

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions)	GN Docket No. 12-268
)	
Office of Engineering and Technology Releases and Seeks Comment on Updated OET-69 Software)	ET Docket No. 13-26
)	
Office of Engineering and Technology Seeks to Supplement the Incentive Auction Proceeding Record Regarding Potential Interference Between Broadcast Television and Wireless Services)	ET Docket No. 14-14
)	

**PETITION FOR RECONSIDERATION
OF
SPRINT CORPORATION**

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SUMMARY

The Federal Communications Commission's 600 MHz broadcast television incentive auction ("incentive auction") provides a critical tool, created by Congress, to meet the nation's accelerating spectrum needs by repurposing the 600 MHz band to its highest-valued use. With the opportunity to complete portions of the incentive auction only once, and no additional low-band spectrum identifiable in the near future, it is critically important that the Commission adopts procedures that ensure the success of both the auction itself and post-auction operations of those participating.

Unfortunately, the Commission's recent determination in the context of establishing its inter-service interference methodology (ISIX Methodology) and associated protection standards for any television stations and new 600 MHz Band wireless licensees contains a fundamental error that significantly undermines the prospects of a successful auction. By establishing an ISIX Methodology before circulation of critical information regarding future 600 MHz licensees, the Commission based its decision on an incomplete and fundamentally flawed record. Specifically, the Commission's decision to adopt an F(50,50) statistical measure to predict levels of acceptable interference from remaining television stations into wireless operations after the auction and repacking severely underestimates the real-world level of interference that could result.

This Petition presents information showing that the use of an F(50,10) statistical measure would be a preferable and more useful indicator of potential interference that could occur within a 600 MHz spectrum block that is being auctioned. The Petition documents the differences that could occur in the predicted levels of interference between F(50,50) and F(50,10), and discusses the limited ability of certain mitigation techniques to overcome interference that could occur but

would not be predicted when using the $F(50,50)$ statistical measure. The Petition suggests that use of the $F(50,50)$ statistical measure would create bidder uncertainty, reduce forward auction participation, and reduce auction revenue. Finally, this Petition demonstrates why the Commission should require future Low Power Television (LPTV) and TV translator stations to protect 600 MHz wireless operations using $F(50,10)$ statistical measures.

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I. INTRODUCTION AND SUMMARY

Sprint Corporation (“Sprint”) hereby petitions the Federal Communications Commission (the “Commission” or “FCC”) to reconsider its decision in the *Second Report and Order* to use the F(50,50) statistical measure to predict the strength of digital television (DTV) signals that can cause interference to co-channel and adjacent channel wireless base stations and wireless user equipment in the 600 MHz band.¹ The Commission has stated that its central objective in

¹ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Office of Engineering and Technology Releases and Seeks Comment on Updated OET-69 Software, Office of Engineering and Technology Seeks to Supplement the Incentive Auction Proceeding Record Regarding Potential Interference Between Broadcast Television and Wireless Services, Second Report and Order and Further Notice of Proposed Rulemaking,*

designing the incentive auction is “to harness the economics of demand for spectrum in order to allow market forces to determine its highest and best use.”² To achieve this goal, and to ensure that repurposed 600 MHz spectrum has the utility and coverage to support increased broadband competition while meeting the government’s substantial revenue goals,³ forward auction bidders must have accurate information concerning the interference wireless operators can expect from remaining or repacked incumbent television broadcasters.

Wireless operators design and expect their networks to operate at high reliability levels that would be significantly undermined if interference were to occur 50 percent of the time as would be predicted by using the F(50,50) statistical measure. While wireless operators can adopt mitigation techniques that may reduce the level and frequency of potential interference from co-channel or adjacent channel DTV operations that remain in the 600 MHz band after the auction and repacking is completed, those mitigation costs cannot be easily assessed when relying only on interference predictions that use the F(50,50) statistical measure. Mitigation costs could be substantial and some mitigation techniques may not work adequately to achieve the desired network reliability. Therefore, as discussed below, in assessing the potential for harmful

GN Docket No. 12-268, ET Docket No. 13-26, ET Docket No. 14-14, FCC 14-157, ¶ 37 (Oct. 16, 2014) (“*Second Report and Order*”). F(50,50) indicates that the propagation model parameters are set so that DTV signals are statistically expected to meet or exceed the interference threshold at no less than 50 percent of the potential wireless receiver locations for at least 50 percent of the time.

² See *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567, ¶ 2 (2014) (“*Incentive Auction Report and Order*”).

³ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6402, 126 Stat. 156 (2012) (“*Spectrum Act*”).

interference from a co-channel or adjacent channel DTV broadcaster, bidders in the forward auction need the results of an F(50,10) statistical measure, which predicts potential interference based on a model that assures that the DTV signal level that could cause interference to 600 MHz wireless operations would be exceeded at 50 percent of the locations within a licensee's service area no more than 10 percent of the time (and therefore interference would not be predicted to exist 90 percent of the time). The adopted F(50,50) statistical measure will, on the other hand, severely mispredict the harmful interference. *i.e.*, impairment, that a commercial wireless broadband operator is likely to experience from co-channel or adjacent channel television stations – a factual inaccuracy that goes to the heart of a bidder's ability to accurately value 600 MHz spectrum blocks in the forward auction. Using the F(50,50) statistical measure in the 600 MHz incentive auction will create bidder uncertainty, reduce forward auction participation, and reduce auction revenue. Moreover, the F(50,50) measure will delay provider deployment of critical, competition-enhancing low-band spectrum, as wireless operators confront and struggle to mitigate more extensive areas and levels of interference than the Commission predicted before the forward auction. The decision to use the F(50,50) statistical measure is thus, at the very least, inimical to the Commission's stated public policy objectives.

More than simply reflecting a policy misjudgment, however, the decision to adopt the F(50,50) statistical measure is also a material error that warrants reconsideration, particularly in light of new facts and circumstances.⁴ Since first soliciting comments on the use of the F(50,50) statistical measure for estimating interference levels that might be received by 600 MHz auction

⁴ See *In the Matter of Connect Am. Fund*, Third Order on Reconsideration, 27 FCC Rcd 5622, ¶ 1 (2012) (explaining that reconsideration is warranted when a Commission decision contains a material omission or error).

winners, the Commission has released substantial additional information about how the 600 MHz auction and repacking processes will work.⁵ This information, not made available until after commenters' last opportunity to present analysis to the Commission, provides a better basis for decision on the appropriate statistical measure than the limited information upon which the Commission based its decision to use the F(50,50) statistical measure.⁶ The new facts and circumstances are of decisional weight not only to the Commission (rendering the Commission's record – and the ultimate decision – in the *Second Report and Order* incomplete and premature), but also to likely forward auction participants, who did not know the extent to which, based on the Commission's subsequent decisions, their auction participation and future operations would be detrimentally impacted by use of the F(50,50) statistical measure.⁷ This previously unavailable information, as discussed below, demonstrates that using the F(50,10) statistical measure would provide much more accurate and useful impairment information to forward auction bidders. Accordingly, the Commission's decision to use the F(50,50) statistical measure rather than the F(50,10) statistical measure is a material, substantive error that warrants granting this Petition for Reconsideration and, on reconsideration, adopting instead the F(50,10) statistical

⁵ See, e.g., *Comment Sought on Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002*, Public Notice, AU Docket No. 14-252, GN Docket No. 12-268 (rel. Dec. 17, 2014); *The Incentive Auction Task Force and the Wireless Telecommunications Bureau to Host Webinars to Discuss Proposals Put Forth in the Comment Public Notice*, Public Notice, Au Docket No. 14-252, GN Docket No. 12-268 (rel. Jan. 8, 2015); *Forward Auction LEARN Webinar*, FCC (Jan. 15, 2015).

⁶ 47 C.F.R. § 1.429(b)(2) (providing grounds for a petition for reconsideration where “[t]he facts or arguments relied on were unknown to the petitioner until after his last opportunity to present them to the Commission”).

⁷ See, e.g. 47 C.F.R. § 1.429(b)(3) (authorizing grant of a petition for reconsideration where consideration of new facts or arguments relied on is in the public interest); *In the Matter of Connect Am. Fund ¶ 1*; see also *Amendment of Section 73.202(b), Table of Assignments, FM Broadcast Stations*, MM Docket No. 83-237, ¶ 9 (1984) (discussing the standard for reconsideration of new facts or circumstances in light of their “decisional weight”).

measure for providing impairment data to forward auction participants. The Commission should also determine that the F(50,10) statistical measure is the appropriate measure to be used when determining whether proposed Low Power Television (LPTV) and TV translator stations will adequately protect co-channel and adjacent channel 600 MHz wireless operations, as discussed further in Section III below.

