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ability of MetroPCS to offer nationwide service to its customers has become a major driver of the customer's purchase decision and today MetroPCS only offers its customers nationwide service. NTELOS has also found that nationwide service is "table stakes" in the marketplace and spends a large portion of its advertising and promotional dollars to demonstrate to customers that a regional carrier can meet the need for nationwide service. Clearly, consumers view the relevant market as national, which means that the Commission would be ignoring commercial realities to examine the effects of the merger solely on a local basis. The Commission must assess the effect of the merger on competition *nationwide* – and among other things assess the extent to which, post-merger, the regional and mid-size carriers will still be able to compete effectively nationally.

Though AT&T now claims to the contrary, the national nature of the market from the consumer's perspective must come as no surprise. AT&T, Verizon, Sprint, and – until the merger – T-Mobile (the "Big-4") have spent billions of dollars on national advertising campaigns. It is estimated that AT&T alone spent some \$1.1 *billion* on advertising in 2010, most of it national in scope.<sup>28</sup> It is estimated that Verizon, too, spent \$1.1 billion on advertising in 2010.<sup>29</sup> These advertising campaigns tout *nationwide* service, and *national* pricing plans. They implement *national* marketing plans. They boast of *nationally* available handsets and infrastructure. If the wireless market were purely local, the expenditure of these funds and efforts would be sheer folly. Further, the Big-4 make all their network technology and handset choices and purchases nationally, have nationwide management structures run from a single location, and deploy capital, financing, human and other resources on a national basis. For example, the iPhone is available in *all* AT&T and Verizon Wireless markets but is not available on *any* Sprint, T-

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<sup>28</sup> David Broughton, "Sports ad spending roars back," *Sports Business Journal*, May 2, 2011.

<sup>29</sup> *Id.*

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Mobile or other systems. Finally, although the Big-4 may give modest latitude to their local management teams in a given metropolitan area, they all offer national service and pricing plans that include service throughout their entire footprint. This hardly bespeaks a local market. The large national carriers also have focused competitive attention on the mid-tier unlimited no contract carriers with national service offerings. For example, the large national carriers have established “flanker” brands which are designed to specifically target the customers of the mid-tier unlimited no contract carriers which offer nationwide service.<sup>30</sup> These brands have helped raise the bar so that nationwide service is the only competitive service category.

Further, the Commission must not overlook that the services being sold to consumers are being produced through national networks. Although the services may be sold locally (and local markets may have some flexibility in how such services are marketed and priced locally), the network responsible for creating such services is national. The local-only analysis advocated by AT&T would be akin to a local-only examination of a manufacturing enterprise which manufactures different components of its products in different locales but requires all of the manufacturing units to produce a single product which it sells nationwide. In the wireless industry, national service requires either a national network or a local/regional network with a roaming agreement that allows for national service. If the merger is examined strictly on a local basis, the Commission would miss the most important aspect of what is happening here: that AT&T is removing from the market a national network which produces national services. Thus, the effects of this merger on competition must be examined from a national perspective.

Indeed, the very purpose of this transaction, according to AT&T, is to increase its *national* footprint for broadband data services by promising to deliver broadband service to 97%

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<sup>30</sup> For example, AT&T offers the “GoPhone,” and Sprint provides the “Boost” phone, which are all pay as you go services.

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of Americans. If markets were purely local in character, this increase would be a matter of indifference to AT&T, to consumers and the public interest. So AT&T's insistence that the market is local cannot withstand even the most superficial reading of its Public Interest Statement.

### **B. AT&T has argued in the past that the wireless market is national**

It is not surprising, then, that AT&T and Verizon in prior filings repeatedly have told the Commission that the wireless market is a national one. Starting as early as 2004 in the Cingular merger with AT&T Wireless, AT&T argued that the market was *national* (“the geographic scope of competition in the provision of wireless calling plans should be analyzed as national”).<sup>31</sup> Similarly, in its application to undertake the Centennial merger in 2009, AT&T argued that “the evidence shows that the predominant forces driving competition among wireless carriers operate at the *national* level” and that AT&T develops “its rate plans, features and prices in response to competitive conditions and offerings at the national levels.”<sup>32</sup>

So why has AT&T purportedly changed its mind? Because AT&T realizes that, if the market is examined now on a national basis, the transaction will properly be viewed as consolidating the second and fourth largest carriers – leaving only three national wireless carriers

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<sup>31</sup> *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corp. for Transfer of Control of PCS Licenses*, WT Docket No. 02-354, “Description of Transaction, Public Interest Statement and Waiver Project,” at 30 (emphasis added and citations omitted) (“*AT&T/Cingular Application*”); see also Declaration of Richard J. Gilbert, to *AT&T/Cingular Application*, at ¶ 52 (“the geographic scope of competition in the provision of mobile wireless call plans should be analyzed as national”).

<sup>32</sup> *Applications of AT&T Inc. and Centennial Communications Corp. for Transfer of Control of Licenses and Authorizations Pursuant to Sections 214 and 310(d) of the Communications Act*, WT Docket 08-246, “Description of Transaction, Public Interest Showing and Related Demonstrations,” at 28-29 (filed Nov. 18, 2008)(emphasis added). Verizon made similar representations during its acquisition of Alltel. See *Application of Verizon Wireless and Atlantis Holdings LLC for Transfer of Control of Licenses and Authorizations Pursuant to Sections 214 and 310(d) of the Communications Act*, WT Docket No. 08-95, “Public Interest Statement” at 29 (“the wireless business today is increasingly national in scope”) and at 31 (“While a national geographic scope has been rejected in certain prior merger proceedings, growing national forces - such as the increasing reliance on national rate plans - argue more and more for redefining how the Commission judges the competitive effects of transactions.”).

