

Project	<b>IEEE 802.20 Working Group on Mobile Broadband Wireless Access</b> < <a href="http://grouper.ieee.org/groups/802/20/">http://grouper.ieee.org/groups/802/20/</a> >	
Title	<b>Completeness of QFDD and QTDD proposals based on documented technology selection process: A response to C802.20-05/91</b>	
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Re:	Response related to MBWA Call for Proposal	
Abstract	This document provides a response to the issues raised in C802.20-05/91.	
Purpose	FYI.	
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***Completeness of QFDD and QTDD  
proposals based on documented  
Technology Selection Process:  
A Response to C802.20-05/91***

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# Issue 1: QTDD and QFDD Proposals

- QFDD and QTDD Performance Report 2 and corresponding presentations documents C802.20-05/86-89 uploaded after the required deadline. Also Report 1 substantially incomplete without the required simulation results for 120km/hr Vehicular B channel model.
  - This does not comply with the Technology Selection Process since the proper evaluation is not possible. Therefore the proposals have to be treated as incomplete.
  - Request to WG: As the Report 2 was not available before the deadline, please provide adequate time to the group to study and evaluate it before rushing to technology selection in this meeting.
- Response:
  - Submission of Performance Report 2 and the corresponding presentation documents (C802.20-05/86-89) complies with the approved Technology Selection Process. These were not required at the November meeting. Providing the documents in November was intended to give the group additional time to review the materials, since they were ready.
  - Simulation results for Vehicular B channel model were provided. See C802.20-05/61&62 (FDD) or C802.20-05/66&67 (TDD) for further details.

# Issue 2: QTDD and QFDD proposal

- Hardware characteristics
  - Per **IEEE 802.20- PD-09** “A proposal shall include detailed information regarding the amplifier/s used in the simulation. The information shall be sufficiently detailed such that the claimed simulation results can be verified by others and that the practicality of the proposed amplifier arrangement is justified.”
  - Per **IEEE 802.20 PD-09**, a verifiable amplifier modeling is required while no simulation results presented.
  - This violate the completeness criteria for technology selection
- Response: Please see the revised Report 1 Documents C802.20-05/61r1 and C802.20-05/66r1 section 3.4.
- Number of Guard Band tones
  - This seems to be a system parameter in the proposal. There is not enough of clarification on requirements for MS units to guarantee interoperability in network.
- Response: Number of Guard Band Tones is indeed a “system parameter” in both MBTDD and MBFDD. This is a deployment parameter, and should be chosen to meet regional regulatory constraints. Because these vary depending on region, the exact numbers of guard band tones are not specified in the proposed specification. This is left to other documents addressing regional and regulatory issues.

# Issue 3: QTDD and QFDD Proposals

- As per IEEE 802.20-PD-06r1: The following subjects and/or simulations are missing in the proposal and as a result the proposals are not complete
  - Section 3.1 and 4.2.2 “The 802.20 system shall support non-line of sight **outdoor to indoor** scenarios and indoor coverage.” “The system shall work in dense urban, urban, suburban, rural, outdoor-indoor, pedestrian, and vehicular environments and the relevant channel models shall be applicable.
  - Response: The proposed systems (MBFDD and MBTDD) do support and do work in all these environments. We presented simulation results for the channel models specified in the Evaluation Criteria document, and these channel models apply for NLOS and outdoor to indoor operation.
  - **Section 5.2.5.2 Radio Transmitter:** The transmitter performance specifications shall include, but not be limited to, occupied channel bandwidth, required channel spacing, maximum and average transmit power, **EIRP, modulation characteristics, intermodulation distortion (IMD) limits, spurious emission limits, frequency accuracy and stability under the range of specified operating environmental conditions.**
  - Response: The proposed 802.20 Air Interface specification provides interoperable support in many environments. The approved project (see 802.20’s PAR) requires an air interface specification, and not a minimum performance specification. We view the “transmitter performance specifications” as another document, yet to be proposed, but certainly an item for future work in 802.20. Because the proposed specification was written for diverse environments, transmitter performance specifications are not included, and could be very different for each environment.
  - **Section 5.2.5.3 Radio Receiver:** The receiver performance specifications will include, but not be limited to, channel bandwidth and spacing, sensitivity at **specified SNR, adjacent channel selectivity, alternate channel blocking, spurious emissions, spurious response, frequency accuracy and stability under the range of specified operating environmental conditions.**
  - Response: The proposed 802.20 Air Interface specification provides interoperable support in many environments. The approved project (see 802.20’s PAR) requires an air interface specification, and not a minimum performance specification. We view the “receiver performance specifications” as another document, yet to be proposed, but certainly an item for future work in 802.20. Because the proposed specification was written for diverse environments, receiver performance specifications are not included, and could be very different for each environment.

# Issue 3: QTDD and QFDD Proposals

- As per PD-06r1: The following subjects and/or simulations are missing in the proposal and as a result the proposals are not complete
  - **Section 4.5.2: OA&M Support:** The AI shall provide a mechanism to enable the provisioning and collection of metrics, so that the network operator can effectively control, monitor, and tune the performance of the 802.20 air-interface. Provisional parameters, performance metrics and other OA&M values shall be made available through a standards compliant MIB.
- Response: The 802.20 TSP specifically says that the proposal package normative draft describe the “core technology”, and not necessarily supporting functionality such as MIBs. Hence the proposed technology packages were complete as posted. To further develop and improve the technology specification, the revised merged specification document (C802.20-06/04) includes MIB support.