

Commission consider those impacts, especially given the substantial evidence that all the major carriers set pricing without regard to local competition.⁵⁵

VII. A Post-Merger AT&T Would Have Substantially Increased Market Power and Unilateral and Coordinated Effects Would Be Highly Likely.

Applicants fail to offer any convincing evidence that the substantial increase in concentration occasioned by the merger won't further enhance AT&T's already considerable market power. AT&T's case for why consummation of the merger would not produce upward pricing pressure consists of two assertions: that the merger would alleviate capacity constraints and lead to expanded output at lower prices; and that T-Mobile's elimination would have no impact since it is currently not a competitor to AT&T. Both of these assertions are without merit.

First, the supposed capacity constraints are non-existent, given that AT&T has yet to deploy service on any of its 700 MHz or AWS spectrum. Other carriers, most notably Verizon, have not claimed any such network constraints – not because they are in a vastly better spectrum position or have fewer hogs on their networks, but because they deployed their spectrum assets in a more timely fashion. AT&T's entire case for network constraints that could only be relieved by this merger is predicated on a static analysis of today's market that ignores the benefits the company will get once it deploys LTE and a portion of its customers begin to migrate off of legacy spectrum. And as we discussed above, there is no reason to believe that the offer of a faster service or the increase of network capacity will lead to lower prices, certainly not in a market that is more concentrated than today's. Indeed, all major carriers have increased capacity by moving from 3G services to 4G services, and none lowered prices. AT&T eliminated

⁵⁵ As the DOJ has recognized, “[t]he existence of local markets does not preclude the possibility of competitive effects in a broader geographic area, such as a regional or national area....” See *United States, State of Alabama, State of California, State of Iowa, State of Kansas, State of Minnesota, State of North Dakota, and State of South Dakota v. Verizon Communications Inc. and Alltel Corp.*, Competitive Impact Statement, Oct. 30, 2008.

unlimited pricing as it deployed HSPA+ (in an effort to reduce overall output) and Sprint initially charged a \$10 premium above the cost of its 3G offering for use of its 4G service, despite the increased capacity.⁵⁶

And the second prong of AT&T's case against upward pricing pressure – that T-Mobile is not a competitor – is equally as dubious, as we detail above. Central to AT&T's case against unilateral⁵⁷ and coordinated effects is its assertion that elimination of T-Mobile won't matter because the remaining carriers can simply "reposition" their offerings in response to any unilateral AT&T action or coordinated action with Verizon.⁵⁸ But again, this ignores the historical evidence that shows *existing* coordinated effects despite numerous attempts by Sprint and others to "reposition" its own offerings.⁵⁹

⁵⁶ See Sarah Jacobsson, "HTC EVO 4G Arrives June 4 for \$200," *PC World*, May 12, 2010 ("EVO 4G users will pay a minimum of \$70 per month (with Sprint's 'Everything Data['] Plan), as well as an additional \$10 per month for 4G coverage (dubbed the 'Premium Data Add-on'). The additional \$10/month charge will be mandatory for all EVO 4G users, regardless of whether they live in a 4G coverage area or not.").

⁵⁷ While AT&T's answer to the unilateral effects arguments focus almost solely on the issue of upward pricing pressure, increased prices are just one among many possible unilateral harms. These harms include relatively reduced capital investment, reduced innovation, higher prices of certain specific services, and removal of certain products from the market. All of which, as we discussed in our Petition to Deny, are likely outcomes of this merger.

⁵⁸ Opposition at 135; *id.* at 140 n.229. AT&T's rebuttal against the evidence of coordination on text messaging prices is particularly misleading. AT&T makes the bizarre claim that text messaging prices have actually decreased, because now a \$5 text bundle has more texts in it than before, and most of AT&T's customers buy these bundles. But this is highly misleading, as raising the price of an la carte text in a coordinated fashion is a way to force customers into needless bundles as a method of insurance against text-induced bill shock. AT&T simply has no good explanation for why it and Verizon doubled the per-text price of SMS service mere months apart, and offers no reason why instances of such coordinated behavior won't increase following the concentration of nearly 80 percent of the market in the hands of these two companies were the Commission to approve this transaction.

⁵⁹ And despite these efforts by Sprint, AT&T has been able to grow share and reduce churn. AT&T's internal communications reveal that **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

VIII. Applicants Overstate Their Spectrum Efficiency Claims and Could Achieve Many of the Same Benefits Without Merging.

In the preceding sections, we explained that the Opposition fails to make the case for merger-specific and cognizable benefits in terms of rural deployment, increased urban capacity, and other purported consumer benefits of the transaction. There are no economic barriers to accomplishing what the Applicants promise as benefits of the merger; and in fact, AT&T promises *fewer* capital expenditures as a result of the merger, choosing instead to pay a premium for eliminating one of its rivals and increasing AT&T's already considerable market power. Examining Applicants' spectrum claims more closely, however, the story is no different: just as it fails to make an economic case for benefits that would outweigh the transaction's harms, the Opposition utterly fails to make the technical case that this merger is necessary to alleviate spectrum constraints or deploy LTE.

