Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Sunset of the Cellular Radiotelephone Service Analog Service Requirement and Related Matters	)	RM No. 11355

MEMORANDUM OPINION AND ORDER

Adopted: May 25, 2007 **Released: June 15, 2007**

By the Commission: Commissioners Copps and Adelstein issuing separate statements.

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I. INTRODUCTION

1. In this order, we deny the Petition for Rulemaking[1] filed by the Alarm Industry Communications Committee (AICC)[2] and ADT Security Services, Inc. (ADT),[3] seeking a two-year extension, until February 18, 2010, of the requirement that all cellular licensees provide analog service to subscribers and roamers whose equipment conforms to the Advanced Mobile Phone Service (AMPS) standard.[4] This requirement will sunset on February 18, 2008 (the "analog sunset date"),[5] but cellular licensees may continue to provide AMPS compatible service after that date. The record before us demonstrates that the five-year sunset of the requirement has achieved the Commission's goals of facilitating the migration of deaf and hard of hearing and emergency-only users from analog to digital handsets and that, on balance, the public interest would not be served by extending the requirement beyond February 18, 2008. Accordingly, we deny the Petition.

2. We also take related actions to ensure the continuity of wireless coverage to affected consumers following sunset of the analog service requirement and to ensure that interested parties are fully informed of next year's sunset. We require all cellular licensees to notify any remaining analog service subscribers of the analog sunset. At a minimum, licensees must notify each analog-only subscriber of their intention to discontinue analog service before such discontinuance (by a billing insert, for example). In addition, we seek to reduce the financial, administrative, and technical burdens that would be associated with filing a revised Cellular Geographic Service Area (CGSA) determination when a carrier decommissions analog service, while also ensuring that consumers will be afforded comparable digital service. Accordingly, we will permit licensees, in lieu of making a revised CGSA showing,[6] to certify that the discontinuance of AMPS service will not result in any loss of wireless coverage throughout the carrier's CGSA. If a licensee cannot so certify, it must file a revised

[1] Petition for Rulemaking (filed Nov. 30, 2006) (Petition).

[2] AICC members include the Central Station Alarm Association (CSAA, http://www.csaaul.org/AICCCommittee.htm), the National Burglar & Fire Alarm Association (NBFAA, http://www.alarm.org/), the Security Industry Association (SIA, http://www.siaonline.org/), Bosch Security Systems, Digital Monitoring Products, Digital Security Control, Telular, HSM (formerly know as Honeywell Monitoring), Honeywell Security (http://www.security.honeywell.com/HS/jsp/search1.jsp), Vector Security, Inc. (http://www.vectorsecurity.com/), ADT Security Services (http://www.adt.com/wps/portal/adt), AES-IntelliNet, GE Security, Alarm.com, Numerex Corp., Aeris.net, and Security Network of America, among others. *Id.* at 1-2.

[3] ADT is the largest single provider of electronic security services with more than six million commercial, governmental and residential customers throughout North America. *Id.* at 3. We collectively refer to AICC and ADT as AICC.

[4] See 47 C.F.R. § 22.901(b).

[5] In the Matter of Year 2000 Biennial Regulatory Review – Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service and Other Commercial Mobile Radio Services, WT Docket No. 01-108, *Report and Order*, 17 FCC Rcd 18401, 18405, ¶5 (2002) (*Analog Sunset Order*), *Order on Reconsideration*, 19 FCC Rcd 3239 (2004) (*Analog Sunset Reconsideration Order*).

[6] When a cellular licensee discontinues analog service, it must make a revised CGSA showing if the CGSA-defining location, power, or height parameters for any CGSA changes.

determination, and any area no longer covered by a CGSA would be forfeited and available for immediate reassignment by the Commission under its cellular unserved area rules.[7]

3. We also seek to ensure that the public is well prepared for the analog sunset, and hereby direct the Consumer and Governmental Affairs Bureau, in conjunction with the Wireless Telecommunications Bureau, to commence a public outreach campaign to ensure that consumers, public safety groups, and other interested parties are prepared for the analog sunset.

II. BACKGROUND

4. In 1981, when the cellular industry was in its infancy, the Commission established a requirement that all cellular radiotelephone licensees must provide AMPS compatible analog cellular service.[8] The Commission adopted the requirement to accomplish two goals: (1) to enable consumers to use their existing handsets when roaming outside their home service area (*i.e.*, foster nationwide network interoperability); and (2) to ensure the availability of low-cost compatible handsets to consumers.[9] Twenty years later, the Commission commenced a rulemaking to consider whether it was in the public interest to retain the technology-specific analog service requirement.[10] Based on the substantial record developed in that proceeding, the Commission concluded, in 2002, that it was unnecessary to continue the analog service requirement indefinitely, because it had substantially achieved the Commission's goals.[11] We note that the Commission has never imposed the technology-specific AMPS/analog service

[7] 47 C.F.R. § 22.949.

[8] 47 C.F.R. § 22.901(b). Section 22.901(b) provides that:

Until February 18, 2008, each cellular system that provides two-way cellular mobile radiotelephone service must --

(1) Maintain the capability to provide compatible analog service ("AMPS") to cellular telephones designed in conformance with the specifications contained in sections 1 and 2 of the standard document ANSI TIA/EIA-553-A-1999 Mobile Station-Base Station Compatibility Standard (approved October 14, 1999); or, the corresponding portions, applicable to mobile stations, of whichever of the predecessor standard documents was in effect at the time of the manufacture of the telephone…

(2) Provide AMPS, upon request, to subscribers and roamers using such cellular telephones while such subscribers are located in any portion of the cellular system's CGSA where facilities have been constructed and service to subscribers has commenced…

[9] *See* Inquiry into the Use of the Bands 825-845 and 870-890 for Cellular Communications Systems, CC Docket No. 79-318, *Report and Order*, 86 FCC 2d 469, 508 (1981); *Memorandum Opinion and Order*, 54 RR 2d 375,375 (1983); Amendment of Parts 2 and 22 of the Commission's Rules to Permit Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Services, GEN. Docket No. 87-390, *Report and Order*, 3 FCC Rcd 7033, 7038 (1988).

[10] In the Matter of Year 2000 Biennial Regulatory Review – Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service and Other Commercial Mobile Radio Services, WT Docket No. 01-108, *Notice of Proposed Rulemaking*, 16 FCC Rcd 11169 (2001)(*Analog Sunset Notice)*.

[11] *See Analog Sunset Order*, 17 FCC Rcd at 18406 ¶8, and 18409-18412 ¶¶13-17.

requirement on any other commercial mobile radio service (CMRS) provider, including PCS and SMR providers.[12]

5. Although the Commission found, in 2002, that the analog service requirement "imposes costs and impedes spectral efficiency,"[13] it also found that immediate elimination of the requirement could harm specific classes of consumers, "particularly those with hearing disabilities as well as emergency-only consumers, who currently continue to rely on the availability of analog service and lack digital alternatives."[14] The Commission determined that the analog service requirement should be phased-out gradually over a five-year period, which commenced on the effective date of the *Analog Sunset Order* (*i.e.*, February 18, 2003).[15] The Commission reasoned that such a transition period was necessary because digital technologies had been shown to cause interference with hearing aids and cochlear implants, and found that a five-year period should enable the development and wide-spread distribution of hearing aid-compatible digital phones.[16] The Commission also noted that a transition period would "mitigate possible negative effects to emergency-only consumers that might otherwise occur with an immediate elimination of the analog requirement."[17]

6. The Commission sought to monitor the progress made in developing and distributing hearing aid-compatible digital handsets to persons with hearing disabilities by requiring nationwide cellular service providers to file progress reports at the beginning of the third and fourth years of the sunset period.[18] When establishing this reporting requirement, the Commission emphasized that "information contained in the reports will be used to determine whether or not the Commission will initiate a proceeding to extend the sunset date or take appropriate enforcement action under section 255."[19] On February 20, 2007, the two nationwide cellular service providers—AT&T Mobility and Verizon Wireless, each of which serves

[12] Thus, while the two nationwide cellular providers, AT&T Mobility and Verizon Wireless, must provide AMPS compatible analog service, Sprint/Nextel and T-Mobile, which hold spectrum nationwide in the Broadband Personal Communications Service and/or Specialized Mobile Radio Service, have no such obligation.

[13] *Analog Sunset Order*, 17 FCC Rcd at 18406, ¶8.

[14] *Id.*

[15] *Id.*, and *id.* at 18414-18419 ¶¶22-30.

[16] *Id.* at 18418 ¶28. Chairman, then Commissioner, Martin separately stated, the "Order makes clear that—even after the five-year period—the Commission will not eliminate the analog requirement if hearing-aid compatible digital devices are still not available. This latter point was fundamental to my support of the item." *Id.* at 18466 (emphasis added). Chairman Martin also stated that "[u]ltimately, however, the Commission must ensure the availability of digital phones that are compatible with hearing aids and cochlear implants. Fixing the digital compatibility problem, rather than relegating the hearing disabled to analog phones is the real solution." *Id.* at 18466-18467.

