

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of )  
 )  
WORLDCALL INTERCONNECT, INC. )  
a/k/a EVOLVE BROADBAND, )  
Complainant )  
 )  
v. )  
 )  
AT&T MOBILITY LLC )  
Defendant )

File No. EB-14-MD-011

**Supplemental Declaration of Jonathan Orszag**

**July 24, 2015**

# CONTENTS

I.	Qualifications .....	2
II.	Assignment and Summary of Conclusions .....	2
III.	AT&T's and WCX's Proposed Roaming Agreements .....	4
IV.	AT&T's Proposed Roaming Terms and Conditions Are Market Based and Consistent with the Commission's <i>Data Roaming Order</i> .....	7
	A. AT&T's proposed rates are consistent with rates in the marketplace for data roaming .....	7
	B. The proposed usage restrictions and overall scope of the agreement proposed by AT&T are consistent with AT&T's agreements with other wireless service providers .....	9
V.	AT&T's Proposed Roaming Rates Are Not Substantially in Excess of AT&T's Retail, International, and Resale Data Rates .....	10
	A. Retail Rates .....	13
	B. International Roaming Rates .....	14
	C. Resale Rates .....	15
VI.	WCX's Proposed Agreement Is Not Commercially Reasonable .....	16
	A. WCX's proposed roaming rates are not commercially reasonable .....	16
	B. WCX's proposal includes unusual terms and conditions regarding roaming usage and the overall scope of the roaming agreement .....	17

Appendix A: Curriculum Vitae - Jonathan M. Orszag

Appendix B: Tables

## I. Qualifications

1. My name is Jonathan Orszag. I am a Senior Managing Director and member of the Executive Committee of Compass Lexecon, LLC, an economic consulting firm. My services have been retained by a variety of public-sector entities and private-sector firms ranging from small businesses to Fortune 500 companies. These engagements have involved a wide array of matters, from entertainment and telecommunications issues to issues affecting the sports and retail industries. I have provided testimony to the U.S. Congress, U.S. courts, the European Court of First Instance, the Federal Communications Commission (“the Commission”), and other domestic and foreign regulatory bodies on a range of issues, including competition policy, industry structure, and fiscal policy.
2. Previously, I served as the Assistant to the U.S. Secretary of Commerce and Director of the Office of Policy and Strategic Planning and as an Economic Policy Advisor on President Clinton’s National Economic Council. For my work at the White House, I was presented the Corporation for Enterprise Development’s 1999 leadership award for “forging innovative public policies to expand economic opportunity in America.”
3. I am a Fellow at the University of Southern California’s Center for Communication Law & Policy and a Senior Fellow at the Center for American Progress. I received an M.Sc. in economic and social history from Oxford University, which I attended as a Marshall Scholar. I graduated *summa cum laude* in economics from Princeton University and was elected to Phi Beta Kappa.
4. While I served in the federal government, I worked on a number of policy issues involving the telecommunications sector, including policy matters affecting the wireless industry. Since leaving government, I have been active in applied analysis of issues affecting the telecommunications sector. For example, I have written about wireless spectrum auctions; valued wireless spectrum; written about the consumer benefits from broadband access; analyzed policy issues affecting the mobile wireless industry; and analyzed a number of mergers between wireless companies.
5. My full *curriculum vitae*, including a listing of my prior testimony, is included as Appendix A. I filed a Declaration in this matter on November 5, 2014.<sup>1</sup>

## II. Assignment and Summary of Conclusions

6. I have been asked by counsel for AT&T Mobility (“AT&T”) to update the calculations and opinions in my November 2014 Declaration in the matter of Worldcall Interconnect, Inc. a/k/a Evolve Broadband’s (“WCX”) complaint regarding AT&T’s alleged violation of its obligations to provide data roaming on “commercially reasonable” terms.<sup>2</sup> I have also been asked to review the new data

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<sup>1</sup> See Declaration of Jonathan Orszag, November 5, 2014 (hereinafter, *Orszag Declaration*).

<sup>2</sup> Amended Complaint, *WorldCall Interconnect, Inc. a/k/a Evolve Broadband v. AT&T Mobility, LLC.*, October 1, 2014 (hereinafter, *Amended Complaint*), at ii. See also Complaint, *WorldCall Interconnect, Inc. a/k/a Evolve Broadband v. AT&T Mobility, LLC*, September 8, 2014 (hereinafter, *Complaint*).

roaming agreements proposed by AT&T and WCX to assess, from an economic perspective, whether the agreements meet the “commercially reasonable” standard as defined by the Commission in the *Data Roaming Order* and *Declaratory Ruling*.<sup>3</sup>

7. As discussed in more detail below, since I filed my previous declaration, AT&T and WCX have proposed new data roaming agreements, which contain, among other terms, revised data roaming rates and usage restrictions. In addition, AT&T has executed new data roaming agreements with other independent wireless service providers. In this declaration, I update the economic analyses in my previous declaration to incorporate the terms and conditions in the recently proposed agreements, the terms and conditions in AT&T’s executed agreements with other wireless service providers, and the effective roaming rates that result from AT&T’s current agreements with other wireless service providers.
8. In addition, through the Wireless Bureau’s *Declaratory Ruling*, the Commission provided further guidance about whether a particular data roaming offer includes commercially reasonable terms and conditions. Specifically, the Commission concluded that the *Data Roaming Order* permitted consideration of evidence regarding rates charged by the parties in other contexts. The Commission continued that the parties can adduce evidence as to whether proffered roaming rates are “substantially in excess of retail rates, international rates, and MVNO/resale rates.” The Commission also reiterated its earlier determination that it is appropriate to compare the offered roaming rates to the rates the parties have negotiated in other domestic roaming agreements.<sup>4</sup>
9. In light of the Commission’s *Declaratory Ruling*, I have been asked to include in this declaration additional evidence regarding AT&T’s retail rates, international roaming rates, and MVNO/resale rates for mobile data services.
10. My updated analyses do not change the conclusions in my previous declaration:
  - I have seen no evidence that AT&T’s terms and conditions are tantamount to a refusal to deal. AT&T’s proposal contains terms and conditions entirely consistent with – and in some cases almost identical to – those included in dozens of arm’s length agreements between AT&T and other independent wireless service providers, many of which are rural carriers.
  - The rates offered by AT&T for 4G LTE-based roaming match the rates AT&T has agreed upon in recent LTE agreements with independent wireless service providers. These rates are below the average effective roaming rates that AT&T pays to other domestic carriers and the average effective rates negotiated between AT&T and other rural wireless service providers.

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<sup>3</sup> Second Report and Order, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, WT Docket No. 05-265, 26 FCC Rcd. 5411, April 7, 2011 (hereinafter, *Data Roaming Order*); Wireless Telecommunications Bureau, *Declaratory Ruling, Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, WT Docket No. 05-265, December 18, 2014 (hereinafter, *Declaratory Ruling*).

<sup>4</sup> *Declaratory Ruling*, ¶¶ 9, 15-16.

- The usage and scope restrictions proposed by AT&T are entirely consistent with [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] those included in agreements executed between AT&T and other independent wireless service providers.
  - There are many limitations to using rates charged by carriers in other contexts as reference points for domestic roaming rates. Nonetheless, the evidence shows that AT&T's proposed rates to WCX are within the range (and not "substantially in excess") of these other rates.
  - WCX's proposed data roaming rates are not commercially reasonable. WCX's proposed data roaming rates are not consistent with rates that would produce an efficient allocation of economic resources as they would require AT&T to provide more favorable rates to WCX than to other independent wireless service providers.
  - WCX's proposal suggests a level of usage that is far in excess of the usage permitted in AT&T's roaming agreements with other wireless service providers. In addition, the scope of WCX's proposed agreement is also significantly different than the scope of the roaming agreements AT&T has negotiated with other wireless service providers and beyond what is necessary to supplement the mobile wireless services offered by WCX when its subscribers are outside WCX's home area.
11. In the following sections, I describe in more detail the facts and economic analyses that lead to these conclusions. My opinions may be revised in light of any new evidence that may emerge. I, therefore, reserve the right to incorporate such evidence into my analysis.