First, the Opposition offers no new defense of the proposed merger's alleged spectrum efficiency benefits nor does it adequately rebut arguments raised in various petitions to deny. Instead, Applicants offer mere hypotheses that on detailed examination present no real evidence of merger-specific benefit, because they are based on assumptions, simplified models (which are often further distorted by extending their assumed outcomes from phone networks to broadband),

END HIGHLY CONFIDENTIAL INFORMATION] See ATTF-TMO-00005897. This information is very important as regulators consider the potential for coordinated effects, given that AT&T eventually announced its increased ETF mere months after Verizon doubled its own early termination fee.

and arbitrary hypothetical examples.⁶⁰ In any event, any suggestion that *current* spectrum constraints justify the proposed merger are premature because AT&T has yet to deploy any networks using its 700 MHz and AWS spectrum licenses.⁶¹

Second, the alleged benefits of the proposed merger are either not significant or do not depend on the merger. Third, both AT&T and T-Mobile have available to them non-merger, lower-cost alternatives that would be equally as effective at improving network capacity. Furthermore, as discussed above, to the extent that AT&T or T-Mobile face greater constraints than their competitors as a result of their own poor business decisions, granting this merger would constitute Commission intervention to reward a competitor – AT&T – and distort competition. Overall, as explained more fully in the remainder of this Reply, the benefits of consolidated spectrum control that AT&T alleges do not offset the demonstrated harms of the merger.

A. The Alleged Spectrum Efficiency Benefits of the Transaction Are Neither Merger-Specific Nor Significant.

The Opposition and its supporting documents propose five different sources for the alleged spectrum benefits of the transaction: cell splitting, transitioning the use of spectrum for newer technologies, removing control channels, channel pooling, and increases in network utilization efficiency.⁶² Each of these purported benefits can be readily accomplished without a

⁶⁰ For example, one of AT&T’s attached declarations is characterized by another of its own declarations as resting on multiple assumptions and “simplified” analysis. *See* Opposition, Reply Declaration of William Hogg, ¶¶ 28-30 (Hogg Reply) (citing multiple assumptions in the Reply Declaration of Dennis W. Carlton, Allan L. Shampine, and Hal S. Sider, and subsequently referring to the Carlton declaration as being based on “simplified peak capacity calculations” with parameters that “do not reflect the full range of real world considerations”).

⁶¹ Petition to Deny of Free Press at 61-62; Sprint Petition to Deny at 95-97.

⁶² Opposition, Joint Declaration of Jeffrey H. Reed and Nishith D. Tripathi, “Analysis of Network Efficiencies Associated with the Proposed Acquisition By AT&T, Inc. of T-Mobile USA, Inc.,” at 6 (Reed-Tripathi White Paper) (“In particular, the integration of the two networks

merger, provide no significant long-term value, and offer only uncertain and likely minor improvements even in the short term.

1. *Cell splitting*

According to Applicants, the proposed merger would enable substantial rapid cell splitting, allowing AT&T to improve capacity in the merged network by installing new equipment or repurposing T-Mobile's current equipment.⁶³ Yet, Applicants could achieve these same efficiencies without resorting to a merger. Their argument runs as follows: post-merger, the new "dense cell grid" would offer many advantages, particularly where the companies' networks are currently congested.⁶⁴ Applicants also assert that current T-Mobile sites are particularly well placed to alleviate current AT&T congestion through network integration and effective cell splitting.⁶⁵ But that dense cell grid is created by installing *new* equipment in new places to reduce load, practices that can already be performed by AT&T and T-Mobile without merging. Nothing prevents AT&T and T-Mobile from adding new cell sites or sharing current cell sites without a merger. In some locations, the equipment of both providers can be operated on the same site, eliminating the need to find a brand new location for installation. In other locations where a site does not have room for both providers' equipment, data roaming agreements can allow both parties to use the equipment, without merging.⁶⁶ Even steps allowing T-Mobile to use AT&T's 850 MHz spectrum, which has better propagation characteristics than T-Mobile's higher-

is expected to increase network capacity and performance through cell splitting, the elimination of redundant control channels, channel pooling, increases in network utilization efficiency, and the shifting of certain spectrum to newer, more spectrally efficient technologies.”).

⁶³ Opposition at 45-50.

⁶⁴ *Id.* at 45-46.

⁶⁵ *Id.* at 47-48.

⁶⁶ *See* Petition to Deny of Free Press at 62.

bandwidth spectrum, could be accomplished without a merger by way of an agreement between the two independent companies to upgrade and share equipment.

The benefits of cell splitting after a merger are also uncertain. The joint network still would be burdened by the combined number of subscribers on both companies' networks. Meaningful improvements in network capacity require the installation of new equipment in new locations, regardless of whether AT&T and T-Mobile are permitted to merge. Although it is obvious that the total number of shared cell sites available to the combined network would be greater than the number currently serving either network alone,⁶⁷ this is not the key question. If each network's spectrum holdings and cell sites are strained, then certainly the combination would need more sites than either individual network. Therefore, the key question is whether the combined network would have *enough* additional cell sites to handle the increased demand, and this is an empirical question that Applicants have not clearly answered even with the Opposition's so-called "simplified example"⁶⁸ – the purported benefits of which are (once again) not merger-specific, because each company could engage in such cell splits on its own.

