WELCOME
to the
IEEE/PES Switchgear Committee
Spring 2018 Meeting
Orlando, FL, USA

Starts at
7:25am

Topics of Discussion

- Meeting Specific Items
  - Safety
  - Wi-Fi
  - Patents
  - Affiliation
  - Schedule / Guidebook
  - Presentations
  - Supporting Companies
- Where Do We Fit In With IEEE
  - Organization
  - Scope
  - Activities
  - Officers
  - Subcommittees
- Frequently Asked Questions
- Standards Process
- Future meetings
  - 54 Slides

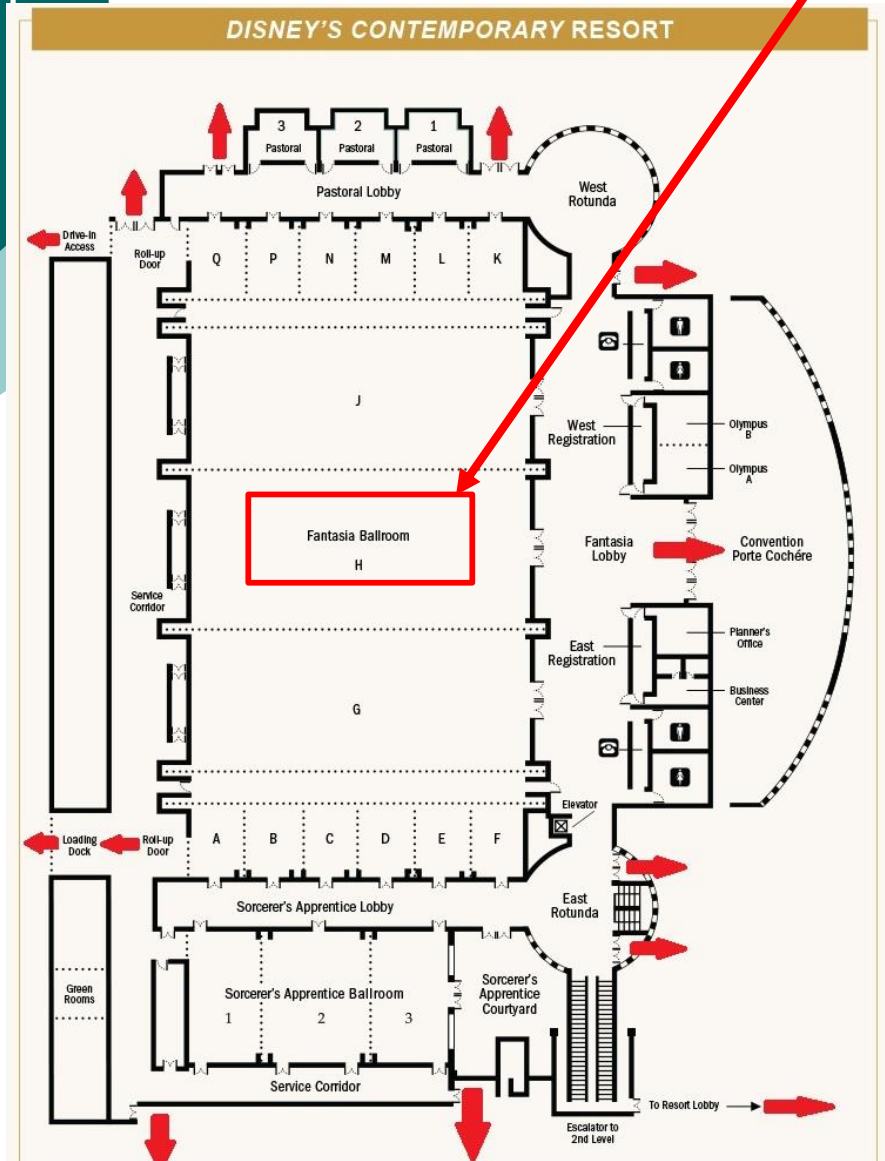
Safety Minute

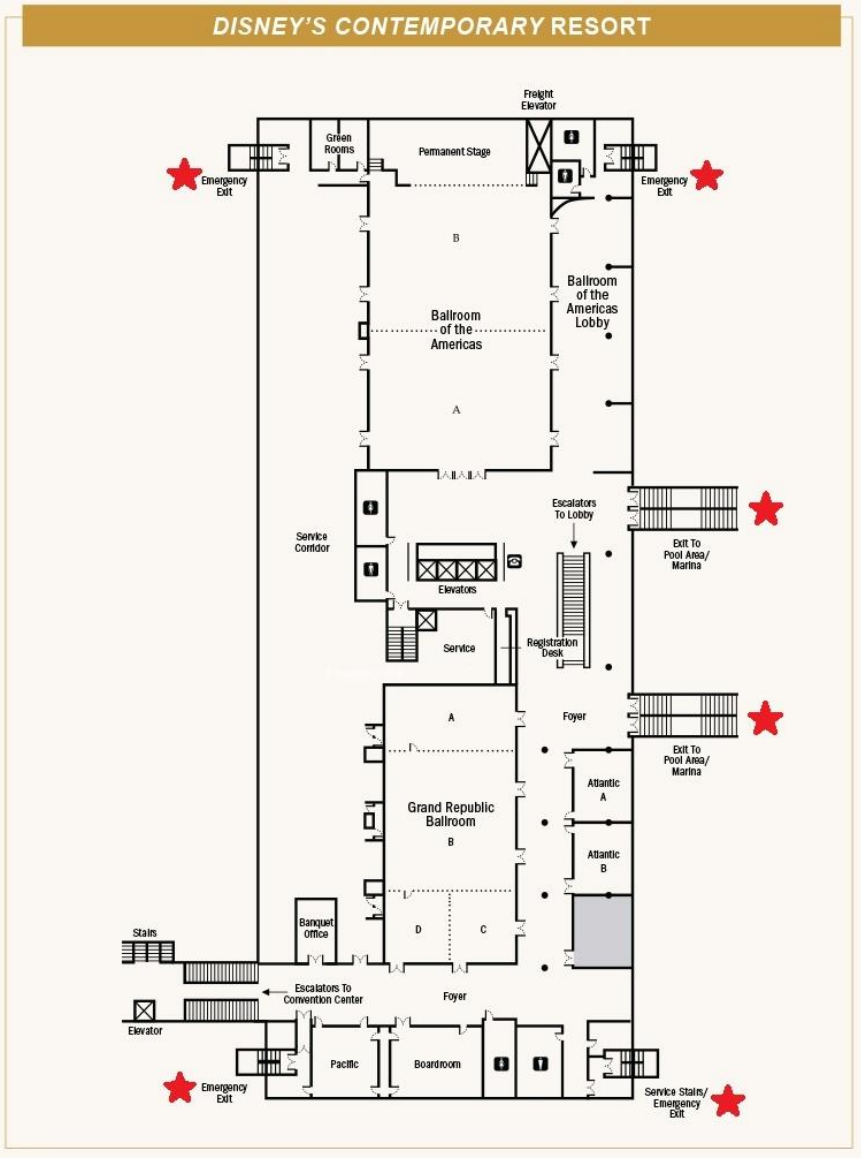
- Be sure to know the emergency exit for each room that you enter, including your hotel room.