II. THE COMMISSION SHOULD USE F(50,10) STATISTICAL MEASURES WHEN CALCULATING THE POTENTIAL INTERFERENCE TO 600 MHZ WIRELESS OPERATIONS FROM CO-CHANNEL AND ADJACENT CHANNEL TELEVISION STATIONS

The Commission has adopted rules that establish the protection requirements that would exist between co-channel and adjacent channel television and wireless operations that may exist in the 600 MHz band due to market variability. The Commission has identified four interference cases that can occur:⁸

⁸ *Office of Engineering and Technology Seeks to Supplement the Incentive Auction Proceeding Record Regarding Potential Interference Between Broadcast Television and Wireless Services*, Public Notice, GN Docket No. 12-268, ET Docket No. 14-14, 29 FCC Rcd 712, at 2-3 (2014) (“ISIX PN”); *Second Report and Order* at ¶ 30.

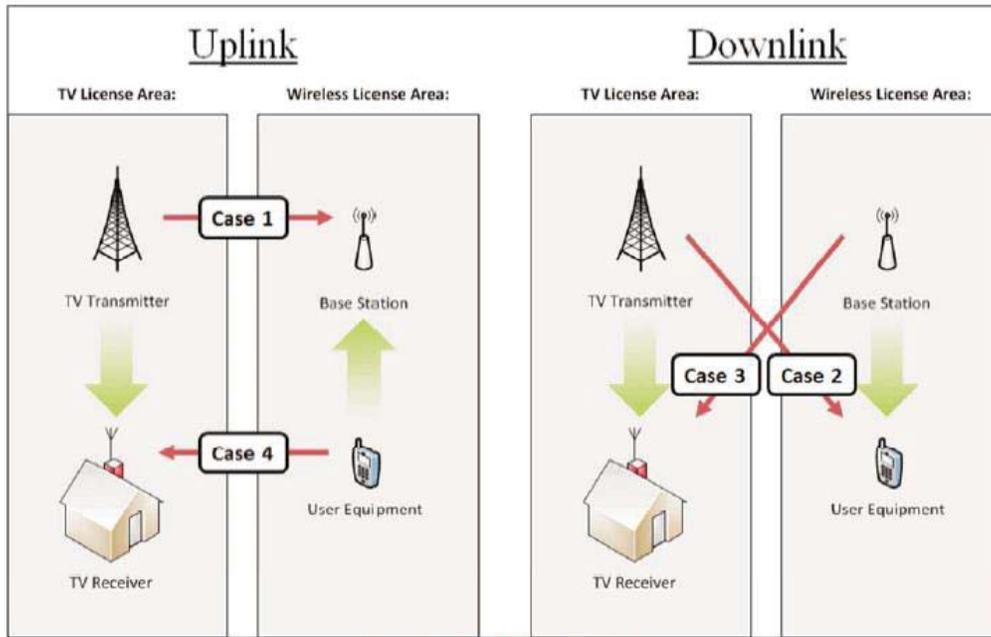


Figure 1. Interference scenarios

In the Commission's *Second Report and Order*, it adopted limits on the amount of interference a 600 MHz wireless operator could cause to co-channel and adjacent channel television operations (Cases 3 and 4).⁹ It also adopted interference analysis procedures for analyzing the level of interference that could occur from remaining TV operations to uplink and downlink wireless operations (Cases 1 and 2). Those procedures will be used to determine, prior to the start of an incentive auction forward stage, the amount of impairment that might exist on co-channel and adjacent channel wireless licensees – a critical factor for bidders as they determine both the prices they are willing to pay for these licenses and their utility in the bidder's wireless network.

In assessing potential signal levels using the Longley-Rice propagation model, as well as other models, adjustments are often made to the statistical probability at which a particular signal

⁹ *Id.* ¶¶ 42-58.

level is predicted to occur. Typically, the Commission has developed television protected service contours based on either F(50,50) or F(50,90) statistical measures.¹⁰ Interfering television signal limits, however, are typically based on F(50,10) statistical measures in order to ensure that interference occurs no more than 10 percent of the time.¹¹ In the *Second Report and Order*, the Commission also has proposed that wireless operations would be not be permitted to cause interference to broadcast television operations above the required Desired to Undesired signal level (D/U) ratio (Cases 3 and 4) based on the F(50,10) statistical measure.

However, in assessing the potential impairment to wireless operations from co-channel or adjacent channel television operations that remain in the 600 MHz band, the Commission chose to use the F(50,50) statistical measure as was proposed in the *ISIX PN*.¹² Numerous commenters, including Sprint, suggested that F(50,10) would be a more accurate and useful statistical measure than F(50,50).¹³ Some wireless operators expressed a preference, however, for the Commission

¹⁰ The coverage of analog TV stations is predicted using F(50,50) statistical measure pursuant to 47 C.F.R. §73.684(c), while the coverage of DTV stations is predicted using F(50,90) statistical measure pursuant to 47 C.F.R. §73.622e). F(50,50) indicates that the required signal level is predicted to be received at 50 percent of the locations at least 50 percent of the time, while F(50,90) indicates that the required signal level is predicted to be received at 50 percent of the locations at least 90 percent of the time.

