

ASSESSING COMPETITION IN THE WIRELESS SECTOR: HOW DOJ CAN CLEAR AWAY THE FOG FROM PROPOSED MERGERS

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I. Introduction and Background

Over the past twenty years, the American wireless sector has grown consistently more rapidly than the remainder of the economy. Growth has come partly from innovation, and partly from new services and products and services whose shelf-life is measured in months. From an array of vendors, consumers choose new products and use them in unimaginable and unpredictable ways. Today's equipment and services are obsolete two years from now, or sooner.

Growth has also come from an industry in transition: many firms have begun operations; others have ceased; and still others have merged. It is difficult to look at the structure of the American wireless industry today and believe that the transition has been completed. We have not reached the end of wireless history with a permanent industry structure in place. The question is not so much whether another major merger of wireless firms will occur, but rather when and which parties will be involved.

Proposed major mergers in all industries are reviewed by the federal government for antitrust and other concerns. The Department of Justice ("DoJ") reviews mergers in the telecommunications industry under Section 7 of the Clayton Act to determine whether they would "substantially lessen competition." Together with the Federal Trade Commission, DoJ has developed the Horizontal Merger Guidelines to give guidance to merging parties about the standards of federal antitrust review.

By many accounts, the wireless industry is and has been competitive. The Federal Communications Commission ("FCC") has assessed competition annually since the mid-1990s, and has never reached a conclusion that the industry is uncompetitive. The FCC has also reviewed nearly two dozen mergers in the industry over the past eleven years, and has never found the underlying industry to be uncompetitive. The industry has many of the hallmarks of competition: falling prices; rapidly improving quality; entry and exit; substantial advertising to attract consumers; and, for many firms, little if any net income.

DoJ's role under the Clayton Act is not to assess whether the industry is competitive today but rather whether it would be substantially less competitive under a proposed merger. DoJ analyses of proposed mergers are invisible to the public except in the rare circumstances where a proposed merger is challenged in court. Only one proposed wireless industry

merger, AT&T-T-Mobile, has been challenged in court by DoJ. Because AT&T and Deutsche Telekom subsequently withdrew their merger application, the DoJ antitrust analysis was not tested in court.

Although DoJ reviews proposed mergers in many industries, those in the wireless sector face unusual challenges. Consider the following five observations:

- Another federal agency, the FCC, conducts parallel, public, and at times erroneous, merger analyses;
• The relevant markets for firms offering wireless services are difficult to define;
• The competitors in those markets are difficult to identify;
• Widely used data do not actually measure market concentration;
• Rapidly changing technology makes merger analyses difficult.

Each observation might be viewed as adding fog to the puzzle of antitrust analysis of mergers. Before DoJ can even attempt to solve the underlying puzzle, it must clear away the fog. Here are six steps for DoJ to consider:

- Give little weight to the FCC merger analyses;
• Consistent with the Horizontal Merger Guidelines, examine a wide range of potential relevant markets;
• Consistent with the Horizontal Merger Guidelines, identify competitors and potential competitors in each of those markets;
• Show humility regarding the use of information not intended for antitrust analysis; and
• Show humility in examining an industry with rapid technological change.

II. Give Little Weight to the FCC Merger Analyses

Mergers in the wireless industry are reviewed both by DoJ and the FCC. The FCC analyses, based largely on a public record and at least partly visible to the public through FCC decisions, claim to mimic the Horizontal Merger Guidelines. But the FCC merger reviews are different from those conducted by the DoJ in several key respects:

- The FCC merger reviews are based on a "public interest" standard rather than an antitrust standard. The two are not the same. The FCC can take into consideration factors not found in either the Clayton Act or the Horizontal Merger Guidelines.
• In most of its proceedings, the FCC has a different and primarily public information base in its proceedings, including merger reviews. DoJ's information is not shared with the public.

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- A DoJ challenge to a merger is subject to court review; an FCC challenge is not.

Not only are the merger reviews different, but there are further reasons why DoJ cannot simply rely on the FCC to conduct antitrust analyses in its stead.

