



CTIA Certification Program Working Group Liaison Statement

To	3GPP RAN4, 3GPP RAN5
CC	N/A
Source	CTIA 5G Millimeter-Wave OTA Sub-Working Group
Subject	Over-the-Air Radiated Performance Testing for 5G mm-Wave (FR2) User Equipment
Date	July 31, 2018

Introduction

CTIA and 3GPP RAN4/5 have exchanged Liaison Statements in [1],[2], and [3]. The CTIA 5G Millimeter-Wave OTA Sub-Working Group held two meetings since the initial LS from CTIA [1]. This LS clarifies the scope and deliverables of the CTIA Certification Program Working Group (CPWG) in terms of a Millimeter-Wave OTA test plan.

Discussion

Following the initial LS from CTIA to 3GPP RAN4/5 [1], the newly formed CTIA 5G Millimeter-Wave OTA Sub-Working Group held two meetings to discuss the scope and deliverables of the group.

CTIA has confirmed two co-chairs to lead the CTIA 5G Millimeter-Wave OTA Sub-Working Group efforts. The contact information and affiliation are listed below.

The response LSs from RAN4 [2] and RAN5 [3] were received and noted. The CTIA 5G Millimeter-Wave OTA Sub-Working Group is looking forward to frequent and constructive discussions with RAN4 and RAN5 going forward.

Following discussions in the first two conference calls, the below scope and deliverables have been identified in some more detail:

- CTIA will publish a 5G Millimeter-Wave OTA test plan for certification purposes
 - Alignment with RAN4 and RAN5, e.g., applicable core and test specifications, utilizing the same permitted methods as defined in 3GPP, the same test interfaces, black-box testing, etc.
 - The scope of CTIA's test plan could be wider than 3GPP's scope as in similar situations with previous OTA test plans, e.g., additional phantoms, SISO carrier aggregation testing, etc.
- The 5G Millimeter-Wave OTA Sub-Working Group will define Measurement Uncertainty elements for each test case and permitted test method included in the CTIA test plan as well as procedures for equipment/system vendors and labs to determine each element. The CTIA Measurement Uncertainty Sub-Working Group (MUSG) will support these efforts. For the purpose of authorizing test labs, the 5G Millimeter-Wave OTA Sub-Working Group will also determine feasible MU limits for each test case and configuration and present the proposal to the OTA Working Group for approval. To ensure alignment with the MU efforts in 3GPP, CTIA will work with its 3GPP member companies to provide input to 3GPP RAN4 and RAN5, if necessary.
- CTIA will publish a Laboratory Assessment & Validation Requirements Document (AVRD) that will be used to assess equipment/system vendor solutions as well as CTIA Authorized Testing Labs (CATLs)
 - CTIA will use CTIA Subject Matter Experts (SMEs) for these assessments



CTIA will continue to work with 3GPP and to provide input in the areas of test system validation, evaluation/maintenance of lab quality, establishment of measurement uncertainty criteria, and background in body phantom development to improve device certification going forward.

In order to guarantee alignment with 3GPP RAN4 and RAN5, regular communication between 3GPP and CTIA is planned.

Actions:

None

References:

- [1] CPWG180531-2, CTIA 5G mmW Sub Group LS to 3GPP RAN4/RAN5, Ron Borsato (PCTest), Scott Prather (AT&T), Thorsten Hertel (Rohde & Schwarz), May 2018
- [2] R4-1808515, Response LS to CTIA on FR2 OTA Testing, 3GPP RAN4, Rohde&Schwarz, 3GPP TSG RAN WG4 Meeting #87, May 2018
- [3] R5-183245, Response LS to Over-the-Air Radiated Performance Testing for 5G mm-Wave (FR2) User Equipment, 3GPP RAN5, PCTest, 3GPP TSG-RAN5 Meeting #79, May 2018

Contact Info

- Thorsten Hertel, Co-Chair, CTIA 5G Millimeter-Wave OTA Sub-Working Group, Keysight Technologies, thorsten.hertel@keysight.com
- Taeho Park, Co-Chair, CTIA 5G Millimeter-Wave OTA Sub-Working Group, Apple, park@apple.com
- Ron Borsato, Co-Chair, CTIA OTA Working Group, PCTEST Engineering Lab, ron.borsato@pctest.com
- Scott Prather, Co-Chair, CTIA OTA Working Group, AT&T, scott.prather@att.com

Date of Next CTIA 5G Millimeter-Wave OTA Sub-Working Group Meetings:

30 August, 2018, Teleconference, 11am-1pm EDT

Date of Next CTIA OTA Working Group Meetings:

11 September, 2018, Teleconference, 11am-1pm EDT