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(counting Sprint, which, as discussed in greater detail below, cannot materially constrain the market power of the “Big 2”). In the recent past, the Commission has taken comfort in the fact that the number of nationwide competitors is four, not three.<sup>33</sup> With this proposed merger, however, the Commission can no longer take such comfort. Indeed, there may realistically be only two national carriers if this transaction is consummated. Sprint has indicated that it will not be a viable competitor if the proposed merger is consummated.<sup>34</sup> The Commission must take seriously the concerns expressed by Sprint regarding the dire competitive effects of the transaction. When a market consolidates from four to three national carriers, one might expect all three remaining carriers to benefit from the resulting oligopoly. Thus, it is no great surprise that Verizon has not lined up in opposition to this merger transaction.<sup>35</sup> In contrast, the fact that Sprint is opposed is significant, particularly since it is a publicly-traded company with legal obligations not to make statements that mislead its shareholders. Thus, Sprint can say that the proposed merger will have dire consequences for Sprint only if it believes that to be true.

**C. AT&T’s claims that local competition solves the public interest issues with the merger are false.**

AT&T seeks to sidestep this loss of competition at the national level by focusing on the competitive prowess of mid-tier, regional carriers and rural carriers, like the Petitioners, which do not have national facilities-based footprints. However, the ability of these carriers to continue to provide effective national competition is limited. First and foremost, these carriers are limited in the spectrum resources that they may have. For example, the combined AT&T/T-Mobile will have on average 183 MHz of spectrum in each of the major metropolitan areas in which

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<sup>33</sup> *Verizon-Alltel Order* at ¶ 98.

<sup>34</sup> *See supra* n.6.

<sup>35</sup> Verizon seems more concerned that this merger may lead to greater regulation of the wireless industry. Verizon’s fears are justified. As discussed *infra*, if the merger is approved, the Commission will need to examine whether further regulation is warranted on the Big 2 carriers.

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MetroPCS operates while MetroPCS on average only has 22 MHz.<sup>36</sup> NTELOS has only 20 MHz of spectrum in its Virginia east markets of Richmond, Norfolk, Hampton Roads and Virginia Beach and the average across its region for NTELOS is only 23 MHz. Without an adequate supply of spectrum, carriers like MetroPCS and NTELOS will be unable to compete effectively against the combined AT&T/T-Mobile. The Commission therefore should not allow the proposed merger to proceed without significant divestitures of spectrum to the carriers AT&T identifies as viable competitors who have limited spectrum resources.

Second, as AT&T well knows, smaller carriers can only effectively compete with the combined AT&T/T-Mobile if they are in a position to provide ubiquitous and cost-effective roaming services outside their home areas. But AT&T's actions over the recent past have been purposefully designed to make it impossible for these competitors to offer cost-effective roaming.<sup>37</sup> Allowing AT&T to absorb its only technologically compatible nationwide competitor, without stringent roaming conditions allowing competitors to roam on the combined AT&T/T-Mobile system at rates that will allow them to compete effectively, would give AT&T a free hand to further choke off roaming by its non-national competitors.

### **D. The Commission must, however, focus locally in assessing the effects of the merger on spectrum concentration**

The national nature of the wireless market does not mean that the Commission should be unconcerned about those instances in which the merger has a particularly severe anti-competitive impact in a particular market or on inputs necessary for national competition. For example, spectrum cannot be used outside the territory where it is licensed, so concentration issues relating to spectrum should still be examined on a market-by-market, geographic-area-by-geographic-

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<sup>36</sup> See discussion *infra* at Section IV.B.

<sup>37</sup> In addition, Verizon has offered roaming rates with a cost differential of over 1000 times wholesale rates offered to their own mobile virtual network operators.

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area basis as well as on a national level. Since much of the spectrum is licensed on a BTA, CMA, EA or MEA basis, the Commission should consider the effects of the merger on the concentration and nature of spectrum holdings within specific BTAs or CMAs. Such an analysis would allow the Commission sufficient granularity to determine the concentration of spectrum where the spectrum can in fact be used.<sup>38</sup> However, this localized analysis must supplement and not supplant analysis of the impact of the proposed merger on the larger national market for wireless services. Focus on local concentration should not blind the Commission to AT&T's ability, post-merger, to dominate the national market. Here, based on an examination just in the metropolitan areas where MetroPCS operates, the proposed merger will result in significant increases in spectrum concentration.<sup>39</sup>

Indeed, the Commission must determine not only whether the combined entity will have an oversupply of spectrum in any given area, but also whether the spectrum resources of the competing licensees are sufficient to allow robust competition to continue. In the past, the Commission focused predominantly on the amount of spectrum being aggregated by the acquirer.<sup>40</sup> Here, the approach needs to be different because AT&T itself has pointed to the mid-tier and other carriers as a competitive check on the combined AT&T/T-Mobile. Consequently, to validate AT&T's claim, the Commission must consider the adequacy of the spectrum holdings

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<sup>38</sup> Petitioners note that there are many local markets where the spectrum concentration are over 145 MHz when taking into consideration WCS and the 700 MHz spectrum being acquired by AT&T from Qualcomm.

<sup>39</sup> Exhibit A shows the spectrum holdings of all carriers in the fourteen major MetroPCS metropolitan areas.

<sup>40</sup> Of course, the spectrum screen is based on an assumption that there would be spectrum for at least four licensees in each market with an adequate amount of spectrum. Here, however, the Commission must go further and update the projection of how much spectrum each licensee must have to be able to effectively compete and to ensure that the right parties get the spectrum. For example, Verizon Wireless getting more as result of the divesture in a market where Verizon Wireless already holds in excess of 80 MHz would do nothing for the carriers with 20 MHz or less.

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by each *remaining* competitor since, if they do not have adequate spectrum, they will be unable to compete effectively on a going forward basis against the combined entity.<sup>41</sup>

### V. THE MERGER CANNOT BE JUSTIFIED BY THE PUBLIC INTEREST BENEFITS CLAIMED BY AT&T

In its Public Interest Statement, AT&T cites a variety of purported public interest benefits of the proposed merger. There are fatal problems with each of these supposed benefits. But, as a starting point, the Petitioners must resoundingly agree with the statement of Public Knowledge that

It is particularly striking that every single public interest benefit AT&T has claimed as a result of the merger can be accomplished without removing a competitor. Expansion of 4G coverage to overlap their current 2G and 3G network coverage of 97 percent and improving their network capacity are already possible and therefore are not merger-specific benefits.<sup>42</sup>

Thus, most of AT&T's supposed Public Interest Statement can simply be thrown out as irrelevant, and is certainly far from sufficient to outweigh the massive harm to the public interest that will result if the merger proceeds without conditions that address the problems arising from the merger.

