intercarrier compensation systems to ensure that robust, affordable voice and broadband service, both fixed and mobile, are available to Americans throughout the nation. Connect America Fund et al., Order and Further Notice of Proposed Rulemaking, FCC 11–161 (*USF/ICC Transformation Order*) (76 FR 73830 (Nov. 29, 2011) and 76 FR 78384 (Dec. 16, 2011)). In the *USF/ICC Transformation Order,* the Commission, among other things, created (1) the Connect America Fund (CAF), to help make broadband available to homes, businesses, and community anchor institutions in areas that do not, or would not otherwise, have broadband, (2) the Mobility Fund, to ensure the availability of mobile broadband networks in areas where a private-sector business case, (3) the Remote Areas Fund (RAF), to ensure that Americans living in the most remote areas in the nation, where the cost of deploying traditional terrestrial broadband networks is extremely high, can obtain affordable access through alternative technology platforms, including satellite and unlicensed wireless services. The *USF/ICC Transformation Order* directed that support under CAF Phase II, the Mobility Fund, and the RAF be awarded by competitive bidding. The Commission adopted rules to implement the reforms it adopted in the *USF/ICC Transformation Order,* including rules in part 1, subpart AA, of the Commission's rules governing competitive bidding for universal service support generally. *See* 47 CFR 1.21001–1.21004.

On October 27, 2020, the Commission adopted a Report and Order in which it, among other things, amended its existing part 1, subpart AA, general universal service competitive bidding rules to codify policies and procedures applicable to the universal service auction application process that have been adopted in its recent universal service auctions, better align provisions in the universal service competitive bidding rules with like provisions in the Commission's spectrum auction rules, and make other updates for consistency, clarification, and other purposes that would apply in all universal service auctions. *See* Establishing a 5G Fund for Rural America, *Report and Order,* FCC 20–150 (*5G Fund Report and Order*). The amended part 1, subpart AA, rules adopted in the *5G Fund Report and Order* apply to applicants seeking to participate in future Commission auctions for universal service support.

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2021–08292 Filed 4–21–21; 8:45 am]

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 73 and 74

[MB Docket No. 20–74 and GN Docket No. 16–142; FCC 21–21; FR ID 17416]

Rules Governing the Use of Distributed Transmission System Technologies, Authorizing Permissive Use of the ''Next Generation'' Broadcast Television Standard

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission modifies its rules governing the use of distributed transmission system (DTS) technologies by broadcast television stations by permitting, within certain limits, DTS signals to spill over beyond a station's authorized service area by more than the ''minimal amount'' currently allowed. By affording broadcasters greater flexibility in the placement of DTS transmitters, the rule changes allow broadcasters to enhance their signal capabilities and fill coverage gaps, improve indoor and mobile reception, and increase spectrum efficiency by reducing the need for television translator stations operating on separate channels.

DATES: Effective May 24, 2021, except for amendatory instructions 3, 4, and 6, which are delayed. The Commission will publish a document in the **Federal Register** announcing the effective date those amendments.

FOR FURTHER INFORMATION CONTACT: Ty Bream, Industry Analysis Division, Media Bureau, *Ty.Bream@fcc.gov,* (202) 418–0644.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Report and Order* (Order) in MB Docket No. 20–74 and GN Docket No. 16–142, FCC 21–21, that was adopted January 13, 2021 and released January 19, 2021. The full text of this document is available for public inspection online at *https://docs.fcc.gov/public/attachments/FCC-21-21A1.pdf.* Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat. Alternative formats are available for people with disabilities (braille, large print, electronic files, audio format, etc.) and reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) may be requested by sending an email to *fcc504@fcc.gov* or calling the FCC's Consumer and Governmental Affairs Bureau at (202) 418–0530 (voice), (202) 418–0432 (TTY).

Synopsis

1. *Introduction:* In this Report and Order (Order) we adopt a technical modification to the Commission's rules governing the use of a distributed transmission system (DTS), or single frequency network (SFN), by a broadcast television station. Consistent with our goal of addressing technical issues that may impede the adoption of DTS technology, we conclude that by modestly easing limitations on DTS transmitters and providing additional clarity in our rules, we can help unlock the potential of DTS at this crucial time when many stations are considering migrating to the next generation broadcast television standard (ATSC 3.0). As the record in this proceeding demonstrates, affording broadcasters greater flexibility in the placement of DTS transmitters can allow them to enhance signal capabilities and fill coverage gaps, improve indoor and mobile reception, and increase spectrum efficiency by reducing the need for television translator stations operating on separate channels.

2. Specifically, we update the current restriction that prohibits DTS signals from spilling over beyond a station's authorized service area by more than a ''minimal amount.'' See 47 CFR 73.626(f)(2). As described below, we replace the existing, and imprecise, ''minimal amount'' standard with a clearer, service-based approach that allows broadcasters greater flexibility in locating DTS transmitters, so long as, for UHF stations, the 41 dBu F(50,50) contour for each DTS transmitter does not exceed the reference station's 41 dBu F(50,50) contour. A 41 dBu F(50,50) contour refers to a boundary at which a signal is predicted to exceed 41 dBu at 50% of locations 50% of the time. We provide corresponding dBu values for F(50,50) limiting contours for Low and High VHF stations of 28 dBu for Low VHF and 36 dBu for High VHF. Consistent with our current approach, DTS transmissions will not be entitled to interference protection beyond the station's authorized service area. Our decision to replace the current, subjective spillover standard with a bright-line rule that both expands and clarifies the permissible range of spillover will not only promote DTS use by facilitating more efficient and more

economical siting of DTS transmitters, but it also will establish a clearly defined limit that will promote regulatory certainty.

3. We find that the approach we adopt in this document improves upon the proposed rule set forth in the underlying notice of proposed rulemaking (NPRM). See 85 FR 28586 (May 13, 2020). In that NPRM, we sought comment on a proposed modification submitted in a joint petition for rulemaking (Petition) by America's Public Television Stations (APTS) and the National Association of Broadcasters (NAB) (collectively, Petitioners). As explained below, our adopted approach will allow broadcasters to improve coverage in their service areas, without causing more spillover than necessary to promote DTS deployment. In addition, we remove the requirement that Class A, LPTV, and television translator stations must apply for DTS facilities on an experimental basis, and we add a contour-based limit on DTS spillover by such stations that is similar to what we adopt in this document for full power stations, but modified slightly to account for technical differences between low power and full power services. Specifically, because low power stations do not have antenna height limits, we cannot easily replicate a Table of Distances, which is calculated using a station's hypothetically maximized antenna height, for low power stations. Instead, similar to full power stations, we subject Class A, LPTV, and television translator stations using DTS to the limitation that: (1) Each DTS transmitter must be located within the station's authorized F(50,90) contour, and (2) the F(50,50) contour for each DTS transmitter must be fully contained within the station's F(50,50) contour (as opposed to an authorized service area drawn according to a Table of Distances).

4. *Background:* Traditionally, a broadcast television station transmits its signal from a single elevated transmission site central to the service area, resulting in a stronger signal available near the transmitter and a weaker signal as the distance from the transmitter increases. Non-uniform terrain or morphological features also can weaken signals, regardless of distance from the transmitter. One way for a station to augment its signal strength is to provide fill-in service using one or more separately licensed secondary transmission sites that operate on a different radiofrequency (RF) channel than the main facility, *i.e.,* a television translator. By contrast, a DTS network employs two or more transmission sites located within a station's service area, each using the same RF channel and synchronized to manage self-interference. Because it operates on only one frequency, DTS offers an alternative to traditional full power television transmission, which may use secondary translators that operate on additional frequencies.