¹¹ *See*, for example, 47 C.F.R. §73.616(e)(1).

¹² *Id.* at 6.

¹³ Comments of Sprint Corp., GN Docket No. 12-268, ET Docket No. 14-14, at 7-8 (March 18, 2014); Comments of the Society of Broadcast Engineers, Incorporated, GN Docket No. 12-268, ET Docket No. 14-14, at 5 (March 17, 2014); Comments of the National Association of Broadcasters, ABC Television Affiliates Association, FBC Television Affiliates Association, CBS Television Network Affiliates Association, NBC Television Affiliates, the Association of Public Television Stations, the Corporation for Public Broadcasting, and the Public Broadcasting Service (collectively the “Joint Broadcasters”), GN Docket No. 12-268, ET Docket No. 14-14, at 29-30 (March 18, 2014).

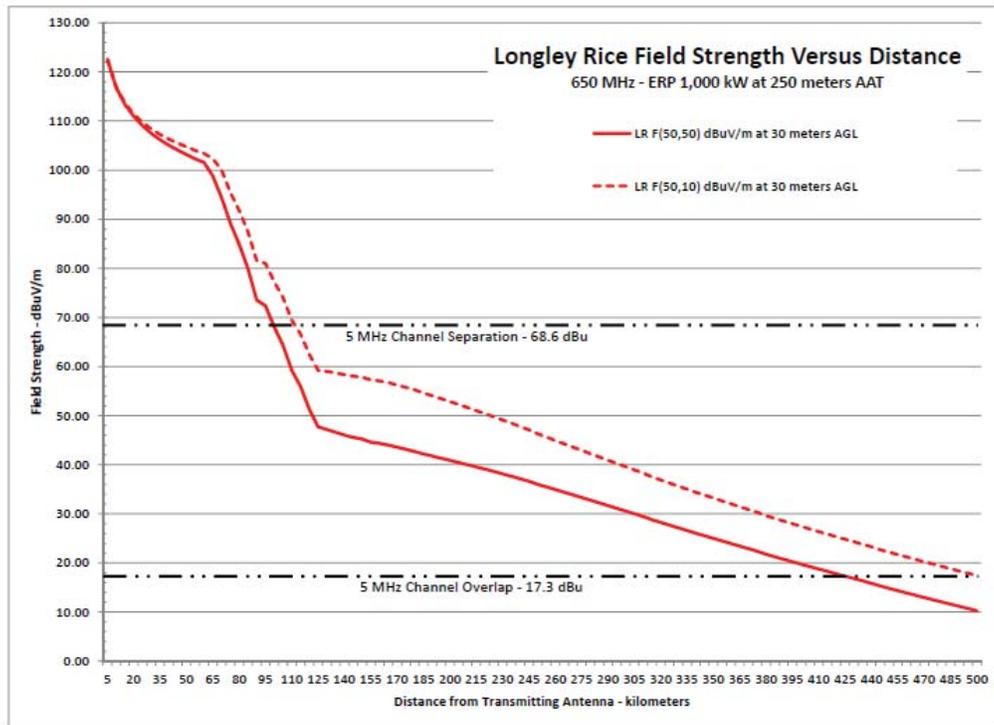
to use F(50,50) statistical measure in this regard.¹⁴ In the *Second Report and Order*, the Commission concluded that F(50,50) statistical modeling is more appropriate for use in predicting interference from DTV signals to wireless operations because: 1) F(50,50) will not risk interference to broadcasters because F(50,50) will not be applied in calculating interference from wireless operations to DTV;¹⁵ 2) the majority of wireless operators supported F(50,50); and 3) various techniques are available to wireless operators to avoid harmful interference to wireless base stations.¹⁶ In this petition, we explore the feasibility of using various interference mitigation techniques – that the Commission relied on in reaching its decision – to attempt to address interference that can be found to occur at higher levels than would be predicted when using F(50,50). This is of particular import for the Case 1 interference scenario described above involving reception of ‘undesired’ DTV signals by wireless base stations.

Sprint notes that the difference between the predicted interference levels using F(50,50) vs F(50,10) is significant, particularly as distances increase, as shown in the graph below, prepared for Sprint by telecommunications consulting engineering firm Kessler and Gehman Associates (“KGA”):

¹⁴ *Second Report and Order* at n.133 and n.134.

