

## **Attachment A**

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of

Applications of AT&T Inc. and  
Deutsche Telekom AG

For Consent To Assign or Transfer  
Control of Licenses and Authorizations

**WT Docket No. 11-65**

Declaration

of

**LEE L. SELWYN**

on behalf of

The Ad Hoc Telecommunications Users Committee

May 31, 2011

## DECLARATION OF LEE L. SELWYN

### EXECUTIVE SUMMARY

**Neither competition nor regulation will operate to compel the Applicants to flow the various efficiency gains and cost savings they ascribe to the AT&T/T-Mobile merger through to end users.**

The central theme of the “public interest” showing being advanced by AT&T Mobility and T-Mobile USA (“the Applicants”) in support of their merger is that by combining their networks and other assets, the two carriers will realize substantial efficiencies and associated cost savings that would not arise were the two firms to continue their separate existence. They claim that these efficiency gains will result in an increase in total industry output and thus produce lower prices than would otherwise prevail in the absence of the transaction. However, under the present policy of regulatory forbearance with respect to wireless rates, the Applicants will flow these post-merger cost savings through to consumers only if competitive marketplace forces require it. But the Applicants – which even as separate firms are the second and fourth largest providers of wireless services in the United States with 31.5% and 11.0% of the national market, respectively – here argue that even entities of their current size, scale, and scope are not individually big enough to realize the “immense network and spectrum synergies” that would arise if permitted to join their networks and operations. But the properties being identified by the Applicants as producing significant efficiency gains *for them*, including the advantage that combining their operations will afford them in overcoming the many and formidable barriers to organic expansion of their separate networks, all work to create cost and operational efficiencies that smaller rivals will be incapable of replicating. If the various firms being portrayed by the Applicants as their “competitors” are unable, due to the considerably smaller scale and scope, to achieve comparable levels of costs and production efficiencies, they cannot provide a meaningful competitive challenge to a post-merger AT&T/T-Mobile.

Absent an actual, *bona fide* possibility of entry, there would be nothing to prevent the merged entity from setting prices at profit-maximizing supracompetitive levels. Clearly, there is a fundamental disconnect between the Applicants’ contention that they are incapable of organic growth and that without their merger they cannot compete with far smaller firms, on the one hand, and their assurance that the existence of these much smaller firms create a sufficiently competitive market as to protect consumers from unilateral or coordinated price increases or other anticompetitive tactics on the part of a merged AT&T/T-Mobile. They contend that such “typical ‘unilateral effects’ concerns do not apply to the proposed transaction because the merger will increase the combined capacity of the two firms relative to what would exist if they were to remain separate, and that it is this *lack* of capacity constraints confronting the post-merger entity that protects consumers against such unilateral effects. But for that thesis to ring true, rival firms must also not be subject to capacity constraints. Here, however, the Applicants fail to explain

why the capacity limits they each currently face do not also confront their far smaller rivals. Yet if those rival firms are capacity-limited and cannot increase their own output, the now-non-capacity-constrained post-merger AT&T/T-Mobile will indeed be capable of raising its prices without losing customers to competitors, *since those competitors would be incapable of handling the volume of traffic that would otherwise be shifted their way*. This Application thus places the Commission at a critical crossroads, as years of policy aimed at fostering competition must now be squared with the Applicants' public interest showing that leads to the inevitable conclusion that wireless is now a natural monopoly in need of active economic regulation.

**The proposed merger raises the urgency for the Commission to assure that prices in the market for special access services – the overwhelming source for wireless backhaul – are brought down to competitive levels.**

Wireless carriers make extensive use of *wireline* services and infrastructure to interconnect their cell sites with the associated mobile telephone switching offices (MTSOs). The vast majority of these so-called “backhaul” links are accomplished by means of Special Access services obtained from the local ILEC. AT&T Mobility and Verizon Wireless are the two largest wireless carriers in the US and are, of course, affiliates of the two largest ILECs in the US – AT&T and Verizon, respectively. Within the respective footprints of each of their wireline ILEC affiliates, AT&T Mobility and Verizon Wireless each satisfy their respective backhaul needs by purchasing special access services from these internal sources.

Special access services are currently subject to “pricing flexibility” in most MSAs, which means that there are no regulatory constraints on the prices that AT&T and Verizon charge their affiliates – and others – for these services. AdHoc and others have estimated that the extent of overcharging for ILEC special access services subject to pricing flexibility is currently in the range of 100%. However, as for purchases of special access by AT&T Mobility from the local AT&T ILEC, or by Verizon Wireless from the local Verizon ILEC, these excessive left-pocket-to-right-pocket intracompany payments have no effect on the overall profitability of the parent company – i.e., on its bottom line. And the overpayments being made by AT&T Mobility to the Verizon ILECs are approximately being offset by the reciprocal overpayments being made by Verizon Wireless to the AT&T ILECs, and similarly engender only a minimal bottom line impact for both parent companies. Yet for the remaining wireless carriers that do not have a significant ILEC affiliation, the persistent and substantial overcharges for essential special access services operate to raise their operating costs and in so doing impair their ability to compete with the two dominant, vertically integrated providers. Many of these non-integrated carriers – including T-Mobile – have complained to the FCC about the persistently excessive special access prices to which they are subject, and have on multiple occasions asked the Commission to remove these services from “pricing flexibility” rules and reinitialize rates at cost-based levels. T-Mobile, in fact, has within the past two years made multiple filings and/or *ex parte* visits with the Commission on this issue both alone as well as through its participation in the No Choke Points Coalition.

## *Executive Summary*

Wireless carriers are hardly the only source of demand for special access. These services are used extensively by interexchange carriers, Internet Backbone Providers, CLECs and others, as well as by business, government and institutional end users of all sizes. The effectively nonregulated special access rates produce at least \$10-billion in annual excess profits for AT&T and Verizon alone, creating a source of cash that can be used to support a variety of competitive ventures and investments. It is noteworthy that while DT Senior Vice President Langheim has notes that “[t]he required substantial investments in LTE in the United States would significantly stretch Deutsche Telekom’s financial capability or, alternatively, force Deutsche Telekom to reallocate investments from our core Europe operations into T-Mobile USA,” AT&T seems to have no difficulty coming up with the \$39-billion to acquire T-Mobile and with the additional capital to upgrade the T-Mobile network to accomplish precisely what DT is itself not prepared to undertake. AT&T’s continuing ability to exploit its special access monopoly and to generate sustained and increasing excess profits therefrom that can be used to cross-subsidize other competitive and nonregulated activities needs to be addressed and remedied as part of the merger approval process.

If the merger is to be allowed to go forward, it is essential that the Commission put in place a regulatory mechanism capable of assuring that the various economic and operational efficiencies being ascribed to the merger will actually inure to individual residential and business consumers and to the economy overall, and that AT&T’s ability to exploit its special access monopoly to cross-subsidize its own wireless investments while simultaneously raising its rivals’ costs will once and for all be addressed and resolved. Approval of the transaction while the current wireless and special access forbearance regimes remain in place would “fail to protect subscribers adequately from unjust and unreasonable rates or rates that are unjustly or unreasonably discriminatory,” and would thus be inconsistent with the public interest.

# DECLARATION OF LEE L. SELWYN

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DECLARATION OF LEE L. SELWYN

INTRODUCTION

1

2

3 Lee L. Selwyn, of lawful age, declares and says as follows:

4

5 **Qualifications**

6

7 1. My name is Lee L. Selwyn; I am President of Economics and Technology, Inc. (“ETI”),  
8 One Washington Mall, 15th Floor, Boston, Massachusetts 02108. ETI is a research and  
9 consulting firm specializing in telecommunications and public utility regulation and public  
10 policy. I have participated in numerous proceedings before the Federal Communications  
11 Commission (“FCC” or “Commission”) dating back to 1967 and have appeared as an expert  
12 witness in hundreds of state proceedings before more than forty state public utility commissions.  
13 My Statement of Qualifications is annexed hereto as Attachment 1 and is made a part hereof.

1           2. I have had extensive experience in a number of state and federal regulatory matters  
2 dealing specifically with the Commercial Mobile Radio Service (“CMRS”) industry since the  
3 “first round” 800 MHz cellular application process that was initiated by the FCC in 1981. I and  
4 my firm provided economic and financial analysis in support of approximately thirty  
5 applications in the “top ninety” cellular markets in 1982 and 1983. I was a principal in ten “third  
6 round” applications and served on the Partners Committee of Albany (New York) Cellular  
7 Telephone Company until approximately 1986 (I currently hold no financial interest in any  
8 wireless service provider). I provided expert testimony on behalf of several “A-block” (non-  
9 wireline) cellular licensees in various state regulatory proceedings during the start-up phase of  
10 their operations, in cases dealing with contested “head start” issues and landline interconnection.  
11 This included an appearance on behalf of McCaw/Intrastate Cellular Systems, then a partner in  
12 Bay Area Cellular Telephone Company, in a 1983-84 California PUC proceeding, Application  
13 No. 83-07-04. I was engaged by the Division of Ratepayer Advocates (DRA) of the California  
14 PUC as a consultant and expert in Investigation 93-02-028 dealing with the 1993 spin-off of  
15 Pacific Telesis Group’s cellular and wireless subsidiaries. I also served as a consultant to the  
16 County of Los Angeles, a party in the California PUC’s Investigation into Mobile Telephone  
17 Service and Wireless Communications, Investigation 93-12-007. I co-authored comments, reply  
18 comments and *ex parte* presentation materials on behalf of the Ad Hoc Telecommunications  
19 Users Committee in the FCC’s *Wireless Calling Party Pays* rulemaking, WT Docket No. 97-  
20 207. In 1999, I appeared as a witness on behalf of Meteor Mobile Communications, Inc. before  
21 the High Court of Ireland, Docket 1998 No. 12160P, involving the Competition for the Third  
22 Mobile Telephony License in the Republic of Ireland. In July 2003, I co-authored a white paper  
23 entitled “Market-based Solutions for Realigning Spectrum Use in the 800 MHz Band,” and in

1 December 2004, I co-authored “Market-based Valuation vs. Third-party Appraisals as a Means  
2 to Ensure Fair Valuation and Efficient Allocation of 1.9 GHz Spectrum,” both submitted by  
3 counsel for James A. Kay, Jr. in FCC WT Docket No. 02-55. I have submitted testimony on  
4 behalf of the Wireless Consumers Alliance *et al* and AARP in WT Docket No. 05-194, *In the*  
5 *Matter of CTIA Petition for Expedited Declaratory Ruling on Early Termination Fees*, and was  
6 invited by the Commission to testify at its June 12, 2008 *en banc* hearing on wireless early  
7 termination fees. I have also been engaged by several state and municipal taxation authorities  
8 regarding sales, property and other taxation issues relating to wireless services.

