

- 13. Amend § 600.210–12 by revising paragraphs (a)(2)(i)(B), ((ii)(B)), (b)(2)(i)(B), and (ii)(B) to read as follows:

§ 600.210–12 Calculation of fuel economy and CO₂ emission values for labeling.

(a) * * *

(2) * * *

(i) * * * (B) For each model type, determine the derived five-cycle city CO₂ emissions using the following equation and coefficients determined by the Administrator:

$$\text{Derived 5 – cycle City CO}_2 = \{\text{City Intercept}\} \times A + \{\text{City Slope}\} \times \text{MT FTP CO}_2$$

Where:

A = 8,887 for gasoline-fueled vehicles, 10,180 for diesel-fueled vehicles, or an appropriate value specified by the Administrator for other fuels.

City Intercept = Intercept determined by the Administrator based on historic vehicle-specific 5-cycle city fuel economy data.

City Slope = Slope determined by the Administrator based on historic vehicle-specific 5-cycle city fuel economy data.

MT FTP CO₂ = the model type FTP-based city CO₂ emissions determined under § 600.208–12(b), rounded to the nearest 0.1 grams per mile. Note that for fuel economy labels generated from E10 test data, the MT FTP CO₂ input value is required to be “A166 CO₂” values for the model type, where “A166 CO₂” emissions are equal to the measured tailpipe CO₂ emissions for the test cycle multiplied by a factor of 1.0166, rounded to the nearest 0.1 grams per mile, as obtained in § 600.208–12(b)(3)(iii).

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(ii) * * *

(B) For each model type, determine the derived five-cycle highway CO₂ emissions using the equation below and coefficients determined by the Administrator:

$$\text{Derived 5-cycle Highway CO}_2 = \{\text{Highway Intercept}\} \times A + \{\text{Highway Slope}\} \times \text{MT HFET CO}_2$$

Where:

A = 8,887 for gasoline-fueled vehicles, 10,180 for diesel-fueled vehicles, or an appropriate value specified by the Administrator for other fuels.

Highway Intercept = Intercept determined by the Administrator based on historic vehicle-specific 5-cycle highway fuel economy data.

Highway Slope = Slope determined by the Administrator based on historic vehicle-specific 5-cycle highway fuel economy data.

MT HFET CO₂ = the model type highway CO₂ emissions determined under § 600.208–12(b), rounded to the nearest 0.1 grams per mile. Note that for fuel economy labels generated from E10 test data, the MT HFET CO₂ input value is required to be “A166 CO₂” values for the model type, where “A166 CO₂”

emissions are equal to the measured tailpipe CO₂ emissions for the test cycle multiplied by a factor of 1.0166, rounded to the nearest 0.1 grams per mile, as obtained in § 600.208–12(b)(3)(iii) and § 600.208–12(b)(4).

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(b) * * *

(2) * * *

(i) * * * (B) Determine the derived five-cycle city CO₂ emissions of the configuration using the equation below and coefficients determined by the Administrator:

$$\text{Derived 5-cycle City CO}_2 = \{\text{City Intercept}\} + \{\text{City Slope}\} \times \text{Config FTP CO}_2$$

Where:

City Intercept = Intercept determined by the Administrator based on historic vehicle-specific 5-cycle city fuel economy data.

City Slope = Slope determined by the Administrator based on historic vehicle-specific 5-cycle city fuel economy data.

Config FTP CO₂ = the configuration FTP-based city CO₂ emissions determined under § 600.206, rounded to the nearest 0.1 grams per mile. Note that for specific labels generated from E10 test data, the Config FTP CO₂ input value is required to be “A166 CO₂” values for the configuration, where “A166 CO₂” emissions are equal to the measured tailpipe CO₂ emissions for the test cycle multiplied by a factor of 1.0166, rounded to the nearest 0.1 grams per mile, as obtained in § 600.206–12(a)(2)(iii).

* * * * *

(ii) * * * (B) Determine the derived five-cycle highway CO₂ emissions of the configuration using the equation below and coefficients determined by the Administrator:

$$\text{Derived 5-cycle city Highway CO}_2 = \{\text{Highway Intercept}\} + \{\text{Highway Slope}\} \times \text{Config HFET CO}_2$$

Where:

Highway Intercept = Intercept determined by the Administrator based on historic vehicle-specific 5-cycle highway fuel economy data.

Highway Slope = Slope determined by the Administrator based on historic vehicle-specific 5-cycle highway fuel economy data.

Config HFET CO₂ = the configuration highway fuel economy determined under § 600.206, rounded to the nearest tenth. Note that for specific labels generated from E10 test data, the Config HFET CO₂ input value is required to be “A166 CO₂” values for the configuration, where “A166 CO₂” emissions are equal to the measured tailpipe CO₂ emissions for the test cycle multiplied by a factor of 1.0166, rounded to the nearest 0.1 grams per mile, as obtained in § 600.206–12(a)(2)(iii).

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MB Docket No. 20–74, GN Docket No. 16–142; FCC 20–43; FRS 16707]

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

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Commission seeks comment on whether to modify the Commission’s rules governing the use of distributed transmission system (DTS) technologies by broadcast television stations. Specifically, the Commission seek comment on amending section 73.626 of its rules to permit, within certain limits, DTS signals to spill over beyond a station’s authorized service area by more than the “minimal amount” currently allowed; how DTS signals extending beyond their current service areas should be treated for interference purposes if such spillover is allowed; potential impacts to other spectrum users, such as TV translators and LPTV stations, including whether there are alternatives to the proposed rule changes that could accomplish the intended objectives; whether to modify the DTS rules as they relate to Class A and LPTV licensees; and whether and to what extent the proposed changes are also appropriate for stations broadcasting in ATSC 1.0.

DATES: *Comments Due:* June 12, 2020. *Replies Due:* July 13, 2020.

ADDRESSES: You may submit comments, identified by MB Docket No. 20–74 and GN Docket No. 16–142, by any of the following methods:

- Federal Communications Commission’s website: <http://apps.fcc.gov/ecfs/>. Follow the instructions for submitting comments.

