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

In the Matter of )

Applications of T-Mobile US, Inc. )

and ) WT Docket No. 18-197

Sprint Corporation )

Consolidated Applications for Consent )
to Transfer Control of Licenses )
and Authorizations )

REPLY OF ALTICE USA, INC.

Jennifer L. Richter
Shea Boyd
Akin Gump Strauss Hauer & Feld LLP
1333 New Hampshire Avenue, NW
Washington, DC 20036
Tel: (202) 887-4524
jrichter@akingump.com
Counsel for Altice USA, Inc.

October 31, 2018
Executive Summary

Commenters agree with Altice USA, Inc. (“Altice”) that the Commission must be specifically concerned about the negative impact on Mobile Virtual Network Operators (“MVNOs”) from the proposed combination of T-Mobile US, Inc. (“T-Mobile”) and Sprint Corporation (“Sprint,” collectively, the “Applicants”). Applicants acknowledge and agree that the only viable source of potential wireless competition to the big three carriers, if the transaction is allowed to move forward, rests with MVNOs. Yet Applicants offer no tangible protection for MVNOs. The Commission must ensure that, if approved, the New T-Mobile will support wireless competition by all MVNOs.

It is critical that the Commission understands that all MVNOs are not made the same, appreciating the distinctions among full infrastructure-based MVNOs, “light” MVNOs and “white label” MVNOs. The full infrastructure-based MVNO model likely represents the best opportunity for new, robust wireless competition, leveraging a unique model to create a strong entrant in the wireless market. A full infrastructure-based MVNO will rely critically, but minimally, on mobile network operator (“MNO”) partners, utilizing only the radio access network (“RAN”) of the MNO. As a full infrastructure-based MVNO, Altice will supply all other aspects of the mobile offering, including the SIM, roaming and network partners, data and Internet access, voice messaging, rate charging, customer care, and billing. This model enables the MVNO to provide facilities-based competition to the MNOs, including meaningful competition on price and product innovation for customers.

Because of its control over most network components, a full infrastructure-based MVNO, such as Altice, will be able to offer the full range of competition to large carriers – from price, to quality, to the service offering itself. Full infrastructure-based MVNOs can innovate and provide
new services, without waiting or relying on the MNOs, leading to greater innovation, at a faster pace. Ultimately, this innovation creates differentiated products, providing consumers with greater choice, and requiring the MNOs to innovate themselves to keep up. Additionally, a full infrastructure-based MVNO is designed to allow partnership with multiple MNOs to enable dynamic routing through different MNOs based on quality, price or other metrics, creating downward pressure on wholesale prices. The true competitive threat posed by full infrastructure-based MVNOs demands protection from the Commission to ensure that, if approved, the New T-Mobile will provide reasonable agreements that support the long-term viability of this MVNO offering, relying on “incentives” will not be sufficient to satisfy the public interest to approve the merger.

Unfortunately, T-Mobile, Sprint and the New T-Mobile are making no tangible commitments to support MVNOs with reasonable, long-term, nationwide contracts, leaving no credible source of outside wireless competition that would make it possible for the Commission to grant the presently proposed consolidation. Furthermore, the Applicants may be even more reluctant to support full infrastructure-based MVNOs, such as Altice, due to the true competitive threat these MVNOs bring.

As discussed by Altice in its Petition to Condition or Deny (“Petition”), the unique circumstances presented here require that any approval of the “New T-Mobile” by the Commission is accompanied by unique conditions and protections for wireless competition to protect new sources of competition, such as full infrastructure-based MVNOs. In the absence of such conditions, or voluntary, tangible commitments that the New T-Mobile will provide reasonable, long-term, nationwide agreements, the proposed transaction cannot be considered to be in the public interest, and must be denied.
TABLE OF CONTENTS

I. THE RECORD MAKES CLEAR THAT COMMENTERS ARE SPECIFICALLY CONCERNED ABOUT THE NEGATIVE IMPACT ON MVNOs FROM THE PROPOSED COMBINATION OF SPRINT AND T-MOBILE ..................................................3
   A. All MVNOs Need Protection Against the Predictable Negative Impacts of Unprecedented Wireless Market Consolidation, Particularly Full Infrastructure-Based MVNOs That Offer the Greatest Potential for New Wireless Competition ........................................................................................................................................5
   B. Sprint, T-Mobile and the New T-Mobile Have Made No Tangible Commitments to Support a Robust and Durable MVNO market; This is Particularly Concerning in Light of T-Mobile’s Prior Hostile Statements Against Cable MVNOs ..................................................................................................................8
   C. The Loss of Sprint and T-Mobile, Two Disruptive, “Maverick” Partners in the Wholesale Market, Will Diminish the Ability of MVNOs to Offer Robust Nationwide Competition Over the Long Term ..................................................................12
   D. If the Commission Moves Forward, it Must: (1) Impose Safeguards That Ensure Meaningful, Long-Term Competition in the Wireless Market For All MVNOs; and (2) Require New T-Mobile to Divest Its Spectrum Holdings in Excess of the Spectrum Screen .................................................................................16
      1. Competitive Safeguards .........................................................................................................16
      2. Divestiture .................................................................................................................................18

II. CONCLUSION ..................................................................................................................................19
In the Matter of       )
Applications of T-Mobile US, Inc.     ) WT Docket No. 18-197
) 
and         )
Sprint Corporation       )
) 
Consolidated Applications for Consent )
to Transfer Control of Licenses       )
) and Authorizations     )
) 

REPLY OF ALTICE USA, INC.

Altice USA, Inc. (“Altice”) hereby replies to the Joint Opposition (“Opposition”) of T-Mobile US, Inc. (“T-Mobile”) and Sprint Corporation (“Sprint,” collectively, the “Applicants”)\(^1\) in the above-captioned proceeding.

Commenters agree with Altice USA, Inc. (“Altice”) that the Commission must be specifically concerned about the negative impact on Mobile Virtual Network Operators (“MVNOs”) from the proposed combination of T-Mobile US, Inc. (“T-Mobile”) and Sprint Corporation (“Sprint,” collectively, the “Applicants”). Applicants acknowledge and agree that the only viable source of potential wireless competition to the big three carriers, if the transaction is allowed to move forward, rests with MVNOs. Yet Applicants offer no tangible protection for MVNOs. The Commission must ensure that, if approved, the New T-Mobile will support wireless competition by all MVNOs.