- The Clayton Act gives the FCC no authority. Indeed, the FCC in conducting its merger reviews does not cite the Clayton Act but instead cites only the “public interest” standard related to license transfers under the Communications Act.¹⁵ The Communications Act provides no specific authority for review of mergers by the FCC.
- Nor does the Clayton Act give DoJ the authority to delegate antitrust review to another agency.¹⁶ The *Horizontal Merger Guidelines* do not mention other federal agencies as a source of antitrust analysis.
- Despite separate legal authorities and despite separate sources of information, DoJ and the FCC are widely known to “coordinate” merger reviews.¹⁷
- As will be explained in more detail below, despite substantial efforts invested in them, the FCC merger reviews have many errors.

The parallel reviews of DoJ and the FCC have many potential unintended consequences that could undermine a DoJ court challenge. If the merger reviews of the agencies are identical or even closely similar, there is at least the appearance of DoJ having delegated its Clayton Act responsibility to the FCC. Yet it is DoJ, not the FCC, that must defend the analyses in court.

Also awkward would be the situation where the analyses are entirely different and even contradictory. Suppose an FCC merger review were to find no competitive harms, but DoJ attempts to block the merger for antitrust reasons. In court, the parties seeking the merger will reasonably point to the FCC analyses. Thus, an FCC merger review could limit and interfere with DoJ prerogatives.

Perhaps even more troubling is that the FCC in mergers in the telecommunications industry becomes a surrogate for the courts. Parties in other industries whose proposed merger is blocked by DoJ can and do seek relief in court. Parties whose proposed merger is blocked by the FCC do not, because the FCC’s denial of a license transfer has, as a practical matter, little or no court review. For example, in the proposed AT&T-Mobile merger, the parties appeared to consider a court challenge to the DoJ complaint, but abandoned the deal only when the FCC issued the *Staff Analysis and Findings* against the merger. It was the FCC, not DoJ, and not the courts, that disciplined the behavior of the merging parties.

The parallel review of mergers in the wireless industry by the FCC ultimately undermines the professional antitrust review by DoJ. DoJ could take steps to discourage the parallel review and to give little weight to any merger analyses conducted by other agencies.

III. Consistent with the *Horizontal Merger Guidelines*, Examine a Wide Range of Potential Relevant Product and Geographic Markets

The *Horizontal Merger Guidelines* give specific instructions about how to determine relevant product and geographic markets for antitrust review.¹⁸ While not easily implemented for the wireless industry, DoJ could follow the *Guidelines* to define relevant product and geographic markets. Below, I examine in more detail the following issues:

- Following the *Guidelines* in defining relevant product markets;
- Consistent with the *Guidelines*, considering multiple product markets at different levels of trade rather than single markets for wireless mergers;
- Following the *Guidelines* in defining relevant geographic markets.

A. Follow the *Guidelines* in Defining Relevant Product Markets

The DoJ-FTC *Horizontal Merger Guidelines* describe how the agencies are to assess product markets.¹⁹ “Market definition focuses solely on demand substitution factors”²⁰ The *Guidelines* focus on the “hypothetical monopolist test” and the likely demand response to a “small but significant and non-transitory increase in price (‘SSNIP’) on at least one product in the market.”²¹ In the situation where merging firms have multiple products, as in the mobile services industry, there would correspondingly be multiple hypothetical monopolist tests.

The *Horizontal Merger Guidelines* discuss how to implement the “hypothetical monopolist test” and SSNIP test.²² It is difficult to apply some of the analysis to the wireless industry. For example, the *Horizontal Merger Guidelines* present examples of measured demand response to price changes—price elasticities of demand.²³ Empirically verifiable estimates of such elasticities have not been used in wireless merger reviews.

Nor are the more qualitative approaches to the hypothetical monopolist and SSNIP test necessarily easy to implement for the wireless industry. For example, given that meaningful measures of price have been continually falling for retail wireless services, it is difficult to see how to implement the SSNIP test for such services. As prices are set nationally for retail wireless services, no meaningful regional price variations are available, regardless of regional differences in measured competition.

Particularly to the extent it has relied on qualitative reasoning to define a relevant product market, DoJ could recognize the limitations of its analysis. Reasonable people might have different views in a qualitative analysis, for example, on the breadth of the relevant market. Some might have a narrower view of market definition than DoJ, and some might have a broader view. Without persuasive quantitative evidence, DoJ’s insistence on a single view of market structure may, to many, seem unreasonable.