[17] *Id.* at 18415 ¶24.

[18] *Id.* at 18419 ¶¶31-32. Upon release of the *Analog Sunset Order*, there were three nationwide cellular service providers subject to the AMPS requirement, AT&T Wireless, Cingular Wireless, and Verizon Wireless. AT&T Wireless recently merged with Cingular Wireless, becoming AT&T Mobility.

[19] *Id.* at 18419 ¶32.

approximately 60 million users—filed their second analog sunset reports.[20] Alltel Wireless, which serves approximately 12 million subscribers and more geographic area than either AT&T Mobility or Verizon Wireless, voluntarily filed a report on March 19, 2007.[21] Dobson Communications Corporation (Dobson), which serves approximately 1.7 million subscribers, also voluntarily filed a report on March 20, 2007.[22]

III. DISCUSSION

A. The Petition for Rulemaking

7. On November 30, 2006, AICC and ADT filed a Petition for Rulemaking seeking to extend the analog service requirement for two years, until February 18, 2010.[23] AICC states that the alarm industry uses both wired and wireless technologies, including analog cellular radios, to monitor alarm systems.[24] AICC states that the alarm industry purchases analog service directly from cellular service providers, and indirectly from equipment providers that bundle their equipment with service purchased from cellular resellers.[25] While most analog alarm radios are used as a secondary (or backup) transmission path to central alarm monitoring centers, AICC states that approximately 151,700 are used as a primary communications pathway.[26] AICC contends that digital replacement radios have only become available recently and in relatively limited numbers.[27] AICC claims that if cellular service providers are permitted to decommission analog service in February 2008, some users of analog-only alarm radios could lose service,[28] because there is insufficient time and equipment for the alarm industry to transition analog radios to digital alternatives.[29]

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[20] On February 26 and March 2, 2007, respectively, AT&T Mobility and Verizon Wireless refiled their reports, including some information that was redacted in their February 20 reports. The reports are available at http://wireless.fcc.gov/services/index.htm?job=cellular_reports&id=cellular (herein, the "Verizon Wireless Sunset Report," and the "AT&T Mobility Sunset Report").

[21] The report is available at http://wireless.fcc.gov/services/index.htm?job=cellular_reports&id=cellular (herein, the "Alltel Sunset Report").

[22] The report is available at http://wireless.fcc.gov/services/index.htm?job=cellular_reports&id=cellular (herein, the "Dobson Sunset Report").

[23] Space Data requests that we commence a rulemaking regarding its proposal to use a balloon-based telecommunications system, operating in a "fallow boundary band" between A-side and B-side cellular licensees, to provide a nationwide analog "transition" network. *See generally,* Comments of Space Data Corporation (filed Jan. 19, 2007). Space Data's proposal is beyond the scope of this proceeding.

[24] Petition at 4.

[25] *Id.* at 11-12.

[26] AICC Comments at 3.

[27] Petition at 10-14. AICC also asserts that in several markets digital coverage may not fully duplicate analog coverage and that employing digital radios could degrade service. *Id.* at 14.

[28] *Id.* at 10.

[29] *Id.* at 15-18.

8. On December 20, 2006, the Wireless Telecommunications Bureau released a public notice seeking comment on the Petition.[30] The Bureau requested that interested parties provide detailed comment on the use of analog-only alarm radios in various contexts, the availability of digital cellular alarm radios, alarm industry initiatives to inform customers of the approaching sunset date, and costs that industry, consumers, and others would face if the sunset date is, or is not, extended. Cellular service providers oppose any extension of the requirement, while several entities favor a "reasonable" extension.[31] Based on our review of the record, we find that the alarm industry has not justified an extension of the analog sunset date.

B. An Extension of the Analog Sunset Date Would not Serve the Public Interest

9. For the reasons stated below, we find that an extension of the analog service requirement would not serve the public interest. The record demonstrates that the alarm industry had ample notice and opportunity to prepare for the eventual sunset of the analog service requirement, yet made insubstantial efforts to address subscribers' needs. The industry's claim that it does not have sufficient equipment or personnel to timely address the needs of its existing subscribers is unfounded. Members of the alarm industry admittedly have opted to install more than 19,000 digital alarm radios monthly for new users, rather than upgrade the analog radio equipment of existing subscribers. Members of the alarm industry also continued to install new analog alarm radios long after the Commission announced the analog sunset date, including within the past year.

10. Before addressing the merits of the Petition in greater detail, we first reject the argument made in a Motion to Dismiss, filed by Alltel Corporation, Dobson Communications Corporation, and Verizon Wireless (collectively, ADV)—that the Commission lacks authority to address the Petition and extend the analog sunset date.[32] We next explain why the analog service mandate is no longer necessary to ensure that persons with hearing disabilities have access to mobile telephony services,[33] which was the Commission's principal rationale for phasing out, rather than immediately eliminating, the requirement in 2002.[34] We then discuss why an extension of the mandate could impede Phase II E911 deployment,[35] as well as the deployment of advanced services to the public, particularly consumers in rural America.[36]

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[30] *See* "Wireless Telecommunications Bureau Seeks Comment on Petition for Rulemaking To Extend Cellular Analog Sunset Date," *Public Notice*, 21 FCC Rcd 14683 (WTB 2006). Comments and reply comments were due January 19, and February 6, 2007, respectively.

[31] A list of the parties filing comments and making ex parte presentations is provided in the accompanying Appendix.

[32] ADV Motion to Dismiss (filed Jan. 19, 2007).

[33] *See infra* discussion at paras. 14-17.

[34] *Analog Sunset Order*, 17 FCC Rcd at 18416-17 ¶¶26, 28.

[35] *See infra* discussion at paras. 18-21.

[36] *Id.* at paras. 22-27.

1. The Commission's Authority to Address the Petition for Rulemaking

11. ADV contends that the Petition should be dismissed pursuant to Section 1.401(e),[37] asserting that the analog service requirement applies only to mobile cellular telephones and does not apply to fixed alarm monitoring services.[38] ADV notes that when the Commission adopted the *Analog Sunset Order*, it determined that fixed devices (specifically, highway call boxes) were beyond the scope of the analog service requirement,[39] and that the Commission is thereby precluded from granting the relief sought by AICC.[40]

12. AICC argues that the Motion to Dismiss should be rejected as procedurally infirm because Section 1.401(e) "does not create a protest right for the public,"[41] and because ADV failed to serve the motion on AICC.[42] In the interest of having a complete record, we will treat the Motion to Dismiss and related pleadings as permissible *ex parte* filings.[43] AICC states that by issuing a public notice seeking comment on the Petition pursuant to Section 1.403, the Commission (in this case, the Wireless Telecommunications Bureau) has already determined that the Petition meets the threshold requirements of Section 1.401.[44] AICC further argues that because Section 22.901(a) requires cellular carriers to offer fixed and mobile services on a co-primary basis, the Section 22.901(b) analog service requirement, when read in that context, logically applies to fixed analog alarm services.[45]

13. It is well settled that "the Commission has broad authority and discretion to implement, revise or retain policies if doing so advances the public interest."[46] And, as noted in the *Analog Sunset Order*, in determining whether or not a rule remains necessary, the Commission is "not limited to the original purpose of the rule."[47] Accordingly, the Commission

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[37] Section 1.401(e) provides: "Petitions which are moot, premature, repetitive, frivolous, or which plainly do not warrant consideration by the Commission may be denied or dismissed without prejudice to the petitioner." 47 C.F.R. § 1.401(e).

[38] ADV Motion to Dismiss at 2.

[39] *Id.* at 4. In the *Analog Sunset Order*, the Commission stated that "callboxes are not mobile devices by definition, and thus service to such equipment is not covered by the analog requirement." *Analog Sunset Order*, 17 FCC Rcd at 18416 ¶25, n.82.

[40] ADV Motion to Dismiss at 2.

[41] Opposition of AICC at 2 (filed Jan. 31, 2007). AICC also filed a Request for Waiver/Extension of Time to file its opposition because it was not served with the Motion to Dismiss and Petitioners did not find the Motion to Dismiss in the Commission's database until January 30, 2007. Request for Waiver/Extension of Time (filed Jan. 31, 2007).

[42] Opposition of AICC at 5-6.

[43] 47 C.F.R. § 1.1206.

[44] Opposition of AICC at 2-3.

[45] *Id.* at 6.

[46] *Order on Reconsideration*, 19 FCC Rcd at 3247 ¶19; *see also* 47 U.S.C. § 4(i).

[47] *Analog Sunset Order*, 17 FCC Rcd at 18404 ¶4, n.16, *citing*, *Fox Television Stations, Inc. v. FCC et al.,* 280 F.3d 1027 (D.C. Cir. 2002) ("Nothing in § 202(h) suggests the grounds upon which the Commission may conclude that a rule is necessary in the public interest are limited to the grounds upon which it adopted the rule in the first place.").

may entertain the Petition and, if it were in the public interest, issue a Notice of Proposed Rulemaking proposing to extend the analog sunset date.