2. *Transitioning to more efficient technologies*

Most of the purported long-term efficiencies of the proposed transaction appear to result from conversion of spectrum currently used for older technologies, such as GSM and UMTS, to newer and more efficient technologies, particularly LTE⁶⁹; but the benefits of aggressive conversion to LTE can be readily achieved at far lower cost without the proposed merger. Applicants claim that other synergies would permit them to free spectrum to redeploy for more

⁶⁷ Hogg Reply ¶ 34.

⁶⁸ Opposition at 46.

⁶⁹ *Id.* at 43.

efficient service.⁷⁰ However, both AT&T and T-Mobile can free significant spectrum for conversion without this merger simply by providing incentives for current GSM users to transition to other networks.⁷¹ Applicants cannot deny that AT&T could transition some of its spectrum holdings currently used for older GSM and UMTS technologies to LTE without the merger.⁷² Instead, they contend that the transition to LTE can be achieved “more quickly” as a result of the proposed merger,⁷³ and that the proposed merger will sufficiently increase capacity in AT&T’s GSM and UMTS networks while the LTE transition is underway to avoid degrading service to AT&T’s customers.⁷⁴

Neither of these goals is *necessary*, however, to achieve the increased efficiency offered by LTE. What’s more, the benefits of a more rapid transition and reduced subscriber disruption are limited and speculative because they depend on the other alleged improvements for AT&T’s current GSM and UMTS networks, which are in turn challenged by multiple petitioners and inadequately defended in the Opposition. These inadequacies are discussed at greater length below.

3. *Benefits to GSM and UMTS networks – removal of control channels, channel pooling, and utilization efficiencies.*

Applicants state that, regardless of disagreements among parties concerning LTE efficiency and cell splitting, the other three sources of spectrum efficiency benefits – the removal

⁷⁰ *Id.*

⁷¹ *See, e.g.*, Petition to Deny of Free Press at 61.

⁷² In fact, AT&T stated as much in filings in the pending Qualcomm proceeding. *See id.* at 62 n.190.

⁷³ Opposition at 7 (“Such efficiencies will allow the combined company to shift spectrum more quickly to its UMTS and LTE networks....”).

⁷⁴ Hogg Reply ¶ 25.

of control channels, channel pooling, and utilization efficiencies – surely cannot be realized without the proposed merger.⁷⁵

First, this assertion is debatable, because commercial arrangements can enable the sharing without a merger of all network resources either in whole or in part, including channels of spectrum. In fact, AT&T's only real response to such arguments is to claim that they are too complicated to bother with.⁷⁶

More importantly, however, the value of these benefits is limited and highly speculative. Many of the benefits appear to accrue primarily to GSM networks and particularly to voice services.⁷⁷ And all of the benefits appear to be based on hypothesis and hopes, not facts. Even Applicants' own experts describe the benefits as impossible to identify with certainty.⁷⁸ The alleged benefits for Applicants' GSM and UMTS networks hinge on speculations, theories, and assumptions. The theoretical benefits of shared GSM networks under certain assumptions translate into additional capacity for UMTS (under additional assumptions), which together with theoretical "utilization efficiencies" (which are questionable) translate to reduced congestion in UMTS, and possibly also more available spectrum for LTE (though at great cost for transitioning existing T-Mobile customers⁷⁹). If all of these things work exactly as hoped, then together,

⁷⁵ Opposition at 63-64.

⁷⁶ See Hogg Reply ¶ 66 (characterizing network sharing as burdened by "many governance and network-planning issues" such as deciding when to upgrade systems).

⁷⁷ See Sprint Petition to Deny at 113. Applicants respond to Sprint's allegations by noting that GSM networks also offer (extremely slow) EDGE data connectivity, *see* Reed-Tripathi White Paper at 22, and therefore channel pooling offers some non-voice benefits. However, no direct benefits accrue to the far more widely used HSPA data services.

⁷⁸ See Reed-Tripathi White Paper at 6-8 ("[I]t is impossible analytically to determine the *exact* gains due to the enormous complexities of real-world wireless networks.").

⁷⁹ Petition to Deny of Free Press at 59-60.

Applicants assert “the combined network will far exceed the sum of its parts.”⁸⁰ More likely, however, the exaggerations of the proposed combination far exceed the sum of any real gains.

a. Removing control channels

Applicants argue that partial overlap in AT&T’s and T-Mobile’s GSM networks – through their PCS spectrum licenses – would allow the combined network to free up at least 4.8 MHz of spectrum through the elimination of redundant “control channels.”⁸¹ But this benefit is of limited utility. These control channels are tiny, scattered chunks of 200 KHz of spectrum, scattered throughout the spectrum band used for the GSM network.⁸² Repurposing a meaningful amount of spectrum involves both freeing enough control channels to aggregate a usable amount of spectrum, and rearranging the spectrum in use to align all of the freed spectrum into a contiguous block. If the resulting block is large enough in a cell site to add a UMTS carrier, then some small benefit can be achieved, for that cell site. But how often and where all of these factors will align remains to be determined, particularly when (as AT&T acknowledges) a typical UMTS carrier deployment requires 10 MHz of spectrum,⁸³ not 4.8.