The public is not privy to the detailed structure of the internal DoJ analyses in its review of mergers. Even in

its Amended Complaint in the proposed AT&T-Mobile merger,²⁴ DoJ does not reveal the analyses that it conducted to reach the conclusion of exactly two relevant product markets: “mobile wireless telecommunications services”²⁵ and “mobile wireless telecommunications services provided to enterprise and government customers.”²⁶ Perhaps as a result of coincidence or coordination, the FCC with little explanation defined two similar relevant markets.²⁷ Neither DoJ nor the FCC provided a clear explanation of how these markets were derived.

It would also be helpful to the public and a potential reviewing court for DoJ to explain how and why relevant product markets have changed since previous merger reviews. Changing market definitions would be reasonable given rapidly changing technology. Perhaps DoJ is capable of such an explanation, but the FCC frequently states the opposite: relevant product markets are the same as before.²⁸

Should DoJ challenge a proposed wireless merger in the future, it would be helpful to the public and to a potential reviewing court for DoJ to explain in public documents why the relevant product is not broader or narrower than concluded. It is possible that such an explanation is in redacted documents that might be available to a court, but they are not available to the public, or to potentially merging parties.

B. Consistent with the Guidelines, Consider Multiple Product Markets at Different Levels of Trade Rather than Single Markets for Wireless Mergers

DoJ could use the *Horizontal Merger Guidelines* to consider a wide range of potential product market definitions. For example, DoJ might consider whether there are retail markets beyond wireless services in which the merging firms compete.²⁹ Wireless carriers compete in other retail markets besides wireless services including providing networking equipment such as wireless hubs or laptop sticks that enable electronic devices to connect to either WiFi or mobile networks. As the FCC discusses, consumers increasingly use wireless devices or WiFi devices for internet access.³⁰ Wireless carriers also hold large inventories and are large retail sellers of wireless handsets. As the FCC has documented on many occasions, wireless services also compete at the retail level with wireline services and satellite services.³¹

Wireless carriers also engage in a wide range of wholesale markets, transactions in which consumers do not directly participate. These wholesale markets include markets for spectrum, roaming, wholesale transactions between facilities-based carriers and MVNOs, wholesale purchasers of handsets, purchasers and sellers of wholesale backhaul services, wholesale purchasers of tower services, and wholesale purchasers of network equipment. Each of these wholesale markets is a potential relevant product market, particularly to the extent that each of the merging firms is a major participant in the market. None was examined as a separate market in the proposed AT&T-Mobile merger by either DoJ or the FCC.³²

DoJ could also use the *Horizontal Merger Guidelines* to consider potentially narrower markets within wireless services other than enterprise and government users. Common distinctions are made between contract and prepaid plans, and among facilities-based carriers and MVNOs and

resellers.³³ Merging parties may compete in one or all of these categories.

It is likely that two large wireless firms compete in a half-dozen or more product markets, not the two discovered by DoJ and, perhaps coincidentally, the FCC. The FCC may rationally limit its analyses to markets that it closely regulates,³⁴ but DoJ is not limited to reviewing specific markets, much less those selected by the FCC. It is possible that few if any of these markets have competitive concerns, but that judgment should be made by DoJ based on a record before it.

Should DoJ challenge a proposed wireless merger in the future, it would be helpful to the public and to a potential reviewing court for DoJ to examine a wide range of potential product markets at different levels of trade including wholesale markets.

C. Follow the Guidelines in Defining Relevant Geographic Markets

The DoJ-FTC *Horizontal Merger Guidelines* describe how the agencies are to assess geographic markets.³⁵ Retail wireless services in the United States tend to be priced nationally. The amended complaint related to the AT&T-Mobile merger does not explain how geographic markets were determined by DoJ, much less why those markets were determined to be regional rather than national.³⁶ The DoJ geographic market definition is the same as that used by the FCC.³⁷ At least for retail services, a national market almost certainly makes more sense. On the other hand, for spectrum, tower leasing, backhaul and other wholesale markets, regional markets make sense. Should DoJ challenge a proposed wireless merger in the future, it would be helpful to the public and to a potential reviewing court for DoJ to explain in public documents why the relevant geographic market is not broader or narrower than concluded.

