POLICIES FOR POST-FIRST WAVE CERTIFICATION AND POST-INITIAL CERTIFICATION

Note on "Compliance" Versus "Conformance"

MANDATORY standards are set by governments (e.g., FCC Rules) and are enforced by laws and regulations.

VOLUNTARY standards do not include legal or statutory requirement

- Voluntary standards may be used to harmonize regulations or to meet specific attributes, but they do not have the force of law.
- Adoption of any WInnForum standard is, by definition, VOLUNTARY

CONFORMITY refers to when an organization seeks to meet the requirements of a voluntary standard

COMPLIANCE relates to a situation in which the organization fulfils a compliance obligation or legal requirement stipulated by a legal or higher authority (e.g., the FCC).

WInnForum may offer programs to demonstrate CONFORMANCE with a WInnForum standard through industry CERTIFICATION testing

CONFORMANCE with a WInnForum standard may be deemed by the sufficient by a regulatory body to demonstrate COMPLIANCE with MANDATORY requirements during government CERTIFICATION testing

Note on "First-Wave Certification" Versus "Initial Certification"

"First-Wave Certification" refers to the certification process successfully completed by seven AFC System operators according to DA 24-166 (AFC Approval PN).

"Initial-Certification" refers to the certification process of an AFC system operator to be certified by the FCC at the first time.

From standards development perspective, a set of the versions of the standards <u>used</u> for "First-Wave Certification" is the baseline for version management.

From AFC operator perspective, a set of the versions of the standards <u>conformed</u> for their "Initial Certification" is the baseline for their implementation .

For seven AFC operators, the versions standardized for "First-Wave Certification" were the standards <u>conformed</u> for their "Initial-Certification".

For other AFC operators (incl. applicants), the standards <u>conformed</u> for their "Initial-Certification" may be different from seven AFC operators.

What the FCC encourages inter-industry organizations in DA 24-166

Para 12 We agree with AT&T that *it would be useful for inter-industry organizations to develop standardized implementations for the propagation models to enable the AFC systems to provide more consistent results in all cases. We encourage inter-industry organizations that contain representatives from both the AFC system operators and microwave licensees, such as the WInnForum, to further study these implementation issues and any other issues that may be identified in the future to develop recommendations that can be used by the AFC systems in the future. AT&T suggests that as a condition of AFC system approval, we require AFC system operators to continue to work within inter-industry group(s) on AFC system implementation issues that affect the AFC system calculations. While we do not go as far as AT&T requests, we will continue to monitor developments in the band that could affect system calculations and could require system changes if warranted.*

Purpose

The purpose of this document:

1. To define standards development policies beyond the baseline versions used for First Wave Certification; and,

2. To define certification policies beyond "Initial Certification" for conformance with the WInnForum 6 GHz standards.

STANDARDS DEVELOPMENT POLICIES

WINNF-CC-DNNN-VJ.K.L (Towards VJ'.K') (IRX)