\(^1\) Joint Opposition of T-Mobile US, Inc. and Sprint Corporation, WT Docket No. 18-197 (filed Sept. 17, 2018) (“Opposition”).
It is critical that the Commission understands that all MVNOs are not made the same, appreciating the distinctions among full infrastructure-based MVNOs, “light” MVNOs, and “white label” MVNOs. The full infrastructure-based MVNO model likely represents the best opportunity for new, robust wireless competition, leveraging a unique model to create a strong entrant in the wireless market. A full infrastructure-based MVNO will rely critically, but minimally, on mobile network operator (“MNO”) partners, utilizing only the radio access network (“RAN”) of the MNO. As a full infrastructure-based MVNO, Altice will supply all other aspects of the mobile offering, including the SIM, roaming and network partners, data and Internet access, voice messaging, rate charging, customer care, and billing. This model enables the MVNO to provide facilities-based competition to the MNOs, including meaningful competition on price and product innovation for customers.

Because of its control over most network components, a full infrastructure-based MVNO, such as Altice, will be able to offer the full range of competition to large carriers – from price, to quality, to the service offering itself. Full infrastructure-based MVNOs can innovate and provide new services, without waiting or relying on the MNOs, leading to greater innovation, at a faster pace. Ultimately, this innovation creates differentiated products, providing consumers with greater choice, and requiring the MNOs to innovate themselves to keep up. Additionally, a full infrastructure-based MVNO is designed to allow partnership with multiple MNOs to enable dynamic routing through different MNOs based on quality, price or other metrics, creating downward pressure on wholesale prices. The true competitive threat posed by full infrastructure-based MVNOs demands protection from the Commission to ensure that, if approved, the New T-Mobile will provide reasonable agreements that support the long-term viability of this MVNO offering, relying on “incentives” will not be sufficient to satisfy the public interest to approve the merger.
Unfortunately, T-Mobile, Sprint and the New T-Mobile are making no tangible commitments to support MVNOs with reasonable, long-term, nationwide contracts, leaving no credible source of outside wireless competition that would make it possible for the Commission to grant the presently proposed consolidation. Furthermore, the Applicants may be even more reluctant to support full infrastructure-based MVNOs, such as Altice, due to the true competitive threat these MVNOs bring.

As discussed by Altice in its Petition to Condition or Deny (“Petition”), the unique circumstances presented here require that any approval of the “New T-Mobile” by the Commission is accompanied by unique conditions and protections for wireless competition to protect new sources of competition, such as full infrastructure-based MVNOs. In the absence of such conditions, or voluntary, tangible commitments that the New T-Mobile will provide reasonable, long-term, nationwide agreements, the proposed transaction cannot be considered to be in the public interest, and must be denied.

I. THE RECORD MAKES CLEAR THAT COMMENTERS ARE SPECIFICALLY CONCERNED ABOUT THE NEGATIVE IMPACT ON MVNOs FROM THE PROPOSED COMBINATION OF SPRINT AND T-MOBILE

Altice is not alone in recognizing the threats and transaction-specific harms, posed to MVNOs by the proposed merger of Sprint and T-Mobile. C Spire, Charter, Tucows, Console Enterprises, DISH, Free Press, the Communications Workers of America, the American Antitrust Institute, the Common Cause Petitioners, the Union Telephone Company Petitioners, and the

2 Petition to Condition or Deny of Altice USA, Inc., WT Docket No. 18-197, at 6-7 (filed Aug. 27, 2018) (“Altice Petition”).
Rural Wireless Association each share Altice’s concern that the proposed merger will threaten long-term competition from MVNOs.³

The significant tension that exists between MVNOs and MNOs was highlighted by both Altice⁴ and DISH, who asked the Commission to “take into account an additional factor not present in the retail markets: the buyers [MVNOs] depend on the sellers [MNOs], often for crucial inputs, even as they try to compete against the sellers . . . an increase in concentration in that market [the MNO market] is likely to raise the prices of these services, thereby raising the costs of additional [MVNO] market entry and reducing its likelihood.”⁵

For full infrastructure-based MVNOs, such as Altice, that tension is even greater. Full infrastructure-based MVNOs rely less on the MNO and therefore offer a greater competitive threat through control of pricing and product innovations. Indeed, in view of the high barrier to entry in the nationwide wireless market, full infrastructure-based MVNOs are the best source of meaningful competition for the would-be three MNOs. Because of the competitive threat posed 

---
⁴ Altice Petition at 13 (“The Commission must consider the impact of the loss of these two individual mavericks, which compete today for MVNO business, on the ability of MVNO partners to obtain nationwide, long-term, reasonable MVNO agreements.”).
⁵ DISH Petition at 57.
by full infrastructure-based MVNOs, no voluntary “incentive” will be strong enough to ensure New T-Mobile will support competition from these MVNOs.

DISH asks the Commission to “undertake a rigorous examination of the roaming and wholesale segments at issue in this transaction and determine whether consolidation is in the public interest.” Altice supports this DISH ask, and further requests that the Commission seriously consider the record support for the following: (A) All MVNOs need protection against the predictable negative impacts of unprecedented wireless market consolidation, particularly full infrastructure-based MVNOs that offer the greatest potential for new wireless competition; (B) There are no tangible commitments from Sprint, T-Mobile and the New T-Mobile to support a robust and durable MVNO market, and this is particularly concerning in light of T-Mobile’s hostile statements against cable MVNOs; (C) The loss of Sprint and T-Mobile, two disruptive, “maverick” partners in the wholesale market, will diminish the ability of MVNOs to offer robust, nationwide competition over the long term; and (D) If the Commission determines to approve the transfer applications, it must: (1) impose safeguards that require the Applicants to offer reasonable, durable, long-term agreements to all MVNO partners to ensure meaningful, long-term competition in the wireless market; and (2) require New T-Mobile to divest its spectrum holdings in excess of the Commission’s spectrum screen.