¹⁵ F(50,10) will be applied instead. *See Second Report and Order* at 60.

¹⁶ *Second Report and Order* at ¶ 37.

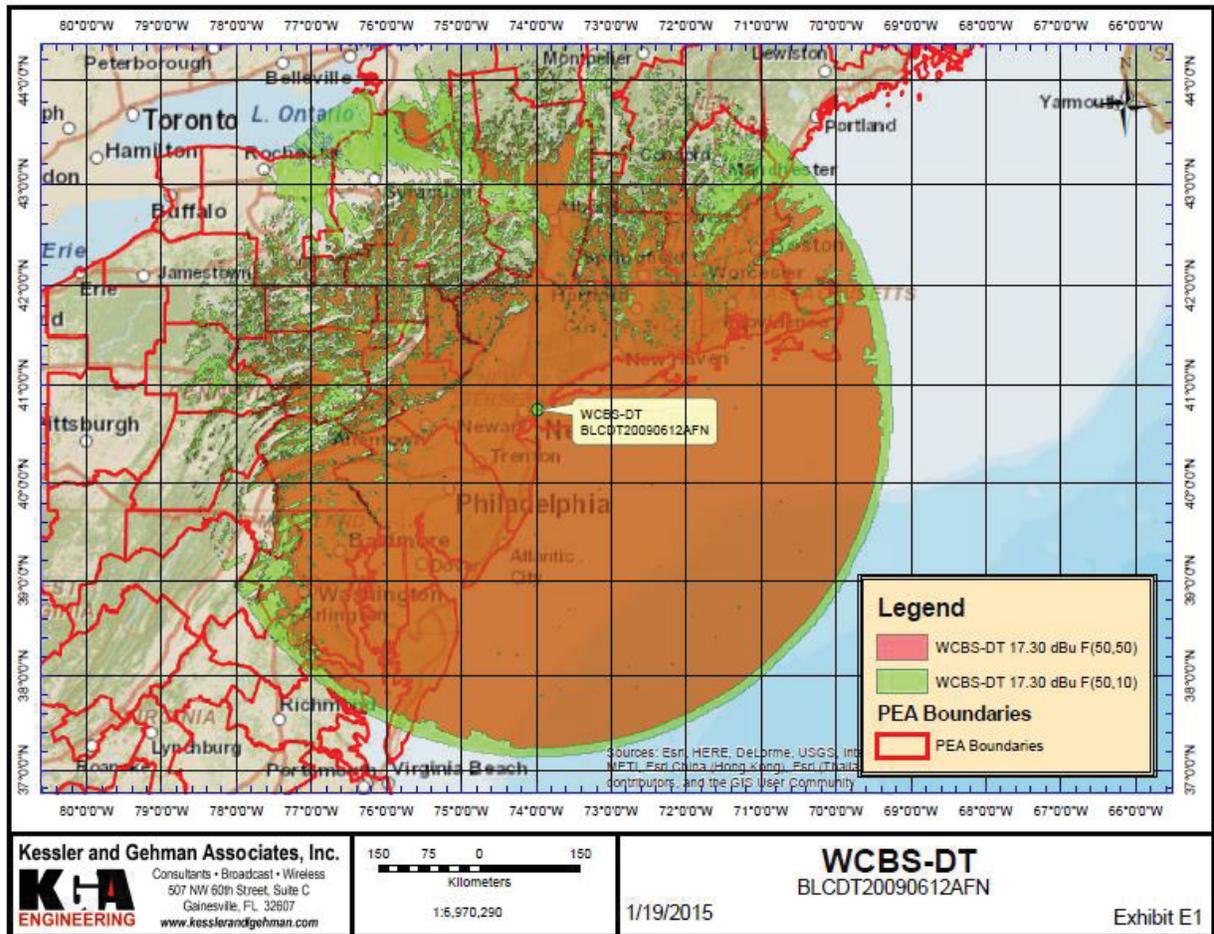


This graph shows the predicted field strength that would be received by a wireless base station antenna, located 30 meters above average terrain, from a typical 1 megawatt DTV station with an antenna height of 250 meters above average terrain operating on 650 MHz in the Miami, Florida area (where there is little terrain variation that would impact the results). While F(50,50) and F(50,10) statistical measures yield similar results at distances up to about 50 kilometers, at farther distances the predicted signal levels can differ by more than 10 dB.¹⁷

To see how this might play out in a real-world situation, KGA also looked at the differences in predicted amounts of impairment that would occur when F(50,50) and F(50,10) statistical measures are used to determine where interfering signals to a co-channel 600 MHz