- People with Disabilities: Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by email: FCC504@fcc.gov or phone: 202–418–0530 or TTY: 202–418–0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

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 Notice of Proposed Rulemaking (NPRM) in MB Docket No. 20-74 and GN Docket No. 16-142, FCC 20-43, adopted on March 31, 2020 and released on April 1, 2020. The full text of this document is available for public inspection online at <https://docs.fcc.gov/public/attachments/FCC-20-43A1.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. In this Notice of Proposed Rulemaking (NPRM), we seek comment on changes 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 the joint petition for rulemaking (Petition) submitted by America's Public Television Stations (APTS) and the National Association of Broadcasters (NAB) (collectively, Petitioners), by this NPRM we seek input regarding technical changes to the DTS rules that could enable the broadcast television industry to expand DTS use as it deploys the next generation broadcast television standard (ATSC 3.0). The Commission's current rules regarding DTS use were first adopted more than a decade ago in advance of the digital television (DTV) transition, which was completed for full-power television stations in 2009. Petitioners contend that, while certain characteristics associated with ATSC 3.0 make the use of DTS more efficient and more economical in conjunction with that standard, the Commission's current rules inhibit expanded DTS deployments, particularly near the edge of a station's coverage area.

Accordingly, Petitioners ask that we amend our rules to permit, within certain limits, DTS signals to spill over beyond a station's authorized service area by more than the "minimal amount" currently allowed by our rules. We seek comment below on whether and, if so, how to modify our DTS rules

to ensure that broadcasters planning to deploy ATSC 3.0 are able to use DTS effectively while at the same time minimizing potential impacts on other spectrum users. To that end, we seek comment on amending our rules consistent with the changes proposed in the Petition. As Petitioners note, the Commission has recognized numerous potential benefits of DTS technology, including the ability to serve hard-to-reach viewers, improved indoor and mobile reception, and the more efficient use of TV spectrum.

2. With this NPRM, we seek to facilitate the use of new and innovative technologies by broadcasters. In particular, as the Commission has recognized, the voluntary transition to ATSC 3.0 could enable broadcasters to offer enhanced over-the-air programming, wireless broadcasts and emergency alerts, and advanced data services supported by broadband connectivity. ATSC 3.0 proponents have claimed that this transmission standard has the potential to revolutionize the viewing experience for consumers by providing them more immersive content through new, IP-based consumer applications. DTS technology used in conjunction with ATSC 3.0 technology thereby has the potential to promote enhanced service offerings to broadcast television viewers, public safety organizations, and consumers of next generation services. Accordingly, with this proceeding, we seek to address technical issues that may impede the adoption of DTS technology.

Background.

3. 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 can also 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 distributed transmission system employs two or more transmission sites located around a station's service area, each using the same RF channel and synchronized to manage self-interference. DTS therefore offers an alternative to traditional full-power television transmission and the use of secondary translators on additional frequencies.

4. More than a decade ago, the Commission first recognized the potential uses and benefits of DTS technologies when the transition from analog to digital broadcasting 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 November 2008, the Commission adopted a Report and Order establishing rules for the use of DTS in the DTV service. In the *2008 DTS Order*, the Commission noted that DTS could allow stations to reach more viewers in their coverage areas, distributes more uniform and higher-level signals near the edges of stations' coverage areas, improves indoor reception and reception on mobile devices, offers an alternative to stations limited by tower height and placement restrictions, increases spectrum efficiency by allowing networks to use the same channel for all operations, enhances the ability of broadcasters to compete with multichannel video programming distributors, and allows broadcasters to continue to reach viewers that lost service as a result of the digital transition.

5. Specifically, in the *2008 DTS Order*, the Commission adopted rules permitting a full-power DTV station to transmit using multiple lower power transmitter sites operating on the same frequency. 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." This was referred to as the "Comparable Area Approach." To define the boundaries of this comparable service area (*i.e.*, a DTS station's maximum service area), 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. 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 its authorized service area. In addition, each DTS transmitter's coverage (*i.e.*, its noise-limited service contour (NLSC)) must be contained within either the station's Table of Distances area or its authorized service area, except where such 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. The Commission affords primary regulatory status to DTS transmitters within the areas they are authorized to serve. Finally, the rules allow licensees of multiple digital Class A, low power television (LPTV), and/or television translator stations to operate through interconnected single frequency DTS networks, *i.e.*, to operate a network of stations co-channel using their multiple licenses.

6. In November 2017, the Commission adopted a Report and Order authorizing broadcast television stations to use the ATSC 3.0 transmission standard on a voluntary, market-driven basis while they continue to deliver current-generation DTV broadcast service to their viewers using the ATSC 1.0 standard (*Next Gen TV Order*). In the *Next Gen TV Order*, 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.

7. On October 3, 2019, Petitioners filed a joint petition for rulemaking seeking to amend section 73.626 of the Commission's rules relating to DTS. Petitioners assert that broadcasters planning ATSC 3.0 deployments are interested in exploring the advanced capabilities of ATSC 3.0 to facilitate the use of DTS. The Petition asks the Commission to "amend its methodology for determining DTS service limits while preserving the current interference requirements." Petitioners contend that the DTS rules, which currently allow DTS signals to spill over by only a "minimal amount" beyond a station's authorized service area, "limit broadcasters' ability to deploy additional [DTS] transmitters near the edge of a station's coverage area, hampering the deployment of [DTS] networks." Petitioners do not seek to place DTS transmitters beyond a station's authorized service area. Rather, Petitioners ask the Commission to change the DTS rules to permit stations more flexibility in the placement of their DTS transmitters, particularly near the edge of a station's coverage area.

Specifically, Petitioners propose that the placement of DTS transmitters would be limited by what Petitioners refer to as the DTS transmitter's "interference contour," which could not exceed that of the reference facility. Petitioners assert that their requested rule changes would allow them to "unlock" the "numerous" benefits of DTS operations beyond what the current DTS rules enable, such as further improving service throughout a station's coverage area, improving mobile reception, and allowing more efficient use of broadcast spectrum by reducing the need for television translators using separate channels.

8. On October 11, 2019, the Media Bureau issued a public notice seeking comment on the Petition and setting comment and reply comment deadlines of November 12, 2019 and November 27, 2019, respectively (Public Notice). Thirteen parties filed comments in response to the Public Notice. Seven parties filed reply comments, including Petitioners.