A. **All MVNOs Need Protection Against the Predictable Negative Impacts of Unprecedented Wireless Market Consolidation, Particularly Full Infrastructure-Based MVNOs That Offer the Greatest Potential for New Wireless Competition**

Sprint, T-Mobile and other interested parties agree that MVNOs represent the greatest potential for future wireless competition. The Commission cannot allow Sprint and T-Mobile to

---

*6 Id.*

*7 See Applications of T-Mobile US, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 18-197, ULS File No. 0008224209 (designated as lead application),*
claim the public interest benefits of MVNO competition and simultaneously refuse to commit to support all MVNO providers, particularly full infrastructure-based MVNOs that offer the greatest opportunity for new wireless competition.

Sprint and T-Mobile offered the following assurances to MVNOs in their Public Interest Statement:

New T-Mobile will encourage the launch of new MVNOs that can offer unique value propositions or better reach unique customer segments. Moreover, the Applicants believe the transaction will allow New T-Mobile to enhance the value proposition of MVNOs that use its network—the benefits that accrue from the new, advanced network to New T-Mobile’s subscribers are advantages that New T-Mobile’s MVNO partners can also use to compete more effectively.8

However, Sprint, T-Mobile and the New T-Mobile must pay more than lip service to these claims. They must make tangible commitments to providing these benefits to all MVNOs.9 It is incumbent on the Commission to “ensure the realization of any promised potential benefits” of the transaction claimed by T-Mobile and Sprint.10

All MVNOs are not made the same, and it is important that the Commission understands the distinctions among full infrastructure-based MVNOs, “light” MVNOs, and “white label” MVNOs. The chart, attached hereto as Exhibit A, provides detail on the differences. Altice’s full infrastructure-based MVNO likely represents the best opportunity for new, robust wireless

---

8 Description of Transaction, Public Interest Statement, and Related Demonstrations at 102-116 (filed June 18, 2018) (“Public Interest Statement”).
9 Public Interest Statement at 124 (“New T-Mobile will have significant added network capacity, and therefore will have no incentive to impair MVNOs’ ability to put subscribers on New T-Mobile’s network.”).
competition, leveraging a unique model to create a strong entrant in the wireless market. A full infrastructure-based MVNO will rely critically, but minimally, on MNO partners, utilizing only the radio access network (“RAN”) of the MNO. As a full infrastructure-based MVNO, Altice will supply all other aspects of the mobile offering, including the SIM, roaming and network partners, data and Internet access, voice messaging, rate charging, customer care, and billing. This model enables the MVNO to provide facilities-based competition to the MNOs, including meaningful competition on price and product innovation for customers.

Because of its control over most network components, a full infrastructure-based MVNO, such as Altice, will be able to offer the full range of competition to large carriers – from price, to quality, to the service offering itself. Full infrastructure-based MVNOs can innovate and provide new services, without waiting or relying on the MNOs, leading to greater innovation, at a faster pace. Ultimately, this innovation creates differentiated products, providing consumers with greater choice, and requiring the MNOs to innovate themselves to keep up. Additionally, a full infrastructure-based MVNO is designed to allow partnership with multiple MNOs to enable dynamic routing through different MNOs based on quality, price or other metrics, creating downward pressure on wholesale and retail prices. The true competitive threat posed by full infrastructure-based MVNOs demands protection from the Commission to ensure that, if approved, the New T-Mobile will provide reasonable agreements that support the long-term viability of this MVNO offering. Relying on “incentives” will not be sufficient to satisfy the public interest to approve the merger.

In contrast to full infrastructure-based MVNOs, “white label” MVNOs have a more limited competitive offering, because everything from the products and services, to the profit margin, is controlled by the MNO. Some “white label” or “light” MVNO partners submitted
comments in support of the merger to the Commission.\textsuperscript{11} It is clear why T-Mobile supports these types of MVNOs. These MVNOs will not create strong competitive pressures to discipline the New T-Mobile because the New T-Mobile would control all functions, features, and even the pricing of their offerings. Moreover, supporting niche MVNO competitors that “attract[] and reach[] customers from particular segments”\textsuperscript{12} is not the same as supporting true nationwide, facilities-based wireless competition, and price competition for consumers, in all market segments. Although the facilities-based competition that Altice and others may offer through a full-infrastructure-based MVNO is different from a “light” or “white label” MVNO, all of these sources of competition require protection. As Altice asserted in its Petition, protecting all MVNOs from the harms of the proposed merger is critical to the future of wireless competition and necessary if the Commission permits further market consolidation.\textsuperscript{13}

\textbf{B. Sprint, T-Mobile and the New T-Mobile Have Made No Tangible Commitments to Support a Robust and Durable MVNO market; This is Particularly Concerning in Light of T-Mobile’s Prior Hostile Statements Against Cable MVNOs}

The strong warnings in the record about the transaction-specific harms to MVNOs\textsuperscript{14} emphasize the importance of T-Mobile, Sprint and the New T-Mobile making tangible commitments to mitigate those harms. Yet, as Altice noted in its Petition, those commitments are conspicuously absent from the Applicants’ filings with the Commission, public and private


\textsuperscript{12} Public Interest Statement at 124.

\textsuperscript{13} Altice Petition at 13.

\textsuperscript{14} \textit{Infra} Section I. C
statements, and even pointed Congressional testimony.\textsuperscript{15} The response of T-Mobile and Sprint with respect to these concerns has been, as C Spire put it, “trust us”\textsuperscript{16} – a wholly inadequate response. Applicants are walking an incongruous line: “T-Mobile and the New T-Mobile want to use MVNOs as potential competitors for purposes of the Commission’s analysis of competition in order to get their transaction approved, but they will not commit to providing MVNO partners with the terms that will create sustainable, nationwide competition.”\textsuperscript{17}

T-Mobile and Sprint maintain, including in their most recent Opposition, their reliance on “incentives” rather than commitments, arguing that price increases will be held in check due to “multi-year wholesale agreements with MVNOs that must be honored after the merger.”\textsuperscript{18} Applicants also state that they will honor Altice’s existing agreement.\textsuperscript{19} Altice appreciates this commitment, but living up to the existing terms of a regional, term-limited agreement is not sufficient to ensure long-term, nationwide wireless competition from MVNOs. As the Woroch Declaration states, “It is typical for these agreements to run three or four years.”\textsuperscript{20}

\textsuperscript{15} No firm commitments to the MVNO market are made by Sprint or T-Mobile in: (1) their Public Interest Statement; (2) the statements made by T-Mobile to Congress; or (3) the Opposition recently filed by Sprint and T-Mobile. See Public Interest Statement at 102-116; Game of Phones: Examining the Competitive Impact of the T-Mobile – Sprint Transaction, Senate Committee on the Judiciary, Subcommittee on Antitrust, Competition Policy, and Consumer Rights, 116th Cong. 6 (June 27, 2018) (T-Mobile’s response to questions for the Congressional record), available at https://www.judiciary.senate.gov/imo/media/doc/Legere%20Responses%20to%20QFRs.pdf; Opposition at 85-92.