#### A. AT&T's claims that it has unique needs for additional spectrum should be rejected

Perhaps most specious of all is AT&T's argument regarding its supposedly unique need to amass more spectrum to better serve its customers. Everyone knows that the industry as a whole needs more spectrum over the next decade. The proper role for the Commission to play is

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<sup>41</sup> For example, MetroPCS is unable to offer broadband data service to laptop cards, tablets and connected devices with the spectrum that it has in its metropolitan areas. Accordingly, if the Commission expects MetroPCS to act as a competitive check on the combined AT&T/T-Mobile post merger, it must see that MetroPCS has adequate additional spectrum. Getting this spectrum in several years at auction is not sufficient since delay would allow the combined AT&T/T-Mobile to establish an unassailable beachhead in these services.

<sup>42</sup> Testimony of Gigi B. Sohn, President, Public Knowledge, Before the U.S. Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights Hearing: "The AT&T/T-Mobile Merger: Is Humpty Dumpty Being Put Back Together Again?" at 2-3, May 11, 2011 (citations omitted) ("*Sohn Testimony*").

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to identify spectrum to repurpose for commercial mobile wireless use and to adopt licensing rules that will result in an equitable pro-competitive assignment of the spectrum to carriers. Allowing the most voracious and well-funded competitor simply to gobble up other competitors and to thereby corner the market with an oversupply of spectrum, will not solve the problem, it will exacerbate it. Absent meaningful divestitures, no new spectrum would be made available to others by the merger, and AT&T's claims that the merger would result in greater efficiency do nothing but beg the question as to whether the purported efficiency gains are worth the market harm.

In fact, no credible case has been made by AT&T that enhancing its spectrum holdings from approximately 100 MHz on average to over 170 MHz on average measurably improves network efficiency. Professor Gavil sums the issue up succinctly as follows:

The argument invites two immediate questions: (1) how can two capacity constrained firms increase their capacity through merger? In other words, how can  $0 + 0 = 1$ ? And (2) why can't AT&T utilize the substantial cash it is using to acquire T-Mobile to instead make these improvements on its own?<sup>43</sup>

Accordingly, the Commission must view with skepticism unfounded claims made by AT&T that somehow by amassing additional spectrum it will be able to be more efficient.

Taking AT&T's claims to their logical conclusion, a monopoly would be most efficient user of spectrum and provide the most benefit to consumers.<sup>44</sup> But more than a century of antitrust enforcement and three decades of Commission efforts to increase competition in this industry are ample proof that this country's policies are based on the well-founded belief that over-concentration is bad, not good, for consumers. Further, allowing AT&T to gain such a

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<sup>43</sup> *Gavil Testimony* at 17.

<sup>44</sup> Such an argument ignores that monopolies tend to stifle innovation. For example, a customer of the monopoly AT&T in the 1950s and 1960s could have any color phone they wanted so long as it was black and rotary dial. That is neither choice nor innovation.

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massive advantage over its competitors in spectrum holdings will allow AT&T to create a beachhead that may be unassailable when the Commission finally is able to identify and license additional spectrum.

As AT&T's presentation itself shows, much of the capacity "constraints" it faces are due to the grossly inefficient use it makes of spectrum today. For example, a considerable number of its customers are currently on non-state-of-the-art GSM, GPRS and EDGE networks. Indeed, AT&T states that these customers number in the "tens of millions."<sup>45</sup> But rather than find ways to migrate these customers to newer and much more efficient technologies, AT&T seeks to put off the day of reckoning by merely throwing more spectrum at the problem. The efficiency of these AT&T services, measured in Bps/Hz, is minute compared to the efficiency of advanced technologies such as HSPA rel. 7, WiMAX or LTE.<sup>46</sup> Because of its inexcusable lethargy in rolling out advanced services, AT&T's average efficiency of usage today in many markets is less than half that of MetroPCS. Yet, AT&T argues that giving it more spectrum is the panacea for its efficiency problems! To the contrary, the way for AT&T to serve the public interest and to provide better services to its customers is to invest in more infrastructure and technology to make more efficient use of its own existing spectrum, not to amass monopolistic amounts of other people's spectrum.

### **B. AT&T's claims that it is an efficient user of spectrum must be rejected**

Interestingly, AT&T claims that it has the least amount of spectrum holdings per subscriber and thereby is either starved and needs additional spectrum or conversely is the most efficient user of spectrum. For example, AT&T claims that MetroPCS has 3.3 MHz holdings per million subscribers while AT&T has 0.86 MHz holdings per million subscribers and that the

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<sup>45</sup> *Public Interest Statement* at 22.

<sup>46</sup> *Credit Suisse Report* at 38.

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combined AT&T/T-Mobile would have 1.02 MHz holdings per million subscribers.<sup>47</sup> This is total obfuscation; the real story is vastly different.

The following table demonstrates that, rather than AT&T being the most spectrum starved and the most efficient user of spectrum, it is MetroPCS who holds that distinction in its major metropolitan areas:

[\*\*\* BEGIN CONFIDENTIAL\*\*\*]

**Table 1: Spectrum Holdings in MHz Below 2.5 GHz (including WCS)**

	MetroPCS (MHz)	MetroPCS Subs/MHz (000s)	AT&T (MHz)	AT&T Subs/MHz (000s)	T Mobile (MHz)	T Mobile Subs/MHz (000s)	Combined AT & T Mo (MHz)	AT&T & T Mo Combined Subs/MHz (000s)
Atlanta	20		136		70		206	
Boston	22		126		50		176	
Dallas/ Ft. Worth	30		136		50		186	
Detroit	20		104		60		164	
Jacksonville	20		131		60		191	
Las Vegas	20		121		50		171	
Los Angeles	20		141		50		191	
Miami	30		129		60		189	
New York City	20		103		50		153	
Orlando	20		131		73		204	
Philadelphia	10		113		50		163	
Sacramento	30		136		45		181	
San Francisco	30		141		70		211	
Tampa	20		116		65		181	

Based on Nielsen data March 2011 and FCC records as of March 31, 2011, AT&T spectrum includes WCS and QCOM 200 MHz.