9. The majority of commenters support the Petition, although some with reservations. For example, ARK Multicasting (ARK) and the LPTV Spectrum Rights Coalition (LPTV Coalition) state that they support the Petition provided that LPTV stations and TV translators are protected from displacement. National Public Radio (NPR) urges the Commission to address the risk of interference posed by DTV Channel 6 (DTV6) stations in spectrum adjacent to reserved band noncommercial educational (NCE) FM stations. Two commenters—The National Translator Association (NTA) and Microsoft Corporation (Microsoft), the latter a supporter of white space device operations—oppose the Petition. NTA states that the Petition is "premature" and that the issues put forth by the Petition should be considered in three to five years "once the penetration of home reception and broadcast station transmissions are both far enough along for the affected [parties] to understand many of the strengths and weaknesses in this ambitious upgrade and replacement program." Microsoft asserts that the "rule changes proposed in the [Petition] . . . appear to go well beyond what is needed to fill coverage gaps within broadcasters' service areas" and that Petitioners have not made a persuasive showing that the flexibility in the existing rules as to *de minimis* spillover is insufficient. Microsoft further states that any rule changes should be closely tailored to the need to fill coverage gaps, and not extend service beyond a station's service contour.

10. In their reply, Petitioners state that their proposals would not expand the area within which a DTS transmitter can be located, would not enlarge the area within which a DTV station is protected from interference, and would not permit a DTV station to increase its antenna height or effective radiated power beyond what is currently allowed. Petitioners also assert that their proposals are tailored to minimize impact on LPTV and television translator stations and that adopting their proposed rule changes would "provide the enhanced spectrum efficiency Microsoft seeks." Together with their reply, Petitioners filed a brief technical study analyzing the impact of their proposed rule changes on LPTV stations (Petitioners' Study). While Petitioners do not seek interference protection for any spillover stemming from their proposed rule changes, they acknowledge, based on the submitted Petitioners' Study, that impacts to LPTV or translator stations from such spillover are "unavoidable." Nonetheless, Petitioners contend that the Commission should not consider elevating the rights of secondary services as part of this proceeding. Although Petitioners' Study does not address white space devices, Petitioners respond to Microsoft's concerns with assurances that they do not propose that DTS transmitters could be located outside a station's service area, that broadcasters could enlarge the area within which a DTV station is protected from interference, or that DTS transmitters could cause interference to other broadcast stations above currently permitted levels.

Discussion

11. We seek comment below on changing our DTS rules consistent with the proposals set forth in the Petition. Specifically, we seek comment on whether any change to our DTS rules is necessary or appropriate at this time, and if so, whether to adopt the proposals or whether there are alternatives we should consider. In doing so, we seek comment on whether to permit more than a "minimal amount" of DTS spillover beyond a station's authorized service area, how we should treat DTS signals beyond their current service areas if such spillover is allowed, and, finally, the use of DTS by Class A and LPTV licensees. We also seek comment on whether and to what extent the following or other changes are appropriate for ATSC 3.0, ATSC 1.0, or both.

12. We seek comment on whether to change our rules to replace the current

standard, which limits spillover beyond a reference station's authorized service area to a "minimal amount," with a less restrictive standard.

13. In particular, we seek comment on Petitioners' claim that such a rule change is needed now as the industry embarks on ATSC 3.0 deployment. Petitioners maintain that DTS is now both technically and economically feasible with ATSC 3.0 in ways that it has never been with ATSC 1.0. They contend, however, that the current rules inhibit efficient and economical deployment of additional transmitters near the edges of a station's coverage area. We seek comment on Petitioners' claims. We also seek comment on the opposing argument that it is premature to change the DTS rules now and that the Commission should allow the ATSC 3.0 marketplace to develop further before considering changes. What impact, if any, will deferring DTS rule changes have on the development of the ATSC 3.0 marketplace? If the rules should be changed, we seek comment on the appropriate time to take such action.

14. In addition to limiting spillover, our rules currently require that each DTS transmitter be located within either a station's Table of Distances area or its authorized service area. Petitioners and commenters addressing the issue of transmitter location agree that we should maintain this requirement. We tentatively conclude not to modify this requirement but welcome comment on this issue.

15. Petitioners argue that the current DTS rules undercut a key benefit of DTS—facilitating service to hard-to-reach viewers. We seek comment on whether, and if so how, revising our rules consistent with the proposals in the Petition would benefit viewers. How many more viewers likely would be reached if we changed our rules? Are there additional services that could be provided to broadcast television viewers and other consumers in local markets? Would there be offsetting adverse effects for viewers, and if so, how should we balance those trade-offs with potential benefits to viewers? How, if at all, would facilitating the deployment of DTS impact the viability of non-broadcast service offerings, such as advanced data services? What would be the costs and benefits to the local market generally?

16. If we were to revise our rules consistent with the proposals in the Petition, DTS spillover would be permitted outside the boundaries of a station's service area to the extent additional coverage is 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." In place of the current rule's "minimal amount" limitation, the extent of spillover permitted would be subject instead 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. Petitioners claim that using this value would reduce interference with co-channel Class A and LPTV operations, yet, at the same time, they acknowledge that there may be instances where disruption to LPTV stations would be "unavoidable." We seek comment on the most likely impact of this approach. Additionally, consistent with the proposals in the Petition, we tentatively conclude that the area within which a station may locate a DTS transmitter would not expand as a result of this rule change, nor would the station's authorized antenna height or authorized effective radiated power increase beyond what is currently allowed for the station. We seek comment on these tentative conclusions.

17. In addition, we seek comment on whether to eliminate the current standard that limits spillover to a "minimal amount" necessary to ensure full coverage of the applicant's service area, and to replace it with a standard based on whether spillover is "necessary to achieve a practical design." Petitioners contend that the Commission's policy of allowing only a "*de minimis* extension of a station's coverage area on a case-by-case basis" is insufficient to facilitate deployment of DTS transmitters near the edges of a station's coverage area. We seek comment on claims that the current minimal spillover allowance and the ability to seek a waiver are inadequate to fulfill the promise of DTS and facilitate deployment. Is "necessary to achieve a practical design" an appropriate standard? What would be its effect? If we adopt it, how should we define "necessary" for purposes of applying this standard? Moreover, how would the Commission appropriately determine what constitutes a "practical design," and how difficult would it be to administer such a standard? Are there specific factors (e.g., related to logistical issues, speed of deployment, or cost) that we should consider in determining whether a proposed DTS deployment is, in fact, "necessary to achieve a practical design?" Should we require applicants seeking to satisfy this standard to demonstrate that alternatives would be

prohibitively costly and/or substantially less beneficial than the applicant's purportedly "necessary" design? Are there other standards that we should consider? For instance, should we replace the "minimal amount" standard with a more specific quantitative standard, and if so, what should that standard be?

