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CTIA
Building The Wireless Future
Cellular Telecommunications Industry Association

Michael F. Altschul
Vice President/General Counsel

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FEDERAL COMMUNICATIONS COMMISSION
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By Hand

May 5, 1999

Ms. Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
The Portals
445 Twelfth Street, S.W.
12th Street Lobby, TW-A325
Washington, D.C. 20024

Re: Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102.

Dear Ms. Salas:

On behalf of the Cellular Telecommunications Industry Association ("CTIA"), this letter addresses an important issue presently before the Commission in this docket, namely, a proposed amendment to the Commission's rules to require CMRS handsets operating in the analog mode to scan both cellular systems when the digits "9-1-1" are dialed.

When first proposed by the former "Ad Hoc Alliance" (subsequently incorporated as the "Wireless Consumers Alliance", and referred to herein as the "Alliance"), the Alliance described its proposed rule change as the "strongest signal" proposal. In the past year, the Alliance has proposed two variations on its "strongest signal" proposal, "Strongest/Adequate Signal", and "Strongest/Adequate Signal with adjustable threshold". Regardless of its name, the "strongest signal" proposal and its progeny describe a process for placing emergency calls that is covered by a patent held by Mr. Robert Zicker. Mr. Zicker has indicated that cellular handset manufacturers would be required to purchase a license from him to use the "strongest signal" technology.[1]

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1 Letter from Robert Zicker to George Shaginaw, CTIA (Nov. 10, 1998) (filed with the Commission on Nov. 19, 1998); *see also,* Letter from Brian F. Fontes, CTIA, to Chairman William Kennard, (Nov. 12, 1998) (analysis of the Zicker Patent).

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List A B C D E

From the outset (long before it learned of the Zicker patent), CTIA has opposed the "strongest signal" proposal (and its progeny) for the simple reason that its adoption would lead to less reliable emergency communications. As CTIA, along with public safety and virtually all other commenters, has stated throughout this proceeding, the unintended consequences of the patented "strongest signal" approach, which selects a carrier for wireless E 9-1-1 calls based solely on the relative signal strength of the forward control channel, is more likely to interfere with successful call completion than enhance it. This is because the relative signal strength of the forward control channel of an analog cellular system (which is the "strongest signal" proposal's sole criteria for selecting a carrier) does not consider whether a voice channel is available to complete the emergency call, or monitor the call set-up and completion, but rather is likely to place all emergency calls on a single system, increasing the likelihood of blockage.

The patented "strongest signal" proposal is based on the unproven premise that the strength of the forward control channel should be used to measure the quality of the voice communication. It is proposed as a solution for a single problem: poorly tuned cellular systems where the range of the forward control channel extends beyond the range of a handheld portable handset to establish reliable communications. CTIA believes that the Commission has addressed this particular problem through its licensing of broadband PCS and ESMR carriers. A poorly tuned cellular system will not complete customers' calls. Period. Both revenue producing and 9-1-1 wireless calls are subject to the same laws of physics. The competitive CMRS marketplace, with the overwhelming predominance of handheld wireless phones, simply will not tolerate wireless carrier networks that do not reliably complete calls.[2]

Unfortunately, not all wireless calls will be completed. While proper tuning of the forward control signal is within a carrier's control, other factors are not. These factors include the absence of antenna sites due to local zoning opposition that result in dead-zones in all carriers' systems, such as in Rock Creek Park; transitory obstacles to line of site communications, such as a moving vehicle passing in front of a building as call set-up is being completed; and congestion, caused when all available voice channels are in use. These factors are critical to successful call completion, and independent of the relative strength of a cellular carrier's forward control channel.

Recognizing the importance of every emergency call, CTIA, working with the public safety community and the wireless industry experts on call completion, asked the Telecommunications Industry Association's TR-45 Engineering Committee to review <u>all</u> approaches (including the "strongest signal" proposal) to enhancing the likelihood that an

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2 It is apparent that poor system tuning is not the problem the Alliance alleges it to be. As described in the attachment to this letter, in over three and one half years of advocacy, the Alliance has been unable to provide even a single real-world example where "strongest signal" technology would have facilitated completion of a wireless 9-1-1 call.

emergency call will go through. In response, TIA recommended adoption of "Automatic A/B Roaming" for 9-1-1 calls. "Automatic A/B Roaming" is invoked only when an emergency call fails to go through to the preferred carrier. The TIA's "Automatic A/B Roaming" proposal offers a real solution for failed call attempts by ensuring that the handset continues to scan all channels until a voice connection is made between the caller and emergency services. CTIA endorses "Automatic A/B Roaming" because it addresses emergency call attempts that actually fail, for whatever reason, in contrast to the "strongest signal" proposal which makes a predictive decision on the narrowest of bases: a comparison of control channel strength without regard to voice channel availability or actual call completion.

As the Commission is very much aware, through a series of *ex parte* submissions, the Alliance repeatedly has exercised its prerogative as the proponent of an important rule change to revise its "strongest signal" proposal and interject new claims into the record. The Commission should not permit these claims to distract it from its work of adopting policies and rules that will best enhance wireless 9-1-1 call completion. The Alliance raises serious charges that simply are not supported by the facts, by its own citations, or by common sense. To assist the Commission, I have attached to this letter CTIA's responses to these assertions.