9 3. I have been involved in most of the major merger/change of control proceedings  
10 involving the regional Bell operating companies (RBOCs). These have included the  
11 SBC/Pacific Telesis merger in 1996-97, the Bell Atlantic/NYNEX merger in 1996-97, the  
12 SBC/SNET merger in 1998, the SBC/Ameritech merger in 1999, the Bell Atlantic/GTE merger  
13 that created what is now Verizon in 1999, the SBC/AT&T and Verizon/MCI mergers in 2005,  
14 and the AT&T/BellSouth merger in 2006. I also submitted testimony on behalf of the National  
15 Association of State Utility Consumer Advocates (NASUCA) in the *Tunney Act* proceedings in  
16 2006 reviewing the SBC/AT&T and Verizon/MCI mergers, respectively.

17

18 **Assignment**

19

20 4. I have been asked by the Ad Hoc Telecommunications Users Committee (“AdHoc”) to  
21 review and comment on the regulatory policy implications of the proposed AT&T/T-Mobile  
22 merger based upon the economic conditions confronting the two companies and other wireless  
23 incumbents as set out in the testimony of several AT&T and T-Mobile witnesses.

1                   REGULATORY IMPLICATIONS OF THE AT&T/T-MOBILE MERGER

2  
3   **If the operational efficiencies claimed by the Applicants to justify the transaction are**  
4 **legitimate, the Commission must impose upon the post-merger entity a regulatory regime**  
5 **that assures that these efficiency gains will be flowed through to consumers.**  
6

7           5. AT&T Mobility and T-Mobile USA (“the Applicants”) support their merger application  
8 with the claim that the transaction “will generate strong and diverse public interest benefits that  
9 would not occur but for this transaction.”<sup>1</sup> The central theme of this “public interest” showing is  
10 that by combining their networks and other assets, the two carriers will realize a number of  
11 efficiencies and associated cost savings that would not arise were the two firms to continue their  
12 separate existence, and that these efficiency gains will result in lower prices overall:

13  
14           [The merger] will create immense network and spectrum synergies that will alleviate the  
15 capacity constraints that the applicants would otherwise be left to address, far less efficiently  
16 and effectively, on their own. It will thereby increase capacity, enhance efficiency in the use  
17 of scarce spectrum resources, and significantly improve quality of service. This expanded  
18 capacity will benefit not only the applicants and their customers, but consumers in general.<sup>2</sup>  
19

20 These operational and efficiency benefits, the Applicants claim, will increase total industry  
21 output and thus produce lower prices than would otherwise prevail in the absence of the  
22 transaction.

23           6. The Applicants do not demonstrate, however, that the internal operational and efficiency  
24 benefits they anticipate will inevitably produce public benefits in the form of lower prices. To

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1. Applicants’ *Public Interest Showing*, at 18.

2. *Id.*

1 the contrary, their evidence actually demonstrates that marketplace competition is insufficient to  
2 assure just and reasonable rates going forward or that the efficiency benefits of the merger will  
3 flow through to consumers. As I shall discuss in greater detail below, the Applicants – which  
4 even as separate firms are the second and fourth largest providers of wireless services in the  
5 United States with 31.5% and 11.0% of the national market, respectively<sup>3</sup> – have justified their  
6 merger application with evidence that even entities of their current size, scale, and scope are not  
7 individually capable of realizing the “immense network and spectrum synergies” that would  
8 arise if permitted to join their networks and operations. If true, then rivals of an even smaller  
9 size, scale, and scope than a post-merger AT&T/T-Mobile will be incapable of offering a serious  
10 competitive challenge and, as such, can no longer be relied upon to constrain the post-merger  
11 entity’s rates or, of direct relevance to the instant matter, to force the post-merger entity to flow  
12 its newly-acquired efficiency gains – gains that will be unique to its own operations – through to  
13 its customers. If the justification for the merger is the public interest benefits of realizing the  
14 proffered efficiency gains, the Commission must concurrently implement, as a condition for  
15 approval of the merger, a regulatory mechanism capable of achieving the flow-through of those  
16 gains, which otherwise will not take place.

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3. AT&T 2010 10-K Report; T-Mobile Investor Relations 4<sup>th</sup> Quarter 2010 Financial disclosures posted on T-Mobile.com; Verizon 2010 10-K; CTIA *Wireless Quick Facts* (available at [http://ctia.org/media/industry\\_info/index.cfm/AID/10323](http://ctia.org/media/industry_info/index.cfm/AID/10323) [accessed May 25, 2011]). The most recent FCC data, which was published in the 14th CMRS Report (*Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, WT Docket No. 09-66, *Fourteenth Report*, Rel. May 20, 2010), provides subscriber counts as of December 2008, at Table C-4, p. 223. At that time, AT&T had 77-million connected devices, representing a 29% market share. T-Mobile had 32.8-million connected devices, accounting for 12% of the US wireless market.

1       7. In the testimony that follows, I shall assume, for purposes of discussion and policy  
2 analysis, that the various output-increasing and cost-reducing operational efficiencies that the  
3 Applicants portray as arising from the transaction are real and are likely to arise as described.  
4 Indeed, the Applicants have submitted compelling technical support as to the presence of  
5 significant economies of scale and scope in the provision of wireless services.<sup>4</sup> These efficiency  
6 gains and cost savings will not, however, result in the public interest benefit of lower prices to  
7 end users of wireless services unless the merged entity is compelled by competitive pressure or  
8 regulatory compliance to pass through those benefits. Not only have the Applicants failed to  
9 offer any evidence that competition is sufficient for this purpose, they have proffered economic  
10 and technical evidence that actually compels precisely the opposite conclusion - i.e., that rival  
11 carriers' costs will be sufficiently greater than those of the merged AT&T/T-Mobile that they  
12 will be incapable of presenting any meaningful competitive challenge to the Applicants  
13 following the merger.. And in that event, the merged entity can be expected to retain as  
14 additional profits most if not all of the efficiency gains that result from the large increase in the  
15 overall scale and scope of its operations following the merger.

16       8. The Applicants have shown that by combining and pooling the AT&T and T-Mobile  
17 networks, they can eliminate a duplicative control channel and in so doing “free up an additional  
18 4.8 to 10 MHz of spectrum in each market where AT&T and T-Mobile USA offer GSM service  
19 ..., greatly improving the combined company’s flexibility to meet capacity and performance

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4. Significantly, the very same economic analysis of spectrum, network and operational efficiencies being offered by the Applicants in support of their merger could also be advanced to justify a future combination of a post-merger AT&T Mobility/T-Mobile with Verizon Wireless.

1 challenges,”<sup>5</sup> enabling the combined company to reallocate the spectrum currently required for  
2 that then-redundant control channel to voice and/or data “payload” transport. They have shown  
3 that, by combining the smaller blocks of spectrum now held separately by each of the two  
4 carriers into a single larger pool of voice and/or data channels, the call-carrying capacity of the  
5 pooled spectrum would be significantly greater than if the separate frequency blocks continued  
6 to exist in isolation from one another. This “channel pooling” will, according to the Applicants,  
7 “allow more customers to be served per MHz of spectrum deployed, providing a substantial  
8 capacity boost even in areas where both companies’ networks are heavily loaded.”<sup>6</sup> They have  
9 shown that by “optimiz[ing] the spectrum allocation in areas where one company’s network and  
10 spectrum are underutilized relative to the other’s, ... improvements in both performance and  
11 capacity in those areas” can be achieved.<sup>7</sup> They have explained that these efficiencies will allow  
12 the merged entity “to accelerate the shift of spectrum from less spectrally efficient to more  
13 spectrally efficient network technologies (i.e., GSM to UMTS and UMTS to LTE).”<sup>8</sup>

14 9. Indeed, strong support for these claims is to be found in well-accepted traffic engineering  
15 theory and practice. For any given “grade of service” or “probability of blockage” objective, a  
16 single, large pool of channels is able to support a volume of traffic that is greater than the  
17 volume of traffic that could be supported by the same number of channels if broken up into

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5. Hogg Decl., at ¶12.