In the long term, this benefit is indeed short-lived. Applicants insist that, although the benefit accrues solely to GSM networks, it is nevertheless not moot because it frees spectrum for use in newer technologies.⁸⁴ However, the ultimate goal of all network providers is and must be to repurpose *all* of the spectrum now used by GSM services for other uses, and to eliminate GSM networks entirely. With this long-term goal in mind, the short-term goal of freeing a portion of

⁸⁰ Opposition at 43.

⁸¹ *Id.* at 50.

⁸² Reed-Tripathi White Paper at 13-16.

⁸³ Opposition at 54.

⁸⁴ *Id.* at 50.

GSM spectrum will, indeed, be just that – short-term – and will not generate any additional long-term capacity.⁸⁵

b. Channel pooling and network utilization efficiencies

The benefits of channel pooling and network utilization efficiencies are highly speculative. They appear to be based on theoretical models that do not seem likely to match real-world network load conditions. For example, the benefits of both channel pooling and network utilization efficiencies are based on load balancing theory, under which any practical benefits would vary widely depending on the load on the two networks at any given time. When two networks are combined, significant load balancing benefits from the combination would be achieved only if one network were overloaded and the other lightly loaded at a given time. Consequently, if both networks are frequently heavily loaded, or are heavily loaded at the same times, it stands to reason that the benefits of the combination would be greatly limited.⁸⁶

Moreover, Applicants' analysis relies heavily on theoretical models developed for assessing load on phone networks. Applicants specifically assert that two combined networks can "accommodate more subscribers with the same probability of blocking."⁸⁷ This discussion of "blocking" appears to be an odd way to characterize greater efficiency in mobile broadband networks – but it is necessary because Applicants' assertions rely heavily on the benefits of load

⁸⁵ These GSM control channels will be eliminated anyway when both companies repurpose the spectrum used by their GSM services. Therefore, the total spectrum usable for other services will be the same with or without the merger, contrary to Applicants' arguments. *See id.* at 50 ("[T]he combined company's ability to eliminate redundant control channels is another way in which the transaction will give it substantially more capacity than the sum of the capacities of the standalone companies.").

⁸⁶ *See* Petition to Deny of Free Press at 55-56.

⁸⁷ Opposition at 52.

balancing in phone networks.⁸⁸ Applicants do not attempt to extend these theories to broadband networks, or apply them to the specific networks of AT&T and T-Mobile, much less measure the actual benefits under real world scenarios. Instead, much of the theoretical analysis used by Applicants to illustrate the alleged utilization benefits is based on phone networks, and the reduced call blocking of a combined network under heavy load.⁸⁹

But data services use capacity in very different ways than voice. Even a model of voice traffic based on typical real-world usage patterns, rather than a random distribution, would not support allegations of benefits of load balancing in data networks, because the network loads would be very different.

Unfortunately, these outdated, theoretical, and highly speculative models represent the high-water market of Applicants' analysis. What remains is a hodgepodge of idealistic assumptions and hypothetical examples otherwise used to defend the alleged efficiencies. For example, Applicants reintroduce the "ticket agent" analogy, creating unrealistic scenarios in which one queue (or network) is lightly loaded, and the other is heavily loaded⁹⁰ – the ideal scenario for load balancing, but one unlikely to occur often in practice. They also make convenient assumptions about network load,⁹¹ positing one network that might be 80% loaded

⁸⁸ See Reed-Tripathi White Paper at 18, 30 ("Research (and experience with commercial networks) indicates that there could be more than a 10% gain in voice capacity due to inter-carrier load balancing in the case of 2 carrier frequencies."). The cited source for this conclusion is a paper on load balancing in old CDMA networks, dated 2001. *Id.* at 37 (reference to Tripathi & Sharma IEEE paper).

⁸⁹ See *id.* at 17-20 (characterizing the Erlang capacity of a cell in terms of the number of calls that can be completed and the probability that a call will be blocked – all concepts relevant solely to a mobile phone network, not a data network).

⁹⁰ Opposition at 51. This metaphor has already been debunked. *E.g.* Petition to Deny of Free Press at 55 (noting the absurdity of supposed efficiencies from channel pooling if Applicants' claims regarding their over-burdened GSM networks are given any credence at all).

⁹¹ See, *e.g.*, Reed-Tripathi White Paper at 28-30 (analyzing an arbitrarily chosen example of two heavy network loads).

while the other is 10% loaded. Such hypotheticals are trotted out again,⁹² as they were in the original application materials.⁹³ Yet, Applicants fail to address the more likely scenario raised in petitions to deny, in which the total average load of the two networks is far greater than what one of the two could handle alone while the merged entity repurposes some spectrum currently in use.⁹⁴

Overall, although there are theoretical benefits from channel pooling and network utilization efficiencies, the Opposition does not – and likely cannot – close the significant gap between that theory and any practical benefits for AT&T's and T-Mobile's mobile broadband networks as a result of this merger.