5. *Current DTS Rules.* The Commission first recognized the potential uses and benefits of DTS technologies more than a decade ago when the transition from analog to digital television (DTV) brought with it the ability to transmit multiple television signals on the same channel without causing harmful interference, thus making DTS feasible for television for the first time. In 2008, the Commission stated that DTS could allow stations to reach more viewers in their coverage areas, to distribute more uniform and higher-level signals near the edges of their coverage areas, to improve indoor reception and reception on mobile devices, to overcome tower height and placement restrictions, to increase their spectrum efficiency by using the same channel for all operations, to enhance their ability to compete with multichannel video programming distributors, and to reach viewers that lost service as a result of the digital transition. In anticipation of these benefits, the Commission adopted rules permitting full power DTV stations to transmit using multiple, lower power DTS transmitter sites operating on the same frequency.

6. In crafting these rules, the Commission defined a DTS station's maximum authorized service area to be an area comparable to that which the DTV station could be authorized to serve with a single transmitter. To determine the boundaries of a DTS station's maximum service area under this ''Comparable Area Approach,'' the Commission established a ''Table of Distances,'' which it derived from the hypothetical maximum service area that a DTV station would be allowed to apply for under the Commission's rules (*i.e.,* using the maximum antenna height and power permitted for the station's single-transmitter site). The maximum service area defined by the Table of Distances is centered around the station's reference facility. Among other things, the Commission's rules require that each DTS transmitter must be located within either the reference station's Table of Distances area or the reference station's authorized service area. In addition, each DTS transmitter's noise-limited service contour (NLSC) must be contained within either the reference station's Table of Distances area or the reference station's authorized service area, except where an extension of coverage beyond the station's authorized service area is of a ''minimal amount'' and necessary to ensure that the combined coverage from all of its DTS transmitters covers all of the station's authorized service area. In adopting this ''Comparable Area Approach,'' the Commission rejected proposals for an ''Expanded Area Approach,'' which would have permitted DTS stations to expand coverage beyond their single-transmitter service areas (*e.g.,* to cover a larger area, up to an entire DMA). One of the Commission's concerns was that permitting broadcasters to reach viewers beyond their authorized service areas could undermine the Commission's localism goals by distracting them from the primary responsibility of providing programming responsive to the needs and interests of their community of license.

7. In authorizing DTS operations, the Commission afforded primary regulatory status to DTS transmitters of a full power station within the area the full power station is authorized to serve. The current rules therefore protect such DTS transmitters, within their authorized service areas, from interference from secondary licensees, such as low power television (LPTV) and television translator stations, and from unlicensed operations in television white spaces. The Commission also approved the use of DTS on an experimental basis by a single-license digital Class A, LPTV, and television translator station to provide service within its authorized service area, *i.e.,* operating a reference facility and one or more transmitters using a single Class A or LPTV license in the manner permitted for full power television stations.

8. *Next Gen TV (ATSC 3.0).* In November 2017, the Commission authorized broadcast television stations to use the ATSC 3.0 transmission standard on a voluntary, market-driven basis while they continued to deliver current-generation DTV broadcast service to their viewers using the ATSC 1.0 standard. The Commission concluded that the existing rules authorizing DTS stations generally were adequate to authorize the operation of an ATSC 3.0 SFN and that the record did not support changes to the authorized service areas for DTS stations at that time. The Commission further stated that it would monitor the deployment of ATSC 3.0 in the marketplace and consider changes to the DTS rules in the future, if appropriate. The Commission also noted that a

station interested in pursuing a change to its DTS service area may file for a waiver of the DTS rules pursuant to the Commission's general waiver standard.

9. *Petition for Rulemaking.* Petitioners contend that the ability of ATSC 3.0 broadcasters to use DTS is limited by the restriction that DTS signals may spill over by only a ''minimal amount'' beyond a station's authorized service area. In their Petition, filed October 3, 2019, they ask the Commission to amend § 73.626 of the Commission's rules to permit television stations more flexibility in the placement of their DTS transmitters, particularly near the edges of a station's coverage area. Petitioners do not seek the placement of DTS transmitters beyond a station's authorized service area. Rather, they propose that what they refer to as the DTS transmitter's ''interference contour,'' which would not be permitted to exceed that of the reference facility, would determine how close a DTS transmitter could be placed to the edge of a station's authorized service area. On October 11, 2019, the Media Bureau issued a public notice seeking comment on the Petition.

10. *NPRM.* The Commission's subsequent NPRM, released April 1, 2020, and published May 13, 2020, sought public comment on the proposed rule changes advocated by Petitioners and on the various arguments that commenters raised in response to the Public Notice. The NPRM sought comment on whether any change to the DTS rules is necessary or appropriate at this time, or whether relaxing the current spillover restriction would be premature given the lack of DTS deployment to date. The Commission asked whether it should permit more than a ''minimal amount'' of DTS spillover beyond a station's authorized service area, how to treat DTS signals beyond a station's current service areas if such spillover is allowed, and whether any rule changes adopted in this proceeding for full power stations should be applied also to Class A and/or LPTV stations. The NPRM also sought comment on the potential impact of the proposed rule changes on the Commission's policy goal of promoting localism and its other policy reasons for limiting DTS spillover. In addition, the Commission asked how other spectrum users, including LPTV and translator stations, wireless microphones, and white space devices, could be affected by such rule changes and whether there are steps it could and should take to mitigate such impacts.

11. *Discussion: DTS Spillover Contour.* We update our DTS rules to give television station licensees additional flexibility and greater certainty in the placement of DTS transmitters by increasing the amount by which DTS transmissions are permitted to spill over beyond a station's authorized service contour. Although its permitted area for DTS spillover will increase, a station's area of interference protection will not expand under our rule change. Specifically, such spillover will be subject to a bright-line limitation that, for UHF stations, the 41 dBu F(50,50) contour for each DTS transmitter must remain fully within the 41 dBu F(50,50) contour for the overall reference facility (for Low VHF and High VHF stations, the corresponding dBu values will be 28 dBu and 36 dBu, respectively). Under our revised rule, the 28 dBu F(50,50) contour of each DTS transmitter for a Low VHF station must remain fully within the 28 dBu F(50,50) contour for the overall reference facility, and the 36 dBu F(50,50) contour of each DTS transmitter for a High VHF station must remain fully within the 36 dBu F(50,50) contour for the overall reference facility. In addition, for each band in the Table of Distances, we calculate a smaller interfering field strength that, when it is combined with the assumed reference interfering signal using the root-sum-square (RSS) methodology, would not increase the interference potential of the DTS network as compared to the interference predicted by a single-transmitter station located at the reference point.

12. We conclude that allowing full power television stations this greater flexibility in locating DTS transmitters and affording greater clarity as to the amount of spillover permitted will promote regulatory certainty and serve the public interest. In particular, relaxing and clarifying the amount of DTS spillover permitted at the fringe of a full power station's authorized service contour will improve the station's ability to provide a stronger and more uniform signal to viewers located at the edges of its service area and in places where terrain hampers coverage. We believe that the Commission's current imprecise spillover restriction could inhibit DTS deployment. We expect that the approach we adopt will provide substantial flexibility and certainty to licensees, which were principal objectives of the NPRM proposal, without causing more risk of disruption to other spectrum users than necessary to achieve these goals.