The wireless industry wants every call to go through, and supports the Commission's efforts to enhance emergency call completion. That is why CTIA endorsed the TIA's "Automatic A/B Roaming" proposal.[3] However, as the Alliance's own confusion over the internal operation of the Audiovox Model 405 demonstrates, in crafting rules, the Commission should avoid describing specific call processing techniques that are susceptible to disputes over the utilization of a specific technology. In addition, specific solutions risk freezing technology and prevent the deployment of enhanced solutions. The better course is to adopt a generic functional requirement that

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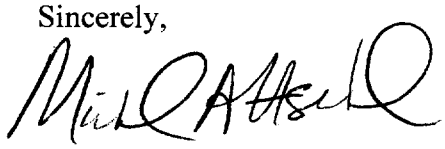
[3] In falsely claiming that the Audiovox Model 405 telephone employed the "strongest signal" technology, the Alliance mistakenly endorsed TIA's "Automatic A/B roaming" approach. See the attached April 30, 1999 Letter from Jim Papadopoulos, Audiovox Vice President, Engineering, to Mr. Timothy Jeffries, Manager of CTIA's Certification Program.

The Alliance's case of mistaken identity is the best evidence that even its own experts did not detect any noticeable delay in completing emergency calls using "Automatic A/B roaming." The simple fact that the Alliance itself confused the functional operation of the Audiovox Model 405 with its patented "strongest signal" technology rebuts all of its hypothetical arguments alleging the superiority of "strongest signal" technology in call set-up time and robustness.

broadly describes the criteria for the operation of a handset if a wireless 9-1-1 emergency call is not completed. CTIA proposed such a rule in its March 2, 1999 *ex parte* submission in this proceeding, and urges the Commission to adopt its proposal.

Sincerely,



Michael Altschul

cc: Chairman Kennard
Commissioner Furchtgott-Roth
Commissioner Ness
Commissioner Powell
Commissioner Tristani

Mr. Ari Fitzgerald
Mr. Paul Misner
Mr. Dan Conners
Mr. Peter Tenhula
Ms. Karen Gulick

Mr. Thomas Sugrue
Mr. Jim Schlichting
Mr. Dan Grosh

There Is No Factual Predicate to Support the "Strongest Signal" Proposal

On October 7, 1998, CTIA filed comments responding to the Commission's request for additional comment on the strongest and adequate signal proposals. These comments made clear that the record in this proceeding does not meet the legally established standard that is required to support a change in the Commission's rules.[1]

The Legal Standard

Legal precedent places the burden upon the proponent of a new government requirement to prove that such regulation is necessary.[2] The D.C. Circuit has held that "regulation perfectly reasonable and appropriate in the face of a given problem may be highly capricious if that problem does not exist."[3]

CTIA estimates that there are more than 98,000 wireless calls to 9-1-1 every day, or almost 36 million calls a year. In its February 9, 1999 *ex parte* submission, the Alliance alleges that at least 1,882,631 wireless 9-1-1 calls a year are not completed due to "lock in", their term for a poorly tuned cellular system where the range of the forward control channel extends beyond the range of a handheld portable handset to establish reliable communications.[4] According to the Alliance, "[l]ock-in occurs when no voice communication is possible and the handset will not switch to the other side ...."[5]

Despite its claim that there are millions of emergency wireless calls a year that are not completed due to "lock in", the Alliance has identified only three (3) cases where it alleges that the patented "strongest signal" technology would have prevented harm. Each of these examples involves a genuine human tragedy, and CTIA in no way seeks to diminish the loss associated with each example. Yet when reviewed in terms of the "strongest signal" and "lock-in" issues that lie at the heart of this proceeding, as tragic as these stories are, not one of them demonstrates that the "lock in" problem was a factor.

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1 Revision of the Commission's Rules to Ensure Compatibility with E9-1-1 Emergency Calling Systems, CC Docket No. 94-102, Comments of CTIA at 12-15 (filed Oct. 7, 1998).

2 In a July 17, 1998 *ex parte* presentation in this proceeding, TruePosition, Inc. enclosed a twelve page legal analysis of the strongest signal proposal prepared by Willkie Farr & Gallagher which explains in detail this legal requirement.

3 Home Box Office, Inc. v. F.C.C., 567 F.2d 9, 36 (D.C. Cir. 1977).

4 Indeed, the Alliance claims that the number of uncompleted calls because of "Lock-in" is even higher, alleging that "Lock-in will occur approximately one-third of the time in suburban and rural areas." Alliance February 9, 1999 Ex Parte filing, at 3.

5 *Id*, at 2.

To the contrary, the first example involved a digital phone whose operating characteristics have never been examined in the context of this proceeding, and the other two examples involved completed wireless calls, proving that the Alliance's "lock in" problem was not a factor.

Review of the record establishes that none of these tragedies would have been prevented had the strongest signal technology been available. After more than three and a half years of advocacy, stripped of the Alliance's rhetoric and theory, the Commission has no evidence of an actual, real world problem that the "strongest signal" proposal would resolve. These facts bring to mind the D.C. Circuit's admonition that "regulation perfectly reasonable and appropriate in the face of a given problem may be highly capricious if that problem does not exist."

