Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band	)	WT Docket No. 07-195
	)	
Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz, and 2175-2180 MHz Bands	)	WT Docket No. 04-356
	)	

T-MOBILE REQUEST FOR EXTENSION OF TIME TO FILE COMMENTS

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T-Mobile USA, Inc. ("T-Mobile") respectfully requests, pursuant to section 1.46 of the Commission's rules, that the Commission extend the date for filing comments in this proceeding by 90 days, to October 7, 2008, in order to institute supervised testing to determine the extent of the interference issues raised by the proposal in the Further Notice of Proposed Rulemaking, FCC 08-158 ("FNPRM"). In the alternative, if the Commission will not supervise testing on its own behalf, the Commission should extend the comment deadline by at least 30 days in order to allow T-Mobile to submit a comprehensive analysis of its own (now ongoing) tests into the record in time for the Commission and other interested parties to take that information into account in assessing the proposals in the FNPRM.

The FNPRM invites comment on proposed AWS-3 service rules, which would permit two-way TDD transmissions in the band and specify proposed out-of-band emissions (OOBE) limits for mobile devices and base stations. Notwithstanding the novelty of the Commission's proposal, and in spite of the substantial technical and legal concerns voiced by many in the industry, the

Commission set an abbreviated comment period of only 14 days for initial comments and 7 days for replies, measured from the accelerated publication of the FNPRM in the Federal Register on June 25, 2008.

This is an insufficient period of time in which to assess the complex issues the FNPRM raises. Prior submissions in this proceeding make clear that TDD transmissions in the AWS-3 band would create a serious risk of harmful interference to licensees in the recently-auctioned AWS-1 spectrum.[1] Indeed, T-Mobile and others have provided enough evidence to make out a *prima facie* case that deployment of TDD could prevent AWS-1 licensees from making use of at least the AWS-1 F-Block, and possibly the D and E Blocks as well, to provide advanced wireless services, such as those that T-Mobile currently is rolling out across the country. Even though the Commission indicated that it had no intention of authorizing TDD in the AWS-3 spectrum unless "proponents of TDD can *conclusively demonstrate* that such technologies could be used in these bands or some segments of these bands without causing interference to other spectrum users,"[2] it thus far has conducted no empirical testing of its own to support its proposal or directed the parties advocating such use to make the required technical demonstration.

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[1] *See, e.g.*, Comments of Verizon Wireless, filed Dec. 14, 2007, at 8-13 (describing how use of the AWS-3 band for mobile transmissions would cause harmful interference to services in adjacent bands); Comments of T-Mobile USA, filed Dec. 14, 2007, at 5-7 (stating that uplink / downlink use in the AWS-3 band would create significant interference challenges for incumbent AWS-1 licensees); Comments of CTIA, filed Dec. 14, 2007, at 2-7 (same); *see also* Notice of Proposed Rulemaking, *Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band*, 22 FCC Rcd 17035, 17058 ¶¶ 49, 51 (2007) (noting that "[t]ransmissions originating in the AWS-3 band could potentially cause harmful interference to adjacent band services" and that "if a handset transmitting in the 2155-2175 MHz band is in close physical proximity to a handset receiving in the adjacent 2110-2155 MHz band, then 'mobile-to-mobile' interference could occur to the receiving handset").

[2] Report and Order, *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, 18 FCC Rcd 25162, 25204-05 ¶ 111 (2003) (emphasis added); *see id.* at 25179 ¶ 46 (same).

The Commission cannot responsibly reach a decision on the proposal advanced in the FNPRM without gathering empirical data concerning the interference risks that have been identified. TDD proponents have not provided any evidence whatsoever to meet their burden, and adjacent licensees concerned about the TDD proposal have not had adequate time to comprehensively finish their own interference analyses because they had no notice that the Commission would shift the burden to them to provide affirmative evidence of interference. Even when it became clear that the Commission was leaning toward a TDD proposal, the Commission failed to take up T-Mobile's repeated invitation to participate in *joint* testing of AWS-1 devices and those devices' vulnerability to interference from TDD operations in the AWS-3 band.[3]