2. The Analog Service Requirement is no Longer Necessary to Ensure that Persons with Hearing Disabilities Have Access to Mobile Services

14. We find that the analog service requirement is no longer necessary to ensure that persons with hearing disabilities have access to mobile services. In the 2002 *Analog Sunset Order*, the Commission found that immediately terminating the analog requirement would be detrimental to persons with hearing disabilities.[48] The Commission noted that, unlike analog wireless devices, nearly all digital wireless devices manufactured at that time tended to cause interference to hearing aids and cochlear implants.[49] As a result, the Commission found that, if the analog requirement were removed immediately, "persons with hearing disabilities could be left without access to mobile telephony services . . . ."[50] The Commission concluded that, "[b]ecause persons with hearing disabilities must continue to rely on analog technology for access to wireless services at this time," it would establish a five-year transition period, commencing on the effective date of the *Analog Sunset Order* (i.e., February 18, 2003), before eliminating the analog service requirement.[51] Although the Commission anticipated that this period would provide the wireless industry sufficient time to develop hearing aid-compatible digital devices,[52] it "reserve[d] the right to extend the sunset period in the event that solutions to hearing aid-compatibility problems are unsatisfactory."[53]

15. In the 2003 *Hearing Aid Compatibility Order*, the Commission established rules to ensure that persons with hearing disabilities would have access to hearing aid-compatible digital handsets by the analog sunset date.[54] These rules require manufacturers of digital handsets and providers of digital wireless service, unless entitled to a *de minimis* exception, to make hearing aid-compatible handset models available to their customers.[55] The rules further

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[48] *Analog Sunset Order*, 17 FCC Rcd at 18417-18 ¶28.

[49] *Id.* at 18416-17 ¶26.

[50] *Id.* at 18418 ¶28.

[51] *Id.* at ¶¶28-29.

[52] *Id.* at ¶29.

[53] As Commissioner Copps noted in his Separate Statement on the *Analog Sunset Order*, "[e]liminating the analog requirement before compatible devices are available could leave millions of Americans without service in the near future. I am willing to eliminate the rule, but will not until the actual availability of accessible devices." *Id.* at 18464.

[54] Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, *Report and Order*, 18 FCC Rcd 16753 (2003); *Erratum*, 18 FCC Rcd 18047 (2003) (*Hearing Aid Compatibility Order*), *modified on reconsideration*, Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, *Order on Reconsideration and Further Notice of Proposed Rulemaking*, 20 FCC Rcd 11221 (2005) (*Hearing Aid Compatibility Order on Reconsideration*). The Commission adopted these requirements for digital wireless handsets under authority of a provision of the Hearing Aid Compatibility Act of 1988, codified at Section 710(b)(2)(C) of the Communications Act of 1934, as amended, 47 U.S.C. § 610(b)(2)(C).

[55] *See* 47 C.F.R. § 20.19(e)(1)-(2). The *de minimis* exception applies on a per air interface basis, and provides that manufacturers or mobile service providers that offer two or fewer digital wireless handsets in the U.S. are exempt (continued….)

establish phased-in deployment benchmark dates for the offering of such hearing aid-compatible handsets to ensure an orderly and efficient implementation of the hearing aid compatibility requirements.[56] These benchmarks currently require non-nationwide providers of digital wireless service and manufacturers of digital wireless handsets to offer at least two digital handsets per air interface that meet a specified rating for reduced radio frequency (RF) emissions to enable acoustic coupling with hearing aids without interference.[57] Nationwide "Tier I" providers have greater deployment obligations, and must offer a number of handsets meeting the RF interference rating equal to either five digital wireless handset models per air interface or twenty five percent of the total number of models they offer per air interface, but providers were given the choice of picking the handset offering they wished to provide.[58] For both nationwide and non-nationwide wireless providers, the offering requirement will be modified effective February 18, 2008 (the analog sunset date), by which date they must further ensure that at least 50 percent of their handset models per air interface meet the specified RF interference rating.[59] Finally, in addition to offering digital handsets meeting the RF interference rating, providers and manufacturers must, as of September 16, 2006, also offer at least two handset models per air interface that meet a specified rating for telecoil compatibility.[60]

16. The Commission also required manufacturers and digital wireless service providers to report every six months on their efforts toward compliance with the hearing aid compatibility requirements for the first three years of implementation (*i.e.*, on May 17 and November 17, 2004, 2005, and 2006), and then annually thereafter through the fifth year of implementation.[61] These reports demonstrate that manufacturers and service providers have significantly increased access to hearing aid-compatible digital handsets since adoption of the hearing aid-compatibility rules in 2003. For example, in their November 17, 2006 reports, digital wireless handset manufacturers including Kyocera Wireless Corp., LG Electronics Inc.,

(Continued from previous page)
from the requirements of the hearing aid compatibility rules. For mobile service providers that obtain handsets only from manufacturers that offer two or fewer digital wireless handset models in the U.S., the service provider would likewise be exempt from the hearing aid compatibility requirements.

[56] *See* 47 C.F.R. 20.19(c); *Hearing Aid Compatibility Order on Reconsideration*, 20 FCC Rcd at 1234 ¶23.

[57] *See* 47 C.F.R. § 20.19(c)(1)(i), (2)(i)(A).

[58] *See* 47 C.F.R. § 20.19(c)(3)(i)(B).

[59] *See* 47 C.F.R. § 20.19(c)(1)(ii), (2)(ii), (3)(ii).

[60] *See* 47 C.F.R. § 20.19(d). Telecoil mode provides significant advantages over acoustic coupling mode, as the Commission explained in the *Hearing Aid Compatibility Order*:

> In acoustic coupling mode, the microphone picks up surrounding sounds, desired and undesired, and converts them into electrical signals. . . . In telecoil mode, . . . [t]he hearing aid converts the magnetic field into electrical signals, amplifies them as needed, and converts them back into sound via the speaker. Using a telecoil avoids the feedback that often results from putting a hearing aid up against a telephone earpiece, can help prevent exposure to over amplification, and eliminates background noise, providing improved access to the telephone.

Hearing Aid Compatibility Order, 18 FCC Rcd at 16763 ¶22.

[61] *See id.* at 16787 ¶¶89-91; *see also* Wireless Telecommunications Bureau Announces Hearing Aid Compatibility Reporting Dates for Wireless Carriers and Handset Manufacturers, WT Docket No. 01-309, *Public Notice*, 19 FCC Rcd 4097 (WTB 2004).

Motorola, Nokia Inc., and Samsung Telecommunications America, reported full compliance with their hearing aid-compatible handset deployment obligations. Further, all four Tier I carriers and the vast majority of the top 25 mobile service providers, providing service to more than 196 million subscribers, also reported full compliance as of November 2006. Thus, these carriers now offer at least two digital handsets with both acoustic coupling and telecoil coupling capability. We anticipate that, as the sunset date approaches, and with it, an increased deployment requirement, the choices of hearing aid-compatible digital handsets available to the public will continue to increase.[62]

17. In light of the regulatory requirements that the Commission has established, and the significant level of compliance recently reported by manufacturers and service providers, we conclude that the analog service requirement is no longer necessary to ensure that persons with hearing disabilities have access to mobile telephony services.[63] We will continue to monitor the progress of manufacturers and service providers, as well as the effectiveness of our rules in ensuring such access.[64] We also note that, pursuant to a directive in the *Hearing Aid Compatibility Order*, Commission staff are currently examining if greater compatibility between hearing aids and digital wireless phones has been achieved, and are in the process of preparing a report relaying their findings.[65] The Commission will consider that report in determining whether it should adopt further changes to the hearing aid-compatibility rules.

3. An Extension of the Analog Sunset Date Could Impede E911 Deployment

18. We find it would be contrary to the interests of public safety to take any action that could undermine efforts to transition consumers using analog-only handsets to digital, E911-compliant handsets. Analog handsets are not available with location capability. Thus, in order

[62] Although Verizon Wireless and AT&T Mobility both reported full compliance with the current hearing aid-compatible handset deployment obligations in their November 2006 reports, their analog sunset reports demonstrate that, since November 2006, both carriers have continued to add hearing aid-compatible digital handsets to their inventories. *See* Verizon Wireless Sunset Report at 2 (since its November 2006 Report, Verizon increased the number of hearing aid-compatible headsets offered from 30 to 35, representing nearly 80 percent of total available handsets); AT&T Mobility Sunset Report at 4 (since its November 2006 Report, AT&T increased the number of hearing aid-compatible headsets offered from 8 to 9).

[63] In fact, with the lone exception of the National Safety Council (NSC), we have received no comments on behalf of persons with hearing disabilities indicating support for an extension of the analog sunset date. *See* NSC Ex Parte Letter at 1, dated March 8, 2007. NSC does not argue that there is any shortage of digital hearing-aid compatible phones. Rather, NSC asserts that some persons with hearing disabilities may use analog alarm services. As explained below, however, the alarm industry has sufficient time, personnel, and equipment to replace all primary analog radios, including those used by persons with hearing disabilities, prior to the analog sunset date. *See infra* paras. 33-37.