The Spielholz Case

Initially, the Alliance relied solely on this one incident as the basis for mandating strongest signal. The Alliance contends that deployment of its patented technology would have allowed Ms. Marcia Spielholz to avoid the injuries she suffered in a car chase in Los Angeles.[6] Since Ms. Spielholz survived the assault, and is known personally to many members of the Communications Bar, her claims deserve special consideration.

Ms. Marcia Spielholz was the victim of an assault following a car chase in Los Angeles, CA. Ms. Spielholz alleges in a lawsuit filed against her cellular carrier that she was unable to reach emergency assistance during the course of the car chase. This incident is subject to ongoing litigation and the relevant facts on the proximate cause of Ms. Spielholz's injuries are in dispute. The Commission has conducted no fact finding of its own, and has no basis to substitute its judgment for that of the court which will have a full record on which to render an opinion. However, there is a very important fact that is clear, since it was pled by Ms. Spielholz in her Complaint: Ms. Spielholz was using a digital cellular phone at the time of her assault.[7]

The "strongest signal" proposal only applies to phones operating in the analog mode. While the Alliance recently advised the Commission that its solution "is intended to incorporate all phones which are capable of operating in the analog mode, such as dual mode and trimode phones,"[8] there is nothing in the record that describes the operating logic and software features applicable to dual mode and tri-mode digital cellular phones.

Indeed, neither the Alliance nor the Commission staff has made the operation of digital wireless phones in their digital mode an issue in this proceeding, and there is no

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6 See Alliance Ex Parte filing, CC Docket No. 94-102 (February 3, 1998).

7 See Marcia Spielholz v. L.A. Cellular Telephone Co., Case No. SC039628, Complaint at ¶ 6 (Oct. 29, 1996).

8 See Alliance Ex Parte filing, CC Docket No. 94-102 (April 2, 1999), n.1.

evidence, and therefor no basis to assume, that Ms. Spielholz' phone was even operating in the analog mode. Moreover, there is nothing in the record to instruct the Commission as to how the various types of digital cellular phones scan various channels and bands, what is their "default" mode, and under what conditions they will switch from digital to analog modes and back again. The Alliance does not even specify if it believes that digital phones should first attempt to place emergency calls on digital channels if they are available, or immediately default to analog cellular and the "strongest signal" technology. Given the total lack of information concerning the operation of Ms. Spielholz' digital cellular phone, this example cannot serve as a predicate to support the "strongest signal" proposal.

Another problem with the Spielholz example is highlighted by the Alliance 's own expert Trott Report, dated August 19, 1998, which shows that signal strength is, in actuality, "high" in urban and close-in suburban areas.[9] Obviously, Los Angeles is such an area. The Alliance today concedes that the strongest signal technology is not geared towards cities. Thus, even if Ms. Spielholz was not using digital channels (i.e., her phone was in the analog mode) while driving through Los Angeles, the strongest signal technology, as modified by the Alliance's more recent "threshold" proposals, would have been of no benefit to her, and by extension, of no benefit to the support of the "strongest signal" proposal.

The Lechuga Family

The second tragic incident in the record involves the Lechuga family, whose vehicle left the road in a rural area causing the loss of life to everyone in the car. The Alliance alleges that someone in the car tried to call 9-1-1 several times from a handheld cellular phone, but that the call was never completed to emergency services. The call records associated with this incident, submitted by the Alliance into the record, demonstrate that the phone made six different calls, but not one of the calls was to "9-1-1".[10] Five of the six calls were to non-dialable numbers. The sixth call was completed to what appears to have been an erroneous area code.[11] By applying a

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9 See Alliance Ex Parte filing, CC Docket No. 94-102 (Sep. 17, 1998) ("In the core and close-in suburbs, the portable handset user will find fairly good signal available on the street." [T]he portable handset user is not disadvantaged in being able to access and use those [core urban and close in suburban] portions of the cellular network." Trott Report at 4, 2 (Aug. 19, 1998).

10 Since everyone in the Lechuga family perished, it is unclear on what basis the Alliance concludes that the family attempted, and failed, to call "9-1-1" due to "lock-in".

See Matea Gold, Misdialed 911 Thwarted Call for Help; Tragedy: The Day After Family's Truck Plunged Off a Snowy Cliff, Mother Mistakenly Dialed 1 First and Got a Recording Police Say, *Los Angeles Times* (Dec. 12, 1997) (Dolores Lechuga "misdialed the area code of her sister-in-law's phone number, but at least one of those calls connected her to a business in Georgia. She had a brief

minimal degree of scrutiny to the Alliance's claims, it becomes clear that the facts from this accident do not support adopting the "strongest signal" proposal for two reasons. First, the strongest signal mechanism is triggered when the caller dials 9-1-1. In this instance, the Commission has before it the actual call records, and "9-1-1" was never dialed by the Lechuga family. Second, strongest signal is intended for situations where the caller is unable to complete a call, *i.e.*, what the Alliance terms "lock-in." Here, the call record shows that a call was, in fact, completed to a number in Georgia. Thus, the outcome of this tragedy would have been exactly the same, even if the technology described in Mr. Zicker's patent had been deployed and another carrier's available forward control channel signal was stronger in that area. Once again, the Alliance is unable to bridge the gap between its proposed technology solution and the facts that would support adopting it.

