

# Wireless Innovation Forum Update

2022 WinnComm  
14 December 2022



# Agenda

## About the Forum

## Advocacy

## Strategic Plan

## The Committees

- 6 GHz Band Multi-stakeholder Committee
- Advanced Technologies Committee
- Regulatory Advisory Committee
- Software Defined Systems Committee
- Spectrum Sharing Committee



# WinnF At A Glance

## ~80 Member Companies

- All levels of the Wireless Value Chain
- Semiconductor, components, software, system, equipment, network operators
- Large and small
- \$565k revenue, \$400k expenses
- \$800k net assets

## ~3000 Virtual Meeting Participants per Quarter

- 6 GHz most active

## WinnComm

- 3 day online event
- 230+ attendees

## Website

- ~150k views per year

## Press Releases

- ~150k views per year



# Forum Advocacy Agenda – No Change in 2022

## Advocacy Agenda

- Initiated in 2012
- Used to collaborate with governments, regulators, standards bodies, and research sponsors
- October 2021 updated
  - 76 affirmative unanimous

## Essential and Critical communications

- Fault tolerant, secure, and extensible system architectures
- Use of SDR, CR and DSA
- **Dynamic, situational prioritization of network and spectrum resources**
- Dynamically access additional spectrum for essential and critical communication users

## Innovation and Competition

- Government strategic investment of joint research and development between industry and academia (Top-10)
- Real world Spectrum Test Beds and Test Cities
- Easy access to experimental spectrum licenses

## Spectrum

- Advocates the use of spectrum sharing and small cell technologies
- Advocates the **modernization of regulatory licensing database** capability to fully realize the potential of spectrum sharing
- **Dedicated spectrum** for Essential and Critical communications
- Technology and service neutrality to enable innovative and efficient use of spectrum
- Regulatory model:
  - **Combinations of licensed and unlicensed**
  - Sharing and hierarchical
  - Cooperative and co-existent domains
- **Networked and synchronized databases** accessed with device location information
- Harmonized standards

## Security

- Development and application of policies and standards that enable communication systems and platforms to protect all sensitive information and data
- Allow Over the Air software reconfiguration

## Communications Interoperability

- **openly developed** industry requirements and architectural standards that lead to **interoperable products and systems**



# 5 Year Strategic Plan Update

## Incremental Changes

### Section 5 Structure and Implementation

- Rebranded the Advanced Technologies Committee as the Wireless Innovation Committee and updated its mandate
- Rebranded the Spectrum Sharing Committee as the CBRS Committee
- Clarified the role of Commercialization Committees
- Defined the role of the Joint Marketing Group and Regulatory Advisory Committees

### Section 8 Meeting and Event Strategy

- Updated to reflect the Board of Directors' preferred Post Covid model

### Section 11 Strategy for Expansion and Growth

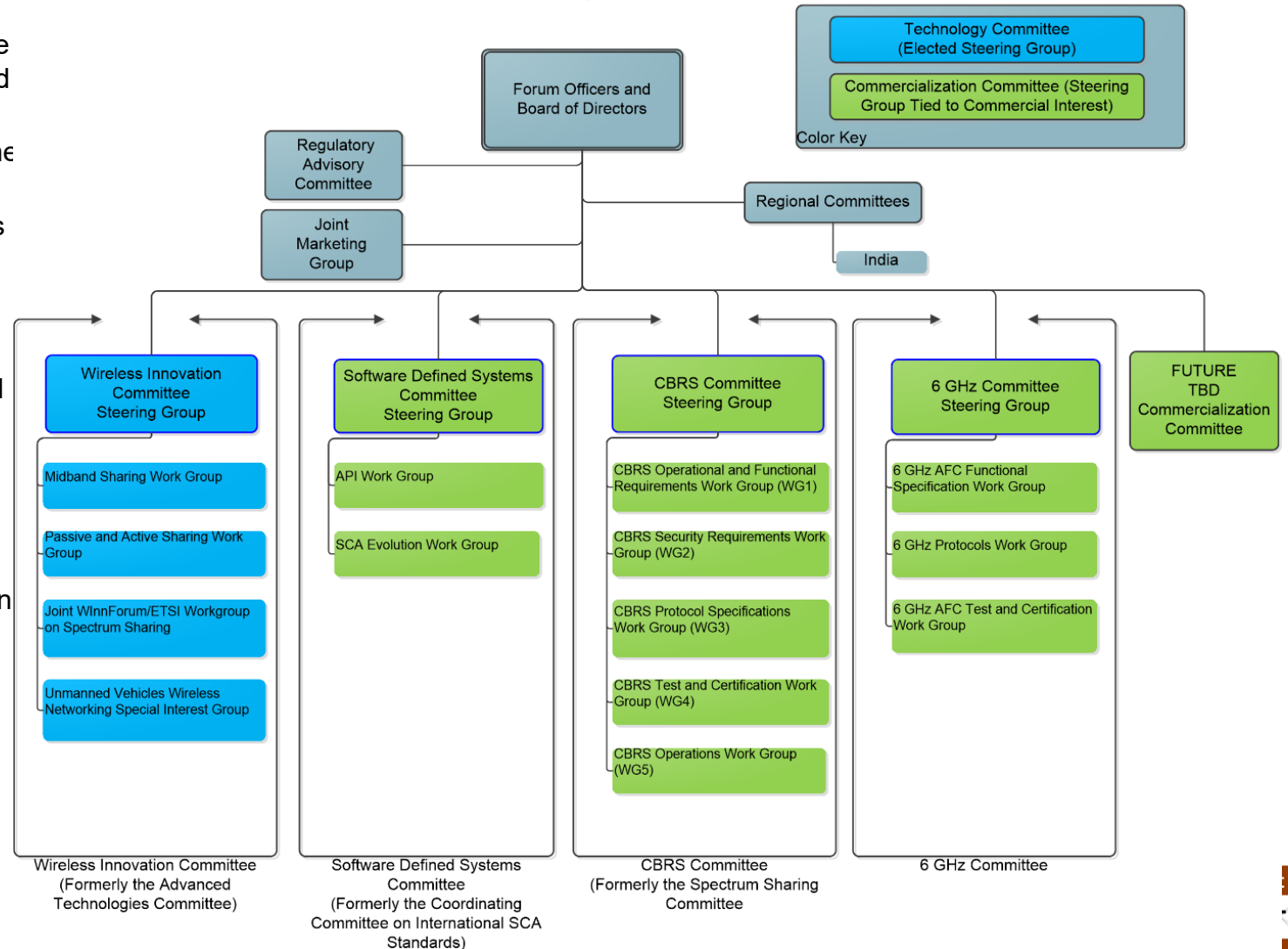
- Numerous changes to reflect member feedback