B. AT&T and T-Mobile Have Many Options to Improve Their Respective Networks Without a Merger.

AT&T and T-Mobile both could improve their networks readily without this merger. AT&T, in particular, has at least five options for doing so, including adding cell sites; deploying unused spectrum; transitioning current users from older to newer technologies; entering into data roaming agreements to improve coverage; and buying additional spectrum in subsequent auctions. AT&T likely can pursue any and all of these options at lower cost than the \$39 billion purchase price of T-Mobile, as any of these routes might cost a few billion dollars each at maximum. Unfortunately, Applicants' filing appears contemptuous of these options.⁹⁵ Merger opponents do not claim that AT&T and T-Mobile engineers are unaware of the non-merger related possibilities for network investment. Rather, AT&T and T-Mobile may be *actively choosing* not to take the proper engineering steps to alleviate congestion, because doing so would

⁹² *Id.* at 25, fig. 6.1.

⁹³ Application, Hogg Declaration, ¶ 55.

⁹⁴ Petition to Deny of Free Press at 57.

⁹⁵ See Opposition at 63-64.

involve capital investment that is not required in the insufficiently competitive mobile broadband market. Frankly, Applicants appear naïve when they assert, “If AT&T could have eliminated capacity constraints on its network using the alternatives cited by merger opponents, it would have done so.”⁹⁶

In fact, if doing so would substantially lessen AT&T’s profit margins, AT&T would almost certainly have chosen *not* to invest in such options. AT&T’s poor network performance and plummeting customer satisfaction ratings, during a time when it managed to retain share based on its iPhone exclusivity and other factors, bear out this hypothesis.⁹⁷ But now that AT&T may face more consequences of its poor decisions and under-investment, it is willing to pony up \$39 billion to eliminate a rival and buy that rival’s customers rather than competing for their business. The Commission must not confuse AT&T’s business decisions with engineering constraints. Both AT&T and T-Mobile can take steps to improve their networks, without Commission approval of the proposed merger.

1. Adding cell sites

Both AT&T and T-Mobile can address the alleged capacity constraints in their current networks by adding new cell sites. Sprint has estimated that AT&T could establish 30,000 new cell sites – more than 60% greater than the total number of cell sites operated by T-Mobile – for a fraction of the cost of this merger.⁹⁸ Adding cell sites promotes efficient use of spectrum and significantly increases network capacity.

⁹⁶ *Id.* at 63.

⁹⁷ See Petition to Deny of Free Press at 65-66; see also Joint Petition to Deny of Media Access Project *et al.* at 34-35 & n.97.

⁹⁸ Sprint Petition to Deny at 108.

Applicants suggest that the only way AT&T can add a cell site without acquiring T-Mobile is by starting from scratch.⁹⁹ But this misses the point. If AT&T has the opportunity to accelerate cell site additions by acquiring T-Mobile, then AT&T can enter into separate agreements with T-Mobile or the companies from which T-Mobile leases cell site space in order to achieve the same accelerations by effectively adding those same cell sites. At cell sites where AT&T would not install any new equipment post-merger, but would instead integrate the equipment that T-Mobile has already installed, AT&T customers could gain access to that site and equipment today through a data roaming agreement, without necessitating all the harms that the merger transaction would engender.

Ultimately, Applicants' most defensible argument for the merger is that AT&T could add new cell sites faster if allowed to acquire T-Mobile.¹⁰⁰ This is likely true. However, a slight increase in speed is a far cry from attributing to the proposed merger the entire benefit of new cell sites, and such misattribution is the clear (and misleading) implication of most of Applicants' arguments.

2. *Building out unused spectrum*

AT&T can achieve significant improvements in its network by deploying its unused 700 MHz and AWS spectrum.¹⁰¹ As Applicants note, AT&T is in the process of doing so, and soon will have service available in many markets.¹⁰² However, given that this new service is not currently available, AT&T cannot yet improve congestion in its GSM and UMTS networks by transitioning current and new users to this spectrum. The faster these services are deployed, the

⁹⁹ See Opposition at 65-67; Hogg Reply ¶¶ 57-61.

¹⁰⁰ See Hogg Reply ¶ 55 (referring to a "streamlined process" to integrate T-Mobile sites into AT&T's network, versus "difficulties and time" to add new sites without a merger).

¹⁰¹ Petition to Deny of Free Press at 61-62.

¹⁰² Opposition at 28.

faster AT&T's users can begin switching, and the more quickly AT&T's alleged capacity constraints in GSM and UMTS can be alleviated.