The Blomme Death

The most recent tragedy the Alliance has sought to link to its "strongest signal" proposal is a death in Kansas caused by a car fire. The Alliance reports that when the driver, Mr. Keith Blomme, dialed 9-1-1 from his burning car, the call was delivered to a town 42 miles away. The Alliance, in quite a leap from its "lock-in" argument, contends that "[h]ad the cellular telephone . . . been equipped to select the Strongest Signal the call would have been routed to Goodland which would have dispatched emergency vehicles from the town of Wheeler, 5 mile from the accident."[12] Given these facts, the Alliance cannot allege that "lock-in" prevented Mr. Blomme from reaching 9-1-1, but rather seems to imply that the "strongest signal" technology will improve call routing. The two, however, are unrelated.

Once again, the Alliance fails to demonstrate why the "strongest signal" technology would have caused a different result. As explained above, the Alliance has proffered the "strongest signal" technology as the solution for "lock-in" situations where the caller is unable to secure voice communications with the 9-1-1 call center (PSAP). In this instance, that obviously was not the case, since Mr. Blomme completed his call to 9-1-1 using his preferred carrier's system. And even if Mr. Blomme's handset had been equipped with the patented strongest signal technology, there is no evidence that the cellular carrier with the strongest forward control channel would reliably route the 9-1-1

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conversation with the person who answered the phone, police said. . . .") (emphasis added)

The call records confirm the *Los Angeles Times* story. They indicate that the Lechuga family dialed 1-706-245-1340, which is the number for Cobb Memorial Hospital in Royston, Georgia. The family also dialed a seven digit phone number in Victorvile CA, where the Lechuga's spent Thanksgiving. Unfortunately, ten digits, beginning with the "760" area code were required to complete this call. But for the transposed area code, the two numbers are the same.

12 Alliance *Ex Parte,* at 2.

call to the closer PSAP. In fact, as CTIA has noted in the record, the tower with the strongest forward control channel signal is not necessarily the one closest to the caller. The forward control channel strength is a function of the size of the cell -- the larger a carrier's cell area, the stronger the forward control channel. In rural areas, such as this part of Kansas, the strongest forward control channel may well be emitted by a tower that is not the closest to the user. This is an unnecessary line of inquiry, however, since the location of the tower and the routing of an emergency call are unrelated at this time. [13]

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[13] With the deployment of Phase I wireless 9-1-1 location technology, the number of incidents such as this one will be reduced because the cell-site location technology of Phase I is expected to improve call routing. While the Commission's efforts have been focused on the Alliance, the Commission has failed to address the implementation issues (raised in CTIA's reconsideration petition and summarized in the WEIAD annual report) that actually promise to save lives by securing the benefits of Phase I and Phase II for the public.

AUDIOVOX
COMMUNICATIONS CORP.

April 30, 1999

Mr. Timothy H. Jeffries
Manager Certification
Cellular Telecommunications Industry Association
1250 Connecticut Avenue, NW
Suite 800
Washington, DC 20036

Dear Mr. Jeffries,

This is to advise you that the April 2, 1999 Ex Parte presentation (CC Docket No. 94-102) has misrepresented the operation of the Audiovox MVX-405 on 911 calls. The MVX-405 did not employ the "strongest signal method".

Furthermore, no leverage or pressure from CTIA or any other group has been exerted on Audiovox to change the operation of its phones with regard to 911 and strongest signal.

Please feel free to call me if you have any questions.

Best regards

Jim Papadopoulos

Jim Papadopoulos
Vice President, Engineering

555 Wireless Blvd., P.O. Box 18034, Hauppauge, NY 11788 • Phone (516) 233-3300 Fax (516) 233-3431

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JUN 19 1991

Federal Communications Commission
Mail Room

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Bundling of Cellular	)	CC Docket No. 91-34
Customer Premises Equipment	)	
and Cellular Service	)	

REPLY COMMENTS OF THE UNITED STATES DEPARTMENT OF JUSTICE

James F. Rill
Assistant Attorney General
Antitrust Division

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SUMMARY

Bundling is generally a procompetitive marketing device, and the bundling of cellular service and cellular customer premises equipment ("CPE") has benefited consumers by offering them CPE at a substantially lower price than would otherwise be available. Because of the cellular service market's duopoly structure, however, there is the theoretical possibility that facilities-based carriers might use bundling for anticompetitive purposes. Entry into the retail CPE market, however, is sufficiently easy for retailers such as consumer electronics stores that cellular carriers would probably never be able to raise CPE prices above competitive levels. Consequently, the likelihood of anticompetitive effects that would outweigh bundling's procompetitive benefits is remote enough that the Commission's prohibition on bundling by carriers is unnecessary. The Commission therefore should adopt its tentative decision to allow carriers to bundle cellular CPE and cellular service, provided that they also offer service separately at a nondiscriminatory price.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Bundling of Cellular	)	CC Docket No. 91-34
Customer Premises Equipment	)	
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REPLY COMMENTS OF THE
UNITED STATES DEPARTMENT OF JUSTICE

I. INTRODUCTION AND STATEMENT OF POSITION

By its Notice of Proposed Rule Making,[1/] the Federal Communications Commission has requested comment on whether it should "clarify or modify" its rule governing bundling of cellular customer premises equipment ("CPE") and cellular service by allowing such bundling, provided that service is also offered separately at a non-discriminatory price, and if so, whether any other conditions should obtain. The Commission received comments from numerous facilities-based carriers, agents, resellers, and others. The United States Department of Justice ("Department"), the executive agency responsible for enforcing the antitrust laws and promoting competition,[2/] submits these comments in reply.