¹⁷ For example, the predicted DTV signal level at ~120 kilometers from the DTV station using F(50,50) is approximately 12 dB lower than the signal level that is predicted using F(50,10).

wireless operation would be produced by WCBS, New York City. The following graph, which shows the results of that study, would seem to show very little difference in impact for areas near to New York City, but greater impact in the Manchester, NH, Williamsport, PA, and Syracuse, NY areas:



The following table, which shows the resulting impairment levels in each PEA impacted by WCBS’s operations, reveals more clearly the very significant differences that can exist in the impairment levels that would be predicted using F(50,50) vs. F(50,10) statistical measures:

WCBS-DT, New York, NY			F(50,10)		F(50,50)		Difference	
PEA Number	PEA Name	PEA Population	Pop Within 17.3 dBuV/m	% Impaired	Pop Within 17.3 dBuV/m	% Impaired	Pop Within 17.3 dBuV/m	% Impaired
1	New York, NY	25,237,061	24,736,167	98.0%	24,358,291	96.5%	377,876	1.5%
5	Baltimore, MD- Washington, DC	7,842,134	7,819,907	99.7%	6,929,659	88.4%	890,248	11.4%
6	Philadelphia, PA	7,587,252	7,505,298	98.9%	7,406,199	97.6%	99,099	1.3%
7	Boston, MA	6,776,035	6,696,364	98.8%	5,974,790	88.2%	721,574	10.6%
41	Syracuse, NY	1,371,959	472,022	34.4%	43,018	3.1%	429,004	31.3%
44	Rochester, NY	1,316,146	331,139	25.2%	7,297	0.6%	323,842	24.6%
48	Harrisburg, PA	1,244,058	1,201,582	96.6%	1,080,835	86.9%	120,747	9.7%
49	Albany, NY	1,222,542	1,119,723	91.6%	913,027	74.7%	206,696	16.9%
57	Richmond, VA	1,080,661	30,133	2.8%	13,103	1.2%	17,030	1.6%
60	Manchester, NH	1,025,620	831,666	81.1%	135,983	13.3%	695,683	67.8%
69	Springfield, MA	861,286	772,866	89.7%	627,200	72.8%	145,666	16.9%
77	Portland, ME	784,594	60,201	7.7%	0	0.0%	60,201	7.7%
88	Frederick, MD	678,674	226,850	33.4%	131,069	19.3%	95,781	14.1%
103	Winchester, VA	556,408	88,726	15.9%	2,205	0.4%	86,521	15.5%
121	Altoona, PA	490,867	11,193	2.3%	1,324	0.3%	9,869	2.0%
136	Williamsport, PA	454,792	312,186	68.6%	121,381	26.7%	190,805	42.0%
138	Burlington, VT	452,191	29,625	6.6%	1,495	0.3%	28,130	6.2%
140	Fredericksburg, VA	438,705	136,426	31.1%	19,984	4.6%	116,442	26.5%
143	Keene, NH	427,275	124,759	29.2%	37,996	8.9%	86,763	20.3%
147	Salisbury, MD	419,355	411,386	98.1%	404,466	96.4%	6,920	1.7%
188	Jamestown, NY	325,075	7,602	2.3%	958	0.3%	6,644	2.0%
194	State College, PA	317,863	59,897	18.8%	1,087	0.3%	58,810	18.5%
210	Binghamton, NY	295,081	127,769	43.3%	35,904	12.2%	91,865	31.1%
227	Watertown, NY	255,260	12,697	5.0%	1,527	0.6%	11,170	4.4%
271	Elmira, NY	193,433	77,632	40.1%	19,589	10.1%	58,043	30.0%
283	Plattsburgh, NY	173,097	607	0.4%	175	0.1%	432	0.2%
296	Pottsville, PA	148,289	121,050	81.6%	67,022	45.2%	54,028	36.4%
324	Honesdale, PA	110,191	105,620	95.9%	97,062	88.1%	8,558	7.8%
Total Population:		62,085,904	53,431,093		48,432,646		4,998,447	
Total % Impaired:				86.1%		78.0%		8.1%

Several observations follow from this data. First, the difference in the calculated levels of impairment is largely dependent on how far the PEA is from the DTV station. Yet, under the recently proposed *Incentive Auction Comment Public Notice*, forward auction wireless bidders will only know the predicted level of impairment in a block and not the actual source of the impairment and whether it is close or far away. Thus, for example, if the FCC reports to forward auction bidders impairment of one percent on a block based on F(50,50) statistical measure, the bidder will only know that impairment would occur 50 percent of the time. A bidder wouldn't know what level of impairment it would be facing 10% of the time, which is more relevant to ensuring it can meet network reliability requirements. In the case of impairments that could be caused by WCBS, the F(50,10) impairment, corresponding to a 1% F(50,50) impairment, could

vary from 3% of the POPs (Richmond, VA, PEA #57), to 5% of the POPs (Watertown, NY, PEA #227), and to 25% of the POPs (Rochester, NY, PEA #44). As a result, a wireless bidder will likely have to assume, for valuation purposes, the worst case scenario.

