



Advanced Spectrum Policy Course

Lecture 6: International Spectrum Policy

Fall 2025

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Washington, D.C.



Advanced Spectrum Policy

1. Introduction
2. Lecture 1 NRAO Panel Discussion
3. Lecture 2 Federal Spectrum Policy
4. Lecture 3 FCC and NTIA and OSTP
5. Lecture 4 FCC Rulemaking Process
6. Lecture 5 Congressional Involvement
- 7. Lecture 6 International Spectrum Policy**
8. Lecture 7 Competition and New Use Cases

Lecture 6: International Spectrum Policy

6.1. International Telecommunications Union World Radio Conference (ITU WRC)

6.1.1. WRC-23

6.1.2. WRC-27

6.1.3. CITEL PCC.II

6.2. IEEE and Other Standards Bodies

6.3. In the News

6.4. Assignment

6.1. International Telecommunications Union World Radio Conference (ITU WRC)

6.1.1. WRC-23

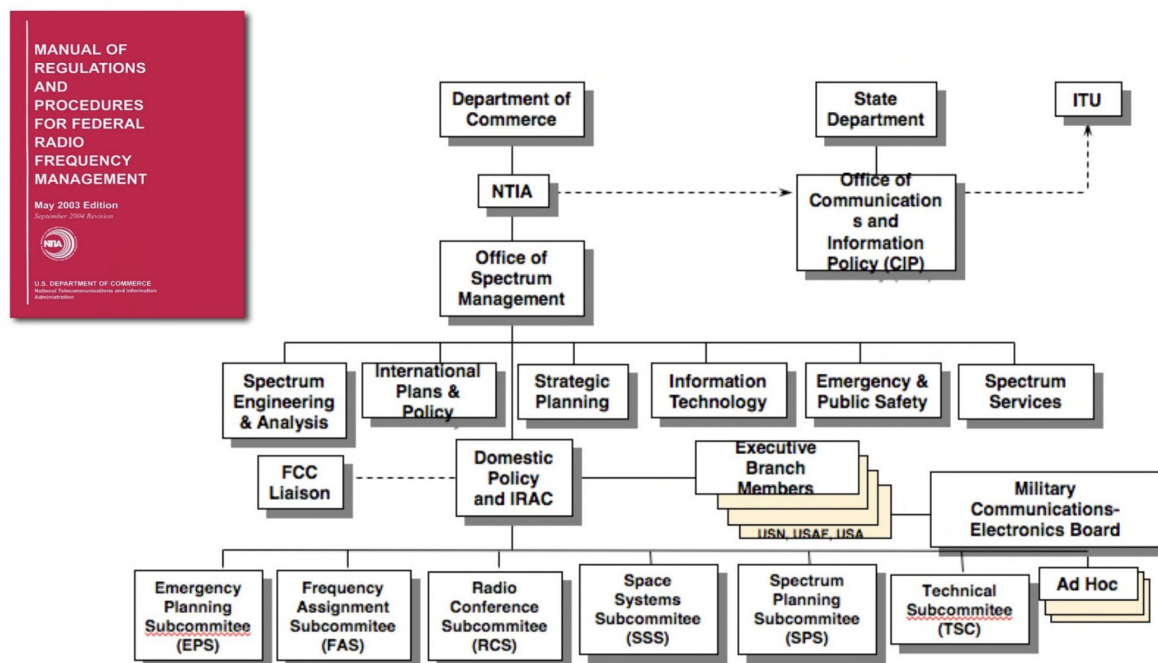
6.1.2. WRC-27

6.1.3. CITEL PCC.II

6.1.1. WRC-23

NTIA Organization

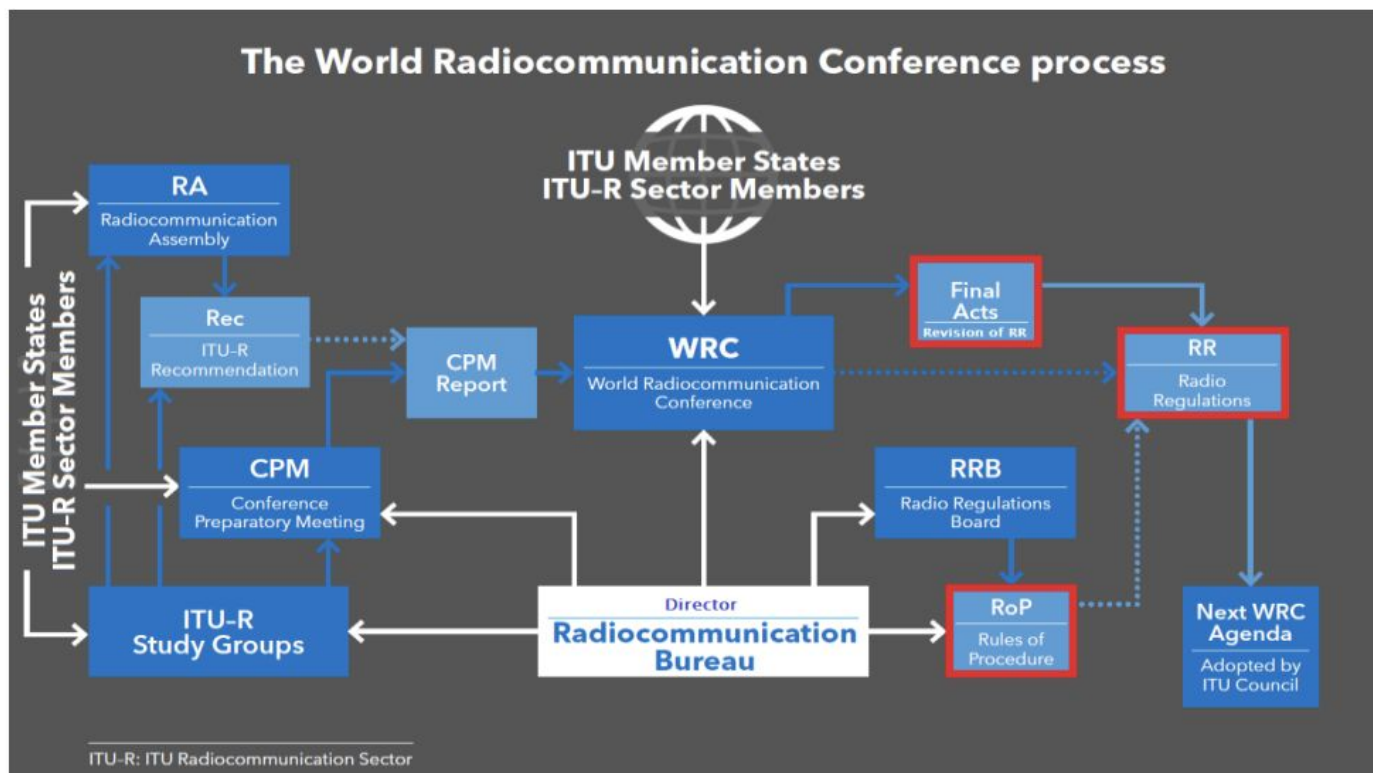
NTIA Manual



6

International Committee on Global Navigation Satellite Systems, "Introduction to National Spectrum Agencies and National Applications," <https://www.unoosa.org/pdf/icg/2015/presentations/38.pdf>

6.1.1. WRC-23

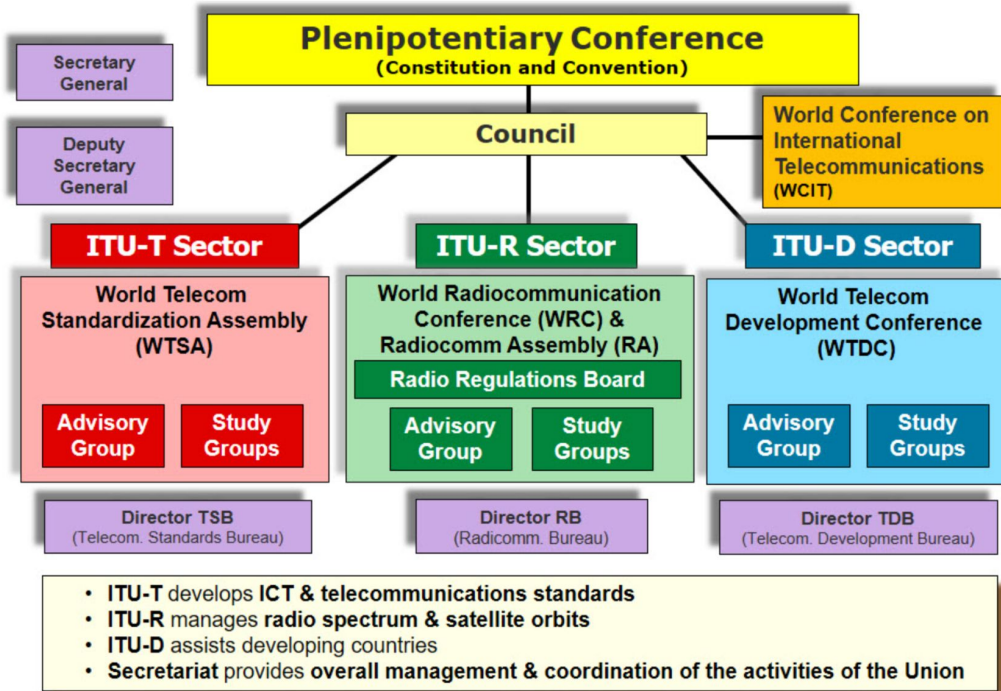


Schema 1: The World Radiocommunication Conference process

ITU, “The International Telecommunication Union (ITU): Results of the Radiocommunication Assembly and World Radiocommunication Conference 2023,” Feb. 1, 2024, at 2,
https://www.unoosa.org/res/oosadoc/data/documents/2024/aac_105c_12024crp/aac_105c_12024crp_23_0_html/AC105_C1_2024_CRP23E.pdf