6. *Id.*

7. *Id.*

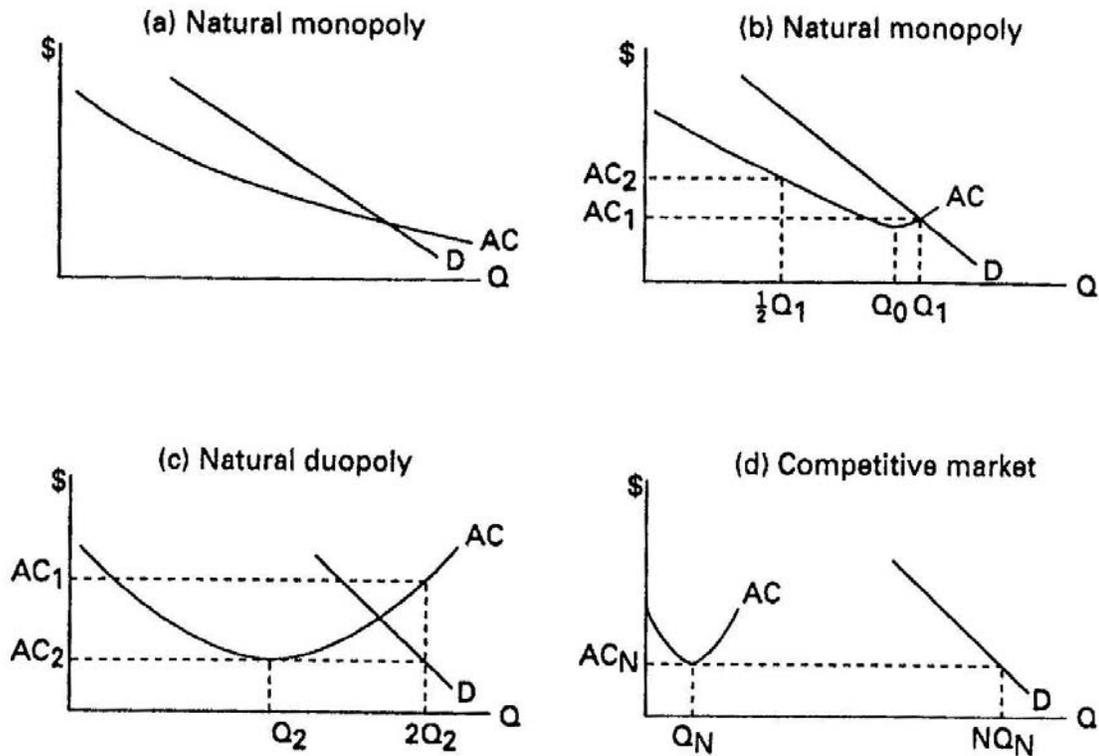
8. *Id.*

1 several smaller and mutually isolated pools.<sup>9</sup> It is this property of pooled facilities that gives rise  
2 to the significant economies of scale that are typically associated with common carrier telecom-  
3 munications. Where a production process is subject to significant economies of scale, the firm's  
4 average – and marginal – costs tend to decrease as its overall scale of operations increases. See  
5 Figure 1 below.<sup>10</sup> Graphs (a) and (b) portray the case of “natural monopoly” where average cost  
6 (AC) continues to decrease even beyond the aggregate level of market demand (D) (graph (a)),  
7 or where minimum average cost is achieved just slightly below aggregate demand (graph (b)).  
8 Graph (c) portrays a “natural duopoly” where minimum average cost occurs at roughly half of  
9 total demand, resulting in two efficient producers. Graph (d) portrays a competitive market,  
10 where minimum average cost is achieved at a small fraction of total demand, such that the  
11 market is capable of supporting multiple efficient producers. All else equal, where economies of  
12 scale are present, a larger firm will be able to produce the product or service at a lower average  
13 cost than would an otherwise similar, but smaller provider.

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9. See, e.g., Bell System Center for Technical Education, *Telecommunications Transmission Engineering, Volume 3 – Networks and Services*, Second Edition, 1977, Chapter 7, “Traffic Engineering Concepts,” at 132-163.

10. Train, Kenneth E., *Optimal Regulation: The Economic Theory of Natural Monopoly* (Cambridge, Mass.: MIT Press, 1991), at 7.



**Figure 1.** Relation of average cost to demand.

1        10. Because telecommunications networks exhibit so-called “network effects,” in which the  
 2 value of the service arises from its ability to connect to other locations, the more extensive a  
 3 carrier’s network, the greater the likelihood that the carrier will, in fact, have facilities available  
 4 at both endpoints of any point-to-point connection that is requested by a prospective customer.  
 5 In fact, the number of potential point-to-point connections increases exponentially with the  
 6 number of service points or “nodes” associated with a network. Expressed formally, the number  
 7 of different possible two-point connections  $C$  that can be accommodated in a given network of  $n$   
 8 nodes is given as

9  
 10 
$$C = \frac{n(n-1)}{2}$$

1 Networks offering larger potential points of connectivity exhibit *economies of scope* in excess of  
2 the sum of their piece-parts. Thus, by joining the AT&T and T-Mobile networks, the resulting  
3 network will both be capable of carrying a larger volume of traffic than could each individual  
4 network standing alone, while the aggregate volume of traffic demand being presented to the  
5 now-combined network will also increase due to the larger number of potential “on-net” calls  
6 that would become available. The combination of the increased scale and scope economies will  
7 also work to reduce both average and marginal cost of producing the wireless service.

8

9 **Both economic theory and the factual evidence proffered by the Applicants demonstrate**  
10 **that the efficiency/operational gains and capacity enhancements described by the**  
11 **Applicants will not flow through to the ultimate consumer absent appropriate regulatory**  
12 **requirements**

13

14 11. While the proposed combination of AT&T and T-Mobile is likely to produce the various  
15 efficiency/operational gains and capacity enhancements as described by the Applicants, *there is*  
16 *no assurance that any of these gains will be flowed through to the ultimate consumer in the form*  
17 *of price reductions that are greater than they would have otherwise been in the absence of the*  
18 *merger of these two carriers.* Indeed, both economic theory and the factual evidence being  
19 proffered by the Applicants compel an expectation of precisely the opposite outcome – i.e., that  
20 it is far more likely that any such efficiency gains or cost reductions arising from the increased  
21 economies of scale and scope that would result from the merger will be retained by the post-  
22 merger entity and *not* flowed through to consumers as the Applicants contend.

23 12. There is, in fact, no automatic process by which the various efficiency gains and  
24 reductions in average and marginal cost that the Applicants anticipate to result from their merger  
25 will be flowed through to end-user customers. On the contrary, the Applicants will flow these

1 cost savings through to their customers only if compelled to do so by competitive marketplace  
2 forces. Thus, unless the AT&T/T-Mobile merger operates to create corresponding efficiency  
3 gains across all wireless service providers large and small – which of course it will not –  
4 competitive marketplace forces will be incapable of bringing about the consumer benefits being  
5 claimed here by the Applicants.

6 13. In non-price-regulated markets such as the existing market for wireless services in the  
7 United States, each carrier can be expected to set its price so as to maximize its profits over some  
8 reasonable time frame. Even if the market demand for a given product or service is relatively  
9 price-inelastic, the demand confronting any individual provider in a competitive market tends to  
10 be relatively price-elastic – the typical situation facing individual firms in multi-firm markets. In  
11 such a case, a price reduction can lead to increased revenues and profits – particularly where the  
12 firm faces economies of scale and successively lower marginal costs as its output increases – a  
13 condition that is also typical of firms in industries characterized by high fixed costs, such as  
14 telecommunications. If the overall market demand for a product or service is relatively price-  
15 elastic – a condition that is common in markets for “discretionary” goods such as existed for  
16 wireless services during their earlier ramp-up period – price reductions will similarly drive up  
17 aggregate revenues and, if subject to economies of scale, will also drive up aggregate profits.

18 14. The annual volume of wireless voice minutes in the United States increased from 24-  
19 billion to 1.1-trillion between June 1996 and December 2010. The Applicants suggest that this  
20 precipitous jump in volume has been driven by the large drop in wireless price levels over that  
21 same period – when carriers’ average revenue per voice minute (“ARPM”) fell from \$0.41 per  
22 minute in June 1996 to less than \$0.05 per minute in June 2010 – and that this large price drop  
23 “was achieved in part through past mergers which led to the creation of more efficient

1 carriers.”<sup>11</sup> Significantly, nowhere in their evidence do the Applicants contend that these price  
2 reductions were driven by competition in the wireless industry, or that lesser price reductions  
3 would have taken place were the wireless market not subject to the effective competition that  
4 they claim to exist.

5 15. Since the earliest days of first-generation analog cellular Advanced Mobile Phone  
6 Service (“AMPS”) operating in the 800 MHz band, the succession of technological innovations  
7 such as the conversion to digital, the release of large blocks of additional spectrum, and the  
8 licensing of additional Personal Communications Service (“PCS”) carriers have all helped to  
9 produce a quantum increase in the channel-carrying capacity of the wireless infrastructure in the  
10 US. These developments have resulted in a large drop in the average cost per minute, and have  
11 made it possible for carriers to reduce their per-minute prices while still operating profitably.  
12 But price reductions in and of themselves may demonstrate not that the wireless market is  
13 subject to effective, price-constraining competition, but that carriers are simply setting prices at  
14 profit-maximizing levels which are lower than earlier rates.

15 16. Indeed, the price and volume data offered by Prof. Carlton confirms that if, as he  
16 contends, the order-of-magnitude price drop that occurred between 1996 and 2010 was a key  
17 factor in driving “the dramatic growth in the demand for wireless voice services,” it is equally  
18 clear that those price reductions were directly responsible for the enormous jump in wireless  
19 carrier revenues that the price-driven growth in demand engendered. In the following table, I  
20 have calculated total annual industry voice revenues using the price (ARPM) and volume data  
21 cited by Prof. Carlton for 1996 and 2010:

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11. Carlton *et al* Decl., at ¶15.

Growth in Total US Wireless Voice Revenues 1996 to 2010			
Year	Price (ARPM)	Voice minutes	Total revenue
1996	\$0.41	24-billion	\$9.84-billion
2010	\$0.05	1.2-trillion	\$60-billion

Source: Carlton *et al* Decl., at ¶15

As the table demonstrates, the 88% price decrease resulted in – or at least materially contributed to – a six-fold increase in aggregate voice revenue over that same period.

17. There is no evidence – and the Applicants have offered none – that would support a conclusion that these price levels, even with their precipitous decline, represented a “competitive outcome” rather than a profit-maximizing price/output combination being offered by a small number of massively large producers in a highly-concentrated oligopolistic market.<sup>12</sup> Indeed, there is strong evidence that this is precisely the case. Back in the early 2000s, there were six national wireless carriers in the US – Verizon Wireless, Cingular, AT&T Wireless, Sprint, Nextel and T-Mobile. Various securities analysts had at that time expressed the view that the number of providers was too large, and that consolidation was necessary to improve company profitability.<sup>13</sup>

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12. The level of concentration in the US wireless services market has been steadily increasing over the past decade. “The Herfindahl-Hirschman Index (HHI) is used to measure concentration of mobile wireless service providers. Average HHI (weighted by Economic Area (EA) population) increased in 2008 relative to prior years. Both the lowest EA HHI value and the highest EA HHI value are both higher than preceding years’ lowest and highest EA HHI values. The weighted average of the HHIs (weighted by EA population) was 2848 in 2008, an increase from 2674 in 2007. The weighted average HHI has increased by nearly 700 since we first calculated this metric in 2003.” *14th CMRS Report*, at 15.

