Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
2000 Biennial Review	)	WT Docket No. 01-14
Spectrum Aggregation Limits for	)	
Commercial Mobile Radio Services	)	

To: The Commission

REPLY COMMENTS OF CINGULAR WIRELESS LLC

J. R. Carbonell
Carol L. Tacker
David G. Richards
5565 Glenridge Connector
Suite 1700
Atlanta, GA 30342
(404) 236-5543

Its Attorneys

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SUMMARY

The comment record demonstrates that virtually all parties agree that the wireless industry is very competitive. Specifically, meaningful competition exists in the form of five or more carriers in most markets, the presence of six nationwide competitors, and a tripling of subscribers since the cap was first adopted. Thus, a majority support elimination or immediate modification of the spectrum aggregation limits, consistent with the public interest. Moreover, nearly all commenters addressing the cellular cross-interest rule support its elimination as an outdated policy that unjustly burdens a select group of CMRS carriers. Accordingly, consistent with the attached reply paper prepared by Strategic Policy Research, Cingular reiterates that the Commission allow market forces to operate unfettered by spectrum aggregation limits.

Proponents of the cap put forth several arguments concerning the nature of the competitive market. WorldCom admits that the market is increasingly competitive, but offers no causal link for its suggestion that this is due to the cap. Because there is no such evidence, Worldcom's speculative fears concerning consolidation in the absence of the cap are without foundation. While Sprint submits an HHI analysis purporting to demonstrate that markets remain concentrated and therefore the cap should be retained, its analysis is highly suspect because it is premised upon an admittedly undefined product market, and in any event its economist concedes the need to conduct a "more extensive analysis" before opining as to the efficacy of a spectrum cap. Leap's statements regarding the lack of product and price differentiation are also baseless, given the evidence of decreasing prices and a variety of new price packages and service offerings.

Contrary to the claims of a limited group of commenters, the record also strongly demonstrates that spectrum aggregation limits are not necessary to prevent harmful concentration or other alleged abuses. First, market forces have rendered the cap unnecessary to prevent harmful consolidation and/or coordinated interaction, and regulatory safeguards in the form of the antitrust laws and Section 310(d) provide additional assurance that transactions will be in the public interest. Second, spectrum aggregation limits are not necessary to protect against the warehousing of spectrum because the cost of aggregating spectrum for anticompetitive means is prohibitive. Lastly, concerns regarding barriers to entry/access to spectrum are largely moot because the majority of spectrum subject to the cap has been auctioned, and other barriers to entry, such as the cost of constructing wireless networks, have declined.

Claims by TDS and WorldCom that consolidation in the form of carriers seeking to establish nationwide footprints is "the main potential threat to competition" amount to nothing more than "big is bad" regardless of the public interest benefits. In the case of nationwide carriers, the Commission has repeatedly found that the creation of national competitors is in the public interest and will lead to multiple competitive benefits, including the expansion of innovative pricing plans and further decreases in prices to consumers.

Suggestions by Leap that carrier capacity needs fail to provide further justification to eliminate the cap are unsupportable. Leap first asserts that carriers who continue to offer analog service are using their spectrum "with appalling inefficiency," but this assertion ignores the fact that cellular carriers are required to continue to offer analog service and are therefore precluded from being able to completely switch-over to digital technologies. Leap's omission of the analog

requirement is followed by a transparent "commercial" lauding the benefits of the latest CDMA equipment. Leap fails to note that its former parent, Qualcomm, is one of the nation's largest CDMA equipment manufacturers. Qualcomm retains up to fifteen percent of Leap's equity, and obviously has an interest in the widespread use of CDMA technology. Leap's argument that high speed data services require minuscule bandwidth is simply factually wrong, and suggestions that if carriers were really capacity-constrained they would raise prices or halt marketing efforts are baseless.

In fact, the record is replete with evidence that elimination of the spectrum aggregation limits will serve the public interest. For example, elimination will allow carriers to meet subscriber capacity demands, while providing much-needed flexibility to deploy additional services to the public, particularly advanced services. At the same time, elimination will allow constrained firms to exploit economies of scale and scope, leading to greater efficiencies and, in turn, better services and lower prices for consumers. Elimination of the spectrum cap will also afford small and rural companies greater flexibility to compete, enhancing their ability to provide cutting edge services to rural consumers.

Several carriers argue that the cap should be retained and only be modified or sunset upon the occurrence of certain contingencies. These proposals are self-serving. Sprint's argument that the cap should be retained in some form until the 3G auctions are completed and then immediately abolished would preclude any of its competitors (including those who may be more efficient and/or have "deeper pockets") from getting much larger. By subsequently removing the cap completely, Sprint's proposal would serve to increase the value of *all* CMRS spectrum and thereby enhance *its own* value as an acquisition target. While this may be in Sprint's corporate interests, it is not in the public interest. Likewise, WorldCom's proposal to retain the cap is a self-serving attempt to seek to preserve its resale business. Attempting to use the spectrum cap as a tool to circumvent the fact that the resale rule will sunset in November 2002 is inappropriate and does not serve the public interest.

Lastly, Cingular agrees with commenters that the FCC's current waiver approach does not provide sufficient relief. Far from solving the underlying problems with the cap, a waiver process injects uncertainty in any acquisition or sale because carriers cannot predict the timing or outcome of such a request.

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REPLY COMMENTS OF CINGULAR WIRELESS LLC

Cingular Wireless LLC ("Cingular") hereby replies to those comments submitted in response to the *Notice of Proposed Rulemaking* in the above-referenced proceeding, which examines whether to eliminate, modify or retain the spectrum aggregation limits for certain commercial mobile radio service ("CMRS") providers contained in Sections 20.6 and 22.942 of the Federal Communications Commission's ("FCC" or "Commission") rules.[1] The record reveals that virtually all parties espouse the competitiveness of the wireless industry, and a majority support elimination or immediate modification of the spectrum aggregation limits, consistent with the public interest. The record also demonstrates that elimination of the spectrum aggregation limits will not result in harmful consolidation or other abuses given the realities of the marketplace and the existence of regulatory safeguards. As a result, proposals to retain the spectrum cap are exposed as self-serving and should be rejected. Finally, the record demonstrates that proceeding by waiver is not reasonable.

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[1] *2000 Biennial Regulatory Review — Spectrum Aggregation Limits for Commercial Mobile Radio Services,* WT Docket No. 01-14, *Notice of Proposed Rulemaking*, FCC 01-28 (rel. Jan. 23, 2001) ("*NPRM*"), *summarized*, 66 Fed. Reg. 9798 (Feb. 12, 2001); *see* 47 C.F.R. §§ 20.6(a), 22.942.

Accordingly, Cingular reiterates that the Commission should eliminate the spectrum aggregation limits without further delay.

I. VIRTUALLY ALL COMMENTERS ESPOUSE THE COMPETITIVENESS OF THE MARKET, AND A MAJORITY FAVOR ELIMINATION OR IMMEDIATE MODIFICATION OF THE SPECTRUM AGGREGATION LIMITS

The record reveals that the majority of parties commenting on the issue favor outright elimination, or at a minimum immediate modification, of the CMRS spectrum cap, given the highly competitive nature of the CMRS industry today.[2] Such a result is consistent with the weight of the economic analyses appended to many of these comments.[3] Moreover, nearly all commenters addressing the cellular cross-interest rule support its elimination as an outdated policy that unjustly burdens a select group of CMRS carriers.[4] Only two parties favoring retention of the aggregations

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[2]Seven parties support elimination of the spectrum cap. *See* Comments of AT&T Wireless Services, Inc. ("AT&T"); the Cellular Telecommunications & Internet Association ("CTIA"); Chadmoore Wireless Group, Inc. ("Chadmoore"); Cingular Wireless LLC ("Cingular"); Nextel Communications, Inc. ("Nextel"); Rural Telecommunications Group and the Organization for the Promotion and Advancement of Small Telecommunications Companies ("RTG/OPASTCO"); Verizon Wireless ("Verizon"). One party supported raising the cap to 70 MHz, *see* Comments of the Coalition of Independent Cellular Carriers ("Coalition"), while another supported modifying the cap to exclude spectrum dedicated to analog service, *see* Comments of Sprint PCS ("Sprint"). Another party stated the *NPRM* provided insufficient information to comment. *See* Comments of the Office of Advocacy of the Small Business Administration ("SBA"). The remaining five parties opposed any unconditional adjustment to the cap at this time. *See* Comments of Leap Wireless International, Inc. ("Leap"); National Telephone Cooperative Association ("NTCA"); Telephone and Data Systems, Inc. ("TDS"); UTStarcom; WorldCom, Inc. ("WorldCom").

[3]*See* Economists Incorporated ("Economists Inc."), "An Economic Evaluation of the Federal Communications Commission's Commercial Mobile Radio Services Spectrum Cap," appended to AT&T Comments; Marius Schwartz and John M. Gale (Schwartz and Gale"), "Are Spectrum Aggregation Limits Needed to Preserve Competition," appended to CTIA Comments; Strategic Policy Research, "White Paper on Elimination of the Spectrum Cap" ("White Paper"), appended to Cingular Comments; Declaration of Robert H. Gertner and Allen L. Shampine ("Gertner/Shampine"), appended to Verizon Comments.

[4]*See* Comments of Chadmoore; Cingular; Coalition; RTG/OPASTCO; Verizon; *see also* Comments of TDS (favoring relaxation of the controlling interest standard). *But see* Comments of

limits submitted economic papers in support of their position.[5] As the attached SPR Reply prepared by Strategic Policy Research demonstrates, however, these economic papers do not withstand close scrutiny.[6]

A. Cingular Agrees that the Burden is on the FCC to Show Aggregation Limits Are Still Required

As a preliminary matter, Cingular agrees with Verizon that the burden is on the FCC to justify retention of the rule.[7] As Verizon notes, the Commission has previously recognized that the mandate in Section 332(c) empowering it to reduce CMRS regulation in favor of market forces "places on us the burden of demonstrating that continued regulation will promote competitive market conditions."[8] Then-Commissioner Powell previously has made this very point explicitly in the context of the spectrum cap, noting:

> Frankly, I believe the burden should be on us, the FCC, to re-assess and re-validate the [spectrum cap] rule . . . . [I]f the evidence in support of the rule is lacking, we must modify or eliminate it and rely on competitive market forces or other mechanisms, such as the antitrust laws. We cannot continue to sit back and struggle over

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UTStarcom.

[5]*See* Declaration of Peter Cramton ("Cramton"), appended to Leap Comments; John B. Hayes ("Hayes"), "CMRS HHIs from Customer Share Data: An Update," appended to Sprint Comments.

[6]SPR Reply to Certain Spectrum Cap Comments, prepared by Strategic Policy Research (May 14, 2001) ("SPR Reply").

[7]*See* Comments of Verizon at 7.

[8]*See* Comments of Verizon at 7 & n.9 (citing *Petition of the Connecticut Department of Public Utility Control to Retain Regulatory Control of the Rates of Wholesale Cellular Service Providers in the State of Connecticut, Report and Order*, 10 F.C.C.R. 7025, 7031 (1995), *aff'd sub nom. Connecticut Department of Public Utility Control v. FCC*, 78 F.3d 842 (2d Cir. 1996)); *see also* 47 U.S.C. § 332(c)(1)(C).