Second, the *level* of impairment that would occur 10 percent of the time can be significantly greater than the level of impairment that would occur 50 percent of the time. For example, only 13 percent of the Manchester PEA POPs would be impaired 50 percent of the time, but 81 percent of those POPs would be impaired 10 percent of the time. The real-world usability of that block, which requires reliable non-interference conditions, would be severely threatened, and the cost for a network operator to address that impairment could be significant.¹⁸

In adopting the F(50,50) statistical measure for calculating potential interference to wireless operations, the Commission relied on comments from 4G Americas, T-Mobile, Verizon, and AT&T, indicating that deployment mitigations exist that would make those parties comfortable with relying on impairments calculated using F(50,50) statistical measure. Yet, a close reading of those comments really only focus on mitigation techniques that might permit F(50,50) to be used for calculating potential interference to wireless devices (*i.e.*, interference Case 2).¹⁹ This omission of attention to the impacts of F(50,50) on Case 1 interference scenarios

¹⁸ We do note that in many cases there is little predicted change in impairment regardless of whether a F(50,50) or F(50,10) statistical measure is used, and that creates another level of uncertainty for bidders.

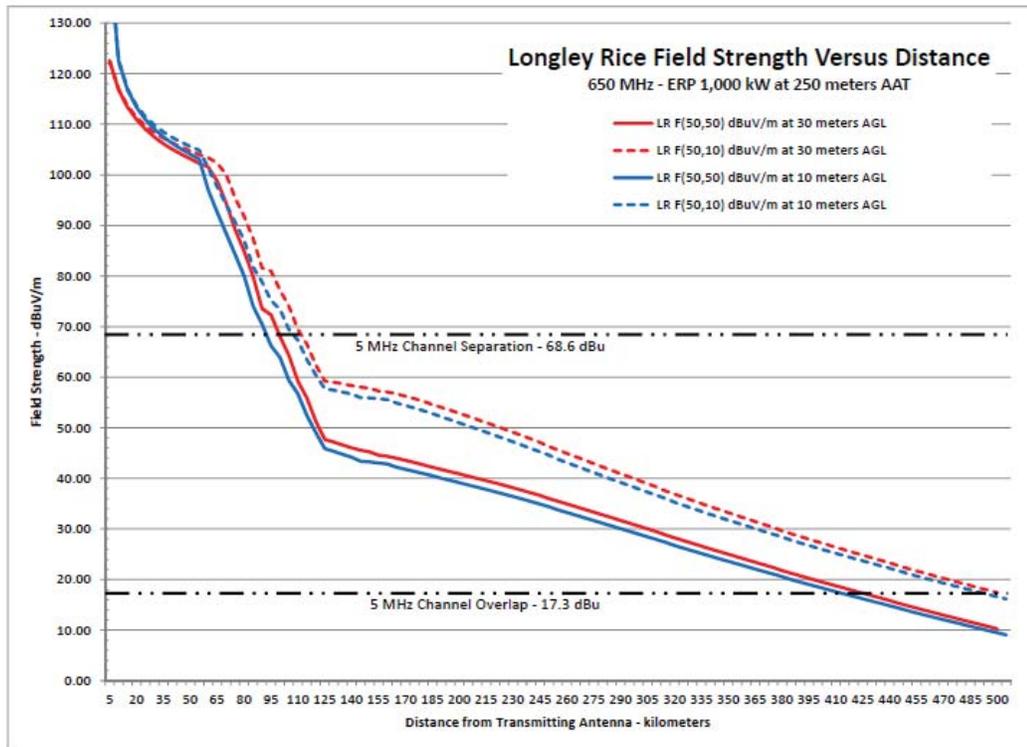
¹⁹ See Comments of 4G Americas, GN Docket No. 12-268, ET Docket No. 14-14, at 4-5 (March 17, 2014) (“Use of Longley-Rice F(50,50) is likewise appropriate for Case 2 because current and planned LTE deployments do have improved features that better enable mobile user devices to reject interference”; no mention of using F(50,50) for Case 1); Letter from Brian J. Benison, AT&T Services, Leona Hochstein, Verizon, Chris Wiczorek, T-Mobile to Marlene H. Dortch, FCC, GN Docket 12-268 (filed June 13, 2014) (also discussing use of Longley-Rice F(50,50) only for Case 2).

is notable and problematic.