6.1.1. WRC-23

Figure 1: ITU Structure



Government of Canada, "ISED's Involvement in the International Telecommunication Union: Evaluation Report," <https://ised-isde.canada.ca/site/audits-evaluations/en/evaluation/iseds-involvement-international-telecommunication-union-evaluation-report>.

6.1.1. WRC-23



ITU WRC-23 in Dubai, Nov. 20–Dec. 15, 2023,
<https://www.itu.int/wrc-23/>

6.1.1. WRC-23



ITU's WRC-19 conference. Photo: ITU

ITU WRC-19 in Sharm El-Sheikh, Egypt, Oct. 28–Nov 22, 2019

6.1.1. WRC-23

Federal Communications Commission

DA 23-296

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations
(See No. 2.1)

MOD USA/A1 1.7/1

75.2-137.175 MHz

Allocation to services		
Region 1	Region 2	Region 3
117.975-137	AERONAUTICAL MOBILE (R) <u>AERONAUTICAL MOBILE-SATELLITE (R) ADD 5.A17 ADD 5.B17</u> 5.111 5.200 5.201 5.202	

Reasons: Adds an AMS(R)S allocation to the 117.975-137 MHz band.

ADD USA/A1 1.7/2

5.A17 In the frequency band 117.975-137 MHz, the use of the aeronautical mobile-satellite (R) service is limited to non-geostationary-satellite systems and is subject to coordination under No. 9.11A. Stations in the aeronautical mobile-satellite (R) service operating in the 117.975-137 MHz frequency band shall not cause harmful interference to, nor claim protection from stations in the aeronautical mobile (R) service. The use of this band by the aeronautical mobile-satellite (R) service shall be limited to systems that operate and are planned in accordance with recognized international aeronautical standards. (WRC-23)

Reasons: To ensure the current and future AM(R)S systems are not constrained.

ADD USA/A1 1.7/3

5.B17 In the frequency band 136-137 MHz, space stations operating in the aeronautical mobile-satellite (R) service should ensure that their maximum level of their emissions above 137 MHz does not exceed a pfd of $-166.6 \text{ dB(W/(m}^2 \cdot 14 \text{ kHz))}$. (WRC-23)

Reasons: To ensure the protection of the incumbent services above 137 MHz.

5

FCC, OIA Seeks Comment
on Recommendations
Approved by the WRC
Advisory Committee,
[https://docs.fcc.gov/public/
attachments/DA-23-296A1.
pdf](https://docs.fcc.gov/public/attachments/DA-23-296A1.pdf)

6.1.2. WRC-27

World Radiocommunication Conferences (WRC)

World Radiocommunication Conference 2023 (WRC-23)

20 NOVEMBER - 15 DECEMBER 2023 DUBAI, UNITED
ARAB EMIRATES (UAE)

World Radiocommunication Conference 2019 (WRC-19)

28 OCTOBER - 22 NOVEMBER 2019 SHARM EL-SHEIKH,
EGYPT

World Radiocommunication Conference 2015 (WRC-15)

2-27 NOVEMBER 2015 GENEVA, SWITZERLAND

World Radiocommunication Conference 2012 (WRC-12)

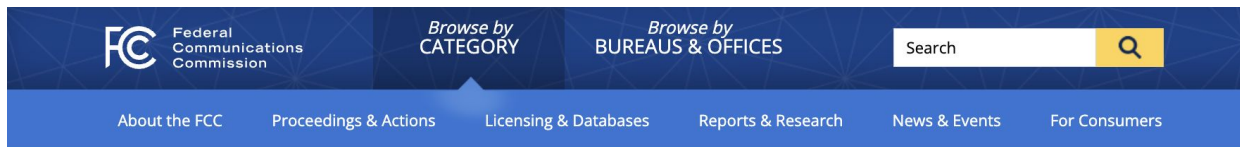
23 JANUARY - 17 FEBRUARY 2012 GENEVA,
SWITZERLAND

World Radiocommunication Conference 2007 (WRC-07)

22 OCTOBER - 16 NOVEMBER 2007 GENEVA,
SWITZERLAND

ITU WRC, World
Radiocommunication
Conferences (WRC),
[https://www.itu.int/en/ITU-R/
conferences/wrc/Pages/defa
ult.aspx](https://www.itu.int/en/ITU-R/conferences/wrc/Pages/default.aspx).