1/ FCC 91-52, CC Docket No. 91-34, released March 27, 1991 (hereinafter "Notice").

2/ The submission of these comments does not affect the Department's independent antitrust enforcement responsibilities. See, e.g., United States v. RCA, 358 U.S. 344, 350 (1959).

Based upon the evidence presented in the Notice and the comments, bundling appears to have been a procompetitive practice. In particular, given current cellular service market conditions, it provides consumers with CPE and cellular service at a significantly lower total price than they would likely receive if bundling were prohibited. While bundling by firms with market power potentially may have anticompetitive consequences, in this case, that potential is not significant enough to outweigh the consumer benefits it provides today. Absent clear evidence that such harm would be likely without regulatory intervention, the Commission should allow unfettered competition to take its course. The Commission, therefore, should eliminate its prohibition on bundling by carriers, so long as those carriers are required to continue to offer cellular service alone at a nondiscriminatory price.

II. DISCUSSION

The Commission's policy of encouraging the development of competition in telecommunications services reflects the fact that the competitive process, not regulatory intervention, offers the greatest potential for the provision of high quality, innovative products and services at reasonable prices.[3/] This

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3/ See, e.g., Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), 77 FCC 2d 384, 439, modified on recon., 84 FCC 2d 50 (1980), further modified, 88 FCC 2d 512 (1981), aff'd sub nom. Computer and Communications Industry Ass'n v. FCC, 693 F.2d 198 (D.C. Cir. 1982), cert. denied, 461 U.S. 938 (1983), aff'd on second further recon., FCC 84-190 (released May 4, 1984).

policy, which the Department has consistently supported, mandates the removal of regulatory requirements that are unnecessary to protect consumers and that only burden the exercise of business judgment. The record before the Commission here does not reveal evidence of a competitive hazard great enough to warrant the regulatory restraint the unbundling requirement imposes on carriers.

As the Commission observed in the Second Computer Inquiry decision, bundling is, all other things being equal, a harmless marketing tool:

> If the markets for the components of the commodity bundle are workably competitive, bundling may present no major societal problems as long as the consumer is not deceived concerning the content and quality of the bundle. The bundle either survives a market test or it does not, and competing vendors find it in their self-interest to make information available to the consumers making the choice.[4/]

If both the cellular and CPE service markets are competitive, bundling simply reflects carriers' attempts to pass distributional efficiencies on to consumers.

There seems to be little doubt that both the manufacturing and retail CPE markets are competitive. Moreover, since carriers and their agents evidently have been consistently bundling cellular service and CPE, the practice does not seem to impede competition in either market in the short run. Indeed, given the number of cellular carriers across the country, it is difficult to see how bundling would ever be likely to harm competition in CPE manufacture. While bundling has, as some

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4/ Second Computer Inquiry, 77 FCC 2d at 443 n.52.

commenters suggest,[5] caused CPE retailers to align themselves with carriers, so that the retailers might have access to the substantial commissions that enable them to discount CPE, this practice does not appear to have had any anticompetitive impact. Rather, it may simply be a reflection of cellular carriers' competition for distributors and the desire to provide an introductory discount to new customers.

The most dramatic impact of bundling on the CPE retail market, of course, is the substantial discounting it has spawned. Much like promotional discounts for new customers in other product areas, bundling dramatically cuts CPE prices to consumers who might otherwise have chosen to forgo cellular telephone service. Of course, any decrease in transaction costs from bundling (e.g., through "one-stop shopping" or prepackaging of CPE and cellular service) may be a source of the lower CPE prices, too.[6]

While the CPE markets are competitive, there is insufficient evidence to warrant the conclusion that the cellular service market is in fact "workably competitive." In each service area, there is still a duopoly, which the Commission described in 1981 as "a marginal amount of

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[5] See Comments of Tandy Corporation at 2-3; Comments of Cellnet Communications Inc. at 12.

[6] At the same time, no commenters have produced specific evidence that bundling itself, as opposed to the joint provision of cellular service and CPE through the same firm, reduces costs.

facilities-based competition."[7] While resellers may help deter price discrimination, as the Commission hoped in forbidding restrictions on resale,[8] they are in no position to offer unconstrained price competition to the facilities-based carriers, which set the price resellers pay for the lines they resell. Similarly, although the carriers' agents may compete with each other to attract customers, the prices at which they sell cellular service are set by the duopolist carriers. Finally, although the carriers have listed several services that they claim do or will compete with cellular telephone service, there is insufficient evidence to allow us to conclude that these services should be included in the same market as cellular service. In the absence of any evidence (such as price and cost data), it is difficult to sustain the conclusion that the market is competitive.

The inability to conclude that the cellular service market is competitive ordinarily might raise concern, as bundling by a firm with market power can have anticompetitive consequences. The theoretical risk to competition can arise through regulatory manipulation, monopoly extension, or price discrimination. As discussed below, however, none of these practices is likely to create significant competitive problems under current conditions in the cellular service and CPE markets.