In its ISIX PN comments, Sprint did indicate that “wireless operators have a number of tools that can be used to deploy and adjust their networks so as to mitigate interference problems that otherwise might exist with remaining television broadcasters on the same frequencies (*i.e.*, co-channel) in different locations, or with television broadcasters operating in the same location on nearby (*i.e.*, adjacent-channel) spectrum.”²⁰ *However*, there are limits to how much can be done in that regard in Case 1 situations without also jeopardizing wireless coverage and significantly increasing cost to deploy.

For example, a wireless operator could lower its base station sector antenna that is pointing in the general direction of the interfering DTV station. However, this approach would be available only if tower space at a lower height were available. This approach would also add cost and would not work if DTV stations in multiple locations were creating the impairment. Furthermore, a reduction in antenna height might not fully overcome the difference in interference that could be caused by using F(50,50) instead of F(50,10), as shown in the following graph depicting F(50,50) and F(50,10) signal levels that would be received at wireless antennas 10 meters and 30 meters above the terrain:

²⁰ *Id.* at 2-3.



Other techniques, such as use of smart antennas, beam forming and base station MIMO, are generally more difficult, expensive, and potentially impractical to use on low-band frequencies, such as 600 MHz, because of antenna size and separation requirements. Base station antenna down-tilt could help lower the interfering signal by a few dBs, but would not itself be able to overcome increased levels of interference of 10 dB or more. Finally, switching network operations from a temporarily impaired 600 MHz base station to a base station in another frequency band, as proposed by 4G Americas for devices, would significantly impact network capacity and coverage, and would also significantly reduce the value and usability of 600 MHz spectrum blocks. For competitive carriers such as Sprint, this is a significant issue given their relatively limited access to other low-band spectrum that could provide comparable coverage or in-building penetration.

Sprint believes that, because of the significant difference in network reliability and cost arising from different statistical measures, the Commission's F(50,50) statistical measure of interference will not provide forward auction participants sufficient information from which to understand, evaluate, and predict potential interference to their operations. This uncertainty undermines valuation efforts, engenders significant bidder uncertainty, and threatens bidder confidence about the utility of the licenses at auction.

III. THE COMMISSION SHOULD ALSO DETERMINE THAT FUTURE LOW POWER TELEVISION (LPTV) AND TV TRANSLATORS SHOULD PROTECT 600 MHZ WIRELESS OPERATIONS USING F(50,10) STATISTICAL MEASURES

The Commission proposes, in paragraph 82 of the *Second Report and Order*, field strength values that should be used to determine whether future LPTV and TV translators would adequately protect 600 MHz wireless operations. The Commission proposes protection using the same field strength values that it has adopted for use in determining impairments to 600 MHz wireless blocks prior to the forward auction. The Commission, however, has not proposed whether those limits should be met using F(50,50) or F(50,10) methodology.²¹ To the extent the Commission believes they have already made this decision to use F(50,50), Sprint respectfully also requests reconsideration of that decision.

The consequences of using F(50,50) statistical measures to calculate field strength values that would be received by wireless operators under Case 1 and Case 2 scenarios are enormous. A wireless operator, who has paid dearly for access to the spectrum at auction (potentially accessing critical low-band spectrum for the first time), could be faced at a future time with a

²¹ The *Second Report and Order*, including its Appendices, does not discuss this or render any obvious decision.

new sources of interference from LPTV or TV translators that impact its network reliability considerably more if F(50,50) is used instead of F(50,10). Furthermore, applying F(50,50) as the protection requirement for LPTV and TV translators to wireless would mean that wireless operations are protected to a much lesser extent than would be required for interference from LPTV and TV translators to full power DTV stations.²² The correct approach would be for the Commission to affirm that F(50,10) should be used in calculating potential interfering signal levels from LPTV and TV translators to 600 MHz wireless operations.

²² See 47 C.F.R. §74. 705(c)(1).

IV. CONCLUSION

For the foregoing reasons, Sprint requests that the Commission reconsider the *Second Report and Order* and incorporate the F(50,10) statistical measure to predict the strength of digital television (DTV) signals that can cause interference to co-channel and adjacent channel wireless base stations and wireless user equipment, both in determining the levels of impairment that would be provided to forward auction bidders as well as in determining whether a proposed LPTV or TV translator would adequately protect 600 MHz wireless operations.

Respectfully submitted,

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