6.1.2. WRC-27



Home / International Affairs

WRC-27

World Radiocommunication Conference

WRC-27

WRC-23

WRC-19

WRC-15

WRC-12

The advisory committee provides to the Federal Communications Commission (FCC) public views and recommendations in preparation for the 2027 World Radiocommunication Conference (WRC-27).

Docket 24-30 ([EDOCs](#), [ECFS](#)) World Radiocommunication Conference Advisory Committee for WRC-27

How to Apply for Membership:

To apply for membership on the committee or change representatives on the committee please see the Public Notice [Rechartering and solicitation of members for the WRC Advisory Committee](#)

Public Notices Regarding WAC-27:

2025

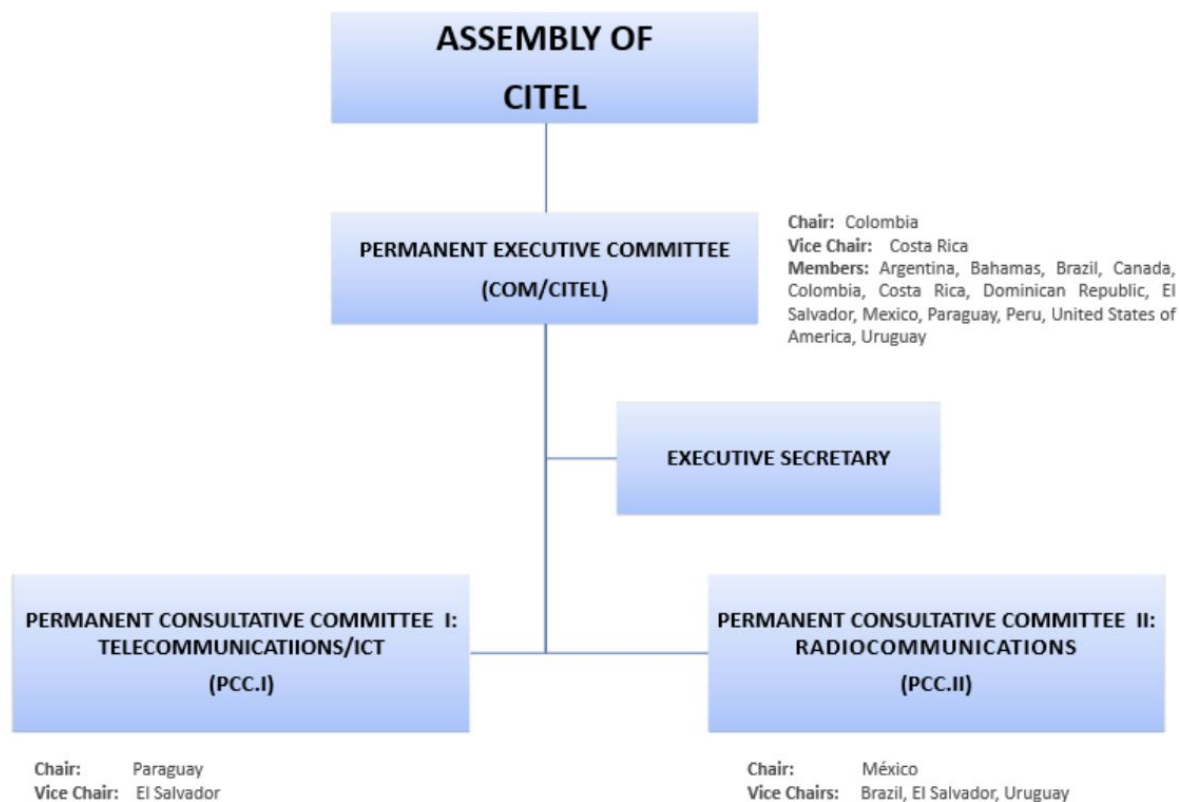
- [WRC Advisory Committee Schedules April 15 Meeting](#)

2024

- [Rechartering and solicitation of members for the WRC Advisory Committee](#)
- World Radiocommunication Conference Advisory Committee Meetings
 - [First Meeting](#), June 3, 2024
 - [Second Meeting](#), August 5, 2024
 - [OIA Seeks Comment on Recommendations Approved by the WAC](#)
 - [Third Meeting](#), April 15, 2025
- [Appointments of Jayne Stancavage and Kimberly Baum as Chair and Vice Chair of the Commission's World Radiocommunication Conference Advisory Committee](#)