As a result, the record is devoid of key evidence, and the Commission must provide enough time for the agency, and individual parties, to amass, submit, and review such evidence in order to reach an informed and reasoned decision. The Commission always has recognized the importance of having empirical testing data – not just theoretical modeling or arguments by analogy – to resolve questions of potential harmful interference between co-channel or adjacent spectrum uses. In the television "white spaces" proceeding, for example, the Commission has expressly declined to rely on "theoretical" arguments, and has instead undertaken nearly two years of rigorous testing.[4] In that proceeding, the Commission began, and is still conducting, a series of its own tests

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[3] *See* Letter from Kathleen O'Brien Ham, Vice President, Regulatory Affairs, T-Mobile USA, to Marlene H. Dortch, FCC, filed June 4, 2008 in WT Docket No. 07-195; Letter from Thomas J. Sugrue, Vice President, Government Affairs, and Neville Ray, Senior Vice President, Engineering and Operations, T-Mobile USA, to Kevin Martin, Jonathan Adelstein, Michael Copps, Robert McDowell, and Deborah Taylor Tate, FCC, filed June 13, 2008 in WT Docket No. 07-195.

[4] *See, e.g.*, First Report and Order and Further Notice of Proposed Rulemaking, *Unlicensed Operation in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, 21 FCC Rcd 12266, 12290 ¶ 63 (2006) ("White Spaces Order") (noting that claims about interference were "theoretical because no parties have submitted test

of several generations of proposed devices. The Commission also emphasized the importance of comprehensive testing in the low-power FM proceeding.[5] Other federal agencies likewise have recognized the importance of testing wireless handsets against potential interference, and have demonstrated a willingness to engage in empirical analysis to develop the factual record.[6]

Courts similarly have recognized that "when an agency undertakes a thorough, primary, evaluation of all relevant facts, it is highly desirable that the agency . . . independently amass the raw data,"[7] and that empirical data can be superior to theoretical modeling.[8] And Congress has *required* the agency to conduct interference investigations prior to authorizing new services that

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results showing actual . . . interference;" urging parties to submit test results concerning such interference; and providing parties with sufficient time to do so, namely, 75 days after Federal Register publication for comments and 105 days for reply comments); *id*. at 12272-73, 12283-84 ¶¶ 13-15, 48 (discussing the "importance of conducting tests to ensure that whatever standards are ultimately adopted for such devices will protect incumbent radio services from harmful interference").

[5] *See, e.g.*, Order, *Creation of a Low Power Radio Service*, 14 FCC Rcd 4096, 4097 ¶ 4 (1999) (extending comment deadlines to allow parties to conduct testing, citing "the crucial importance of quantitative technical analyses" concerning interference); Office of Engineering and Technology, FCC, *Second and Third Adjacent Channel Interference Study of FM Broadcast Receivers*, MM Docket No. 99-25, at 3 (Aug. 5, 1999) (recognizing, in independent Commission study concerning interference, the "need to get some objective data into the record as quickly as possible").

[6] For example, as part of the relocation of government users in the 1710-1755 MHz band, National Telecommunications and Information Administration ("NTIA") staff cooperated with T-Mobile in joint testing of handsets against incumbent government interference. In an effort to develop an informed engineering record, T-Mobile and NTIA engineers worked together for several weeks in a government lab in Boulder, Colorado.

[7] *National Ass'n of Regulatory Utility Com'rs v. FCC*, 737 F.2d 1095, 1124 (D.C. Cir. 1984).

[8] *See Chamber of Commerce of U.S. v. Securities and Exchange Comm'n*, 412 F.3d 133, 142 (D.C. Cir. 2005) ("an agency acting upon the basis of empirical data may more readily be able to show it has satisfied its obligations under the APA"); *cf. Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 240-41 (D.C. Cir. 2008) (reversing a technical finding grounded in theoretical modeling because the Commission had dismissed contrary empirical evidence).

might interfere with existing licensees. For example, in the LOCAL TV Act, Congress instructed the Commission to conduct independent testing of proposals for terrestrial service in the direct broadcast satellite band to ensure that the proposed service would not interfere with existing users – and there, Congress provided 60 days for testing and 30 days for public comment, a period considerably longer than the Commission has provided here.[9]

Consistent with these precedents, the Commission should extend the deadline here for a period sufficient to conduct final independent testing that will provide objective empirical data on the interference issues, as a number of parties already have requested.[10] T-Mobile submits that 90 days would be an appropriate period of time to allow such testing to take place and be analyzed.

