

IEEE 802.18 & 802.19

802.18 Radio Regulatory TAG – Chair: Mike Lynch

802.19 Coexistence TAG – Chair: Steve Shellhammer

Presented by Bruce Kraemer

Chair 802.11

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Disclaimer...

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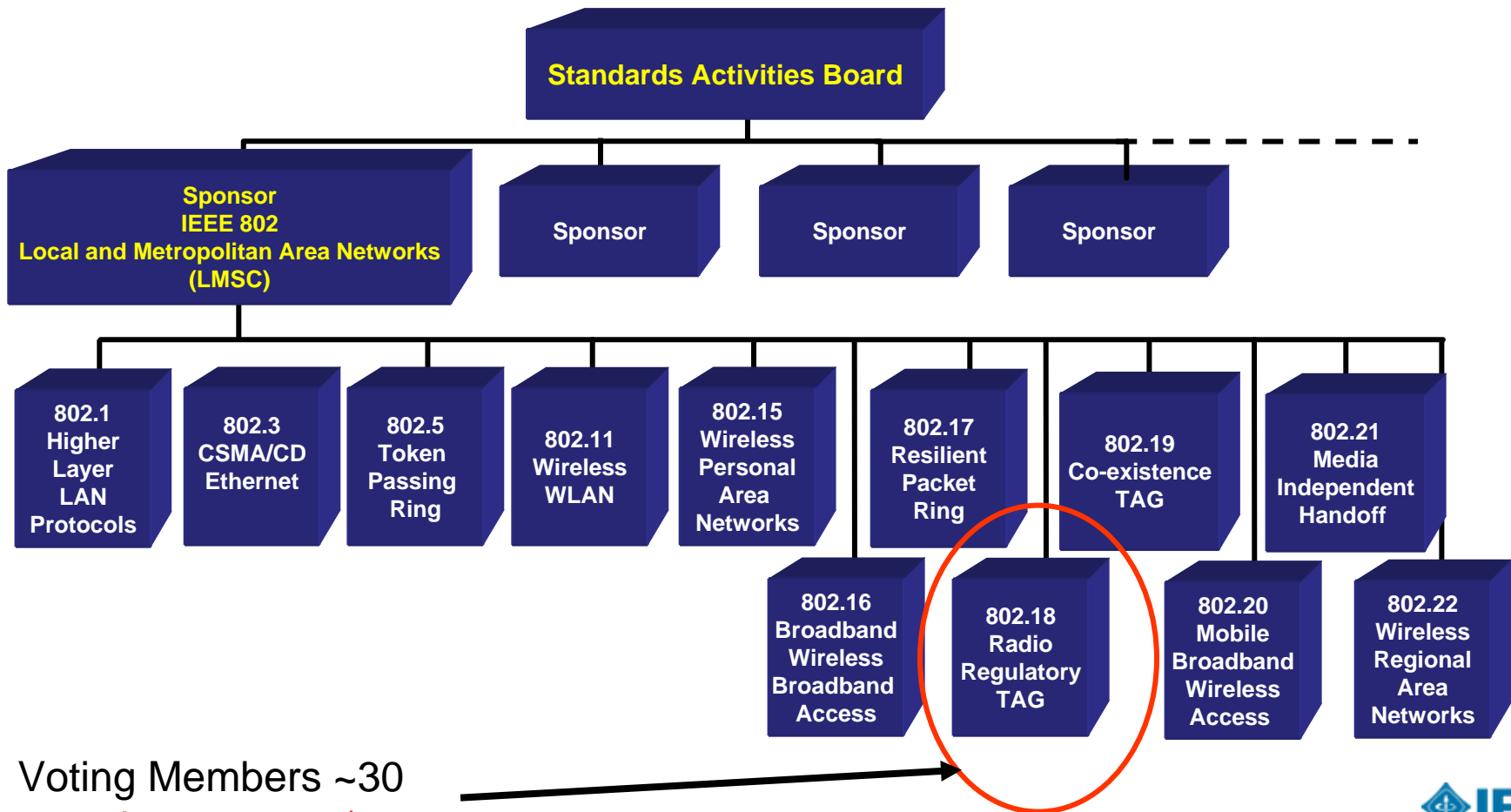
IEEE-SA Standards Board Operation Manual (subclause 5.9.3)