[\*\*\*END CONFIDENTIAL\*\*\*]

<sup>47</sup> AT&T + T-Mobile: World Class Platform for the Future of Mobile Broadband, at 9, [http://www.att.com/Common/about\\_us/pdf/INV\\_PRES\\_3-21-11\\_FINAL.pdf](http://www.att.com/Common/about_us/pdf/INV_PRES_3-21-11_FINAL.pdf).

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This analysis shows that MetroPCS has significantly more subscribers per MHz of spectrum than AT&T, with the exception of only three metropolitan areas – Boston, New York and Las Vegas – and in these three metropolitan areas MetroPCS has only recently started operations so that slightly lower yield per MHz is to be expected. Why is this the appropriate measure as opposed to the measure being touted by AT&T? First, it is not entirely clear how AT&T derives its figures and they may be based on outdated subscriber counts. Second, it is not clear how much spectrum AT&T is including within its numerator – such as AT&T’s sizable holdings of WCS spectrum and the Qualcomm spectrum. Third, dividing subscribers by spectrum is more akin to other efficiency measures ordinarily used in the telecommunications industry, such as the ratio of subscribers to interconnection trunks. Based on this analysis, it is clear that MetroPCS is more efficient – in several cases two to three times more efficient -- than AT&T and the combined AT&T/T-Mobile. Exhibit B includes a complete analysis which shows that, in most of MetroPCS’ major metropolitan areas, MetroPCS is the most efficient (and has the least spectrum to grow) than all of the other carriers in its major metropolitan areas.

MetroPCS is not the only one who believes that AT&T is not fully utilizing its spectrum. Other analysts have also concluded that AT&T is underutilizing its spectrum capacity.<sup>48</sup> Striking evidence for this conclusion resides in the fact that Verizon holds almost the same amount of spectrum as AT&T, but has publically stated that it has enough spectrum for the near term.<sup>49</sup>

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<sup>48</sup> See, e.g., Dave Burstein, “70-90% Of AT&T Spectrum Capacity Unused,” *Fast Net News*, Mar. 21, 2011, <http://www.fastnews.com/a-wireless-cloud/61-w/4193-70-90-of-atat-spectrum-capacity-unused> (last viewed on Apr. 1, 2011).

<sup>49</sup> See Charles B. Goldfarb, “The Proposed AT&T/T-Mobile Merger: Would it Create a Virtuous or a Vicious Cycle?” *Congressional Research Service*, May 10, 2011, at 14.

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This is despite the fact that Verizon's smartphone subscribers use more data capacity than AT&T's.<sup>50</sup>

Apportioning spectrum more equitably among market participants is essential to assure that consumers enjoy the purported efficiencies and cost savings promised by the Applicant and to ensure that innovation continues. The Big 2 already have a pronounced advantage in the amount of spectrum available to them. Through this merger, AT&T hopes to gain an even more disproportionate advantage and will have the ability to use it to dominate the industry. Like a steel mill that needs iron ore to produce steel, wireless carriers need spectrum in order to offer their services. But if the Big 2 are allowed to corner the market on this scarce resource to build an oversupply available only to them, then they will be able to engage in anticompetitive and anti-consumer practices to their hearts' content, with no fear of market discipline from other carriers.

If T-Mobile remains in existence, AT&T would not have access to T-Mobile's spectrum – but this would make it no worse off than any other carrier, and still much better off than all but Verizon. Like other carriers, AT&T would need to improve its efficiency by investing in infrastructure and technology to squeeze more and more use out of a limited supply of spectrum. Instead, the merger would alter the dynamic and allow AT&T and Verizon to hold the vast majority of the raw material needed by all carriers. In this scenario, technological developments would have to be driven by the carriers which face the greatest resource constraints, the mid-tier, regional and rural carriers. For example, 4G might not be a reality without the current competitive environment. MetroPCS, not AT&T or Verizon, pioneered 4G LTE and was the

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<sup>50</sup> See "Validas Reports Verizon Wireless Smartphones Consume More Data Than iPhones," *PR Newswire*, July 26, 2010, available at <http://www.prnewswire.com/news-releases/validas-reports-verizon-wireless-smartphones-consume-more-data-than-iphones-99234019.html>.

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first to deploy 4G LTE – substantially ahead of AT&T, which is just now planning to deploy 4G LTE in a limited number of metropolitan areas.<sup>51</sup> But because, as discussed previously and below, the Big 2 carriers would have both the power and the incentive post-merger to quash this innovation, it may well not occur at all in the future if this merger is approved without adequate conditions.

As AT&T itself notes, operators can achieve much lower unit costs if they have greater amounts of spectrum because of channel pooling efficiencies, spare capacity pooling, the spreading of control channels over more non-control channels, and the like.<sup>52</sup> However, mid-tier, regional and rural operators, which have been shut out of recent new spectrum allocations, may be less and less able to compete on a cost basis with a merged AT&T/T-Mobile and thus without conditions there is a substantial likelihood the efficiencies will not be passed through to customers. While AT&T claims that it will achieve greater efficiency because it will gain spectrum from the T-Mobile deal, in fact, the opposite is true: their relative track records so far indicate that this spectrum would do far more good in the hands of mid-tier, regional and rural carriers than AT&T, and that handing it over to AT&T would allow AT&T to continue to perpetuate its inefficient use of spectrum.