- Test the GFCI in your rooms.

Property Map

You Are Here

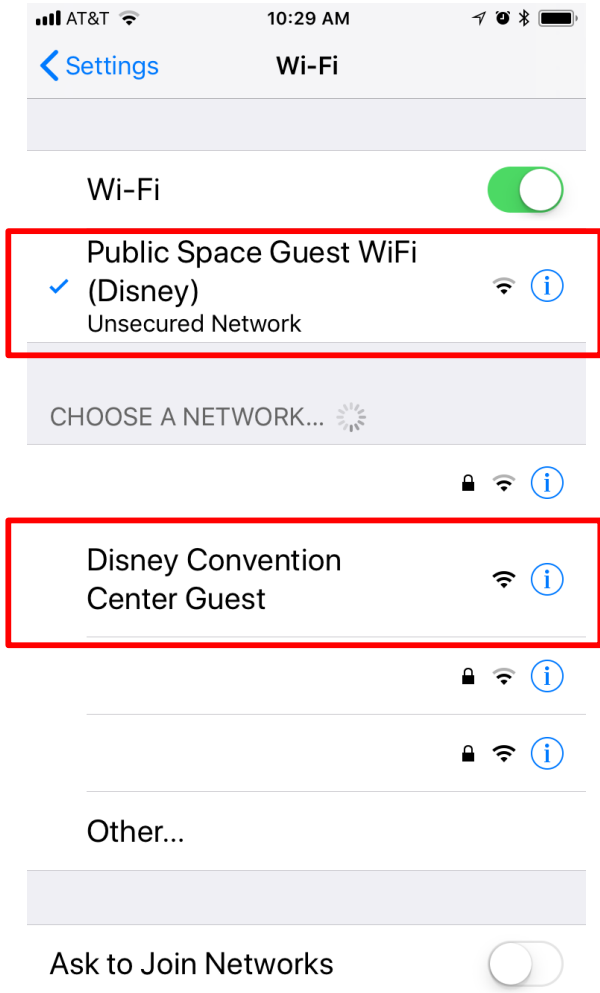




Wi-Fi

In meeting room area

- Connect to:
  - Disney Convention Center Guest
  - Public Space Guest WiFi (Disney)
- PASSWORD:
  - None required



Call for Potentially Essential Patents

Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

Early identification of holders of potential Essential Patent Claims is encouraged

Ways to inform IEEE

- Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
- Speak up now and respond to this Call for Potentially Essential Patents

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

Other guidelines for IEEE WG meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don't discuss specific license rates, terms, or conditions.
    - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
      - Technical considerations remain the primary focus
  - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don't discuss the status or substance of ongoing or threatened litigation.
  - Don't be silent if inappropriate topics are discussed … do formally object.

For more details, see *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at http://standards.ieee.org/develop/policies/antitrust.pdf

Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
- *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)

Material about the patent policy is available at *http://standards.ieee.org/about/sasb/patcom/materials.html*

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org

IEEE PES SWITCHGEAR COMMITTEE

IEEE PES Switchgear Committee
C/O Ken Edwards, 319 NW 104th St, Vancouver, WA 98685
Phone: 360-936-1749 **Fax:** 360-418-2958
k.s.edwards@ieee.org

t.olsen@ieee.org
Manager of Technology
Siemens Energy, Inc.
Member

Tradewinds Island Resort
5500 Gulf Boulevard
St. Pete Beach, FL
April 28 - May 3, 2012

Additional Information

Newcomer Determination

* 1. Is this your first Switchgear Meeting attendance?

No

IEEE-SA Patent Policy

NOTE: All participants in this meeting have certain obligations under the IEEE-SA Patent Policy (See the Switchgear Committee's website for additional information, refer to the IEEE Patent Policy "section"). Participants shall inform the IEEE of the identity of each "holder of any potential Essential Patent Claims of which they are personally aware" if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents. "Personal awareness" means that the participant "is personally aware that the holder may have a potential Essential Patent Claim" even if the participant is not personally aware of the specific patents or patent claims.

If anyone registering for this meeting is personally aware of the holder of any patent claims that are potentially essential to the implementation of any of the proposed standard(s) under consideration by any task Force, Working Group or Subcommittee that they will be participating in and that are not already the subject of an "Accepted Letter of Assurance" they are encouraged to disclose that information.

(If you answer YES you will possibly be contacted by the Switchgear Committee Secretary for additional information)

* 2. Are you aware of any potential Essential Patent Claims? (If you answer YES you will possibly be contacted by the Switchgear Committee Secretary for additional information.

3. If you answered YES, describe patent claims in detail and as a minimum, list the WG and/or SC that are affected, the affected document, the Essential Patent Claim, the Company and/or individual patent holder)

If you are unsure about anything you have read, please refer to the IEEE Patent Policy "section" of the Switchgear Committee's website for additional information.

Cancel Next

Affiliation

- Each person must state their affiliation at each meeting.
- The affiliation for each person must be recorded in the meeting minutes.
- We will provide a list in the Main Committee minutes of each attendee and the registered affiliation of that person. Only need to record deviations from that affiliation.

Going Green - Schedule

- Guidebook App
- IEEE PES Switchgear Website http://www.ewh.ieee.org/soc/pes/switchgear/meetings/next_meeting/Next_Meeting.html
- Bulletin Board – Registration Area

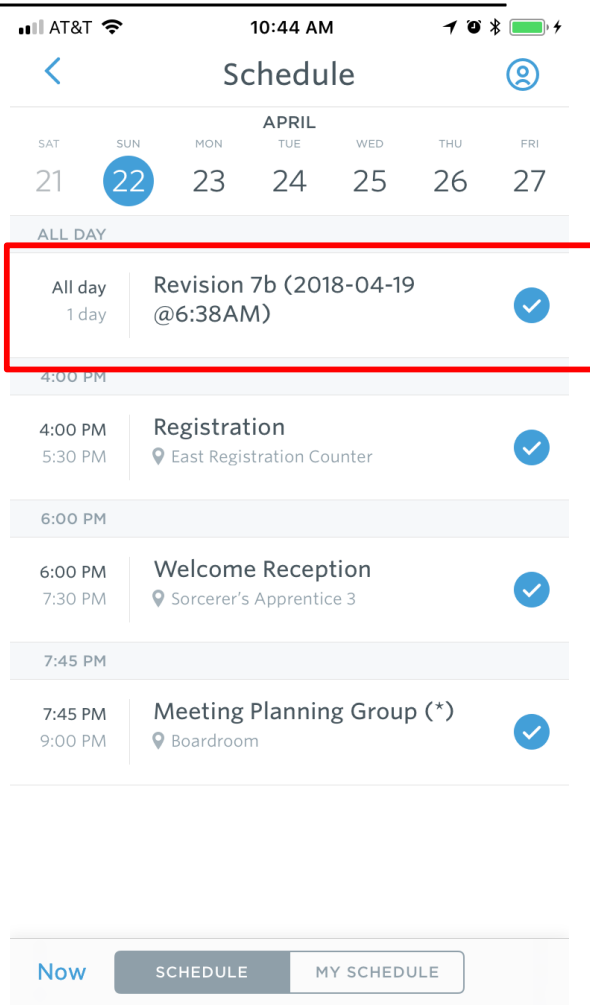
Guidebook App

- Download a free app including:
  - Meeting schedule (active updates)
  - Maps for meeting rooms
  - List of supporters
  - Attendees
  - Personalized schedule with reminders
- Go to the App Store on your smart device.
- Search and download "**Guidebook**"
- Search for "**Switchgear**"

Schedule Changes

- Guidebook App will be updated – you get notifications.
- Bulletin board Schedule at registration will be updated.
  - Currently Schedule is

7c (2018-04-22 @11:45AM)



Tuesday Breakfast Presentation

- IEEE-SA Erin Spiewak (IEEE-SA)

  Overview of General Data Protection Requirements (GDPR)

- Where: Fantasia H

  Breakfast same location each day.