If the Commission is unwilling or unable to participate in or supervise independent testing, it should at minimum extend the comment period long enough to allow interested parties to conduct their own testing, submit data, and evaluate the test results of other parties. T-Mobile already has begun accelerated laboratory testing to evaluate empirically the interference between AWS-1 FDD and AWS-3 TDD operations. This data is directly relevant to the questions posed in

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[9] Launching Our Communities Access to Local Television Act of 2000 ("LOCAL TV Act"), Pub. L. No. 106-553, div. B § 1012, 114 Stat. 2762, 2762A-141-142 (requiring independent testing and public demonstration of any terrestrial service technology proposed within the DBS frequency band, and allowing up to 60 days for testing and an additional 30 days for public comment); *see also* Radio Broadcasting Preservation Act of 2000, Pub. L. No. 106-553, div. B § 632(b), 114 Stat. 2762, 2762A-111-112 (requiring "third-adjacent channel" interference testing for low-power FM stations by an independent contractor).

[10] *See, e.g.*, Letter from Christopher Guttman-McCabe, CTIA, to Marlene H. Dortch, filed June 5, 2008 in WT Docket No. 07-195, at 2 (urging Commission to "at least . . . conduct a more fulsome review prior to taking action," and as part of the review, "the Commission could conduct publicly-reviewable handset testing"); Letter from Kathleen O'Brien Ham, Vice President, Regulatory Affairs, T-Mobile USA, to Marlene H. Dortch, filed June 6, 2008, in WT Docket No. 07-195 (urging the Commission "not to rely upon theoretical predictions of peaceful coexistence between the AWS-1 (FDD) and AWS-3 (TDD) services but to take the time to gather and analyze actual, empirical operating evidence through a testing program").

the FNPRM, and the Commission therefore should extend the comment period by at least 30 days, in order to give T-Mobile the time it needs to finalize its testing and analyze the results so that it may submit them on the record with sufficient time to permit review by the Commission and other parties. Any other parties that may be conducting testing could similarly use this extension to finalize their own work.

The Commission cannot responsibly decide these questions without such a record and, accordingly, it would be arbitrary and capricious for the Commission to refuse to extend the comment period in order to accept and consider clearly relevant testing data. That is especially the case given that the 14-day comment period allowed by the FNPRM is far shorter than the period typically recognized as necessary to allow informed comment, especially on matters that are technically complex.[11] The courts generally have recognized that 30 days is an appropriate minimum comment window.[12] Moreover, "[t]he Administrative Conference of the United States has opined, for the guidance of administrative agencies, that the shortest period in which parties can meaningfully review a proposed rule and file informed responses is thirty days."[13] Significantly, even a 30-day period "is, in the Administrative Conference's view, 'an inadequate time to allow people to respond to proposals that are complex or based on scientific or technical data'" and "[t]he Administrative Conference itself thus suggests a sixty-day period as 'a more

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[11] As a practical matter, the period for the performance of tests and submission of testing data has been even further truncated here by the Commission's accelerated publication of the FNPRM in the Federal Register – and by the fact that the very short comment period includes the 4th of July, a federal holiday.

[12] *See, e.g.*, *Riverbend Farms, Inc. v. Madigan*, 958 F.2d 1479, 1484 (9th Cir. 1992) (although the APA "mandates no minimum comment period, some window of time, usually thirty days or more, is . . . allowed for interested parties to comment").

[13] *Petry v. Block*, 737 F.2d 1193, 1201 (D.C. Cir. 1984) (citing Administrative Conference of the United States, A GUIDE TO FEDERAL AGENCY RULEMAKING 124 (1983)).

reasonable *minimum* time for comment.'"[14] The courts typically uphold comment periods shorter than 30 days only when external factors, such as statutory deadlines, are present[15] – *and* where the complaining party suffered no harm.[16] Here, no statutory deadline or other exigent circumstance exists, and the harm to AWS-1 licensees from proceeding on the FNPRM proposals in the absence of resolving the interference questions is potentially massive.[17]

Further, the Commission has recognized in the past that, where empirical testing is being done, it would be arbitrary for the Commission to rush to decision without giving itself and interested parties an opportunity to evaluate the test results. For example, in the low-power FM proceeding, the Commission repeatedly granted extensions of comment deadlines to allow time for parties to conduct testing and to evaluate and comment on the results of that testing.[18] Similarly,

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[14] *Id.* (emphasis in original).