13. As discussed below, the initial proposal in the NPRM failed to account for the additive effect of multiple DTS transmissions and thus underestimated the potential interference impact of the proposal. The bright-line approach we adopt remedies that technical omission and provides broadcasters ample leeway to improve coverage and locate transmitters, with less interference risk to other spectrum users. Further, we expect that the additional flexibility the new rule offers will make the use of DTS more practical as part of ATSC 3.0 deployments and thereby facilitate the realization of many anticipated consumer benefits that are possible with ATSC 3.0, such as improved audio and video quality, mobile viewing capabilities, geo-targeting of emergency alerts, and advanced data services supported by broadband connectivity. Indeed, easing the DTS spillover restriction will help both ATSC 1.0 and ATSC 3.0 broadcasters deliver improved services, including ancillary and supplementary services like Broadcast internet, to more of their viewers.

14. *Timely Action Required.* Although the Commission's current rules permit both ATSC 1.0 and ATSC 3.0 broadcasters to deploy DTS, to date few broadcast stations have opted to employ this technology, despite the potential benefits to such operations. In petitioning for a rule change, Petitioners contend that revising the permitted DTS spillover allowance at this stage of ATSC 3.0 deployment would be an effective means of encouraging DTS use because DTS can be used more efficiently and economically with the ATSC 3.0 standard than is possible with ATSC 1.0. We are persuaded that the time is right to take action, and that a revised rule will promote DTS use and foster the accrual of the long-recognized benefits of such operation. First, the DTS rules apply equally to ATSC 1.0 and ATSC 3.0 broadcasters, and so ATSC 1.0 broadcasters also will benefit from our revised approach. Our current DTS rules apply to both ATSC 1.0 and ATSC 3.0 and we see no reason not to maintain that parity. Accordingly, we apply our rule changes, and their associated benefits, to both ATSC 1.0 and ATSC 3.0. Second, the deployment of ATSC 3.0 infrastructure is well under way and immediate action will encourage ATSC 3.0 broadcasters still in their planning stages to consider using DTS as a means to serve their hard-to-reach viewers or to enhance service in their coverage areas.

15. *Update of Rule.* The rule change proposed in the NPRM would have substantially expanded the amount of DTS spillover permitted outside the boundaries of a station's authorized service area. Specifically, the proposed change would have permitted spillover to the extent necessary either to ''achieve a practical design'' or, as

articulated in the current rule, to ensure that combined coverage from all of the DTS transmitters covers all of the applicant's authorized service area. Instead of the current rule's ''minimal amount'' limitation, the extent of spillover permitted would have been subject to the limitation that (for UHF stations) the DTS transmitter's 36 dBu F(50, 10) ''interference'' contour not exceed the reference facility's 36 dBu F(50, 10) contour.

16. We find that the technical analysis Petitioners submitted in support of the initial proposal substantially underestimates the interference potential of DTS networks. In short, the interference protection under the proposal is designed around a single transmitter and does not account for the additive effects of signals from multiple DTS transmitter sites. These additive effects would create interference risk from a UHF station beyond its 36 dBu F(50, 10) contour. Given this situation, we find that the proposal cannot be adopted without changes. Specifically, Petitioners' proposal purports to be calibrated in such a way as to maintain the nominal desired-to-undesired ratio necessary to avoid interference to Class A and LPTV stations. If, however, we do not account for the additive effects of signals from multiple DTS transmitter sites, this premise is no longer valid, and the potential for interference at a given distance would be greater than what is suggested by Petitioners. Therefore, we adopt a modified approach that achieves the principal objectives articulated in the record—which include providing broadcasters with additional flexibility to serve hard-to-reach viewers and bringing the benefits of DTS and ATSC 3.0 to additional consumers—while resulting in less spillover than the initial proposal. Thus, as compared to the NPRM proposal, the rule change we adopt in this document poses less of an interference risk to licensed and unlicensed operations in areas beyond a full power station's authorized service contour.

17. We conclude that more time is not needed to assess the impact of the rules adopted in this Order. There is a robust record on the issues of whether and how increased DTS flexibility, including Petitioners' proposal, would risk disruption to other spectrum users and whether Petitioners' ''necessary to achieve a practical design'' standard is impractical. Our decision here responds to the concerns expressed in the record by adopting an alternative approach that achieves the goal advanced in the NPRM of providing flexibility in DTS deployments and is consistent with the original purposes of our DTS rules, while at the same time offering broadcasters more clarity and certainty than the ''necessary to achieve a practical design'' standard and also reducing the risk of disruption to other spectrum users.

18. Our revised rule replaces the ''minimal amount'' test in § 73.626(f)(2) with an approach that utilizes a contour based on the service field threshold. To the extent there are existing DTS networks operating with Commission approval under the ''minimal amount'' standard today that would not be entirely compliant with our modified spillover limits, such DTS networks may continue to operate pursuant to their current authorization. However, pending applications will be granted only if they comply with our revised rule.

19. Specifically, we will permit television stations additional flexibility to deploy DTS transmitters so long as the transmitters continue to be sited within the station's authorized service contour and, for UHF stations, the 41 dBu F(50,50) contour for each individual DTS transmitter is fully contained within the reference station's 41 dBu F(50,50) contour. A 41 dBu F(50,50) contour refers to a boundary at which a signal is predicted to exceed 41 dBu at 50% of locations 50% of the time. Under the current rule, DTS transmitter service contours are not permitted to exceed the 41 dBu F(50,90) contour of the reference facility except by a minimal amount to enable coverage within the authorized service area. Because, by definition, a 41 dBu F(50,90) contour requires the predicted signal strength to be exceeded 90% of the time, it encompasses an area where a stronger signal could be expected to be received, *i.e.,* an area smaller than that encompassed by a 41 dBu F(50,50) contour. Additionally, the distance from the 41 dBu F(50,90) contour to the 41 dBu F(50,50) contour is directly related to the radius of the F(50,90) contour, such that a lower power/lower antenna transmitter will have a smaller difference between the two. That effect makes it clear that a DTS node at a certain ERP and HAAT may be located at the edge of a station's authorized service area. By replacing the current 41 dBu F(50,90) limiting contour with a 41 dBu F(50,50) limiting contour, we give broadcasters a certain room for spillover from DTS transmitters and thereby enable the placement of transmitters in locations that were not practical previously, particularly locations closer to the edge of a station's authorized service area. We also provide dBu values for limiting contours for Low and High VHF stations.

20. Consistent with the Table of Distances used in our current rule, our revised Table of Distances includes separate, corresponding dBu values for Low VHF and High VHF stations, which are 28 dBu and 36 dBu, respectively. These changes will afford stations greater ability to site DTS transmitters near the edges of their authorized service contours and will provide a clear, bright-line standard for determining the permissible level of spillover beyond an authorized service contour. Siting DTS transmitters near the edges of their service areas will allow stations to reach more viewers in areas they are authorized to serve and to distribute more uniform and higher-level signals throughout those areas, the latter of which is prerequisite to the provision of certain advanced services under ATSC 3.0. With increased flexibility in the siting of DTS transmitters, we also anticipate that, in many instances, stations using DTS will be able to cover a comparable area with fewer DTS transmitters than would be necessary under the current rule, thereby making DTS deployments more practical and cost effective.