[64] We note that the two nationwide cellular providers certified in their analog sunset reports that there are digital hearing aid-compatible handsets available in every Cellular Market Area in which they intend to discontinue analog service. *See* AT&T Mobility Sunset Report at 19; Verizon Wireless Sunset Report at 7. In addition, AT&T Mobility is undertaking outreach efforts to communicate to advocates for persons with disabilities regarding their planned discontinuance of analog service. AT&T Mobility Sunset Report at 19.

[65] *See* "Wireless Telecommunications Bureau Seeks Comment On Topics To Be Addressed In Hearing Aid Compatibility Report," WT Docket No. 06-203, *Public Notice,* 21 FCC Rcd 13136 (WTB 2006).

for a service provider deploying a handset-based solution to comply with the E911 Phase II requirements, it must ensure that its analog subscribers adopt digital handsets with location capability. The public uses wireless handsets to make more than 230,000 wireless calls to public safety answering points (PSAPs) each day,[66] and it is vital that such calls automatically provide caller location information to the PSAPs. The Commission has emphasized the importance of extending E911 Phase II capability to all wireless consumers, including those who currently utilize analog phones, and has commended the efforts of cellular carriers that have succeeded in transitioning their customers from legacy analog phones to location-capable digital handsets.[67] The analog sunset date has served as a key impetus to encourage these efforts. By contrast, the requested two-year extension of the sunset date could slow the steady migration to digital handsets, which would delay the deployment of location capability to all wireless consumers.

19. The Commission has repeatedly recognized the location benefits of digital handsets in considering requests for extension of the December 31, 2005 deadline by which carriers that employ a handset-based E911 location solution were to have achieved 95% penetration of location-capable handsets among their subscribers.[68] The Commission has rejected the argument that the presence of consumers reluctant to upgrade to location-capable digital handsets justifies an extension of the deadline.[69] Specifically, in the recent *Alltel Order*, the Commission noted that, "given the critical public safety benefits of Phase II E911, the Commission has never entertained [the] suggestion" that customer resistance to digital migration could, by itself, justify a waiver of the Commission's E911 requirements.[70] The Commission's orders specify that wireless carriers should be making every effort to transition to all-digital service as quickly as possible.[71] AICC argues that the cellular industry could complete the digital migration for subscriber handsets, and also maintain analog service solely for the benefit

[66] *See* CTIA Wireless Quick Facts (Dec. 2006), http://www.ctia.org/advocacy/research/index.cfm/AID/10323.

[67] *See, e.g.*, Alltel Corporation Petition for Limited Waiver of Location-Capable Handset Penetration Rule, WT Docket No. 05-287, *Order*, 22 FCC Rcd 337 ¶23 (2007) (*Alltel Waiver Order*) (noting the success of a Tier III carrier in convincing its analog phone users to upgrade to location-capable digital handsets); Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Petitions for Waiver of Enhanced 911 Phase II Requirements, CC Docket No. 94-102, *Order*, 20 FCC Rcd 16937, 16946 ¶23 (2005) (*Tier III Carriers Waiver Order*) (rejecting an argument that petitioners should be permitted to exclude analog handset users from their customer bases for purposes of calculating the location-capable handset penetration rate).

[68] 47 C.F.R. § 20.18(g)(1)(v).

[69] *Alltel Waiver Order*, 22 FCC Rcd 337 ¶¶22-23.

[70] *Id.* at ¶24.

[71] *See, e.g.*, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Request for Limited Waiver of Washington RSA No. 8 Limited Partnership, CC Docket No. 94-102, Order, 22 FCC Rcd 2564 ¶13 (2007); Tier III Carriers Waiver Order, 20 FCC Rcd at 16943 ¶15, see also Request for a Limited Waiver of United Sates Cellular Corporation, Order, 22 FCC Rcd 360 ¶18 (2007) (noting that carriers experiencing customer resistance to digital migration could expand digital coverage or make available higher-power, location-capable handsets).

of the alarm industry.[72] Alarm systems, however, inherently use little airtime and AICC's approach would leave cellular providers with no obvious means of cost recovery.[73]

20. We note that the Association of Public Safety Officials-International (APCO), the International Association of Fire Chiefs (IAFC), and the Fraternal Order of Police (FOP) support a "reasonable" extension of the analog sunset date.[74] As explained above, however, any extension of the sunset date would actually impede the deployment of location capabilities to wireless consumers and undermine the public safety objectives of the Commission's wireless E911 policies, policies that APCO, IAFC, and other members of the public safety community have supported. APCO, for example, has urged the Commission "to adopt appropriate conditions for the implementation of handset-based location technologies, with the principal goal being to protect the safety of life and property."[75] Similarly, IAFC has argued that E911 location capability "is extremely critical in order to timely respond to life threatening emergencies."[76] We agree with APCO and IAFC that E911 deployment is vital to public safety, and note that this is

[72] AICC Ex Parte Letter at 3, dated April 27, 2007.

[73] ADV Comments at 19. Verizon Wireless "estimates that the out-of-pocket costs of maintaining [its] analog network for an additional year would be approximately $167 million." Verizon Wireless Ex Parte Letter at 1, dated April 10, 2007. AT&T Mobility estimates that maintaining analog after the sunset date would cost "approximately $8 million/month, depending upon variables such as cost of utilities." AT&T Mobility Ex Parte Letter at 1, dated May 11, 2007.

[74] APCO Ex Parte Letter at 1, dated February 21, 2007; IAFC Ex Parte Letter at 1, dated January 24, 2007; FOP Ex Parte Letter at 1, dated March 7, 2007. The Home Safety Council (HSC) and the National Safety Council (NSC) also support a reasonable extension of the analog sunset date. HSC Ex Parte Letter at 1, dated March 7, 2007; NSC Ex Parte Letter at 1, dated March 8, 2007. The National Crime Prevention Council (NCPC) also supports an extension of the analog sunset date. *See* NCPC Ex Parte Letter at 1, dated November 1, 2006. We note that the Chairman of NCPC is also the President of ADT, a party to the Petition for Rulemaking. *See* NCPC website at http://www.ncpc.org/about/board.php.

[75] Reply Comments of APCO on Wireless E911 Phase II Automatic Location Identification Requirements at 8, *In the Matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102 (filed July 2, 1999). *See also* Comments of APCO at 7, *In the Matter of Joint Petition of CTIA and RCA, Sprint-Nextel Request for Limited Waiver, Alltel Petition for Limited Waiver*, WT Docket Nos. 05-286, 05-287, 05-288 (filed Oct. 21, 2005) (contending any waivers of E911 Phase II rules should be "designed to encourage universal wireless E9-1-1 capability at the earliest possible date" and noting that an "aggressive handset replacement timeline" is important for handset-based E911 solutions); Comments of NENA, APCO and NASNA on Rural Carrier Waiver Requests at 7-8, *In the Matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102 (filed Oct. 2, 2003) (disfavoring a "categorical" waiver of E911 Phase II accuracy standard for rural carriers where "lives and property are at risk"); Further Comments of APCA, NENA and NASNA at 2, CC Docket No. 94-102 (filed Mar. 15, 2002) (urging Commission to "impose meaningful sanctions on carriers . . . that fail to meet [E911 Phase II capability] compliance deadlines"); Comments of APCO, NENA and NASNA at 2, CC Docket No. 94-102 (filed Sept. 25, 1996) (stating that "as wireless telephones become more prevalent, the need to identify the number and location of 9-1-1 callers will become even more critical for public safety agencies").

[76] IAFC Ex Parte Letter at 1, *In the Matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102 (filed Sept. 28, 2000). *See also* Joint Statement of IAFC, National Association of Counties, and National League of Cities at 1-2 , CC Docket No. 94-102 (filed July 20, 2005) (supporting E911 location accuracy be calculated at the local vs. statewide level, which would lead to "very poor levels of accuracy, making it difficult for first responders to locate emergencies in a timely manner").

particularly true in sparsely populated rural areas, where callers often may not know their precise location or be able to obtain location information from a nearby party.

21. Although APCO, IAFC, and the Fraternal Order of Police (FOP) are also concerned about the potential loss of service to customers with analog-only alarms, as we find below, there is sufficient time and equipment available for the alarm industry to replace all primary analog alarm systems before the analog sunset date.[77] Because an extension of the analog sunset date would adversely impact wireless E911 Phase II deployment, but would not adversely impact primary analog alarm users, we find that the public safety benefits of eliminating the use of non-compliant analog-only handsets outweigh the potential burdens on the alarm industry associated with affirming the long-scheduled analog sunset.