### **C. AT&T's gambit to use the merger to perpetuate inefficient uses of spectrum must be rejected**

AT&T seeks to use its acquisition of the T-Mobile spectrum as a substitute for investment and true innovation – to allow it to deploy higher speed and greater capacity ahead of the competition without maximizing use of its already vast spectrum resources. This would

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<sup>51</sup> See e.g. Douglas McIntyre, “AT&T’s 4G Battle Plan: 15 Major Cities in 2011,” *Daily Finance*, May 26, 2011, <http://www.dailyfinance.com/2011/05/26/atandt-4g-battle-plan-15-major-cities-in-2011/>.

<sup>52</sup> *Public Interest Statement* at 8-9.

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allow AT&T to build a beachhead and gain a head start in these services which will make it impossible for more innovative, but less well-funded, competitors to assail this beachhead or catch up with this head start. Even if carriers such as the Petitioners are able to get the spectrum they need in a few years AT&T would be so far ahead by then that these competitive carriers will not be able to catch up – assuming that they will still exist to actually receive the spectrum.

AT&T complains that it is foreclosed from achieving these efficiencies because it is serving “tens of millions” of legacy GSM and UMTS handsets. Perversely, AT&T predicts that the merger will *increase* use of these inefficient handsets by making them usable in a wider area.<sup>53</sup> But AT&T has the resources to incent users to migrate to more flexible handsets and thereby achieve efficiencies as great or greater than those already achieved by mid-tier, rural and regional carriers such as the Petitioners. It could, for example, follow the lead of MetroPCS, which has adopted aggressive, consumer-friendly pricing and designed attractive feature rich 4G LTE data plans in order to incent customers to move from its 1xRTT service to its LTE service. If MetroPCS can effectively turn over and replace handsets in more than one-half of its entire subscriber base in one year, surely AT&T can do the same. Moreover, the fact that MetroPCS already is achieving two times more efficiency than AT&T – with considerably less spectrum – demonstrates that AT&T could double the utilization of its existing spectrum in many markets merely through investments in technology and infrastructure. This outcome would be far more beneficial to the public interest than simply ceding more spectrum to AT&T to allow it to perpetuate obsolete technologies. AT&T now states that it plans to pursue just such a handset migration strategy following the merger, but the Commission should ask itself whether AT&T should undertake such activity first and whether approving the merger is necessary to promote

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<sup>53</sup> *Id.* at 43-44.

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this migration.<sup>54</sup> To the contrary, it appears likely that AT&T's incentives for prompt migration will evaporate when the deal is approved, with the result that the implementation at advanced technology will actually slow if the transaction closes.

Because of Petitioners' relatively smaller spectrum resources, they have had to use technology – rather than larger piles of spectrum – to gain efficiencies. For example, MetroPCS has deployed 6-sector cells on a wide spread basis, while the rest of the industry is still largely tied to 3-sector cells. MetroPCS has successfully deployed DAS in core outdoor metropolitan areas – such as Philadelphia – to increase spectrum utilization. AT&T in its Petition has downplayed DAS as a solution, arguing that DAS is really only good for indoor deployments and for limited area deployments.<sup>55</sup> However, DAS offers substantial capacity improvements over existing macro cell deployments. DAS allows a carrier to initially deploy sites that are simulcast together. As capacity needs increase, the carrier can increase capacity by first making each DAS node a separate site and then, when further capacity increases are necessary, going to three or six sectors. This is how MetroPCS has been able to serve Philadelphia on CDMA and 4G LTE with just 10 MHz of combined spectrum. AT&T has also identified the costs of developing cell sites as an important impediment to adding capacity, but DAS provides a solution to this need as well. DAS networks allow quicker and easier deployment since in many instances the carrier can avoid having to obtain site by site approval from local municipalities. Nothing prevents AT&T from enjoying success from DAS similar to that of MetroPCS, yet it has not done so.

Similarly, MetroPCS was the first to deploy 4G LTE – substantially ahead of AT&T which is only now planning to deploy 4G LTE. AT&T claims spectrum constraints have slowed

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<sup>54</sup> *Id.* at 22-25.

<sup>55</sup> *Id.* at 48.

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it down, yet MetroPCS faces much worse constraints, yet has innovated in this area faster than AT&T.

**D. The proposed merger also will concentrate spectrum holdings dramatically**

This merger will also dramatically increase concentration in the wireless industry by another very important measure -- spectrum. The importance of considering the combined spectrum holdings of merged carriers has been a consistent focus of the Commission and resulted in the development of the spectrum screen. The combined spectrum holdings of AT&T/T-Mobile and Verizon after this merger would dwarf the spectrum holdings of Petitioners – whom AT&T holds up as the carriers who will act as the most significant competitive check on the combined AT&T/T-Mobile. For example, absent spectrum divestitures, post-merger, AT&T would have an average of 183 MHz of spectrum in the 14 MetroPCS major metropolitan areas – nearly nine times MetroPCS’ average of 22 MHz. Attachment A hereto shows the effect of the merger on spectrum holdings below 2.3 GHz in MetroPCS’ 14 markets in three regions. As can readily be seen, in all three of the regions, Northeast, Southeast and Northwest, the combined post-merger holdings of AT&T and Verizon would dwarf those of the other major providers in those markets. Indeed, only in Verizon’s traditional home region, the Northeast, are even Verizon’s holdings in these markets as high as two-thirds those of the post-merger AT&T, and elsewhere, AT&T has more than double Verizon’s holdings. On average, the post-merger holdings of the five shown carriers in these regions stack up as follows:

<b>Provider</b>	<b>Northeast</b>	<b>Southeast</b>	<b>Southwest</b>	<b>Overall</b>
AT&T/T-Mobile	153.5	188.2	180	<b>168.2</b>
Verizon	103	92	72.4	<b>81</b>

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Sprint	57.5	45.6	53.6	<b>51.9</b>
MetroPCS	18	22	26	<b>22.3</b>

Note: Based on licensed spectrum from Commission records and on spectrum holdings below 2.5 GHz.

