Worldwide initiatives to deliver more mid-band spectrum through sharing
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Global Summit
A NEW SPECTRUM MINDSET

November 3-5, 2020
VIRTUAL EVENT
Michael A. Calabrese directs the Wireless Future Program at New America’s Open Technology Institute, a non-profit think tank based in Washington, D.C. He develops and advocates policies to promote ubiquitous, fast and affordable wireless broadband connectivity, including the reallocation of more prime spectrum for unlicensed access, next generation Wi-Fi, and dynamic spectrum sharing.

Calabrese has served on the U.S. Department of Commerce Spectrum Management Advisory Committee (CSMAC) since 2009 and as an Invited Expert on President Obama’s Council of Advisors on Science and Technology (PCAST) spectrum reform working group during 2011-2012.

Calabrese has previously served as Vice President of New America (2003-2010), General Counsel of the Congressional Joint Economic Committee, director of domestic policy at the Center for National Policy, and as a counsel at the national AFL-CIO. He is a graduate of Stanford Law and Business Schools (JD/MBA) and of Harvard College.
Guest Speakers

- **Alexander Kühn**
  - Chairman | CPG, BNetzA (Federal Network Agency), Germany

- **Charles Cooper**
  - Associate Administrator | Office of Spectrum Management, NTIA

- **Guillaume Lebrun**
  - Spectrum Consultant | Facebook

- **Andy Clegg**
  - Spectrum Engineering Lead | Google

- **Jennifer McCarthy**
  - VP, Legal Advocacy | Federated Wireless
Worldwide initiatives to deliver more mid-band spectrum through sharing

Alexander Kühn
Dynamic Spectrum Alliance Summit 2020
Virtual Conference, 04.11.2020
Introduction

Mobile operators

Verticals / Newcomers

Growing interest of SME & Industry

Existing use

Foster competition

Facilitate innovation

Efficient use of spectrum

Quality of service

Coverage

Converging technologies

Nationwide

Local

EMC

Prohibit hoarding

Sharing of capacity or spectrum?

Regulatory Challenge
Example 1: 3400-3700-3800 MHz

- **Application based process**
- **Local frequency utilization only**
  by Owner, Tenant w/permission, Commissioned Provider
- Company **internal communications** only
- **Obligation to negotiate** with neighbouring operators
- **Review after 1 year** incl. Consultation of interested parties

- **Auction process**
- Usage by Mobile Network Operators
- **Nationwide utilization**
- Public Telecommunication services
Example 2: 26-GHz-Band

- Full accordance with EC DEC (EU)2019/784
- **Application based process**
- **First-come-first-served principle**
- Ensure **protection of current use** of Fixed Service links (PTP/PMP) and EESS Earth Stations. No relocation of fixed radio links ⇒ but: future utilization concept
- **Technology- and Service- Neutrality**
- **Start assignments in 26.5–27.5 GHz**
- Obligation of negotiation for adjacent radio networks.
- Allow individual coordination w/ existing user.
- “**Use-it-or-lose-it**” - Review (1 year).
Thank you!

Alexander Kühn

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U.S. Spectrum Sharing in the 3 GHz Range

CHARLES COOPER, NTIA
NOVEMBER 4, 2020
U.S. Spectrum Management

The President

Communications Act of 1934

Congress

Coordination

• FCC-NTIA MOU
• ITU preparation

NTIA

Federal Users

FCC

Non-Federal Users

Interdepartment Radio Advisory Committee

Chaired by NTIA OSM
19 Federal agency members

Policy and Plans Steering Group

Chaired by NTIA Assistant Secretary
Federal agencies plus FCC and the White House

Commerce Spectrum Management Advisory Committee

Non-government advisors to Department of Commerce

Mobile phones
Commercial Satellites
Emergency Services

U.S. Department of Commerce · National Telecommunications and Information Administration

National Defense
Homeland Security
Transportation
Science (weather)
Natural Resources

47 CFR Part 300
NTIA Manual

FCC Rules
47 CFR Parts 0-199

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Incumbent Informing Capability

- FSO
  - Commercial Spectrum Operator
  - Federal Spectrum Operator (Incumbents)
  - Priority User
  - Incumbent
  - Planned Emissions
    - Time
    - Frequency
    - Location
    (Impact Level Designated Data)

- IIC
  - Incumbent Informing Capability
  - Regulatory Compliance
    (Impact Level Designated Data)

- CSM
  - Commercial Spectrum Manager
  - CSM Interface
  - Dynamic Protection Area
  - Interference Management Services
  - EMS Monitoring Service
  - Confirm Cessation of Frequency Use
  - New Entrants
  - Secondary Priority Users
  - Potentially Provide Spectrum Use Information

- CSO
  - Incumbent Informing Capability Concept
Questions?

Charles Cooper
Associate Administrator

- Office of Spectrum Management
- National Telecommunications & Information Administration
- U.S. Department of Commerce

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Thanks