### III. AT&T's and WCX's Proposed Roaming Agreements

12. On July 15, 2015, AT&T submitted its "best and final" proposed data roaming agreement.<sup>5</sup> This proposal contains terms and conditions generally consistent with both (i) AT&T's current template data roaming agreement and (ii) dozens of roaming agreements AT&T has executed with other wireless service providers.<sup>6</sup> In fact, as discussed in more detail below, the *AT&T Proposed Agreement* contains roaming rates that are (i) below the average effective rate AT&T has negotiated with other wireless service providers and (ii) below the average effective rate that AT&T currently pays to roam on other wireless service providers' networks.
13. The *AT&T Proposed Agreement* includes, among other provisions, the following terms and conditions:

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<sup>5</sup> See AT&T Best and Final Offer, July 15, 2015 (hereinafter, *AT&T Proposed Agreement*).

<sup>6</sup> See Declaration of Gram Meadors, November 5, 2014, Ex. 2 (AT&T's Domestic LTE Template Agreement) (hereinafter, *AT&T Template Agreement*).

**CONFIDENTIAL INFORMATION REDACTED**

- *Rates:* The AT&T Proposed Agreement includes [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] [END CONFIDENTIAL]
- *Usage Restriction:* AT&T proposes to restrict WCX's roaming on AT&T's network to [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]
- *Limitations on Scope:* The AT&T Proposed Agreement contains the standard language present in AT&T's agreements with other wireless service providers, [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]

14. As discussed in greater detail below, I find AT&T's proposal consistent with the economic terms found in arm's length agreements between AT&T and other wireless service providers, many of which are rural carriers. AT&T currently has [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] data roaming agreements negotiated on an arm's length basis with other wireless service providers, about [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] of which have been executed or amended since the release of the *Data Roaming Order*.

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<sup>7</sup> AT&T Proposed Agreement, Exhibit 8. [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]

<sup>8</sup> A subscriber is a [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] *Id.*, § 1.

<sup>9</sup> *Id.*, § 11.

<sup>10</sup> AT&T Proposed Agreement, §§ 3, 11, 13.

15. On July 15, 2015, WCX submitted its “best and final” proposed data roaming agreement.<sup>11</sup> Unlike the WCX’s proposed agreement discussed in my previous declaration,<sup>12</sup> this proposal is in part based on AT&T’s template agreement and agreements AT&T has executed with other wireless service providers. As a result, this proposed agreement resolves certain differences between the parties’ proposals discussed in my previous declaration.<sup>13</sup>
16. The *WCX Proposed Agreement* includes, among other terms, the following terms and conditions:
- *Rates*: WCX proposes [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] [END CONFIDENTIAL]
  - *Usage Restriction*: WCX proposes to restrict WCX’s roaming on AT&T’s network to no more than [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED] [END CONFIDENTIAL]
  - *Limitations on Scope*: The *WCX Proposed Agreement* contains a definition of [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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<sup>11</sup> WCX Best and Final Offer, July 15, 2015 (hereinafter, *WCX Proposed Agreement*).

<sup>12</sup> WCX had previously proposed the use of the RWA Model Agreement as the contract terms between WCX and AT&T. See *Amended Complaint*, ¶¶ 31, 44.

<sup>13</sup> While the parties’ negotiations resolved a number of issues, differences still remain as to the enforcement provisions. In particular, [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED] [END CONFIDENTIAL]

<sup>14</sup> *WCX Proposed Agreement*, Exhibit 8. [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED] [END CONFIDENTIAL]

<sup>15</sup> *Id.*, § 11. [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED] [END CONFIDENTIAL]

[REDACTED] [END  
CONFIDENTIAL]

17. As discussed in more detail below, I find that WCX's proposal does not contain commercially reasonable terms and conditions.
18. In the following sections, I update the analyses in my previous declaration to assess the commercial reasonableness of AT&T's and WCX's new proposals. In Section IV, I show that the rates and usage restrictions AT&T has offered to WCX are consistent with the data roaming agreements AT&T has entered into with other wireless service providers; thus, they are market-based and commercially reasonable. In Section V, I explain that the rates charged by carriers in other contexts are not a product of the same market dynamic and do not necessarily provide a reasonable reference point for roaming rates that would result from arm's length negotiations. Nonetheless, I show that the roaming rates AT&T has offered to WCX are not substantially in excess of those other rates. In Section VI, I show that WCX's newly proposed rates are below the rates that AT&T has negotiated with any other independent provider through arm's length negotiations and, therefore, are not commercially reasonable. I also show that WCX's proposal includes terms and conditions that are not consistent with the provisions of AT&T's roaming agreements with other providers and effectively extend the scope of the roaming agreement beyond what is necessary to supplement the mobile wireless services offered by WCX when its subscribers are outside WCX's home area.

#### **IV. AT&T's Proposed Roaming Terms and Conditions Are Market Based and Consistent with the Commission's *Data Roaming Order***

19. In my previous declaration, and in order to assess whether the data roaming rates and usage terms proposed by AT&T were commercially reasonable, I analyzed the data roaming agreements that had been executed between AT&T and other domestic providers. In this declaration, I update the same analysis to incorporate additional agreements AT&T has signed with other providers and domestic roaming data through May 2015.

##### **A. AT&T's proposed rates are consistent with rates in the marketplace for data roaming**

20. In my updated analysis of AT&T's domestic roaming rates, I focus on [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] data roaming agreements that resulted from arm's length negotiations between AT&T and other domestic wireless service providers, [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] of which were negotiated or amended after the *Data Roaming Order*. As in my previous declaration, I exclude "strategic" agreements that involve roaming as well as other

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<sup>16</sup> See *Id.*, § 1 [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] and § 11 (Limitations on Scope). See also Worldcall Interconnect, Inc.'s Responses to AT&T Mobility LLC's First Set of Interrogatories, June 19, 2015 (hereinafter, *WCX Interrogatory Responses*), Interrogatory ATT-WCX 6: "WCX's service area is the entire United States."

components not directly related to roaming.<sup>17</sup> Based on these data, I have updated my calculations of the effective rates paid and charged by AT&T to include data from June 2014 to May 2015 (*i.e.*, the most recent twelve-month period with available data).

21. Although LTE roaming arrangements are a relatively recent phenomenon, AT&T has negotiated several LTE roaming agreements since I filed my previous declaration. As of May 31, 2015, **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]** Table B-1 in Appendix B shows the LTE roaming rates in each of the arm's length, non-strategic agreements.

22. It is noteworthy that the range of LTE rates in AT&T's recently negotiated agreements with other carriers is very similar to the LTE rates AT&T has offered to WCX. In particular, between November 2014 and April 2015, AT&T has negotiated **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]**

23. I also have updated my analysis of the roaming rates effectively paid and charged by AT&T in all its arm's length roaming agreements. **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]** As noted in my previous declaration, there is a wide variation in data roaming rates (and traffic volume) across AT&T's agreements with other providers.<sup>19</sup> For example, **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]**

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<sup>17</sup> See discussion in *Orszag Declaration*, ¶ 49. AT&T currently has **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]** strategic agreements with other wireless service providers. See Table B-4 in Appendix B.

<sup>18</sup> **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]**

<sup>19</sup> **[BEGIN CONFIDENTIAL]** [REDACTED] **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]**, [REDACTED] **[END CONFIDENTIAL]**



[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] [END CONFIDENTIAL]

29. The *AT&T Proposed Agreement* also contains the standard language present in AT&T’s agreements with other wireless service providers regarding the scope of the roaming agreement.<sup>26</sup> [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED] [END CONFIDENTIAL]

30. AT&T’s proposal also [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED] [END CONFIDENTIAL]

**V. AT&T’s Proposed Roaming Rates Are Not Substantially in Excess of AT&T’s Retail, International, and Resale Data Rates**

31. In its *Declaratory Ruling*, the Commission noted that the *Data Roaming Order* permitted consideration of the totality of the facts and circumstances, including evidence regarding rates charged by the parties in other contexts. In particular, the Commission concluded that the parties

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<sup>23</sup> *AT&T Proposed Agreement*, § 11.

<sup>24</sup> *AT&T Template Agreement*, § 11.

<sup>25</sup> As noted in my previous declaration, these restrictions are also placed on AT&T by its roaming partners, and AT&T has found them to be commercially reasonable when applied to AT&T.

<sup>26</sup> *See, e.g., AT&T Template Agreement*, §§ 3, 11.