In short, if the merger were allowed to proceed, AT&T would have more than twice the spectrum holdings of Verizon in these markets, over three times those of Sprint, and nearly eight times those of MetroPCS.<sup>56</sup>

This concentration of spectrum is particularly important because – as AT&T itself boasts – its aggregation of spectrum allows it to offer more and a greater variety of broadband data services at lower cost than if it had less spectrum.<sup>57</sup> What AT&T conveniently ignores, however, is that this same analysis holds for its competitors with less spectrum. Indeed, as the spectrum disparity grows, the competitors with less spectrum become less and less able to compete for certain data customers – the fastest growing and most spectrum intensive segment of the wireless market – because their costs will not be decreasing as quickly as the reduction of prices and therefore they may not be able to compete for whole segments of mobile broadband data customers, such as laptop cards, tablets and connected devices<sup>58</sup> – and thus will not be able to act as the competitive check that AT&T claims they will be.

**E. The merger must be conditioned on significant spectrum divestitures of usable paired spectrum to remaining non-national carriers**

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<sup>56</sup> Unfortunately, certain spectrum allocation decisions of the Commission have exacerbated these spectrum disparities. For example, MetroPCS repeatedly expressed concern prior to the 700 MHz auction that the licensing rules which included large spectrum blocks, large license areas and combinatorial bidding – were unfairly swayed in favor of the nationwide carriers. The auction results, which were dominated by AT&T and Verizon, confirmed that MetroPCS was right.

<sup>57</sup> *Public Interest Statement* at 25.

<sup>58</sup> Without such spectrum, it is also unlikely that the carriers with less spectrum would act as a competitive check on wireline broadband services as well since such services typically will require even more spectrum than that required to compete with mobile broadband services.

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AT&T posits, and Petitioners agree, that the amount of spectrum to a large measure dictates the cost (to the carrier) of service; additional spectrum properly deployed can allow a carrier to be more efficient. But AT&T will not pass any cost savings it enjoys along to consumers in the form of lower prices unless there is effective competition. The cost to consumers of uploading or downloading a megabyte of data has dropped precipitously in the last several years and is projected to continue to drop.<sup>59</sup> This drop will require carriers to continue to reduce their costs to transmit a megabyte of data in order to be able to continue to effectively compete. The Commission has properly recognized that the industry faces a serious spectrum crunch, and is actively trying to reallocate an additional 500 MHz of commercial broadband spectrum for the industry.<sup>60</sup> The only saving grace is that today, all carriers are starved for spectrum and face common challenges that incent them, each in their own circumstances, to find innovative efficiencies while meeting the never-ceasing consumer demand for more and better services. But this transaction will disturb this relative equilibrium and provide one competitor with more than enough spectrum while the government struggles to locate, reallocate and auction additional spectrum for the remaining non-national carriers, who will remain deprived of the spectrum they need *now* to effectively compete in the newest services, and also to vie long term with a combined AT&T/T-Mobile.<sup>61</sup> To maintain the existing equilibrium among competitors, it would be necessary to assure that *all* competitors receive proportionate amounts of additional spectrum. As the graph below shows, this would be required to avoid AT&T obtaining a huge head start over the rest of the industry. At the same time, AT&T and Verizon will have fewer

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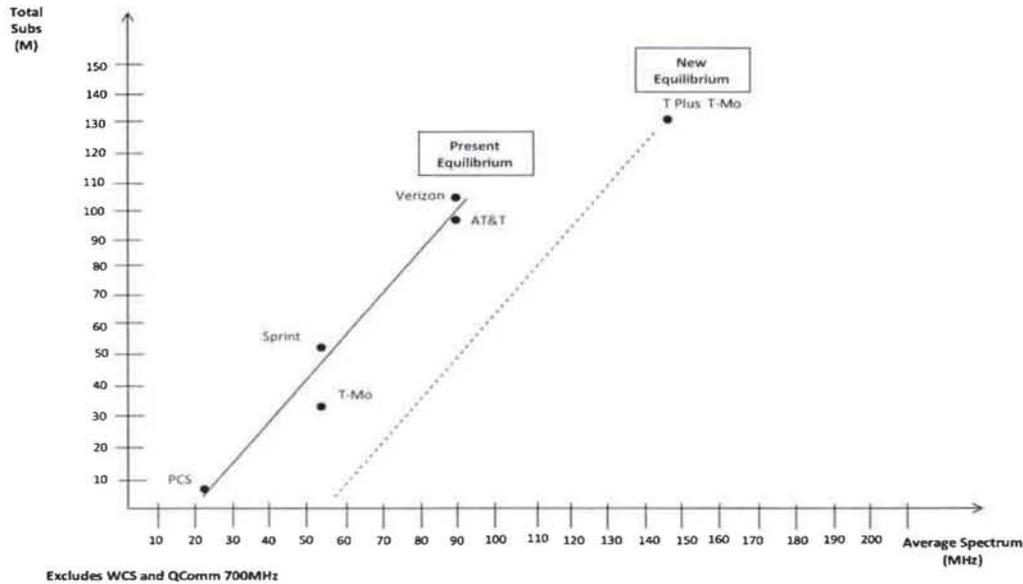
<sup>59</sup> *Credit Suisse Report* at 9.

<sup>60</sup> See *Connecting America: The National Broadband Plan*, Section 5.4 Making More Spectrum Available Within the Next 10 Years (rel. March 16, 2010).

<sup>61</sup> See discussion *infra* Section IX.A.

incentives to compete and innovate aggressively as the competitive threat from smaller carriers diminishes over time.

### Competitive Equilibrium Based on Spectrum Concentration



#### F. AT&T's problems are of AT&T's making and the merger is not the solution

Much of AT&T's current self-described spectrum crunch has arisen for two reasons. First, AT&T has clung (and acquiesced in "tens of millions" of customers clinging) to legacy technologies that are far less efficient than today's state of the art, and are rapidly becoming obsolete. Second, AT&T has not invested in infrastructure as quickly or in the same amount as other carriers.