FCC, WRC-27,
<https://www.fcc.gov/wrc-27>

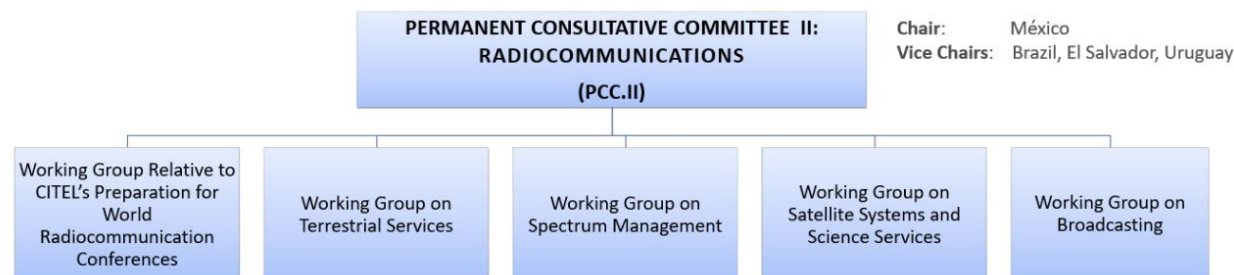
6.1.3. CITEL PCC.II



CITEL, 2021
Annual Report,
at 8,
<https://scm.oas.org/pdfs/2024/CP49464E.pdf>.

6.1.3. CITEL PCC.II

3.3 *Permanent Consultative Committee II: Radiocommunications (PCC.II)*



CITEL, 2021
Annual Report,
at 13,
<https://scm.oas.org/pdfs/2024/CP49464E.pdf>

6.1.3. CITEL PCC.II

CITEL PCC.II, or the Permanent Consultative Committee II: Radiocommunications, is a key body within the Inter-American Telecommunication Commission (CITEL), an entity of the Organization of American States (OAS). CITEL itself is focused on promoting telecommunications and information and communication technology (ICT) development across the Americas. PCC.II specifically deals with radiocommunications and broadcasting, playing a critical role in coordinating regional preparations for international events like the World Radiocommunication Conference (WRC), organized by the International Telecommunication Union (ITU).

The PCC.II develops common positions and Inter-American Proposals (IAPs) for WRCs, which are submitted to influence revisions to the ITU Radio Regulations—the treaty governing global radio-frequency spectrum and satellite orbit use. PCC.II operates through meetings where member states, including the United States, collaborate with associate members (e.g., industry stakeholders) to negotiate and refine these positions. It's a platform for dialogue, technical studies, and consensus-building ahead of global conferences like WRC-27.

6.1.3. CITEL PCC.II

Connecting the Americas: Thoughts from the 43rd Meeting of CITEL-PCC.II

30/04/2024



Written by César Díaz, Head of Telecommunications Affairs

Within the framework of the 43rd Meeting of Permanent Consultative Committee 2 (PCC.II) of the Inter-American Telecommunications Commission (CITEL) held in Montevideo, Uruguay, Internet Technical Community organizations LACNIC, ISOC, ICANN, LACTLD, LAC-IX, LACNOG, and RedClara had the privilege of welcoming to *Casa de Internet* prominent representatives of CITEL Member States and the presidents of various working groups. Discussions focused on topics considered essential for the development of telecommunications in our region.

LACNIC Blog,
“Connecting the
Americas: Thoughts
from the 43rd
Meeting of
CITEL-PCC.II,” Apr.
30, 2024,
<https://blog.lacnic.net/en/connecting-the-americas-thoughts-from-the-43rd-meeting-of-citel-pcc-ii/>

6.2. IEEE and Other Standards Bodies

The screenshot shows the IEEE SA Standards Association website. At the top left is the IEEE SA logo, and at the top right is the IEEE logo. Below these is a navigation bar with links: Standards, Products & Programs, Practices & Focuses, Get Involved, Resources, a search bar labeled 'Search the IEEE SA Website...', and a 'MAC ADDRESS' button. The main banner features the headline 'RAISING THE WORLD'S STANDARDS' in large white letters, followed by the text 'Discover how the IEEE SA is working to meet your evolving needs.' Below this is a search bar with the placeholder text 'I want to...' and a plus icon. At the bottom of the banner, three statistics are displayed: '2,360+ Standards & Projects', '160+ Countries', and '35,000+ Global Participants'. The background of the banner is a dark blue image of a woman's face in profile, overlaid with various digital and technical icons.

IEEE SA STANDARDS ASSOCIATION

IEEE

Standards Products & Programs Practices & Focuses Get Involved Resources Search the IEEE SA Website... MAC ADDRESS

RAISING THE WORLD'S STANDARDS

Discover how the IEEE SA is working to meet your evolving needs.

