



January 21, 2019

Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: T-Mobile Ex Parte Notification of December 13, 2018 regarding
GN Docket No. 18-122, Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band**

I have been asked by the C-Band Alliance to apply an economic and auction design perspective to review the portion of the above *ex parte* filing by T-Mobile and related filings that propose an auction process to reassign the band. The filing inaccurately calls its proposal an “Incentive Auction,” blatantly copying a name from the FCC’s successful process to reassign 84 MHz of spectrum previously used for UHF television broadcasting. The name is misleading, however, because many of the important principles embodied in the FCC’s UHF-TV incentive auction are reversed in the T-Mobile proposal.

In addition to the flaws in its general approach, the T-Mobile proposal leaves critical issues unresolved. This fact creates a likelihood that any attempt to follow the proposed path would necessarily lead to long delays in reassigning any spectrum in this band. In view of the wide agreement about the urgent need for fast action on this mid-band spectrum to provide enormous value to individual consumers and to advantage the United States in the international race to 5G, such delays would be very damaging.

To compare the T-Mobile proposal to the 600 MHz Incentive Auction, it is necessary to review several of the most important principles embodied in the 600 MHz Incentive Auction design. Among them are:

1. Participation in the auction was voluntary. Broadcasters who decided not to participate could keep their broadcast licenses and continue to broadcast over the air to the same television viewers as before the auction.
2. Each participating broadcaster could decide separately about its bid, that is, about the minimum compensation it would accept in exchange for its broadcast rights.
3. The clearing procedure carefully weighed the bids of buyers and sellers to identify the efficient quantity of spectrum bandwidth to be reassigned from TV broadcast to the new flexible use to maximize economic value.
4. The auction procedures provided a positive “incentive” for the broadcasters both to embrace the FCC process and participate fully in the auction.

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T-Mobile's proposed auction reverses all four of these principles. According to the T-Mobile proposal:

1. Participation in the auction is mandatory. All satellite operators are required to participate and give up some of their capacity to serve their existing customers.
2. The satellite companies must participate as a forced consortium. Somehow, the companies all are required to agree to give up the same rights in every one of the hundreds of geographic areas. The T-Mobile proposal does not specify by what fiat or magic formula the companies will reach quick, consensus decisions in an environment so challenging that the very survival of the satellite businesses would be at risk.
3. The proposal makes no attempt to weigh bids by buyers and sellers to identify the economically efficient quantity or timing of spectrum reassignments. In the most populous areas where spectrum values are highest, the proposal dictates that at least 300 MHz of spectrum must be reassigned regardless of the prices offered by the buyers (except for a minimal reserve price) or demanded by the sellers. Moreover, the complicated but completely arbitrary pricing proposed by T-Mobile for spectrum beyond the 300 MHz would be unrelated to the incremental value of that spectrum to the buyers, and so cannot promote economic efficiency.
4. The T-Mobile proposal incorporates only negative incentives, including a not-too-veiled threat that if the satellite companies fail to vacate all 500 MHz of the C-Band in favor of "only" 300 MHz, then the compensation they may get would be only ten percent of the revenues from any spectrum sale.

These reversals, especially the shift from the positive, market-based incentives of the UHF-TV Incentive Auction to the fiat and mandates of the T-Mobile proposal would encourage the satellite companies to resist in every way they can. The proposed process masquerades as an incentive auction, but it would more accurately be dubbed a "Disincentive Auction."

As demonstrated above, the fundamental flaw of the T-Mobile proposal is that its plan needs a forced consortium to address the problem for the shared C-Band spectrum that was not present in the first FCC incentive auction. Unlike the UHF-TV stations that participated in that auction, C-band licensees all use the same frequencies for their signals. As a result, any terrestrial use that creates interference for one satellite user also creates interference for all the others operating in the same area. This fundamental attribute of the C-band licenses makes their reassignment very different from UHF-TV licenses. For a set of frequencies to be available for terrestrial use, all of the satellite operators with customers in that area must make some alternative arrangements. This flaw is also present and must be considered in any similar proposal for an incentive auction structure for C-band.

Forming a consortium requires the participants to agree on a governance structure, key personnel, a procedure for cost sharing, revenue sharing, and more. A company that joins a consortium typically gives away significant decision rights over a critical asset. The satellite companies here can hardly be expected to do that without a very significant *positive* incentive, but the T-Mobile proposal provides none. Without a positive incentive, the FCC would need to dictate many details

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to the satellite companies, likely leading to a protracted legal and regulatory battle.

Moreover, even a brief reading of the T-Mobile proposal makes it clear that it is merely a sketch. For example, while it specifies the percentage of auction revenue to be shared with the satellite operators in the event of clearing 300 MHz or 500 MHz, it makes no attempt to justify these percentages, leaves the applicable percentages for other clearing targets unspecified, and does not describe how decisions would be made or revenues shared among the satellite operators.

Despite the incompleteness of T-Mobile's proposal, two things are clear. First, it includes no substantial positive incentive for the satellite companies to participate in the plan. Second, it would provide absolutely no market signal about how much spectrum to clear or even whether the proposed transaction is a valuable one and whether buyers' spectrum values are high enough to compensate the satellite companies for the damage to their businesses.

As noted in the CBA filings, the minimal compensation that T-Mobile proposes would be coupled with requiring the satellite companies to give up at least 300 MHz of spectrum just where they need it most to continue to provide their vital video programming distribution service. If T-Mobile's further proposal to encourage the satellite companies to give up the full 500 MHz in exchange for 80% of the auction revenues succeeds, that would eliminate the C-Band satellite businesses entirely.

In contrast, the CBA proposal calls for private transactions that would result in rapid clearing of a large part of the C-band. The satellite companies have a positive incentive to negotiate with and provide value to potential buyers while still preserving service to their existing customers. Such a market-based process relying on positive incentives would be much faster and more certain than T-Mobile's Disincentive Auction.

Respectfully submitted,



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