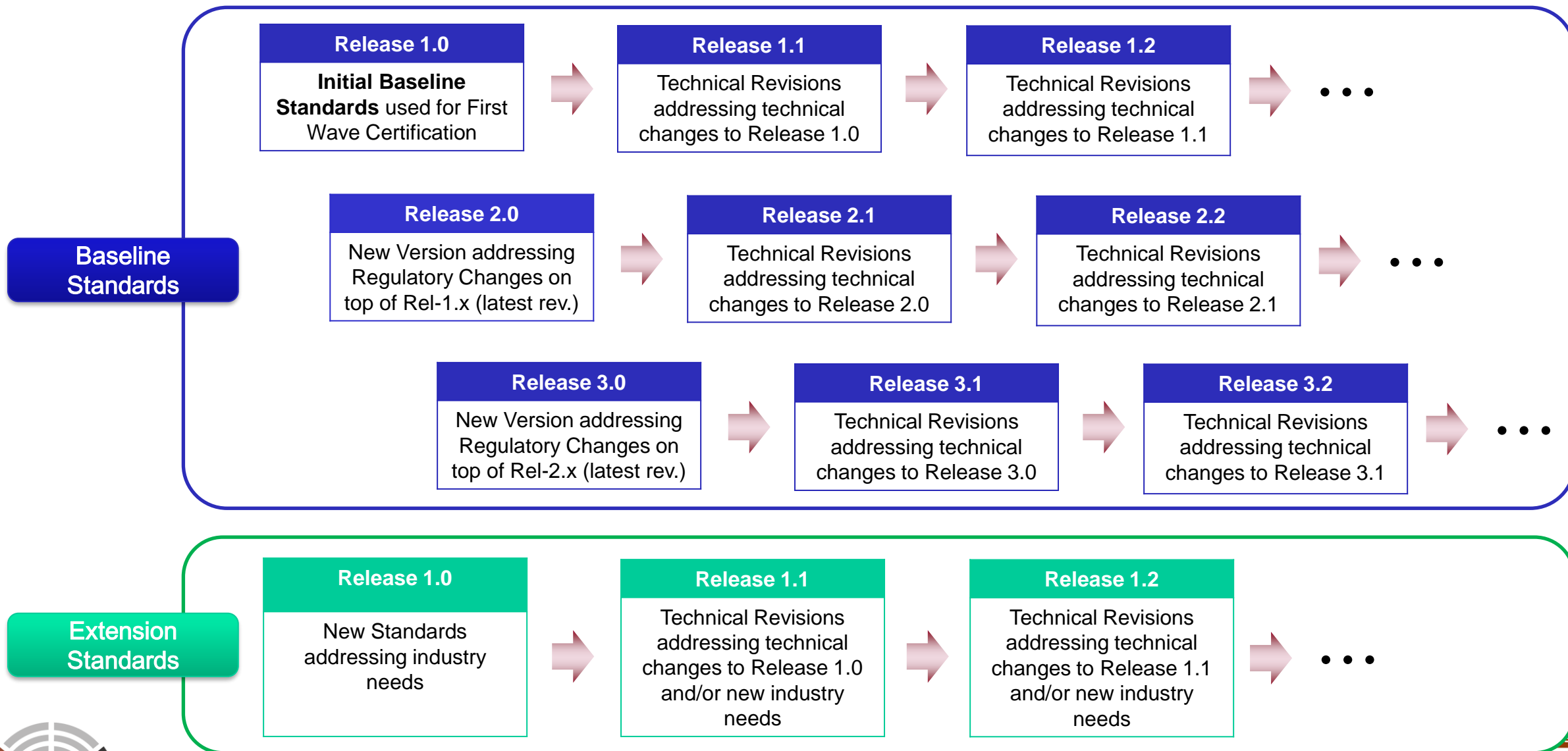CC = Document Category Identifier

D = Document Content Identifier

NNN = Document Serial Number

VJ.K.L = The current Version number, with

- V = the letter V

- J = Current version

- K = Current Technical Revision

- L= Current Editorial Revision

- **Note that newer Technical Revision deprecates the older Technical Revisions**

WInnForum 6 GHz Standards Releases

Baseline Standards

Release 1.0
Initial Baseline Standards used for First Wave Certification

Release 1.1
Technical Revisions addressing technical changes to Release 1.0

Release 1.2
Technical Revisions addressing technical changes to Release 1.1

. . .

Release 2.0
New Version addressing Regulatory Changes on top of Rel-1.x (latest rev.)

Release 2.1
Technical Revisions addressing technical changes to Release 2.0

Release 2.2
Technical Revisions addressing technical changes to Release 2.1

. . .

Release 3.0
New Version addressing Regulatory Changes on top of Rel-2.x (latest rev.)

Release 3.1
Technical Revisions addressing technical changes to Release 3.0

Release 3.2
Technical Revisions addressing technical changes to Release 3.1

. . .

Extension Standards

Release 1.0
New Standards addressing industry needs

Release 1.1
Technical Revisions addressing technical changes to Release 1.0 and/or new industry needs

Release 1.2
Technical Revisions addressing technical changes to Release 1.1 and/or new industry needs

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Release 1.0 of WInnForum 6 GHz Baseline Standards

WINNF-TS-1014-V1.4.0 6GHz Functional Requirements

WINNF-TS-2013-V1.0.0 Amendment to WINNF-TS-0022 for 6 GHz AFC System Authentication

WINNF-TS-3007-V1.2.0 AFC System to SPD Interface Technical Specification

WINNF-TS-4007-V1.1.0 Extension to AFC System (SUT) and AFC Device (DUT) Compliance Test Plans

WINNF-TS-5008-V1.2.0 6 GHz Supplementary Data Repositories

Release 1.0 of WFA Deliverables for 6 GHz AFC

Deliverable	Current Version	Version Available for download
AFC System to Device Interface (SDI) Specification	v1.5	v1.5 Delivered
AFC System Under Test (SUT) Compliance Test Plan	v.1.5	v1.5 Delivered
AFC SUT Compliance Test Vectors	v1.2	V1.2 Delivered
AFC Device Under Test (DUT) Compliance Test Plan	v1.4	v1.4 Delivered
AFC DUT Compliance Test Vectors	v1.1	V1.1 Delivered
AFC DUT Test Harness	2.0.65.144	2.0.65.144 [Delivered]

WINNF-TS-3005-V1.1.1 <u>Extensions to </u>AFC System to SPD Interface Technical Specification

Triggers to initiate development of new Technical Revisions of Baseline Standards:

- **Completion of the FCC certification testing of new "Wave" of AFC system operator applicants**
  - Note: This is because new implementation issues could be tabled during the FCC certification Public Trial of new "Wave" of AFC system operator applicants. If no issue is raised, development of new Technical Revisions of Baseline Standards will not be triggered.