IEEE 802.18 Radio Regulatory Technical Advisory Group

Michael Lynch
Chairman, IEEE 802.18
www.ieee802.org/18/

IEEE 802 Organization

IEEE Standards Association



Voting Members ~30
www.ieee802.org/18

WG18 activities

- The IEEE 802.18™ Radio Regulatory Technical Advisory Group (RR-TAG) supports the wireless Working Groups in the IEEE 802 community by interfacing with regulatory agencies and industry groups working on regulatory issues.
- Administrations constantly upgrade their radio rules and regulations, providing brief opportunities for public comment. The RR-TAG monitors those with potential impact on IEEE 802 wireless standards groups and creates appropriate comment documents.
- The RR-TAG is also the liaison to other standards bodies on radio regulatory matters of mutual interest.

What is IEEE 802.18?

- IEEE 802, the LAN/MAN Standards Committee, or LMSC, currently has 6 Working Groups with projects on standards for radio-based systems ... IEEE 802.11 (WLAN), IEEE 802.15 (WPAN), IEEE 802.16 (WMAN), IEEE802.20 (Wireless Mobility), IEEE 802.21 (Handoff/Interoperability Between Networks), and IEEE 802.22 (WRAN).
- The monitoring of, and active participation in, ongoing radio regulatory activities, at both the national and international levels, are an important part of the LMSC's work. That is the job of the 802.18 Radio Regulatory Technical Advisory Group ("RR-TAG").

What does IEEE 802.18 do?

- IEEE 802.18 doesn't create wireless standards – but helps to create the correct regulatory environment
 - Interfaces directly with national regulators as needed
 - Conduit for IEEE 802 inputs to ITU-R

Recent Projects

- ITU-R: IMT Advanced, M.1801, M.1450
- 2.4 GHz rules: EN 300 328, EN 300 220
- FCC Broadband
- FCC NOIs: Broadband, Smart Grid, “White Spaces”
- Ofcom Digital Dividend, MGWS
- DFS, Weather Radar, Airplane operation
- U.S. FDA input on the use of wireless technology in medical devices
- ERO, European Radiocommunications Office,
 - Spectrum Engineering Working Group
 - SE21 - Unwanted Emissions - impact of radar spurious emissions
 - SE 24 - RLAN on board aircraft (SE24_32)

Typical IEEE 802.18 activities

- Initiated the current revision of ITU-R Recommendation M.1450 which lists RLAN technologies for use in the 5 GHz frequency band – referenced in Res. 229 (WRC-2003)
- Provided input to the U.S. Food and Drug Administration on the use of radio frequency wireless technology in medical devices
- Provided input to regulators (e.g. Industry Canada, U.K. Ofcom, U.S. FCC) on proposed spectrum policy changes