18. We also seek comment on whether to adopt a 36 dBu F(50, 10) "interference" contour as the limiting contour for permissible spillover. Is this proposal reasonable and appropriate? Are Petitioners accurate in asserting that adoption of this contour would reduce interference with co-channel Class A and LPTV operations? For instance, should the Petitioners' proposal be modified in view of the fact that the DTV co-channel interference desired-to-undesired ratio varies between 15 and 23 dB, depending on the signal strength of the desired station? Is there another contour that could or should be used instead? Should we consider changing the "minimal amount" standard without also adopting the proposed interference contour (or with some different limiting contour)? To what extent could we expect other services, including Class A and LPTV stations, to be operating in the spillover area permitted if we revise our rules consistent with the proposals in the Petition?

19. In addition, we seek comment on issues related to implementation of any changes to the DTS rules. For example, are there changes to the Commission's DTS licensing process that should be considered so as to facilitate the deployment of DTS sites shared by multiple licensees? What would be the implications of any such changes, for instance, in terms of the need to make changes to Commission forms or licensing systems? Are there any other issues that could arise given substantive differences between or among multiple licensees? In addition, should we impose power restrictions on DTS transmitters to ensure they are used only to fill coverage gaps? If so, should we establish a blanket power restriction, or should we tailor power restrictions to the specific circumstances of each case? What should those power restrictions be, if any? Should we require applicants to certify that their objective is to fill coverage gaps and not to extend service? Should the Commission consider the potential for either self-interference or coverage improvements realized from enhanced signals due to operation of co-channel DTS transmitters within stations' NLSCs? Are there any other technical complexities or effects on any of our other rules that we should

consider? What other implementation issues, if any, should we address?

20. We also seek comment on the implications of changing our DTS rules in light of the original purposes and justifications for those rules. As noted above, revising our rules consistent with the proposals in the Petition would permit DTS signals to reach beyond what the Commission authorized in the *2008 DTS Order*. In that proceeding, 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). It prohibited DTS stations from operating on either a primary or secondary basis beyond that limit. In particular, the Commission rejected requests to adopt an Expanded Area Approach allowing DTS stations to reach an area wider than achievable with a traditional single-transmitter station and specifically to the boundaries of their DMAs. The Commission was also concerned that an Expanded Area Approach "would subvert [its] current licensing rules by allowing a station to obtain the rights to serve a new community where a new station, including a low-power station, might otherwise be licensed" and would be inconsistent with the statutory requirement to assign new licenses through a competitive bidding process, as appropriate. In addition, the Commission concluded that "[a]n Expanded Area Approach is not necessary to implement DTS service or obtain its core benefits."

21. We seek comment on the continuing relevance of these or other conclusions that led the Commission to adopt a Comparable Area Approach in the *2008 DTS Order* and to retain that approach—at least tentatively—in the *Next Gen TV Order*. Do such conclusions remain current and sound? For example, would the proposal enable broadcasters to serve additional areas without going through a competitive bidding process? Would that result be an appropriate exercise of our spectrum management authority under the Communications Act? Would revising our rules consistent with the proposals in the Petition effectively amount to adopting the previously rejected Expanded Area Approach? Are the reasons for rejecting the Expanded Area Approach still valid given marketplace developments over the past 12 years?

22. We also seek comment on the potential impact of the proposed rule changes on the Commission's policy goal of promoting localism. Nexstar asserts that the proposed rule changes would promote localism by enabling

more viewers within a service area to access the local news and informational programming of an ATSC 3.0 broadcaster. Further, several other broadcaster commenters contend that maximizing broadcasters' ability to utilize DTS would promote localism because the geo-targeted programming capabilities of ATSC 3.0 will allow broadcasters to tailor programming, including news, weather, and emergency alerts, to specific communities. We seek comment on these issues.

23. How should we evaluate these claims in light of the fact that the Commission previously rejected an Expanded Area Approach, in part because it felt 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? At that time, the Commission cautioned that "DTS must not be used to undermine localism and that a DTS service area should not shift a station's primary focus from its community of license." The Commission also expressed concern that allowing DTS signals to spill over beyond a station's existing service area and into new communities would foreclose opportunities for the licensing of new LPTV stations to serve those communities. In advancing their proposal, however, Petitioners assert that the proposed rule changes would not harm localism because their recommended interference contour would prevent DTS stations from encroaching on the service of stations in adjacent markets.

24. We seek comment on whether, on balance, revising our rules consistent with the proposals in the Petition would hinder or promote our localism goal and the delivery of programming responsive to the needs and interests of local communities. What is the relevance in today's marketplace of the Commission's prior conclusions regarding the impact of an Expanded Area Approach on localism? Is there any evidence that these concerns have or would come to pass as a result of DTS use? To what extent have LPTV stations entered areas that DTS stations might otherwise have served? What would be the effect on localism if the proposed rule changes precluded future LPTV service in spillover areas?

25. To inform our analysis of proposed rule changes, we seek comment on the deployment of DTS, both now and in the future. As noted above, the *Next Gen TV Order* made

clear that, in addition to ATSC 1.0 broadcasters, ATSC 3.0 broadcasters also are currently permitted to deploy SFNs under the Commission's existing DTS rules. We seek comment on the current and reasonably foreseeable future state of DTS deployment using either ATSC 1.0 or ATSC 3.0. At present, there are fewer than two dozen active DTS stations. To what extent are current DTS deployments providing benefits, including those envisioned in the *2008 DTS Order*? What factors, if any, are inhibiting additional DTS deployments or restricting the realization of such benefits today? Are there types of locations or circumstances where DTS has proven, or is expected to prove, particularly valuable? Are there characteristics of ATSC 3.0 that are particularly conducive to DTS use, and, if so, what are they? How does the potential for co-channel interference within a station's DTS service area differ between a deployment using ATSC 1.0 and a deployment using ATSC 3.0, and what are the potential benefits in improved coverage realized by each technology due to the enhancement of signal strength within an NLSC? Are there specific types of deployments, network configurations, or uses that ATSC 3.0 enables that are infeasible or impractical under ATSC 1.0? In particular, we seek comment from broadcasters intending or considering whether to deploy DTS networks. What challenges do they face?