\textsuperscript{16} C Spire Petition at ii, 4, 11.

\textsuperscript{17} Altice Petition at 16; see also Console Enterprises Petition at 1, 4 (noting a “general lack of MVNO commitments from Sprint and T-Mobile to ensure continued competition in the market segment.”); C Spire Petition at 9-11; Union Telephone Petition at 25 (“While openly asserting that three strong nationwide carriers will deliver robust consumer benefits, and stating its intention to take a number of pro-competitive actions if the transaction is approved, T-Mobile provides no examples illustrating where a marketplace populated by three dominant providers was better for consumers. Nor does it offer any commitments that might partially offset anticompetitive effects from shrinking from 4 to 3.”); Tucows Comments at 9-10. Instead of commitments, the Applicants ask the Commission to rely on “incentives” to preserve competition. Console Enterprises, C Spire, Union Telephone Petitioners, and Tucows agree with Altice that “[h]aving ‘no incentive to impair’ the business opportunities of its MVNO partners is . . . not the same as affirmatively committing to provide the terms MVNO partners.” See Altice Petition at 17, citing Public Interest Statement at 124; Console Enterprises Petition at 4; C Spire Petition at 9-11; Union Telephone Petition at 25; Tucows Comments at 9-10.

\textsuperscript{18} Opposition at 89.

\textsuperscript{19} Id.

\textsuperscript{20} Id. at Appendix I, “Declaration of Dr. Glenn Woroch,” 24 (“Woroch Declaration”).
term nature of existing agreements will not provide sufficient opportunity for MVNOs to prepare for and respond to the new competitive landscape post-merger, particularly in the face of unprecedented consolidation in the wireless industry and related effects.

For the proposed merger to meet the public interest standard, there must be long-term competition from MVNOs, which rely on reasonable, long-term wholesale agreements. As described above, the most likely, and possibly only, source of meaningful competition on price and products comes from full infrastructure-based MVNOs. The Applicants themselves suggest MVNO competition is a mitigating factor that should permit their merger, but do not commit to supporting MVNOs offering meaningful competition.\(^{21}\) Nearly all smaller wireless competitors have emphasized to the Commission that reliance on current commercial arrangements and “incentives” for the future is not enough to mitigate the harms of this transaction.\(^{22}\) C Spire expresses it best: “Trust Us is not a sufficient public interest showing. As it has done in the past, the Commission must impose meaningful enforceable safeguards in order to guard against anti-competitive behavior.”\(^{23}\)

Compounding the absence of actual commitments to support competition in the MVNO market are the hostile statements made by T-Mobile against MVNOs, particularly cable MVNOs: “T-Mobile will say ‘NO’ to MVNO deals with cable companies.”\(^{24}\) This hostility was noted by

\(^{21}\) See Public Interest Statement at 102-116.

\(^{22}\) See Altice Petition at 16; Console Enterprises Petition at 1; C Spire Petition at 9-11; Union Telephone Petition at 25; Tucows Comments at 9-10; Common Cause Petition at 14; CWA Comments at 12; DISH Petition at 50.

\(^{23}\) C Spire Petition at 11 (internal quotations omitted).

\(^{24}\) See John Legere, What’s Next: My 2017 Predictions, T-MOBILE NEWSROOM (Jan. 4, 2017), available at https://www.t-mobile.com/news/legere-2017-predictions (“In 2017, Big Cable will unleash their assault on wireless through their MVNO deals, and big surprise – customers won’t be satisfied. I predict Big Cable will have their assed handed to them and will be in full retreat from their MVNO strategy by end of year. After all, the last two letters in MVNO are ‘NO – as in customers will say ‘NO, an MVNO strategy is just not good enough, Big Cable.’ …T-Mobile will say ‘NO’ to MVNO deals with cable companies.”).
numerous commenters, and must be considered by the Commission. The Common Cause Petitioners highlight that “T-Mobile CEO John Legere has, until the announcement of the present transaction, dismissed the cable industry’s ability to compete in the wireless market. Earlier this year, Legere called cable’s wireless play “irrelevant” and “incompetent,” and asserted that cable’s MVNO or Wi-Fi model does not work and does not pose a competitive threat to the nationwide wireless carriers.” Charter noted similar anti-cable-MVNO statements by T-Mobile. This is in stark contrast to the Public Interest Statement filed by T-Mobile and Sprint, which asserts that competition from MVNOs, including cable MVNOs, is a legitimate source of competition that will mitigate the impact of further market consolidation on wireless competition and should justify grant of their transfer applications.

As Altice stated in its Petition, “If New T-Mobile is truly dedicated to supporting its MVNO partners, as portrayed in its Public Interest Statement, it should have no issue with making tangible commitments to offer terms that will enable robust nationwide MVNO competition by its partners, such as Altice.”

---

25 See Altice Petition at 46; Common Cause Petition at 14; CWA Comments at 12; DISH Petition at 50.
26 Common Cause Petition at 14.
28 See Public Interest Statement at 105, 111 (noting that “[m]ajor wireless players have recognized the competitive pressure exerted by cable providers” and that “[b]y collaborating to compete in mobile wireless on a nationwide scale and combining their assets, resources, and expertise under a new partnership, Comcast and Charter have multiplied their individual competitive strengths to become an even more formidable new force in the industry.”).
29 Altice Petition at 18-19.
C. The Loss of Sprint and T-Mobile, Two Disruptive, “Maverick” Partners in the Wholesale Market, Will Diminish the Ability of MVNOs to Offer Robust Nationwide Competition Over the Long Term