- Registration is NOT required.

Tuesday Luncheon Presentation

- Paul Leufken
  Innovation is Like a Lightning Bolt
- Where: Fantasia H
- Registration is required.

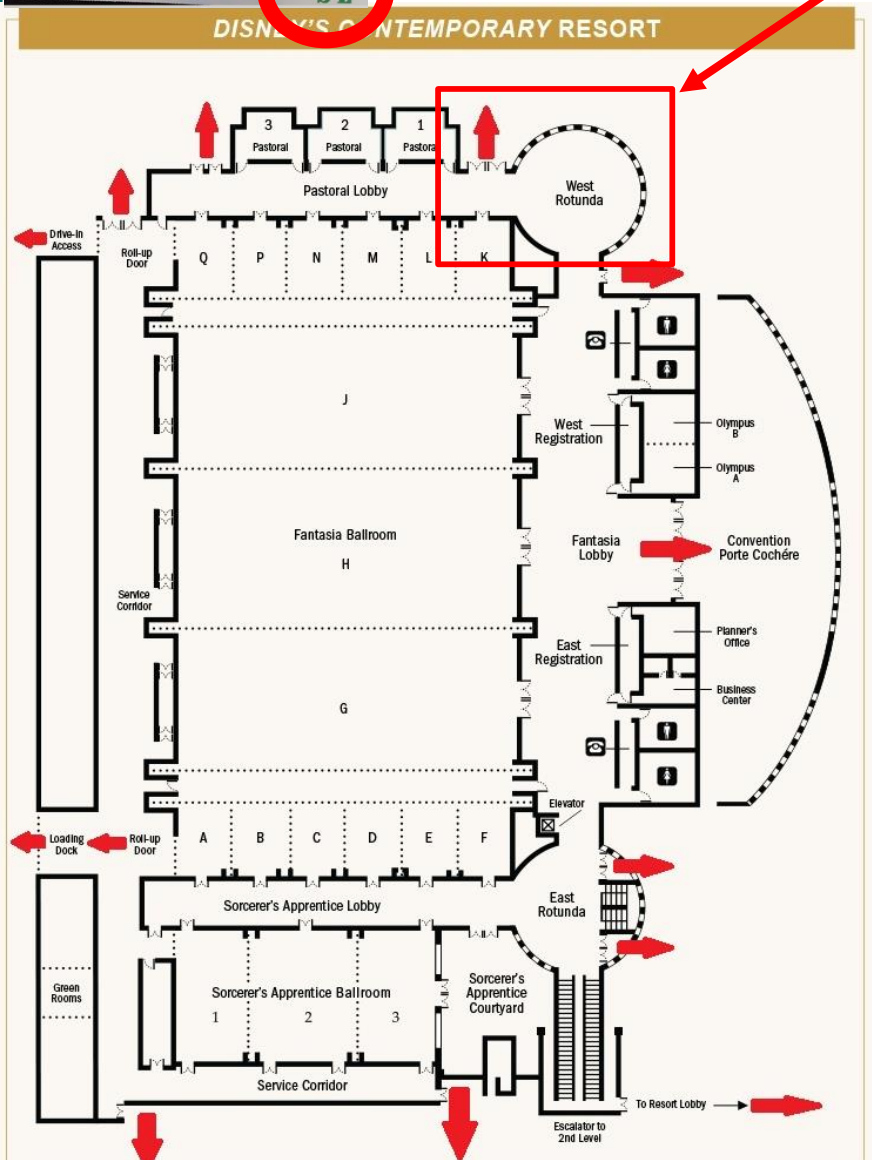
Wednesday Evening Social

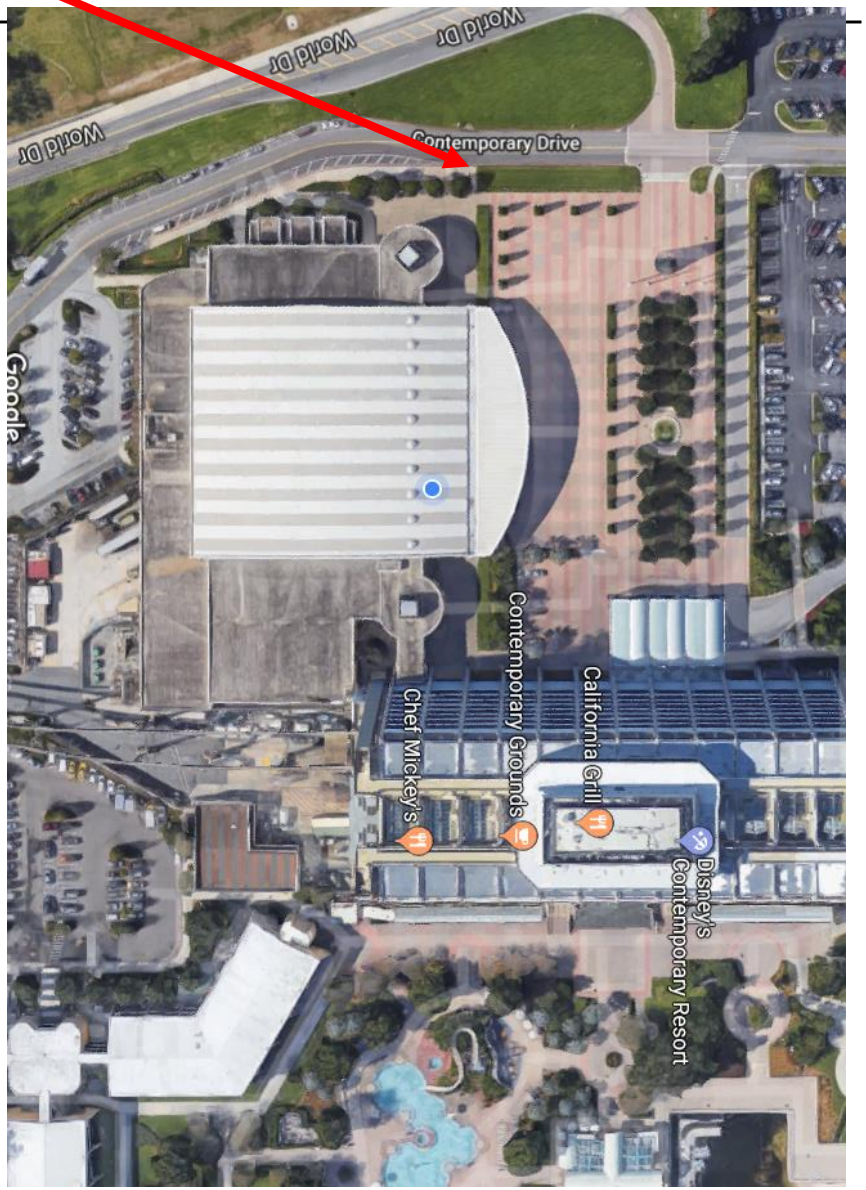
- Epcot Living Seas Salon
- Dinner & Fireworks
- Buses
  - 5:30PM:Buses start departing – Lobby
  - 9:15PM: Buses start returning
  - Monorail: See me!
- Must wear Badge
- Does not include access to Epcot