7/ Cellular Communications Systems (Cellular Report and Order), 86 FCC 2d 469, 476 (1981), modified, 89 FCC 2d 58, further modified, 90 FCC 2d 571 (1982), appeal dismissed sub nom. United States v. FCC, No. 82-1526 (D.C. Cir. March 3, 1983).

8/ Id. at 511.

When the Commission imposed the unbundling requirement ten years ago, it may not have anticipated today's absence of rate-of-return regulation of cellular service. While non-regulation of cellular-service tariffs does not in itself demonstrate that the market is competitive, it does eliminate one motive for bundling: to manipulate the regulatory environment by building CPE costs into a carrier's cellular rate base. Absent a guaranteed return on their cellular-service investments, carriers cannot expect to recover any CPE discount by including it in their rate bases.[9/] Rather, without a regulatory cap on profits, duopolist carriers are free to maximize their cellular-service profits through cellular service alone. Thus, unregulated cellular carriers generally would have no incentive to inflate their accounting costs of providing service because they will determine their profit-maximizing service prices on the basis of the actual marginal costs of providing service.

However, two other theories suggest that, in some circumstances, carriers with market power may yet have an anticompetitive incentive to bundle CPE with cellular service. The first is that, under some conditions, a firm with market power in one market could enhance its profits by parlaying its power into a monopoly in a second market. In a recent article,

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9/ Even if some states chose to employ rate-of-return regulation, they could well thwart any cross-subsidization attempt by carriers with cost-allocation rules like those of the FCC.

Michael D. Whinston demonstrates that, in certain situations, a monopolist might profit from employing tying arrangements (including bundling) in order to foreclose competition in a second product market.[10] Whinston's model raises the possibility that, if bundling were to heighten the carriers' power over the retail CPE market, it could eventually lead to higher CPE prices.

Of course, to raise the possibility that bundling by a firm with power in a market might have anticompetitive effects in another market is not to suggest that bundling is ordinarily an anticompetitive practice or that bundling of CPE by cellular carriers is likely to have anticompetitive effects. The Commission should not regulate based on a mere possibility of harm.

First of all, even if Whinston's model were deemed applicable to the situation at hand, it is uncertain whether bundling would be socially harmful. Whinston himself suggested that the results of his study do not clearly mandate the appropriate policy response -- first, because the welfare effects are ambiguous even within the context of his own model, and, second, because his model does not take into account the possible benefits that tying might engender.[11]

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[10] Whinston, "Tying, Foreclosure and Exclusion," American Economic Review, September 1990, 837.

[11] Id. at 855-56.

Moreover, the facts involving the cellular service and CPE markets fail to match Whinston's model in several critical ways. First, most cellular markets are duopolistic, rather than monopolistic. Thus, market power here is attenuated relative to Whinston's assumption. Second, the sunk costs associated with retailing CPE may be sufficiently small that it is unlikely that cellular carriers could foreclose competition in CPE retailing.

The first distinction from Whinston's hypothesis needs no explanation. The second, while not as obvious, is equally important. Given the large number of cellular carriers nationally, one should not expect that only one manufacturer would continue CPE production even if carriers cornered local retail CPE markets. Rather, a variety of electronics firms are likely to continue manufacturing CPE. Unless the two carriers in an area could tie up all those manufacturers with exclusive-dealing arrangements -- an unlikely prospect -- retailers could easily arrange to supply CPE, either to customers or resellers, if carriers began charging high CPE prices. The sunk costs of adding CPE to the existing line at a retail electronics store, for example, are likely to be small.[12/] Such a store therefore would have relatively little to lose from ordering a shipment of cellular CPE in order to

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12/ Furthermore, CPE manufacturers might be willing to bear some of these costs in order to increase their sales through other retailers. Manufacturers might also agree to buy back unsold CPE.

typically involve two-part tariffs -- the use of a flat monthly fee and a usage-based charge -- carriers currently have a potent mechanism for extracting surplus from cellular service customers. Still, access to one more tool for differentiation among customers is likely to yield the carriers at least some additional profits. Nevertheless, to the extent that the differentiation brings in new customers without making existing cellular customers worse off, it would enhance welfare.

Several commenters have suggested that bundling unfairly forces existing cellular telephone users to subsidize CPE purchases by new users,[16] and that absent bundling, the carriers would cut cellular service rates.[17] That assertion presumes that carriers set their rates on the basis of their average total costs. However, in the short run, profit-maximizing carriers will set their rates based on variable costs, the costs they can control by increasing or decreasing output. Given the demand it faces, a carrier will try to maximize the difference between revenue and total variable cost. Once the carrier has signed up a customer, the commission it paid its agent is a sunk cost; it has no impact on the variable costs of providing cellular service to the

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(Footnote continued from previous page.)
the service seller is unable to distinguish among consumers *ex ante*.

16/ *See*, *e.g.*, Comments of the National Cellular Resellers Association at 18-19; Comments of Tandy Corporation at 19-20.