<sup>27</sup> *AT&T Proposed Agreement*, §§ 3, 11. [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED] [END CONFIDENTIAL]

<sup>28</sup> *AT&T Proposed Agreement*, §§ 11, 13. [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED] [END CONFIDENTIAL]

can adduce evidence as to whether proposed roaming rates are “substantially in excess of retail rates, international rates, and MVNO/resale rates.”<sup>29</sup>

32. The Commission noted, however, that rates charged in other contexts are “merely reference points,” which should not be interpreted as a ceiling or as a cap on prices. Moreover, the Commission did not expect these other rates to be probative factors in every case. Instead, the Commission views them as “potentially relevant reference points” when there are “substantial differences” with respect to roaming rates, and would consider arguments as to whether these other rates are or are not relevant to each particular case.<sup>30</sup>
33. The main limitation associated with using rates charged by carriers in other contexts is that, by definition, those rates are not a product of the same market dynamic and do not necessarily provide a reasonable reference point—much less a regulatory benchmark—for roaming rates that would result from arm’s length negotiations between independent providers of mobile wireless services. In particular, the following factors are of concern in this case:
  - AT&T agreements in other contexts are not typically based on a single “price” (in dollars per MB of data usage), but instead based on an array of fixed and variable charges for a *bundle* of mobile wireless services.
  - Rates observed in other contexts are in part the result of price discrimination – which is quite common in mobile data wireless services and not *per se* problematic.
  - There is a tendency to rely on *average* rates in other contexts, which reflect a combination of rates for high- and low-cost areas (*e.g.*, rural and urban areas) and different customer demographics, and do not reflect the marginal opportunity cost of supplying incremental bandwidth.
34. There are significant differences between data roaming rates and those that result from retail mobile wireless services. For example, retail mobile wireless services are typically offered to subscribers in packages that include a bundle of goods (*e.g.*, handsets, tablets) and mobile wireless services (*e.g.*, data, voice, SMS, voicemail, etc.) for a monthly charge, along with usage charges and/or overage charges if a subscriber exceeds the monthly allowance for each service. Even if one could allocate certain fixed charges to obtain an indicative measure of the effective data rates for retail mobile wireless service (as I provide below), such indicative measures ignore the fact that carriers sell a bundle of complementary goods. Economic theory, as well as empirical economic evidence, shows that prices for complementary goods are inextricably linked (consumers care about what they pay for the bundle—not just what they pay for one component). As such, carriers have the incentive to make certain components of the bundle more attractive (*e.g.*, data plans, line access) in order to capture customers and obtain a profit from other components of the bundle (*e.g.*, handset insurance, cloud service, etc.).

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<sup>29</sup> *Declaratory Ruling*, ¶¶ 9, 15-16.

<sup>30</sup> *Id.*, ¶¶ 17-18.

35. Resale agreements typically contain significant fixed charges, in addition to other one-time charges and revenue commitments based on the total charges for all mobile wireless services. What makes resale agreements particularly challenging as a reference point in this context is that they often contain multiple service plans within each agreement, with widely varying rate structures and relatively large monthly charges. Such variation makes it difficult to obtain any reasonable measure of the “data only” rate.
36. Price discrimination is a common feature of mobile wireless services.<sup>31</sup> AT&T’s retail plans target different sets of consumers with different rate structures, including consumers with low usage who purchase basic services, more affluent smartphone users, and large commercial accounts with up to 400 GB of mobile wireless data usage. Similarly, AT&T has agreements with hundreds of different foreign carriers with widely varying roaming volumes and each potentially subject to different regulatory regimes and different end-user demographics. MVNOs purchase wholesale data and minutes from larger facilities-based providers and resell to consumers who, for example, tend to be more price sensitive or do not want to buy a bundle that contains unwanted services.<sup>32</sup> Resale/MVNO agreements also vary in usage volume and can contain volume discounts.
37. In addition, the network usage of retail, resale, and international mobile wireless services can differ markedly from data roaming service both in terms of location (*i.e.*, rural versus urban) and available technology (LTE versus 2G/3G service). For example, international traffic principally occurs in a few large urban areas where spectrum has been built out. **[BEGIN CONFIDENTIAL]** [REDACTED]  
[REDACTED]  
[REDACTED] **[END CONFIDENTIAL]**
38. In calculating benchmark rates or reference points, there is an inevitable tendency to rely on *average* rates (*i.e.*, for each of retail, resale, and international rates). Average rates reflect a combination of rates for high- and low-cost areas. Build-out costs differ according to population density, spectrum propagation characteristics, and topography, among other factors. As explained in my previous declaration, a requesting carrier that pays for roaming based on the average price of the service may not cover the incremental cost that the host provider faces, including the potential

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<sup>31</sup> See, e.g., Declaration of Joseph Farrell, *In Support of Petition for Expedited Declaratory Ruling of T-Mobile USA, Inc.*, May 19, 2014 (also included in WCX’s *Complaint*, at 96-136) (hereinafter, *Farrell Declaration*), ¶¶ 8, 60: “the force of benchmarks is limited by the fact that price discrimination is not inherently harmful in settings such as mobile wireless services.” Dr. Farrell also notes that “[n]one of these benchmarks is or can be ideal” and “the Commission should apply the proposed benchmarks cautiously and in conjunction with one another.” *Id.*, ¶¶ 8, 57.

<sup>32</sup> See, e.g., Federal Communications Commission, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 11-186, March 21, 2013, ¶¶ 33-34.

<sup>33</sup> **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]**

for congestion and the opportunity cost of providing the service to another carrier or customer.<sup>34</sup> Further, when congestion arises, it is likely to occur in regions in which the retail rate is not sufficient to cover build-out costs. In those cases, it does not make economic sense for the host carrier potentially to reduce the quality of the service provided to its own customers in order to provide roaming services to another carrier’s subscribers. Such roaming rates would force host providers to make investments with negative returns and would discourage investments in high-cost and congested areas.<sup>35</sup>

39. Despite the significant caveats, and in light of the guidance provided by the Commission in the *Declaratory Ruling*, I have been asked to analyze AT&T’s data rates in agreements with retail customers, foreign carriers, and resale partners. I show below that AT&T’s proposed rates to WCX are within the range (and not “substantially in excess”) of these other rates when they are adjusted – to the extent possible – to reflect the factors discussed above.

**A. Retail Rates**

40. As discussed in my previous declaration, in order to calculate the effective data rate paid by AT&T’s retail customers, one needs to take into account the following factors:<sup>36</sup> First, retail customers pay a monthly charge for a “bucket” of data, regardless of usage. As a result, the effective rate paid (in dollars per MB of usage) will be higher than the advertised rate if the customer does not use the full amount of data allowed by the plan. Second, retail customers cannot always predict their exact usage and, as a result, some customers pay overage charges when they exceed their monthly data allowance. Third, retail customers need to pay a monthly line access charge in order to get data service.
41. Table B-5 in Appendix B incorporates these factors into two indicative calculations of the effective data rates for AT&T’s retail data plans (in May 2015). For each retail data plan,<sup>37</sup> Table B-5 shows the share of customers under each plan (“Group Mix”), the monthly recurring charge for the data plan (“Data MRC”), and the monthly data charge including the line access charge (“Data MRC +

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<sup>34</sup> In network industries in which demand is growing rapidly, the opportunity cost of the service also includes serving future growth in demand, as opposed to using all available bandwidth to serve other carriers (and having to invest in the network sooner than needed). [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]

<sup>35</sup> See *Orszag Declaration*, ¶¶ 85, 110. I also note in my previous declaration that regulating roaming rates based on benchmarks of rates charged in other contexts can give carriers the perverse economic incentive to raise the rates used as benchmarks. See *id.*, ¶¶ 86-87.

<sup>36</sup> See *Orszag Declaration*, ¶¶ 96-97.

<sup>37</sup> Table B-5 shows retail rates for all of AT&T’s current Mobile Share Value plans, [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]

Lines”).<sup>38</sup> It also shows for each plan the GB included, the average data utilization in the group, the average rate (per GB), and the average overage cost for the customers in the plan.<sup>39</sup>

42. I first calculate the effective “data only” rate for each plan (*i.e.*, with no line access charge). The effective data only rate equals the monthly data charge plus the average overage cost, divided by the average data usage by the customers in the plan (*i.e.*, the GB allowance multiplied by the average group utilization). I also calculate the effective data rate including the line access charge by including the monthly data charge and the line access charge in the numerator. This calculation is similar to the one provided by Dr. Farrell and submitted with the *WCX Complaint*.<sup>40</sup>
43. As shown in Table B-5, there is a wide variation in pricing across AT&T’s retail data plans.<sup>41</sup> Retail rates tend to decrease as usage increases. Depending on the chosen plan and actual data usage, the effective “data only” rate can range from approximately [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]. If one includes the line access fee, the effective data rate can range from approximately [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]. On average across all of AT&T’s retail customers, the effective data rate ranges from approximately [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]. The rates AT&T has offered to WCX are not “substantially in excess” of these rates.