I want to... +

2,360+
Standards & Projects

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35,000+
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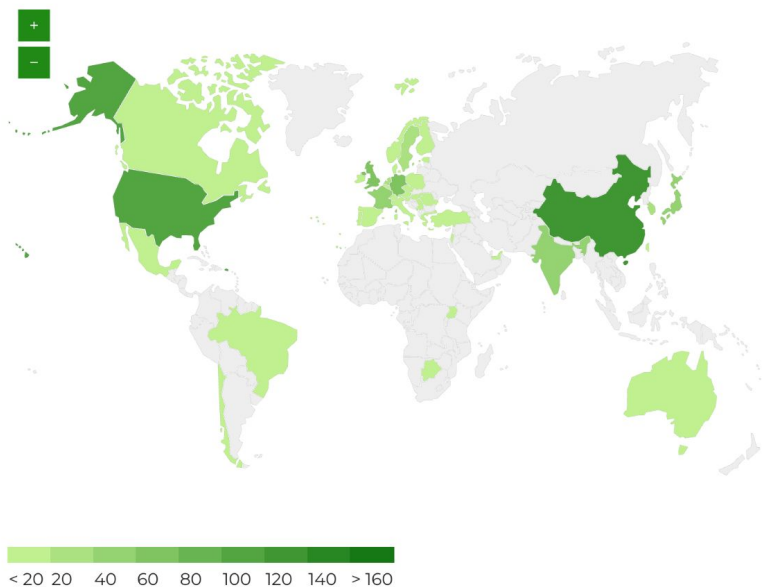
IEEE SA, <https://standards.ieee.org/>.

6.2. IEEE and Other Standards Bodies



[About](#) [3GPP Groups](#) [Specifications & Technologies](#) [Delegates Corner](#) [Get Involved](#) [News & Events](#)

3GPP Global Membership



43

Countries

848

Organizational Partner Members

9773

Number delegates at meetings this year

60

3GPP Meetings per year

4343

3GPP Specifications

12198

3GPP 'Change Requests' to date

3GPP, <https://www.3gpp.org/>.

6.2. IEEE and Other Standards Bodies

Connect with us:     Sign up for ETSI news | Member Portal



STANDARDSTECHNOLOGIESCOMMITTEESMEMBERSHIPEDUCATIONMORE

Get standardsTypes of standardsStandards makingWhy standardsEuropean regulationCoordinated Vulnerability Disclosure

STANDARDS, SPECIFICATIONS AND REPORTS

ETSI is a key player on the international standards scene and publishes more than 2,500 standards every year. These include the standards that enable key global technologies such as GSM™, 3G, 4G, 5G, DECT™, and many more ICT standards success stories.

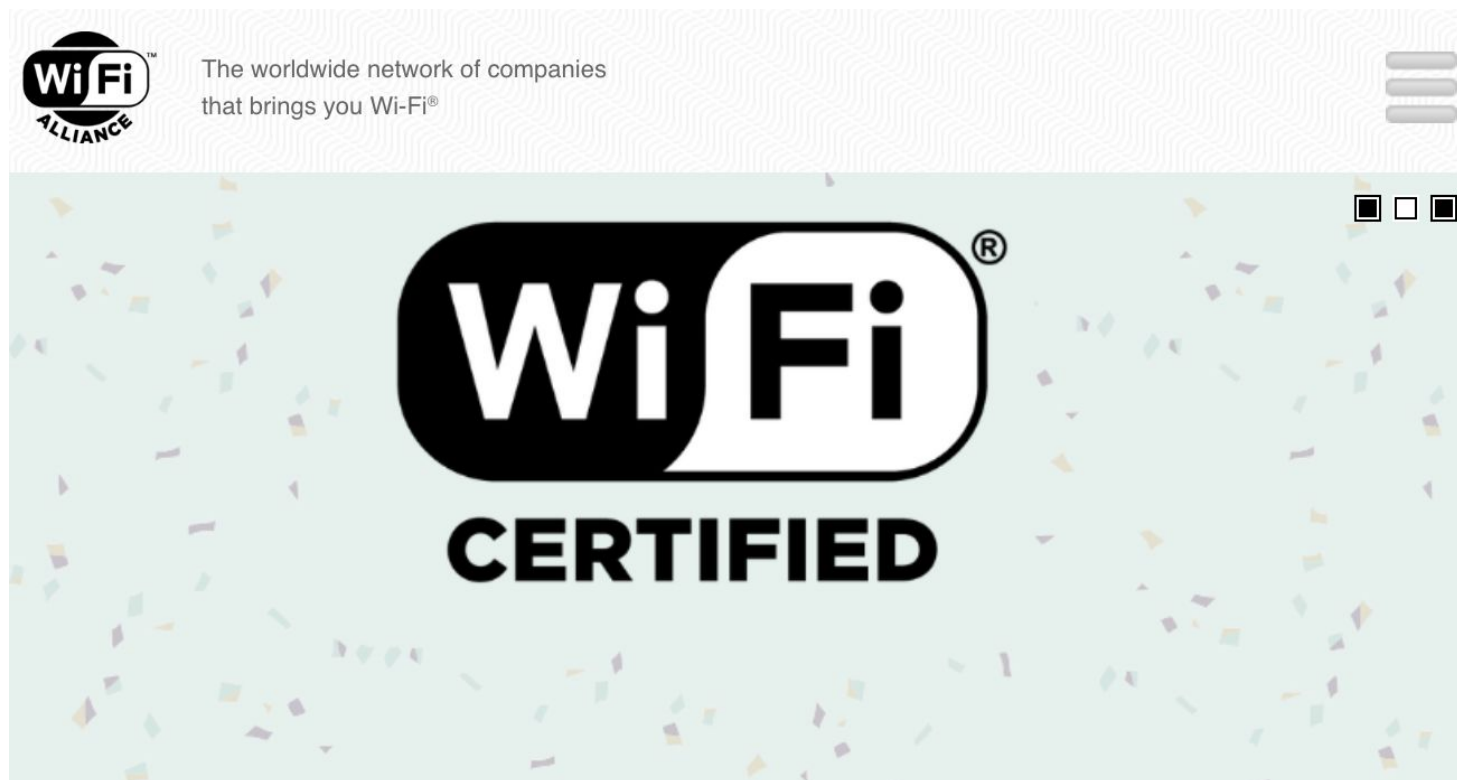
ETSI standards are [available for download in PDF](#) free of charge (*the Word version is password protected and accessible for a specific target audience only*).