17/ *See*, *e.g.*, Comments of National Cellular Resellers Association at 16-18; Comments of Tandy Corporation at 21; Comments of North American Telecommunications Association at 16.

customer. Consequently, the service rates charged would not vary with the size of commissions paid to agents. Even if the elimination of bundling led to a reduction in the commissions carriers paid their agents, it would likely not affect the marginal cost of cellular service; thus, it would have no impact on rates. Bundling therefore may be the only manner in which this rebate on cellular-service profits will ever reach consumers.[18/] Furthermore, to the extent that bundling expands the customer base, it may encourage additional research aimed at reducing the future cost of providing cellular service. This is so because carriers can apply the benefits of such cost reductions to a larger volume of service. Thus, the desire for lower cellular service rates is not a promising basis for maintaining the current rule against bundling.

The resellers that have filed comments argue that bundling by carriers and their agents leaves the resellers unable to compete with them.[19/] Even if this is so, it does not show

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18/ One can imagine that, as an alternative to bundling, cellular carriers might offer new customers an introductory discount in return for a minimum service commitment -- for example, the customer pays only for air time during the first six months (i.e., the fixed fee is temporarily waived). If carriers could identify new customers, then such a plan might accomplish the goal of adding new cellular customers just as well as do low CPE prices. It is not clear why carriers do not pursue this option -- whether identifying new customers is too difficult or whether the Communications Act's nondiscrimination requirements prohibit such an offer.

19/ See, e.g., Comments of the National Cellular Resellers Association at 8; Comments of Tandy Corporation at 20; Comments of Cellular Marketing, Inc. at 6-7; Comments of the North American Telecommunications Association at 10-11.

that bundling itself is likely to have anticompetitive effects.[20] As noted above, resellers are at a pricing disadvantage to begin with, having first to purchase cellular service from facilities-based carriers, and then to compete against these carriers in the provision of cellular service to final consumers. The current prohibition against bundling by facilities-based carriers, if enforced, would provide resellers with an artificial countervailing advantage over the carriers, but it does so at the expense of consumers who would prefer to buy a combination of service and CPE directly from the carriers. Since resellers will remain able to obtain CPE to offer their customers together with service, the sole effect of lifting the current prohibition on carrier bundling will be to put the resellers in the same position that any distributor faces when its supplier engages in dual distribution. Such dual distribution does not, in itself, raise anticompetitive effects.[21]

III. CONCLUSION

Consumers today realize substantial benefits from bundling by carriers, their agents, and resellers. On a theoretical

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[20] The purpose of the antitrust laws, and competition policy in general, is "'protection of competition, not competitors.'" Atlantic Richfield Co. v. USA Petroleum Co., 110 S.Ct. 1884, 1891 (1990)(quoting Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962)(emphasis in original)).

[21] Much of the concern expressed in these comments seems to arise ultimately from the duopoly structure of the cellular service market rather than from bundling per se.

level, bundling by the carriers could have anticompetitive effects. At this time, however, these remote possibilities seem outweighed by the immediate benefits of bundling. The Department recommends, therefore, that the Commission formally adopt its tentative decision to allow cellular carriers to offer cellular CPE and cellular service on a bundled basis, provided that they also offer service separately at a nondiscriminatory price.

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Market Choice and the "Bundling" Issue

On March 23, 1999 the Alliance proposed regulatory language which purportedly "give[s] the consumer the option of deciding between staying on the preferred system or switching to the strongest signal when 911 is dialed."[1] On April 2, 1999 the Alliance followed its proposed language with an attack on the CMRS industry that seeks instead to limit consumers' choice.[2] CTIA strongly supports consumer choice on these matters, and has proposed regulatory language that is technology neutral and actually will allow choice.

Unfortunately, the Alliance's proposed regulatory language, deemed "911 System Selection Process," fails to offer consumers any choice. Not surprisingly, the patented strongest signal technology lies at the heart of the Alliance's 911 System Selection Process.[3] Under the regulatory changes proposed by the Alliance, every wireless handset, without specifying the date of manufacture,[4] must possess the capability to measure the signal strength of the forward control channel and to switch to the non-preferred carrier when the signal strength of that channel fails to attain a certain level. Although the proposal offers users the ability to manually reduce the strongest signal settings, it does not offer consumers a choice of technologies. In fact, the Alliance concedes that it has no faith in consumers or in the robustly competitive wireless industry. Rather, it rejects the marketplace in favor of regulatory commands because it believes that placing these decisions "in the hands of the 'marketplace' will mean that consumers do not have a choice."[5]

CTIA believes that the Commission should not mandate standards, especially standards which require the use of proprietary technology, or which have been rejected by industry standards bodies. CTIA's proposal achieves the Commission's public policy

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1 *Ex Parte* filing of Alliance, CC Docket No. 94-102 (March 23, 1999).

2 *Ex Parte* filing of Alliance, CC Docket No. 94-102 (April 2, 1999).

3 See Letter from Robert Zicker to George Shaginaw, CTIA (Nov. 10, 1998) (filed with the Commission on Nov. 19, 1998); Letter from Brian F. Fontes, CTIA, to Chairman William Kennard, FCC (Nov. 12, 1998) (an analysis of the Strongest/Adequate Signal Patent).

4 If the Commission were to adopt the Alliance's regulatory language as offered, it appears that every wireless handset would have to be retrofitted to meet these specifications.