Additionally, in the short term, AT&T could split up its unused spectrum, deploying its AWS spectrum for HSPA+ service in those markets where its UMTS networks are most severely congested (or even nationwide) but leaving its 700 MHz spectrum available for accelerated buildout of LTE. Given that T-Mobile already uses AWS spectrum for HSPA+, many current T-Mobile handsets likely could use the new AT&T spectrum as well (pursuant to sharing and roaming agreements rather than a merger), and the claimed capacity constraints of both carriers could be rapidly reduced without limiting AT&T's ability to deploy LTE on its 700 MHz spectrum. Applicants are entirely wrong in stating that these two solutions are irreconcilable.¹⁰³ AT&T has chosen to deploy all of its AWS and 700 MHz holdings together; however, this clearly is not the only possible option. Dividing the holdings could allow part to be used to alleviate UMTS congestion, and part for LTE deployment.

3. *Transitioning users to newer technical standards*

Both AT&T and T-Mobile can realize substantial benefits by creating incentives for their users to transition to newer, more spectrally efficient technologies. In AT&T's case, the benefits of an aggressive LTE transition would be significant.¹⁰⁴ For T-Mobile, continued development of HSPA+, repurposing of spectrum currently used for GSM to UMTS, and other actions could produce significant returns.¹⁰⁵

Applicants claim that repurposing AT&T's current cellular and PCS spectrum for use in more spectrally efficient networks, including its LTE network, would be a very difficult process

¹⁰³ *Id.* at 7-8.

¹⁰⁴ See Sprint Petition to Deny at 101 (noting that LTE is about 860 percent more efficient than GSM).

¹⁰⁵ Petition to Deny of Free Press at 62-63.

and would take years.¹⁰⁶ Applicants insist that the proposed merger is necessary to perform such a transition “without degrading service for GSM and UMTS subscribers.”¹⁰⁷ But the challenges are not as grave as Applicants allege. For example, Applicants imply that AT&T’s only option to repurpose some spectrum from GSM is to disable GSM service entirely in a geographic region.¹⁰⁸ In reality, after transitioning *some* of its customers away from GSM to UMTS or LTE, AT&T can reduce the amount of spectrum allocated to GSM while still leaving enough for the reduced number of users, thereby freeing some spectrum to be repurposed for more efficient uses. Applicants offer a “simple example” in which each of the two merging networks is only using 10 MHz of spectrum for GSM, all of which would need to be freed to clear enough for a single UMTS carrier.¹⁰⁹ But in another and far more realistic “simple example” in which AT&T’s network is using far more than 10 MHz of spectrum for GSM, transitioning some GSM customers to other networks could allow AT&T to *reduce* its GSM allocation by 10 MHz to support a new UMTS carrier, without needing to eliminate GSM service entirely.

Despite the alleged challenges of transitioning AT&T’s users, Applicants appear to contemplate transitioning *T-Mobile* users to achieve their proposed efficiency gains.¹¹⁰ Without transitioning T-Mobile users, no utilization efficiencies for UMTS can be achieved, as AT&T and T-Mobile operate incompatible UMTS networks.¹¹¹ Additionally, without transitioning

¹⁰⁶ Opposition at 32-33.

¹⁰⁷ Hogg Reply ¶ 17.

¹⁰⁸ Opposition at 35; Hogg Reply ¶ 23 (“[E]ven if AT&T could completely transition all of its customers in a particular market from GSM to UMTS...AT&T could not turn down its GSM network in that market because the rest of AT&T’s GSM customer base will need to use that network when they travel to the ‘turned-down’ area.”).

¹⁰⁹ Opposition at 54.

¹¹⁰ See *id.* at 81 (characterizing the ability to use T-Mobile’s occupied AWS for LTE as a “key benefit” of the proposed merger, even though such usage would require transitioning all of T-Mobile’s current HSPA+ subscribers).

¹¹¹ Petition to Deny of Free Press at 57-58.

current T-Mobile users, AT&T cannot clear and repurpose T-Mobile’s AWS spectrum to expand the reach of its LTE network – an alleged “key benefit” of this transaction.¹¹² Clearly, AT&T is less concerned about the challenges of transitioning T-Mobile’s current customers than its own current customers. Yet, Applicants also misleadingly assert that “[T-Mobile] customers will not have to make any changes to their T-Mobile USA services or devices upon the close of this transaction.”¹¹³ This statement is true only as of the close of the transaction, however, as realizing its supposed benefits will require forcing every T-Mobile user to change services and devices – likely being forced in the bargain to pay more for AT&T rate plans when the T-Mobile-specific plans and services are discontinued.¹¹⁴

Perhaps Applicants will assert that T-Mobile users are easier to move simply because there are fewer of them.¹¹⁵ If so, this is not a defensible argument, because T-Mobile’s users have no less right to be saved from disruption than AT&T users. More importantly, though, the fault for having too many subscribers to move lies with AT&T for not deploying LTE more rapidly. Earlier LTE deployment would have reduced the number of new UMTS subscribers and allowed some to transition over time, reducing the number of subscribers that need to be transitioned with extra incentives all at once to unused spectrum. Instead, AT&T has aggressively added more HSPA+ users, and signed many of them to lengthy contracts backed by

¹¹² Opposition at 81.

¹¹³ *Id.* at 62. In a footnote attached to this text, Applicants concede this fact, but dismiss it as happening only “over time” and “in certain markets.” *Id.* at 62 n.70.