4. An Extension of the Analog Sunset Date Could Slow Deployment of Advanced Services

22. In 2002, the Commission found that extending the analog service requirement would "prevent[] cellular licensees from choosing to efficiently utilize their spectrum by installing an all digital network and potentially providing additional advanced services."[78] It also found that the requirement imposes "financial burdens on cellular licensees who would prefer to use their spectrum and other resources on digital technology rather than setting aside a portion to support their analog facilities."[79] The Commission emphasized that to comply with the mandate, licensees must maintain two networks and that "operation and maintenance costs associated with the digital network may be higher because the carrier is not able to optimize the system as efficiently as it would if there was only one network."[80] The Commission also found that the regulatory parity policies underlying Section 332 of the Act[81] favored sunset of the analog requirement, noting that it "forces cellular carriers to incur costs and burdens not assumed by other CMRS licensees despite the similarity of services provided by cellular carriers" and other CMRS providers.[82]

23. One of the Commission's strategic goals is to facilitate efficient and effective use of spectrum to promote the growth and rapid deployment of innovative and efficient communications technologies and services.[83] We are concerned that any extension of the analog requirement would inhibit deployment of more spectrally efficient digital technologies,[84] which enable the provision of advanced services, including E911, text and picture messaging, voice

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[77] *See infra* paras 33-36.

[78] *Analog Sunset Order*, 17 FCC Rcd at 18408 ¶12.

[79] *Id.*

[80] *Id*.

[81] 47 U.S.C. § 332.

[82] *Analog Sunset Order,* 17 FCC Rcd at 18414 ¶21.

[83] *See* FCC Strategic Plan 2006-2011 at 10, http://www.fcc.gov/omd/strategicplan/.

[84] *Analog Sunset Order*, 17 FCC Rcd at 18408 ¶12; *see also* Opposition of CTIA – the Wireless Association (CTIA Comments) at 3 (analog technology is five to 10 times less efficient than digital technologies).

activated dialing, and broadband services to the American public.[85] For example, AT&T Mobility currently uses five percent of its authorized cellular spectrum to serve only 0.50 percent of its subscribers using analog-only phones,[86] accounting for 0.56 percent of network minutes of use (MOU).[87] The company states that following the sunset, use of the spectrum that is currently devoted to analog service "will facilitate the roll-out of third generation wireless broadband services,"[88] and that its "roll-out of wireless broadband services may provide [rural] customers with their only opportunity for broadband access."[89] Only 0.50 percent of Verizon Wireless's retail subscribers use analog-only devices, accounting for just 0.1 percent of network MOUs,[90] and only 0.5 percent of Dobson's subscribers use analog-only devices.[91] Similarly, less than one percent of Alltel's subscribers use analog-only devices,[92] accounting for less than one percent of network MOUs (including roaming and resale).[93] In light of such minimal analog network usage and given the ready availability of digital alternatives with more advanced capabilities for wireless consumers, we find that compelling carriers to devote spectrum and other resources to operate legacy analog networks after the sunset date would not be an efficient and effective use of spectrum.

[85] Verizon Wireless Sunset Report at 5.

[86] AT&T Mobility states that as of April 30, 2007, the company had approximately 81,000 retail customers using analog-only handsets, rather than 315,000 as stated in its sunset report. AT&T Mobility Ex Parte Letter at 1, dated May 11, 2007. The company thus is maintaining an analog network to serve less than 0.2 percent of its subscribers.

[87] AT&T Mobility Sunset Report at 11. AT&T Mobility notes that its AMPS/TDMA MOUs continue to drop at a rapid pace, from approximately four percent in January 2006 to 0.8 percent in December 2006 to 0.56 percent in January 2007. *Id.* at 13.

[88] Opposition of AT&T Mobility LLC to Petition for Rulemaking (AT&T Mobility Comments) at 16; *see also* Joint Comments of Alltel Corporation, Dobson Communications Corporation and Verizon Wireless (ADV Comments) at 19 (carriers "will be constrained in their ability to offer [broadband] services . . . while they continue to set aside spectrum for analog use by a very small percentage of customers"); CTIA Comments at 3 (expiration of analog sunset and concomitant "increase in spectral efficiency will provide wireless carriers additional flexibility to deploy new services").

[89] AT&T Mobility Comments at 16; ADV Comments at 18. AT&T Mobility also states that, because rural customers "are less likely than urban customers to have alternate sources of broadband access. . . [it is expected that] rural demand for higher speeds and transfer rates [will] be greater than for the typical customer." *Id.* at 16.

[90] Verizon Wireless Sunset Report at 3-4. Verizon Wireless notes that this percentage reflects a significant decrease from the end of 2005, when analog-only subscribers accounted for 1.5 percent of total retail subscribers. *Id.* Verizon Wireless also states that MOUs on its network have declined by 40 percent annually over the past three years. Accordingly, "only about one out of every thousand minutes of use in December 2006 used the analog network." *Id.* at 4. Verizon Wireless advises that from December 31, 2006 to March 31, 2007, the number of analog-only subscribers declined approximately 15 percent from 318,000 to 272,000. Verizon Wireless Ex Parte Letter at 1, dated April 30, 2007.

[91] Dobson Sunset Report at 3. Dobson notes that only 53 percent of these analog subscribers placed calls in the month of February 2007. *Id.*

[92] Alltel Sunset Report at 1. In addition, Alltel's analog subscribership is declining at a rate of approximately five percent month over month. *Id.*

[93] *Id.* at 1. Alltel notes that analog usage declined by 45 percent from January 2006 to January 2007. *Id.*

24. We note that small and rural carriers in particular would be impacted negatively by any extension of the analog sunset. ACS Wireless (ACSW, a cellular provider in Alaska), for example, notes that "maintenance and operation of obsolete analog technology will siphon off funds which would otherwise go to . . . deployment of advanced services and technologies."[94] The National Telecommunications Cooperative Association (NTCA), which represents several hundred wireless providers that "serve the most rural areas of the country," states that in anticipation of the analog sunset, providers have actively migrated consumers from analog to digital service.[95] NTCA states that doing so has enabled carriers to provide "the advanced wireless voice and data services rural customers are demanding" today.[96] NTCA further states that "[e]xtending the sunset date will force small cellular carriers to spend resources on analog services unnecessarily and will place them at a competitive disadvantage."[97]

25. Although AICC requests that carriers be required to maintain analog networks for an additional two years, it does not propose that the costs associated with maintaining those systems would be shouldered by the alarm industry. These costs would presumably be born by CMRS consumers. As AT&T Mobility notes, one-way fixed alarm units likely "will produce very little revenue to the host cellular operator" because "[s]uch units use airtime only for periodic tests and for reporting alarm incidents."[98] The record also demonstrates that the costs of operating analog networks are disproportionate to the number of subscribers served.[99] ACSW, for example, devotes forty percent of its annual operations budget to operate a network serving 1,200 analog-only subscribers (one percent of the company's subscriber base).[100] Northwest Missouri serves ten analog users at an annual cost of nearly $15,000 per user.[101] The high cost of

[94] ACSW Response to Public Notice Concerning Need for New Rules Extending Analog Sunset Date (ACSW Comments) at 8-9; *see also* Comments of Advantage Cellular Systems, Inc., Artic Slope Telephone Association Cooperative, Inc., CGKC&H No. 2 Rural Cellular Limited Partnership, CT Cube, L.P. d/b/a/ West Central Wireless, Iowa RSA No. 2 Limited Partnership, d/b/a Lyrix Wireless, Leaco Rural Telephone Cooperative, Inc., Mid-Tex Cellular Ltd., Missouri RSA#5 Partnership d/b/a Chariton Valley Wireless Services, Northwest Missouri Cellular L.P., Panhandle Telecommunications Systems, Inc., and RSA 1 Limited Partnership d/b/a Cellular 29 Plus at 3 (Rural Carrier Comments) (noting Rural Carriers' customers would be harmed by an extension because "they would be denied or delayed in the receipt of advanced digital services").

[95] Reply Comments of the National Telecommunications Cooperative Association (NTCA Reply Comments) at 2.

[96] *Id.*

[97] *Id. See also* CTIA Ex parte Letter at 1, dated April 30, 2007 (noting that "[t]he analog requirement has taken a heavy economic and spectral efficiency toll on small and rural carriers").

[98] AT&T Mobility Comments at 19. ACSW notes that the alarm industry seeks to shift the costs to "cellular carriers and consumers who would bear the entire burden of an analog extension with no offsetting benefits." ACSW Comments at 2.

[99] *See, e.g.,* ACSW Comments at 6-7; Rural Carrier Comments at 2-3; ADV Comments at 18-19; AT&T Mobility Comments at 15-16; Comments of United States Cellular Corporation (USCC Comments) at 4-5 ("It costs USCC many millions of dollars per year to provide analog service throughout its network."); NTCA Reply Comments at 2.

[100] ACSW Comments at 6-7 (these costs include circuits, space, power, and maintenance/repair). ACSW consequently spends nearly $3,900 per analog customer to maintain its analog network.