13. See, e.g., La Monica, Paul R., “What’s Next in Wireless?” *CNN Money.com*, December 13, 2004, available at <http://money.cnn.com/2004/12/13/technology/wireless/index.htm>

1 **The Applicants' own public interest showing demonstrates the presence of formidable**  
2 **barriers to entry and to organic expansion in the provision of wireless services.**  
3

4 18. A longstanding and well-established bedrock principle of economic theory is that the  
5 presence of effective competition in any market will force prices to levels that are at or very  
6 close to long run incremental cost. If, due to differences in their scale of operations or other  
7 factors, individual firms confront different long run incremental costs, the lower-cost firms may  
8 be able to convert their cost advantage into excess profits.<sup>14</sup> In a market with many incumbents,  
9 an attempt by any one of them to unilaterally raise price materially in excess of cost will cause  
10 customers to shift their purchases to lower-priced rival providers, ultimately forcing the firm that  
11 had raised its price to bring it back down to the competitive level. If the market price level rises  
12 above cost and in so doing produces supracompetitive price levels for the incumbent firms, new  
13 providers will rapidly enter the market to take advantage of these profit opportunities, thereby  
14 increasing overall supply and driving market price levels back down toward cost. Such  
15 additional entry is possible, however, only where there are no or minimal barriers to such entry.  
16 The presence of entry barriers can slow or block entry, making it possible for the incumbents in  
17 the market to maintain above-cost prices and supracompetitive profits for an extended period of  
18 time or, in some cases, indefinitely where entry barriers are so formidable as to make entry all  
19 but impossible.

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14. The continuing presence of firms operating at different points along the (decreasing) average cost curve is made possible due to the finite nature of at least one critical input – spectrum in this case. Smaller, less efficient firms that possess spectrum can continue to operate even in the presence of a larger and lower-cost rival that is itself subject to spectrum constraints. In that case, the larger, more efficient firm will have no incentive to reduce its prices to reflect its lower cost, instead retaining its cost advantage *vis-à-vis* its smaller rivals as excess profit.

1       19. In recent years, economics literature addressing “contestable markets” has posited the  
2 notion that the mere *threat* of potential entry, rather than actual entry, may be sufficient to  
3 discipline incumbents to maintain prices at cost-based competitive levels. Proponents of  
4 “contestable markets” theory argue that incumbents will price at competitive levels precisely to  
5 discourage entry from occurring, thereby assuring a competitive price outcome even in the  
6 absence of actual competition.<sup>15</sup> But where entry is so difficult, costly or involves lengthy and  
7 protracted start-up efforts, or where the incumbents possess cost, technological, brand  
8 identification, infrastructure, and/or an embedded base of customers that would be difficult or  
9 impossible for a rival to replicate, or where, as here, the supply of a critical input (spectrum in  
10 this case) is finite and strictly limited, the threat of potential entry would be seen as empty at  
11 best.<sup>16</sup> Absent an actual, *bona fide* possibility of entry, there would be nothing to prevent  
12 incumbents in a market from setting prices at profit-maximizing supracompetitive levels.

13       20. In the instant matter of the proposed merger of AT&T Mobility and T-Mobile, the very  
14 properties being identified by the Applicants as creating substantial efficiency gains and cost  
15 savings for the merged entity *vis-à-vis* their continued operation as separate providers works to  
16 increase the barriers to entry confronted by potential competitors. This is because the properties  
17 of scale and scope cited by the Applicants make it more difficult for smaller incumbent rivals to  
18 offer any serious competitive discipline constraining the largest firms’ prices and profits. The  
19 very same conditions cited by the Applicants as producing significant efficiency gains *for them*

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15. See, Baumol, William J., John C. Panzar and Robert D. Willig, *Contestable Markets and the Theory of Industry Structure*, Harcourt Brace Jovanovich, 1982. (“*Baumol et al*”).

16. See, Bain, Joe S., *Barriers to New Competition*, Harvard University Press, 1956. The presence of high fixed and/or start-up costs, unrecoverable sunk costs, and/or, as here, legal and regulatory hurdles to exit, impose additional risks that operate to further deter entry.

1 also work to create cost and operational efficiencies that smaller rivals will be incapable of  
2 replicating. If the various firms being portrayed by the Applicants as their “competitors” are  
3 unable, due to the considerably smaller scale and scope of their operations, to achieve  
4 comparable levels of costs and production efficiencies – including in particular spectrum  
5 efficiencies – they cannot provide a meaningful competitive challenge and as such cannot be  
6 relied upon to force the post-merger AT&T/T-Mobile entity to pass on to its customers the  
7 efficiency gains arising from the merger.

8 21. AT&T Mobility is the second largest wireless carrier in the US, and currently serves  
9 approximately 96-million connected devices. T-Mobile is the fourth largest US wireless carrier,  
10 and currently serves roughly 34-million connected devices.<sup>17</sup> Yet despite the extensive scale and  
11 scope of both carriers’ operations, the Applicants portray their individual ability for any organic  
12 expansion beyond their existing size as being extremely difficult:

- 13
- 14 • “AT&T faces severe capacity constraints and cannot simply wait for the next major  
15 auction to resolve them.”<sup>18</sup>
  - 16
  - 17 • “AT&T’s capacity constraints also prevent it from dedicating enough spectrum to launch  
18 LTE, deploy it optimally, or meet expected demand.”<sup>19</sup>
  - 19
  - 20 • “T-Mobile USA likewise faces capacity constraints in a number of key markets. It also  
21 has no clear path to deploy LTE services because it has already dedicated its spectrum  
22 resources to today’s less spectrally efficient technologies.”<sup>20</sup>
  - 23

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17. Footnote 3, *supra*.

18. Public Interest Statement, at 4.

19. *Id.*, at 5.

20. *Id.*

- 1 • “T-Mobile USA also faces new questions about its long-term capital support, in part  
2 because its parent company, Deutsche Telekom, must dedicate significant capital  
3 resources to broadband deployment in Germany and the rest of Europe. Indeed, Deutsche  
4 Telekom recently announced that, in light of its capital constraints, T-Mobile USA can  
5 no longer rely on its parent for investment funding and must instead ‘fund its future  
6 itself.’”<sup>21</sup>  
7
- 8 • “... building new cell sites is difficult, expensive, and – most importantly – prone to  
9 multi-year delays.”<sup>22</sup>  
10
- 11 • “In a number of markets, AT&T is burning through its existing spectrum at an  
12 accelerating rate. Whereas in 2004 it took 24 months in major markets to exhaust 10  
13 MHz of spectrum, from 2008-2010 growing UMTS demand caused AT&T to burn  
14 through 10 MHz in half that time or less in some major markets. As a result, in many  
15 urban, suburban, and rural markets, AT&T faces a growing capacity crunch.”<sup>23</sup>  
16
- 17 • “... spectrum constraints currently keep AT&T from launching and supporting more  
18 spectrally efficient UMTS services *at all*.”<sup>24</sup>  
19
- 20 • “AT&T’s average spectrum holding is insufficient to permit deployment of the most  
21 spectrally efficient LTE services, whereas the combination of AT&T’s and T-Mobile  
22 USA’s spectrum will address the situation.”<sup>25</sup>  
23
- 24 • “T-Mobile USA faces spectrum constraints of its own, despite its substantial investments  
25 in spectrum and network facilities.”<sup>26</sup>  
26

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21. *Id.*, at 5-6.

22. *Id.*, at 27.

23. *Id.*, at 28, citing Hogg Decl., at ¶6.

24. *Id.*, at 29, citing Hogg Decl., at ¶39. Emphasis in original.

25. *Id.*, at 30, citing Hogg Decl., at ¶60.

26. *Id.*, citing Larsen Decl, at ¶¶12-13.

- 1 • “Because of this ‘explosive growth in demand,’ T-Mobile USA ‘faces spectrum exhaust  
2 in a number of markets.’”<sup>27</sup>  
3  
4 • “T-Mobile USA has ‘no clear path’ to LTE.”<sup>28</sup> “T-Mobile USA has already dedicated its  
5 current spectrum to UMTS/HSPA+ and GSM technologies.”<sup>29</sup> “As a result, T-Mobile  
6 USA ‘does not have access to the spectrum needed to deploy LTE in an economically  
7 and technically sustainable fashion.’”<sup>30</sup> “Even in areas where T-Mobile USA could try to  
8 ‘reform’ its existing spectrum to make room for LTE, it would face serious competitive  
9 disadvantages.”<sup>31</sup>  
10  
11 • “T-Mobile USA could not acquire new spectrum unless it obtains the necessary billions  
12 of dollars in investment capital, and it can no longer look to its corporate parent for that  
13 purpose.”<sup>32</sup>  
14  
15 • “AT&T cannot ... add [cell] sites fast enough to meet the projected rate of demand for  
16 more capacity ...”<sup>33</sup>  
17  
18 • “The tremendous cell density improvement that this transaction achieves where and when  
19 we need it simply could not be replicated by a new build program. T-Mobile USA’s cell  
20 sites are the product of many years of intense effort to identify and secure the best cell  
21 site locations that would provide the greatest propagation benefits. ... Some of T-Mobile  
22 USA’s well-placed cell sites appear to be in locations where we likely could not replicate  
23 them (e.g., because space is unavailable). But even where duplication would be possible  
24 (albeit at much greater cost), it could not be accomplished in time to meet customer  
25 demand.”<sup>34</sup>

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27. *Id.*, citing Larsen Decl. ¶12.