¹¹⁴ In fact, it may well be this distinction that makes the cost of transition incentives worthwhile for Applicants as a short-term business calculation. Whereas AT&T users presumably would receive transition incentives for free, T-Mobile users would pay more for their monthly service after a transition, possibly outweighing the up-front cost of the incentives.

¹¹⁵ Hogg Reply ¶ 20 (“*With this many subscribers to transition, it simply will take a significant number of years to transition the customers to UMTS or LTE, regardless of how aggressive AT&T is in promoting that migration.*”) (emphasis added).

early termination fees, locking millions more subscribers into two-year UMTS windows, and increasing the difficulty of transitioning to LTE.

Ultimately, however, as illustrated above in this Reply, Applicants have already contradicted the alleged difficulties of repurposing spectrum in their current network for more efficient purposes by stating that such a transition is possible.¹¹⁶ As a transition to LTE is readily possible without the proposed merger, the transaction's purported advantages are not derived from engineering efficiencies, but rather from a business judgment that the merger will help the company "absorb the capital investment and lower returns associated with building out to over 97 percent of the population."¹¹⁷ As we have shown, AT&T apparently has no trouble justifying these reduced returns if it can take out a rival and increase its own market power – even if it must pay a large premium to do so.

4. *Data roaming*

AT&T and T-Mobile can expand their network coverage and increase their effective capacity through the judicious use of data roaming.¹¹⁸ Applicants are critical of the benefits of data roaming¹¹⁹ but their supposed competitors rely on it heavily for coverage.¹²⁰ In practice, data roaming on other companies' LTE networks (if coupled with Commission action to promote interoperability) could help AT&T expand its coverage area significantly, in particular by

¹¹⁶ See Petition to Deny of Free Press at 62 (referencing statements made by AT&T, and specifically the Rinne Declaration, in the context of its application to acquire Qualcomm spectrum).

¹¹⁷ Hogg Reply ¶¶ 45-47.

¹¹⁸ Petition to Deny of Free Press at 62.

¹¹⁹ Opposition at 72.

¹²⁰ See Petition to Deny of Free Press at 62 (citing the six places in the original joint application where the data roaming agreements of other carriers are cited positively to show their competitiveness).

allowing the company to access the nationwide LTE service Verizon Wireless is currently deploying.¹²¹

5. *Buying more spectrum*

Both AT&T and T-Mobile have the option of expanding their network capacity by purchasing additional spectrum licenses as they become available. In fact, in a number of other pending transactions, AT&T proposes to buy regional 700 MHz licenses to complement its current holdings.¹²² The Commission's National Broadband Plan established an objective of making 500 MHz of additional spectrum available for mobile broadband use.¹²³ In the Commission's plan, as much as 120 MHz of spectrum would come from reallocation in the current TV bands.¹²⁴ Whatever the near term results for that spectrum, it is a certainty that the Commission will conduct additional auctions in the next several years. AT&T and T-Mobile can bid to acquire more spectrum, and thus more potential capacity, in any of these forthcoming

¹²¹ *Id.*

¹²² See Joint Motion to Consolidate of Cincinnati Bell Wireless, LLC, MetroPCS Communications, Inc., NTELOS, Rural Cellular Association, Rural Telecommunications Group, and Sprint Nextel Corporation, *Applications of AT&T Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses and Authorizations, Application for Assignment of Lower 700 MHz Band Licenses from Qualcomm Incorporated to AT&T Mobility Spectrum LLC, Applications for Assignment of Licenses from Whidbey Telephone Company to AT&T Mobility Spectrum LLC, Application for Assignment of License from 700 MHz, LLC to AT&T Mobility Spectrum LLC, Application for Assignment of License from Knology of Kansas, Inc. to AT&T Mobility Spectrum LLC, Application for Transfer of Control of Redwood Wireless Corp. to AT&T Inc., Application for Assignment of License from Windstream Lakedale, Inc. to AT&T Mobility Spectrum LLC, Application for Assignment of Licenses from Windstream Iowa Communications, Inc. to AT&T Mobility Spectrum LLC, Application for Assignment of License from Maxima International, LLC to AT&T Mobility Spectrum LLC, Application for Assignment of Licenses from D&E Investments, Inc. to New Cingular Wireless PCS, LLC*, WT Docket Nos. 11-65, 11-18 (June 9, 2011).

¹²³ Federal Communications Commission, *Connecting America: The National Broadband Plan*, at 75 (2010), <http://download.broadband.gov/plan/national-broadband-plan.pdf>.

¹²⁴ *Id.* at 76.

auctions. In fact, they would have more reason to bid if this merger were denied, but less incentive to participate in and contribute to a successful auction if this deal were to be approved.