21. We also clarify that the largest station alternative, an alternative to the Table of Distances by which stations may seek to use DTS to match the geographic coverage of the largest station in their market, remains unchanged and available to stations looking to employ DTS as part of an ATSC 3.0 deployment. Our action in this document does not alter the ability of stations to make use of this alternative. We further clarify that, in determining the geographic area to be matched, DTS spillover is not counted in calculating the coverage of the largest station in a market.

22. The F(50,50) curves are one of two sets of curves within part 73 of our rules—the other being the F(50,10) curves. See 47 CFR 73.699. In turn, the F(50,90) curve values are derived from a calculation comparing the values from the F(50,50) and F(50,10) charts. Historically, the F(50,50) curves were used for predicting service area for analog television stations. Currently, the F(50,10) curves are used for predicting interfering signals, and the F(50,90) curves are used to represent digital television service areas within which most people can expect to view a signal nearly all of the time. While the F(50,50) curves are not presently used in the context of digital television service, we find that it is useful and appropriate to employ them in this instance in determining the limits on spillover by

DTS transmitters beyond a station's authorized service contour. The F(50,50) curves, in combination with the signal level thresholds in 47 CFR 73.622(e), can be considered as representative of an area in which most of the people could view a DTV signal a substantial amount of the time. Accordingly, we find that it makes sense to limit spillover service to this area, an area that likely already experiences some level of reception from the existing non-DTS facility and thus may already have viewership of the station. Regarding the protection of any improved signal and potential interference caused as result of this permitted spillover, we emphasize that neither the definition of the DTS protected area in 47 CFR 73.626(e), nor the interference analysis for DTS facilities (pursuant to 47 CFR 73.626(f)(5), 47 CFR 73.623(c)(3), and OET Bulletin No. 69) will change.

23. We therefore update the Table of Distances in 47 CFR 73.626(c) with an additional set of reference distances calculated using the 41 dBu F(50,50) contours. In addition, we delegate to the Media Bureau the authority to update the relevant FCC forms for full power stations, including Schedules A and B of FCC Form 2100, to conform with the rule changes we adopt.

24. For purposes of compliance, the Commission uses the RSS method of calculating interference from multiple DTS transmitters, rather than adding up the aggregate interference from each individual DTS transmitter, commonly referred to as a ''direct summation'' approach. This means that the combined field strength level at a given location is equal to the square root of the sum of the squared field strengths from each transmitter in the DTS network at that location. We believe RSS continues to be an appropriate method to aggregate interference because we need some method that accounts for the multiple sources of interference, including to ATSC 1.0 ''victim'' receivers, which perceive the signals as multiple sources of white noise.

25. These reference distances will establish the limit of permissible spillover, and § 73.626(f)(2) will be modified to state that the 41 dBu F(50,50) service contour for each individual DTS transmitter must be contained fully within that reference distance. In addition, for each band in the Table of Distances, we calculate a smaller interfering field strength that, when its RSS is combined with the assumed reference interfering signal, does not increase the interference potential of the DTS network as compared to the interference predicted by a single-transmitter station located at the reference point. To illustrate, in the UHF band with a reference interference of 36 dBu, an additional signal of 26.6 dBu would RSS combine to an equivalent of 36.47 dBu, which rounds back down to 36 dBu. Accordingly, the approach we adopt in this document requires that the 26.6 dBu F(50,10) contour of each DTS node for a UHF station be contained completely within the reference 36 dBu F(50,10) distance. We also provide corresponding values for Low VHF and High VHF stations. In addition, the F(50,10) node-interfering contour of any DTS transmitter, aside from one located at the reference point, may not extend beyond the F(50,10) reference-interfering contour of its reference facility, and the F(50,10) reference-interfering contour of a facility at the reference point may not extend beyond the F(50,10) reference-interfering contour of its reference facility.

26. *Benefits of Modified Approach.* The modified approach we adopt has several policy advantages over Petitioners' submission. First, our approach is based on service contours instead of interference contours, which typically are used in spacing broadcast radio stations and no longer are used in television. Therefore, we find that our service-based approach—focusing on the provision of service to those viewers a station is already authorized to serve—is more consistent with the intent underlying 47 CFR 73.626(f)(2) that spillover allowances meet the requirement in 47 CFR 73.626(f)(1) to cover the entire reference service area. Second, as mentioned previously, it achieves our goal of improving stations' ability to fill coverage gaps and to deliver a strong and uniform signal throughout their authorized service areas, thereby supporting the provision of advanced services under ATSC 3.0. Third, the risk of disruption to other existing and future spectrum users is lower than it would have been under the NPRM proposal. In particular, our approach allows nearly the same signal levels for DTS nodes located within the core of a station's authorized service area as the NPRM proposal, but it reduces the allowable signals for nodes located at the extreme edge of the service area, and hence the potential spillover resulting from such nodes. This reduced interference risk is accomplished while also offering a substantial increase in flexibility and certainty for broadcasters to implement DTS networks.

27. In addition, our approach has practical benefits. First, unlike the initial proposal, the modified approach we adopt accounts for the additive effects of multiple DTS transmitters and so produces more accurate, realistic results. Second, our new rule will produce the clarity and certainty in the engineering review process that some commenters suggest is lacking under the ''minimal amount'' standard of the current rule. It focuses on measurable, repeatable results that licensees and their consulting engineers can use to determine compliance in advance of application to the Commission. By replacing the ''minimal amount'' exception with a bright-line rule, our revised rule provides more regulatory certainty regarding the boundary of a station's spillover area. The requirement that all DTS transmissions stay within a defined contour will enable better planning not only among broadcasters implementing DTS, but also among all other licensed and unlicensed spectrum users operating in or interested in operating in spillover areas. Third, our approach does not include the nebulous standard contemplated in connection with the initial proposal, which would have allowed spillover where necessary to achieve a practical design. Our approach avoids the possibility that such a provision would require Commission staff to make burdensome and subjective assessments about the design practicability of a station's DTS network, which could be impossible without access to sensitive cost and financial information. Rather, our approach is based on an objective standard that will promote consistency and efficiency. Moreover, it is no more complex from an engineering standpoint than the initial proposal advocated by Petitioners, and thus it imposes no higher burden on licensees to perform the required analysis than initially anticipated. We direct the Media Bureau and the Office of Engineering and Technology to update TVStudy, the Commission's software program used to evaluate television applications, in order to support the engineering analysis required under our revised approach.

28. *Localism.* Furthermore, we find that the rule we adopt is consistent with the service-based approach previously adopted by the Commission, which the Commission found was adequate to preserve and protect localism. As noted above, the Commission determined that a DTS station's maximum authorized service area should be comparable to that which the DTV station could be authorized to serve with a single transmitter (the Comparable Area Approach). A principal reason the Commission chose that approach was to

preserve and protect localism, on the theory that permitting broadcasters to reach viewers beyond their authorized service areas could distract them from the primary responsibility of providing programming responsive to the needs and interests of their community of license. We find that our adopted approach also will preserve and protect localism. We believe that it strikes an appropriate balance that enables a station to improve service at the edges of its service area, without allowing it to expand coverage to the point where it might shift attention away from its community of license. Nevertheless, we can revisit this issue in the future if evidence suggests that our revised DTS rules are not protecting localism adequately.

