next page
  - Task force or task group
    - Requirements vary – consult Working group.

# Acquiring Working Group voting membership

- Participating at a meeting = at least 75% presence.
- For a new Working Group, persons participating in the initial meeting become members.
- For an existing Working Group, after attending 2 of last 4 plenary sessions or 1 plenary and 1 interim, membership starts at the next plenary attended.
  - In 802.1, a letter of intent to the chair is required.

# Ways of Collaborating

- Join the 802.1 [mailing list](#)
  - Discussion and announcements
- Participation at 802.1 meetings
  - 802.1 meets 6 times per year for a week
- Participation on conference calls
  - Biweekly conference calls are expected
- Exchange of liaisons
  - As necessary
  - Formal indication of positions, drafts, and milestones

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# Getting more information

# Resources

- IEEE 802 home page:
  - http://www.ieee802.org
- IEEE 802 chairs, etc.
  - http://www.ieee802.org/wgchairs.shtml
- IEEE 802.1 WG home page:
  - http://www.ieee802.org/1
- Links to IEEE and IEEE 802 procedural documents:
  - http://www.ieee802.org/devdocs.shtml
- Links to IEEE 802 orientation
  - http://ieee802.org/orientation.shtml