Certification Program Working Group
Liaison Statement

To	3GPP TSG RAN WG5
Source	CTIA Certification on behalf of PTCRB RF Channel Bandwidth Task Force
Subject	Request for development of 5G Application Layer downlink and uplink Data Throughput test case for 5G NR FR1 in 3GPP TR 37.901-5
Date	August 10, 2023

Introduction

PTCRB RF Channel Bandwidth Task Force (PTCRB CBW Task Force) would like to thank 3GPP RAN WG5 for their commitment to the development of 5G NR Data Throughput test cases in 3GPP TR 37.901-5.

PTCRB RF Channel Bandwidth Task Force would like to request RAN5 to develop a 5G Application Layer downlink and uplink Data Throughput test case for 5G NR FR1 in 3GPP TR 37.901-5, in order to perform certification tests validating RF channel bandwidth.

Overview

The operators in PTCRB Working Group have deployed 5G NR services in their networks serviced with multiple 5G NR bands, various Channel Bandwidth (CBW) and Subcarrier Spacing (SCS). However, it was reported that due to the regional requirement and/or market situation, all 3GPP defined CBW/SCS are not supported in their networks and some UEs do not support them fully due to design restriction and/or market needs among other reasons. Therefore, it was required to find out which UE CBWs are suitably implemented to ensure they can function properly on the various networks. PTCRB Working Group has formed a PTCRB CBW Task Force, composed of operators, tests equipment vendors, device, chipset vendors, and PTCRB labs, which started to discuss development of a methodology to validate support of the CBWs declared by the UE.

PTCRB CBW Task Force concluded that execution of selected test cases from 5G NR Application Layer Data Throughput Performance Technical Report, 3GPP TR 37.901-5, such as downlink test in section A.2.1.1, could sufficiently identify UE's CBW/SCS issues and validate UE's functionality by measuring data throughput over the supported CBW/SCS.

PTCRB CBW Task Force sees relevance in performing downlink and uplink testing to validate that UEs correctly support each of the CBW they advertise.

However, the Task Force identified that section 5.6.1 of 3GPP TR 37.901-5 states the procedure for bi-directional scenario using TCP-based data transfer is for further study.

Action

CTIA Certification on behalf of PTCRB RF Channel Bandwidth Task Force respectfully requests the following action from 3GPP RAN5.

- Develop a new 5G NR downlink and uplink test case, validating that a UE supports each of the CBW it advertises, building on downlink test case in section A.2.1.1.

Future Meetings

PTCRB RF CBW Task Force	September 5, 2023

Contact Info

Darren Thompson, Vice Chair, PTCRB Plenary Working Group, T-Mobile, Darren.Thompson@T-Mobile.com

JeanYves Bernard, Chair, PTCRB RF Channel Bandwidth Task Force, Rogers, jeanyves.bernard@rci.rogers.com

Daniel Nam, Element, daniel.nam@element.com

CTIA Certification, cpwg@ctiacertification.org