Property Map

Bus Departure Location

N





Thursday Technical Presentation

- Technical Presentation
  - Joanne Hu & Rene Smeets
  - ***HVDC Switching***
- Sorcerer's Apprentice 2 & 3
- Registration is NOT required.
- PDH Credit
  - IEEE PES Switchgear Homepage Link
- Box lunches only for those that have pre-purchased them.

Frequently Asked Questions

I can't remember if I signed up for the Tuesday Luncheon or Wednesday Social, how do I know?

S = Social

L = Luncheon

Ticket for Thursday Box Lunch

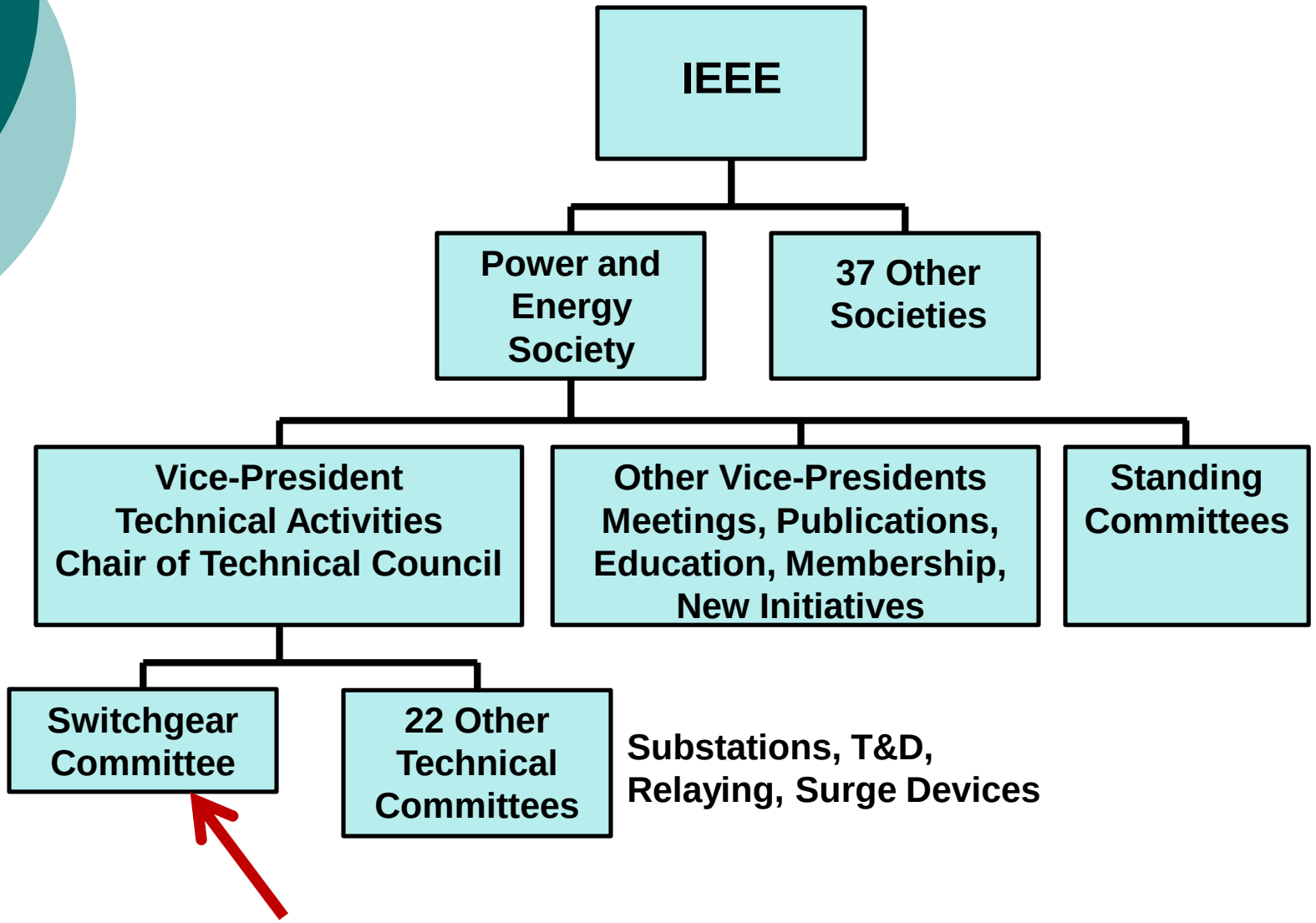
Supporting Companies – Financial Contribution

Thank You!