> getting rid of another ownership restriction because its opponents have failed to show why the rule is no longer "in the public interest."[9]

Any such reassessment by the Commission must be based upon a record of "current facts that look forward, not backward."[10] As shown below, however, the current facts contained in the record demonstrate that market conditions warrant the prompt elimination of the spectrum aggregation limits.

B. The Record Contains Persuasive Data that Current Conditions Warrant Elimination of the CMRS Spectrum Cap

Virtually all parties espouse the competitiveness of the wireless industry.[11] The record strongly demonstrates that today's CMRS industry is performing competitively, warranting elimination of the spectrum cap.[12] Specifically, meaningful competition as required by Section 11 of the Communications Act[13] exists in the form of five or more carriers in most markets, the presence

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[9]*See 1998 Biennial Regulatory Review — Spectrum Aggregation Limits for Wireless Telecommunications Carriers*, WT Docket No. 98-205, *Notice of Proposed Rulemaking*, 13 F.C.C.R. 25132, 25177 (1998) (Separate Statement of Commissioner Powell).

[10]Comments of Verizon at 7.

[11]*See, e.g.*, Comments of AT&T at 1-2; CTIA at 15-22; Chadmoore at 2; Cingular at 23-28; RTG/OPASTCO at 4; Verizon at 8-12; *see also* Comments of Coalition at 3 (citing the "continuing explosive success" of the non-cellular competitors, *e.g.*, PCS and SMR providers); Nextel at 6 & n.11 (citing growing demand for services and dramatic subscriber increases); Leap at 5 (describing the CMRS marketplace as "more competitive than in years past"); Sprint at 3-4 (describing increases in the number of subscribers, carriers, and pricing plans, and "dramatic" decreases in overall prices, since 1996); TDS at 5 (detailing "increasing intra-market wireless competition" and the "spectacular growth" of new CMRS competitors in the 1990s); WorldCom at 1-2 (noting that "[t]he price of wireless services has steadily declined with the introduction of more CMRS providers, while the variety of service offerings and features, and the quality of service continues to increase").

[12]*See, e.g.*, Comments of CTIA at 14-22; Schwartz/Gale at 20-28.

[13]Section 11 requires the Commission to eliminate or modify any regulation that "is no longer necessary in the public interest as the result of meaningful economic competition between providers of such service." 47 U.S.C. § 161(a)(2).

of six nationwide competitors, and a tripling of subscribers since the cap was first adopted.[14] The benefits of this dramatic growth in competitive entry are reflected directly in the availability of new and innovative pricing plans and declining prices.[15] Even Sprint, one of the proponents of retaining the cap (albeit with modifications), submits data by its economist, John Hayes, recognizing that Herfindahl-Hirschman Index ("HHI")[16] levels in the top 25 metropolitan statistical areas ("MSAs") have fallen by 1200 points since 1998 and have been cut nearly in half since the cap was first adopted.[17] According to Sprint, such numbers reflect what most know to be true — the rise of "meaningful" economic competition between providers of CMRS services.[18] For all these reasons, Cingular agrees with then-Commissioner Powell that the CMRS industry is "the most competitive and dynamic segment of the telecommunications industry,"[19] therefore warranting elimination of the cap under Section 11 of the Act.

Moreover, the fact that competition in rural markets is inhibited by the spectrum cap presents further grounds upon which the cap should be eliminated. RTG/OPASTCO, a group of rural

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[14] *See, e.g.*, Comments of Cingular at 23-28; Verizon at 8-15; AT&T at 2; Gertner/Shampine at 3-8; Schwartz/Gale at 20-27.

[15] *See, e.g.*, Comments of CTIA at 15; Gertner/Shampine at 7.

[16] The HHI is a measure of economic concentration used by the Department of Justice and the Federal Trade Commission in evaluating horizontal mergers. *See* Department of Justice and Federal Trade Commission 1992 Horizontal Merger Guidelines, 4 Trade Reg. Rep. (CCH) ¶ 13104, § 1.5 (dated Apr. 2, 1992, as revised, Apr. 8, 1997) ("*Merger Guidelines*").

[17] Comments of Sprint at 5.

[18] *See* Comments of Sprint at 5.

[19] *See* "Dissenting Statement of Commissioner Michael K. Powell" (rel. Jan. 28, 1999), *re: Policies and Rules Concerning the Interstate Interexchange Marketplace: Implementation of Section 254(g) of the Communications Act*, CC Docket No. 96-61, *Memorandum Opinion and Order*, 14 F.C.C.R. 391 (1998).

telecommunications providers, explains that elimination of the cap is particularly warranted in rural areas, despite the fact that the Commission has already increased the cap in such areas from 45 to 55 MHz.[20] They explain that given the high cost of providing service across large geographic areas, the most cost-effective and efficient way for bringing enhanced CMRS offerings to rural subscribers is to allow existing providers the ability to acquire sufficient spectrum to offer such services.[21] Therefore, "[e]limination of the spectrum cap rule would allow rural cellular carriers greater flexibility to serve additional areas, thereby advancing the build-out of PCS and SMR networks in rural America."[22] Accordingly, "[c]onsidering that competition now exists in most markets, and that further competition in rural markets is inhibited by the spectrum cap rule, the Commission's spectrum cap no longer serves any pro-competitive purpose" and should be eliminated.[23]

Proponents of the cap, notably WorldCom, Sprint and Leap, assert variations of two basic arguments concerning the nature of the market and its impact upon an analysis of whether to retain or eliminate the spectrum cap. First, they argue that the current level of competition in the market is directly attributable to the spectrum cap, and therefore speculate that such competition would be threatened in the absence of the cap. Second, they argue that while the market is competitive, it is not competitive *enough* and therefore the cap should be retained. It is significant that in raising these arguments concerning the nature of competition, none of the cap's proponents analyze the relevant market upon which their competitive conclusions are based. As Cingular discussed in its comments

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[20]*See* Comments of RTG/OPASTCO at 4-6; *see also* Economists Inc. at 18.

[21]*See also* Economists Inc. at 18.

[22]Comments of RTG/OPASTCO at 4-5.

[23]Comments of RTG/OPASTCO at 5.

and accompanying White Paper, the relevant market has expanded while the cap has not.[24] Regardless, none of these arguments to retain the cap withstand scrutiny.

1. WorldCom's Assertion of a Causal Link Between the Competitive Market and the Spectrum Cap Is Unsupported

Initially, WorldCom admits that the market is increasingly competitive, but offers no causal link for its suggestion that this is due to the cap.[25] There is no such evidence. WorldCom makes an equally unsupported assertion that "[i]t is reasonable to expect that without the spectrum aggregation limits currently placed on CMRS providers, consolidation is likely to accelerate."[26] As AT&T notes, "there is no evidence of any relationship between continued retention of the spectrum cap and the growth of competition in the wireless market."[27] Cingular agrees.

2. Sprint's HHI Analysis of Market Concentration Is Inherently Flawed and Unreliable

In its comments, Sprint goes even further, making the bold assertion that "[t]he only effect" of eliminating the cap "would be to allow for CMRS industry consolidation — and in the process allow the CMRS market to become less competitive."[28] Yet, it also offers no hard evidence, only speculation, in support of such an ominous projection. The only data it submits is an HHI analysis of the current market that (erroneously) indicates that the largest markets remain "highly

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[24]Comments of Cingular at 14-18, 20-23, 24-27; White paper at 11-12, 16-17, A1-A4. In fact, contrary to Leap's assertion, Comments of Leap at 13-14, the Commission has in recent years allocated new spectrum which can be used for mobile voice service (*e.g.*, WCS, 700 MHz), and vastly greater allocations have been proposed (*e.g.*, 3G), without any corresponding adjustment to the cap itself. *See* Comments of Cingular at 13-14, 20-34.

[25]*See* Comments of WorldCom at 1-2, 5-7.

[26]Comments of WorldCom at 7.

[27]Comments of AT&T at 3.

[28]Comments of Sprint at 6 (emphasis added).

concentrated."[29] This data does not purport to indicate what would happen in the absence of the cap. In fact, according to its author, it merely suggests that "[c]aution is appropriate" and that regulatory authorities must "be prepared to oppose mergers that would reduce competition."[30] Yet, as many commenters point out and as discussed in Section II below, this is the very purpose of the antitrust laws and Section 310(d) of the Act. Quite simply, the spectrum cap is unnecessary given these continuing safeguards. In fact, neither Sprint nor its economist addresses the existence of the antitrust laws as a safeguard in the absence of the cap to meet their speculative concentration concerns.

Most significantly, the data Sprint's economist submits for the proposition that the market is concentrated is itself inherently flawed and is therefore unreliable. As the attached SPR Reply explains, Hayes discloses that "*an analysis of the proper product market was not within my charter*."[31] Accordingly, Hayes' conclusions are unreliable because they are based on a market

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[29]Comments of Sprint at 6; *see* Hayes at 5. In fact, CTIA demonstrates that calculation of HHIs in the top 10 MSAs based upon the amount of spectrum currently allocated yields HHIs between 1263-1641 with a population-weighted average of 1552 — well below the 1800 level considered "highly concentrated." While comparable figures based upon spectrum that is both owned and used (*i.e.*, built out) ranges between 1705-2050 with a population weighted average of 1916, Schwartz/Gale correctly note that "[t]hese concentration levels are lower than in many industries that are subject to antitrust review of consolidations, instead of outright prohibitions." Comments of CTIA at 17; Schwartz/Gale at 11 & n.15, 23 & Table 2. Moreover, CTIA's observations should be regarded as conservative, because they reflect a relatively narrow product market. As the attached SPR Reply makes clear, although CTIA's observations "likely overstate relevant concentration and understate competitiveness," even based upon CTIA's conservative measures "there is no basis for presuming a competitive failure that warrants maintenance of an (arbitrary) ownership cap." SPR Reply at 12 n.37.

[30]Hayes at 5.

[31]SPR Reply at 2 (quoting Hayes at 2 (emphasis added)). In addition, Hayes' underlying data was collected from surveys requiring self-reporting that he acknowledges underestimated certain carrier shares. SPR Reply at 3 (citing Hayes at 3).

structure for a market or markets which are never defined.[32] It is also telling that Hayes specifically disavows the conclusion he previously reached concerning the efficacy of a spectrum cap, and now acknowledges that:

> I would not draw the same conclusion today based on HHI data alone. I would instead need to conduct a more extensive analysis of the specific CMRS markets involved in a particular merger or acquisition before I could draw firm conclusions about the likely competitive effects of the transaction.[33]

As SPR states, Hayes' "putative support for a spectrum cap is conspicuous by its absence."[34]

3. Leap's Statements Regarding the Lack of Product and Price Differentiation Are Baseless

Finally, Leap claims that the market, while competitive, still does not protect consumers from anticompetitive conduct and therefore should not be eliminated.[35] In this regard, Leap argues that the possibility for "cartel-like" behavior exists in markets with four or less competitors; it also asserts that even areas served by more competitors are characterized by largely identical services with little price competition, especially with regard to price competition among nationwide competitors.[36] Leap's cartel theory is undermined, however, by the record evidence and the presence of nationwide carriers and the national service and price plans they offer. Its statements concerning price competition are counterfactual given the clear declines in wireless prices and the expansion of innovative pricing plans cited in the *Fifth CMRS Competition Report*, owing in significant part to

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[32]SPR Reply at 2.