IX. Approving The Proposed Merger Would Unfairly Reward AT&T and T-Mobile While Punishing Their Competitors.

Even if the Commission assumes the alleged spectrum benefits of the proposed merger to be true – contrary to the wealth of opposing evidence – the Commission still must not approve this merger. AT&T and T-Mobile are not entitled to merge; instead, under the Commission’s rules, they must show that a merger would benefit the public interest. Such a showing is impossible, because approving this merger would harm competition while rewarding two competitors – AT&T and T-Mobile – for their own mistakes. As discussed in greater detail above, Applicants in this merger are effectively asking for a government bail-out for AT&T. As Applicants themselves conceded, the “Commission’s statutory responsibility is to protect competition, not competitors.”¹²⁵

Having discussed earlier in this Reply the breathtaking nature of AT&T’s anti-free market contentions, we pause here only to emphasize that this merger would create one company with massive spectrum holdings far in excess of its competitors.¹²⁶ Applicants assert that “the combined company’s spectrum holdings will fall far short of levels that could support any reasonable concern about spectrum aggregation,”¹²⁷ but bases this statement on its belief that the Commission should greatly expand the contours of its current spectrum screen, in part by adding spectrum bands that have not yet been made available for mobile broadband use.¹²⁸ With respect to the current spectrum screen, Applicants allege that on average the combined company would

¹²⁵ Opposition at 98-99, 181.

¹²⁶ Petition to Deny of Free Press at 47-50.

¹²⁷ Opposition at 185.

¹²⁸ *Id.* at 186.

hold 134 MHz of spectrum, which is less than one third of the 424.5 MHz that AT&T calculates to be the total available for mobile broadband.¹²⁹ But that estimate explicitly excludes in the numerator the Qualcomm spectrum as well as other 700 MHz licenses that AT&T also has sought permission to acquire. Together, if all of these transactions were to be approved, the combined company would hold on average well over one third of all spectrum currently considered by the Commission to be suitable for mobile broadband deployment.¹³⁰ And that's just the average. In many individual markets, the combined company would hold far more – as much as 200 MHz or more, as Applicants do not deny.¹³¹

Applicants attempt to defuse these arguments by insisting that the Commission should not care how much spectrum a company has, but instead should ask “whether the amount of spectrum a provider holds in a particular area is sufficient to handle bandwidth demands generated by its subscribers in that area.”¹³² This is incorrect, and such a self-serving formula would sound the death knell for wireless competition policy. The most important question facing the Commission is whether allowing this company to acquire massively more spectrum serves the public interest. Here, given that AT&T in particular already has massive spectrum holdings and that the companies' need for more spectrum arises from their own mistakes, the answer to that question must be “no.”

These companies have both made mistakes. Both companies had opportunities in 2008 to purchase more spectrum. And yet both companies today still have options at their disposal to

¹²⁹ *Id.* at 188.

¹³⁰ *See* Petition to Deny of Free Press at 47-50.

¹³¹ *See id.* Applicants disregard these demonstrations, on the grounds that they are slightly overinclusive in counting the debated WCS spectrum licenses. *See* Opposition at 188. However, even without counting AT&T's WCS spectrum, AT&T would have nearly 200 MHz of spectrum in many areas throughout the country, and more than 200 MHz in some.

¹³² Opposition at 17.

improve their network capacity and increase their geographic coverage, options which they slow-roll or choose not to employ. AT&T has a demonstrated history of underinvestment in its network – and contrary to Applicants’ claims,¹³³ this history is well documented.¹³⁴ At the same time, there can be no doubt that AT&T would have experienced fewer capacity problems with its network if it had not enjoyed an exclusive deal for the iPhone,¹³⁵ regardless of any other alleged benefits of the deal.¹³⁶

Meanwhile, according to Applicants, competing carriers do not face the same constraints as AT&T and T-Mobile. Applicants repeatedly assert that the constraints facing AT&T and T-Mobile are unique, and that their competitors are well positioned to flourish.¹³⁷ In their original application, Applicants reference positive statements from Verizon Wireless, Sprint, Leap, and MetroPCS indicating that all four companies have comfortable network capacity for the immediate future.¹³⁸ Even if the alleged benefits of this merger were true, Commission approval would constitute a handout to the worst industry performers, at the expense of competition and more successful providers.

X. Conclusion

This merger’s concentration of so much market power in the hands of two legacy Bell monopolists would reduce the forces of competition, reduce innovation and investment, lead to

¹³³ *Id.* at 37 (“[T]he claim that AT&T has underinvested in its network is factually untenable.”).

¹³⁴ *See, e.g.*, Petition to Deny of Free Press at 69-70; Sprint Petition to Deny at 85-87.

¹³⁵ Petition to Deny of Free Press at 66.

¹³⁶ Opposition at 38-39 (praising the “unqualified boon” of the exclusive deal, without denying that it contributed substantially to AT&T’s network problems).

¹³⁷ *See, e.g., id.* at 19, 22, 180 (stating that “both AT&T and T-Mobile USA confront growing spectrum and capacity constraints,” that “other carriers have publicly stated, even since this transaction was announced, that they do not face short-term capacity constraints,” and that “AT&T faces uniquely serious and urgent capacity constraints”).

¹³⁸ Application at 26 n.36.

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higher effective prices, and kill tens of thousands of jobs. The prospects for competitive entry or competitive responses by remaining carriers are non-existent, and the claimed benefits are speculative and non-merger specific. There is simply no good reason, from either an antitrust or public interest perspective, to approve this duopoly-forming transaction.

Respectfully submitted,

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