The Commission must only approve the transaction if the Applicants demonstrate that the proposed consolidation will serve the public interest, convenience, and necessity.\(^{30}\) The transaction-specific harms impacting MVNOs, if the transaction is approved, are clear. As Altice stated in its Petition, “Today, T-Mobile and Sprint serve as MVNO and roaming partners for a combined 68% of the market. Each carrier is known for providing reasonable voice and data roaming, as opposed to the other major carriers. The competition between T-Mobile and Sprint as MVNO and roaming partners has been good for smaller wireless players, the MVNO market and consumers. If the transfer applications are approved, that competition will be gone.”\(^ {31}\) DISH came to a similar conclusion, estimating that Sprint and T-Mobile “provide network service for more than 60% of MVNOs’ subscribers.”\(^ {32}\)

Interestingly, T-Mobile and Sprint attempt in their Opposition to downplay their significant role in the MVNO market, characterizing AT&T and Verizon as the primary MVNO partners today.\(^ {33}\) However, their own data\(^ {34}\) confirms the importance of Sprint and T-Mobile to the MVNO market. Applicants’ Declaration of Dr. Glenn Woroch (“Woroch Declaration”) states that the majority of MVNOs, 62 of the 100, rely on one MNO partner to provide service.\(^ {35}\) Of those MVNOs, 42 (or 68%) rely on Sprint and T-Mobile.

\(^{30}\) 47 U.S.C. § 310(d); See, e.g., Application of AT&T Inc. and Qualcomm Incorporated For Consent to Assign Licenses and Authorizations, WT Docket No. 11-18, Order, FCC 11-188, para. 23 (2011) (“AT&T-Qualcomm Order”).

\(^{31}\) Altice Petition at 11.

\(^{32}\) DISH Petition at 57.

\(^{33}\) Opposition at 86.

\(^{34}\) Woroch Declaration at 25-26.

\(^{35}\) Woroch Declaration at 26.
Unquestionably, Sprint and T-Mobile are the major, disruptive partners of MVNOs today, and have been known for providing reasonable MVNO agreements. The list of commenters concerned about the loss of these competitors is extensive – Charter, C Spire, Free Press, the Common Cause Petitioners, and the Union Telephone Petitioners echoed the harms resulting from the loss of these particularly important “maverick” competitors for the MVNO market. According to the American Antitrust Institute, “Mergers that eliminate such mavericks are particularly likely to result in anticompetitive post-merger coordination.” Charter has maintained that “the proposed Sprint/T-Mobile transaction eliminates the one company willing to enter into the kind of mobile virtual network operator (MVNO) agreement that would have enabled Charter to be a robust mobile competitor.” The American Antitrust Institute also emphasized the ill effects on the wholesale market and MVNOs:

36 Many commenters urged the Commission to consider the impact of the loss of these two individual mavericks, which compete today for MVNO business, on the ability of MVNO partners to obtain nationwide, long-term, reasonable MVNO agreements. See RWA Petition at 12; American Antitrust Institute Petition at 4, 14; C Spire Petition at 11; Free Press Petition at 20; Common Cause Petition at 28; Union Telephone Petition at 39. The American Antitrust Institute explains that “[t]he merger eliminates head-to-head competition between the two disruptive rivals in the national U.S. wireless market . . . Such competition, and the benefits it delivers to consumers, would be lost by the merger.” American Antitrust Institute Petition at 4. The list of commenters concerned about this issue goes on – Charter, C Spire, Free Press, The Common Cause Petitioners, and the Union Telephone Petitioners echoed the harms resulting from the loss of these particularly important “maverick” competitors for the MVNO market.

37 See Charter Information Request Response at 1; C Spire Petition at 11 (“The Proposed Transaction poses the risk of the elimination of not one, but two ‘mavericks,’ from the wireless marketplace. This dramatically increases the risk that both retail and wholesale prices will rise.”); Free Press Petition at 20 (“[M]ore recently and in the wake of government decisions to oppose prior wireless industry attempts to contract from four to three national carriers, both T-Mobile and Sprint have taken on the role of maverick competitors, and collectively gained share relative to the Twin Bells in the broader cellular market and in specific market segments as a result. Both have used product innovation and price promotions to differentiate and compete.”); Common Cause Petition at 28 (“The merger would negatively impact the wholesale market by raising the cost of capacity access to low-cost resellers.”); Union Telephone Petition at 39 (“Sprint has been a much better roaming partner than other carriers, and its willingness to support Mobile Virtual Network Operators (‘MVNO’) has had salutary effects on competition and consumer choice.”); Tucows Comments (“With two providers, Ting has the ability to enroll new customers on the lowest cost platform. Rate changes can be held in check, at least in part, because Sprint and T-Mobile can compete against each other for business from Ting Mobile”).

38 American Antitrust Institute Petition at 14.

39 Charter Information Request Response at 1; see also Tucows Comments at 9-10 (“With two providers, Ting has the ability to enroll new customers on the lowest cost platform. Rate changes can be held in check, at least in part, because Sprint and T-Mobile can compete against each other for business from Ting Mobile.”); Union Telephone Petition at 19 (“Sprint will be eliminated as an independent competitive constraint, it will no longer be
Potential anticompetitive coordinated conduct would not be limited to retail wireless subscribers. It could extend to fixing wholesale prices for MVNOs, jointly developing rules governing MVNO access to infrastructure, or even a group boycott of MVNO resellers in gaining access to the resources necessary to compete at retail. Post-merger, MVNOs would be both the target of anticompetitive conduct by the Big 3 and yet still be dependent on them for access to the resources. 40

Without question, the elimination of competition between Sprint and T-Mobile will put “upward pressure on wholesale prices,” said the American Antitrust Institute, hampering competition from MVNOs.41

The Commission must consider the substantial concerns articulated by Altice, C Spire, Charter, Tucows, Console Enterprises, DISH, Free Press, the Communications Workers of America, the American Antitrust Institute, the Common Cause Petitioners, the Union Telephone Company Petitioners, and the Rural Wireless Association about the negative impacts on MVNOs and the wholesale market. Collectively, these concerns include, but are not limited to: (1) loss of independent competitive constraints that discipline the largest carriers and keep wholesale rates, terms and conditions in check; (2) elimination of competition in the wholesale 4G and 5G markets; (3) upward pressure on wholesale prices and its impact on the retail market; (4) price fixing; (5) reduced access by MVNOs to critical infrastructure components necessary to compete; and (6) reduced availability of long-term nationwide contracts for MVNOs, which are critical.