28. *Id.*, at 31, citing Larsen Decl., at ¶¶23-26; Langheim Decl., at ¶11.

29. *Id.*, citing Larsen Decl., at ¶11; Langheim Decl., at ¶12.

30. *Id.*, citing Langheim Decl, at. ¶12.

31. *Id.*

32. *Id.*, at 32.

33. Hogg Decl., at ¶67.

34. *Id.*, at ¶68.

1        22. Yet, for reasons that remain unexplained by the Applicants and seemingly inexplicable,  
2 the Applicants and their experts persist in portraying the mixed bag of far smaller and signifi-  
3 cantly less financially endowed firms as somehow presenting so formidable a competitive threat  
4 to AT&T and T-Mobile that, if required to maintain their present independent existence, neither  
5 would be capable of providing an effective competitive response. In addition to Verizon  
6 Wireless and Sprint, the Applicants include within their list of carriers purportedly presenting a  
7 serious challenge such “low cost carriers” as “MetroPCS and Leap/Cricket as well as multi-area  
8 and regional competitors such as U.S. Cellular, Cellular South, Cincinnati Bell, nTelos, Atlantic  
9 Tele-Networks and others.”<sup>35</sup> Also included in their litany of competitive threats is the  
10 “[a]dditional competition at the wholesale and retail level [that] is enabled by recent entrants  
11 with substantial spectrum, LightSquared and Clearwire.”<sup>36</sup> And most worrisome, “future  
12 entrants will have the opportunity to obtain spectrum in future FCC auctions and will be able to  
13 deploy whatever ‘next generation’ technology is available at that time.”<sup>37</sup> Applicants nowhere  
14 explain why it is that neither AT&T nor T-Mobile will themselves *not* “have [exactly the same]  
15 opportunity to obtain spectrum in future FCC auctions and ... be able to deploy whatever ‘next  
16 generation’ technology is available at that time.”<sup>38</sup>

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35. Carlton *et al* Decl., at ¶75.

36. *Id.*, at ¶76.

37. *Id.*

38. Trade and financial press reports on the proposed merger have speculated that the Applicants may be required to divest spectrum and/or customers in markets in which both compete. Both AT&T and T-Mobile offer service in most “NFL cities” and thus compete extensively across many geographic areas. Such divestitures, if required, would undermine the very basis being put forth in support of the proposed merger – the operational and efficiency gains available to the two providers through *combining* their spectrum, networks and operations.

1       23. Clearly, there is a fundamental disconnect between the Applicants' contention that they  
2 are incapable of organic growth and that without their merger they cannot compete with far  
3 smaller firms, on the one hand, and their assurance that the existence of these much smaller  
4 firms creates a sufficiently competitive market as to protect consumers from unilateral or  
5 coordinated price increases or other anticompetitive tactics on the part of a merged  
6 AT&T/T-Mobile. There is no *a priori* basis to conclude or to expect that the "competitors"  
7 mentioned by the Applicants and their experts are somehow immune from the laundry list of  
8 barriers to organic expansion that are cited by the Applicants and enumerated in paragraph 21  
9 above. Certainly all incumbents confront the same overall spectrum availability constraints.  
10 Indeed, the Commission's experience with past spectrum auctions is that the larger wireless  
11 carriers generally have the financial resources to outbid smaller rivals. The various  
12 inefficiencies of relatively small blocks of spectrum and the various benefits of pooling  
13 described by the Applicants have a far more profound negative impact upon smaller service  
14 providers. All wireless carriers confront downward-sloping average and marginal cost curves,  
15 and due to the substantially smaller scale and scope of their operations, the smaller carriers find  
16 themselves operating at a much higher average cost than the behemoths with which they  
17 compete, among which are AT&T and T-Mobile.

18

19 **The Applicants' dismissal of typical "unilateral effects" is based upon the factually**  
20 **incorrect premise that rival carriers do not experience the same capacity constraints as the**  
21 **Applicants absent the merger.**

22

23       24. Through their economic experts, the Applicants contend that "typical 'unilateral effects'  
24 concerns do not apply to the proposed transaction given the capacity constraints faced by AT&T

1 and T-Mobile USA and the increased capacity resulting from the transaction.”<sup>39</sup> They explain  
2 that “[i]t is well recognized that mergers of firms that produce differentiated products can give  
3 rise to concerns that the merged firm will find it profitable to increase price unilaterally (e.g.,  
4 without actions by any other firm).”<sup>40</sup> They go on: “Most analyses of unilateral effects are done  
5 under the assumption that firms face no capacity constraints. If this assumption does not hold  
6 and if instead the merger increases the combined capacity of the firm, then it is consistent with  
7 economic theory that the merged firm increases its profits by expanding output.”<sup>41</sup> The  
8 Applicants argue, repeatedly throughout their showing, that the merger will increase the  
9 combined capacity of the two firms relative to what would exist if they were to remain separate,  
10 and that it is this *lack* of capacity constraints confronting the post-merger entity that protects  
11 consumers against such unilateral effects. But for that thesis to be true, rival firms must also not  
12 be subject to capacity constraints. If rival firms are capacity-limited and cannot increase their  
13 own output, the now-non-capacity-constrained post-merger AT&T/T-Mobile will indeed be  
14 capable of raising its prices without losing customers to competitors, since those competitors  
15 would be incapable of handling the volume of traffic that would otherwise be shifted their way.

16 25. Thus, the entirety of the Applicants’ contention that their merger will not result in higher  
17 prices to consumers depends critically upon rival carriers’ own ability to expand their output  
18 indefinitely without bumping up against capacity limitations. Yet short of entirely unsupported  
19 assertions, the Applicants offer no facts or evidence demonstrating that while both AT&T and

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39. Carlton *et al* Decl., caption preceding ¶137.

40. *Id.*, at ¶137.

41. *Id.*, at ¶139.

1 T-Mobile have reached the limit of their individual ability to serve additional demand, the other,  
2 far smaller providers whom the Applicants portray as “competitors” are able to expand their own  
3 supply of wireless service without limit. Such a claim is preposterous on its face and is certainly  
4 being advanced here without any basis or factual support.

5

6 **This Application places the Commission at a critical crossroads, as years of policy aimed**  
7 **at fostering competition must now be squared with the Applicants’ public interest**  
8 **showing that wireless is a natural monopoly in need of active economic regulation.**  
9

10 26. The proposed merger of AT&T Mobility and T-Mobile USA places the Commission at a  
11 major policy crossroads in terms of deciding whether competition is insufficient, and regulation  
12 is necessary, to ensure that the public interest is advanced in any post-merger wireless market.  
13 In his seminal monograph on natural monopoly, Prof. Kenneth E. Train succinctly captures the  
14 limitations of competition in producing an optimal outcome:

15

16 To work, competition requires certain conditions. Most important, the market must  
17 contain many firms with none dominant, allow free entry and exit, and exhibit no  
18 externalities. Unfortunately, these conditions cannot always be met. Intervention in the  
19 market is often required to ensure that the pursuit of profit does not conflict with social  
20 welfare. Natural monopoly is the classic case. Loosely defined, a natural monopoly  
21 exists when the costs of production are such that it is less expensive for market demand  
22 to be met with one firm than with more than one. In this situation it is optimal, from a  
23 cost perspective, to have only one firm. More fundamentally, a condition required for  
24 competition (that is, numerous firms) conflicts with the attainment of the benefits of  
25 competition (namely, production at lowest possible cost, which requires one firm).

26

27 In such cases, regulation becomes important. The purpose of regulation is to ensure  
28 socially desirable outcomes when competition cannot be relied upon to achieve them.

1 Regulation replaces the invisible hand of competition with direct intervention – with a  
2 visible hand, so to speak.<sup>42</sup>  
3

4 27. It is now more than four decades since the Commission first embarked on a policy aimed  
5 at introducing competition into the US telecommunications market. In its landmark 1971  
6 *Specialized Common Carrier* ruling, the FCC posited that the dynamic gains from competition –  
7 innovation, expansion of the total telecommunications market, improved service quality, and the  
8 like – would overcome any potential loss in static efficiency that might result from the migration  
9 of such specialized service demand away from the previously monopolistic service provider:

10  
11 Data and other specialized users may require not only a different application of  
12 communications technology, but also have service requirements that are heterogeneous in  
13 character. ... [These include] service features designed to meet the special requirements  
14 of data transmission users, e.g., lower costs, end-to-end compatibility, rapid connection,  
15 high reliability, simultaneous two-way transmission, a wide selection of switched speed  
16 offering, a low incidence of network busy conditions, interconnection flexibility for  
17 user-provided facilities, asymmetry, etc. ... To the extent that customers may be attracted  
18 by any or all of these or other features ... it is a reasonable conclusion that the effect of  
19 new entry would be expansion of the total communications market. Moreover,  
20 competition within the market for specialized services should motivate innovations or  
21 modifications in the service offerings and/or facilities by all carriers serving that market  
22 and thus produce even greater growth rates in total specialized traffic than the growth  
23 rates projected in the context of the existing industry structure.<sup>43</sup>  
24

25 The Applicants here present an opposite argument: To them, the gains in operational efficiency  
26 that would result from the increased scale and scope of their post-merger network are so large as  
27 to overcome the market effects of having one less national competitor. While I have assumed

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42. Train, footnote 10, *supra*, at 5-6.

43. *Specialized Common Carrier Services*, 29 FCC 2d 870, 907 (1971).

1 for purposes of this testimony that the efficiency and operational gains being portrayed by the  
2 Applicants are real and significant, the Applicants have failed to offer any assurance that post-  
3 merger competitive market conditions will be sufficient to require them to flow through such  
4 gains to their customers. Indeed, to the extent that smaller rivals will be unable to achieve  
5 comparable efficiency gains and/or will confront serious capacity constraints coupled with the  
6 formidable, perhaps insurmountable, barriers to any new entry, the post-merger entity will be  
7 able to raise its prices without fear of losing significant share to those smaller rivals. Thus, in  
8 approving this merger, the Commission needs to concurrently implement measures that will  
9 successfully overcome this competitive market failure.