## B. International Roaming Rates

44. There is also wide dispersion in AT&T’s roaming rates with foreign carriers, which vary according to the carrier’s country and usage volume, among other factors. Nonetheless, it is again the case that the rates AT&T has offered to WCX are within the range of rates AT&T has negotiated with foreign roaming carriers.

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<sup>38</sup> Table B-5 shows the line access fees that apply when the customer brings her own device, purchases a device at full price, or has a month-to-month contract. See <http://www.att.com/shop/wireless/data-plans.html?&WT.srch=1>.

<sup>39</sup> For each plan, the average overage cost equals the overage rate multiplied by the percentage of customers going above the plan allowance, multiplied by the average number of overage occurrences for those customers that go above the allowance.

<sup>40</sup> See *Farrell Declaration*, § VI.A.1. Dr. Farrell refers to this calculation as a “high estimate” of the average retail rate because it allocates the entire monthly line access charge to the data used.

<sup>41</sup> Of course, with each plan, the effective data rate paid by individual customers will show additional variation depending on each customer’s data usage.

<sup>42</sup> The calculations in Table B-5 are broadly consistent with the findings of Dr. Farrell based on retail rates charged by AT&T, Verizon, Sprint, and T-Mobile as of February 2014. Dr. Farrell’s calculations show that for low data usage (*e.g.*, 0.25 GB per month), retail customers paid between \$0.15 and \$0.30 per MB. But when retail customers used 1 GB per month, they paid no more than \$0.12 per MB. Finally, for the average usage of T-Mobile’s customers, approximately 1.7 GB per month, Dr. Farrell calculated that retail customers paid between \$0.03 and \$0.08 per MB of data usage. See *Farrell Declaration*, ¶¶ 67-69, Figure 2, and Table 2.





[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]  
[END CONFIDENTIAL]

**B. WCX's proposal includes unusual terms and conditions regarding roaming usage and the overall scope of the roaming agreement**

55. As mentioned above, while every agreement may have individual elements that vary from AT&T's roaming template, AT&T's roaming template and most of the agreements AT&T has negotiated during the last year include limits on roaming traffic [BEGIN CONFIDENTIAL] [REDACTED]

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50 [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]

51 *Orszag Declaration*, ¶ 49.

52 [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]

53 This concept was captured by the RWA Model Agreement previously proposed by WCX, which acknowledged that roaming rates can vary where "one Party was incented to build-out network for the benefit of the other Party." See RWA Model Agreement (available in *Complaint*, at 56-82), Exhibit 2 (at 73).

[REDACTED] [END  
CONFIDENTIAL] In contrast, WCX proposed to restrict WCX's roaming on AT&T's network to [BEGIN  
CONFIDENTIAL] [REDACTED]  
[REDACTED] [END CONFIDENTIAL]

56. Further, the manner in which WCX proposes to calculate the total traffic volume of its end-users also differs significantly from the way in which such volumes are calculated under the usage provisions in AT&T's agreement with other wireless providers. [BEGIN CONFIDENTIAL] [REDACTED]

[REDACTED]  
[REDACTED] [END  
CONFIDENTIAL]

57. WCX's proposal thus suggests a level of usage that is far in excess of the usage permitted in AT&T's roaming agreements with other wireless service providers. In fact, WCX states that the average usage of WCX's customers is approximately [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]

[REDACTED] [END HIGHLY CONFIDENTIAL]

58. The scope provisions of WCX's proposed agreement are also significantly different from the scope provisions in the roaming agreements that AT&T has negotiated with other wireless service providers. For example, [BEGIN CONFIDENTIAL] [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] [END CONFIDENTIAL]

59. WCX's proposed definition extends the scope of the roaming agreement beyond what is necessary to supplement the mobile wireless services offered by WCX when its subscribers are outside WCX's home area. Instead, WCX would be able to use AT&T's network to offer mobile wireless services to

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<sup>54</sup> *Id.*, § 11.

<sup>55</sup> *See WCX Proposed Agreement*, §§ 1, 11.

<sup>56</sup> *See Reply Declaration of Lowell Feldman*, November 21, 2014, at 7, 80. [BEGIN CONFIDENTIAL] [REDACTED]  
[REDACTED] [END CONFIDENTIAL]

<sup>57</sup> *See WCX Proposed Agreement*, § 1.

<sup>58</sup> WCX has also stated that [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]  
[REDACTED] [END HIGHLY CONFIDENTIAL] *See WCX Interrogatory Responses*,  
Interrogatory ATT-WCX 4.

<sup>59</sup> *WCX Interrogatory Responses*, Interrogatory ATT-WCX 6.



\* \* \*

I hereby swear under penalty of perjury that the foregoing is true and correct.



Jonathan Orszag

Date: July 24, 2015

# Appendix A



## CURRICULUM VITAE

### Jonathan M. Orszag

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#### PROFESSIONAL EXPERIENCE:

- **Senior Managing Director**, Compass Lexecon (previously Competition Policy Associates, Inc. (“COMPASS”) and before that, Sebago Associates, Inc.), March 2000-Present. Manage economic consulting firm specializing in antitrust, economic policy, and litigation matters. Member of the firm’s Executive Committee. Conduct economic and financial analysis on a wide range of complex issues in policy and regulatory for corporations and public-sector entities. Serve as expert witness in proceedings before U.S. and international courts and administrative agencies and the European Court of First Instance on competition policy issues, including industry structure, vertical relationships, and intellectual property rights.
- **Assistant to the Secretary and Director of the Office of Policy and Strategic Planning**, U.S. Department of Commerce (Washington, D.C.), March 1999-March 2000. Served as the Secretary of Commerce's chief policy adviser. Responsible for coordinating the development and implementation of policy initiatives within the Department. Worked on a wide range of issues, from implementing the steel loan guarantee program to telecommunications and e-commerce issues. Represented the Secretary of Commerce in meetings with other government officials and outside organizations, and testified before Congress on behalf of the Department on budget and Native American economic development issues.
- **Economic Policy Advisor**, National Economic Council, The White House (Washington, D.C.), August 1997-March 1999; Assistant Director, January 1996-November 1996. Coordinated policy processes on a wide range of issues, from Social Security reform to job training reform, unemployment insurance reform, homeownership and low-income housing issues, the minimum wage, and Individual Development Accounts. Responsible for helping to coordinate the Administration’s daily economic message and to promote (and defend) President Clinton's economic record.

- **Economics Teacher**, Phillips Exeter Academy Summer School (Exeter, New Hampshire), June 1997-August 1997. Taught introductory economics at Phillips Exeter Academy Summer School.
- **Economic Consultant**, James Carville (Washington, D.C.), August 1995-January 1996. Helped James Carville, President Clinton's 1992 campaign strategist, research and write his *New York Times* #1 best-selling book, *We're Right, They're Wrong: A Handbook for Spirited Progressives*.
- **Special Assistant to the Chief Economist**, U.S. Department of Labor, (Washington, D.C.), August 1994-August 1995. Served as an economic aide to the Chief Economist (Alan B. Krueger) and the Secretary of Labor (Robert B. Reich).

### **Volunteer Positions**

- **Director of Policy Preparations for Vice Presidential Debate**, Gore-Lieberman Presidential Campaign, September 2000-October 2000. Oversaw policy preparations for Democratic Vice Presidential candidate before his debate with the Republican Vice Presidential candidate.
- **Weekly Commentator**, *Wall Street Journal Online*, September 2004-November 2004. Commented on economic issues during the 2004 presidential campaign. Topics of weekly commentary included jobs, health care, energy, trade, taxes, tort reform, appointments, and fiscal policy.