26. To what extent would broadcasters decline to deploy DTS transmitters if the rule is not changed? To what extent could directional antennas or other solutions obviate or reduce the need for a rule change? In other words, can DTS transmitters employ a directional antenna to reach viewers at the edge of a station's coverage area without spilling beyond that area? If so, are there additional costs associated with the deployment of a directional antenna that make it a less attractive option? Are there terrain-specific factors that render the use of directional antennas impractical in some situations? We invite commenters to provide specific real-world examples of circumstances where use of DTS signals would be impractical under the current rules but would be viable if the rules were changed. How common are such situations?

27. We also ask commenters to quantify, to the extent possible, not just the need for rule changes but also the benefits and costs of adopting rule changes, including rule changes that are consistent with the proposals in the Petition. What are the costs associated with deploying, operating, and

maintaining a DTS transmitter or network of transmitters? How significantly do these costs differ when adding one or more transmitters to an existing structure versus constructing a new facility? On average, how many transmitters could we expect each station to deploy if we modify our rules as suggested herein? Would the changes proposed herein reduce the cost of deployment of DTS and, if so, how and to what degree? For example, would fewer DTS transmitters be required? What other quantifiable benefits would flow from changing our rules? What are the potential impacts of more numerous DTS deployments? Would it require the construction of new towers, or would stations be able to use existing towers or other structures? What would be the costs stemming from proposed rule changes, particularly to other licensees that may be affected or displaced by the changes? We ask that, in responding, commenters quantify the specific costs entailed with deployment and any specific savings that would flow from the proposed technical changes.

28. In addition to costs and benefits associated with deployment, are there costs or benefits we should consider related to spectrum efficiency? For example, several commenters point to the more efficient use of spectrum that can be achieved by using DTS transmitters instead of translators, given that DTS transmitters broadcast on the same channel as the main transmitter. Microsoft contends that the Commission should encourage broadcasters to relinquish their dedicated translator channels and transition their translator facilities to DTS, thereby freeing up spectrum for other uses. We seek comment on Microsoft's suggestion. If rule changes would increase opportunities to create DTS networks, how much more spectrum is likely to become available as a result of no longer needing translators to rebroadcast the primary station's signal? How likely is that recovered spectrum to be used and for what purposes? Spectrum efficiency is also enhanced when broadcasters use portions of their spectrum not dedicated to over-the-air programming to provide non-broadcast services, such as advanced data services. Would the use of DTS networks increase the likelihood that broadcasters would offer such services? And, if so, are there costs and benefits that we should consider?

29. If we modify our DTS rules to change our restriction that currently limits DTS spillover to a "minimal amount," the next fundamental issue we ask commenters to address is the level of interference protection that should be afforded to, and expected from, DTS

station signals in the spillover area. Notably, Petitioners do not seek interference protection for DTS signals in the spillover area, and we tentatively conclude that if we were to modify our rules consistent with the Petition, we would not enlarge the area within which a DTV station is protected from interference. Petitioners acknowledge, however, that such spillover signals could cause disruption to secondary services in some instances. We seek comment below regarding how other spectrum users, including LPTV and translator stations, wireless microphones, and white spaces devices, could be affected by such rule changes and whether there are steps we could and should take to mitigate such impacts.

30. As an initial matter, we seek comment on what regulatory status, if any, should be granted to DTS signals beyond the reference station's service area. In the *2008 DTS Order*, the Commission rejected requests to confer either primary or secondary status to DTS transmissions that spilled over a station's authorized service area. As discussed above, the Commission's rationales included treating single-transmitter and DTS stations consistently, protecting localism, and preserving opportunities for new low-power stations. The Commission also noted that DTS broadcasters can achieve the same benefits as a secondary service by using digital on-channel translator/LPTV stations under Part 74 of the Commission's rules. We seek comment on these prior conclusions. Do they remain sound? How, if at all, should we take account of changes in the intervening 12 years when considering these conclusions? What would be the effects if a DTS transmitter's spillover signal were given secondary status versus being afforded no protection at all? How would such decisions affect new or existing spectrum users, including those discussed below?

31. In particular, we seek comment on the effects of any rule changes on Class A, LPTV, and translator stations. Several commenters urge the Commission to ensure that Class A stations, LPTV stations, TV translators, and the holders of construction permits for such facilities would not be affected or displaced by any rule changes. Petitioners contend that their proposed interference contour of 36 dBu F(50, 10) would ensure that DTS stations would not interfere with co-channel Class A and LPTV operations. They also claim that their suggested limit would prevent DTS stations from encroaching on the service of stations in adjacent markets. Despite Petitioners' assurances, a

number of commenters, while supportive of DTS generally, express concern about potential interference to their operations. In responding to commenters' concerns, Petitioners acknowledge that "there may be instances where disruption is unavoidable," namely to LPTV stations. Petitioners further contend that nothing in their proposal would change the interference protection rights of LPTV and TV translator stations—which are afforded protection only with respect to secondary and unlicensed users—and that the Commission should not consider elevating those rights as part of this proceeding. We seek comment on this view. How accurate is Petitioners' claim that the proposed interference contour would not cause interference issues for existing co-channel Class A and LPTV stations? Moreover, we seek comment on ARK's concern regarding interference to LPTV stations operating on adjacent channels, rather than on co-channels. How often is this type of interference likely to occur?

32. Further, we seek comment on Petitioners' interference study, which calculated that, under the parameters used in the study, 3.73 to 5.05% of co-channel LPTV stations and 2.23 to 2.84% of adjacent-channel LPTV stations would experience interference above a "2% threshold" as determined by performing an "OET-69 interference study." Does Petitioners' Study analyze the full range of interference concerns that LPTV stations would face? Are the assumptions it relies on reasonable? Are its conclusions valid? Are there areas that warrant additional study?