[101] Rural Carrier Comments at 2-3.

maintaining analog systems will likely increase as legacy analog systems age.[102] In this regard, we note that "repair and replacement parts are becoming more difficult to locate and expensive to purchase, because analog equipment has been discontinued by manufacturers."[103]

26. The Rural Carriers request that if the Commission were to extend the analog requirement, it exempt any carrier with fewer than five percent of its subscribers using analog alarm radios.[104] Although AICC acknowledges that an extension would cause carriers significant hardship, it opposes the Rural Carriers' request, claiming it could "exempt every cellular carrier in the country."[105] Instead, AICC proposes a "rural exemption," for any carrier serving a Rural Service Area (RSA), provided that less than five percent of its subscribers use analog alarm radios or it has obtained alarm industry concurrence that an extension is unnecessary.[106] Even if we were to accept AICC's argument that analog alarm radios used on a primary basis cannot be timely upgraded, which we do not, we would reject any argument that would treat rural citizens differently than their more urban counterparts. If, as AICC contends, an extension of the analog sunset date would be required in such an event to preserve public safety, the public interest would require that we extend the date nationwide. The public safety of rural citizens is no less important than that of urban dwellers, and we would not countenance a result that disenfranchised only rural consumers using analog alarm radios.[107] We also note that AICC's approach would result in a geographic patchwork of decommissioned analog service, which could engender considerable public confusion, especially in regard to roaming services. The public is better served by the alarm industry making a concerted effort to update all primary analog alarm radios before the sunset rather than discontinuing service only to its rural customers.

27. At bottom, the record demonstrates that extension of the analog service requirement would require carriers to use their spectrum inefficiently, impair the provision of advanced services, adversely impact smaller and more rural carriers, and shift costs from the alarm industry to CMRS consumers. Such results would ill serve the public interest.

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[102] ACSW confirms that analog systems are more prone to failure than their digital counterparts. ACSW Comments at 7. ACSW also notes that it has received a waiver of the analog requirement with respect to seven sites that were unduly burdensome to serve. *Id.* at 6.

[103] *Id.* at 6; *see also* AT&T Mobility Comments at 16 ("none of Cingular's network infrastructure vendors support analog equipment, and all have notified Cingular that their analog network infrastructure products are manufacturer discontinued"); ADV Comments at 19.

[104] Rural Carrier Comments at 4.

[105] AICC Reply Comments at 35.

[106] *Id.* at 35-36. AICC further proposes an exemption for MSA licensees with either no analog alarm users or that secure alarm industry verification that an extension is unnecessary. *Id.* at 36. *See also* AICC Ex Parte Letter at 3, dated April 27, 2007 (arguing that "compliance with any extension [would be] unnecessary for most small and rural cellular systems").

[107] According to 2000 Census data, more than 65 million Americans (23 percent of the U.S. population) reside in an RSA. Thus, if the deployment of analog alarm radios generally corresponds to population, then approximately 35,000 primary analog alarm radios are deployed in RSAs. *See also* In the Matter of Petition for Forbearance From E911 Accuracy Standards Imposed on Tier III Carriers for Locating Wireless Subscribers Under Rule Section 20.18(h), *Order*, 18 FCC Rcd 24648, 24655 ¶18 (2003) (rejecting less stringent Phase II E911accuracy requirements for rural areas).

5. The Alarm Industry has not Demonstrated that an Extension of the Analog Sunset Date is Warranted

28. As demonstrated above, the analog service requirement is no longer necessary to ensure that persons with hearing disabilities have access to mobile telephony services. An extension of the analog service requirement, moreover, would undermine the Commission's E911 initiatives, and impede the deployment of advanced services to all Americans, particularly rural consumers. We also note that when it adopted the *Analog Sunset Order*, the Commission did not identify the alarm industry or its subscribers as intended beneficiaries. We must consider the alarm industry's request to extend the analog sunset against this backdrop. On balance, we find that the alarm industry has failed to demonstrate that the potential benefits to the alarm industry of extending the analog sunset date outweigh the harm to CMRS consumers.

a. The Alarm Industry had Ample Notice of the Analog Sunset

29. We find that the alarm industry had ample notice and thus opportunity to prepare for sunset of the analog service requirement, but made insubstantial efforts to develop and deploy digital replacement equipment. AICC claims that "the impact of the analog-to-digital transition was not readily apparent upon the issuance of the" *Analog Sunset Order*,[108] noting that some alarm service providers do not purchase analog wireless service directly from wireless providers.[109] This argument is unpersuasive. It is well established that Federal Register publication constitutes notice to interested parties of any change to a Commission rule.[110] On May 17, 2001, the Commission released the *Analog Sunset Notice*, asking interested parties to address whether the analog service requirement should be retained.[111] The *Analog Sunset Notice* was published in the Federal Register on June 12, 2001.[112] On August 8, 2002, the Commission issued a press release, stating that it had adopted the *Analog Sunset Order*, including the five-year analog sunset period.[113] On December 17, 2002, the *Analog Sunset Order* was published in the Federal Register.[114] The sunset period, however, did not commence until February 18, 2003, the effective date of the order, thereby affording the alarm industry an additional six months to prepare for the sunset of the analog service requirement.

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[108] Petition at 11.

[109] *Id.* at 11-12. AICC argues that once these third parties "became aware of the AMPS issue, and focused the alarm companies on the problem, the alarm companies immediately began to formulate a solution." *Id.* at 12.

[110] *See* Federal Crop Ins. Corporation v. Merrill, 332 U.S. 380, 384-85 (1947) ("appearance of rules and regulations in the Federal Register gives legal notice of their contents"). *See also* In re Application of Ann D. Genthner, *Memorandum Opinion and Order*, 1 FCC Rcd 399 ¶6 (1986) ("It is well settled that under 44 U.S.C. § 1507 publication in the Federal Register constitutes constructive notice of Commission processing requirements regardless of whether a particular applicant has no actual notice."); Request of 220 Television, Inc., *Order*, 81 FCC 2d 575, 577 ¶6 (1980) ("All persons are charged with knowledge of matters duly and properly published in the Federal Register.").

[111] *Analog Sunset Notice*, 16 FCC Rcd 11169.

[112] 66 Fed. Reg. 31589 (June 12, 2001).

[113] "FCC Streamlines Part 22 of its Rules, Eliminates Analog Service Requirement After Five-Year Transition Period," *Press Release*, 2002 FCC LEXIS 3888 (Aug. 8, 2002).

[114] 67 Fed. Reg. 77175 (Dec. 17, 2002).

30. As ADV notes, the alarm industry and its related trade associations are "well versed in FCC and federal administrative procedures and have actively participated in numerous proceedings."[115] AICC has a long history of representing the interests of the alarm industry before the Commission, and should be familiar with the Commission's publications.[116] Indeed, AICC's website emphasizes that it "monitors developments at the federal level affecting the ability of the alarm industry to utilize telecommunications technology in providing protection services to the public."[117]

31. In any event, the record demonstrates that the alarm industry had actual notice of the impending sunset date. AICC argues that it, and the National Burglar and Fire Alarm Association (NBFAA), first became aware that digital equipment was unavailable to replace analog devices in 2004, and then began "communicating with their members about the AMPS transition, and the problems facing alarm companies in complying with the sunset deadline."[118] In April 2005, NBFFA issued a bulletin notifying members of the sunset date, explaining that "[s]hould the FCC maintain its decision to cancel the AMPS networks, many of the systems you now install may need to be replaced to comply with these changes."[119] The record also indicates, however, that ADT, which provides alarm service to over 6 million consumers, issued a request for "a manufacturer proposal to provide digital replacement radios for ADT's analog alarm customers" in August 2002, when the Commission issued a press release describing the sunset date.[120] ADT apparently relied on "early information from Honeywell" that it intended to provide a GSM digital alarm radio in the Fall 2005 timeframe,[121] and allegedly "became concerned" in 2005 when that "commitment" did not appear to be coming to fruition.[122] Only

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[115] ADV Comments at 14.

[116] *See, e.g.*, AICC Reply Comments, Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz Government Transfer Bands, ET Docket No. 00-221 (filed Apr. 9, 2001); Petition for Clarification and/or Reconsideration of AICC, Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket No. 92-235 (filed Aug. 5, 1999); AICC Comments, Applications of Ameritech Corp., Transferor, and SBC Communications Inc., Transferee, CC Docket No. 98-141 (filed Oct. 15, 1998).

[117] AICC Website, http://www.csaaul.org/AICCCommittee.htm.

[118] AICC Comments at 12.

[119] NBFAA Member Update, FCC Establishes Sunset Clause for Analog Cellular Networks (Apr. 22, 2005), available at http://alarm.org/update-member/2005/MemberUpdate2005-04-22.htm. Similarly, in 2006, AICC member-company Vector Security, Inc. posted a notice on its website regarding the need to transition to digital equipment in light of the approaching analog sunset." Vector explained: "Vector has developed alternatives to address this issue without an interruption in this critical service. It's important to note that this change will NOT just impact Vector's Security customers, but ALL alarm customers receiving cellular back-up alarm services from ANY alarm companies nationwide. We have been testing a variety of replacement technologies over the past year in anticipation of this specific ruling." Vector Security, *Recent RCC Rule Change Requires Cellular-Based Back-UP Monitoring Transmitters to be replaced!,* available at http://www.vectorsecurity.com/VSI_Website_AMPS_Information.html#TOP.