### **EDUCATION:**

- Oxford University, M.Sc. in Economic and Social History, 1997
- Princeton University, A.B. *summa cum laude* in Economics, 1996
- Phillips Exeter Academy, graduate with High Honors, 1991

### **HONORS, PROFESSIONAL ASSOCIATIONS, AND APPOINTMENTS:**

- Phi Beta Kappa, inducted June 1996
- Marshall Scholar, 1996
- *USA Today* All-USA College Academic Team, 1996
- Corporation for Enterprise Development Leadership Award for “Forging Innovative Public Policies to Expand Economic Opportunity in America,” 1999
- *Who's Who in America*, 2001-Present; Also, *Who's Who in the World*; *Who's Who in Science and Engineering*; *Who's Who in Finance and Business*; and *Who's Who of Emerging Leaders*
- California Workforce Investment Board, 2000-2003
- California Governor's Technology Advisory Group, 2000-2003
- Adjunct Lecturer, University of Southern California (Los Angeles, CA), January 2002-June 2002.

- *Global Competition Review's* "40 under 40: The World's 40 Brightest Young Antitrust Lawyers and Economists," 2004
- *Global Competition Review's* "Best Young Competition Economists," 2006
- *The International Who's Who of Competition Economists*, 2007-Present
- LawDay Leading Competition Economics Experts, 2009-Present.
- Expert Guides, Best of the Best USA, 2011-Present.
- Fellow, University of Southern California's Center for Communication Law & Policy, 2007-Present.
- FTI Consulting Inc., Founders Award, 2008.
- Senior Fellow, Center for American Progress, 2009-Present
- Board of Directors, Sebago Associates, Inc., 2000-2007; Competition Policy Associates, Inc., 2003-2006; The First Tee of Washington, DC, 2005-2011; Ibrix, Inc. (Sold to Hewlett-Packard), 2006-2007; JMP Securities, Inc. (NYSE: JMP), 2011-Present; Tiger Woods Foundation, Board of Governors, 2012-Present; Children's Golf Foundation, 2013-Present; Friends of the Global Fight Against AIDS, Tuberculosis, and Malaria, 2013-Present.
- Clinton Global Initiative, Member, 2008-Present; Grassroot Soccer, Ambassadors Council, 2010-Present; The First Tee, Trustee, 2013-Present.
- Member of the American Economic Association, the Econometric Society, the American Finance Association, and the United States Golf Association.

#### **REPORTS, PAPERS, AND NOTES:**

- "Tax Reform in The Bahamas: An Evaluation of Proposed Options," with David Kamin, Commissioned by the Commonwealth of The Bahamas, May 27, 2014.
- "The Impact of Federal Revenues from Limiting Participation in the FCC 600 MHz Spectrum Auction," with Philip Haile and Maya Meidan, Commissioned by AT&T, October 30, 2013.
- "The Definition of Small Business in the Marketplace Fairness Act of 2013," Commissioned by eBay, Inc., October 8, 2013.
- "The Benefits of Patent Settlements: New Survey Evidence on Factors Affecting Generic Drug Investment," with Bret Dickey, Commissioned by the Generic Pharmaceutical Association, July 23, 2013.
- "The Liftoff of Consumer Benefits from the Broadband Revolution," with Mark Dutz and Robert D. Willig, *Review of Network Economics*, Volume 11, Issue 4, Article 2, 2012.
- "Antitrust Guidelines for Private Purchasers Engaged in Value Purchasing of Health Care," with Tim Muris and Bilal Sayyed, Commissioned by Buying Value, July 2012.
- "The Economic Benefits of Pharmacy Benefit Managers," with Kevin Green, Commissioned by Express Scripts and Medco, December 5, 2011.
- "An Analysis of the Benefits of Allowing Satellite Broadband Providers to Participate Directly in the Proposed CAF Reverse Auctions," with Bryan Keating, Commissioned by ViaSat, Inc., April 18, 2011.

- “A Preliminary Economic Analysis of the Budgetary Effects of the Proposed Restrictions on ‘Reverse Payment’ Settlements,” with Bret Dickey and Robert D. Willig, August 10, 2010.
- “An Economic Assessment of Patent Settlements in the Pharmaceutical Industry,” with Bret Dickey and Laura Tyson, Volume 10, Issue 2, *Annals of Health Law*, Winter 2010.
- “An Economic Analysis of Consumer Harm from the Current Retransmission Consent Regime,” with Michael Katz and Theresa Sullivan, Commissioned by the National Cable & Telecommunications Association, DIRECTV, and DISH Network, November 12, 2009.
- “Intellectual Property and Innovation: New Evidence on the Relationship Between Patent Protection, Technology Transfer, and Innovation in Developing Countries,” with Mark Dutz and Antara Dutta, October 2009.
- “Intellectual Property and Innovation: A Literature Review of the Value of Patent Protection for Developing Countries,” with Mark Dutz and Antara Dutta, October 2009.
- “An Economic Perspective on the Antitrust Case Against Intel,” with Robert D. Willig and Gilad Levin, October 2009.
- “The Substantial Consumer Benefits of Broadband Connectivity for U.S. Households,” with Mark Dutz and Robert D. Willig, July 2009.
- “An Economic Assessment of the Homeowners’ Defense Act of 2009,” with Doug Fontaine, July 2009.
- “A Preliminary Economic Analysis of FTC Chairman Leibowitz’s June 23<sup>rd</sup> Speech,” with Robert D. Willig, June 24, 2009.
- “Assessment of Microsoft’s Behaviour in the Browser Market,” with Assaf Eilat, Gilad Levin, Andrea Lofaro, and Jan Peter van der Veer, Submitted to the Commission of the European Communities, COMP/C-3/39.530, May 27, 2009.
- “An Economic Perspective on the Microsoft Internet Explorer Tying Case,” with Assaf Eilat, Gilad Levin, Andrea Lofaro, and Jan Peter van der Veer, Submitted to the Commission of the European Communities, COMP/C-3/39.530, April 24, 2009.
- “The Empirical Effects of Collegiate Athletics: An Update Based on 2004-2007 Data,” with Mark Israel, February 2009.
- “An Econometric Analysis of the Matching Between Football Student Athletes and Colleges,” with Yair Eilat, Bryan Keating, and Robert D. Willig, January 2009.
- “An Economic Assessment of Regulating Credit Card Fees and Interest Rates,” with Susan H. Manning, October 2007.
- “An Assessment of the Competitive Effects of the SKY-Prime Merger: Lessons from the Recent News Corp.-DIRECTV Merger,” with Cristian Santesteban, Submitted to New Zealand Commerce Commission, January 23, 2006.
- “Closing the College Savings Gap,” with Peter R. Orszag and Jason Bordoff, November 2005.
- “Putting in Place An Effective Media Player and Media Server Remedy,” with Joseph E. Stiglitz, Submitted to the Korean Fair Trade Commission, October 10, 2005.
- “An Economic Analysis of Microsoft’s Tying of the Windows Media Player to the Windows Operating System and Its Impact on Consumers, Competition, and Innovation,” with Joseph E. Stiglitz, Submitted to the Korean Fair Trade Commission, September 12, 2005.

- “Economic Analyses of Microsoft’s Abusive Tie and Its Impact on Consumers, Competition, and Innovation,” with Joseph E. Stiglitz and Sangin Park, Submitted to the Korean Fair Trade Commission, September 12, 2005.
- “The Empirical Effects of Division II Intercollegiate Athletics,” with Peter R. Orszag, June 2005.
- “An Economic Analysis of Microsoft’s Abusive Tie and Its Impact on Consumers, Competition, and Innovation,” with Joseph E. Stiglitz and Jason Furman, Submitted to the European Court of First Instance, Case T-201/04 R, May 12, 2005.
- “The Physical Capital Stock Used in College Athletics,” with Peter R. Orszag, April 2005.
- “The Empirical Effects of Collegiate Athletic Spending: An Update,” with Peter R. Orszag, April 2005.
- “Putting in Place An Effective Media Player Remedy,” with Joseph E. Stiglitz, Submitted to the Commission of the European Communities, April 27, 2005.
- “The Empirical Effects of Collegiate Athletic Spending: An Interim Report,” with Robert E. Litan and Peter R. Orszag, the National Collegiate Athletic Association and Sebago Associates, Inc., August 2003 (reprinted in *The Business of Sports*, edited by Scott Rosner and Kenneth Shropshire (Jones and Bartlett Publishes, 2004)).
- “Learning and Earning: Working in College,” with Peter R. Orszag and Diane M. Whitmore, *Journal of Student Employment*, Volume IX, Number 1, June 2003.
- “The Impact of Asbestos Liabilities on Workers in Bankrupt Firms,” with Joseph E. Stiglitz and Peter R. Orszag, *Journal of Bankruptcy Law and Practice*, Volume 12, Issue No. 1, February 2003.
- “The Process of Economic Policy-Making During the Clinton Administration,” with Peter R. Orszag and Laura D. Tyson, in *American Economic Policy in the 1990s*, edited by Jeffrey Frankel and Peter R. Orszag (Cambridge, Massachusetts: MIT Press, 2002).
- “The Implications of the New Fannie Mae and Freddie Mac Risk-Based Capital Standard,” with Joseph E. Stiglitz and Peter R. Orszag, *Fannie Mae Papers*, Volume I, Issue 2, March 2002 (reprinted in *Housing Matters: Issues in American Housing Policy*).
- “Hispanics and the Current Economic Downturn: Will the Receding Tide Sink Hispanics?” with Alan B. Krueger, Pew Hispanic Center, January 2002.
- “Aging in America: A Policy Perspective,” with Jonathan Gruber and Peter R. Orszag, The Pew Charitable Trusts and Sebago Associates, Inc., January 2002.
- “An Economic Analysis of Spectrum Allocation and Advanced Wireless Services,” with Martin N. Baily, Peter R. Orszag, and Robert D. Willig, Cellular Telecommunications and Internet Association and Sebago Associates, Inc., October 2001.
- “A New Look at Incentive Effects and Golf Tournaments,” in *The Economics of Sports*, edited by Andrew Zimbalist (London: Edward Elgar Publishing, 2001). Original version in *Economics Letters*, 46, March 1994, p. 77-88.
- “Learning and Earning: Working in College,” with Peter R. Orszag and Diane M. Whitmore, UPromise, Inc. and Sebago Associates, Inc., August 2001.