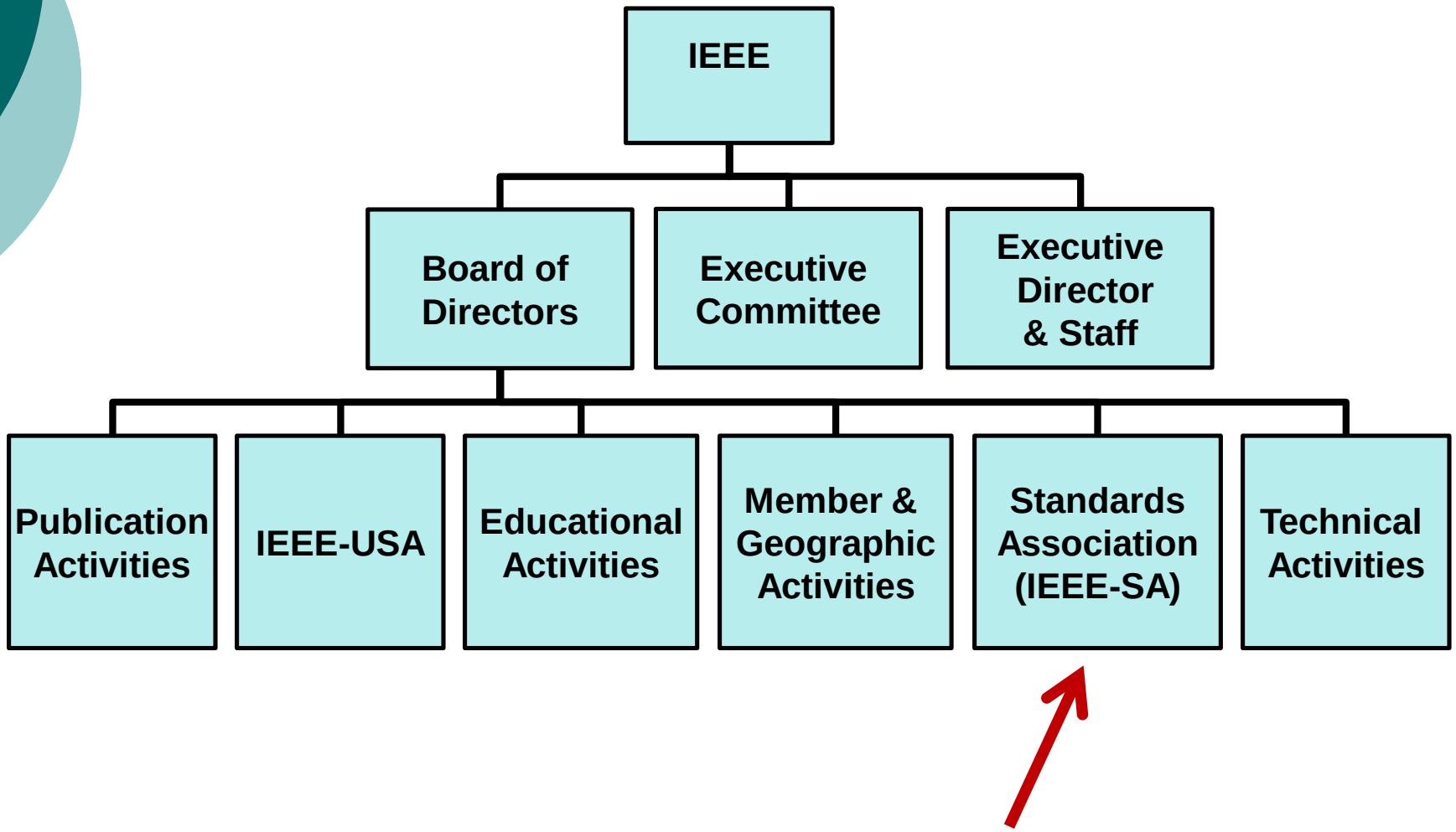
- ABB
- Cleaveland Price
- DNV GL KEMA
- Eaton
- G&W Electric
- GE Grid Solutions
- Hitachi T&D
- H-J
- Mitsubishi Electric
- NEMA
- Powell Industries
- S&C Electric
- Schneider Electric
- Siemens
- Southern States

Where Do We Fit In With IEEE?

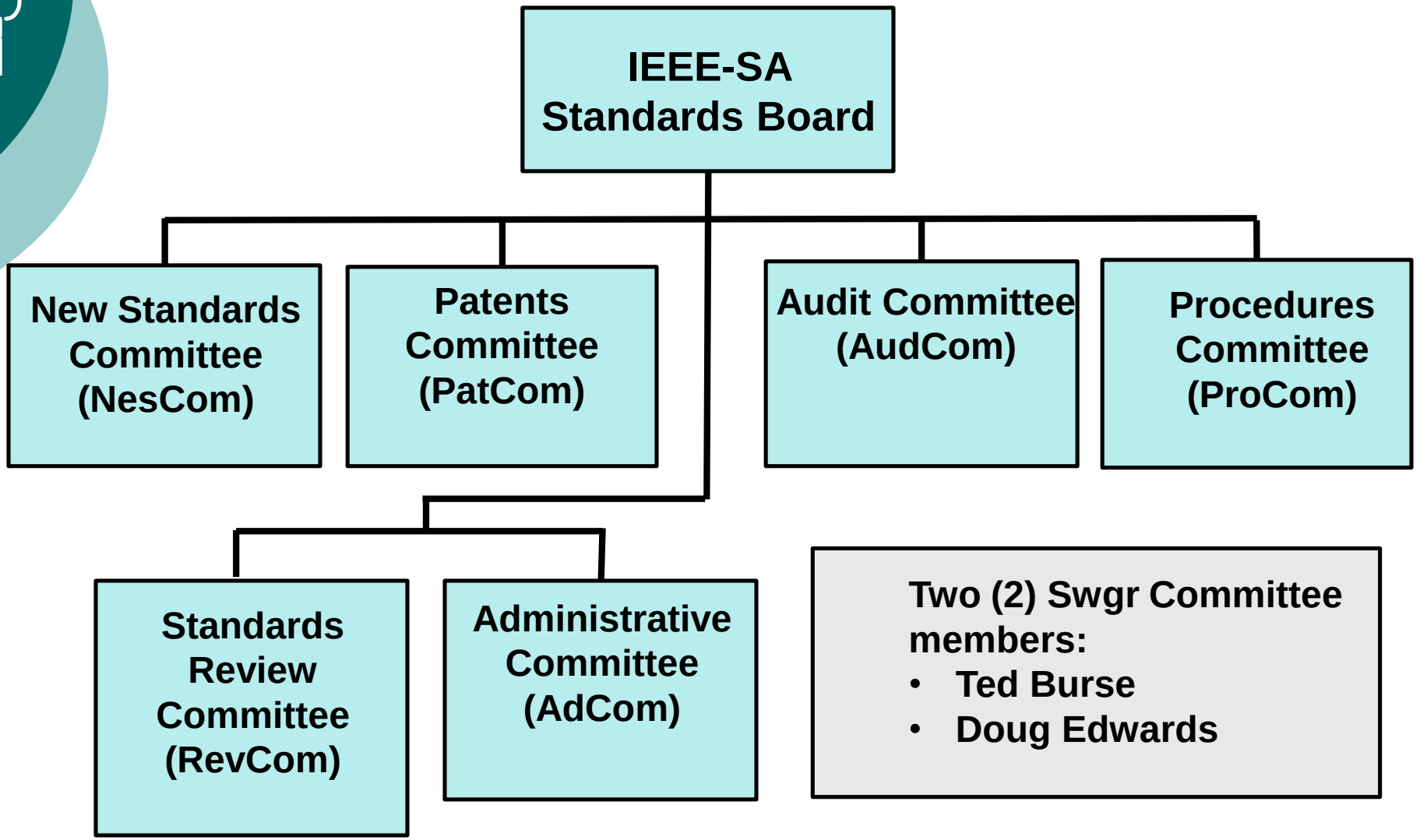
Where Do We Fit In With IEEE?