10 28. The Applicants' evidence regarding scale and scope efficiencies, coupled with the fact  
11 that the demand for wireless voice and data services has grown to the point where it must be  
12 viewed as an essential public service, compels the inescapable conclusion that wireless providers  
13 are vested with the public interest and that the production of these services is characterized by  
14 such massive economies of scale and scope as to require that they be considered to possess  
15 attributes of a "natural monopoly" and be regulated as such. The evidence presented here by the  
16 Applicants more than satisfies the threshold requirements for being treated as a "dominant  
17 carrier" not unlike the treatment afforded wireline local and long distance carriers possessing  
18 similar economic attributes.

19

20 **The Commission needs to assure that prices in the market for special access services – the**  
21 **overwhelming source for wireless backhaul – are brought down to competitive levels.**  
22

23 29. Wireless carriers make extensive use of *wireline* services and infrastructure to inter-  
24 connect their cell sites with the sites' associated mobile telephone switching offices (MTSOs).

1 The vast majority of these so-called “backhaul” links are accomplished by means of Special  
2 Access services obtained from the local ILEC. Sprint, for example, has in the past advised the  
3 Commission that it uses ILEC-provided special access services for backhaul to roughly 93% of  
4 its cell sites nationwide.<sup>44</sup> More recently, Sprint (and T-Mobile) have each, on a confidential  
5 basis, furnished the Commission with current information on their respective use of special  
6 access for backhaul in a statistically valid sample of MSAs. This data was submitted by the  
7 carriers in response to the Commission’s voluntary data request in WC Docket No. 05-25, the  
8 Special Access rulemaking.<sup>45</sup> T-Mobile, like Sprint, is heavily dependent upon ILEC-provided  
9 special access for backhaul, and has been active in the Special Access NPRM proceeding for  
10 years because of the excessive prices it is forced to pay for these essential – indeed, *critical* –  
11 inputs to the production of its wireless services. For example, in an *ex parte* letter to the FCC  
12 just one year ago, T-Mobile attempted to clarify AT&T’s misuse of selected statements from one  
13 of T-Mobile’s investor reports by stating that it was able to use “alternative backhaul providers”  
14 at only 20% of its cell sites nationwide – but more importantly, T-Mobile noted that:

15  
16 First, the term “alternative backhaul providers” means providers capable of delivering  
17 non-TDM-based backhaul, i.e., Ethernet technology, and thus includes incumbent local

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44. See, *Performance Measurements and Standards for Interstate Special Access*, CC Docket No. 01-321, *Comments of Sprint Corporation*, filed January 22, 2002, at 4-5; See also, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carrier*, CC Docket No. 01-338; *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98; *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, *Comments of Sprint Corporation*, April 5, 2002, at 23-24.

45. See voluntary responses from Sprint and T-Mobile filed on January 27, 2011 in WC Docket 05-25 in response to the FCC’s Special Access Data Request.

1 exchange carriers (“ILECs”) such as AT&T and Verizon. T-Mobile continues to seek an  
2 alternative to subsidizing its two largest competitors, but today, AT&T and Verizon  
3 continue to supply the majority of T-Mobile’s backhaul services.<sup>46</sup>  
4

5 30. AT&T Mobility and Verizon Wireless are the two largest wireless carriers in the US and  
6 are, of course, affiliates of the two largest ILECs in the US – AT&T and Verizon, respectively.  
7 Within the 22-state AT&T ILEC footprint, AT&T Wireless would thus satisfy its backhaul needs  
8 by purchasing special access services from the local AT&T ILEC. Similarly, within the nine  
9 states in which Verizon is the dominant ILEC, Verizon Wireless would be acquiring its special  
10 access backhaul facilities from its Verizon ILEC affiliate. Special access services are currently  
11 subject to “pricing flexibility” in most MSAs, which means that there are no regulatory  
12 constraints on the prices that AT&T and Verizon charge their affiliates – and others – for these  
13 services.

14 31. Wireless carriers’ demand for special access has grown considerably over the past  
15 decade, and can be expected to escalate even more dramatically in the coming years. As the  
16 Applicants’ evidence demonstrates, the demand for wireless data services, video downloads and  
17 video chat services such as Apple’s Facetime™ are forcing the Applicants – and presumably all  
18 other wireless carriers – to increase the number of cell sites, to split cells, and to increase the  
19 bandwidth capacity of their backhaul networks to accommodate this growth.<sup>47</sup> Backhaul costs –

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46. Letter from Kathleen O’Brien Ham, Vice President–Federal Regulatory of T-Mobile USA to Marlene Dortch, Secretary, FCC, in WC Docket 05-25, dated May 6, 2010.

47. Hogg Decl., at ¶8. “AT&T has spent approximately <<REDACTED>> annually in recent years to further enhance capacity by increasing cell density through new cell sites (cell splitting), additional UMTS radio carriers, and network performance optimization (high-speed backhaul, sector reorientation, antenna tilts, and other modifications).”

1 which for the most part consist of special access services purchased from ILECs – are becoming  
2 an increasingly larger component of wireless carriers’ overall operating expenses.

3 32. AdHoc and others have estimated that the extent of overcharging for ILEC special  
4 access services subject to pricing flexibility is currently in the range of 100%.<sup>48</sup> However, as for  
5 purchases of special access by AT&T Mobility from the local AT&T ILEC, or by Verizon  
6 Wireless from the local Verizon ILEC, these excessive left-pocket-to-right-pocket intracompany  
7 payments have no effect on the overall profitability of the parent company – i.e., on its bottom  
8 line. And the overpayments being made by AT&T Mobility to the Verizon ILECs are  
9 approximately being offset by the reciprocal overpayments being made by Verizon Wireless to  
10 the AT&T ILECs, and similarly engender only a minimal bottom line impact for both parent  
11 companies. For wireless carriers that do not have a significant ILEC affiliation, on the other  
12 hand, the persistent and substantial overcharges for essential special access services substantially  
13 raise their operating costs. These carriers include Sprint, T-Mobile, MetroPCS, Leap/Cricket,  
14 U.S. Cellular, Cellular South, nTelos, Atlantic Tele-Networks and others. Many of these carriers  
15 – including T-Mobile – have complained to the FCC about the persistently excessive special  
16 access prices to which they are subject, and have on multiple occasions asked the Commission to  
17 remove these services from “pricing flexibility” rules and reinitialize rates at “competitive”  
18 levels – e.g., so that they earn only the last-authorized 11.25% rate of return. T-Mobile, in fact,

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48. Economics and Technology, Inc., *Special Access Overpricing and the US Economy: How Unchecked RBOC Market Power is Costing US Jobs and Impairing US Competitiveness*, prepared for the Ad Hoc Telecommunications Users Committee, August 2007, at 13-14.

1 has within the past two years made multiple filings and/or *ex parte* visits with the Commission  
2 on this issue both alone as well as through its participation in the No Choke Points Coalition.<sup>49</sup>

3 33. Wireless carriers are hardly the only source of demand for special access. These  
4 services are used extensively by interexchange carriers, Internet Backbone Providers, CLECs  
5 and others, as well as by business, government and institutional end users of all sizes. The  
6 effectively nonregulated special access rates produce at least \$10-billion in annual excess profits  
7 for AT&T and Verizon alone,<sup>50</sup> creating a source of cash that can be used to support a variety of  
8 competitive ventures and investments. It is noteworthy that while DT Senior Vice President  
9 Langheim states that “[t]he required substantial investments in LTE in the United States would  
10 significantly stretch Deutsche Telekom’s financial capability or, alternatively, force Deutsche  
11 Telekom to reallocate investments from our core Europe operations into T-Mobile USA,”<sup>51</sup>  
12 AT&T seems to have no difficulty coming up with the \$39-billion in funds to acquire T-Mobile,  
13 or the additional capital to upgrade the T-Mobile network to accomplish precisely what DT is  
14 itself not prepared to undertake. AT&T’s continuing ability to exploit its special access  
15 monopoly and to generate sustained and increasing excess profits therefrom that can be used to

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49. According to the FCC’s Electronic Comment Filing System, T-Mobile has on its own made approximately twelve (12) separate filings in WC Docket No. 05-25 between March 2009 and February 2011. No filings in that docket have been made by T-Mobile following the March 20, 2011 announcement of its plans to merge with AT&T.

50. See *Special Access Overpricing*, fn. 48 *supra*. We estimated the extent of special access overpricing industrywide at \$8.31-billion based upon 2006 ARMIS data. Special access category results are no longer available, but extrapolating from pre-2007 growth the \$10-billion estimate of AT&T and Verizon special access overcharges is certainly more than reasonable.

51. Langheim Decl., at ¶14.

1 cross-subsidize other competitive and nonregulated activities needs to be addressed and  
2 remedied as part of the merger approval process.

3 34. The AT&T and Verizon defense of special access pricing flexibility has been that the  
4 special access market is “competitive” and that customers of these services – including wireless  
5 carriers – have a choice of providers.<sup>52</sup> Large users of special access services such as the  
6 members of the Ad Hoc Telecommunications Users Committee, wireless carriers, and others  
7 have repeatedly challenged this claim and have submitted extensive evidence showing that,  
8 while competitive alternatives are sometimes available in certain limited geographic areas, the  
9 vast majority of special access requirements can only be supplied by the incumbent LEC.<sup>53</sup> To

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52. See, e.g., *Supplemental Comments* filed by AT&T in RM 10593 and WC Docket No. 05-25 on August 8, 2007.