- “The Impact of Potential Movie and Television Industry Strikes on the Los Angeles Economy,” with Ross C. DeVol, Joel Kotkin, Peter R. Orszag, Robert F. Wescott, and Perry Wong, The Milken Institute and Sebago Associates, Inc., April 19, 2001.
- “Would Raising IRA Contribution Limits Bolster Retirement Security for Lower- and Middle-Income Families?” with Peter R. Orszag, Center on Budget and Policy Priorities, April 2, 2001.
- “Computers in Schools: Domestic and International Perspectives,” California Technology, Trade, and Commerce Agency and Sebago Associates, Inc., March 2001.
- “The Impact of Paying for College on Family Finances,” with Laura D. Tyson, Joseph E. Stiglitz, and Peter R. Orszag, UPromise, Inc. and Sebago Associates, Inc., November 2000.
- “A Simple Analysis of Discarded Votes by Precinct in Palm Beach,” with Peter R. Orszag, Sebago Associates, Inc., November 10, 2000.
- “Analysis of Votes for Buchanan by Precinct within Palm Beach and Broward Counties,” with Peter R. Orszag, Sebago Associates, Inc., November 9, 2000.
- “A Statistical Analysis of the Palm Beach Vote,” with Peter R. Orszag, Sebago Associates, Inc., November 8, 2000.
- “The Role of Government in a Digital Age,” with Joseph E. Stiglitz and Peter R. Orszag, Computer and Communications Industry Association and Sebago Associates, Inc., October 2000.
- “Quantifying the Benefits of More Stringent Aircraft Noise Regulations,” with Peter R. Orszag, Northwest Airlines and Sebago Associates, Inc., October 2000.
- “All That Glitters Is Not Gold: The Feldstein-Liebman Analysis of Reforming Social Security with Individual Accounts,” with Peter R. Orszag, Center on Budget and Policy Priorities, April 26, 2000.
- “Would Raising IRA Contribution Limits Bolster Retirement Security For Lower- and Middle-Income Families or Is There a Better Way?” with Peter R. Orszag, Center on Budget and Policy Priorities, April 12, 2000.
- “The Economics of the U.S.-China Air Services Decision,” with Peter R. Orszag, and Diane M. Whitmore, United Parcel Service and Sebago Associates, Inc., March 2000.

**OP-EDS/LETTERS TO THE EDITOR:**

- “Hitting Budget Numbers May Be Up for Auction,” *Roll Call*, December 19, 2013.
- “Jack Welch Could Help Improve U.S. Jobs Data,” with Peter R. Orszag, *Bloomberg*, October 9, 2012.
- “Giving Credit Where Credit Is Due,” *The Hill*, December 2, 2011.
- “PBMs Save Us Billions,” *The Hill*, November 28, 2011.
- “Drug Patent Settlements,” with Robert D. Willig, *New York Times*, July 19, 2010.
- “Homeowners Defense Act Could Lower Insurance Premiums,” *Treasure Coast Palm*, September 24, 2009.

- “Katrina Teaches Us To Financially Prepare Today for the Catastrophe of Tomorrow,” *San Angelo Standard-Times*, September 23, 2009.
- “A Catastrophe Waiting To Happen,” *The Daily Citizen*, September 15, 2009.
- “Broadband: Now A ‘Necessity’,” *Multichannel News*, August 10, 2009.
- “Forget the Estate Tax: America Needs An Inheritance Tax,” *Ideas Primary*, January 23, 2008, available at <http://www.ideasprimary.com/?p=442>
- “Credit Where It’s Due,” *Wall Street Journal*, October 25, 2007.
- “Congress Grounds Delivery Competition,” Sebago Associates, Inc., April 17, 2003.
- “Paul O’Neill Doesn’t Cry for Argentina,” Sebago Associates, Inc., August 3, 2001.
- “Do You Recognize The Clinton West Wing in *The West Wing*?” *The Atlantic Monthly Online*, March 2001.

#### **SPEECHES AND PRESENTATIONS:**

- “Office Superstores: What Changed in 15 Years?” Panelist on ABA Section of Antitrust Law, Economics and Mergers & Acquisitions Committees, Washington, DC, January 6, 2014.
- “Five Bars: Spectrum Policy and the Future of the Digital Economy,” Panelist at Third Way Briefing, House of Representatives, Washington, DC, December 11, 2013.
- “An Economic Perspective on Reverse Payment Settlements in the Pharmaceutical Sector,” Speech to the Generic Pharmaceutical Association 2013 Annual Meeting, Orlando, Florida, February 21, 2013.
- “Navigating Our Economic Challenges and the Role of Public Policy,” Speech to the South Carolina Manufacturers Alliance Fourth Annual Textile Summit, Spartanburg, South Carolina, January 10, 2013.
- “Upward Price Pressure and Merger Analysis: What Is UPP’s Proper Role and How Can UPP Deal With Real-World Issues?” Presentation to Gilbert + Tobin, Sydney, Australia, December 4, 2012.
- “Obama’s Second Term: What It Means for the U.S. and World Economies,” FTI Consulting, Inc., Brisbane, Australia, December 3, 2012.
- “Merger Substance: How to Conduct a Proper Analysis of a Merger’s Competitive Effects, and How to Frame Related Legal Standards?” Panelist at Antitrust in Asia, American Bar Association, New Delhi, India, December 1, 2012
- “Financial Issues in College Sports,” Panelist at the Third Annual Sports Law Symposium: What is the Proper Role of Sports in Higher Education?, Institute of Sports Law and Ethics, Santa Clara University, September 6, 2012.
- “Pricing and Bundling of IT Products: Drawing The Line Between Lawful and Unlawful Behaviour,” Panelist on GCR Live’s Antitrust and Technology 2012, London, England, March 14, 2012.
- “The Role of Economic Evidence in Cartel Enforcement,” Speaker on ABA Section of International Law Teleconference, February 28, 2012.