[33]Hayes at 5.

[34]SPR Reply at 3.

[35]Comments of Leap at 6.

[36]Comments of Leap at 5, 7, 9.

nationwide competitors.[37] In fact, Leap "speaks out of both sides of its mouth" on the issue of prices, first citing little "outright competition on price[s,]" but then several pages later referring to the "trend of falling prices."[38] Leap's nationwide price analysis also ignores the significant issues that come into play with regard to nationwide pricing, *e.g.*, coverage, roaming rates charged, the number of customers converted to digital service (critical mass), and handset availability. As a whole, Leap's views concerning the level of competition in the market are very static — while the market itself is anything but — and are inconsistent with the record evidence that the relevant market is ever expanding with more competitors, decreasing prices, and a variety of new service offerings.

C. The Record Is Replete with Evidence that the Public Interest Will Be Served By Elimination of the Spectrum Cap

Commenters, such as UTStarcom, who say the opponents of the cap have failed to demonstrate how the public will benefit by elimination of the cap, have the analysis backwards.[39] The burden rests with the cap's proponents to show that retention of the cap is in the public interest.[40] Nevertheless, the record amply demonstrates that the public interest will be served if the rule is eliminated, and harmed if it is retained. For example:

- Elimination of the cap will allow carriers to meet subscriber capacity demands;[41]

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[37] *Implementation of Section 6002(b) of the Omnibus Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to CMRS, Fifth Report,* 15 F.C.C.R. 17660, 17675-79 (2000) ("*Fifth CMRS Competition Report*"); *see also infra* Section II.B.

[38] *See* Comments of Leap at 5, 9.

[39] *See* Comments of UTStarcom at 2.

[40] *See infra* discussion Section I.A.

[41] Comments of Cingular at 34-38.

- Elimination of the cap will provide "much-needed flexibility and allow carriers to enter into business transactions that will enhance their competitiveness and promote the deployment of additional services to the public;"[42]

- Elimination of the cap will afford carriers the opportunity to fully develop and offer advanced services;[43]

- Elimination will allow constrained firms to exploit economies of scale and scope, leading to greater efficiencies and, in turn, better services and lower prices for consumers;[44]

- Elimination of the spectrum cap will increase the competitive opportunities for small and rural companies by allowing them the flexibility to compete in neighboring markets and enter new lines of business;[45]

- Elimination will also benefit rural consumers because their ability to receive cutting edge services will be enhanced.[46]

- Conversely, retention of the cap can impose substantial costs on consumers in the form of delay in the introduction of new services that could generate billions of dollars in annual consumer surpluses;[47] and

- Retention of the cap can result in costs to consumers in the form of decreased innovation, lower quality, and higher prices.[48]

D. Contrary to Leap's Assertions, Spectrum Needs are Well-Documented and Provide Further Justification to Eliminate the Spectrum Cap

Leap in particular argues that parties favoring elimination of the cap have failed to show that spectrum needs warrant elimination. As a preliminary matter, Section 11 of the Act does not require

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[42]Comments of Nextel at 6.

[43]*See* Comments of AT&T at 2, 6-10; Economists Inc. at 11-21.

[44]Schwartz/Gale at 31.

[45]Comments of RTG/OPASTCO at 2-3.

[46]Comments of RTG/OPASTCO at 6.

[47]Gertner/Shampine at 16-17.

[48]Gertner/Shampine at 17.

such a showing in order to warrant elimination of a rule. Rather, it requires the Commission to eliminate or modify any regulation that "is no longer necessary in the public interest as the result of meaningful economic competition between providers of such service."[49] As shown above, meaningful competition between CMRS providers exists, and elimination of the cap will serve the public interest. The rule should therefore be eliminated. Nevertheless, the Commission has before it in this and related proceedings ample evidence that carrier spectrum needs are real and immediate, providing further justification for the prompt elimination of the spectrum cap.

For example, carriers' spectrum needs have already been well documented in the Commission's pending proceeding concerning third generation ("3G") wireless services.[50] There, Cingular and others demonstrated that additional spectrum is required not only to keep up with the growing demand for existing first and second generation wireless services, as reflected in the spectacular growth of wireless subscribers to numbers exceeding 110 million domestically, but also to support the development of advanced wireless services.[51] Comments showed that while expected continued increases in mobile telephone service and the demand for new advanced services may be met *in part* by the introduction of new technologies and continued spectrum management policies, *additional spectrum is crucial* to facilitate the introduction of 3G wireless systems.[52] According to the International Telecommunications Union, a minimum of 160 MHz of additional spectrum will

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[49] 47 U.S.C. § 161(a)(2).

[50] *See Allocation of Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Services,* ET Docket No. 00-258, *Notice of Proposed Rule Making,* FCC 00-455 (rel. Jan. 5, 2001)

[51] *See* Reply Comments of Cingular in ET Docket No. 00-258 at 3-4 (Mar. 9, 2001) (citing comments).

[52] *See* Comments of Cingular in ET Docket No. 00-258 at 5-6 (Feb. 22, 2001).

need to be allocated for 3G purposes. In fact, one need look no further than the record prices spent for spectrum licenses in recent auctions in the United States (nearly $17 billion) and in Europe (more than $44 billion in Germany alone) as further evidence of this critical need.[53]

In this proceeding, Verizon explains that advanced "[b]roadband wireless services are . . . extremely spectrum-intensive."[54] Given current spectrum limitations, however, carriers have "had to deploy most of their spectrum to meet the sharply increased demand for future mobile voice services, leaving little spectrum available for widespread deployment of other spectrum-intensive applications."[55] In Cingular's South Florida system, for example, comprising Miami, Ft. Lauderdale, Palm Beach and other densely populated areas as of three years ago, one hundred percent of the cellsite channels throughout the area are in use 60-80 percent of the time, 24-hours per day, and busy-hour usage was even higher.[56] Usage has only increased over the last few years. More broadly, an economist's report shows that carriers have now reached the cap in large portions of the country covering 30% of the population, and many more will reach the cap in major markets upon grant of the C and F Block licenses recently reauctioned.[57] For such carriers, the spectrum cap presents an immediate impediment to their ability to serve their subscribers.

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[53]*See FCC News Release*, "C and F Block Broadband PCS Spectrum Auction Raises Nearly $17 Billion for the U.S. Treasury" (Jan. 26, 2001); Rick Perera, "Europe's 3G Euphoria Ends with a Fizzle," The Industry Standard (Dec. 13, 2000).

[54]Comments of Verizon at 18.

[55]Comments of Verizon at 18.

[56]*See* Application for Review of BellSouth Cellular Corp., GTE Wireless Products and Services, Southwestern Bell Mobile Systems, Inc., and AirTouch Communications, Inc. to Partial Lifting of Freeze AirCell Inc. Experimental License, DA 97-2309, at 8 (Mar. 12, 1998).

[57]Gertner/Shampine at 4, 12, 14-15, *cited in* Comments of Verizon at 20.

As AT&T notes, the FCC has already recognized that the cap hinders carriers' ability to offer new, innovative services like 3G.[58] In this regard, CTIA also demonstrates that the spectrum cap materially limits wireless carriers in contrast to other industrialized countries. For example, certain carrier(s) in the United Kingdom have up to 85 MHz of spectrum, in Japan have up to 98 MHz, and in Germany have up to 70 MHz. Even Leap acknowledges that U.S. carriers have less spectrum than foreign carriers (approximately 25-45 MHz versus 60-86 MHz), though it disputes the import of this disparity.[59] Such a disparity places at risk further competitive development by preventing spectrum acquisitions to improve efficiency.[60] For these reasons, a bi-partisan coalition in Congress has been urging the FCC for some time to eliminate the cap due to concerns that the cap is inhibiting the growth of 3G services and will leave the United States further behind Europe and Asia.[61]

Leap rejects this evidence, however, arguing that carriers (particularly those who continue to provide analog cellular service) have sufficient spectrum, but are using it inefficiently and have overestimated the mount of spectrum needed to support 3G services like wireless broadband operations, especially mobile data.[62] Leap's arguments are premised on the baseless assumption that Cingular and others are not employing the latest technologies and equipment. For the reasons set forth below, these arguments fail.

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[58]Comments of AT&T at 2; *see Fifth Annual Competition Report*, 15 F.C.C.R. at 17685.

[59]Comments of Leap at 34-25; Declaration of Mark Kelley ("Kelley") at 22-25, appended to Leap Comments.

[60]*See* Comments of CTIA at 27-28; Schwartz/Gale at 33-34.

[61]*See* Comments of Cingular at 37-38.

[62]*See* Comments of Leap at 21-24; Cramton at 26-27; Kelley at 12-15.

1. Leap's Analog Service Diatribe Ignores the Commission's Analog Service Requirement

Leap argues that carrier claims regarding spectrum needs "ring hollow" because those favoring elimination of the cap use their spectrum "with appalling inefficiency."[63] Leap bases this claim in significant part on the fact that some carriers are continuing to offer analog service, and that "no carrier should claim it is 'capacity constrained' while it still retains *any* analog subscribers."[64] This claim makes *no* reference to the fact that cellular carriers are *required* to continue to offer analog service and are therefore *precluded* from being able to completely switch-over to more spectrally-efficient digital technologies.[65] As the Commission has previously observed, "unlike cellular radiotelephone systems, licensed PCS systems will not have to accommodate older and less spectrum efficient analog equipment, and therefore may be able to provide comparable service with less spectrum."[66] Leap's analog diatribe also ignores the fact that many PCS providers rely on cellular analog to provide their customers roaming capabilities where they have not built out.[67] Leap

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[63]Comments of Leap at 3, 11.

[64]Comments of Leap at 3, 11, 14-19; Kelley at 5-12.

[65]*See Amendment of the Commission's Rules to Establish New Personal Communications Services, Second Report and Order*, 8 F.C.C.R. 7700, 7747 (1993) ("*Broadband PCS Second Report and Order*") ("With regard to repealing the analog service requirement . . . , we believe the record is incomplete and therefore at this time decline to repeal the requirement.").

[66]8 F.C.C.R. at 7715.