53. See, e.g., Comments of AdHoc Telecommunications Users Committee (Jan. 22, 2002) at 2-3, filed in *Performance Measurements and Standards for Interstate Special Access Services*, CC Docket Nos. 01-321, 00-51, 98-147, 96-98, 98-141, 96-149, 00-229, Notice of Proposed Rulemaking, 16 FCC Rcd 20896 (2001) (“*Performance Standards rulemaking*”); Comments of AdHoc Telecommunications Users Committee (Mar. 1, 2002) at 14-17, filed in *Review of Regulatory Requirements for Incumbent LEC Broadband Services; SBC Petition for Expedited Ruling That It Is Non-Dominant in its Provision of Advanced Services and for Forbearance From Dominant Carrier Regulation of These Services*, CC Docket No. 01-337, Notice of Proposed Rulemaking, 16 FCC Rcd 22745 (2001) (“*Broadband Regulation Rulemaking*”); Reply Comments of AdHoc Telecommunications Users Committee (Jul. 1, 2002) at I, filed in *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, CC Docket Nos. 02-33, 95-20, and 98-10, Notice of Proposed Rulemaking, 17 FCC Rcd 3019 (2002) (“*Wireline Broadband Internet Access Rulemaking*”); Comments of AdHoc Telecommunications Users Committee (Dec. 2, 2002) at 5, filed in *AT&T Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, RM No. 10593 (“*AT&T Special Access Rulemaking Petition*”); Comments of Ad Hoc Telecommunications Users Committee (Jun. 30, 2003) at 6, filed in *Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements*, WC Docket No. 02-112, and *2000 Biennial Regulatory Review Separate Affiliate Requirements of Section 64.1903 of the Commission’s Rules*, CC Docket No. 00-175, Further Notice of Proposed Rulemaking, 18 FCC Rcd 10914 (2003) (“*ILEC Separate Affiliate Dominant/Non-Dominant Rulemaking*”); Reply Comments of

1 the extent that there is a limited amount of competition for backhaul and other special access  
2 type services (although certainly not sufficient to constrain ILEC special access prices in those  
3 monopoly markets in which no competitive alternatives are available), the incorporation of  
4 T-Mobile into the AT&T Mobility fold threatens the continued existence of that limited  
5 competition, and further diminishes its potential to develop into effective competition.

6 35. This is because AT&T has indicated that one source of the cost savings that it expects to  
7 realize post-merger will be from switching T-Mobile interconnect and transport services  
8 currently obtained from other carriers over to AT&T's wireline network.<sup>54</sup> More generally – and  
9 of particular concern to competitive local and long-haul carriers and to “alternative backhaul

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AdHoc Telecommunications Users Committee (September 23, 2004) at 3-14, *filed in Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metropolitan Statistical Area*, WC Docket No. 04-223, Memorandum Opinion and Order, FCC 05-170 (rel. Dec. 2, 2005) (“*Qwest Omaha Forbearance Petition*”); Reply Comments of Ad Hoc Telecommunications Users Committee (May 10, 2005), *filed in SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, Memorandum Order and Opinion, 20 FCC Rcd 18290 (2005) (“*SBC/AT&T Merger Order*”); Reply Comments of AdHoc Telecommunications Users Committee (May 24, 2005) at 8-23, *filed in Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, WC Docket No. 05-75, Memorandum Order and Opinion, 20 FCC Rcd 18433 (2005) (“*Verizon/MCI Merger Order*”); Comments and Reply Comments of Ad Hoc Telecommunications Users Committee (June 13, 2005 and July 29, 2005), *filed in Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593, Order and Notice of Proposed Rulemaking, 20 FCC Rcd 1994 (2005) (“*Special Access Rulemaking*”); Comments of AdHoc Telecommunications Users Committee (February 22, 2006), *filed in Petition of Qwest Communications International Inc. for Forbearance from Enforcement of the Commission’s Dominant Carrier Rules as They Apply After Section 272 Sunset Pursuant To 47 U.S.C. § 160*, WC Docket No. 05-333 (“*Qwest § 272 Forbearance Petition*”), Letter from Colleen Boothby, Counsel for Ad Hoc Telecommunications Users Committee, to Marlene Dortch, Secretary, FCC, WC Docket No. 04-440 (filed Mar. 16, 2006).

54. Moore Decl., at ¶34. “There will also be savings from a reduction in interconnection and toll expenses as a result of switching to existing AT&T facilities where possible for transport.”

1 companies” such as Zayo, TTM and FiberTower, who compete with Verizon and AT&T to  
2 provide infrastructure to wireless companies – the Applicants’ “competitive analysis” fails to  
3 address the increase in *monopsony* market power<sup>55</sup> and leverage that the post-merger company  
4 would acquire *vis-à-vis* providers of inputs to the production of its wireless services.<sup>56</sup> A good  
5 deal of the alleged merger synergies appear to arise in this manner, but the potential  
6 anticompetitive implications associated with achieving those synergies are not addressed.

7 36. The merged entity’s potential to exercise its monopsony power has direct historical  
8 parallels. Between 2000 and 2003, SBC was granted authority under §271 of the  
9 *Telecommunications Act of 1996* to enter the in-region long distance market in all of its ILEC  
10 serving areas. Prior to its acquisition of AT&T Corp., SBC had been purchasing wholesale long  
11 distance services from other interexchange carriers, such as WilTel.<sup>57</sup> From the outset, SBC

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55. “Monopsony refers to a market in which there is only one buyer. An *oligopsony* is a market with only a few buyers. With one or only a few buyers, some buyers may have *monopsony power*: a buyer’s ability to affect the price of a good. Monopsony power enables the buyer to purchase the good for less than the price that would prevail in a competitive market.” Robert S. Pindyck & Daniel L. Rubinfeld, *Microeconomics 5<sup>th</sup> Edition*, Prentice Hall, 2001, at 352.

56. The Applicants rely upon the Carlton *et al* Declaration as support for their position that the merger will not result in diminished competition or higher prices for wireless services. However, nowhere in that writing is there any mention or discussion of the effect of the transaction on the merged entity’s ability to dictate terms to its suppliers or to diminish competition in the factor markets. With respect to competitive effects, the Carlton *et al* Declaration contains a section titled “IV. AT&T and T-Mobile USA Face Significant Competition Today and Will Continue to Do So After the Proposed Transaction” and another section titled “V. Concerns about Price Increases Due to Unilateral and Coordinated Effects Do Not Apply Given the Expansion in Output Expected Due to the Proposed Transaction.” Neither of these discussions address factor market impacts.

57. *In the Matter of SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, *Memorandum Opinion and Order*,

1 stated that it intended to shift its purchases of interexchange services from WilTel to the AT&T  
2 Corp. network following the merger,<sup>58</sup> and following the merger it did just that— a pattern  
3 repeated by most ILECs. As a result, most long distance competition has all but evaporated with  
4 the integration of the dominant local and long distance providers, despite the fact that  
5 competition in that segment had been far more developed in 2006 than special access and  
6 backhaul competition is today.

7 37. Today, the ability of AT&T and Verizon, by virtue of their near-monopoly control of the  
8 special access and backhaul markets, to raise the operating costs of rival wireless carriers  
9 presents a similar threat to effective, price-constraining competition in the wireless market.  
10 Therefore, as a condition for approval of this merger, the Commission should concurrently  
11 rescind special access pricing flexibility in all AT&T-served areas and reinitialize special access  
12 rates at cost-based levels. While the Commission cannot impose such a “merger condition”  
13 upon Verizon, imposing it on AT&T will incent AT&T to support a similar outcome industry-  
14 wide in the Special Access rulemaking. Indeed, prior to its acquisition by SBC, the pre-merger  
15 AT&T Corp. had been in the forefront of parties seeking to reinstate price regulation of special  
16 access services. In 2003, AT&T Corp. filed a *Petition for Writ of Mandamus* with the D.C.

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Adopted October 31, 2005, Rel. November 17, 2005, at fn. 431: “SBC currently does not own any long distance facilities in or out of its region, but instead purchases and resells long distance transport from independent providers such as WilTel.”

58. *Id.*, *Description of the Transaction, Public Interest Showing, and Related Demonstrations*, filed February 21, 2005, at 99-100: “Because SBC does not own its own dense national long-haul network, SBC attempted to serve those needs through an arrangement with WilTel, using WilTel’s network. SBC found, however, that its particular arrangement with WilTel did not give it enough end-to-end network management control and flexibility to meet these customers [sic] demanding requirements for system integration and accountability, performance and provisioning and trouble-shooting speed and flexibility.”

1 Circuit, and had been aggressively urging the FCC to take remedial action to reduce special  
2 access rates.<sup>59</sup> That advocacy came to an abrupt halt upon the mid-2004 *announcement* of  
3 AT&T’s plans to merge with SBC. Indeed, it is instructive for the Commission to note that  
4 while the non-ILEC-affiliated wireless carriers (Sprint, T-Mobile, Cellular South, US Cellular,  
5 Cricket and Clearwire) have all been active in pushing for special access reform on their own  
6 and through the No-Choke Points Coalition, the two largest wireless carriers – AT&T and  
7 Verizon – have been utterly silent as their ILEC affiliates – from whom they purchase their  
8 overpriced special access backhaul services – offered and persist in offering strong resistance to  
9 these efforts.

10

11 **The Applicants’ evidence demonstrates that wireless service possesses all of the attributes**  
12 **of a natural monopoly, that competition cannot be relied upon to keep prices at just and**  
13 **reasonable levels, and that affirmative and effective price regulation is necessary to assure**  
14 **that outcome for what has become an essential public service.**

15

16 38. An economic activity calls for economic regulation where two conditions are satisfied:  
17 (1) Its production is characterized by economies of scale and scope and the persistence of  
18 decreasing average costs to a level of output approaching total market demand, such that  
19 minimum average cost can only be achieved by one, or at most two providers; and (2) the  
20 service being produced is a critical input to other economic activity or is itself an essential public  
21 service “vested with the public interest.” I have thus far focused primarily upon the first of these

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59. *AT&T Corp., et al.*, D.C. Circuit Case No. 03-1397, *Petition for a Writ of Mandamus* (filed Nov. 6, 2003). The following parties jointly submitted the mandamus petition with AT&T: AT&T Wireless, The CompTel/ASCENT Alliance, eCommerce and Telecommunications Users Group, and The Information Technology Association of America.