ETSI produces specifications, standards, reports and guides, each with its own purpose.

- European Standard (EN) – Used when the document is intended to meet needs specific to Europe and requires transposition into national standards, or when the drafting of the document is required under a standardization request from the European Commission (EC)/European Free Trade Association (EFTA). An EN is drafted by a Technical Committee and approved by ETSI's European National Standards Organizations.
 - Harmonised Standards
Harmonised Standards are ENs with a special status. We produce them in response to an EC standardization request. They provide the technical detail necessary to achieve the 'essential requirements' of an EC Directive. They are thus key enablers of the European Single Market. We produced and continue to produce numerous Harmonised Standards in support of several EC mandates and policies.
- European standardization deliverables – Any other technical specification than a European standard, adopted by a European standardization organization for repeated or continuous application and with which compliance is not compulsory.
- ETSI Standard (ES) – Used when the document contains technical requirements. An ES is submitted to the whole ETSI membership for approval.
- ETSI Guide (EG) – Used for guidance to ETSI in general on the handling of specific technical standardization activities. It is submitted to the whole ETSI membership for approval.

ETSI, <https://www.etsi.org/standards/types-of-standards>

6.2. IEEE and Other Standards Bodies



Wi-Fi Alliance, <https://www.wi-fi.org/>.

6.3. In the News

The image is a screenshot of a Fierce Network article. At the top, the Fierce Network logo is on the left, and navigation links for Broadband, Cloud, AI, Wireless, MWC, Awards, Research, and FNTV are on the right. Below the navigation bar, the article is categorized under 'WIRELESS'. The title 'Op-Ed: US must prepare for China to host World Radio Conference' is prominently displayed in large white text. To the left of the title are social media sharing icons for LinkedIn, X, Facebook, and a plus sign. Below the title, the author 'By Dean Bubley' and the date 'Feb 28, 2025 7:00am' are shown. At the bottom of the article preview, there are three tags: 'Op-Ed', '5G spectrum', and 'international telecommunications union'.