[120] AICC Reply Comments at 16 and Attachment A. In 2003 and 2004, ADT and a "major" manufacturer met with AT&T Wireless, "seeking its guidance on the implementation of AMPS alternatives." *Id.* at 17.

[121] *Id.* at 17.

[122] The Honeywell radios came to market in October 2006. AICC Comments at 10.

then did ADT begin exploring options with other companies.[123] These facts demonstrate that the alarm industry has long been aware of the analog sunset date, but made little concerted effort to develop and deploy digital replacement equipment.

32. By contrast, the telematics industry—which provides vehicle tracking, navigation, and information services to millions of consumers—has proactively migrated subscribers from analog to digital equipment.[124] When the Commission proposed eliminating the analog service requirement, telematics providers argued that elimination of the rule would impair their ability to provide service because their systems relied on the ubiquity of analog cellular networks.[125] They also noted that replacing telematics equipment would be difficult and costly because their devices are installed in hardened areas of vehicles that are unlikely to be affected by severe impacts.[126] Despite such challenges, OnStar, with nearly four million subscribers, advised the Commission in early 2006, that it had accomplished the "development, validation and launch of dual mode analog/digital hardware" for its subscribers, [127] and that it has kept "subscribers and potential subscribers informed of the Commission's ruling and its implications."[128] OnStar has not filed any comments in support of an extension and has initiated an extensive program to alert its customers to the transition from analog to digital technology.[129] We therefore reject AICC's attempt to found the alarm industry's request for an extension on the alleged benefit to certain OnStar users.[130] ATX, with nearly 800,000 subscribers, "devoted significant investment and effort to transition equipment to a digital format."[131] ATX states that its "effort and investment lead to installation of digital devices commencing in model year 2005."[132] ATX does not support an extension of the analog sunset date, noting that "[i]n the context of the present proposal to extend the sunset to 2010, it would be difficult if not impossible for ATX to brake the present transition path. Systems and expectations are geared" to the February 2008 analog sunset.[133]

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[123] AICC Reply Comments at 17-18.

[124] Telematics can be generally defined as the use of location technology and wireless communications to enhance the functionality of motor vehicles. OnStar and ATX, the leading U.S. telematics providers, offer services such as automatic airbag deployment/crash notification, remote diagnostics, stolen vehicle location and recovery, remote door unlock, and roadside assistance.

[125] *Analog Sunset Order*, 17 FCC Rcd at 18412, ¶18.

[126] *Id.*

[127] OnStar Comments at 4, WT Docket No. 01-108 (filed Feb. 21, 2006).

[128] *Id.*

[129] *See* Information You Need To Know About General Motors Vehicles With Onstar Equipment," http://www.onstar.com/us_english/jsp/explore/onstar_basics/faq_popup.jsp.

[130] AICC Ex Parte Letter at 4, dated April 27, 2007. AICC claims that there are approximately 2 million non-upgradeable OnStar systems. *Id.* According to OnStar, however, the approximate number is 500,000. *See* "Analog cell service nears the finish line, Some OnStar, alarm clients to lose service, " USA Today at B1 (Apr. 16, 2007),

[131] Comments of the ATX Group at 2.

[132] *Id.* at 4.

[133] *Id.* at 5.

b. The Alarm Industry Could Replace all Primary Analog Radios before the Analog Sunset Date

33. AICC contends that there is insufficient time, personnel, and equipment,[134] for members of the alarm industry to transition users from analog alarm radios to digital alternatives.[135] AICC claims that as of January 2007, there were an estimated one million analog alarm radios deployed in the United States.[136] AICC estimates that 151,700 of these radios are used as a primary link to alarm monitoring stations.[137] AICC estimates that 22,436 of the 151,700 systems are used by individuals with medical pendant and panic-button alert devices,[138] which are small, wireless transmitters that can be worn around the neck, strapped to the wrist, or clipped to a belt. Each transmitter has a button, which, when depressed in case of medical or other emergency, uses unlicensed spectrum to activate the alarm system panel, which in turn uses an analog alarm radio to contact an alarm monitoring center.[139] AICC states that the remaining 848,300 estimated analog radios deployed in the United States are used as a *secondary* (or backup) communications path to alarm monitoring stations,[140]and estimates that "several thousand" medical pendants,[141] and 316,396 panic button devices are used with such secondary systems.[142] We recognize the utility of such secondary alarm systems, but note that users already have alarm services through a primary, non-analog, communications path, and that the industry could upgrade them to secondary digital service once it has upgraded all primary analog radios.

34. According to AICC, the members of the alarm industry that responded to a recent AICC survey reported that they are currently installing at least "19,000 digital alarm radios to new customers each month."[143] The actual number of digital alarm radios being installed by the alarm industry may be significantly greater however. AICC states that 39.27 percent of its 2,434 member companies responded to the survey,[144] and on numerous occasions, AICC extrapolates

[134] AICC contends that digital replacement radios have only recently become available and in relatively limited numbers. Petition at 10-14.

[135] *Id.* at 15-18.

[136] AICC Comments at 3.

[137] *Id.* AICC also states that this total number includes an estimated 1,212 governmental/critical infrastructure facilities that use analog alarm radios on a primary basis. *Id.* at 8.

[138] *Id.* at 9-10.

[139] *See, e.g.*, Visonic Wireless Wrist Transmitter for use with Powermax + Visonic Powermax Security and Management System (descriptions of these products can be found at http://www.homesecuritystore.com/ezStore123/DTProductZoom.asp?productID=640 and http://www.homesecuritystore.com/ezStore123/DTProductZoom.asp?productID=1164); Visonic Waterproof Miniature Pendant Wireless Transmitter (a description of this product can be found at http://www.homesecuritystore.com/ezStore123/DTProductZoom.asp?productID=1107).

[140] AICC Comments at 3.

[141] *Id.* at 9.

[142] *Id.* at 10.

[143] *Id.* at 11; *see also id.* ("scarcity of digital replacement radios has been exacerbated by a significant demand by *new* alarm customers for the digital radios that are coming off the assembly line").

[144] *Id.* at 2.

from this percentage, by a factor of more than 2.5, to project industry-wide data.[145] Applying AICC's methodology, we note that it is possible that the alarm industry is installing more than 48,000 digital alarm radios for new customers each month. At that rate, the alarm industry could install 151,700 digital alarm radios in little over three months. Even if the installation rate is only 19,000 units per month, there would be sufficient (152,000) digital alarm radios for the industry to replace all 151,700 primary analog alarm radios identified by AICC in the next 8 months alone.[146]

35. AICC estimates it will cost $450 to $750, plus $150 to $300 for equipment, for its members to perform each analog radio upgrade.[147] Thus, the cost for the industry to upgrade all 151,700 primary analog alarm radios, assuming members do not pass the cost on to consumers, would range from 91 to 159 million dollars, a small fraction (from 0.45 to 0.79 percent) of the more than 20 billion dollars that the industry reportedly earned in 2002.[148] We reject the alarm industry's claim that it is "accommodat[ing] the cellular industry without compensation" by replacing its own consumers' analog alarm radios.[149] Members of the alarm industry have long been aware of the approaching analog sunset date, yet continued to install analog radio equipment as recently as 2006. The alarm industry cannot now shift the responsibility and expense for its business decisions to the cellular industry and wireless consumers through regulatory arbitrage.

36. We also are not persuaded by AICC's varied assertions that there are insufficient trained personnel to meet the task at hand.[150] ADT, in fact, boasts that it "has more than 6,000 installers and technicians nationwide," installing alarm systems at the rate of "more than one a minute."[151] This evidence indicates that it and other members of the industry should have sufficient time, personnel, and equipment[152] to upgrade all primary analog alarm radios before

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[145] *See, e.g., id.* at 8 (stating that 476 governmental/critical infrastructure facilities are served using analog cellular radios as their primary alarm communications path and "[p]rojected over the entire industry, this would amount to approximately 1,212 such facilities").

[146] On May 24, 2007, AICC advised the Commission that the alarm industry has already replaced 50,000 analog alarm radios, and stated that it will replace 350,000 to 450,000 additional analog radios before the sunset date. *See* AICC Supplement to Petition for Rulemaking at 2, filed May 24, 2007. Although it appears that by its own admission the alarm industry has ample time, equipment, and personnel to replace all primary analog alarm radios and a substantial portion of secondary analog alarm radios before the sunset date, AICC argues that we should freeze the rates of carriers in 280 MSAs and require them to provide analog service to the alarm industry until November 18, 2008. *Id.* at 6. For the reasons stated herein, we reject AICC's belated proposal.

[147] *Id.* at 15.

[148] *See* http://www.alarm.org/stats-industry.html.

[149] AICC Ex Parte Letter at 6, dated April 27, 2007.

[150] Petition at 15-18.