IV. Consistent with the *Horizontal Merger Guidelines*, Identify Competitors and Potential Competitors in Each of those Markets

The *Horizontal Merger Guidelines* give specific instructions about the consideration and inclusion of both competitors and potential competitors.³⁸ The *Guidelines* are unambiguous in counting any firm that “currently earns revenues in the relevant market” or “that have committed to entering the market in the near future.”³⁹ Even firms that are not even considering the relevant market but “that would very likely provide rapid supply responses with direct competitive impact in the event of a SSNIP” must be included.⁴⁰ Simply stated, the count of competitors should be broadly inclusive.

In the narrow market definition of “mobile wireless services,” neither DoJ nor the FCC count more than four competitors. This limited count of competitors is due to the assertion by each agency that only facilities-based “nationwide” wireless carriers compete, and that these firms are limited to AT&T, Verizon, Sprint, and T-Mobile.⁴¹ This finding is inconsistent with the *Horizontal Merger Guidelines*’ requirement of broad inclusion.

The finding of these agencies may come as a surprise to other facilities-based carriers and their customers. Leap/Cricket claims to have “Nationwide Coverage.”⁴² So does MetroPCS.⁴³ U.S. Cellular claims “national coverage.”⁴⁴ Clearwire states that

its network “spans the nation.”⁴⁵ There are thus at least another four facilities-based carriers that represent themselves as having nationwide coverage.⁴⁶

More importantly, other carriers represent themselves as competing with, among others, the “four” carriers. For example, MetroPCS compares itself as competitive with and superior to AT&T, Verizon, Sprint, T-Mobile, and Cricket.⁴⁷ Cricket in turn compares itself favorably with AT&T, Verizon, Sprint, and T-Mobile.⁴⁸ Smaller carriers also compare themselves to larger carriers. Cincinnati Bell claims that its 4G network is more than two times faster than AT&T, Sprint, or T-Mobile.⁴⁹ CSpire compares its data plans favorably with AT&T and Verizon.⁵⁰

Major national retailers do not limit customer choice to exactly four carriers either. Radio Shack has only three carriers: AT&T, Verizon, and Sprint.⁵¹ Walmart carries not only the FCC’s four carriers but Tracfone, Cricket, and MetroPCS as well.⁵² Amazon has the FCC’s four carriers plus Cricket, Fuzion, H2O, Kajeet, MetroPCS, Tracfone, Telesial, Alltel, Firefly, PlatinumTel, and Readymobile PCS.⁵³

Exclusion of Resellers and MVNOs

Even if wireless carriers were the proper product market, the Commission does not explain why it excludes MVNOs and resellers, which are heavily concentrated in the prepaid market. The prepaid and pay-as-you-go market accounted for more than 71.5 million customers at the end of 2011, or well over 21 percent of the wireless services market.⁵⁴ Some of the MVNOs and resellers are owned by the facilities-based carriers, but many are not. The prepaid and pay-as-you-go segment accounts for roughly half of gross and net new additions.⁵⁵

Data are not easily available to separate MVNOs and resellers from direct customers of facilities-based carriers.⁵⁶ It does not, however, follow that the proper analytical solution is to ignore MVNOs and resellers. Many of them are quite large, such as TracFone, which has more than 19 million customers.⁵⁷ In addition, Tracfone recently purchased the MVNO Simple Mobile from T-Mobile.⁵⁸

V. Show Humility Regarding the Use of Information Not Intended for Antitrust Analysis

In wireless merger reviews, DOJ should show humility about the use of information not intended for antitrust analysis. In the amended complaint relating to the proposed AT&T-T-Mobile merger, DOJ presents just one set of numbers, labeled as Herfindahl-Hirschman Indexes (“HHIs”), which purport to measure the concentration of firms in the “mobile wireless telecommunications services market” in regional markets before and after proposed merger.⁵⁹ DOJ discusses the numbers as if they were actual measures of industry concentration and makes inferences about the effect of the proposed merger on industry concentration.⁶⁰ Although similar numbers have been presented often by the FCC as measures of regional wireless industry concentration,⁶¹ the numbers cannot plausibly measure actual wireless industry concentration. DOJ’s reliance on these measures present a number of difficulties.

First, as noted above, there are many plausible product market definitions, and “mobile wireless telecommunications services” is only one such definition. Second, the FCC

recognizes that the HHI calculation omits the competitive effect of MVNOs and resellers, and thus the shares associated with facilities-based carriers are overstated and the level of concentration overstated as well.⁶² Third, the FCC bases shares on “connections”—not revenues—supposedly in a regional market.⁶³ Fourth, the connections are only telephone numbers, and omit information on data-only devices, such as those offered by many carriers and exclusively by Clearwire.