[67]Notably, some of the most vocal opponents to eliminating the analog requirement are the PCS providers who rely on analog service to expand their coverage areas. Perhaps for this reason Sprint — which unlike Leap acknowledges the analog service requirement — suggests that the cap be adjusted to exclude spectrum devoted to analog service for a fixed period of time. *See* Comments of Sprint at 10.

also ignores the inefficiencies caused by the spectrum cap itself. As noted by Economists Inc., the cap reduces the "rewards for being efficient and the penalties for being inefficient."[68]

2. Leap's Commercial for CDMA Is Transparent

Leap's omission of the analog requirement is followed by a transparent "commercial" lauding the benefits of the latest CDMA equipment.[69] In essence, Leap is arguing that all carriers who are not using late 1990s CDMA equipment, and are instead using such technologies as TDMA or GSM, should convert to CDMA because of its claimed enhanced spectrum efficiencies. Leap ignores the fact, however, that were this to be the case, such a change would have a significant direct impact on subscribers and the equipment they use, forcing them to replace their phones with CDMA-compatible equipment. Customers would likely disfavor any such forced migration, a public interest factor Leap does not consider. Leap also ignores the huge imbedded investment carriers have in their existing technologies — an investment carriers made based upon the decision of the Commission *not* to regulate carrier technology choices. Leap would in effect have the FCC choose CDMA as the technology for providing wireless services, something it has rightfully heretofore been unwilling to do. In support of Leap's Comments on this issue, Cramton argues that the cap is necessary to ensure competition in the market so that a firm is incented to use its spectrum (an "input" in economic

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[68]Economists Inc. at 17.

[69]*See* Comments of Leap at 18-18; Kelley at 8-10. It is no coincidence that Leap is taking this position. Leap's former parent, Qualcomm Incorporated ("Qualcomm"), is one of the nation's largest CDMA equipment manufacturers. Qualcomm holds up to fifteen percent of Leap's equity, and obviously has an interest in the widespread use of CDMA technology. *See AirGate Wireless, L.L.C., Assignor, and Cricket Holdings, Inc., Assignee, and Application of Leap Wireless International, Inc. for Authorization to Construct and Operate 36 Broadband PCS C Block Licenses, Memorandum Opinion and Order*, 14 F.C.C.R. 11827, 11837 (CWD 1999), *aff'd*, 15 F.C.C.R. 13557 (2000).

terms) in the most efficient manner by selecting the most efficient technology.[70] There is nothing economically efficient, however, about arbitrarily limiting one input and forcing users to "innovate" by adjusting other inputs. This, in fact, reduces firms' incentives to reduce prices, increase quality and innovate if they are already at or near cap. Limiting an input does not increase output.[71]

3. Leap's Argument that High Speed Data Services Require Little Bandwidth Is Factually Wrong

Leap also asserts that carrier projections concerning 3G spectrum needs are inflated because wireless data requires "surprising little bandwidth."[72] Leap appears to focus its analysis upon existing wireless data uses which operate at speeds of 9.6 kbps, which require comparatively less bandwidth than planned high speed uses (both data and video) contemplated in connection with 3G technologies. Providing higher data speeds, such as 2 Mbps, clearly requires significant new spectrum. Leap's suggestion that customers *may* not want these new high speed offerings, or *may* not want them in connection with voice services,[73] implies customers should not be given the choice; therefore, the FCC should not repeal the cap. Such a decision, however, should rest with the consumer. In other words, the Commission must not foreclose to carriers the opportunity to offer such services (by maintaining the cap and curtailing access to spectrum); rather, it should let the market decide whether such services will succeed or fail. The Commission should not make any decision here that would foreclose a carrier from being able to offer both services. Indeed, the cap

[70] *See* Cramton at 20-21.

[71] *See* Gertner/Shampine at 18.

[72] Comments of Leap at 21-24; Cramton at 26-27; Kelley at 12-15.

[73] Comments of Leap at 24-27. Leap's arguments concerning combined voice and high speed data offerings lead to the conclusion that *more* spectrum is needed if a carrier wants to provide both voice and data. *See id.* at 26.

penalizes the carrier who has been successful selling voice services and who could realize economies of scope and scale in offering new advanced services, including high speed data. As such, large carriers are constrained in emerging markets.[74]

4. Leap's Suggestion that Capacity-Constrained Carriers Should Raise Prices or Halt Marketing Efforts Is Patently Contrary to the Public Interest

Lastly, Leap claims that recent carrier press advertisements continuing to solicit more customers somehow belie their arguments that they need additional spectrum, positing that "one would expect [a] business to halt or at least to slow its marketing efforts" if there is a shortage of an input (*i.e.*, spectrum) or else "raise prices."[75] The very advertisements that Leap points to show the competitiveness of the industry and do not imply anything about capacity constraints. The point that Leap appears to miss is that capacity-constrained carriers suffering under the spectrum cap will place most of their resources into maintaining subscriber growth and satisfying demand, particularly in the urban areas where demand is high for voice. What suffers if carriers cannot acquire additional spectrum because of the cap is the ability to offer innovative new products, particularly in the urban areas where voice demand is high but would be the first places that could support new advanced wireless services. The cap thus disadvantages the very CMRS providers who have been successful to the detriment of consumers.

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[74]*See* Comments of Verizon at 20.

[75]Comments of Leap at 15-16.

E. The Record Strongly Supports Elimination of the Cellular Cross-Interest Rule to Ensure a Level Playing Field

Nearly all commenters addressing the cellular cross-interest rule support its elimination as an outdated policy that unjustly burdens a select group of CMRS carriers.[76] Given the rapid growth in PCS and SMR market share, PCS and SMR spectrum are now fungible with cellular spectrum. As a result, the cellular cross-interest rule is no longer needed to promote new entry, and there is no justification to continue to impose the cross-interest regulation upon cellular carriers.[77] Because the cellular cross-interest rule is outdated and hampers the services cellular carriers can provide to subscribers, it should be eliminated to ensure a level playing field.[78]

II. CONCERNS BY LEAP AND OTHERS OF HARMFUL CONSOLIDATION AND OTHER ALLEGED ABUSES IGNORE MARKET REALITIES AND THE PRESENCE OF REGULATORY SAFEGUARDS

Leap and others raise alarmist claims that in the absence of the spectrum cap, significant consolidation and/or warehousing of spectrum will occur.[79] These commenters argue that "ominous" signs of anticompetitive consolidation are already present in the form of mergers to create nationwide carriers.[80] In addition to these concerns, Leap also argues that the cap must be

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[76]*See* Comments of Chadmoore; Cingular; Coalition; RTG/OPASTCO; Verizon; *see also* Comments of TDS (favoring relaxation of the controlling interest standard). *But see* Comments of UTStarcom.

[77]*See* Comments of Verizon at 15-16, Cingular at 40-42; Coalition at 5-6; Gertner/Shampine at 14-15.

[78]*See* Comments of RTG/OPASTCO at 8.

[79]*See, e.g.*, Comments of Leap at 11 & Cramton at 24; UTStarcom at 2.

[80]*See* Comments of WorldCom at 6; *see also* Comments of TDS at 6 (claiming that "the rise of national carriers" is "the main potential threat to competition").

maintained to facilitate entry, *i.e.*, to prevent carriers from being shut out of the market.[81] These claims are without merit. In fact, as discussed below, they ignore the realities of the marketplace and prior Commission findings, as well as the fact that regulatory safeguards exist in the form of compliance with Section 310(d) of the Communications Act by the FCC and the antitrust laws by the Department of Justice and Federal Trade Commission ("DOJ/FTC").

A. The Record Demonstrates that Elimination of the Spectrum Aggregation Limits Will not Result in Harmful Consolidation, Warehousing or Barriers to Entry

Contrary to the claims of a limited group of commenters, the record strongly demonstrates that spectrum aggregation limits are not necessary to prevent harmful concentration or other alleged abuses. First, market forces have rendered the cap unnecessary to prevent harmful consolidation and/or coordinated interaction. For example, Gertner/Shampine demonstrate that the increase in competitors described above, particularly the presence of six nationwide carriers, makes it "highly unlikely" that competition would be foreclosed, because such carriers would be unlikely to sell enough of their spectrum in a given area so as to render themselves unable to provide voice service.[82] In fact, the large number of competitors and complexities of the various pricing plans make coordinated pricing unlikely.[83] Moreover, the dramatic growth in subscribership decreases the likelihood that carriers would be forced out of business, because there are enough subscribers to "go around."[84] Finally, regulatory safeguards in the form of the antitrust laws and Section 310(d) provide additional assurance that transactions will be in the public interest, as noted by CTIA and

[81]*See* Comments of Leap at 8.

[82]Gertner/Shampine at 3.

[83]Gertner/Shampine at 3.

[84]*See* Gertner/Shampine at 3.

Schwartz/Gale.[85] Therefore, concerns about harmful consolidation run counter to the facts in the record.[86]

Second, spectrum aggregation limits are not necessary to protect against the warehousing of spectrum because the cost of aggregating spectrum for anticompetitive means is prohibitive.[87] As Cingular explained in its comments, given the cost of acquiring a license in the first instance and subsequently satisfying the FCC's buildout requirements, a carrier has significant incentives to get customers on its system to pay down these capital expenditures irrespective of the spectrum cap.[88] As the attached SPR Reply notes, warehousing is unlikely because:

> The would-be "warehouser" is required to sink a substantial investment and leave acquired resources fallow (notwithstanding governmental oversight and the activities of other competitors in what is decidedly *not* a "monopoly" environment) on the bet that prices will not fall as rapidly as they otherwise would—indeed, sufficiently slowly to make sinking a sizable investment worthwhile in the first place. The relevant policy question is not one of *possibility* but of *plausibility* and *likelihood*.[89]

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[85]Although Leap claims that antitrust and FCC Section 310(d) review are not always available, Comments of Leap at 31-33, the record reveals that most Americans are served by carriers of sufficient size that acquisitions by and among them will be subject to regulatory scrutiny, *see, e.g.*, Gertner/Shampine at 14. Transactions that fail to trigger FCC or DOJ/FTC review would not be presumed to trigger competitive concerns in the first instance, and Leap presents no evidence to rebut this presumption.

[86]*See* Comments of CTIA at 25-26, 37-46; Schwartz/Gale at 11-15; *see also* Comments of Cingular at 28-34; Gertner/Shampine at 3. While the FCC should rely upon case-by-case public interest review of mergers and acquisitions, Cingular agrees with AT&T that it should leave the competitive analysis to the antitrust authorities. Comments of AT&T at 15-17; Economists Inc. at 21-25.

[87]*See, e.g.*, Comments of CTIA at 24.

[88]Comments of Cingular at 29.

[89]SPR Reply at 7.

Quite simply, no rational business would believe that it could foreclose competition by aggregating and warehousing spectrum because the economic cost of doing so would be prohibitive.[90]

Lastly, Gertner/Shampine and CTIA show that concerns regarding barriers to entry/access to spectrum are largely moot because the majority of spectrum subject to the cap has been auctioned, and other barriers to entry, such as the cost of constructing wireless networks, have declined.[91] Nevertheless, Leap claims that the cap is necessary to ensure that non-traditional carriers like Leap are able to enter and stay in the market.[92] This entry argument has several flaws. First, it presumes that it is up to the Commission to ensure that competitors succeed, which is not its role; success or failure should be determined by the marketplace. Second, what Leap self-servingly refers to as the "Leap effect," *i.e.*, wireless competition with landline providers and lower wireless service prices, has occurred throughout the country regardless of whether Leap was present in a particular market.[93] In any event, Leap verifies in its comments that wireless firms today are competing with as little as 10 MHz of spectrum. Thus, even if one carrier were to amass more than 45 MHz in a particular market in the absence of a cap, the remaining spectrum could still allow competitive opportunities

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[90]*See* Comments of Verizon at 3.