- “Reverse Payment Settlements in the Pharmaceutical Industry,” Presentation to the House Energy and Commerce Committee Staff, July 15, 2011.
- “Increased Government Intervention: The Good, The Bad, and the Ugly,” Panelist, Association of Management Consulting Firms, New York, NY, December 2, 2010.
- “The Economic Challenges and Trade-Offs Facing the Obama Administration,” Remarks to RBS Citizens, Boston, MA, June 8, 2010.
- “Competition Policy As Innovation Policy,” Panelist, Computer & Communications Industry Association, Washington DC, October 27, 2009.
- “State of the Market: Regulatory Evolution and Policy,” Moderator, Youth, I.N.C. and Piper Jaffray, New York, NY, September 29, 2009.
- “The Empirical Effects of Collegiate Athletics,” Presentation to the NCAA Leadership Advisory Board, Detroit, Michigan, April 4, 2009.
- “The Economic Challenges and Trade-Offs Facing the Obama Administration,” Remarks to the Junior Capital Group, Proskauer Rose, LLP, New York, NY, February 10, 2009.
- “Managing Communications During Unprecedented Economic Times,” Panelist, The California Club, Los Angeles, CA, January 27, 2009.
- Presentation to the Computer & Communications Industry Association’s Antitrust Summit on Innovation and Competition Policy in High-Tech Markets, Washington DC, October 24, 2008.
- Presentation to the Center for American Progress Action Fund Session on the “Avoiding the Pitfalls of Credit Card Debt,” Washington, DC, February 25, 2008.
- “Distribution Fund Planning and Management: Lessons Learned from the Global Research Analyst Settlement,” with Francis McGovern, Presentation to the Securities and Exchange Commission, Washington, DC, January 31, 2006.
- “The Empirical Effects of Division II Intercollegiate Athletics,” Presentation to the National Collegiate Athletic Association 2006 Annual Convention, Indianapolis, Indiana, January 8, 2006.
- “Rules of the Game: Defining Antitrust Markets in Cases Involving Sports,” Presentation to the Wilmer, Cutler, Pickering, Hale & Dorr Antitrust Lunch, Washington, DC, December 8, 2005.
- “Competition Policy, Antitrust, and The High-Tech Economy,” Keynote Address to the Computer & Communications Industry Association TechSummit 2005, Laguna Beach, CA, October 26, 2005.
- “The Empirical Effects of Division II Intercollegiate Athletics,” Presentation to the Division II Chancellors and Presidents Summit, Orlando, FL, June 25, 2005.
- “The Empirical Effects of Collegiate Athletic Spending: An Update and Extension,” Presentation to the President’s Task Force on the Future of Intercollegiate Athletics, Tucson, AZ, June 9-10, 2005.
- “The Empirical Effects of Collegiate Athletic Spending: An Update and Extension,” Presentation to the NCAA Division I Board of Directors, Indianapolis, IN, April 28, 2005.
- “An Analysis of Division II Athletic Expenditures: Preliminary Findings,” Presentation to the NCAA Division II Board of Directors, Indianapolis, IN, April 28, 2005.

- “An Analysis of Division II Athletic Expenditures: An Overview of Study Design,” Presentation to the National Collegiate Athletic Association 2005 Annual Convention, Grapevine, Texas, January 8, 2005.
- “The Empirical Effects of Collegiate Athletic Spending: An Interim Report,” Presentation to the National Association of State Universities and Land Grant Colleges Annual Conference, November 17, 2003.
- “The Impact of Asbestos Liabilities on Workers in Bankrupt Firms,” *South Texas Law Review*, “Symposium: Asbestos Litigation,” Fall 2003.
- “The Impact of Asbestos Liabilities on Workers in Bankrupt Firms,” Presentation to the Conference on “Understanding Asbestos Litigation: The Genesis, Scope, and Impact,” U.S. Chamber of Commerce, Washington, DC, January 23, 2003.
- “The Process of Economic Policy-Making During the Clinton Administration,” Presentation to the Conference on “American Economic Policy in the 1990s,” Center for Business and Government, John F. Kennedy School of Government, and Harvard University, Cambridge, MA, June 29, 2001.
- “The Impact of Paying for College on Family Finances,” Presentation to the Conference on “Funding Excellent Schools and Colleges for All Students,” National Conference of State Legislatures, Savannah, Georgia, February 17, 2001.
- “China and the Internet,” Remarks on Entertainment and the Internet in China at the EMASIA 2000 Forum, The Asia Society, Los Angeles, CA, May 23, 2000.
- “Is It The Star or Just an Extra? The Role Government Plays in a Digital Economy,” Remarks on the Regulation of Global Electronic Commerce at the eCommerce and Global Business Forum, The Anderson School at UCLA and the University of Washington Business School, Santa Cruz, CA, May 18, 2000.
- “Lessons Learned from the Emergency Loan Guarantee Programs,” Keynote Address at the Government Guaranteed Lending 2000 Conference, Coleman Publishing, Inc., May 4, 2000.
- “Don’t Just Think, Believe,” Remarks to the Assembly of Phillips Exeter Academy, Exeter, New Hampshire, February 9, 1999.

**TESTIMONY:**

- *Vijay Singh v. PGA Tour, Inc.*, Supreme Court of the State of New York, (Index No. ), (Expert Report: June 12, 2015).
- *In re: Lightsquared Inc., et al.*, In the United States Bankruptcy Court for the Southern District of New York (Case No. 12-12080 (SCC)), (Expert Report: February 3, 2015; Deposition: February 23, 2015; Trial Testimony: March 12, 2015).
- *Armando Diaz et al v. San Juan Cable LLC* In The United States District Court for the District of Puerto Rico (Civil Action No: 14-1244-CCC), (Expert Report: December 5, 2014).
- *In the Matter of World Call Interconnect, Inc. v. AT&T Mobility LLC*, in File No. EB-14-MD-011, Before the Federal Communications Commission (Declaration: November 5, 2014).

- *In re Cablevision Consumer Litigation*, In The United States District Court for the Eastern District of New York (10-CV-4992 (JS) (AKT)) (Expert Report: July 18, 2014; Rebuttal Expert Report: September 11, 2014; Deposition: October 2, 2014).
- *Orbital Sciences Corporation v. United Launch Alliance, LLC, and RD Amross, LLC*, In the United States District Court for the Eastern District of Virginia (Civil No: 1:13-cv-00753 LMB/JFA), (Expert Report: February 28, 2014).
- *Puerto Rico Telephone Company, Inc. v. San Juan Cable LLC d/b/a OneLink Communications*, In the United States District Court for the District of Puerto Rico (Civil No: 11-2135 (GAG)), (Expert Report: December 11, 2013; Supplemental Report: December 23, 2013; Deposition: January 10, 2014).
- *Sky Angel U.S., LLC v. Discovery Communications, LLC, et al.* In the United States District Court of Maryland, Southern Division (Civil Action No. 8:13-cv-00031-DKC), (Expert Report: December 6, 2013; Deposition: January 31, 2014).
- *Oakley, Inc. vs. Nike, Inc. and Rory McIlroy*; In the United States District Court for the Central District of California (Case No. SACV12-02138 JVS-MLG), (Expert Report: November 26, 2013).
- *In re: Electronic Books Antitrust Litigation; The State of Texas, et al., v Penguin Group (USA), Inc., et al.*, In the United States District Court for the Southern District of New York (No. 11-md-02293 (DLC) and No. 12-cv-03394 (DLC)), (Declaration: November 15, 2013; Deposition: December 7, 2013; Sur-Reply Declaration: January 21, 2014).
- Hearing on “Pay-for-Delay Deals: Limiting Competition and Costing Consumers,” Testimony to the Senate Judiciary Committee, Subcommittee on Antitrust, Competition Policy, and Consumer Rights, July 23, 2013.
- *Federal Trade Commission v. Actavis, Inc., et al.*, Signatory, Brief of Antitrust Economists as *Amici Curiae* before the Supreme Court, No. 12-416, February 28, 2013.
- *VOOM HD Holding LLC v. EchoStar Satellite LLC*, In the Supreme Court of the State of New York, County of New York (Index No. 600292/08), (Expert Report: December 4, 2009; Deposition Testimony: March 5, 2010; Supplemental Expert Report: August 10, 2012; Supplemental Deposition Testimony: September 14, 2012; Jury Trial Testimony: October 11-12, 2012).
- *Hewlett-Packard Company v. Oracle Corporation*, In the Superior Court of the State of California, County of Santa Clara (Case No 1-11-CV-203163), (Expert Report: March 26, 2012; Rebuttal Report: April 9, 2012; Deposition Testimony: April 19, 2012; Supplemental Expert Report: December 10, 2012; Supplemental Deposition Testimony: February 5, 2013; Trial Testimony: March 18, 2013).
- *In The Matter of Game Show Network, LLC v. Cablevision Systems Corporation*, in File No. CSR-8529-P, Before the Federal Communications Commission (Expert Report: December 12, 2011; Reply Declaration: February 9, 2012; Expert Report: December 14, 2012; Deposition Testimony: February 7, 2013, March 12, 2015; Direct Testimony: March 12, 2013; Supplemental Direct Testimony: March 19, 2013; Rebuttal Report: December 15, 2014; Complete Direct Testimony: June 1, 2015; Trial Testimony: July 20, 2015).