33. We note that in 2018 Congress acted to reimburse licensees of LPTV stations and TV translators for expenses incurred as a result of displacements precipitated by the broadcast incentive auction. To the extent that changing the DTS rules would risk causing another round of displacement for these licensees, or otherwise nullify the time, money, and effort spent to relocate LPTV and translator operations following the incentive auction repack, we seek comment on whether such action would be consistent with congressional intent regarding LPTV and translator services. Should the number or percentage of displaced LPTV licensees impact our consideration of this issue? In addition, ARK asserts that allowing full-power licensees to extend their existing contours in a manner that impinges on LPTV stations would contravene Congress' intent in the Middle-Class Tax Relief and Job Creation Act of 2012 not to alter LPTV rights. Given, however, that Petitioners are not proposing that

we take any action in this proceeding pursuant to that Act, we tentatively conclude that this specific statutory provision does not preclude us from adopting the proposal.

34. In addition, NTA warns that allowing new DTS facilities to overlap the contours of existing LPTV and TV translators could harm viewers who rely on such existing stations to provide over-the-air television. NTA proposes a 41 dBuV/m protected contour for ATSC 3.0 translators and LPTV stations. It claims that a 41 dBuV/m contour would promote spectrum efficiency and would enable more consumers in sparsely populated areas to receive the benefits of ATSC 3.0 through LPTV and translator service. MWG posits that Class A stations, LPTV stations, and TV translators stand to benefit from the proposed rule changes as more spectrum would become available for other services to the extent translators shift operations to DTS. MWG further contends that the ability of full-power stations to increase their signal strength in peripheral areas using DTS would allow other services in those areas also to operate at higher power levels (while still maintaining a sufficient desired-to-undesired ratio) without causing impermissible interference to the full-power stations. We seek comment on NTA's proposal and MWG's claims.

35. Moreover, we seek comment on whether there is a way to accomplish our objectives without jeopardizing other services. For instance, could we protect existing LPTV and translator stations by treating spillover from DTS signals as secondary facilities with respect to interference caused to such LPTV and translator services? We envision that, under such an approach, if interference complaints were received from affected LPTV or translator viewers within the spillover area, the onus would be on the DTS facility to resolve the problem, for example, by means of a directional antenna and/or power reduction. By contrast, with regard to alleged interference inside the authorized service area, the DTS facility would be treated as primary and would be under no obligation to resolve interference complaints from LPTV or translator viewers. Would this approach minimize potential disruption to existing LPTV and translator stations, and if so, to what extent? In addition, if we treated spillover from DTS signals as secondary facilities, to what extent would we be limiting opportunities for new LPTV and translator stations to be licensed in spillover areas? How should we think about the Commission's concern expressed in the *2008 DTS Order* that an Expanded Area Approach

would limit opportunities for new licensees, including LPTV stations, in spillover areas? Is this concern still as relevant today as it was in 2008?

36. In addition, NPR urges the Commission to address the interference risk that DTV Channel 6 stations pose generally to NCE FM stations in the adjacent band. Specifically, NPR asks the Commission to require broadcasters to use more stringent filters in the construction and operation of DTS facilities for DTV Channel 6 stations and to impose specific filtering requirements like the Commission established for DTV channels 14 and 17. It appears that at least some of NPR's concerns may relate to the use of DTV Channel 6, generally, rather than the use of DTS, in particular. We seek comment on NPR's concerns, including whether such concerns are sufficiently specific to DTS use that we should consider them in the context of this proceeding.

37. We also seek comment on the potential effects of revising our rules consistent with the proposals in the Petition, or any alternative approaches, on licensed and unlicensed wireless microphone operations in the TV spectrum. If we treated spillover from DTS signals as secondary facilities with respect to the interference caused to other services, as noted above, to what extent could we limit the potential for harmful interference to licensed wireless microphones? Should we additionally consider potential impacts that DTS transmissions will have on unlicensed wireless microphones?

38. In addition, we seek comment on the potential effects that revising our rules consistent with the proposals in the Petition, or any alternative approaches, would have on white space device users. In February 2020, the Commission launched a proceeding to provide additional opportunities for unlicensed white space devices operating in the broadcast television bands to deliver wireless broadband services in rural areas and applications associated with the Internet of Things. We have recognized that spurring the growth of the white space device ecosystem can help bring affordable broadband service to rural and underserved communities that can help close the digital divide. The Commission remains committed to these goals and, in pursuing its proposed measures in this proceeding, it is not our intent to undo the agency's progress in improving broadband coverage that will benefit American consumers in rural and underserved areas. Microsoft, a supporter of white space device operations, asserts that Petitioners' proposed rule changes "go

well beyond" what full-power television stations need to do in order to fill coverage gaps in their service areas and that television stations using DTS should not be granted interference protection outside their defined service areas. Should we consider, as Microsoft suggests, the potential impact that DTS transmissions will have on white space devices providing services to rural communities via TV spectrum, such as high-speed broadband? We seek comment on MWG's contrary position that there would be little risk to white space devices given MWG's view that DTS build-out is likely to be uneconomical in the areas where white spaces are used to serve rural consumers. What effect, if any, would the Commission's proposed measures to promote the use of white spaces have on DTS use, and vice versa?

39. Finally, we seek comment on the use of DTS by Class A and LPTV licensees. In the *2008 DTS Order*, the Commission approved the use of DTS technologies on an experimental basis by a single digital Class A, LPTV, or TV translator 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, as they differ from full-power television stations. Furthermore, the Commission concluded that it did not have "sufficient indication of widespread 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 there were a "demonstrated interest in or need for DTS as an alternative for individual low power stations on a permanent basis."

40. Have things changed in the past 12 years that make the use of DTS more attractive for Class A or LPTV stations today? For instance, have changes in the marketplace including, but not limited to, the DTV transition, technological innovations such as ATSC 3.0, and the spectrum repack, affected the Commission's prior conclusions regarding DTS use by Class A and LPTV stations in any way? Is there additional information we should consider that might lead us to different conclusions now?