40 American Antitrust Institute Petition at 10.
41 Id. at 15. Console Enterprises echoed this transaction-specific harm, stating that the removal of Sprint and T-Mobile “will critically stifle competition in the wholesale 4G and 5G markets.” See Console Enterprises Petition at 1.
Ironically, it was these same concerns that Sprint raised against the merger of AT&T and T-Mobile, a merger that failed, in large part, due to Sprint’s own advocacy. As C Spire put it, “despite the leading role Sprint played in stopping the prior consolidation of the wireless market from four to three nationwide carriers by explaining the harms of such consolidation, the Application does not cite, or make any direct effort to distinguish, the ill-fated AT&T/T-Mobile merger.”\(^{42}\)

When Sprint petitioned to deny the AT&T/T-Mobile merger in 2011, it highlighted many of the same negative impacts that are detailed by Altice and the dozen commenters cited above.

- **First**, Sprint argued that the merged entity would *control assets other providers need to compete, enabling them to raise costs and squelch competition*: “AT&T’s control over assets other providers need to compete, such as backhaul, spectrum, and roaming, would exacerbate the anti-competitive effects of the takeover,” enabling “the Twin Bells to raise competitors’ costs, reduce their network quality, and quash competitive alternatives.”\(^{43}\)

- **Second**, Sprint noted the “*unprecedented spectrum holdings*” of the combined entity and the fact that the merger would *reduce roaming options*: “Roaming is a key input for smaller carriers that do not operate national networks.”\(^{44}\)

- **Third**, Sprint argued that post-merger AT&T and Verizon would *raise costs and block retail price competition*: “AT&T and Verizon would be able to raise the costs for Sprint and other carriers through their control of backhaul circuits, landline interconnection, and roaming, thereby preventing the non-Bells from offering lower prices and thus hindering if not blocking effective retail price competition.”\(^{45}\)

- **Finally**, Sprint acknowledged the *negative impact on nationwide competition*: “The ability to offer nationwide service is now a *critical dimension of competition*. It is this nationwide service that customers want and that wireless carriers strive to offer, either through networks, roaming and access agreements, or both.”\(^{46}\)

---

\(^{42}\) See C Spire Petition at 9.

\(^{43}\) Petition to Deny of Sprint Nextel Corporation, WT Docket No. 11-65, at ii (filed May 31, 2011).

\(^{44}\) *Id.* at ii-iii (emphasis added).

\(^{45}\) *Id.* at 33.

\(^{46}\) *Id.* at 20 (emphasis added).
Altice agrees with all of these points raised by Sprint, which are equally applicable to the present transaction. T-Mobile and Sprint should respond to these points, together with the concerns raised by Altice and the commenters discussed in this section. The Commission must examine and address each concern in order to prevent the predicted harms from the proposed combination.

D. If the Commission Moves Forward, it Must: (1) Impose Safeguards That Ensure Meaningful, Long-Term Competition in the Wireless Market For All MVNOs; and (2) Require New T-Mobile to Divest Its Spectrum Holdings in Excess of the Spectrum Screen

If the Commission determines to grant the transfer applications, it must protect the wholesale wireless market, and consumers, by requiring both competitive safeguards that require the Applicants to offer reasonable, durable, long-term agreements to all MVNO partners to ensure meaningful, long-term competition in the wireless market, and divestiture of spectrum beyond the spectrum screen.

1. Competitive Safeguards

Altice noted in its Petition that “[t]he Commission must question the likelihood of MVNO partners achieving acceptable long-duration, nationwide terms with any of the three big carriers, if the New T-Mobile is approved without conditions that require these commitments into the future.”47 Tucows, Charter, the Communications Workers of America, the Rural Wireless Association, and the American Antitrust Institute agree, noting the critical importance of entering into these agreements, the difficulties faced today, and the likelihood that the New T-Mobile would be less likely to provide reasonable wholesale agreements.48 Tucows highlighted the

47 Altice Petition at 14; See Tucows Comments at 8-9; Charter Comments at 5-6; CWA Comments at 14; RWA Petition at 12; American Antitrust Institute Petition at 10.

48 See Tucows Comments at 8-9; Charter Comments at 5-6; CWA Comments at 14; RWA Petition at 12; American Antitrust Institute Petition at 10.
particularly challenging imbalance of bargaining power between MNOs and MVNOs, which the proposed transaction would further exacerbate:

While MVNOs operate under contracts with their back-end network provider(s), no law or regulation requires the network operator to renew that contract or to renew it on commercially reasonable terms. Each MVNO operates under peril that its business could change, or end, if its network provider decided to wind up or substantially alter its MVNO business. This provides the network providers significant leverage in contract negotiation.49

Charter, an MVNO whose competitive impact is relied upon by the Applicants to justify their merger,50 also notes similar issues in reaching competitively reasonable agreements with the largest carriers.51 The barrier to entry in the nationwide wireless market is extremely high. Charter notes many of the challenges for entry in the wireless market, including “spectrum license acquisition costs, significant network deployment costs, tower site acquisition or leasing and construction costs, costs of purchasing network equipment, back haul costs, and the costs of interconnection and roaming.”52 These challenges underscore the importance of instituting safeguards to foster true competition from full infrastructure-based MVNOs in the wireless market if the proposed merger is to be approved.

As Altice urged the Commission in its Petition, it is essential that the Commission receive firm commitments from T-Mobile, Sprint and the New T-Mobile that they will support long-term, nationwide MVNO competition through their partners. Specifically, Altice urges the Commission to condition any approval of the transfer applications on the New T-Mobile:

49 Tucows Comments at 8-9.
50 See Public Interest Statement at 102-116.
51 Charter Comments at 5-6 (“Charter faces certain limitations in its ability to compete in the mobile market on the same terms as Verizon or other facilities-based carriers. There are significant limitations to its MVNO agreement, which are confidential but limit Charter’s ability to fully manage the mobile network and sell the product, thereby hindering the competitiveness of Charter’s mobile service.”); see also CWA Comments at 14 (“MVNOs depend upon facilities-based carriers’ networks, and this relationship can be terminated or altered when it suits the network provider. For this reason, the competitive significance of MVNOs has historically been seen as limited.”).
52 Charter Comments at 6.
(1) committing to honor and diligently implement existing MVNO agreements, including good faith finalization of any future requirements in those agreements;