In its Petition, AT&T admits that it has tens of millions of subscribers on technologies that are much less efficient than its own most efficient technology.<sup>62</sup> AT&T of course would argue that the solution cannot be to require its customers to have service terminated. The

<sup>62</sup> Public Interest Statement at 22.

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Petitioner agree. However, that is not the only solution. For example, AT&T could subsidize its customers upgrading to more efficient technology, which could very well relieve the capacity problems that AT&T argues it faces. If MetroPCS can upgrade almost half of its entire subscriber base in one year, surely AT&T with its vastly greater resources could subsidize the upgrade of its subscribers on legacy technologies to more efficient devices. AT&T could also incent its customers to upgrade on their own by giving rate plan discounts and other incentives for customer to upgrade to HSPA+. MetroPCS, for example, has established a \$40 4G LTE rate plan for exactly that reason – to encourage its existing 1xRTT CDMA users to migrate to 4G LTE. Surely AT&T can do the same.

Second, to a large extent, AT&T's problems stem from its own lack of investment. Some analysts have concluded that, notwithstanding the widely publicized iPhone launch, AT&T has only increased its capital expenditures by 1% while at the same time Verizon has increased its capital expenditures by 10%.<sup>63</sup> So would an additional increase of 9% of its capital budget solve the problems identified by AT&T? It is not clear, but since AT&T has eschewed infrastructure investments and technology improvements, such as 6-sector cells and DAS, the Commission should not put its thumb on the competitive balance in favor of AT&T.

Perversely, the additional spectrum AT&T seeks to gain from T-Mobile would *lessen* the pressure on AT&T to update its services and migrate users to more efficient technologies. And, because of AT&T's huge market share – and its corresponding clout with manufacturers – its delay in broadly implementing state-of-the-art technology will slow 4G adoption rates and prevent the costs of 4G equipment from declining as rapidly (due to reduced volume) as they otherwise would. AT&T has been slow to upgrade to 4G LTE for the very same reasons that it

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<sup>63</sup> See Charles G. Goldfarb, "The Proposed AT&T/T-Mobile Merger: Would it Create a Virtuous or a Vicious Cycle?" *Congressional Research Service*, May 10, 2011, at 15.

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wants to acquire T-Mobile. AT&T does not want to retire its HSPA+ assets or pay for refarming. But these are problems of AT&T's own making. AT&T should not have invested in a non-upgradable technology, or it should, like any competitive business, accept the consequences of rapid technological change. Verizon Wireless and MetroPCS began deploying 4G LTE last year, but AT&T is only now claiming that it plans to roll out a limited number of markets on 4G LTE late this year.<sup>64</sup> This is a precursor of what will happen if AT&T is allowed to acquire T-Mobile and AT&T is not forced to divest spectrum to the remaining non-national carriers.

MetroPCS and Verizon have put competitive pressure on AT&T to deploy 4G LTE. Without additional spectrum MetroPCS will not be able to serve this role in the future. Thus, while at the margin and in the short run the merger might make AT&T's own use of spectrum marginally more efficient, in the bigger picture, it will only postpone the day of reckoning for AT&T and thereby delay the widespread introduction of cost-effective innovative efficiencies into the wireless market as a whole.

### **G. Innovation will suffer if the merger is approved without conditions**

If the proposed merger is approved without conditions, such as those proposed by the Petitioners, innovation will suffer as well, since the Big 2 carriers have often brought up the rear of major technological developments. For example, it was T-Mobile, not AT&T or Verizon, that pioneered Android. Indeed, even the introduction of the vaunted iPhone shows that it is often in AT&T's interest to stifle, rather than foster, innovation. As Public Knowledge President Gigi Sohn put it, in recent testimony before the Senate Judiciary Committee:

During negotiations with AT&T, Apple had to consistently fight with AT&T over what innovative features would be allowed. Such features include how and when

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<sup>64</sup> See *supra* n.6.

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YouTube would function on its network, video calling (which is allowed in Europe and Asia as well as on T-Mobile, but not on AT&T), and tethering the device.<sup>65</sup>

If Apple – the world’s largest technology company by market capitalization,<sup>66</sup> and certainly one of its most influential – encountered such stout resistance to innovation and openness from AT&T, imagine the problems that smaller and less powerful handset manufacturers will have negotiating with AT&T and Verizon post-merger.<sup>67</sup> It is a certainty that innovation in handsets and other equipment will suffer if AT&T and T-Mobile merge.

These known, identifiable concerns are all the more troubling in light of the fact that some negative consequences of the merger are not even knowable. For example, some pro-competitive events may simply never happen if the merger is allowed to go through. Concentration of buying power for infrastructure could easily cause product and innovation stagnation. Infrastructure manufacturers might not develop beneficial products that they might otherwise have developed, either because they are not being pressed by a smaller competitor (like T-Mobile) or because they are unable to arouse advance interest in the Big 2. The history of the wireline equipment market is instructive here. The wireline equipment marketplace blossomed after the passage and implementation of the Telecommunications Act of 1996 with the rise of the CLECs; once the CLECs had crested and mostly disappeared as a major competitive force, wireline equipment innovation has now slowed drastically.

The Commission should expect the same outcome in the wireless market if this merger is allowed to proceed without conditions, such as those proposed by Petitioners, that allow the

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<sup>65</sup> *Sohn Testimony* at 14.

<sup>66</sup> *Value Line*, “The 30 Largest Market Capitalizations - March 11, 2011,” <http://www.valueline.com/Stocks/Screen.aspx?id=10494>.

<sup>67</sup> Verizon reportedly passed on the chance to be the exclusive distributor of the Apple iPhone because it did not approve of the financial terms Apple was seeking. Some of the terms that Verizon refused included allowing Apple to share in monthly fees, allowing Apple to determine how and where iPhones could be sold, and allowing Apple to continue a relationship with iPhone customers. See Leslie Cauley, “Verizon Rejected Apple iPhone Deal,” *USA Today*, Jan. 29, 2007.