29. In addition, we find that our modified proposal, which limits spillover, addresses any concern that the NPRM proposal would have allowed broadcasters to send their signals well beyond their licensed areas, thereby serving additional communities without competing in a Commission auction for that right. Our approach does not raise serious concerns about whether broadcasters using DTS should bid for the modest spillover spectrum our approach would permit them to occupy—without interference protection—outside their authorized service areas.

30. *Impact on Other Spectrum Users.* While we adopt the approach set forth above to provide additional flexibility and certainty to broadcasters deploying DTS networks, we anticipate that our approach has the added benefit of reducing potential disruption to other spectrum users as compared to Petitioners' proposal. In the NPRM, the Commission sought comment on the potential impact of the initial proposal on Class A stations, LPTV stations, television translators, licensed and unlicensed wireless microphone users, NPR FM stations, and white space devices. Petitioners concede that, under the initial proposal, spillover signals likely would cause disruption to other spectrum users. Although initially claiming that interference to LPTV stations would occur in only a handful of cases, Petitioners subsequently estimated that 330, or 13.8%, of the 2,392 existing LPTV stations likely would receive interference above a 2% threshold and that 5.3% to 11% of the 3,135 existing translators likely would be affected under their proposal. Other estimates, however, deviated substantially from Petitioners' results. The wide variability in these predictions reveals the difficulty in establishing a reliable basis for an interference study consistent with Petitioners' proposal. This difficulty reinforces our decision to take a more measured course of action at this time, one that will provide additional flexibility and certainty in the placement of DTS transmitters without posing the same risk of interference to LPTV stations that would have resulted under the initial proposal.

31. Moreover, although the collective impact of our revised rule on other spectrum users depends significantly on the number of stations that deploy DTS transmitters, the number, location, and relative power of those transmitters, and a host of other issues, the rule we adopt permits less spillover than the initial proposal. We are confident therefore that the interference impact will be far less than it would have been with the initial proposal, and we expect that our revised rule, given the contour it applies, is a reasonable approach that will not have a significant impact on authorized secondary licensees or unduly limit entry of new secondary licensees. Likewise, we do not anticipate a significant impact on the availability of spectrum for white space operations or other unlicensed uses, such as wireless microphones.

32. We decline to use this proceeding to take up the issue of, or to alter, the current regulatory status (*i.e.,* interference rights and obligations) of DTS stations or of any other existing or future users of broadcast spectrum. Notably, the NPRM did not propose to afford interference protection to DTS signals in the spillover area, and we see no reason to grant any. The approach we adopt in this document is consistent with the intent of our DTS rules that any spillover should be incidental to, and in service of, improving coverage within a station's authorized service area, rather than intended to extend service to communities outside that area. We therefore decline to provide interference protection to DTS signals in areas beyond the authorized service area. Thus, our interference protections, and the existing relative status of primary, secondary, and unlicensed users in the television spectrum, remain unchanged. DTS signals will continue to receive no interference protection in spillover areas; nor are stations obligated to protect secondary and unlicensed users from interference in the spillover area. Accordingly, the rule change we adopt does not modify or enlarge the area within which a DTV station is protected from interference. In addition, we do not believe that the fact that the Television White Spaces (TVWS) database already protects DTS transmissions that spill over beyond a station's authorized service area requires us to make an affirmative statement that DTS receivers are not protected from harmful interference beyond the DTV station/DTS reference point's service area defined by its 41 dBu F(50,90) contour. However, we direct the Media Bureau and the Office of Engineering and Technology to work with relevant stakeholders to ensure that DTS operations and the TVWS database, respectively, are being implemented consistent with all applicable FCC rules and decisions.

33. In addition, we decline to provide additional protection to noncommercial and educational (NCE) FM stations by requiring full service emission mask filters in the construction and operation of DTS facilities for DTV Channel 6 stations, like those required for DTV channels 14 and 17. To the extent there is a concern about the potential for interference between NCE FM stations and newly permitted spillover outside a DTV Channel 6 station's authorized service area, the rule we adopt allows for less spillover than the initial proposal, which should reduce the chances of such interference events occurring.

34. *Other Issues.* We conclude that no rule changes other than the ones specified herein are currently necessary to implement our revised approach. For example, we note that the rule we adopt does not, in and of itself, do anything to change a station's carriage rights. Following our rule change, stations will continue to enjoy all the rights they have, or could pursue, today by increasing coverage through the use of a single-transmitter facility. Because full power stations have market-wide carriage rights, their expansion of coverage within their DMAs should not raise market modification issues. Moreover, there are several, nonexclusive statutory factors the Commission considers in deciding whether to grant or deny such market modification requests, of which the scope of a station's signal is but one.

35. Beyond the primary issue of revising the spillover rule to facilitate the siting of DTS transmitters, the NPRM also sought comment on issues related to the implementation of revised DTS rules. For example, the Commission asked whether it should revise its licensing process for DTS sites shared by multiple licensees, change any of its forms or licensing systems, impose additional power restrictions on DTS transmitters, include a certification requirement on DTS applications, or adjust its technical requirements. Given that we are making only modest, targeted modifications to the DTS rules

in this document, we decline to make general changes to our implementation of the DTS rules. We further find we can evaluate better the need for any changes after we see what kinds of networks broadcasters deploy in light of our action and whether and how our processes could be improved to support that deployment. Thus, as we gain experience with this new rule, we will adjust our processes as necessary.

36. Finally, we do not require broadcasters switching to and using DTS to take any specific action with respect to their television translators. One of the benefits of DTS is the more efficient use of spectrum that can be achieved by using DTS transmitters instead of television translators because DTS transmitters broadcast on the same channel as the main transmitter. We will not require a full power broadcaster adding DTS facilities to relinquish its translator channel, if it has one, to an LPTV station affected by DTS interference and to reimburse the LPTV station for the costs of moving to the relinquished channel or another channel. We find such a requirement would be heavy-handed and unwarranted at this time, particularly given the uncertainty regarding the extent to which broadcasters will make use of DTS as a replacement for television translators.

37. *Use of DTS by Low Power Stations:* In addition to affording full power television stations greater flexibility and certainty in siting DTS transmitters, we also ease the way for Class A, LPTV, and television translator stations (low power stations) to pursue DTS operations. We eliminate the requirement that these stations must apply for DTS facilities on an experimental basis prior to operation. Rather, in order to allow low power stations to pursue DTS operations in a manner similar to full power stations, we adopt a rule with a contour-based limit defining acceptable DTS spillover, taking into account the technical differences between full power and low power services. Specifically, as discussed below, we will permit low power stations to employ DTS facilities so long as such facilities meet the following conditions: First, DTS transmitters must be located within the authorized F(50,90) contour for the station, and second, the F(50,50) contour of each DTS must be contained within the station's F(50,50) contour based on currently authorized technical parameters (as opposed to an authorized service area drawn according to a Table of Distances). In so doing, we give low power stations the same flexibility of a streamlined licensing process as we give full power stations.

38. We note that the rules already allow licensees of multiple digital Class A, LPTV, and/or television translator stations to operate on a non-experimental basis through interconnected single frequency DTS networks, *i.e.,* to operate a network of stations co-channel using their multiple licenses. In 2008, the Commission approved the use of DTS technologies on an experimental basis by a single low power station to provide service within its authorized service area, finding that there was not an adequate record at that time to resolve the technical issues for LPTV stations as they differ from full power television stations. The Commission further concluded at that time that there was insufficient interest in DTS among individual low power stations; that LPTV stations serve smaller geographic areas than full power stations, making the likelihood of needing DTS to provide service relatively low; and that Class A and LPTV stations, which were not subject to the 2009 DTV transition, did not have the same urgent need for DTS to provide post-transition service. The Commission indicated that it would revisit its decision if circumstances changed.