FIERCE
Network

Broadband Cloud AI Wireless MWC ▾ Awards Research FNTV

WIRELESS

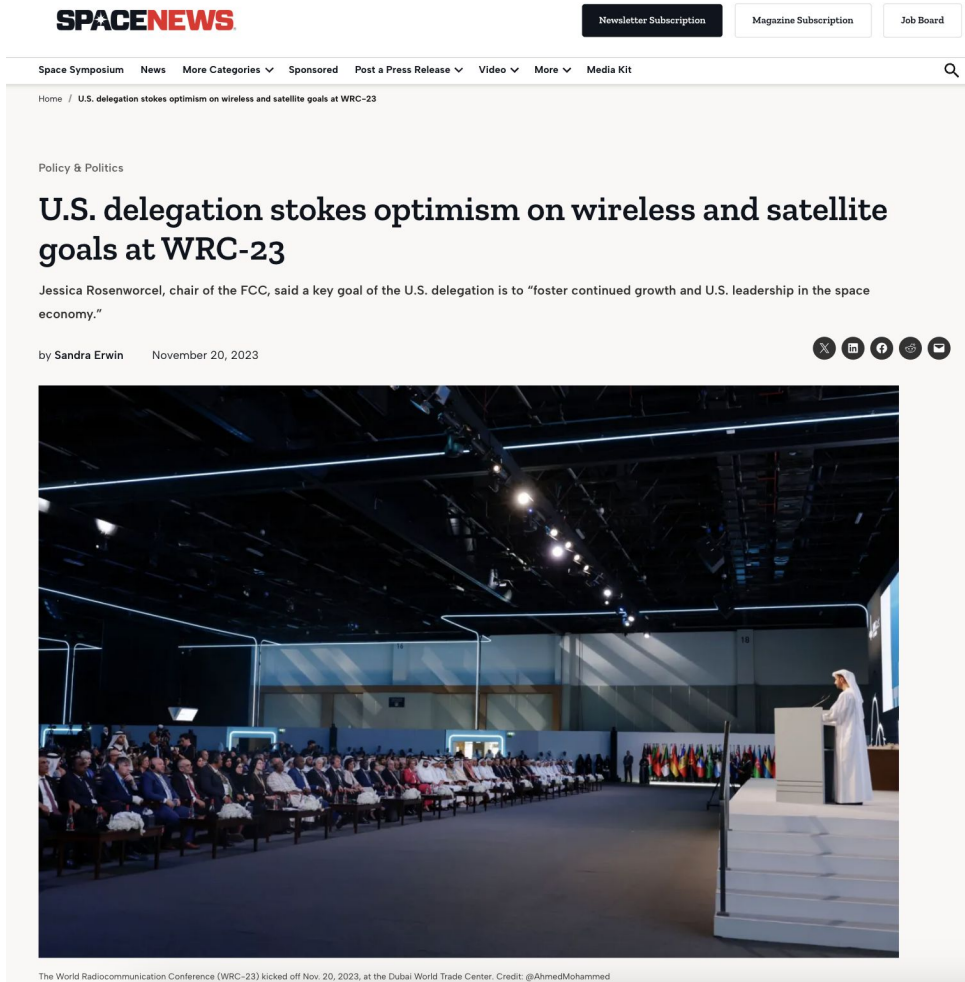
Op-Ed: US must prepare for China to host World Radio Conference

By Dean Bubley · Feb 28, 2025 7:00am

Op-Ed 5G spectrum international telecommunications union

Dean Bubley, U.S. Must Prepare for China to Host the World Radio Conference, Fierce Network, Feb. 28, 2025,
<https://www.fierce-network.com/wireless/op-ed-us-must-prepare-china-host-world-radio-conference>

6.3. In the News



Sandra Erwin, “U.S. Delegation Stokes Optimism on Wireless and Satellite Goals at WRC-23,” Space News, Nov. 20, 2023, <https://spacenews.com/u-s-delegation-stokes-optimism-on-wireless-and-satellite-goals-at-wrc-23/>

6.3. In the News



Monica Allevan, “U.S. Wi-Fi Industry Declares Victory at WRC-23”, Fierce Network, Dec. 15, 2023,

<https://www.fierce-network.com/tech/us-wi-fi-industry-declares-victory-wrc-23>

6.3. In the News

GSMA[™] Solutions and impact Discover Get involved About us Newsroom 

Friday 15 December, 2023

GSMA hails groundbreaking spectrum decisions at WRC-23



GSMA, “GSMA Hails Groundbreaking Spectrum Decisions at WRC-23,” Dec. 15, 2023, <https://www.gsma.com/newsroom/press-release/gsma-hails-groundbreaking-spectrum-decisions-at-wrc-23/>.

6.4. Assignment

Read the draft proposal for the work of the WRC conference. Why is it necessary for the ITU WRC nations to make such technical decisions at the international treaty-level? Can these global spectrum issues be resolved in bilateral or multilateral forums or are these technical spectrum details necessarily international in nature? On page 15, for example, you see major companies agreeing or disagreeing with a proposed position. How do the FCC and State Department decide between conflicting positions?

- FCC, OIA Seeks Comment on Recommendations Approved by the WRC Advisory Committee,
<https://docs.fcc.gov/public/attachments/DA-23-296A1.pdf>.

6.5. Learning Objectives

Understand the role of international organizations like the ITU and CITEL in global spectrum policy, including the outcomes and goals of WRC conferences. Examine how standards bodies such as IEEE influence international coordination and technical guidelines for spectrum use.



www.nrao.edu
science.nrao.edu
public.nrao.edu

*The National Radio Astronomy Observatory is a facility of the National Science
Foundation
operated under cooperative agreement by Associated Universities, Inc.*