[15] *See Florida Power & Light Co. v. United States*, 846 F.2d 765, 772 (D.C. Cir. 1988) (upholding 15-day comment period where agency was subject to 90-day statutory deadline).

[16] *See Phillips Petroleum Co. v. EPA*, 803 F.2d 545, 559 (10th Cir. 1986) (upholding 45-day comment period where petitioner "presented no evidence that they were prejudiced by the EPA's refusal to extend the comment period"); *Florida Power & Light Co.*, 846 F.2d at 772 ("the short length of the comment period appears to be no more than a technical argument").

[17] Members of Congress already have voiced their opinion that a longer comment period is warranted here. *See* Letter from Joe Barton, Ranking Member, House Committee on Energy and Commerce, and Cliff Sterns, Ranking Member, House Subcommittee on Telecommunications and the Internet, to Kevin J. Martin, Chairman, FCC, filed June 30, 2008 in WT Docket No. 07-195 ("[W]e suggest that you allow for a longer comment period than the 3 weeks provided for in the notice.").

[18] *See, e.g.*, Order, *Creation of a Low Power Radio Service*, 14 FCC Rcd 4096, 4097 ¶ 4 (1999) (extending comment deadlines to four months after NPRM was issued, despite a desire to "conclude th[e] proceeding expeditiously," because of the need to allow parties to conduct "quality engineering and other studies"); Order, *Creation of a Low Power Radio Service*, 14 FCC Rcd 11096, 11097 ¶ 6 (1999) (granting an additional 60-day extension of comment deadlines to allow parties to complete testing); Order, *Creation of a Low Power Radio Service*, 15 FCC Rcd 7158, 7159 ¶¶ 4, 7 (1999) (granting yet another extension of the reply comment deadline because "parties need time to analyze the voluminous information submitted into the record," namely, engineering studies and technical material, and "parties' ability to review this material is limited by vacation

in the "white spaces" proceeding, the Commission has provided nearly two years since issuance of a Further Notice of Proposed Rulemaking, to allow for comprehensive interference testing and evaluation of those tests' results.[19]

Here, too, the Commission should allow parties sufficient time to conduct testing and to evaluate and comment on the results of their and other parties' tests. The ongoing deployment of T-Mobile's broadband services on the AWS-1 spectrum makes it possible to test on real devices – an exercise that may provide extremely important data for assessing the risk of and ability to guard against interference. Nothing requires a rush to judgment that would preclude collection of such critical, relevant testing data – data that will be available promptly, and well within the time period the Commission traditionally has allowed for such purposes. While the public interest of course favors putting the AWS-3 spectrum to efficient use without unnecessary delay, it also favors ensuring that the AWS-1 spectrum already auctioned be put to efficient use – and that such use not be frustrated by an uninformed and inaccurate evaluation of the interference potential of the action proposed in the FNPRM.

Conclusion

For these reasons, the Commission should extend the date for filing comments by 90 days to allow for supervised testing of potential interference with AWS-1 operations. At the very least, the Commission should extend the comment deadline by at least 30 days to allow T-Mobile

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schedules during the month of August"); Order, *Creation of a Low Power Radio Service*, 15 FCC Rcd 7161, 7162 ¶ 7 (1999) (extending reply period a fourth time).

[19] *See, e.g.*, *White Spaces Order* at 12273 ¶ 15; Public Notice, "Office of Engineering and Technology Seeks Comment on Measurement Report of DTV Receiver Interference Rejection Capabilities," DA 07-1564 (Mar. 30, 2007) (seeking comments on results of OET testing); Public Notice, "Office of Engineering and Technology Announces Plans for Conducting Measurements of Additional Prototype TV White Space Devices," DA 08-118 (Jan. 17, 2008) (Commission's most recent public notice extending the white spaces proceeding to allow for additional testing).

to complete its testing and submit a comprehensive analysis of the results, with sufficient time for interested parties to evaluate and comment on those results. Such an extension is necessary to establish a reliable record on which to decide the serious interference issues presented by the Commission' proposed rules.

Respectfully submitted,

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