### Section 12 Measuring Success

- Clarified that success metrics will be established on an annual basis through the WInnForum's operations plan

## Organizational Structure for The Wireless Innovation Forum

26 August 2022



# COMMITTEES



# 6 GHz Committee

## Chair

- Mark Gibson, Commscope
- Vice Chair, WinnF

## Commission

- Study and specify sharing arrangements in for unlicensed operation in the 6 GHz band (5925-7125 MHz)
- Provide technical input to the FCC's 6 GHz rule making

## General

- FCC PN indicates WinnForum-approved test labs for CBSD cert are approved to test AFCs

## Protocols WG

- WINNF-TS-3005-V1.0.0-r6.0 (towards V1.1.0) AFC System - SPD Interface Technical Specification
- WINNF-TS-3007-V0.0.0-r6.0 (towards V1.0.0) AFC System to SPD Interface Technical Specification

## AFC Functional Spec WG

- WINNF-TS-1014-V1.1.0-r5.2 (towards v1.2.0) 6 GHz "Functional Requirements for the U.S. 6 GHz Band under the Control of an AFC System" cleared final ballot on Oct 28
- Incumbent Information TG
  - WINNF RC-1010: "Recommendations for Addressing Blank, Uncollected, Erroneous, or Conflicting Database Elements for Incumbent Systems in the U.S. U-NII 5 & 7 Bands for the Purpose of Automated Frequency Coordination System"
  - WINNF-TS-5008-V1.0.0 -r6.0 (Towards 1.1.0) 6 GHz "Supplementary Data Repositories" cleared ballot
  - Dealing with languishing data issues mostly related to antenna patterns
  - Documented issues with ULS to discuss with FCC

## AFC Test & Cert WG

- WINNF-TS-4007-V0.0.1-r0.1 (towards V1.0.0) 6 GHz Test and Certification.docx



# Advanced Technologies Committee (ATC)

## Chair

- John Glossner, Optimum Semi, Chair of WinnF
- Steering Group: Officers of WinnF

## Commission

- Incubate Emerging Technologies
  - SSC and 6 GHz committees started in ATC
- Strategic Plan, Operating Plan
- Advocacy Agenda
- Regulatory Advisory Committee

## Regulatory Advisory Committee

- Facilitate exchange of knowledge with operators
- Quarterly meetings with all interested operators and WinnF Board of Directors
- 2022 focused on AFC and spectrum roadmaps

## New Projects

- Joint WinnForum-ETSI TC RRS WG on Spectrum Sharing Frameworks
  - TR on existing spectrum sharing frameworks for temporary and flexible spectrum access in balloting
- FCC Receiver NOI Response
- CTO Video Series
  - Rydberg Probes
  - LTE on the Moon

## Continuing Projects

- Passive and Active Spectrum Sharing (PASS) Working Group
  - RF/IQ measurements at Hat Creek
  - Data exchange format definition
- Drone Special Interest Group
  - BVLOS Spectrum Requirements
  - Hat Creek arial RF/IQ measurements
- Midband Sharing Working Group
  - Operator survey on interference to be released Jan 2023