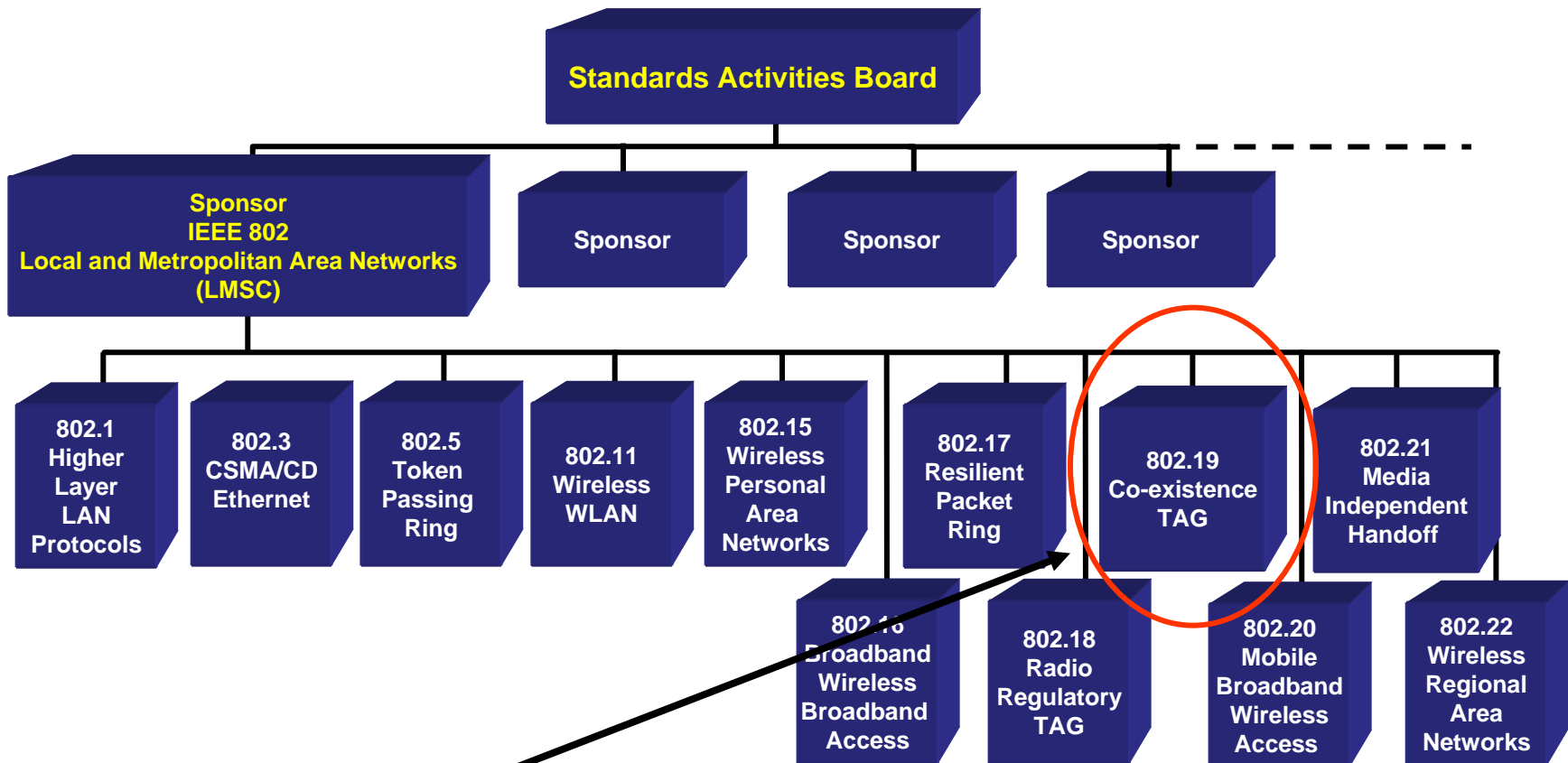
IEEE 802.19

Wireless Coexistence

Steve Shellhammer
Chairman, IEEE 802.19
www.ieee802.org/19/

IEEE 802 Organization

IEEE Standards Association



Voting Members ~25
www.ieee802.org/19

802.19



- **The IEEE 802.19™ Coexistence Technical Advisory Group** (C-TAG) develops and maintains policies defining the responsibilities of IEEE 802 standards developers to address issues of coexistence with existing standards and those under development. As required, it offers assessments to the Sponsor Executive Committee (SEC) on how well standards developers have conformed to these conventions. It also may develop coexistence documentation for the technical community outside of IEEE 802.

Overview

- IEEE 802.19 addresses coexistence between unlicensed wireless networks
- The number and diversity of unlicensed wireless networks are both growing
 - Wireless local area networks (802.11)
 - Wireless personal area networks (802.15)
 - Wireless metropolitan area networks (802.16h) and wireless regional area networks (802.22)
- Many of these devices are mobile or portable and can cause harmful interference to other nearby networks

Activities

- IEEE 802.19 provides technical assistance to the working groups developing unlicensed MAC/PHY standards
- Sometime the work involves working with multiple working groups (e.g. 802.11 & 802.15) to ensure that the standards operating in the same frequency band contain mechanisms (e.g. adaptive frequency hopping, dynamic frequency selection, etc.) to prevent causing harmful interference to other networks

New Project

- With the introduction by the FCC of the new TV white space (TVWS) spectrum several groups are developing MAC/PHY standards for operating in this frequency band
 - IEEE 802.22
 - IEEE 802.11af (TVWS)
 - Others
- IEEE 802.19 has a new standards project (802.19.1) to develop a standard for coexistence between wireless networks in the TV white space
- Some of the cognitive radio technology used in the TV white space may be utilized to provide coexistence between different TVWS networks
- The new project will have its first meeting in January 2010

Web Site

- You can find out more about IEEE 802.19 at the web site,
 - <http://grouper.ieee.org/groups/802/19/>
- Besides face-to-face meetings 802.19 holds conference calls on coexistence topics
- Anyone who is interested can sign up to the email reflector
 - <http://ieee802.org/19/pub/subscribe.html>