1 two conditions – productive efficiency. Prof. Alfred E. Kahn highlights the second, and equally  
2 important, condition:

3  
4 The list of economic justifications [for “the economic logic of the institution of regulated  
5 monopoly”] would have to involve the following:

6  
7 The importance of these industries, as measured not merely by their own sizeable share  
8 in total national output, but also by their very great influence, as suppliers of essential  
9 inputs to other industries, on the size and growth of the entire economy. These industries  
10 constitute a large part of the “infrastructure” uniquely prerequisite to economic develop-  
11 ment. On the one hand they condition the possibilities of growth (as Adam Smith  
12 recognized, the division of labor is limited by the extent of the market, and the latter  
13 depends in turn on the availability and price of transportation). On the other hand,  
14 because many of these industries are characterized by great economies of scale, their own  
15 costs and prices depend in turn on the rate at which the economy and its demand for their  
16 services grows. As general economic growth proceeds, the contribution of these  
17 industries to further expansion is thus enhanced by their own progressive realization of  
18 those economies of scale, in a cumulative and self-reinforcing process.<sup>60</sup>  
19

20 39. Wireless service clearly fits into this category. It is no longer a luxury; it has become an  
21 essential public service. “As of the first half of 2010, more than one in four American  
22 households (26.6%) had only wireless telephones.”<sup>61</sup> As of December 2010, there were some  
23 302.9-million wireless phones in use in the United States.<sup>62</sup> One study estimated that as of the  
24 end of 2010 roughly one-third of these were smartphones, a figure that is projected to increase to

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60. Kahn, Alfred E., *The Economic of Regulation: Principles and Institutions, Volume I* (New York: John Wiley & Sons, 1970), at 11.

61. Center for Disease Control and Prevention, *Wireless Substitution: State-level Estimates From the National Health Interview Survey, January 2007–June 2010*, National Health Statistics Reports Number 39, April 20, 2011, at 1.

62. *CTIA Semi-Annual Wireless Industry Survey as of December 2010*, available at [http://files.ctia.org/pdf/CTIA\\_Survey\\_Year\\_End\\_2010\\_Graphics.pdf](http://files.ctia.org/pdf/CTIA_Survey_Year_End_2010_Graphics.pdf) (accessed 5/26/11).

1 44% by the end of 2012.<sup>63</sup> Wireless use for voice, e-mail, web access and other applications are  
2 now critical elements of small, medium and enterprise business communications. As a result,  
3 persistent excessive pricing of wireless service has the same detrimental impact upon the US  
4 economy as excessive pricing of any essential public utility service – water, energy,  
5 transportation, and traditional wireline telecommunication.

6 40. In 1993, Congress enacted legislation preempting state regulation of commercial mobile  
7 service rates, while expressly “not prohibit[ing] a State from regulating the other terms and  
8 conditions” pertaining to wireless services.<sup>64</sup> While the FCC has the authority, pursuant to 47  
9 U.S.C. §332(c)(1), to regulate CMRS rates, it has never done so, concluding that forbearance  
10 from regulation of wireless carriers will promote competition in this market and, by implication,  
11 relying upon that competition to assure that rates will be just and reasonable.<sup>65</sup> The Applicants’  
12 extensive discussion of the economies of scale and scope that characterize the provision of  
13 wireless services, together with the numerous impediments to entry and to organic growth that  
14 they have identified, compels the conclusion that *competition* as the device for assuring the  
15 persistence of just and reasonable rates can no longer be relied upon going forward.

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63. *Smartphone Penetration Worldwide, by Region and Country, 2009-2014* (eMarketer)  
<http://blog.techneos.com/blog/research-in-a-mobile-world-7/smartphone-penetration-worldwide-by-region-and-country-2009-2014-source-emarketer>

64. 47 U.S.C. §332(c)(3)(A).

65. *Implementation of Sections 3(n) and 332 of the Communications Act Regulatory Treatment of Mobile Services*, GN Docket No. 93-252, 9 FCC Rcd 1411, 1994 (“*CMRS Second Report and Order*”), at ¶¶15-16.

1       41. Section 332(c)(3)(A) expressly provides for reinstatement of regulation of wireless rates  
2 if certain specific conditions – conditions that parallel those outlined by Prof. Kahn – are  
3 satisfied:

4  
5       ... [A] State may petition the Commission for authority to regulate the rates for any  
6 commercial mobile service and the Commission shall grant such petition if such State  
7 demonstrates that –

8       (i) market conditions with respect to such services fail to protect subscribers  
9 adequately from unjust and unreasonable rates or rates that are unjustly or  
10 unreasonably discriminatory; or

11       (ii) such market conditions exist and such service is a replacement for land line  
12 telephone exchange service for a substantial portion of the telephone land line  
13 exchange service within such State.  
14

15 In fact, both of these conditions are now fully satisfied at a *national* level – certainly a 26.6%  
16 level of wireless-for-wireline replacement qualifies as representing “a substantial portion of the  
17 telephone land line exchange service” as contemplated in the statute. State-level regulation of  
18 wireless *rates* may, at this point, be inefficient or even impractical in that most wireless carriers  
19 have adopted uniform *national* pricing regimes, but the need for regulation of wireless rates as  
20 envisioned by Sec. 332, coupled with the Applicants’ demonstration as to the presence of scale  
21 and scope economies so substantial as to require a firm of a size even greater than either AT&T  
22 or T-Mobile standing alone, compels reexamination of the existing forbearance regime  
23 concurrently with the review of the AT&T/T-Mobile merger application. If the merger is to be  
24 allowed to go forward, it is essential that the Commission put in place a regulatory mechanism  
25 capable of assuring that the various economic and operational efficiencies being ascribed to the  
26 merger will actually inure to individual residential and business consumers and to the economy  
27 overall. Approval of the transaction while the current forbearance regime remains in place

- 1 would “fail to protect subscribers adequately from unjust and unreasonable rates or rates that are
- 2 unjustly or unreasonably discriminatory,” and would thus be inconsistent with the public
- 3 interest.

Declaration of Lee L. Selwyn  
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VERIFICATION

The foregoing statements are true and correct to the best of my knowledge, information and belief.

  
\_\_\_\_\_  
LEE L. SELWYN

Dated at Boston, Massachusetts this 31st day of May, 2011.

**Attachment 1**

**Statement of Qualifications**

**LEE L. SELWYN**

## Statement of Qualifications

### LEE L. SELWYN

Dr. Lee L. Selwyn has been actively involved in the telecommunications field for more than forty years, and is an internationally recognized authority on telecommunications regulation, economics and public policy. Dr. Selwyn founded the firm of Economics and Technology, Inc. in 1972, and has served as its President since that date. He received his Ph.D. degree from the Alfred P. Sloan School of Management at the Massachusetts Institute of Technology. He also holds a Master of Science degree in Industrial Management from MIT and a Bachelor of Arts degree with honors in Economics from Queens College of the City University of New York.

Dr. Selwyn has testified as an expert on rate design, service cost analysis, form of regulation, and other telecommunications policy issues in telecommunications regulatory proceedings before some forty state commissions, the Federal Communications Commission and the Canadian Radio-television and Telecommunications Commission, among others. He has appeared as a witness on behalf of commercial organizations, non-profit institutions, as well as local, state and federal government authorities responsible for telecommunications regulation and consumer advocacy.

He has served or is now serving as a consultant to numerous state utilities commissions including those in Arizona, Minnesota, Kansas, Kentucky, the District of Columbia, Connecticut, California, Delaware, Maine, Massachusetts, New Hampshire, Vermont, New Mexico, Wisconsin and Washington State, the Office of Telecommunications Policy (Executive Office of the President), the National Telecommunications and Information Administration, the Federal Communications Commission, the Canadian Radio-television and Telecommunications Commission, the United Kingdom Office of Telecommunications, and the Secretaria de Comunicaciones y Transportes of the Republic of Mexico. He has also served as an advisor on telecommunications regulatory matters to the International Communications Association and the Ad Hoc Telecommunications Users Committee, as well as to a number of major corporate telecommunications users, information services providers, competitive local exchange carriers, interexchange carriers, wireless services providers, and specialized access services carriers.

Dr. Selwyn has presented testimony as an invited witness before the U.S. House of Representatives Subcommittee on Telecommunications, Consumer Protection and Finance and before the U.S. Senate Judiciary Committee, on subjects dealing with restructuring and deregulation of portions of the telecommunications industry.

In 1970, he was awarded a Post-Doctoral Research Grant in Public Utility Economics under a program sponsored by the American Telephone and Telegraph Company, to conduct research on the economic effects of telephone rate structures upon the computer time sharing industry. This work was conducted at Harvard University's Program on Technology and Society, where he was appointed as a Research Associate. Dr. Selwyn was also a member of the faculty at the College of Business Administration at Boston University from 1968 until 1973, where he taught courses in economics, finance and management information systems.

*Statement of Qualifications – Lee L. Selwyn*

Dr. Selwyn has been an invited speaker at numerous seminars and conferences on telecommunications regulation and policy, including meetings and workshops sponsored by the National Telecommunications and Information Administration, the National Association of Regulatory Utility Commissioners, the U.S. General Services Administration, the Institute of Public Utilities at Michigan State University, the National Regulatory Research Institute, the Harvard University Program on Information Resources Policy, the Columbia University Institute for Tele-Information, the Massachusetts Institute of Technology Alfred P. Sloan School of Management, the National Association of State Utility Consumer Advocates (NASUCA), the National Conference of Regulatory Attorneys, as well as at numerous conferences and workshops sponsored by individual regulatory agencies. Dr. Selwyn is an elected Town Meeting Member for the Town of Brookline, Massachusetts, and serves on the Town's Advisory and Finance Committee and its Subcommittee on Planning and Regulation.

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*Statement of Qualifications – Lee L. Selwyn*

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