[91]Gertner/Shampine at 3; Comments of CTIA at 22.

[92]Comments of Leap at 8.

[93]*See* Comments of Leap at 8-9; Cramton at 7-12. Concerning Leap's landline displacement argument, it only shows that Leap took a conscious look at the market and saw a niche that it felt it could fill on a profitable basis – nothing more. Concerning Leap's effect on declining market prices, Leap once again takes a very static, egocentric view of the marketplace. Specifically, it ignores a variety of factors which have given cause for prices to decline, including the roll out of national plans, conversion to digital technologies (because of its efficiencies, carriers may incent subscribers with lower prices to move to digital), new price plans, new service offerings, *etc.*

for a substantial number of effective competitors, each with sufficient capacity to support a large fraction of the market.

B. The Commission Has Repeatedly Recognized that the Creation of Nationwide Competitors Serves the Public Interest

Claims by TDS and WorldCom that consolidation in the form of carriers seeking to establish nationwide footprints is "the main potential threat to competition"[94] amount to nothing more than "big is bad" regardless of the public interest benefits. The issue is not whether removal of the spectrum aggregation limits will lead to *any* consolidation in the marketplace, but whether that consolidation will be *harmful*.[95] In the case of nationwide carriers, the Commission has repeatedly found that the creation of national competitors is in the public interest and will lead to multiple competitive benefits, including the expansion of innovative pricing plans and further decreases in prices to consumers.

For example, the *Fifth CMRS Competition Report* notes that the Commission has consistently concluded that "operators with larger footprints can achieve economies of scale and increased efficiencies compared to operators with smaller footprints."[96] According to the Commission, these benefits permit companies "to introduce and expand innovative pricing plans . . ., reducing prices to consumers."[97] In fact, the Commission has noted that not only is the rise of nationwide competitors *not* harmful, analysts have similarly concluded "that the current consolidation *will*

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[94]Comments of TDS at 6; *see* Comments of WorldCom at 6.

[95]*See NPRM* at ¶¶ 12, 17 (seeking comment on whether the spectrum cap is necessary to prevent "harmful concentration" or "harmful reconsolidation").

[96]*Fifth CMRS Competition Report,* 15 F.C.C.R. at 17669 & n.43 (citing similar findings in previous assessments of the state of competition in the CMRS market going back to 1997).

[97]*Fifth CMRS Competition Report*, 15 F.C.C.R. at 17669.

intensify competition among nationwide wireless providers."[98] As the Commission states, "along with the process of [nationwide] consolidation, the mobile telephone sector continues to experience heightened competition."[99]

Moreover, in recently approving the combination of wireless assets that resulted in the creation of Cingular, the Commission could not have been clearer that the development of an additional nationwide carrier is in the public interest:

> We agree with Applicants that the creation of another national wireless competitor constitutes a clear, transaction-specific public interest benefit. A significant percentage of mobile phone users desire nationwide access, and those users will benefit significantly from the creation of another competitor with a near-nationwide footprint. We are persuaded that new service plans, new features, and reduced charges (including charges for roaming) to consumers will result from the expansion of these two regional wireless into one national company. Further, we find the Applicants' arguments regarding cost savings have been reasonably justified, and therefore count among the public benefits of this transaction. . . . Thus, we conclude that the proposed joint venture is likely to produce demonstrable and verifiable public benefits.[100]

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[98]*Fifth CMRS Competition Report*, 15 F.C.C.R. at 17669 (emphasis added).

[99]*Fifth CMRS Competition Report*, 15 F.C.C.R. at 17670.

[100]*SBC Communications Inc. and BellSouth Corporation*, WT Docket No. 00-81, *Memorandum Opinion and Order*, at ¶ 16 (WTB Sept. 29, 2000).

Other mergers proposing the creation or expansion of nationwide and/or regional footprints have also been found to be in the public interest.[101] For all these reasons, the unsupported and unsupportable claims of WorldCom, UTStarcom, and Leap should be rejected outright.

III. PROPOSALS OF SPRINT AND WORLDCOM TO RETAIN THE CAP OR MODIFY IT WITH CONTINGENCIES ARE SELF-SERVING

Several carriers argue that the cap should be retained and only be modified or sunset upon the occurrence of certain contingencies. For example, Sprint argues that the cap should be retained in some form until the 3G auctions are completed and then immediately eliminated.[102] Sprint's opposition to the immediate abolition of the spectrum cap is curious, because it would appear to limit incumbent participation in any 3G auction, including its own participation. SPR exposes, however, what may be the true interests underlying Sprint's proposal in this regard:

> By restricting all of the major players from bidding on 3G spectrum, Sprint's plan would preclude any of its competitors (including those who may be more efficient and/or have "deeper pockets") from getting much larger. By subsequently removing the cap completely, Sprint's proposal would serve to increase the value of *all* CMRS spectrum and thereby enhance *its own* value as an acquisition target. In effect, the "real auction" could then occur for Sprint's spectrum.

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[101] *See, e.g., GTE Corporation and Bell Atlantic Corporation*, CC Docket No. 98-184, *Memorandum Opinion and Order*, 15 F.C.C.R. 14032, ¶ 237 (2000) ("[W]e conclude that the proposed merger will likely generate benefits for consumers in these markets. . . . By lowering the cost of offering nationwide service plans, the larger footprint will enable it to compete with other nationwide wireless competitors more effectively, making possible more attractive rates and better network coverage."); *GTE Corporation, Vodafone AirTouch Plc, and Bell Atlantic Corporation*, 15 F.C.C.R. 11608, ¶ 12 (WTB 2000) ("[T]he proposed merger would promote competition by furthering the development of a major nationwide wireless system."); *VoiceStream Wireless Corporation or Omnipoint Corporation, Memorandum Opinion and Order*, 15 F.C.C.R. 3341, ¶ 46 (2000) ("We agree . . . subscribers will benefit from the expanded footprint to be offered by VoiceStream, and . . . all mobile phone users needing access throughout the nation will benefit significantly from the creation of another competitor with a near-nationwide footprint.").

[102] *See* Comments of Sprint at 11-12.

> Such an outcome may be in the interest of Sprint's shareholders, but is at odds with promotion of effective competition.[103]

WorldCom, on the other hand, appears to seek an indefinite cap to "ensur[e] that there are at least four facilities-based providers in each market from which resellers [like WorldCom] can negotiate."[104] WorldCom's proposal is a self-serving attempt to seek to preserve its resale business. While the Commission has recognized that resale serves a valuable role for a transition period when a nascent market is adding new competitors, it has acknowledged that once the market becomes competitive a mandatory resale rule no longer serves the public interest and should be sunset.[105] Attempting to use the spectrum cap as a tool to circumvent the fact that the resale rule will sunset in November 2002 is inappropriate and does not serve the public interest. Accordingly, Cingular agrees with Verizon that the Commission should "stop tinkering" with the cap and simply repeal it.[106]

IV. SUGGESTIONS TO CONTINUE TO RELY ON THE USE OF WAIVERS FOR CASE-BY-CASE RELIEF ARE NOT REASONABLE

Cingular agrees with commenters that the FCC's current waiver approach does not provide sufficient relief.[107] Far from solving the underlying problems with the cap discussed throughout

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[103]SPR Reply at 3-4.

[104]Comments of WorldCom at 8-9, 12-14.

[105]*See Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services*, CC Docket No. 94-54, *First Report and Order*, 11 F.C.C.R. 18455, ¶¶ 27-29 (1996), *aff'd sub nom. Cellnet Communications v. FCC*, 149 F.3d 429 (6th Cir. 1998), *recon.*, 14 F.C.C.R. 16340 (1999), *further recon. denied*, 15 F.C.C.R. 16221 (2000); 47 C.F.R. § 20.12(b)(3).

[106]Comments of Verizon at 4.

[107]*See, e.g.,* Comments of Verizon at 22-23; Gertner/Shampine at 18-19; Comments of CTIA at 32 & n.105, 34-35.

these reply comments, a waiver process "inevitably injects uncertainty" because carriers cannot predict the timing or outcome of such a request.[108] Cingular agrees.

While Leap suggests that the relatively low number of waiver requests filed to date evinces a lack of need for additional spectrum above the cap,[109] the record shows that it is the waiver process itself that has discouraged carriers from seeking such relief. For example, carriers cannot enter into transactions, finalize business plans, develop new technologies, or obtain financing for advanced services if such actions are waiver-dependent until such time as the Commission actually grants the waiver request.[110] Virtually no waivers have been granted to date. The waiver process may also discourage carriers from participating in an auction to obtain spectrum where a waiver would be necessary, because the costs involved in acquiring the spectrum are too high to take the risk that a waiver may be denied.[111] Finally, in order to submit a waiver, carriers run the gauntlet between justifying the waiver and disclosing sensitive business plans. For all these reasons, the current waiver process is unworkable and is in no way indicative of carriers' spectrum needs above and beyond the current cap.[112]

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[108]*See* Comments of Verizon at 22.

[109]*See* Comments of Leap at 20.

[110]Comments of Verizon at 22-23.

[111]*See* Gertner/Shampine at 18-19.

[112]Leap makes specific reference to Cingular's pending request to exclude 1.5 MHz of data-only SMR spectrum from the cap, claiming that the amount sought to be excluded "does not mesh with the supercarriers' alarmist claims of capacity constraint." Comments of Leap at 20 n.74. As the waiver request makes clear, however, Cingular seeks to exclude 1.5 MHz of data-only spectrum so that Cingular can obtain spectrum *up to the full* 45 MHz to use for mobile telephony purposes. The waiver explains that at present, the 1.5 MHz of data-only spectrum Cingular seeks to exclude is precluding it from obtaining more than 35 MHz of spectrum in some areas because it has not been able to acquire spectrum in the secondary market in increments of less than 10 MHz. Leap also makes the baseless argument that the waiver has made no showing of need, fails to address

CONCLUSION

For the reasons stated above and in its underlying comments, Cingular respectfully requests that the CMRS spectrum cap and the cellular cross-ownership rules be eliminated.

Respectfully submitted,

CINGULAR WIRELESS LLC

By: /S/ J. R. Carbonell
J. R. Carbonell
Carol L. Tacker
David G. Richards
5565 Glenridge Connector
Suite 1700
Atlanta, GA 30342
(404) 236-5543

Its Attorneys

May 14, 2001

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competitive effects, and does not show that the public interest will be served. Comments of Leap at 20. In fact, the waiver addresses all these points, as Cingular recently emphasized on reply in the waiver proceeding. *See* Reply of Cingular Wireless LLC, Request for Waiver of the CMRS Spectrum Aggregation Limit in Section 20.6(a) of the Commission's Rules, DA 01-665 (filed Apr. 13, 2001).