39. On balance and based on the record before us, we find that changes in the marketplace following the DTV transition, including the evolution of the ATSC 3.0 transmission standard, have made the use of DTS more attractive for low power stations today, despite their smaller service areas. There is now sufficient indication of a demonstrated interest in DTS among Class A and LPTV stations and evidence that the ability to provide DTS service would improve their service. We find that deployment of DTS by low power stations offers potential benefits to consumers, including by facilitating the deployment of ATSC 3.0 services. In light of these changed circumstances, we eliminate the requirement that low power stations must apply for DTS facilities on an experimental basis and allow these stations to employ DTS facilities provided that such facilities comply with the contour-based limit defining acceptable DTS spillover we adopt herein.

40. In crafting an approach for low power stations, we note that there are some important differences between full power and low power stations that we must take into account. Most notably, the LPTV services do not rely currently on the Table of Distances, either with respect to service area distance or interference contour distance. In part, this is because low power stations do not have antenna height limitations, making it difficult to readily establish a Table of Distances for them. In addition, the concept of the largest station in the market, which affords full power stations an additional metric by which they can establish authorized service, does not apply to low power stations. Accordingly, the Table of Distances and the largest station in the market constructs discussed above for full power DTS operations do not apply to these stations. Rather, we require that the DTS facilities of low power stations be contained within the station's authorized F(50,90) and F(50,50) contours as follows. First, DTS transmitters must be located within the authorized F(50,90) contour for the station. Second, the F(50,50) contour of each DTS must be contained within the station's F(50,50) contour. As discussed above, the F(50,50) curve can be considered as representative of an area in which most of the people could view a DTV signal a substantial amount of the time. Accordingly, we find that it makes sense to limit spillover service to this area, an area that likely already experiences some level of reception from the existing non-DTS facility and thus may already have viewership of the station. In this way, we define the permissible spillover for the low power service and afford LPTV stations greater flexibility to more easily deploy DTS facilities.

41. We note that shifting from authorizing LPTV DTS facilities on a case-by-case, experimental basis to licensing under a codified rule applicable to all low power stations will require a modification of a number of processes, including FCC forms, the Licensing and Management System (LMS), and engineering review applicable to low power stations. Accordingly, we direct the Media Bureau and the Office of Engineering and Technology to take the practical steps necessary to implement the rule change we adopt in this document, including the modification of applicable forms (including Schedules C, D, E, and F of FCC Form 2100) and the revision of TVStudy. In the interim, we will continue to process DTS requests for LPTV and Class A stations on a case-by-case basis, filed as a request for Special Temporary Authority (STA), using the guidelines we establish in this document. We decline to consider an approval process for DTS transmitters for LPTVs that would require either no application or a blanket application for lower power LPTV DTS transmitters.

42. *Final Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980, as amended

(RFA), *see* 5 U.S.C. 604, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to this Order.

43. *Paperwork Reduction Analysis.* This document contains modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13. It will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other Federal agencies will be invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees.

44. In this present document, we have assessed the effects of our rule changes easing limitations on the placement of DTS transmitters by full power and low power television stations and find that these changes do not impose new burdens on businesses with fewer than 25 employees.

45. *Congressional Review Act.* The Commission will submit this draft Report & Order to the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, for concurrence that this rule is ''non-major'' under the Congressional Review Act, 5 U.S.C. 804(2). The Commission will send a copy of the Order to Congress and the Government Accountability Office pursuant to 5 U.S.C. 801(a)(1)(A).

46. *Additional Information.* For additional information on this proceeding, contact Ty Bream, Media Bureau, Industry Analysis Division, at *Ty.Bream@fcc.gov* or (202) 418–0644.

47. *Final Regulatory Flexibility Analysis:* As required by the RFA, as amended, *see* 5 U.S.C. 603, an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the NPRM in this proceeding. The Commission sought written public comment on the proposals in the NPRM, including comment on the IRFA. The Commission received no comments on the IRFA. This present FRFA conforms to the RFA. *See* 5 U.S.C. 604.

48. *Need for, and Objectives of, the Report and Order.* This Order adopts a technical modification to the Commission's rules governing the use of a distributed transmission system (DTS), or single frequency network (SFN), by a broadcast television station. Specifically, the Order replaces the current restriction that prohibits DTS signals from spilling over beyond a station's authorized service area by more than a ''minimal amount,'' *see* 47 CFR 73.626(f)(2), with a clearer, service-based approach that allows broadcasters greater flexibility in locating DTS transmitters, so long as, for UHF stations, the 41 dBu F(50,50) contour for each DTS transmitter does not exceed the reference station's 41 dBu F(50,50) contour. A 41 dBu F(50,50) contour refers to a boundary at which a signal is predicted to exceed 41 dBu at 50% of locations 50% of the time. We provide corresponding dBu values for F(50,50) limiting contours for Low and High VHF stations in the revised Table of Distances. Those values are 28 dBu for Low VHF and 36 dBu for High VHF. Consistent with the current approach, DTS transmissions will not be entitled to interference protection beyond a station's authorized service area. The decision to replace the current, subjective spillover standard with a bright-line rule that both expands and clarifies the permissible range of spillover will not only promote DTS use by facilitating more efficient and more economical siting of DTS transmitters, but it also will establish a clearly defined limit that will promote regulatory certainty. Consistent with the goal of addressing technical issues that may impede the adoption of DTS technology, the Order concludes that modestly easing limitations on DTS transmitters and providing additional clarity in our rules can help unlock the potential of DTS at this crucial time when many stations are considering migrating to the next generation broadcast television standard (ATSC 3.0). As the record in this proceeding demonstrates, affording broadcasters greater flexibility in the placement of DTS transmitters can allow them to enhance signal capabilities and fill coverage gaps, improve indoor and mobile reception, and increase spectrum efficiency by reducing the need for television translator stations operating on separate channels.

49. *Summary of Significant Issues Raised by Public Comments in Response to the IRFA.* There were no comments to the IRFA filed.

50. *Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration.* Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments. 5 U.S.C. 604(a)(3). The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

51. *Description and Estimate of the Number of Small Entities to Which the Rules Apply.* The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. 5 U.S.C. 603(b)(3). The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' 5 U.S.C. 601(6). In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. 5 U.S.C. 601(3) (incorporating by reference the definition of ''small business concern'' in 15 U.S.C. 632). Pursuant to 5 U.S.C. 601(3), the statutory definition of a small business applies ''unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the **Federal Register**.'' 5 U.S.C. 601(3). A small business concern is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. 5 U.S.C. 632. Application of the statutory criteria of dominance in its field of operation and independence are sometimes difficult to apply in the context of broadcast television. Accordingly, the Commission's statistical account of television stations may be over-inclusive.