5 Alliance March 23, 1999 *ex parte* at 2. Less than two weeks later the Alliance contradicted itself when it stated that "[t]he heart of our proposal is that the users -- not the carriers -- have the power to make an informed choice. . . ." See Alliance April 2, 1999 *ex parte* at 8.

objectives by relying on the wireless marketplace and its consumers.[6] Specifically, CTIA's proposal requires all analog handsets manufactured after a certain date to be equipped with the ability to switch carriers in the event a caller is unable to reach 9-1-1 using the preferred carrier. The CTIA proposal allows consumers and manufacturers to select the technology they believe will best achieve these goals. By its terms, the regulatory language proposed by CTIA allows manufacturers to adopt either "strongest signal" or "Automatic A over B roaming", with or without intelligent retry, or any other technology which may be developed in the future.

Recently, the Alliance has alleged carriers "control" the handset market through the "bundling" of handsets and service permitted by the Commission's rules. The Commission has thoroughly reviewed this subject, both in a formal rulemaking proceeding, CC Docket 91-34, and in its Annual Reports to Congress on CMRS competition. In each instance, the Commission has concluded, as did the U.S. Department of Justice, that the wireless equipment market is competitive. Indeed, the Antitrust Division concluded that "bundling appears to have been a procompetitive practice ... provid[ing] consumers with CPE and cellular service at a significantly lower total price than they would likely receive if bundling were prohibited."[7] There is absolutely no basis in the record for the Commission to conclude that neither manufacturers, service providers, nor consumers can make the proper decision for themselves in the absence of a government mandate requiring the adoption of a single proprietary standard.[8]

In its attempt to prove that the wireless handset market is not competitive and that the industry is engaged in what, if true, would be an illegal conspiracy to derail the

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6 See *Ex Parte* filing of CTIA, CC Docket No. 94-102 (March 2,1999) (the proposed CTIA amendment to 47 C.F.R. § 20.18 requires that "[a]ll analog cellular mobile stations used by subscribers of a licensee covered by this section must be capable of scanning the frequencies of another licensee in those instances when a 9-1-1 call attempt is made and the call fails to be completed on the service provider's network, to the extent the analog cellular mobile transmitter is manufactured after November 15, 2000.").

7 Reply Comments of the United States Department of Justice, CC Docket No. 91-34 (June 19, 1991) at 2. A copy of these comments is attached hereto.

8 Nothing contained in the Alliance's most recent *ex parte* submission on this subject, dated April 23,1999, is to the contrary. For example, because the Commission's rules require CMRS carriers to make their service available separately from equipment, by definition, there is no "tying" arrangement. Moreover, the Strategis Group survey cited on page 2 of the Alliance *ex parte* in support of the Alliance's claim that "96% of all handsets are sold to consumers by the carriers or their agents" actually demonstrates that there are multiple, competitive distribution channels for wireless equipment, with carriers and their agents collectively responsible for slightly less than half of the market.

patented "strongest signal" technology through threats of a group boycott, the Alliance claims that Audiovox was coerced and in turn forced to abandon the use of "strongest signal" technology.[9] As Audiovox states in the attached letter, despite the Alliance's claims to the contrary, the Audiovox Model 405 phone did not use "strongest signal" technology, and Audiovox was not pressured by anybody to change the operation of its phones with regard to 9-1-1 calls.[10] In truth, Audiovox engineers seized upon an innovative method to add value to their handsets as a way of differentiating them in a very competitive market.

The market-driven development of the Audiovox phone supports the proposition that the Commission should not engage in process regulation, rather it should focus its efforts on results oriented regulations. The Commission's ultimate concern should be providing improved access to 9-1-1 emergency services. Whether a handset uses "strongest signal" technology, or "A over B roaming", or any other technology that improves this access should be irrelevant. Knowing that some manufacturers have developed a system to improve 9-1-1 access should serve as a basis for the Commission to adopt the broadest possible regulatory language to meet the Commission's desired result -- completing more calls to 9-1-1. CTIA's proposal would meet this objective.

Lost in the Alliance's most recent submissions is the fact that nothing prevents the marketing of wireless phones which contain "strongest signal" technology. Under the Commission's rules, carriers are required to transmit all 9-1-1 calls without validation.[11] Thus, if a consumer elected to purchase an analog cellular handset with strongest signal technology, that consumer could be assured that calls to 9-1-1 will be carried on the network with the strongest forward control channel. In other words, the Alliance can market the technology to handset manufacturers, or it can contract for the manufacture of their own wireless handsets with strongest signal technology and market the handsets directly to the public, and compete in the marketplace.[12]

The Commission already has cleared the way for the deployment of "strongest signal" technology by adopting regulations which remove any impediments to its use.

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9 See Alliance April 2, 1999 *ex parte* at 8; Alliance April 23, 1999 *ex parte* at 3.

10 Letter from Jim Papadopoulos, Audiovox, to Timothy Jeffries, CTIA, dated April 30, 1999.

11 Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Memorandum Opinion and Order*, 12 FCC Rcd 22665, at ¶ 33 (1997).

12 Consumers can buy "emergency" phones to dial 9-1-1 without having to first subscribe to cellular service. See id. at ¶ 35 (The Commission concluded that a non-validation requirement would allow consumers that may wish to obtain cellular telephones without purchasing service to do so.).

The Commission should not substitute itself for the market and mandate the use of this patented technology.