SPR Reply to Certain Spectrum Cap Comments

May 14, 2001

1. INTRODUCTION

This reply focuses on two of the spectrum cap proceeding submissions[1] in particular: John Hayes' paper entitled, "CMRS HHIs From Customer Share Data: An Update," attached to Sprint's comments and the Declaration of Peter Cramton filed on behalf of Leap Wireless International. We also comment briefly upon some measurements contained in the analysis of Marius Schwartz and John Gale in their paper entitled, "Are Spectrum Limits Needed to Preserve Competition?," filed on behalf of CTIA. Finally, we address several economic arguments made by WorldCom, TDS, NTCA and UTStarcom.

2. HAYES

The Hayes submission strikes us as rather odd. Hayes begins by commenting that "[a] complete analysis of the ability of firms to exercise market power *would* examine market structure, including barriers to entry, the ability of fringe firms to expand output, and a careful determination of relevant markets"[2]— a position commonly espoused by ourselves, Schwartz and Gale, and, to a certain extent, even by Cramton, the "outlier" in terms of policy guidance. Hayes then remarks that such an analysis "is beyond the scope of this paper."[3]

He further remarks that the data he does analyze reflect only "a subset of CMRS providers," and do not include "telecommunications services that some might

[1] *Comments* filed in: *In the Matter of 2000 Biennial Regulatory Review – Spectrum Aggregation Limits for Commercial Mobile Radio Services* (WT Docket No. 01-14).

[2] *Op. cit.*, at 2 (emphasis added).

[3] *Ibid.*

contend potentially compete with mobile wireless telephone services."[4] While having just vouchsafed that analysis of market power would entail "a careful determination of relevant markets," Hayes discloses that "*an analysis of the proper product market was not within my charter*."[5] His is thus an effort that purports to analyze market structure for a market or markets whose boundaries remain undetermined.

According to Hayes, "market concentration is one well-recognized indicator of the ability of firms to exercise market power."[6] Concentration is certainly a summary statistic that economists consider, but, as is widely recognized, concentration is not enough to demonstrate market power.[7] Furthermore, if not properly measured, concentration possesses even less probative significance.

In addition to issues related to market boundaries, particular measurements may fail on other important accounts. As we explained in our White Paper, what matters for market power is the ability to restrict market output. What counts for illuminating measurement of concentration and thus incisive assessment of that ability is the actual and potential supply capabilities of competing firms. This is more a matter of "capacity" than it is of "output."

Hayes' analysis of concentration is based on neither capacity nor output. It is instead based on survey data regarding the distribution of customers among suppliers gathered by the National Families Organization ("NFO"), a marketing research firm. There may be a relationship between customers and output rates, but that relationship is not necessarily a tight one, and even less so is the relationship between number of customers and potential output rates.

It is unclear from the information supplied whether these NFO data are based on a *random sample* of customers. The sample is simply characterized as "nationally

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4 *Ibid.*

5 *Ibid.* (emphasis added).

6 *Ibid.*

7 As Professor Landes and Judge Posner observe (at 947) in their *Harvard Law Review* article on "Market Power in Antitrust Cases" that we cited in our earlier submission:

> *Market Share Alone Is Misleading.*— Although the formulation of the Lerner index... provides an economic rationale for inferring market power from market share, it also suggests pitfalls in mechanically using market share data to measure market power. Since market share is only one of three factors... that determine market power, inferences of power from share alone can be misleading. In fact if market share alone is used to infer power, *[a] market share measure, which is determined without regard to market demand or supply elasticity ... will be the wrong measure.* The proper measure will attempt to capture the influence of market demand and supply elasticity on market power.

(first emphasis in original; second emphasis added).

representative."[8] If the data are not based on a random sample, and if the basis of sample selection is correlated with predisposition to respond in a particular manner, that may make it difficult to draw valid conclusions even about the distribution of customers by firm on the basis of the sample data.

In addition, as Hayes discloses, only 15 carriers are listed on the survey instrument and customers whose primary carrier is not listed are instructed to name their primary carrier. Suppliers of services that potentially compete are also not included. As Hayes acknowledges, this means that the shares of carriers not listed are likely to be underestimated. Hayes avers that, "despite the acknowledged limitations of these data, they provide reasonably accurate and useful measures of carrier's shares of mobile telephone customers."[9] He does not explain the basis of these "beliefs," nor does he explain why the distribution of customers among firms is germane to the economically relevant issue of ability to restrict market output.[10]

Nevertheless, Hayes finds that HHIs based on "customer shares" have been *steadily decreasing* and concludes that regional CMRS markets are "becoming increasingly competitive." Quite tellingly, Hayes specifically disavows his previously proffered conclusion about the efficacy of a spectrum cap and now acknowledges that:

> I would not draw the same conclusion today based on HHI data alone. I would instead need to conduct a more extensive analysis of the specific CMRS markets involved *in a particular merger or acquisition* before I could draw firm conclusions about the likely competitive effects of the transaction.[11]

His putative support for a spectrum cap is conspicuous by its absence.

Notwithstanding their economist's position, Sprint opposes immediate abolition of the spectrum cap. Yet, if abolition of the cap were to have the untoward consequences Sprint alleges (*e.g.*, reducing competition), Sprint would clearly be among the beneficiaries.

The notion that a cap should be maintained only until 3G auctions are completed and then immediately abolished is also a curious position for Sprint (as a major holder of 2G spectrum) to be taking. There is, however, at least one explanation for

[8] It is easy to conceive of circumstances in which a "nationally representative" sample could produce biased results relative to the actual distribution of customers among carriers.

[9] *Op. cit.*, at 3.

[10] Hayes characterizes customer shares and corresponding HHIs as an "informative complement" to spectrum-based measures on the grounds that the FCC has previously cited them, and that supply increases may take time and thus not be timely in terms of exerting competitive discipline. It is not clear why the latter argument makes subscribers a good measure of output.

[11] *Op. cit.*, at 5 (emphasis added).

Sprint's proposal. By restricting all of the major players from bidding on 3G spectrum, Sprint's plan would preclude any of its competitors (including those who may be more efficient and/or have "deeper pockets") from getting much larger. By subsequently removing the cap completely, Sprint's proposal would serve to increase the value of *all* CMRS spectrum and thereby enhance *its own* value as an acquisition target. In effect, the "real auction" could then occur for Sprint's spectrum. Such an outcome may be in the interest of Sprint's shareholders, but is at odds with promotion of effective competition.

3. CRAMTON

3.1. COMPETITIVE EFFECTS

Cramton begins by arguing that "the Commission should err on the side of *too* stringent a cap."[12] Cramton does not, however, analyze the comparative losses associated with decision errors under more or less stringent caps. He is thus in no position to opine about how the Commission "should err." In the absence of asymmetries in the loss function associated with decision errors under different rule regimes, there is no economic basis for adopting a bias in the Commission's rules.[13] In our view, the Commission should *not* err, but rather should attempt, in formulating policy, to balance conflicting considerations and optimize the relevant economic tradeoffs to maximize economic welfare. A cap prejudges the issue of tradeoffs and resolves the issue of tradeoffs by ignoring them. For that reason, its operation is likely to harm economic welfare. If the Commission nevertheless decides to have a cap, it should neither be too stringent nor too lenient.

In our earlier submission, we argued that competition is an *impersonal* process that supplies a means for discovery of efficient suppliers and services. Cramton's view, in contrast, is apparently that the *specific identities* of competitors not only matter, but matter with a vengeance. Thus, the increasingly good performance of the communications sector is, in his view, less a matter of a huge increase in supply capabilities,[14]

[12] *Op. cit.*, at 4 (emphasis added).

[13] Under too stringent a governmental drug approval system, few people will be hurt by ingestion of harmful medicines, but many people may be hurt by the unavailability of efficacious medications. Unless there is reason to think that losses from the former are greater than losses from the latter, there is no basis for advocating that the government's approval system "should err on the side of *too* stringent" a screen. The benefits of excessive stringency are less than the associated harms.

[14] This has entailed obviously the synthesis, deployment, management and coordination of a huge quantity of sophisticated resources by a variety of firms.

than it is simply the presence (or absence) of Leap or a Leap-like operation in any particular geographic region.

On the one hand, if this were so, it would imply that there are no competitive issues worth worrying about. If a small operator like Leap has the effects Cramton attributes to it, it evidently does not take much to marshal an effective competitive constraint. On the other hand, there is little basis on the evidence presented by Cramton to put so much emphasis on Leap. Before one concludes that "the tail is, indeed, wagging the dog," it is worth considering that, since 1984, more than $121 billion ($431 per Pop) has been invested in wireless networks[15] and that Leap is a comparatively small "niche" player with a modest subscribership even among the circumscribed population it addresses.

We note that, in analyzing wireless price reductions, Cramton fails to provide evidence regarding price reductions in markets not served by Leap. And he does not consider other factors (including large increases in supply and realization of size economies) that might (more) plausibly account for price reductions. Cramton's logic is that prices fell where Leap entered, therefore, it must have been Leap that was the cause. If we told you the Ravens won the Super Bowl because their third-string quarterback suited up for every game and looked great in his uniform, we doubt you would be persuaded. We observe that significant price reductions occurred in virtually all markets by amounts comparable to the charges cited by Cramton in the Leap markets.[16] Moreover, price reductions of comparable magnitudes also occurred in the pre-Leap period.[17]

Entering firms frequently adopt promotional pricing schemes as a means of attracting attention and gaining entrée with customers. Promotional pricing is certainly a benefit of competition, but whether such pricing persists on a continuing basis is a different matter. Leap's ability to offer unlimited minutes at the prices they quote may be contingent upon not too many customers signing up— if too many customers take them up on the deal, they may not be able to meet demand at the quoted prices. More importantly, we note (as Cramton has not) that Leap's offering does not include roaming and that the charges for long-distance calling are *15 cents* per minute. Leap is reportedly also planning "to push content" on callers during the

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[15] Estimated U.S. wireless industry capital expenditures for the period 1984-2001. Source: Raymond James, *Telecommunications Services Industry Brief* (April 17, 2001).

[16] Cramton found that the price decline for the 1,000-minute local wireless plan in Leap markets fell by 37 percent over the period Q4 1998 to Q1 2001 (*op. cit.*, at 11). The reported effective rate per minute of use ("MOU") for *all* markets fell by 27 percent between 1998 (yearly average) and 1999 (yearly average) alone, and by 41 percent between 1998 (yearly average) and January-June 2000 (six-month average) alone. (Data source: CTIA. Effective rate per MOU derived from total service revenue divided by total MOU.)

[17] The effective rate per MOU fell 26 percent during the period 1995 (yearly average) to 1998 (yearly average).

call setup delay. This type of offering may meet some customers' requirements, but is of limited competitive import to customers seeking a different mix of service attributes (*viz.*, reasonably priced long-distance as well as local calling, good roaming capabilities and a "content-free" service offering).

According to Cramton, "removal of the cap would *eliminate* Leap's chances of obtaining spectrum in the secondary spectrum market,"[18] notwithstanding Leap's utilization of low-cost technology and the ostensible advantage this would afford it in a bidding competition. There is no economic basis that warrants bestowing windfall gains on Leap in the form of access to input resources at below-market values. If Leap is unable to compete effectively for resources— and we think Cramton is engaging in hyperbole when he makes this insupportable assertion— that is a signal about its competitive effectiveness, not the market's competitiveness. Leap's putative inability to compete successfully for resources would supply a measure of just how competitive the market is rather than is not.