52. *Television Broadcasting.* The rule changes adopted would apply to television broadcast licensees and potential licensees of television stations using DTS. This Economic Census category ''comprises establishments primarily engaged in broadcasting images together with sound.'' 13 CFR 121.201 (2012), NAICS Code 515120. These establishments operate television broadcast studios and facilities for the programming and transmission of programs to the public. These establishments also produce or transmit visual programming to affiliated broadcast television stations, which in turn broadcast the programs to the public on a predetermined schedule. Programming may originate in their own studio, from an affiliated network, or

from external sources. The SBA has created the following small business size standard for such businesses: Those having $41.5 million or less in annual receipts. The 2012 Economic Census reports that 751 firms in this category operated in that year. Of this number, 656 had annual receipts of less than $25 million. *See* U.S. Census Bureau, Table No. EC1251SSSZ4, *Information: Subject Series—Establishment and Firm Size: Receipts Size of Firms for the United States: 2012* (Jan. 8, 2016), *https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.* Based on this data we therefore estimate that the majority of commercial television broadcasters are small entities under the applicable SBA size standard.

53. Additionally, the Commission has estimated the number of licensed commercial television stations to be 1,368. *See* Press Release, FCC, Broadcast Station Totals as of September 30, 2020 (MB Oct. 2, 2020) (Broadcast Station Totals), *https://docs.fcc.gov/public/attachments/DOC-367270A1.pdf.* Of this total, 1,174 stations (or 85.8%) had revenues of $41.5 million or less, according to Commission staff review of the BIA Kelsey Inc. Media Access Pro Television Database (BIA) based on 2019 revenue data, and therefore these licensees qualify as small entities under the SBA definition. In addition, the Commission estimates the number of licensed noncommercial educational (NCE) television stations to be 390. The Commission does not compile and does not have access to information on the revenue of NCE stations that would permit it to determine how many such stations would qualify as small entities.

54. We note, however, that in assessing whether a business concern qualifies as ''small'' under the above definition, business (control) affiliations must be included. ''[Business concerns] are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has the power to control both.'' 13 CFR 21.103(a)(1). Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. In addition, another element of the definition of ''small business'' requires that an entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television broadcast station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply does not exclude any television station from the definition of a small business on this basis and is therefore possibly over-inclusive.

55. Class A, LPTV, and TV translator stations. The rule changes adopted would apply to and/or impact licensees and potential licensees of Class A stations, LPTV stations, and TV translator stations, as well as to potential licensees in these television services. The same SBA definition that applies to television broadcast licensees would apply to these stations. As noted above, the SBA defines such businesses as a small business if they have $41.5 million or less in annual receipts. 13 CFR 121.201 (2012), NAICS Code 515120.

56. There are 386 Class A stations. Given the nature of these services, the Commission presumes that all of these stations qualify as small entities under the applicable SBA size standard. In addition, there are 1,860 LPTV stations and 3,543 TV translator stations. Given the nature of these services as secondary and in some cases purely a ''fill-in'' service, we will presume that all of these entities qualify as small entities under the above SBA small business size standard. We note, however, that under the SBA's definition, revenue of affiliates that are not LPTV stations should be aggregated with the LPTV station revenues in determining whether a concern is small. Our estimate may thus overstate the number of small entities since the revenue figure on which it is based does not include or aggregate revenues from non-LPTV affiliated companies. We do not have data on revenues of TV translator or TV booster stations, but virtually all of these entities are also likely to have revenues of less than $41.5 million and thus may be categorized as small, except to the extent that revenues of affiliated non-translator or booster entities should be considered.

57. *Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements.* In this section, we identify the reporting, recordkeeping, and other compliance requirements imposed by the Order and consider whether small entities are affected disproportionately by any such requirements. As discussed above, this Order relaxes the current restriction that prohibits DTS signals from spilling over beyond a station's authorized service area by more than a ''minimal amount.'' Specifically, the Order adopts a service-based approach that allows broadcasters to extend their DTS transmissions out to their 41 dBu F(50,50) contour. This rule change replaces the imprecise ''minimal amount'' standard with a clearly defined limit that will promote regulatory certainty. In so doing, we note that the use of DTS is at the discretion of the broadcast licensee. Thus, the Order does not impose any new mandatory reporting, recordkeeping, or compliance requirements for small entities, unless such entities, *i.e.,* licensees, choose to use DTS. The Order therefore will not impose additional obligations or expenditure of resources on small businesses. However, we note that the adoption of the proposed rules may require modification of current requirements and processes for entities that choose to use DTS, such as modification of FCC forms, including, but not limited to, Schedules A and B of FCC Form 2100. The Order delegates to the Media Bureau the authority to update FCC forms to conform with the adopted rule changes.

58. *Steps Taken to Minimize Significant Economic Impact on Small Entities and Significant Alternatives Considered.* The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities. 5 U.S.C. 603(c)(1)–(c)(4).

59. The premise of the rules is to facilitate DTS deployment by TV broadcasters, large and small alike, and thereby benefit their viewers. Among other benefits, easing limitations on DTS transmitters will help unlock the potential of DTS to extend service throughout a station's coverage area, to improve indoor and mobile reception, and to increase spectrum efficiency by reducing the need for television translators using separate channels.

60. In this proceeding, the Commission has three chief alternatives available for the DTS rule for full power stations—retaining the rule in its existing form, modifying the rule as proposed in the Petition (proposed approach), or modifying the rule in a manner that avoids the technical omission in the Petition's proposed rule (bright-line rule). The Commission finds that the public interest and technical and marketplace realities support

relaxing the DTS rule by enacting the bright-line rule. A further internal analysis of the NPRM proposal revealed that it does not account for the additive effect of DTS transmissions and thus underestimates its potential interference impact. The bright-line approach set forth below remedies that technical omission and provides broadcasters ample leeway to improve coverage, with less interference risk to other spectrum users. Further, the additional DTS flexibility it offers will facilitate the deployment of ATSC 3.0 and its many anticipated consumer benefits, such as enhanced over-the-air programming, mobile viewing capabilities, geo-targeting of emergency alerts, and advanced data services supported by broadband connectivity.

61. For low power stations, the Commission has two chief alternatives—retaining the requirement that these stations must apply for DTS facilities on an experimental basis prior to operation or eliminating the requirement. In order to allow low power stations to pursue DTS operations in a manner similar to full power stations, the Order eliminates the requirement and adopts a rule with a contour-based limit defining acceptable DTS spillover, taking into account the technical differences between full power and low power services. Specifically, the Order will permit low power stations to employ DTS facilities so long as such facilities meet the following conditions: First, DTS transmitters and their resulting contours must be located within the authorized F(50,90) contour for the station, and second, the F(50,50) contour of each DTS must be contained within the F(50,50) contour for the station's authorized service area (as opposed to an authorized service area drawn according to a Table of Distances).

62. *Report to Congress.* The Commission will send a copy of this Order, including this FRFA, in a report to Congress and the Government Accountability Office pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996. *See* 5 U.S.C. 801(a)(1)(A). In addition, the Commission will send a copy of the Order, including the FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

63. *Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rule.* None.

64. *Ordering Clauses:* Accordingly, *it is ordered* that, pursuant to the authority found in sections 1, 4, 7, 301, 302, 303, 307, 308, 309, 316, 319, 324, and 336 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154, 157, 301, 302, 303, 307, 308, 309, 316, 319, 324 and 336, this Order *is adopted.*

65. *It is further ordered* that, pursuant to the authority found in sections 1, 4, 7, 301, 302, 303, 307, 308, 309, 316, 319, 324, and 336 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154, 157, 301, 302, 303, 307, 308, 309, 316, 319, 324 and 336, the Commission's rules *are amended,* effective May 24, 2021, except for those rules and requirements involving Paperwork Reduction Act burdens, which shall become effective on the effective date announced in the **Federal Register** document announcing OMB approval.