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remaining carriers to act as an innovative check on the Big 2. AT&T and Verizon have not driven innovation – on the contrary, in many instances they have adopted innovative technologies only when competitors got there first and threatened to make them obsolete. For instance, the prospects of 4G would still be remote but for Clearwire’s and Sprint’s forcing the issue with their deployment of WiMAX.<sup>68</sup> Similarly, Verizon might not have accelerated its 4G deployment plans but for MetroPCS first deploying 4G LTE in key markets. Indeed, the Commission might want to explore whether it was Verizon’s or MetroPCS’ launch of 4G LTE service which has now awakened AT&T from its 4G slumber. Since the next great innovation or application in wireless may come out of garages in Silicon Valley, the Commission must ensure that sufficient competition and choice exist as a market for such products and applications to allow innovation to blossom. Otherwise, the Commission can and should expect that innovation will slow as the Big-2 carriers reach the duopoly they are seeking.

### **H. AT&T’s request for a government bailout should be rejected**

AT&T essentially is asking the Commission for a huge government bailout, but in the form of spectrum rather than money. AT&T repeatedly has made poor choices on how it has invested its already sizable wireless earnings. Rather than invest in technologies, such as six sector cells, DAS and 4G LTE, AT&T has chosen to buy spectrum. Now, AT&T wants the Commission to rescue it from its poor choices and allow it to undertake a merger which would have anticompetitive effects. As Ms. Sohn of Public Knowledge points out:

AT&T has been reported to have ‘only increased wireless capital expenditures by one percent in 2009 compared with an increase in capital spending from Verizon Wireless by about 10 percent. ... Put simply, AT&T has not invested aggressively enough and has instead put its capital into acquiring existing and potential competitors making the

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<sup>68</sup> In the long run, however, because the propagation characteristics of its above-2.5 GHz spectrum make it much more costly to deploy and provide services over this spectrum than the Big 2’s “beachfront spectrum,” Clearwire is unlikely as it is presently constituted to pose a serious threat to the Big 2.

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capacity issues the company will face in the near future a self-inflicted wound. Eliminating T-Mobile as a competitor will hardly cure this lack of foresight but rather will simply reward AT&T for its failings. Raising prices, reducing competition, and reducing innovation hardly seem worthy trade-offs to help AT&T avoid the inevitable result of customers voting with their feet.<sup>69</sup>

AT&T repeatedly makes the claim that it will be able to roll out LTE more quickly following the merger.<sup>70</sup> But AT&T could use the same \$39 billion it proposes to spend on T-Mobile to accelerate the roll out of LTE using its current spectrum. To be sure, this latter approach would require AT&T to be more innovative and efficient on its own, but unlike the merger it would be pro-competitive and pro-innovation. AT&T has all the financial and spectrum resources needed to increase LTE deployment to 97 percent of the U.S. population without T-Mobile. Indeed, AT&T admits in the Public Interest statement that its decision to build-out LTE to 80% of the population pre-transaction was a “business” decision, not a decision predicated on a lack of spectrum or other resources.<sup>71</sup>

### **I. The merger is not required for rural buildout, and AT&T’s use of it is merely a regulatory pay-off**

Now that it has the need to gain regulatory favor, AT&T trumpets that it will commit to building out 4G in rural areas following the merger. This offered regulatory payoff, however, is no substitute for vigorous competition. Even if AT&T follows through on this “plan,” and doesn’t end up citing “unforeseen circumstances” or seeking endless delays and waivers, the lack of meaningful competition post-merger will mean that the development and deployment of “5G” and subsequent generations of technology will be slowed drastically if not foreclosed.

Remember that, when AT&T was a monopoly, it had the concept for cellular phone service on

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<sup>69</sup> *Sohn Testimony* at 16-17.

<sup>70</sup> *Public Interest Statement* at 11.

<sup>71</sup> *Id.* at 55 (“AT&T’s current (pre-merger) plans call for deployment of LTE to approximately 80 percent of the U.S. population but no more. The remaining 20 percent of the population generally lives in less populated areas, including rural and smaller communities, where economies of scale and density are very low and per-customer costs are very high.”).

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its drawing board for *thirty-five years* before the first cell was operational, notwithstanding that, as events showed, there was a huge pent-up demand for reliable, cost-effective mobile wireless service.<sup>72</sup> Remember too that AT&T long distance was the preferred repository for the emerging cellular technology when the Department of Justice broke up the Ma Bell monopoly because cellular service providers, like long distance providers, required access to the local loop. Yet AT&T wasn't interested in cellular then. AT&T has since become a dominant player in the wireless space only by acquiring wireless assets, which it could have acquired on the ground floor, from non-wireline carriers (*e.g.*, McCaw Communications) and LECs (*e.g.*, Cingular). The return of the wireless duopoly will mean a return to the same stagnant backward-looking state of affairs that existed in the early 1980s.

Even apart from the doubt cast on this “promise” by its track record, AT&T's argument that it needs additional spectrum to sustain its rural build out promises is particularly thin. The large amount of spectrum that AT&T holds in the 700 MHz and 850 MHz cellular bands is considerably better suited to covering rural POPs than the PCS and AWS spectrum held by T-Mobile. Indeed, the reason that companies such as T-Mobile and Sprint have considerably less rural coverage today than AT&T and Verizon is that the spectrum they hold is not as well-suited to large scale rural deployments. The difference in coverage is dramatic.<sup>73</sup> Thus it is far less cost-effective to use the T-Mobile spectrum for rural buildout than the spectrum AT&T already holds. Further, one of the current initiatives of the Commission is to repurpose some of the

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<sup>72</sup> “The development of commercial cellular systems did not occur rapidly -- almost 36 years passed between the initial elucidation of the cellular concept at Bell Labs in 1947 and the debut of the first commercial systems in Chicago and Washington/Baltimore in 1983.” SRI International, *The Role of NSF's Support of Engineering in Enabling Technological Innovation Phase II*, prepared for The National Science Foundation, 1998 at Chapter 4, available at <http://www.sri.com/policy/csted/reports/sandt/techin2/chp4.html>.

<sup>73</sup> See Exhibit C, *Credit Suisse Report* at 45.