IEEE Organization



Organization – IEEE-SA



IEEE Membership

Total IEEE membership (2016)		423,566
US	44.2%	187,215
outside the US	55.8%	236,351
Power & Energy Society membership	+22%	33,925
IEEE-SA Standards Association		6,555
Switchgear Committee Membership		79
Attendance (Approx)		
Spring 2015 (St Pete Beach, FL)		273
Fall 2015 (San Diego, CA)		271
Spring 2016 (Hilton Head, SC)		265
Fall 2016 (Pittsburgh, PA)		249
Spring 2017 (Charlotte, NC)		275
Fall 2017 (Portland, ME)		274
Spring 2018 (Orlando, FL)		307

Switchgear Committee Scope

Treatment of matters in which the dominant factors are the **design**, **construction** and **operation** of **devices** or **assembled gear** to establish (**make**), **interrupt**, or **change connections** in **any electric circuit** under **normal or abnormal conditions**, including the following:

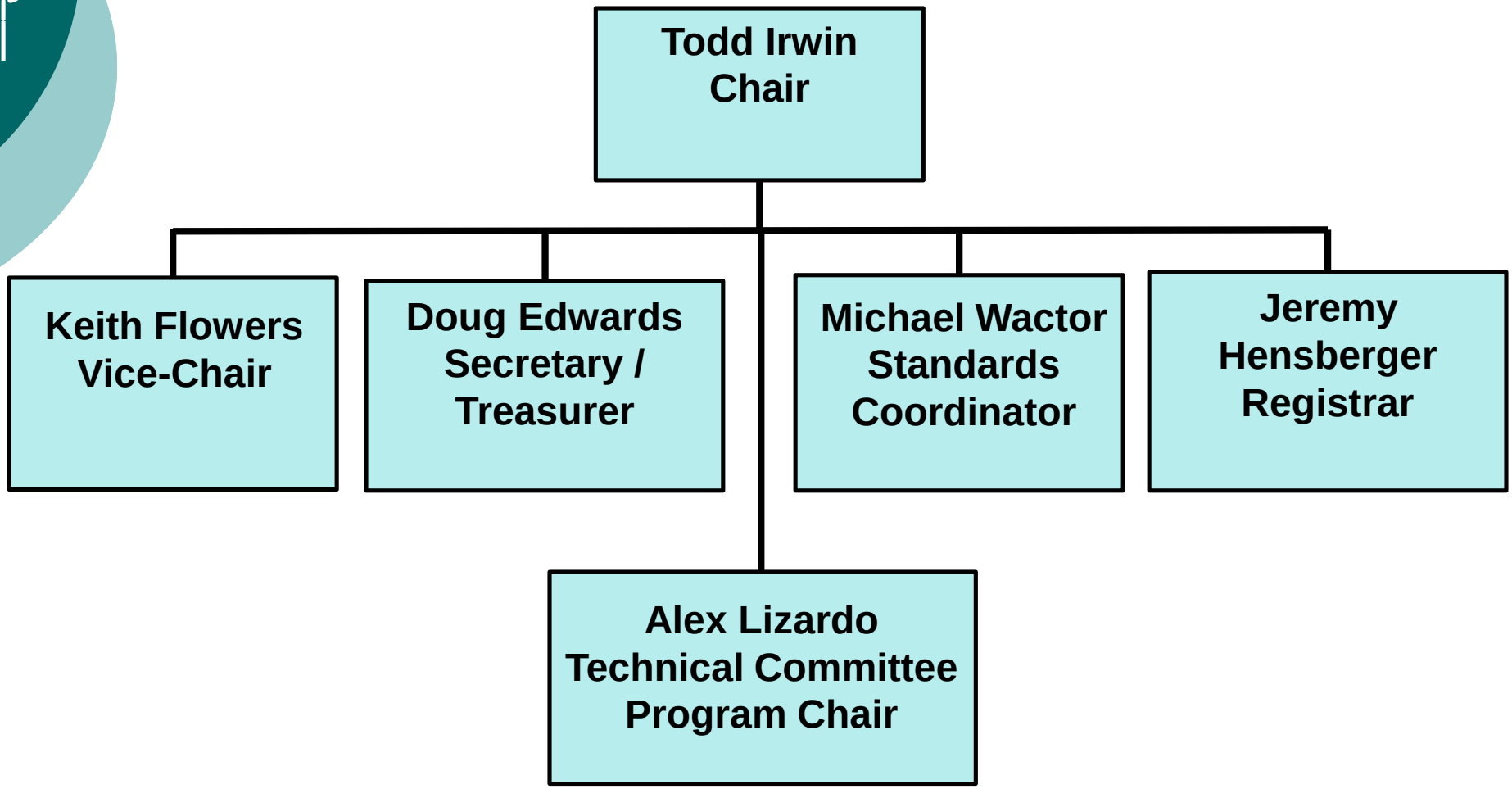
Switchgear Committee Scope

- Automatic reclosers and sectionalizers
- Current limiting devices
- Fuses and cutouts
- Gas-Insulated Switchgear (GIS)
- Insulation, insulators and hardware for switchgear
- Metal-enclosed buses and all buses included in switchgear assemblies
- Power circuit breakers
- Switches, including pad-mounted switches
- Switchgear assemblies
- Switchgear devices
- *Technology and Innovation*