Fifth, the concentration analysis is based on Numbering Resource Utilization and Forecast (“NRUF”) reports from various carriers.⁶⁴ The NRUF reports are derived from Form 502⁶⁵ and are designed to monitor number utilization, not measure HHIs of concentration in the wireless services industry, particularly on a narrow, geographic basis. The NRUF data do not actually provide the number of “connections” in any particular geographic area. The FCC, and implicitly DOJ, merely infers the geographic area from the area code of a phone number.⁶⁶

Sixth, the Form 502 includes the original, not the current, carrier assignment of a telephone number.⁶⁷ Between the fourth quarter of 2003 and the first quarter of 2010, more than 80 million numbers were ported to wireless devices in the United States, usually from one carrier to another.⁶⁸ Thus, the association of a wireless carrier with a specific phone number in use today gathered through Form 502 is far from exact.

Seventh, wireless devices are mobile and portable. Thus a mobile device might have a phone number with an area code in one state, a billing address in a second state, a residential location in a third state, and a work or education location in a fourth state. This pattern is increasingly common, particularly among young people in college, in the military, or moving to different cities. From an economic perspective of the competitive choices facing a consumer, the least interesting aspect of a mobile device is the area code of the number associated with it. Yet the only geographic information from the NRUF data are the area codes associated with the phone numbers for the wireless devices. For phone numbers associated with wireless devices, the numbers are only coincidentally related to geography.

For at least the reasons listed above, the HHI calculations presented by DOJ and the FCC provide little or no useful information about concentration in regional markets. The numbers, which DOJ presents to three or four significant digits,⁶⁹ are not even approximately right; they are wrong.

VI. Show Humility in Examining an Industry with Rapid Technological Change

Section 7 of the Clayton Act prohibits certain transactions under specific conditions, but the interpretation of when those conditions are met relies on the exercise of governmental discretion in interpreting markets, both today and in the future.⁷⁰ The DOJ might show humility about its powers to understand the operations of markets with rapidly changing technology, and, consequently, it would recognize the limitations of the precision with which it can exercise Section 7 authority in such markets.

Few industries have had as much technological change as the wireless industry. Handsets more than two years old are obsolete; the same holds for network equipment more than

five years old. Mobile software and applications have a similar rate of obsolescence. The ways in which Americans use wireless services are constantly changing.

At least since Joseph Schumpeter, economists have examined the relationship between rapid technological change, market structure, and competition and the potential implications for competition policy.⁷¹ While technological change is universally recognized as important, no single conclusion emerges about the effect of antitrust merger reviews on innovation.

Less well-understood is the effect of rapid technological change on the precision of the antitrust merger review itself. Technological change creates a fog around market structure, competitors, and conduct. Governmental decisions within this fog are fraught with peril. A contemporary reviewer reviewing archived government antitrust documents in industries with rapid technological change may read with bemusement or wince in horror, but will rarely encounter an exact prediction of subsequent technological and market developments. In 2000, for example, DoJ blocked the acquisition of Sprint by World Com primarily on the basis that the combination would reduce competition in the market for long-distance telecommunications, a stand-alone industry that all but disappeared just a few years later.⁷²

Not all mergers involve firms engaged in technological change. The canonical *Brown Shoe* case involved shoe manufacturing and distribution, ancient industries that are little changed today.⁷³ But the wireless industry is different.

The fog of technological change does not mean that the government should abandon antitrust law when it encounters a proposed merger between firms engaged in rapid innovation. But it does mean that the government may consider reducing its expectations, and the expectations of courts and the public, about the precision with which markets, competitors, and conduct can be described, much less measured.

The federal government has as much if not more experience in dealing with high technology industries through enforcement of antitrust laws aimed at deterring anticompetitive behavior than merger reviews. Major antitrust cases and investigations involving Microsoft,⁷⁴ Google,⁷⁵ Intel,⁷⁶ Apple,⁷⁷ and other firms in rapidly changing technologies have been based on market conduct rather than mergers. Wireless firms, however, apparently have not been investigated.