- **Communication security vulnerability is discovered in the current specification**

- **New industry needs for non-Wi-Fi/5G air interface**

Acceptable technical changes towards new Technical Revision

For Baseline Standards:

1. **Standardized implementations for the propagation models to enable the AFC systems to provide more consistent calculation results in all cases.**

2. **New/modified security measures to address security vulnerability (for DSQ and ASQ requirements)**

3. **Support of non-Wi-Fi/5G air interface**

> **Note: Technical changes to Baseline Standards will not be necessary for database changes unless the record format (schema) is changed. Addition/deletion/modification of record is not deemed technical change.**

For Extension Standards:

1. **Necessary changes to address technical issues in existing Extension Standards**

2. **Necessary changes to support new Release of Baseline Standards**

3. **Enhancements addressing new industry needs**

Details of acceptable technical changes towards new Technical Revision

	Type of acceptable technical changes
WINNF-TS-1014 6GHz Functional Requirements	a. To develop new requirements for standardized implementations for the propagation models to enable the AFC systems to provide more consistent calculation results. b. To update existing requirements for standardized implementations for the propagation models to enable the AFC systems to provide more consistent calculation results. c. To address security vulnerability (for DSQ and ASQ requirements) d. To create a new Annex to define requirements for non-Wi-Fi/5G air interface
WINNF-TS-2013 Amendment to WINNF-TS-0022 for 6 GHz AFC System Authentication	a. To address security vulnerability (to be consistent with new/modified DSQ and ASQ requirements)
WINNF-TS-3007 AFC System to SPD Interface Technical Specification	a. To define new Global Operating Class corresponding to non-Wi-Fi/5G air interface (to be consistent with new Annex in WINNF-TS-1014) b. To address technical changes in Wi-Fi Alliance's AFC System to Device Interface specification
WINNF-TS-4007 Extension to AFC System (SUT) and AFC Device (DUT) Compliance Test Plans	a. To add new test cases and test vectors for non-Wi-Fi/5G air interface
WINNF-TS-5008 6 GHz Supplementary Data Repositories	a. To develop standardized implementations for the propagation models to enable the AFC systems to provide more consistent calculation results in all cases.

Implementation of Technical Revisions of Baseline Standards

To the FCC-certified AFC system operators implementing WINNF-TS-1014:

- **The WInnForum only recognizes newly adopted Technical Revision of WINNF-TS-1014 that specifies standardized implementations for the propagation models in order to enable the AFC systems to provide more consistent calculation results, as expected by the FCC.**
- **The WInnForum only recognizes newly adopted Technical Revision of WINNF-TS-1014 that specifies new/modified security measures in order to address security vulnerability.**
- **Support of non-Wi-Fi/5G air interface newly specified in newer Technical Revision of the Baseline Standards is OPTIONAL.**

To applicants of AFC system operators wishing to implement WINNF-TS-1014:

- **The WInnForum only recognizes the latest Technical Revisions of the Baseline Standards.**

CERTIFICATION POLICIES

What the FCC Mandates for Implementation Changes against certified-AFC

DA 24-166 (AFC Approval PN) Para 13.

… Therefore, as a condition of AFC system approval, we will require each AFC operator to (1) <u>file a notice in ET Docket No. 21-352 informing OET and the public of any modification to its AFC system that can change the available frequency ranges and maximum power levels determined by its AFC system</u>; and <u>(2) receive OET approval prior to implementing any proposed modification</u>. Depending on the significance and complexity of the modification, OET may require some form of testing or verification.

WInnForum Policies for COMPLIANCE with the FCC Certification

Testing method depends on "type" of Technical Changes to Baseline Standards

Attestation only (i.e. Permissive Change) for COMPLIANCE:

- **Implementation changes to new Technical Revision of Baseline Standards (WINNF-TS-5008) addressing database schema/format changes**
- **Implementation changes to support new Technical Revision of WFA/WInnForum Baseline Standards NOT impacting AFC calculation of available channels and power levels**
- **Implementation changes to support new/modified security requirements and/or measures (WINNF-TS-1014, WINNF-TS-2013)**

Additional testing potentially required for COMPLIANCE:

- **Implementation changes to support new revision of WFA/WInnForum Baseline Standards impacting AFC calculation of available channels and power levels (including support of standardized implementations for the propagation models)**
- **Implementation changes to support new channelization for non-Wi-Fi/5G air interfaces (WINNF-TS-3007)**
- **Implementation changes to support new Release of Baseline Standards (e.g. WINNF-TS-1014-V2.0.0) (i.e. addressing regulatory rule changes)**

Note: Any testing concerning AFC-proprietary features is outside the scope of the WInnForum and it is each AFC operator that is liable for complying with the FCC requirements.

WInnForum Certification for COMFORMANCE with Extension Standards

- **WInnForum future Release Self-Testing Policy to be defined**

- **Companies (members and non-members) must agree to Policies and Procedures for Self Testing balloted and approved by the WInnForum members to claim "conformance" with WInnForum Standards for that feature, including:**
  - Agreeing to follow the test specifications defined by the WInnForum Test and Certification work group
  - Agreeing to use the WInnForum test harness developed by the WInnForum Test and Certification work group for supported features

- **Will start with Feature-by-Feature case, but may later move to feature bundle profiles**
- **Interoperability testing "in addition to" the self testing**
  - Not required to claim conformance
  - Entities might require that as part of their business agreement