- Hearing on “The Express Scripts/Medco Merger: Cost Savings for Consumers or More Profits for the Middlemen?” Written Testimony to the Senate Judiciary Committee, Subcommittee on Antitrust, Competition Policy, and Consumer Rights, December 6, 2011.
- *In the Matter of Applications of AT&T Inc. and Deutsche Telekom AG For Consent To Assign or Transfer Control Licenses and Authorization*, in WT Docket No. 11-65, with Robert D. Willig and Jay Ezrielev, Submitted to the Federal Communications Commission, Commissioned by AT&T, June 9, 2011.
- *In The Matter of The Tennis Channel v. Comcast Cable Communications, LLC*, in File No. CSR-8258-P, Before the Federal Communications Commission (Declaration: February 11, 2010; Reply Declaration: April 13, 2010; Expert Report: February 25, 2011; Deposition Testimony: March 8, 2011; Written Direct Testimony: April 15, 2011; Rebuttal Declaration: April 26, 2011; Courtroom Testimony: April 27, 2011; Supplemental Deposition Testimony: May 1, 2011; Supplemental Rebuttal Declaration, May 12, 2011).
- “Response to Supplementary Comments of Hubert Horan,” Submitted to the Department of Transportation, *Joint Application of Delta Airlines, Inc.; Virgin Blue Airlines PTY LTD; Virgin Blue International Airlines PTY LTD d/b/a V Australia; Pacific Blue Airlines (NZ) LTD; and Pacific Blue Airlines (Aust) PTY LTD*, with Mark Israel, Bryan Keating, and Robert D. Willig, Docket DOT-OST-2009-0155, Commissioned by Delta Air Lines, October 22, 2010.
- “Measuring Consumer Benefits from Antitrust Immunity for Delta Air Lines and Virgin Blue Carriers,” Submitted to the Department of Transportation, *Joint Application of Delta Airlines, Inc.; Virgin Blue Airlines PTY LTD; Virgin Blue International Airlines PTY LTD d/b/a V Australia; Pacific Blue Airlines (NZ) LTD; and Pacific Blue Airlines (Aust) PTY LTD*, with Mark Israel, Bryan Keating, and Robert D. Willig, Docket DOT-OST-2009-0155, Commissioned by Delta Air Lines, October 13, 2010.
- *In the Matter of Implementation of Section 224 of the Act; A National Broadband Plan for Our Future*, with Allan Shampine, Submitted to the Federal Communications Commission (WC Docket No. 07-245; GN Docket No. 09-51), Commissioned by the Edison Electric Institute, Declaration Submitted on October 4, 2010; Supplemental Declaration, Submitted on December 14, 2010.
- *In Re: Cable Subscribership Survey For the Collection of Information Pursuant to Section 612(g) of the Communications Act*, with Michael Katz and Theresa Sullivan, Submitted to the Federal Communications Commission (MB Docket No. 07-269), Commissioned by the National Cable & Telecommunications Association, DIRECTV, and DISH Network, December 16, 2009.
- *Caroline Behrend, et al. vs. Comcast Corporation, et al.*, In the United States District Court for the Eastern District of Pennsylvania (Civil Action No. 03-6604), (Declaration: August 21, 2009; Deposition: September 29, 2009).
- *In The Matter of TCR Sports Broadcasting Holding, LLP d/b/a Mid-Atlantic Sports Network v. Comcast Corporation*, in MB Docket No. 08-214, File No. CSR-8001-P, Before the Federal Communications Commission (Declaration with Jay Ezrielev: July 31, 2008; Expert Report: March 19, 2009; Deposition Testimony: April 23, 2009; Courtroom Testimony: May 26, 2009; Reply Declaration: June 1, 2009).
- *In The Matter of NFL Enterprises LLC v. Comcast Cable Communications, LLC*, MB Docket No. 08-214, File No. CSR-7876-P, Before the Federal Communications Commission (Declaration with Jay Ezrielev: June 20, 2008; Expert Report: March 13, 2009; Deposition

Testimony: April 1, 2009; Written Direct Testimony: April 6, 2009; Courtroom Testimony: April 16, 2009).

- *In The Matter of Applications for the Transfer of Control of Licenses and Authorizations From Centennial Communications Corp. to AT&T*, with Robert D. Willig and J. Loren Poulsen, Submitted to the Federal Communications Commission, Commissioned by AT&T, November 21, 2008.
- *In The Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992; Development of Competition and Diversity in Video Programming Distribution: Section 628(c)(5) of the Communications Act; Sunset of Exclusive Contract Prohibition; Review of the Commission's Program Access Rules and Examination of Programming Tying Arrangements*, Filed in Conjunction With Reply Comments Submitted to the Federal Communications Commission (MB Docket No. 07-29; MB Docket No. 07-198), Commissioned by Discovery Communications, Inc., February 12, 2008.
- *In Re: Intel Corp. Microprocessor Antitrust Litigation; Phil Paul et al v. Intel Corporation*, In the United States District Court for the District of Delaware (MDL Docket No. 05-1717 (JJF) and C.A. No. 05-485 (JJF), (Declaration: August 10, 2007; Declaration: April 23, 2007).
- *In The Matter of Applications for the Transfer of Control of Licenses and Authorizations From Dobson Communications to AT&T*, with Robert D. Willig, Submitted to the Federal Communications Commission, Commissioned by AT&T, July 12, 2007.
- *Microsoft Corporation v. Commission of the European Communities*, European Court of First Instance, Case T-201/04 R, April 24-25, 2006.
- *In The Matter of Satellite Home Viewer Extension and Reauthorization Act of 1994*, with Jay Ezrielev, Submitted to the Library of Congress, Copyright Office (Docket No. RM 2005-07), Commissioned by EchoStar Satellite L.L.C., September 1, 2005.
- *In The Matter of Rainbow DBS Company, LLC, Assignor, and EchoStar Satellite L.L.C., Assignee, Consolidated Application for Consent to Assignment of Space Station and Earth Station Licenses, and related Special Temporary Authorization*, with Simon J. Wilkie, Submitted to the Federal Communications Commission (IB Docket No. 05-72), Commissioned by EchoStar Satellite L.L.C. and Rainbow DBS Company, LLC, April 12, 2005.
- *In The Matter of Applications for the Transfer of Control of Licenses and Authorizations From Western Wireless Corporation to ALLTEL Corporation*, with Robert D. Willig and Yair Eilat, Submitted to the Federal Communications Commission (WT Docket No. 05-50), Commissioned by ALLTEL Corporation and Western Wireless Corporation, March 29, 2005.
- *In The Matter of A La Carte and Themed Tier Programming and Pricing Options for Programming Distribution on Cable Television and Direct Broadcast Satellite Systems*, with Robert D. Willig and Jay Ezrielev, Filed in Conjunction With Comments Submitted to the Federal Communications Commission (MB Docket No. 04-207), Commissioned by Discovery Communications, Inc., July 15, 2004.
- "An Economic Assessment of the Exclusive Contract Prohibition Between Vertically Integrated Cable Operators and Programmers," with Peter R. Orszag and John M. Gale, Filed in Conjunction With Reply Comments Submitted to the Federal Communications Commission (CS Docket No. 01-290), Commissioned by EchoStar Satellite Corporation and DIRECTV, Inc., January 7, 2002

- Hearing on “The Department of Commerce Fiscal Year 2001 Budget and Its Native American Initiatives,” Testimony to the United States Senate Indian Affairs Committee, February 23, 2000.
- Hearing on “Testimony on S. 614: The Indian Tribal Regulatory Reform and Business Development Act,” Testimony to the United States Senate Indian Affairs Committee, May 19, 1999.

# **Appendix B**

## APPENDIX B: Tables

**Table B-1: LTE-Based Roaming Rates in AT&T Arm's Length Agreements with Other Providers  
(May 2015)**



Source:  
AT&T Agreements with providers.

**Table B-2: Effective Roaming Rates in AT&T Arm's Length Agreements with Other Providers  
(June 2014 – May 2015)**



Source:  
AT&T data and agreements with providers.

**Table B-3: Usage Provisions in AT&T Arm's Length Agreements with Other Providers – May 2015**



Source:  
AT&T Agreements with providers.

**Table B-4: Effective Roaming Rates in AT&T Strategic Agreements with Other Providers  
(June 2014 – May 2015)**



Source:  
AT&T data and agreements with providers.

**Table B-5: AT&T Retail Data Rates – May 2015**



**Table B-6: AT&T Data Roaming Agreements with Foreign Carriers – May 2014-April 2015**

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