Many explanations are available for this pattern of antitrust enforcement. Perhaps the wireless industry is so competitive that competition disciplines potential anticompetitive behavior. Perhaps the frequency of mergers and acquisitions in the wireless industry, each requiring governmental reviews, gives antitrust authorities enough opportunities to review corporate behavior to discourage anticompetitive behavior. The courts have given antitrust exceptions to firms complying with federal rules,⁷⁸ but these exceptions are not universal. Regardless of the actual reason, it is clear that the federal government has instruments other than merger reviews to protect the public against anticompetitive behavior that as yet have been largely unexercised with respect to wireless carriers.

Endnotes

- 1 For a view of industry growth through 2007, see Harold Furchtgott-Roth, *The Wireless Sector: A Key to Economic Growth in America* (CTIA 2009).
- 2 From 2003 through early 2012, the FCC reviewed at least twenty-two major mergers involving wireless firms, or more than two per year. These are listed on its mergers and acquisitions page. See Mergers and Acquisitions, <http://www.fcc.gov/mergers> (last visited Aug. 15, 2012).
- 3 15 U.S.C. § 18.
- 4 U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (2010) [hereinafter HORIZONTAL MERGER GUIDELINES], available at <http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf>; see *id.* at § 4.
- 5 See Reports, [http://www.fcc.gov/reports?filter_terms\[0\]=0&filter_terms\[1\]=96&topics\[0\]=0&op=Apply%20Filter](http://www.fcc.gov/reports?filter_terms[0]=0&filter_terms[1]=96&topics[0]=0&op=Apply%20Filter) (last visited Aug. 15, 2012).
- 6 See FCC Encyclopedia, Major Transactions, Archive of, <http://www.fcc.gov/encyclopedia/major-transactions-archive> (last visited Aug. 15, 2012).
- 7 FCC, ANNUAL REPORT AND ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO MOBILE WIRELESS, INCLUDING COMMERCIAL MOBILE SERVICES, at paragraphs 396, and 189-196 (2011) [hereinafter FIFTEENTH REPORT]; see also U.S. BUREAU OF LABOR STATISTICS, PPI DETAILED REPORT, DATA FOR JUNE 2012, available at <http://www.bls.gov/ppi/ppidr201206.pdf>; U.S. BUREAU OF LABOR STATISTICS, CPI DETAILED REPORT, DATA FOR JUNE 2012, available at <http://www.bls.gov/cpi/cpid1206.pdf>; CTIA, WIRELESS INDUSTRY INDICES, YEAR END 2011 RESULTS (2012); *id.* at 266-278.
- 8 FIFTEENTH REPORT, *supra* note 7, at paragraphs 396; *id.* at 104-128, 220-229.
- 9 *Id.* at paragraphs 55-79.
- 10 *Id.* at paragraphs 129-137.
- 11 See Complaint, United States v. AT&T Inc., No. 1:11-cv-01560 (D.D.C. Aug. 31, 2011); Amended Complaint, United States v. AT&T Inc., No. 1:11-cv-01560 (D.D.C. Sept. 16, 2011) [hereinafter Amended Complaint]. The proposed merger of WorldCom-Sprint was challenged in 2000, but that proposed merger involved the wireless industry in only one of the two merging parties.
- 12 DoJ, along with the Federal Trade Commission, reviews mergers under Section 7 of the Clayton Act. In merger review coordination between the two agencies, proposed mergers of telecommunications companies have been reviewed by DoJ. For a skeptical observation on this redundancy, see Harold Furchtgott-Roth, *A Tough Act to Follow* (Am. Enter. Inst. 2006).
- 13 See FCC, Staff Analysis and Findings, Application of AT&T Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses and Authorizations, WT Docket 11-65, at paragraphs 14-18 (Nov. 29, 2011) [hereinafter Staff Analysis and Findings].
- 14 *Id.* at paragraph 11. The FCC refers to 214(a) and 310(d) of the Communications Act as the foundation for the public interest standard in license transfers.
- 15 *Id.*
- 16 15 U.S.C. § 18.
- 17 See Continuing a Conversation About the FCC[s] Merger Review Process, Posting of Jonathan Baker to FCC Blog, <http://reboot.fcc.gov/blog?entryId=1340463> (Mar. 17, 2011) ("Working together, the FCC and DOJ are often more effective in addressing *competition* issues than either would be working alone. The FCC brings industry expertise and a greater practical ability to review and address concerns about a merger's impact on potential competition. Through collaboration, moreover, both agencies were able to conduct an extensive, careful, and cooperative review of that transaction without delaying the process.").
- 18 HORIZONTAL MERGER GUIDELINES, *supra* note 4, at 7-14.
- 19 *Id.* at § 4.
- 20 *Id.* at 7.
- 21 *Id.* at 9.