# Software Defined Systems (SDS)

## Chair

- Ken Dingman, L3 Harris
- Treasurer of WinnF

## Commission

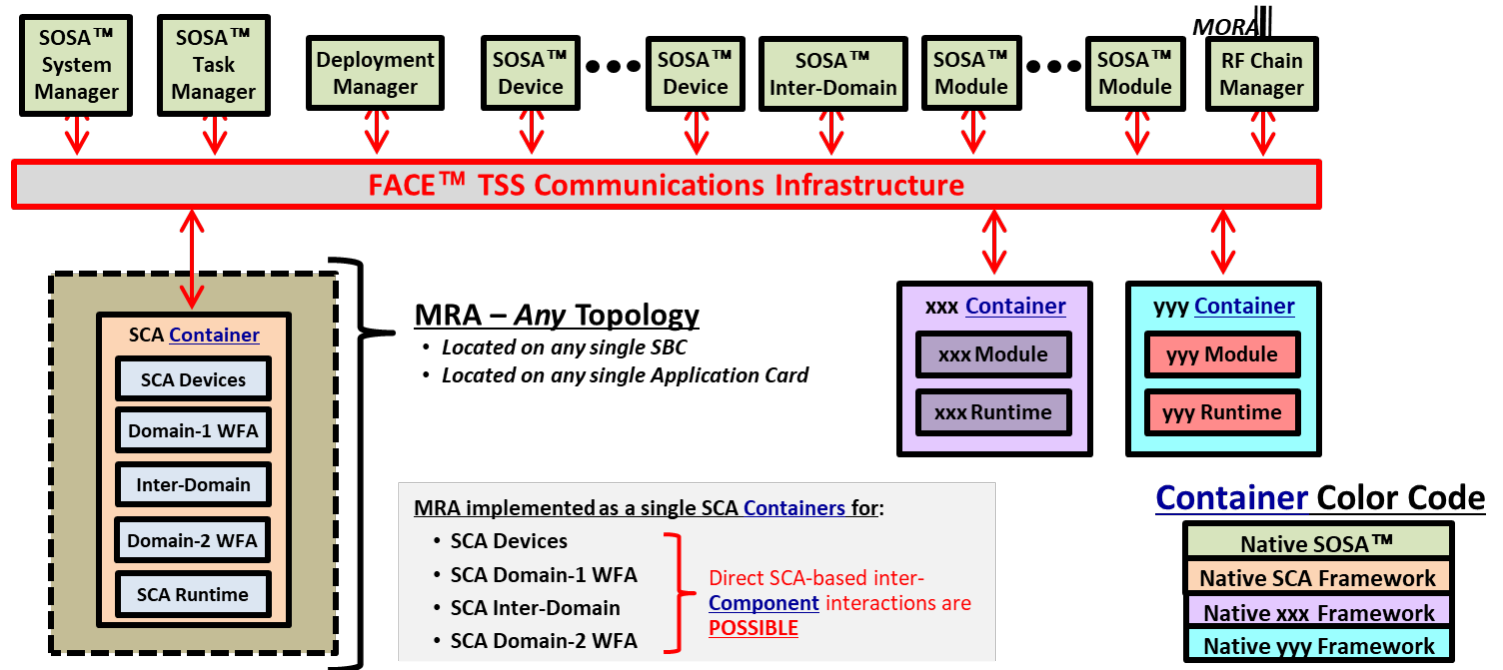
- Software Communications Arch (SCA)
- Sensor Open Systems Arch (SOSA)
- International Tactical Radios

## Transceiver WG

- WINNF-TS-3004 v1.0.0 Time Facility PIM
- WINNF-TS-0008 v2.0.0 Transceiver Facility PIM

## Sensor Open Systems Architecture (SOSA) Support

- International input to SOSA
- Integrating SCA into SOSA



# Spectrum Sharing Committee (SSC)

## Chairs

- Richard Bernhardt, WISPA, WinnF CMO
- Preston Marshall, Google

## Commission

- Commercialization of 3550-3700 MHz

## By the numbers since 2020 1<sup>st</sup>

### Deployment

- ~280k CBSD's (and growing)
- ~5k Certified Professional Installers
- Hundreds of compatible devices

## CBRS 2.0

- IIC to enhance/replace ESCs
- Faster shorter-term grants
- More accurate propagation modeling
- Enhanced Antenna Configurations

## Applications

- Public and Private Networks
- WISPs
- Fixed Wireless
- IoT
- Schools, Universities, Libraries, Dorms
- Multiple Family Dwellings
- Multi-Tenant Enterprises
- Precision Farming
- Stadiums
- Airports
- Emergency Response
- Hospitality and Convention Centers
- And more...



# PRESIDENT'S AWARD PRESENTATION



Slide 11