(2) committing to offer existing MVNO partners, for the full term of existing agreements, or for ten (10) years post consummation, whichever occurs later, the best wholesale terms and conditions that are offered individually by each of the Applicants to their MVNO partners, with a presumption of long term renewals and, if requested, offering the improved nationwide coverage and service offerings of the New T-Mobile to all existing MVNO partners of the Applicants;

(3) divesting spectrum that exceeds the spectrum screen, and associated network infrastructure, in order to make those assets available to MVNOs, and smaller wireless players that need spectrum to enable nationwide mobile deployments and wireless competition; provided, however, that any divestiture partner(s) cannot be under common ownership or control with AT&T, Verizon or the New T-Mobile; and

(4) filing detailed quarterly reports with the Commission describing New T-Mobile’s status in implementing these commitments for ten (10) years post-consummation.53

2. Divestiture

Petitioners and commenters agree with Altice that if the Commission approves the merger, it must condition such approval on “divesting spectrum that exceeds the spectrum screen, and associated network infrastructure, in order to make those assets available to MVNOs, and smaller wireless players that need spectrum to enable nationwide mobile deployments and wireless competition.”54

---

53 A more complete recitation of the conditions Altice views as appropriate is contained in the Altice Petition. See Altice Petition at 21-22.

54 See id. at 21-23; Petition to Condition or Deny the Transfer of Control of Licenses and Authorizations of Rural South Carolina Operators, WT Docket No. 18-197, at 4-5 (filed Aug. 27, 2018) (“Rural South Carolina Operators Petition”) (calling for divestiture of Sprint’s monopolistic holdings of 2.5 GHz spectrum in South Carolina); Petition to Deny of Voqal, WT Docket No. 18-197, at 19 (filed Aug. 27, 2018) (“Voqal Petition”) (demanding divestiture of one third of Sprint’s 2.5 GHz holdings in each CMA); DISH Petition at 68-74 (petitioning the Commission to deny the transaction due, in part, to spectrum holdings in excess of the spectrum screen); Union Telephone Petition at 45; Petition to Deny of Broadcast Data Corp., WT Docket No. 18-197, at 6-8 (filed Aug. 27, 2018) (“Broadcast Data Corp. Petition”) (petitioning for divestiture of spectrum exceeding the screen, recommending divestiture of Sprint’s 2.5 GHz spectrum); Comments of Frontier Communications Corporation and Windstream Services, LLC WT Docket No. 18-197, at 2-4 (filed Aug. 27, 2018) (“Frontier and Windstream Comments”) (noting the broad triggering of the spectrum screen and confirmed the desire for independent operators...
T-Mobile and Sprint argue in their Opposition that the spectrum screen is merely a tool to identify local markets for competitive review. Altice agrees that it is a tool, and use of this tool is necessary with respect to this potential transaction as the screen is triggered in nearly every major market, including 97 out of 100 top CMAs. Applicants’ main argument opposing divestiture is that in local markets where Sprint and T-Mobile would combine, AT&T and Verizon would remain. This argument, however, misses the primary point – in each of these markets, which are exceedingly numerous, there were previously four strong competitors, and now there will be three. If the Commission permits such consolidation, divestitures are necessary to enable access to spectrum for a fourth competitor, or more. Excessive spectrum concentration in three big carriers would further exacerbate the numerous market wide and MVNO-specific harms that are detailed in these Reply Comments, creating even more barriers to new entrants and further limiting future competition in the wireless market.

II. CONCLUSION

There is broad agreement, particularly among the last remaining independent competitors in the wireless market, and public interest groups, that the proposed merger will harm competition, MVNOs, and all market participants. If the Commission is to approve the merger, the only path to mitigate the anticompetitive effects of four-to-three market concentration is to ensure that all MVNOs can bring robust, long-term, nationwide competition to the dominant carriers. Full infrastructure-based MVNOs, such as Altice, will exert the most competitive pressure on dominant carriers, and need the most protection. MVNOs are placed in great danger by the proposed transaction because Applicants will not make commitments to support a robust

to obtain divested spectrum); Union Telephone Petition at 45 (petitioning for divesture of spectrum that exceeds the spectrum screen).

55 Opposition at 25.
56 Id. at 31.
and durable MVNO market, leaving it to the Commission to preserve future wireless competition by imposing conditions. In the absence of such conditions, or voluntary commitments from Sprint, T-Mobile and the New T-Mobile to support a robust and durable MVNO market, offering the full nationwide footprint of the New T-Mobile to all existing partners of T-Mobile and Sprint in long-term contracts, the Commission has only one choice – to deny the transfer applications.

Respectfully submitted,

/s/ Jennifer Richter
Jennifer L. Richter
Shea Boyd
Akin Gump Strauss Hauer & Feld LLP
1333 New Hampshire Avenue, NW
Washington, DC 20036
Tel: (202) 887-4524
jrichter@akingump.com

October 31, 2018

Counsel for Altice USA, Inc.
EXHIBIT A

Full Infrastructure-Based MVNO Diagram
## Altice USA MVNO Implementation Compared to Others

<table>
<thead>
<tr>
<th>Full MVNO</th>
<th>Access (e-)SIMs</th>
<th>Telephone Numbers</th>
<th>Roaming</th>
<th>Data Internet</th>
<th>Voice Messages</th>
<th>Rating Charging</th>
<th>MVNO CRM</th>
<th>MVNO Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAN</td>
<td>Access Control</td>
<td>Roaming Partners &amp; Networks</td>
<td>Roaming Partners &amp; Networks</td>
<td>Data Services</td>
<td>VoLTE/VoWiFi SMS</td>
<td>Online Rating Charging</td>
<td>Customer Portal CRM</td>
<td>End Customer Billing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>White Label</th>
<th>Access (e-)SIMs</th>
<th>Telephone Numbers</th>
<th>Roaming</th>
<th>Data Internet</th>
<th>Voice Messages</th>
<th>Rating Charging</th>
<th>MVNO CRM</th>
<th>MVNO Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAN</td>
<td>Access Control</td>
<td>Wireless Phone Number</td>
<td>Roaming Partners &amp; Networks</td>
<td>Data Services</td>
<td>VoLTE/VoWiFi SMS</td>
<td>Online Rating Charging</td>
<td>Customer Portal CRM</td>
<td>End Customer Billing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Light MVNOs</th>
<th>Access (e-)SIMs</th>
<th>Telephone Numbers</th>
<th>Roaming</th>
<th>Data Internet</th>
<th>Voice Messages</th>
<th>Rating Charging</th>
<th>MVNO CRM</th>
<th>MVNO Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAN</td>
<td>Access Control</td>
<td>Roaming Partners &amp; Networks</td>
<td>Roaming Partners &amp; Networks</td>
<td>Data Services</td>
<td>VoLTE/VoWiFi SMS</td>
<td>Online Rating Charging</td>
<td>Customer Portal CRM</td>
<td>End Customer Billing</td>
</tr>
</tbody>
</table>