- 22 *Id.* at 8-12.
- 23 *See, e.g., id.* at 9 (examples 5 & 6).
- 24 *See* Amended Complaint, *supra* note 11.
- 25 *Id.* at paragraphs 11-12.
- 26 *Id.* at paragraph 13.
- 27 *See, e.g.,* Staff Analysis and Findings, *supra* note 13, at paragraph 31. The FCC's relevant markets were "retail mobile wireless services" and "enterprise and government services."
- 28 *Id.*
- 29 In its merger reviews, the FCC does not appear to consider whether there are additional potential relevant retail markets.
- 30 *See* FIFTEENTH REPORT, *supra* note 7, at chart 15.
- 31 *Id.* at paragraphs 363-377.
- 32 The FCC mentions, but does not examine as a separate market, some of these wholesale activities. For example, the FCC discusses spectrum, Staff Analysis and Findings, *supra* note 13, at paragraph 64, backhaul, *id.* at paragraphs 112-116, and roaming, *id.* at paragraphs 99-105. But these discussions are ultimately in the context of their effect on retail wireless services, not as separate antitrust markets.
- 33 *See, e.g.,* CTIA, WIRELESS INDUSTRY INDICES, YEAR END 2011 RESULTS (2012).
- 34 This explanation, however, does not explain why the FCC does not examine separate markets for spectrum, backhaul, and other heavily regulated services.
- 35 HORIZONTAL MERGER GUIDELINES, *supra* note 4, at 14-15.
- 36 Amended Complaint, *supra* note 11, at paragraph 14.
- 37 *See* Staff Analysis and Findings, *supra* note 13, at paragraphs 32-34.
- 38 HORIZONTAL MERGER GUIDELINES, *supra* note 4, at 15.
- 39 *Id.*
- 40 *Id.*
- 41 Amended Complaint, *supra* note 11, at paragraph 2; *see also* Staff Analysis and Findings, *supra* note 13, at paragraphs 35-38.
- 42 *See* Cricket, <http://www.mycricket.com/> (last visited Aug. 15, 2012).
- 43 *See* MetroPCS, <http://www.metropcs.com/metro/whymetro/ourcoverage.jsp> (last visited Aug. 15, 2012).
- 44 *See* U.S. Cellular, <http://www.uscellular.com/coverage-map/voice-and-data-maps.html> (last visited Aug. 15, 2012).
- 45 Our Network, <http://www.clearwire.com/company/our-network> (last visited Aug. 15, 2012).
- 46 DoJ does not address these carriers. The FCC dismisses these other carriers and asserts that there are only four carriers.
- 47 *See* Compare 4G Plans and Save, <http://www.metropcs.com/metro/static/compare4g-plans.jsp> (last visited Aug. 15, 2012).
- 48 *See* Wireless Carriers Compared, <http://www.mycricket.com/learn/compare-cell-phone-providers/chart> (last visited Aug. 15, 2012).
- 49 *See* Cincinnati Bell, 4G, <http://www.cincinnati-bell.com/4G/> (last visited Aug. 15, 2012).
- 50 *See* CSpire, <http://www.cspire.com/> (last visited Aug. 15, 2012).
- 51 *See* Cell Phones & Plans, http://radioshackwireless.com/mobile/?r=radioshack&refcode1=RSK_0000_000_CELLTOP (last visited Aug. 15, 2012).
- 52 *See* Cell Phones, <http://www.walmart.com/cp/Electronics/542371?provider=catt3944-en-v202889-moduleA060911-lLinkLHN4CellPhones> (last visited Aug. 15, 2012).
- 53 *See* Cell Phones & Accessories, http://www.amazon.com/gp/search/ref=sr_ex_n_1?rh=n%3A2335752011%2Cp_n_feature_ten_browse-bin%3A3310955011&bbn=2335752011&ie=UTF8&qid=1342540513 (last visited Aug. 15, 2012).
- 54 CTIA, WIRELESS INDUSTRY INDICES, YEAR END 2011 RESULTS, at Appendix C, 7-9 (2012).
- 55 *Id.* at 11-12.
- 56 *See* FIFTEENTH REPORT, *supra* note 7, at paragraph 35-36.