41. In this proceeding, some commenters recommend allowing the DTS rules that apply to full-power

television stations to apply also to Class A and LPTV stations. Columbus Broadcasting requests that Class A television stations be permitted to use DTS in the same manner as full-power television stations. ARK, a strategic partner of LPTV licensees in the deployment of ATSC 3.0, similarly requests that the Commission harmonize the DTS rules for full-power television and LPTV stations, asserting that “the use of very low power DTS transmitters will play a very significant role in the addition of utility value and performance for ATSC 3.0 networks” and that, depending on the local topography, foliage and buildings, it intends to deploy DTS transmitters that are optimized for specific local conditions. We seek comment on the Columbus Broadcasting and ARK proposals or any other proposals to expand permitted uses of DTS technologies by Class A and/or LPTV stations. What would be the impact of these proposals, if adopted? Moreover, we seek comment on whether any rule changes we adopt in this proceeding for full-power stations should also be applied to Class A and/or LPTV stations.

42. Initial Regulatory Flexibility Analysis. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) relating to this NPRM.

43. Paperwork Reduction Act. This document may result in new or revised information collection requirements subject to the Paperwork Reduction Act of 1995. If the Commission adopts any new or revised information collection requirement, the Commission will publish a notice in the **Federal Register** inviting the public to comment on the requirement, as required by the Paperwork Reduction Act. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, the Commission seeks specific comment on how it might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

44. Ex Parte Rules—Permit-But-Disclose. The proceeding this NPRM initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Commission’s pre-meeting Sunshine period applies). Persons making oral *ex parte*

presentations are reminded that memoranda summarizing the presentation must (1) List all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with § 1.1206(b) of the Commission’s rules. In proceedings governed by § 1.49(f) of the Commission’s rules or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

45. Filing Requirements—Comments and Replies. Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- **Electronic Filers:** Comments may be filed electronically using the internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.

- **Paper Filers:** Parties who choose to file by paper must file an original and one copy of each filing.

Filings can be sent by commercial overnight courier or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.

- Commercial overnight mail (other than U.S. Postal Service Express Mail

and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19. See *FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy*, Public Notice, DA 20-304 (Mar. 19, 2020), <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>.

- During the time the Commission’s building is closed to the general public and until further notice, if more than one docket or rulemaking number appears in the caption of a proceeding, paper filers need not submit two additional copies for each additional docket or rulemaking number; an original and one copy are sufficient.

46. People with Disabilities. To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

47. Availability of Documents. Comments, reply comments, and *ex parte* submissions will be available for public inspection during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12th Street, SW, CY-A257, Washington, DC 20554. These documents will also be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

48. Additional Information. For additional information on this proceeding, contact Ty Bream, Ty.Bream@fcc.gov, of the Industry Analysis Division, Media Bureau, (202) 418-0644.

Initial Regulatory Flexibility Analysis

49. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared this Initial Regulatory Flexibility Act Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in this Notice of Proposed Rulemaking (NPRM). The Commission requests written public comments on this IRFA. Comments must be identified

as responses to the IRFA and must be filed by the deadlines for comments specified in the NPRM. The Commission will send a copy of the NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the NPRM and IRFA (or summaries thereof) will be published in the **Federal Register**.

A. Need for, and Objective of, the Proposed Rules

50. The NPRM seeks comment on changes to the Commission's rules governing the use of a distributed transmission system (DTS), or single frequency network (SFN), by a broadcast television station in light of continuing developments in ATSC 3.0, the new "Next Gen" broadcast television transmission standard, the potential benefits of DTS, and the Commission's interest in encouraging use of DTS. 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 can also 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 distributed transmission system employs two or more transmission sites located around a station's service area, each using the same RF channel and synchronized to manage self-interference. DTS therefore offers an alternative to traditional full-power television transmission and the use of secondary translators on additional frequencies.

51. The NPRM seeks comment on changing the Commission's DTS rules consistent with the proposals set forth in the October 3, 2019 joint petition for rulemaking. The Petition asks the Commission to change the DTS rules to permit stations more flexibility in the placement of their DTS transmitters, particularly near the edge of a station's coverage area. Specifically, Petitioners propose that the placement of DTS transmitters would be limited by what Petitioners refer to as the DTS transmitter's "interference contour," which could not exceed that of the station's reference facility. Petitioners assert that their requested rule changes would allow them to unlock the benefits

of DTS operations beyond what the current DTS rules enable, such as further improving service throughout a station's coverage area, improving mobile reception, and allowing more efficient use of broadcast spectrum by reducing the need for television translators using separate channels.

52. In the NPRM, the Commission seeks comment on whether any change to its DTS rules is necessary or appropriate at this time, and if so, whether to adopt the rule changes proposed in the NPRM or whether there are alternatives it should consider, how to treat DTS signals beyond their current service areas if such spillover is allowed, and, finally, the use of DTS by Class A and LPTV licensees. The Commission also seeks comment on whether and to what extent the following or other changes are appropriate for ATSC 3.0, ATSC 1.0, or both. In doing so, the Commission seeks comment on whether to amend the current DTS spillover allowance in Section 73.626 of the Commission's rules from a "minimal amount" beyond a station's authorized service area to the amount of DTS spillover "necessary to achieve a practical design."

B. Legal Basis

53. The proposed action is authorized pursuant to 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.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

54. 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. The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction." In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act. 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. Below, we provide a description of such small entities, as well as an estimate of the number of such small entities, where feasible.

55. Rule changes, if adopted, could apply to television broadcast licensees and potential licensees of television

stations. This Economic Census category "comprises establishments primarily engaged in broadcasting images together with sound." 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 \$38.5 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. Based on this data we therefore estimate that the majority of commercial television broadcasters are small entities under the applicable SBA size standard.

56. Additionally, the Commission has estimated the number of licensed commercial television stations to be 1,374. Of this total, 1,263 stations (or 91.9%) had revenues of \$41.5 million or less in 2018, according to Commission staff review of the BIA Kelsey Inc. Media Access Pro Television Database (BIA) on June 5, 2019, 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 388. 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.

57. We note, however, that in assessing whether a business concern qualifies as "small" under the above definition, business (control) affiliations must be included. 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.

58. Rule changes, if adopted, could also apply to 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.

59. There are 387 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 1,892 LPTV stations and 3,621 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.

60. Given the potential impact of Petitioners’ proposal and other proposals on other spectrum users, radio broadcasting stations, in particular noncommercial educational FM stations, may be affected by rule changes.