**Legend:**
- Multiple Partners
- MNO Managed
- MVNO Managed
CERTIFICATE OF SERVICE

I, Shea Boyd, hereby certify that on this 31st day of October, 2018, I caused a copy of the foregoing to be served upon the following individuals by U.S. mail:

Nancy J. Victory*
DLA Piper LLP
500 8th Street, NW
Washington, DC 20004
nancy.victory@dlapiper.com
Counsel to T-Mobile US, Inc.

Matthew F. Wood
Free Press
1025 Connecticut Avenue, NW, Suite 1110
Washington, DC 20036
mwood@freepress.net
Policy Director for Free Press

Andrew Golodny
Steptoe & Johnson LLP
1330 Connecticut Avenue, NW
Washington, DC 20036
agolodny@steptoe.com
Counsel to DISH Network LLC

Jill Canfield*
NTCA - The Rural Broadband Association
4121 Wilson Boulevard, Suite 1000
Arlington, VA 22203
jcanfield@ntca.org

Allen P. Grunes
The Konkurrenz Group
5335 Wisconsin Avenue, NW, Suite 440
Washington, DC 20015
allengrunes@konkurrenzgroup.com
Counsel to Communications Workers of America

Regina M. Keeney*
Lawler, Metzger, Keeney & Logan, LLC
1717 K Street, NW, Suite 1075
Washington, DC 20006
gkeeney@lawlermetzger.com
Counsel to Sprint Corporation

Caressa D. Bennet
Womble Bond Dickinson LLP
1200 19th Street, NW, Suite 500
Washington, DC 20036
carri.bennet@wbd-us.com
Counsel to Rural Wireless Association

Debbie Goldman
Communications Workers of America
501 3rd Street, NW
Washington, DC 20001
dgoldman@cwa-union.org
Telecommunications Policy Director for Communications Workers of America

Johanna R. Thomas*
Communications, Internet & Technology
Jenner & Block
1099 New York Avenue, NW, Suite 900
Washington, DC 20001
jthomas@jenner.com
Counsel to SoftBank Group Corp.

Catherine Wang
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004
Catherine.wang@morganlewis.com
Counsel to Charter Communications, Inc.
Carl W. Northrop  
Telecommunications Law Professionals PLLC  
1025 Connecticut Avenue, NW, Suite 1011  
Washington, DC 20036  
cmahoney@telecomlawpros.com  
Counsel to Cellular South d/b/a C Spire

David A. LaFuria  
Lukas, LaFuria, Gutierrez & Sachs, LLP  
8300 Greensboro Drive, Suite 1200  
McLean, VA 22102  
dlafuria@fcclaw.com  
Counsel for Union Wireless, Pioneer Cellular, Nex-Tech Wireless, Inc., and SI Wireless

Enrique Gallardo  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102  
Enrique.Gallardo@cpuc.ca.gov  
Counsel for California Public Utilities Commission

Yosef Getachew  
805 15th Street, NW, Suite 800  
Washington, DC 20005  
Common Cause

Diana Moss, President  
American Antitrust Institute  
1025 Connecticut Avenue, NW, Suite 1000  
Washington DC 20036  
dmoss@antitrustinstitute.org  
American Antitrust Institute

Lauren J. Coppola  
Conferencing Robins Kaplan LLP  
800 Boylston Street, Suite 2500  
Boston, MA 02199  
lcoppola@robinskaplan.com  
Counsel to CarrierX

David A. LaFauria  
Lukas, LaFuria, Gutierrez & Sachs, LLP  
8300 Greensboro Drive, Suite 1200  
McLean, VA 22102  
dlafuria@fcclaw.com  
Counsel to Broadcast Data Corp. and Union Telephone et al.

Christopher Price  
564 Rio Lindo Avenue, Suite 203  
Chico, CA 95926  
Console Enterprises

Randolph J. May  
P.O. Box 60680  
Potomac, MD 20859  
301-984-8253  
Free State Foundation

Eliot Noss  
96 Mowat Avenue  
Toronto, Ontario  
Canada M6K 3M1  
Tucows

Anne S. Cruz  
Tucker Ellis LLP  
515 S. Flower Street, 42nd Floor  
Los Angeles, CA 90071  
Counsel for TracFone Wireless, Inc.

David Glickman, CEO  
1550 Scenic Avenue  
Costa Mesa, CA 92626  
Mint Mobile & Ultra Mobile

Chris Chuang  
900 Main Campus Drive, Fifth Floor  
Raleigh, NC 27606  
Republic Wireless

Paul Greene, CEO  
11565 Old Georgetown Rd., Suite 230  
Rockville, MD 20852  
Prepaid Wireless Group
AJ Burton
1800 M Street, NW, Suite 850S
Washington, DC 20036
(202) 223-6807
Frontier Communications

Donald L. Herman, Jr.
Herman & Whiteaker, LLC
6720B Rockledge Drive, Suite 150
Bethesda, MD 20817
Counsel for the Rural Operators

John Schwartz
Chief Executive
825 Delaware Avenue
Longmont, CO 80501
Voqal

Kathy Harris*
Mobility Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
kathy.harris@fcc.gov

Linda Ray*
Broadband Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
linda.ray@fcc.gov

Jim Bird*
Office of General Counsel
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
TransactionTeam@fcc.gov

Kate Matraves*
Competition and Infrastructure Policy Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
catherine.matraves@fcc.gov

David Krech*
Telecommunications and Analysis Division International Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
david.krech@fcc.gov

* Served via email with party’s consent.

Shea Boyd
Akin Gump Strauss Hauer & Feld LLP