- 57 *See* TracFone, <http://www.tracfone.com/> (last visited Aug. 15, 2012).
- 58 *See* David Beren, *TracFone Acquires T-Mobile MVNO Simple Mobile*, TMOnews, May 11, 2012, <http://www.tmonews.com/2012/05/tracfone-acquires-t-mobile-mvno-simple-mobile/>.
- 59 Amended Complaint, *supra* note 11, at Appendix B.
- 60 *Id.* at paragraphs 17-18, 22-26.
- 61 *See, e.g.,* FIFTEENTH REPORT, *supra* note 7, at paragraphs 48-54; *see also* Staff Analysis and Findings, *supra* note 13, at paragraphs 42-47.
- 62 FIFTEENTH REPORT, *supra* note 7, at paragraph 49.
- 63 *Id.*
- 64 *Id.* at 8. The NRUF data are described in FCC, NUMBERING RESOURCE UTILIZATION IN THE UNITED STATES (2011), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-303900A1.pdf.
- 65 *See* NANPA NRUF Services, <http://www.nanpa.com/nruf/index.html> (last visited Aug. 15, 2012).
- 66 FIFTEENTH REPORT, *supra* note 7, at n.528.
- 67 "In the case of ported numbers, if a carrier ports numbers for the purpose of transferring an established customer's service to another service provider, the porting-out carrier should classify the numbers as 'Assigned' and the numbers should not be counted by the receiving/porting-in carrier." NANPA, *JOB AID to Report Geographic Utilization and Forecast Data 4* (NRUF Report Form 502, June 2012), *available at* <http://www.nanpa.com/pdf/NRUF/GeoJobAid.pdf>.
- 68 FCC, NUMBERING RESOURCE UTILIZATION IN THE UNITED STATES, at Table 14 (2011), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-303900A1.pdf.
- 69 Amended Complaint, *supra* note 11, at Appendix B.
- 70 15 U.S.C. § 18.
- 71 *See* JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 59-163 (1976). While Schumpeter held that monopolies had a tendency to innovate, Kenneth Arrow took the opposite view that competition leads to innovation. *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources to Invention*, in *THE RATE AND DIRECTION OF ECONOMIC ACTIVITY* 609 (Richard R. Nelson ed., 1962). More recently, *see* WILLIAM J. BAUMOL, *THE FREE-MARKET INNOVATION MACHINE: ANALYZING THE GROWTH MIRACLE OF CAPITALISM* (2002). In an antitrust context, *see* Michael L. Katz & Howard A. Shelanski, *Mergers and Innovation*, 74 ANTITRUST L.J. 1 (2007); *see also* Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation*, 74 ANTITRUST L.J. 575 (2007).
- 72 Complaint, *United States v. WorldCom, Inc.* (D.D.C. June 26, 2000), *available at* <http://www.justice.gov/atr/cases/indx239.htm>.
- 73 *Brown Shoe Co., Inc. v. United States*, 370 U.S. 294 (1962). Even in this example of unchanging technology, the courts may have reached a conclusion with little economic foundation.
- 74 *United States v. Microsoft*, Civil Action No. 98-1232 (CKK) (D.D.C. 1998).
- 75 *See* David Streitfeld & Edward Wyatt, *U.S. Escalates Google Case by Hiring Noted Outside Lawyer*, N.Y. TIMES, Apr. 26, 2012.
- 76 *See* Cecilia Kang & Steven Mufson, *U.S. Files Antitrust Suit Against Intel, Alleges Unfair Tactics Against Rivals*, WASH. POST, Dec. 17, 2009, *available at* <http://www.washingtonpost.com/wp-dyn/content/article/2009/12/16/AR2009121601121.html>.
- 77 *See* Bob Van Voris, *U.S. Files Antitrust Lawsuit Against Apple, Hachette*, BLOOMBERG, Apr. 11, 2012, *available at* <http://www.bloomberg.com/news/2012-04-11/u-s-files-antitrust-lawsuit-against-apple-hachette.html>.
- 78 *Verizon v. Trinko*, 540 U.S. 398 (2004).