66. *It is further ordered* that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, *shall send* a copy of this Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

67. *It is further ordered* that, pursuant to Section 801(a)(1)(A) of the Congressional Review Act, 5 U.S.C. 801(a)(1)(A), the Commission *shall send* a copy of the Order to Congress and to the Government Accountability Office.

68. *It is further ordered* that, should no petitions for reconsideration or petitions for judicial review be timely filed, MB Docket No. 20–74 *shall be terminated* and its docket closed.

List of Subjects in 47 CFR Parts 73 and 74

Radio, Television.

Federal Communications Commission.

Marlene Dortch,

Secretary.

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 73 and 74 as follows:

PART 73—RADIO BROADCAST SERVICES

■ 1. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 155, 301, 303, 307, 309, 310, 334, 336, 339.

■ 2. Effective May 24, 2021, amend § 73.626 by revising paragraphs (c) introductory text and (f)(2) to read as follows:

§ 73.626 DTV Distributed Transmission Systems.

* * * * *

(c) *Table of Distances.* The following Table of Distances describes (by channel and zone) a station's maximum service area that can be obtained in applying for a DTS authorization and the maximum interference area that can be created by its facilities.

TABLE 1 TO PARAGRAPH (c)

Channel	Zone	Service field strength (dBu)	Distance from reference point		Reference interference field strength (dBu)	Distance from reference point F(50,10) (km)	Node interfering field strength F(50,10) (dBu)
			F(50,90) (km)	F(50,50) (km)			
2–6	1	28	108	132	28	183	18.8
2–6	2 and 3	28	128	158	28	209	18.8
7–13	1	36	101	121	33	182	23.8
7–13	2 and 3	36	123	149	33	208	23.8
14–36	1, 2, and 3	41	103	142	36	246	26.8

* * * * *

(f) * * *

(2) Each DTS transmitter's coverage is contained within either the DTV station's Table of Distances area (pursuant to paragraph (c) of this section) or its authorized service area, except where such extension of coverage beyond the station's authorized service area meets the following criteria:

(i) In no event shall the F(50,50) service contour of any DTS transmitter extend beyond that of its reference facility; and

(ii) In no event shall the F(50,10) node-interfering contour of any DTS transmitter, aside from one located at the reference point, extend beyond the

F(50,10) reference-interfering contour of its reference facility; and

(iii) In no event shall the F(50,10) reference-interfering contour of a facility at the reference point extend beyond the F(50,10) reference-interfering contour of its reference facility;

* * * * *

■ 3. Delayed indefinitely, amend § 73.6010 by adding paragraph (e) to read as follows:

§ 73.6010 Class A TV station protected contour.

* * * * *

(e) A digital Class A DTS station will be protected from interference within its Class A DTS protected area as defined by § 73.6023(d).

■ 4. Delayed indefinitely, revise § 73.6023 to read as follows:

§ 73.6023 Distributed transmission systems.

(a) Station licensees may operate a commonly owned group of digital Class A stations with contiguous predicted DTV noise-limited contours (pursuant to § 73.622(e)) on a common television channel in a distributed transmission system.

(b) A Class A DTV station may be authorized to operate multiple synchronized transmitters on its assigned channel to provide service consistent with the requirements of this section. Such operation is called a distributed transmission system (DTS). Except as expressly provided in this section, Class A stations operating a DTS facility must comply with all rules in this part applicable to Digital Class A single-transmitter stations.

(c) For purposes of compliance with this section, a digital Class A station's ''authorized facility'' is the facility authorized for the station in a license or construction permit for non-DTS, single-transmitter-location operation. A digital Class A station's ''authorized service area'' is defined as the area within its protected contour (described by § 73.6010(c)) as determined using the authorized facility.

(d) The protected area for each DTS transmitter is determined based on the F(50,90) field strength given in § 73.6010(c), calculated in accordance with § 73.625(b). The combined protected area of a Class A DTS station is the logical union of the protected areas of all DTS transmitters, that falls within the station's authorized service area as defined in paragraph (c) of this section.

(e) The DTS limiting area for each DTS transmitter is determined using the field strength from § 73.6010(c) and the F(50,50) curves.

(f) An application proposing use of DTS will not be accepted for filing unless it meets all of the following conditions:

(1) The combined protected area covers all of the applicant's authorized service area;

(2) Each DTS transmitter's Class A DTS limiting contour falls within the authorized facility's Class A DTS limiting contour;

(3) Each DTS transmitter's protected area is contiguous with at least one other DTS transmitter's protected area;

(4) The ''combined field strength'' of all DTS transmitters in a network does not cause interference to another station in excess of the criteria specified in §§ 73.6017, 73.6018, 73.6019, and 73.6020. The combined field strength at a given location is determined by a ''root-sum-square'' calculation, in which the combined field strength is equal to the square root of the sum of the squared field strengths from each transmitter in the DTS network at that location; and

(5) Each DTS transmitter must be located within the station's authorized service area.

(g) All transmitters operating under a single Class A DTS license must follow the same digital broadcast television transmission standard.

PART 74—EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

■ 5. The authority citation for part 74 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, 307, 309, 310, 336 and 554.

■ 6. Delayed indefinitely, add § 74.720 to subpart G to read as follows:

§ 74.720 Digital low power TV distributed transmission systems.

(a) A digital low power TV or TV translator (LPTV) station may be authorized to operate multiple synchronized transmitters on its assigned channel to provide service consistent with the requirements of this section. Such operation is called a distributed transmission system (DTS). Except as expressly provided in this section, LPTV stations operating a DTS facility must comply with all rules in this part applicable to LPTV single-transmitter stations.

(b) For purposes of compliance with this section, a digital LPTV station's ''authorized facility'' is the facility authorized for the station in a license or construction permit for non-DTS, single-transmitter-location operation. A digital LPTV station's ''authorized service area'' is defined as the area within its protected contour (described by § 74.792) as determined using the authorized facility.

(c) The protected area for each DTS transmitter is determined based on the F(50,90) field strength given in § 74.792), calculated in accordance with § 73.625(b) of this chapter. The combined protected area of an LPTV DTS station is the logical union of the protected areas of all DTS transmitters, that falls within the station's authorized service area as defined in paragraph (b) of this section.

(d) The DTS limiting area for each DTS transmitter is determined using the field strength from § 74.792 and the F(50,50) curves.

(e) An application proposing use of DTS will not be accepted for filing unless it meets all of the following conditions:

(1) The combined protected area covers all of the applicant's authorized service area;

(2) Each DTS transmitter's LPTV DTS limiting contour falls within the authorized facility's LPTV DTS limiting contour;

(3) Each DTS transmitter's protected area is contiguous with at least one other DTS transmitter's protected area;

(4) The ''combined field strength'' of all DTS transmitters in a network does not cause interference to another station in excess of the criteria specified in § 74.793. The combined field strength at a given location is determined by a ''root-sum-square'' calculation, in which the combined field strength is equal to the square root of the sum of the squared field strengths from each transmitter in the DTS network at that location; and

(5) Each DTS transmitter must be located within the station's authorized service area.

(f) All transmitters operating under a single LPTV DTS license must follow the same digital broadcast television transmission standard.

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