3.2. AUCTION CONSIDERATIONS

According to Cramton, "the spectrum cap is the only suitable response to excessive concentration in an ascending auction."[19] As a starting point, Cramton *assumes* that concentration is a problem, an assumption that is economically unwarranted, and ignores the existence of other potential remedies, including eligibility restrictions. A spectrum cap might be characterized as an eligibility restriction simply under a different name. But eligibility restrictions are a more honest way of framing what is actually being undertaken, and, at least, forthrightly raise issues regarding unwarranted/uneconomic/illegal discrimination and untoward effects on the efficacy of auctions as a method of assigning licenses.

If one starts out knowing who *should* or *should not* be licensed, there is obviously less for an auction to accomplish. The auction is not needed to discover who is willing to back an efficiency claim with dollars and, thus, whose efficiency claim is most credible. If one is interested in minimizing the amount one must vest to stake an efficiency claim and *not* interested in maximizing auction take, consistent with promotion of effective competition, then advocacy of eligibility restrictions possesses obvious attractions.

The Commission has previously adopted eligibility restrictions to exclude certain potential competitors from competing for particular operating rights. A case can be made out for such restrictions (indeed, that is what Cramton has attempted): A

[18] *Op. cit.*, at 4 (emphasis added).

[19] *Op. cit.*, at 19-20.

monopolist may, for illustration, be able to preempt competition by acquiring certain operating rights and, thus, possess both the incentive and ability to win an action. The problem with this case is that its factual premises are rarely satisfied and certainly cannot be accurately claimed to characterize either today's or the prospective future economic operating environment. The special circumstances that might warrant restraints are absent.

When the premises are not satisfied but restrictions are nevertheless advocated, the advocacy looks much more like transparent "rent seeking" than competitive advocacy. There *are* limited circumstances where such restrictions could, in theory, yield higher revenues, but, more generally speaking, the effect of excluding bidders, especially those whose scale and scope of operations and business acumen portends likely competitive effectiveness, will be simply to reduce bid prices and auction take. That may redound to the benefit of those who are not excluded, which may account for their advocacy of suppression of competition, but promotes neither efficient resource allocation nor realization of true value for the public fisc.

Cramton also raises the specter of competition for spectrum inputs raising rivals' costs— if competition for resources could be suppressed, incumbent carriers would allegedly be less able to "warehouse" spectrum.[20] Again, the issue is whether this alleged threat is genuine or merely a technique being marshaled to limit competition for resources, to afford protection from more effective competition, and to lower costs of resource acquisition. The would-be "warehouser" is required to sink a substantial investment and leave acquired resources fallow (notwithstanding governmental oversight and the activities of other competitors in what is decidedly *not* a "monopoly" environment) on the bet that prices will not fall as rapidly as they otherwise would— indeed, sufficiently slowly to make sinking a sizable investment worthwhile in the first place. The relevant policy question is not one of *possibility* but of *plausibility* and *likelihood*.

To be weighed against what we would assess to be minimal risks of this type of failure are adverse consequences that flow directly from suppression of effective competition for acquisition of resources. Primary among these consequences is the less efficient allocation of scarce spectrum resources. The Commission can certainly, if it so wishes, "purchase" a more "aesthetic" distribution of resource ownership and bestow windfall gains on lucky licensees by restraining the ability of some competitors to compete, but only at a cost in terms of competitive effectiveness in the delivery of services to the public. "Special favors" and "industrial planning" have costs. There is a certain irony in Cramton's reliance on what are "special-case"

[20] *Op. cit.*, at 24-25.

arguments for restrictions on competition given his balking at arguments about the potentially broader economic impacts of the spectrum cap.

3.3. BROADER ECONOMIC IMPACTS

According to Cramton, "most economists would scoff" at the argument that the spectrum cap threatens U.S. national interests *vis-à-vis* the rest of the world.[21] Not necessarily. Indeed, commentators in the "strategic trade theory" school have argued that government trade *restriction* can advance national economic welfare given large enough economies of scale and related network effects.[22] In particular, they argue that firms alone may not be able to achieve as beneficial a division of industry profits as firms acting in concert with their government. The "strategic trade theory" school, in fact, has a fairly distinguished intellectual pedigree in the economics profession, among whose principal exponents have numbered former Chairman of the President's Council of Economic Advisers Laura Tyson, currently Dean of the Graduate Business School at Berkeley, and MIT Professor of Economics Paul Krugman, the current economics op-ed page editorialist of *The New York Times*.[23]

One of us has examined the merits of this argument at (book) length.[24] Our conclusion is that the argument is a valid one given its premises, but that its premises are open to question.[25] Moreover, a strategically motivated trade policy, even where plausibly undertaken, may be difficult to implement and subject to a variety of pitfalls.

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[21] *Op. cit.*, at 6, 27-28. CTIA's Tom Wheeler has been a leading exponent of the importance of economically rational spectrum management as a means of promoting economic growth and competitiveness, and he principally draws Cramton's fire.

[22] *See*, e.g., James A. Brander and Barbara J. Spencer, "International R&D Rivalry and Industrial Strategy," *Review of Economic Studies* (1983) and "Tariff Protection and Imperfect Competition," in Kierzkowski, *op.cit.*

[23] *See*, e.g., Tyson, *Who's Bashing Whom?: Trade Conflict in High-Technology Industries* (Institute for International Economics 1993); and Krugman, "Import Protection as Export Promotion," in *Monopolistic Competition and International Trade* (H. Kierzkowski ed., Clarendon Press, 1984).

[24] *See* Ronald A. Cass and John Haring, *International Trade in Telecommunications* (AEI/MIT Press: 1998), Chapter 7. Our conclusions are quite similar to those latterly expressed by Krugman. *See*, for example, *Pop Internationalism* (MIT Press, 1997). Krugman apparently underwent a "Robert Oppenheimer-like" experience and, having invented a powerful and seductive rationale for market intervention, later became concerned that it was being used to undermine the more generally applicable case for free trade. Again, we are struck by the irony of Cramton's recruiting "special-case" arguments, but blanching when they present contrary implications.

[25] In particular, insofar as economies of scale result from learning effects, the argument for trade protection rests on a questionable assumption: that protection does not induce slack. That flies in the face of common experience; in general, firms protected from competition exhibit less zeal for increased efficiencies. *See* Jagdish Bahgwati, *Protectionism* (MIT Press, 1988).

It is important to note that these discussions primarily focus on the efficacy of government actions to *restrain* trade in order to promote strategic objectives. As we have elsewhere, in a different context, argued:

> It strikes us that there is a difference in kind between advocacy of imposition of restraints on commercial freedom and advocacy of relaxation of restraints on commercial freedom as means to internalize positive trade externalities to a greater extent. Consider the "moral hazard" problem [*viz.*, protection produces sloth]: Imposition of restraints may not lead to effective internalization if suppliers become less efficient when afforded protection from foreign competition. In contrast, to the extent export controls are binding constraints, their relaxation can be expected to result in realization of internalization objectives as firms pursue their commercial interests and expand output. There is, for this and other reasons and apart from important considerations of economic freedom, likely to be a significant difference in the instrumental utility of the two approaches in internalizing positive external effects.[26]

Wherever one comes down on the question of whether the United States' economic position *vis-à-vis* the rest of the world would be much affected by removal of the spectrum cap, the question we would pose in relation to the cap is: Why go out of your way to prevent potentially good things from happening?[27]

Before one "scoffs" at the idea that any of this "matters," it is worth considering the mounting evidence that, in recent years, the measured "structural" economic productivity of the U.S. economy has accelerated, and that the widespread adoption of information and communications technology has accounted for more than two-thirds of this increase.[28] While these technical capabilities are globally available, productivity growth has not accelerated in most countries, including many advanced

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[26] *See* Ronald A. Cass and John Haring, *Export Controls, Technology Transfer Regulation and the U.S. Space Industrial Base*, prepared for the U.S. Department of Defense's Space Industrial Base Study, Office of the Undersecretary of Defense for Acquisition, Technology and Logistics (February 29, 2000).

[27] That is hardly the same question as whether one should take affirmative steps *to restrain* trade as a means to internalize economies— a much more questionable proposition.

[28] *See* Alan Greenspan, "Business Data Analysis," remarks before the New York Association for Business Economics, New York, New York (June 13, 2000); and "Structural Change in the New Economy," remarks before the National Governors' Association, 92nd Annual Meeting, State College, Pennsylvania (July 13, 2000). Greenspan's remarks are based primarily on Stephen Oliner and Daniel Sichel, "The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?," *Journal of Economic Perspectives* vol. 14, 4:2000, at 3-22. *See also* Arturo Briceño, John Haring, Jeffrey H. Rohlfs and Harry M. Shooshan III, *The Internet and the New Economy*, March 29, 2001.

industrial economies.[29] The explanation appears to lie in differences among countries in terms of their "economy's structure, institutions, and regulations [that] influence the rapidity with which technological advances are adopted and the extent to which adoption of these advances leads to heightened efficiency."[30]

The ability to sustain high rates of productivity growth depends on the ability to exploit, continually, the new opportunities advances in technology and technical know-how afford. In information and communications technology, today's technology margin involves Internet applications and the development of new broadband wireless services and related components. There is a widespread view that the U.S. is lagging Europe and Japan when it comes to development and innovation of these types of services and associated technical gear, and that this lag is due, in part, to spectrum-related constraints derived from, *inter alia*, differences in government policies.[31] For the reasons we offered in our initial comments (*viz.*, barriers to sufficient bandwidth aggregations), we think the Commission's spectrum cap operates as a barrier to development of what appear to be plausibly likely productivity-enhancing wireless innovations.

Can other nations "steal a march" on the U.S. in economic terms given the reality of "global" technology and competition? If we can steal a march on them— as we apparently have if recent productivity measurements are to be believed— then presumably they can conceivably steal a march on us in the future. This is not a matter of "us versus them" or "zero-sum competition," but of "shooting ourselves in the foot." Cramton is arguing that "our competitive position *vis-à-vis* the world wireless market" does not provide a reason *not* to shoot ourselves in the foot.[32]

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[29] Thus, in a recent review of productivity trends in foreign industrial countries, Christopher Gust and Jaime Marques of the Federal Reserve Boards' Division of International Finance find that, with few exceptions, "[l]abor productivity in foreign countries does not appear to have accelerated in the latter half of the 1990s." *See* "Productivity Developments Abroad," *Federal Reserve Bulletin* (October 2000), at 655. They report that labor productivity growth in the U.S. was higher than that in foreign G-7 countries. Of the 16 countries for which specific results are reported, only Australia, Finland, Ireland and Switzerland had a higher rate of productivity growth than the U.S. during the 1996-1998 period. *Ibid.*, at 670-674. Productivity growth depends on both capital deepening and growth of multifactor productivity. In the U.S., capital deepening rose in the latter half of the 1990s compared to the previous 15-year period, whereas capital deepening in most foreign economies slowed in 1996-1998 compared with 1981-1995. Results for multifactor productivity growth are similar: In the U.S., multifactor productivity almost doubled in the latter half of the 1990s compared to the earlier period, whereas, the foreign G-7 countries, with the exception of Canada, experienced slowing multifactor productivity growth in the latter half of the 1990s compared to the earlier period.