61. The U.S. Economic Census radio broadcasting category “comprises establishments primarily engaged in broadcasting aural programs by radio to the public.” Programming may originate in the establishment’s own studio, from an affiliated network, or from external sources. The SBA has created the following small business size standard for this category: those having \$38.5 million or less in annual receipts. Census data for 2012 show that 2,849 firms in this category operated in that year. Of this number, 2,806 firms had annual receipts of less than \$25 million, and 43 firms had annual receipts of \$25 million or more. Because the Census has no additional classifications that could serve as a basis for determining the number of stations whose receipts

exceeded \$38.5 million in that year, we conclude that the majority of radio broadcast stations were small entities under the applicable SBA size standard.

62. Apart from the U.S. Census, the Commission has estimated the number of licensed AM radio stations to be 4,593 and the number of commercial FM radio stations to be 6,772, along with 8,182 FM translator and booster stations. As of [September 2019, 4,294 a.m. stations and 6,739 FM stations had revenues of \$41.5 million or less, according to Commission staff review of the BIA Kelsey Inc. Media Access Pro Television Database (BIA). In addition, the Commission has estimated the number of noncommercial educational (NCE) FM radio stations to be 4,135. NCE stations are non-profit and therefore considered to be small entities. Therefore, we estimate that the majority of radio broadcast stations are small entities.

63. The same SBA definition that applies to radio stations applies to low power FM stations. As noted, the SBA has created the following small business size standard for this category: those having \$41.5 million or less in annual receipts. While the U.S. Census provides no specific data for these stations, the Commission has estimated the number of licensed low power FM stations to be 2,169. Given the fact that low power FM stations may only be licensed to not-for-profit organizations or institutions that must be based in their community and are typically small, volunteer-run groups, we will presume that these licensees qualify as small entities under the SBA definition.

64. We note again, however, that in assessing whether a business concern qualifies as “small” under the above definition, business (control) affiliations must be included. Because we do not include or aggregate revenues from affiliated companies in determining whether an entity meets the applicable revenue threshold, our estimate of the number of small radio broadcast stations affected is likely overstated. In addition, as noted above, one element of the definition of “small business” is 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 radio broadcast station is dominant in its field of operation. Accordingly, our estimate of small radio stations potentially affected by the rule revisions discussed in the NPRM includes those that could be dominant in their field of operation. For this reason, such estimate likely is over-inclusive.

65. Rule changes, if adopted, could also impact radio and television

broadcasting and wireless communications equipment manufacturing. This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment. The SBA has established a small business size standard for this industry of 1,250 employees or less. U.S. Census Bureau data for 2012 shows that 841 establishments operated in this industry in that year. Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees, and 6 establishments operated with 2,500 or more employees. Based on this data, we conclude that a majority of manufacturers in this industry are small.

D. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

66. This NPRM seeks comment on changes to the Commission’s rules governing the use of a DTS by a broadcast television station in light of continuing developments in ATSC 3.0, the new “Next Gen” broadcast television transmission standard, the potential benefits of DTS, and the Commission’s interest in encouraging use of DTS. The use of DTS is at the discretion of the broadcast licensee. The NPRM 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 NPRM thus 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, FCC Forms 301 and 340.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

67. The RFA requires an agency to describe any significant 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.”

68. Specifically, in addition to issues raised by commenters, the NPRM seeks comment on alternatives to the proposed rule changes, *i.e.*, the “necessary to achieve a practical design” standard, including, but not limited to, (1) making no changes to the DTS rules at this time or (2) changing the “minimal amount” standard without also adopting the proposed interference contour. In addition, the Commission considers the alternatives of (1) protecting existing LPTV and translator stations (including those that are small entities) by treating newly authorized spillover from DTS transmitters as secondary facilities (*i.e.*, in contrast to the primary regulatory status afforded to DTS transmitters within the areas they

are authorized to serve) with respect to interference potentially caused to such LPTV and translator services or (2) affording no protection to newly authorized spillover from DTS transmitters. The Commission’s evaluation of the comments filed on these topics as well as on other questions in the NPRM will shape the final conclusions it reaches and the actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rule

69. None.

List of Subjects in 47 CFR Part 73

Television; Radio.

Federal Communications Commission.

Marlene Dortch,

Secretary, Office of the Secretary.

Proposed Rule

For the reasons discussed in the preamble, the Federal Communications

Commission proposes to amend 47 CFR part 73 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, and 339.

- 2. Amend § 73.626 by revising paragraphs (c), (f)(2) and (5) 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.

Channel	Zone	Service Area		Interference Area	
		F(50,90) field strength (dBu)	Distance from reference point	F(50,10) field strength (dBu)	Distance from reference point
2–6	1	28	108 km (67 mi)	28	184 km (114 mi).
2–6	2 and 3	28	128 km (80 mi)	28	209 km (130 mi).
7–13	1	36	101 km (63 mi)	33	182 km (113 mi).
7–13	2 and 3	36	123 km (77 mi)	33	208 km (129 mi).
14–51	1, 2, and 3	41	103 km (64 mi)	36	245 km (153 mi).

* * * * *

(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 is necessary to achieve a practical design or to meet the requirements of paragraph (f)(1) of this section. In no event shall the F(50,10) interference contour of any DTS transmitter extend beyond that of its reference facility (described in paragraph (c)(2) of this section). The interference contour field strength is given in the Table of Distances (in paragraph (c) of this section) and is calculated using Figure 9a, 10a, or 10c of § 73.699 (F(50,10) charts);

* * * * *

(5) The “combined field strength” of all the DTS transmitters in a network does not cause interference to another station in excess of the criteria specified

in § 73.616, where the combined field strength level is determined by a “root-sum-square” calculation, in which 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 as corrected for the receiving antenna directivity in the direction of each transmitter.

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DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Part 25

[FAR Case 2020-009; Docket No. FAR-2020-0009; Sequence No. 1]

RIN 9000-AO07

Federal Acquisition Regulation: List of Domestically Nonavailable Articles

AGENCY: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Advance notice of proposed rulemaking.

SUMMARY: DoD, GSA, and NASA are considering amending the Federal Acquisition Regulation (FAR) to update the list of domestically nonavailable