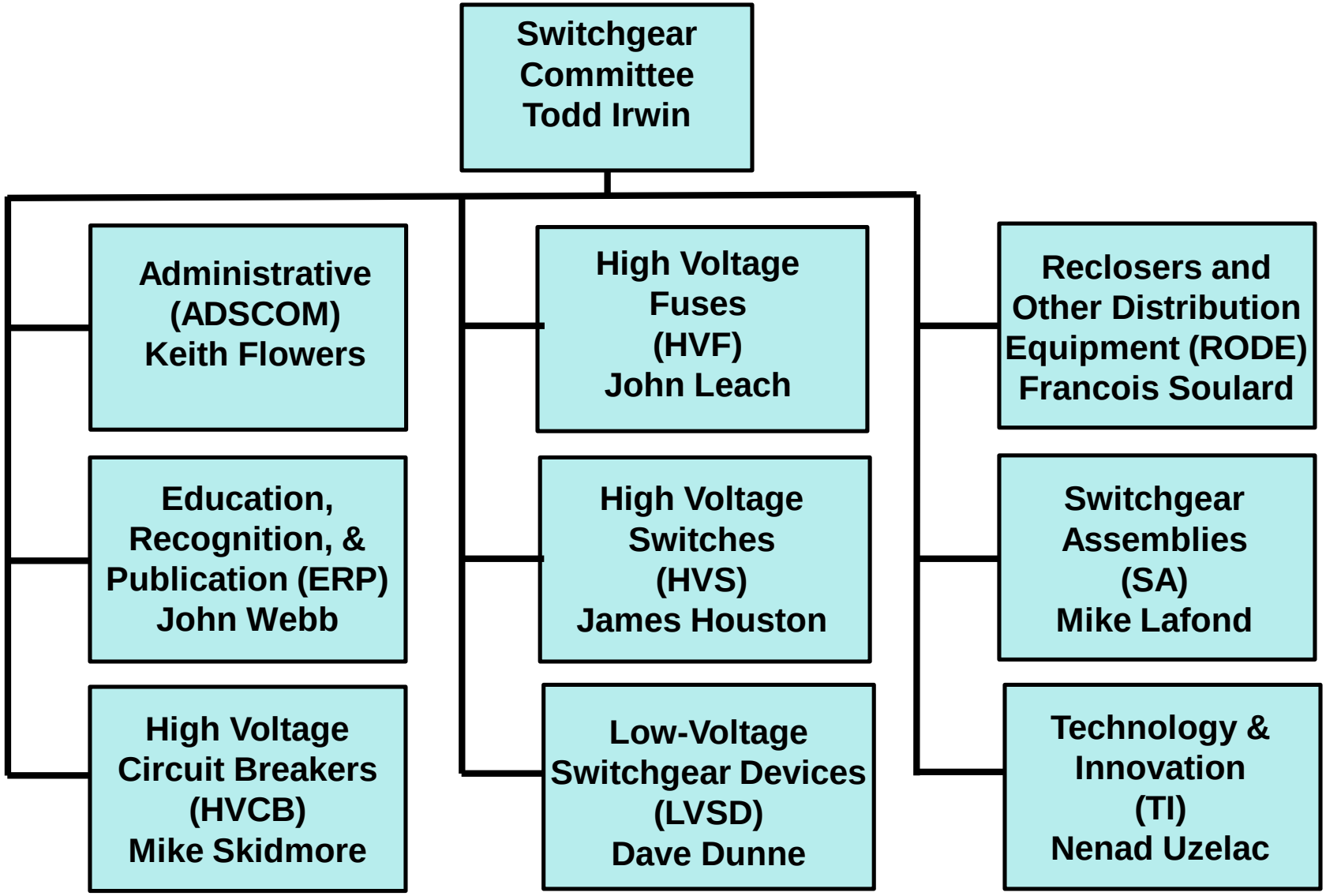
Activities

- Create & Maintain IEEE Switchgear Standards
  - Including Standards, Guides, and Recommended Practices
- Prepare and Review Technical Papers
- Organize Technical Sessions
- Recognize Contributions of Members
- Further the Art of Power Engineering

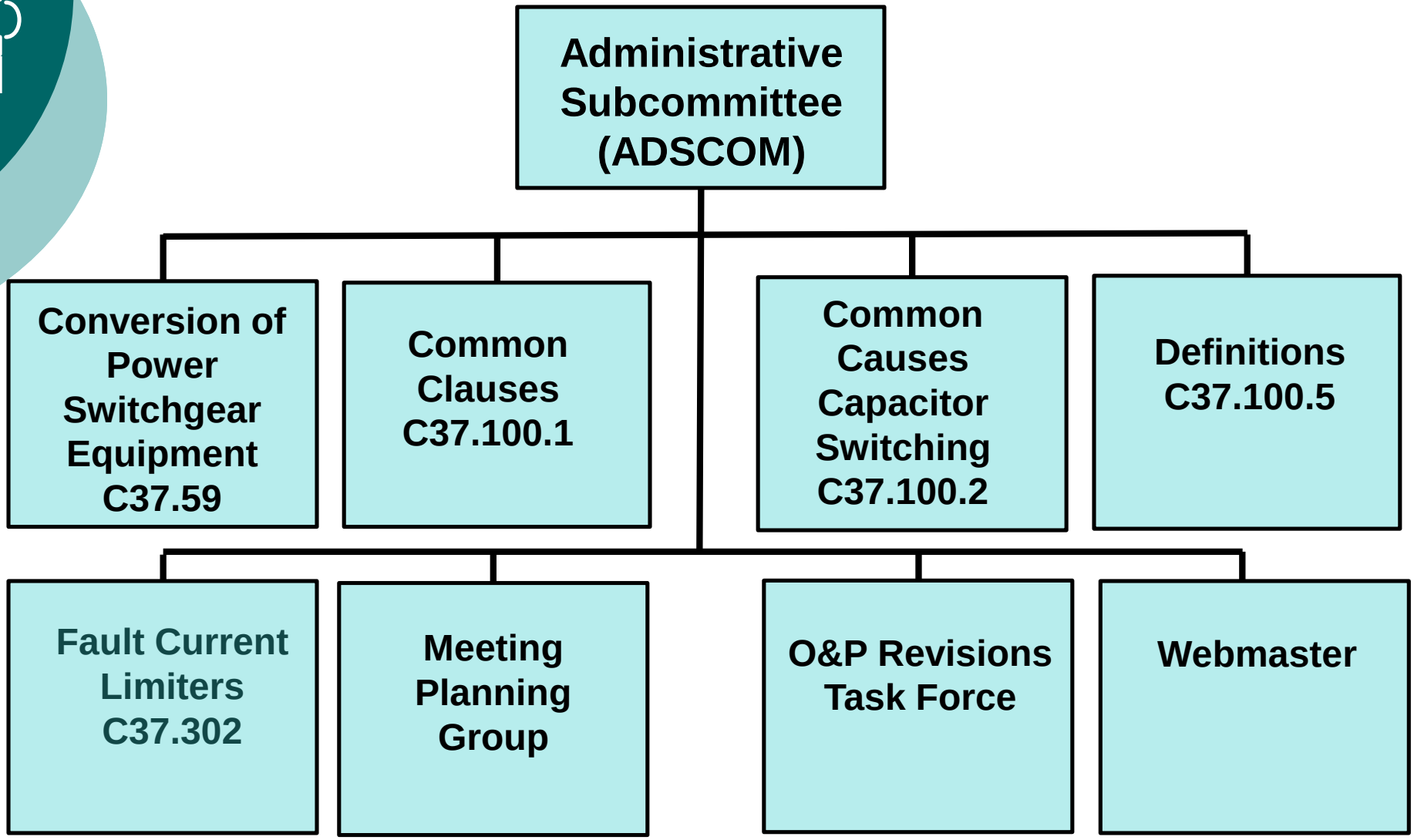
Switchgear Committee Officers



Switchgear – Sub-Committees



Switchgear – Sub-Committees



Switchgear – Sub-Committees

High Voltage Circuit Breakers Subcommittee (HVCB)

- Generator Circuit Breakers
- High-Voltage Application Guide
- Guide for Capacitor Switching
- HVCB Rating Structure
- Standardized Test Procedures
- Review Technical Papers

Switchgear – Sub-Committees

High Voltage Fuses (HVF)

- High-Voltage Fuses
- Consolidation of Fuse Standards

Switchgear – Sub-Committees

High Voltage Switch Subcommittee (HVS)

- Wind Loading
- Interrupter Switches
- Interrupter Switch Test Guide
- HV Air Switches

Switchgear – Sub-Committees

Low Voltage Switchgear Devices Subcommittee (LVSD)

- Low-Voltage AC Power Circuit Breakers
- DC Power Circuit Breakers
- Preferred Ratings for Power Circuit Breakers
- Direct-Acting Trip Systems
- Guide for Power Factor Measurement
- Circuit Breakers for use with Separately Mounted Fuses

Switchgear – Sub-Committees

Reclosers and Other Distribution Equipment Subcommittee (RODE)

- Controls for Distribution Equipment
- Underground Switchgear
- Sectionalizers
- Solid Dielectric Equipment
- Reclosers
- Capacitor Switches

Switchgear – Sub-Committees

Switchgear Assemblies Subcommittee (SA)

- Metal-Enclosed Switchgear & Switches
- Metal-Clad Switchgear
- Guide for Unit Substations
- LV DC Traction Switchgear
- Arc Fault Testing
- Metal-Enclosed Bus

Switchgear – Sub-Committees

Education, Recognition, & Publication (ERP)

- Awards
- Prize Papers Awards
- Paper Reviewing and Editors
- Fellows Nominations

Badge Ribbons….

Frequently Asked Questions

How do I get one of those snazzy "ieee.org" email addresses?