[30] *Ibid.*, at 665.

[31] U.S. Department of Commerce, NTIA, "'Wireless' Internet: What the 3G Challenge Means for U.S. Competitiveness" (downloaded from www.ntia.doc.gov/ntiahome/threeg).

[32] In fairness, Cramton, of course, does not view the spectrum cap as equivalent to shooting ourselves in the foot.

4. SCHWARTZ AND GALE

As we noted in our White Paper, the competition policy that applies to most of the economy is one that puts the burden on the government to explain why otherwise voluntary transactions (among adults) should not be permitted. Under the FCC's spectrum cap regime with the potential for waivers in specific cases, this burden is precisely reversed and it is up to would-be transacting parties to explain why their otherwise voluntary exchanges should be permitted. The essence of a "free economy" is one where economic freedom is fostered as a means of promoting economic welfare and a free society— not one where permission is required from the government.

Those in favor of retaining an ownership cap argue that it prevents bad things from happening, but they fail to acknowledge that it may also prevent good things from happening. The *normal* presumption, at least in what purports to be a "free economy," is that constraints on economic freedom are *harmful* in the absence of a showing to the contrary. The normal presumption is that good things will happen in the absence of constraints, and the burden is to demonstrate why realization of gains from those good things happening should be thwarted.

As Schwartz and Gale (and we) have argued, there simply is no economic rationale for a different presumption (*i.e.*, a different "burden-of-proof" assignment) in the case of spectrum resources. As they note:

> The burden of proof should *not* be on parties to prove that the cap is foreclosing some efficient transactions; rather, the presumption should be that any artificial constraint can deny flexibility and therefore may inflict economic harm.[33]

There *should* be a presumption and there is, in any event, ample economic evidence that the spectrum cap prevents realization of economies of scale and scope in the provision of telecommunications services and operates, increasingly, to inhibit innovation. At the same time, there is little evidence indicating the actual existence of any competitive market failures.

In the latter regard, we have previously remarked upon the analytical and empirical shortcomings of Hayes' measure of concentration based on "customer shares"— many of them preemptively admitted by Hayes. As noted, while he finds declining shares and increasing competition, he nevertheless observes that "the HHI in most of the largest markets remains above the level that the Merger Guidelines identify as

[33] *Op. cit.*, at 3.

'highly concentrated.'"[34] Schwartz and Gale, in contrast, find that concentration in local markets (based on spectrum shares) is relatively modest and at levels that would not automatically trigger an antitrust challenge to proposed consolidations of ownership.[35]

Schwartz and Gale report that concentration is somewhat higher when shares are measured on the basis of spectrum currently used to provide service as opposed to allocated spectrum.[36] This measurement difference nicely illustrates our argument that output measures are likely to understate the capacity of competing firms to offset any attempt to restrict market output and, thus, the actual degree of market competitiveness. Schwartz and Gale's higher numbers likely overstate the ability to restrict output (or a market's susceptibility to output restriction) for, as their lower numbers indicate, potential supply capabilities are typically more widely dispersed than spectrum currently utilized.[37]

5. OTHER PARTIES

In this section, we address some of the principal "economic" arguments advanced by other parties who would retain the spectrum cap. These parties are: WorldCom, Telephone and Data Systems ("TDS"), the National Telephone Cooperative ("NTCA") and UTStarcom.

5.1. WORLDCOM

WorldCom is a nationwide reseller of Commercial Mobile Radio Service ("CMRS"). In its comments, WorldCom warns of the "ominous signs of consolidation" and suggests that removal (or even relaxation) of the existing spectrum cap would threaten competition.[38]

[34] *Op. cit.*, at 5.

[35] *Op. cit.*, at 23.

[36] HHIs reportedly range from 1263 to 1641 based on allocated spectrum and from 1705 to 2050 based on spectrum currently used to provide service.

[37] All of these measures are approximations as spectrum is but one, albeit an important, productive input. Moreover, as we argued in our earlier submission, more expansive definition of relevant market boundaries that takes into account the potential for supply additions from other spectrum resources implies lower levels of concentration and higher levels of market competitiveness. The instant observations (whether of inputs, outputs, or customers) should thus be regarded as conservative measures that likely overstate relevant concentration and understate competitiveness. Even on these conservative measures, there is no basis for presuming a competitive failure that warrants maintenance of an (arbitrary) ownership cap.

[38] WorldCom at 6.

On the one hand, it acknowledges that a prime reason for the consolidation that it finds so ominous and threatening is the desire of carriers to establish, or fill holes in, a national footprint (*i.e.*, to achieve economies of larger scale operations). WorldCom states it well when it says that "to be fully competitive in today's wireless marketplace, a carrier must have a national footprint" and notes that there are "four to six existing national carriers."[39] Yet, WorldCom mischaracterizes this requirement as a "barrier to entry for new carriers."[40] While conceding the benefits of spectrum license aggregation, WorldCom's complaint is that spectrum allocations allow the operation of "only" a limited number of effective competitors. It is precisely the balancing of this type of tradeoff that is the essence of conventional antitrust enforcement.

WorldCom is also the second largest firm in a market (long distance) that is significantly more concentrated than the CMRS market.[41] Indeed, concerns about undue concentration in long-distance telecommunications prompted the Justice Department to file suit to block WorldCom's merger with Sprint, causing the parties to call off their proposed deal.[42] And Justice did so in the face of arguments advanced by WorldCom that telecommunications was all "one big market" in which their ability to exploit economies of scale and scope was critical to competitive effectiveness.

This brings us to our rejoinder to WorldCom's argument that the spectrum cap should be retained to guard against consolidation that might threaten competition. As we argued in our White Paper, there is no reason to expect that the Justice Department will not "know undue concentration when it sees it." It did so in the context of the WorldCom/Sprint merger, and, presumably, it can do so when faced with a specific merger or acquisition involving wireless carriers.

5.2. TDS

TDS escalates the rhetorical attack on " 'national' carriers" by asserting that "as with *all large and powerful companies*" their very existence "creates the possibility of anti-competitive abuses."[43] TDS extols the virtues of "local competition" and argues that

[39] *Ibid.*

[40] *Ibid.* Having to produce a competitively effective offering does not constitute a barrier to entry in economic terms; barriers prevent effective resource deployment. Thus, government regulations that inhibit competitively effective regulations of spectrum would constitute a (legal) barrier.

[41] As the FCC states in "Statistics of the Long Distance Telecommunications Industry" (January 2001), the HHI indices for the long-distance industry "remain high based on the standards used by the Department of Justice... " p. 15.

[42] Associated Press Newswires, "Sprint, WorldCom agree to call off merger"" (July 13, 2000).

[43] TDS at 6 (emphasis added).

small carriers benefit from having a large number of competing wireless providers in any given local market through the increased leverage it gives such carriers to negotiate more favorable roaming charges.

We note that one of the drivers for carriers in acquiring a national footprint is to eliminate roaming charges (internalizing the costs of roaming) and thereby facilitate the offering of various forms of "One Rate" or "Single Rate" plans that have helped bring prices down, made life easier for consumers and stimulated wireless usage. TDS's argument is essentially that the FCC should preclude integration by acquisition and incorporation in favor of integration by contract. We see no basis in economic theory for limiting or proscribing the means by which firms achieve productive efficiencies.[44]

TDS, which itself maintains high roaming charges to other wireless carriers, would not appear especially well-positioned to predicate its comments on alleged concerns about excessive roaming charges. TDS is at least consistent in one respect. The TDS Telecom wireline companies charge over six times as much for switched access services as do larger LECs.[45]

5.3. NTCA

NTCA opposes the "unconditional lifting or raising of the spectrum cap" on the grounds that "further consolidation (will) diminish the opportunities for smaller entities to provide broadband CMRS service."[46] NTCA suggests that the FCC couple any relaxation or removal of the cap with a build-out requirement and with what amounts to a "use it or lose it" rule (*i.e.*, requiring partitioning or disaggregation).

At base, NTCA's problems are with the FCC's auction rules and process which, in its view, have deprived its members of access to spectrum. It asserts that the small telcos which it represents somehow have greater economic incentives to build out wireless networks or expand wireless service offerings in rural areas. This is not

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[44] This is the same argument that was made for years by Hollywood producers against network ownership of full program rights and in support of the so-called "fin/syn" rules. These rules were (in our view) wisely repealed by the FCC when the Commission came to understand that they were actually limiting rather than expanding competition. *See*, for example, John Haring and Harry M. Shooshan III, *How the Financial Interest and Syndication Rules Restrict the Growth of New Broadcast Networks*, prepared for submission before the FCC on behalf of Fox Broadcasting, *In the Matter of Amendment of 47 C.F.R. § 73.658(j)(1)(i) and (ii), the Syndication and Financial Interest Rules*, BC Docket No. 82-345, March 5, 1990.

[45] NECA companies charge 8.6 cents per conversation minute for switched access services as compared to, for example, 1.3 cents for BellSouth and 1.4 cents for SBC. *See* FCC's "Trends in Telephone Service (December 21, 2000) at Table 1.4.

[46] NTCA at 7.

obvious on its face. Auction winners have every incentive to use the spectrum they have bought efficiently and build out their systems where it makes economic sense to do so.

The crux of NTCA's argument is that the FCC should link the lifting of the spectrum caps to redressing what NTCA's members perceive as a failure of the spectrum auctions themselves— principally that the FCC failed to define the service markets narrowly enough and thus priced them out of the market. NTCA's remedy is to force those who played by the rules and paid the highest prices for the spectrum to divest themselves of "unused" spectrum in order to make a secondary market in which NTCA's members might be more successful.

We fail to see the equity in this approach. Nor do we agree with the basic premise of NTCA's argument— that broadband wireless networks and services will be deployed more rapidly in rural areas by smaller enterprises. To the contrary, as we emphasized in our White Paper, rapid and ubiquitous 3G deployment in the United States depends on the large carriers who can take advantage of economies of scale and scope. In turn, it depends upon those carriers having access to the spectrum that is needed to support the new applications.

5.4. UTSTARCOM

UTStarcom argues that lifting the cap will result in all manner of bad things— consolidation, "squandering" bandwidth, "warehousing" spectrum and eliminating the entry of new small local carriers.

We are struck by the complete absence of any evidence (*i.e.*, hard facts or economic analysis) in UTStarcom's pleading. For example, they present nothing to back up their contentions about "squandering" and "warehousing." We agree with their basic point that small enterprises can be— and indeed are— innovators. Moreover, it is not at all clear how lifting the spectrum caps will adversely affect their ability to offer their service, especially when there is additional spectrum that is— or can be made— available for uses such as their "Mobile Local Loop" product— especially in small towns or rural areas. In short, the linkage between the harms they foresee and removal of the spectrum cap is by no means apparent in much the same way as it strains credulity to maintain that all the good things that have happened in the development of the wireless market are somehow attributable to the cap.