1. Be an IEEE Member
2. Have an IEEE Member Account
3. Submit request for GoogleApps@IEEE.org and enjoy:
   - a unique IEEE e-mail address (e.g., XXXX@ieee.org)
   - mail forwarding or e-mail inbox (Gmail)
   - 30 gigabytes of shared storage (Gmail & Google Drive)
   - advertisement-free Gmail
   - Cloud storage via Google Drive.

   http://www.ieee.org/membership_services/membership/googleapps.html/

Frequently Asked Questions

Are Meetings Open to Everyone?

- Generally, meetings are OPEN to all who register for the meetings.
- Observers are encouraged and welcome to attend and participate.

Frequently Asked Questions

Are any meetings CLOSED?

- YES. Meetings, marked with " * " on the schedule, are by invitation only:
- Most IEC, CIGRÉ and STL meetings are restricted, and observers are welcome ONLY at the pleasure of the chair.
- Visitors are welcome at STLNA meetings, but discuss your desire to attend with the chair in advance, to be sure we have enough chairs.

Frequently Asked Questions

How do I become a member of a ballot pool?

- You do NOT have to be a member of the Switchgear Committee to review and ballot Switchgear Committee standards.
- You DO have to join

	2018 Cost
IEEE Member	$200
IEEE-SA (Standards Association)	Included
IEEE PES (Power & Energy Society)	$ 35

- Create an IEEE-SA web account (no cost)
- Include the Switchgear Committee in your interest profile.
- Respond to ballot group invitations when issued, joining those ballot groups in which you have an interest.
- Joining a ballot group imposes an obligation to participate.

Frequently Asked Questions

How do I become a member of a Working Group or Task Force?

- Choose a subject you would like to work on
- Go to the Working Group or Task Force meetings
- Make the Working Group or Task Force Chair aware that you want to be a Working Group member
- Volunteer for an assignment (and complete it on time)
- Working Group and Task Force membership is at the discretion of the Chair for that group

Frequently Asked Questions

How do I become a member of a Subcommittee?

- Become a productive member of a Working Group or Task Force over a continuing period
- Ask the WG or TF chair to nominate you, for Subcommittee membership
- Subcommittee membership is at the discretion of the chair of that Subcommittee

Frequently Asked Questions

How do I become a member of the Main Committee?

- Be a productive member of a Subcommittee for at least two years and attend Main Committee meetings (at least four of last six).
- Fullfill IEEE membership requirements
  - IEEE
  - IEEE-SA
  - PES
- Ask the Subcommittee Chair to nominate you for membership in the Main Committee.
- Main Committee membership is at the discretion of the Main Committee Chair.

Reminder

Maintain your membership

- To be a member of SG and Subcommittees you must maintain current membership in:
  - IEEE
  - Power & Energy Society (PES)
  - Standards Association (SA)
- Please make sure to update your AMS (123Signup.com) profile https://www.123signup.com/profile?Org=IPSC2
- See SG Committee for more AMS (123Signup.com) http://www.ewh.ieee.org/soc/pes/switchgear/meetings/AMS_Intro
- Please let us know of changes of status – retirement, new job, etc.

Frequently Asked Questions

Why are some standards identified as ANSI standards, some IEEE, and some IEEE/ANSI? (1 of 3)

- ANSI standards are those APPROVED by one of the processes of the American National Standards Institute.
- ANSI does NOT create standards, but accredits Standards Development Organizations [SDOs, of which there are over 270] such as IEEE, NEMA, UL, and ASTM, by approval of procedures that conform to ANSI "Essential Requirements"
- After approval in the IEEE-SA process, IEEE-SA submits approved IEEE Standards to ANSI for recognition as ANSI Standards.

Frequently Asked Questions

Why are some standards identified as ANSI standards, some IEEE, and some IEEE/ANSI? (2 of 3)

- During ANSI review, the standard is subject to public comment (comments are infrequent).
- With rare exceptions, all IEEE Switchgear Standards are recognized as ANSI standards, even if the copy available from IEEE-SA does not say so.
- ANSI audits each SDO for compliance with the Essential Requirements, usually every five years.
- NEMA, UL, ASTM, etc., and other ANSI-accredited SDOs are subject to the same rules that ANSI applies to IEEE-SA.

Frequently Asked Questions

Why are some standards identified as ANSI standards, some IEEE, and some IEEE/ANSI? (3 of 3)

- ANSI recognizes three methods:
  - organization, e.g., IEEE
  - accredited committee, e.g., ASC C37, ASC C2, etc.
  - accredited canvass, e.g., NETA.

Standards Process

- Create Project Authorization Request (PAR) and submit to IEEE-SA New Standards Committee (NesCom)
  - Requires IEEE web account
  - http://standards.ieee.org/develop/
  - https://development.standards.ieee.org/my-site - from this url, select “Access the myProject User Guide.
- Form Working Group – Create Document
- Issue Invitation to join Ballot Group to overall Ballot Pool, a subset of IEEE Standards Association [IEEE-SA]

Standards Process

- Finalize Ballot Group and initiate ballot
- After ballot, resolve ballot comments and revise draft document
- Initiate recirculation ballot and recirculate negative ballots as needed to reach a consensus
- Package final balloted draft and backup for IEEE-SA Review Committee (RevCom) & approval by IEEE Standards Board
- Publish as IEEE/ANSI Standard
- This is all managed in the IEEE myProject system

Standards Process

- IEEE-SA policy
  - No interpretations or reaffirmations
- Approved standards are valid for 10 years
- Standard must be revised within 10 years or it will be withdrawn
  - Implication – must start revision 5 years after original approval
- Balance (ANSI) – no interest category can be more than 1/3 of ballot group
  - Implication – always have at least 5 interest groups
  - myProject lists 30 interest categories – suggest selecting a reasonable number (10?) of interest groups

Interest Groups

Academic- researcher	Producer – manufacturer	User – consumer
Academic- student	Producer – Other	User - industrial
Academic- teacher	Producer - Software	User – labor
Academic- other	Distributor	User – other
Gov't – defense	(sub)Supplier	Consulting
Gov't – regulator	Services – design	Insurance
Gov't – other	Services – documentation	Research
NGO – advocacy	Services – testing	SDO
General Interest	Services – training	Trade association
Producer – component	Services – recycle	Professional association

When you initiate an invitation, you can create categories of your own, edit the "default" categories, or delete any of the 30 "default" categories. If you add a category, you must provide a brief definition/description of the category (see separate list of "default" categories along with definition/description.

Standards Process

- Access to myProject user guide
  https://mentor.ieee.org/etools_documentation/dcn/11/etools_documentation-11-0014-MYPR-myproject-user-guide.pdf

- IEEE-SA myProject User Guide is an excellent reference document

Future Meetings – Confirmed

- Fall 2018
  - Oct 14-18, Apr 22-27; Kansas City Marriott Downtown, MO
- Spring 2019
  - April 28 – May 1; Hilton, Burlington, VT
- Fall 2019
  - Oct 6-10; Catamaran Resort, San Diego, CA
- Spring 2020
  - May 4-8; Peppermill Resort, Reno, NV
- Fall 2020
  - Oct 4-8; Sheraton Sundance Square, Fort Worth,