[151] *See* ADT Security Services, Inc. "Fast Facts," https://www.adt.com/wps/wcm/resources/file/eb670b0d44b6c0e/ADTFastFacts_2005_2_2.pdf.

[152] From February 2006 through January 2007, alarm manufacturers shipped approximately 135,000 digital cellular alarm radios. AICC Comments at 11. Applying AICC's extrapolation method, an estimated 343,774 digital replacement units were manufactured and shipped across the entire alarm industry within a year. Alarm.com, moreover, shipped some 10,000 GSM-based digital alarm modules as of January 2007. *See* AICC Comments at 10; (continued….)

the analog sunset date. Indeed, it would appear that most of these radios were installed only recently. In February 2006, AICC informed the Commission that "[b]ased on member input, AICC estimates that the average age of all analog alarm radios is less than five years, and a substantial number of radios are less than two years old."[153] It was only approximately 7 months ago, on October 4, 2006, that ADT advised the Commission that it "has stopped installing analog cellular alarm radios in both direct and indirect distribution channels except in select cases in which there is poor digital cellular coverage."[154] Given that the alarm industry only stopped installing analog radios last year and insists on continuing to install digital radios for new customers at the expense of its existing analog subscribers, it can not now argue that it is too late for it to undo its own handiwork.

37. AICC states that unspecified cellular network "issues" hindered the alarm industry's ability to replace analog alarm radios.[155] First, AICC states that if members of the alarm industry had replaced analog radios before the integration of the AT&T and Cingular GSM networks, they would have had to make a "truck roll," i.e., a service call, following network integration.[156] Even if a second truck roll were required, it does not excuse the alarm industry's failure to develop and aggressively deploy digital radios.[157] Moreover, AT&T Mobility states that if the alarm industry had installed GSM equipment, it would have been able to continue to operate on its integrated network with only an over-the-air programming adjustment, thus avoiding the need for a truck roll to a customer's premises.[158] Second, AICC claims that the replacement of analog radios was impeded by unnamed, "significant" issues associated with AT&T Mobility's integrated network.[159] AT&T Mobility specifies the nature of such issues, and advises that each "was resolved within a week" by the company.[160] We thus are not persuaded by AICC's claims that cellular network "issues" impeded the industry's ability to deploy digital equipment in a timely manner.

c. The Alarm Industry's Claim that Victims of Domestic Abuse Require an Extension of the Analog Sunset is Unfounded

38. AICC notes that some victims of domestic abuse rely on analog wireless devices and therefore could benefit from an extension of the analog service requirement beyond February

(Continued from previous page)
see also "Alarm.com Surpasses 10,000 GSM Module Mark," dated Jan. 17, 2007, available at (http://www.alarm.com/about-us/press_releases/AlarmGSMmilestoneRelease.pdf).

[153] AICC Comments at 8, WT Docket No. 01-108 (filed Feb. 21, 2006).

[154] *See* ADT Ex Parte at 5, WT Docket 01-108 (filed Oct. 4, 2006).

[155] AICC Ex Parte Letter at 4, dated April 27, 2007.

[156] *Id.*

[157] Although CDMA cellular networks are widely deployed in the United States, there is no evidence in the record indicating that the alarm industry attempted to develop a CDMA-based solution to replace analog alarm equipment.

[158] AT&T Mobility Ex Parte Letter at 1, dated May 16, 2007.

[159] AICC Ex Parte Letter at 4, dated April 27, 2007.

[160] AT&T Mobility Ex Parte Letter at 2, dated May 16, 2007. For example, in response to an ADT report of a data transfer issue on January 17, 2007, AT&T Mobility worked with ADT to identify and permanently resolve an underlying switch problem on January 23, 2007. *Id.*

18, 2008.[161] The Home Safety Council, the National Safety Council, and the Fraternal Order of Police also note that some victims of domestic violence rely on analog-only alarm radios.[162] ADT states that its AWARE (Abused Women's Active Response Emergency) program includes individuals chosen by "domestic violence shelter administrators" who are provided with an electronic security system, a wireless emergency pendant, and 24-hour monitoring free of charge.[163] ADT states that it has worked with Honeywell to develop a solution to digitally upgrade the approximately 1,000 AWARE AMPS units, and "will be doing everything possible to complete the AWARE replacement visits prior to" the analog sunset date.[164] We commend ADT's provision of equipment and services to this identified community of users. We are not persuaded, however, that an extension of the analog service requirement is necessary to enable the alarm industry to replace analog alarm radios used by potential victims of domestic abuse that it cannot readily identify. Rather, the alarm industry should address this concern by prioritizing the replacement of all analog radios used on a primary basis before it upgrades analog radios used on a secondary basis or installs digital radios for new subscribers.

39. The Safety Net Project (SNP) of the National Network to End Domestic Violence (NNEDV, a network of state domestic violence coalitions, representing over 2,500 shelters and hotlines across the country) focuses on "ways to use technology strategically to help [victims] escape violence and find safety."[165] SNP states that, based on its technological expertise and its training of nearly 20,000 victims advocates, "it does not believe that the impact on domestic violence victims is an issue relevant to the analog sunset" proceeding.[166] SNP explains that victims of domestic violence generally rely on "donated or purchased cell phones to access help, since wireless phones have become an integral part of safety for survivors."[167] In this regard, we note that since 2001, the Wireless Foundation's "CALL to PROTECT" program has provisioned nearly 11,000 digital handsets to victims of domestic violence.[168] Verizon Wireless's "HopeLine" program, "a national handset recycling program that benefits domestic violence and prevention programs," has donated more than 40,000 handsets.[169] And since 2005, all handsets donated through the program have been digital, GPS-capable, and E911 compliant.[170] We thus

[161] Petition at 18-22.

[162] HSC Ex Parte Letter at 1; NSC Ex Parte Letter at 1; FOP Ex Parte Letter at 1.

[163] Petition at 19. *See* http://www.adt.com/wps/portal/adt/about_adt/adt_in_our_communities/aware (describing AWARE program).

[164] ADT/AICC Ex Parte Letter at 2, dated May 11, 2007.

[165] NNEDV Ex Parte Letter at 1, dated March 5, 2007. NNEDV was founded in 1995, and is a network of state domestic violence coalitions, representing over 2,500 shelters and hotlines across the country. It serves as the national voice of battered women and their children and those who provide direct services to them.

[166] *Id.* at 2.

[167] *Id.*

[168] *See* CTIA Ex Parte Letter at 1, dated March 14, 2007. Moreover, "funds generated through the CALL TO PROTECT collections and other wireless industry programs have provided grants totaling over $10,000,000 to national organizations leading the campaign to end domestic violence."

[169] Verizon Wireless Sunset Report at 5.

[170] *Id.*

are not persuaded by AICC's claims that victims of domestic abuse would be harmed if the analog service requirement sunsets in 2008.[171]

40. Lastly, we note that in the *Analog Sunset Order*, the Commission observed that immediately terminating the analog service requirement could be detrimental to persons relying on analog-only phones for emergency use.[172] AICC suggests that an extension of the analog sunset date is warranted because the cellular industry cannot provide an accounting of emergency-only phones used by the public.[173] Most such phones are non-service-initialized (or non-initialized), however, and thus could not be counted by the industry.[174] In any event, the length of the extension requested by AICC is not based on any accounting of analog emergency-only phones or any projected timeline for conversion of any such phones to digital; rather, the requested extension is based on the alarm industry's desired transition for its own devices. In the *Analog Sunset Order*, the Commission found that a transition period would "provide for an orderly migration of consumers with analog handsets to digital multimode handsets,"[175] and "conclude[d] that a five-year sunset period should resolve any issues faced by" emergency phone users.[176] The Commission also found that, because wireless handsets are recycled by consumers approximately every 18 to 30 months, individuals relying on donated handsets for emergency-use would have access to digital equipment with the passage of time.[177] We note that the average replacement cycle for handsets has shortened to less than 18 months.[178] The record before us thus demonstrates that the Commission's goal of enabling emergency-only handset users to migrate to digital devices has been achieved.

41. In view of the foregoing, we conclude that an extension of the analog sunset date would not serve the public interest, and therefore deny the Petition for Rulemaking. We nevertheless remind cellular licensees of their continuing obligation to "allot sufficient system resources such that the quality of AMPS provided, in terms of geographic coverage and traffic capacity, is fully adequate to satisfy the concurrent need for AMPS availability" until the analog sunset date.[179] If a licensee fails to meet this obligation, the Commission is prepared to take swift enforcement action.

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[171] Petition at 18-22.

[172] *Analog Sunset Order*, 17 FCC Rcd at 18414-15 ¶¶23-25.

[173] AICC Ex Parte Letter at 5, dated April 27, 2007.

[174] Although non-initialized wireless telephones are not registered for service with any carrier, carriers must transmit all 911 calls from such phones. *See* 47 C.F.R. 20.18(b).

[175] *Analog Sunset Order*, 17 FCC Rcd at 18415 ¶24.

[176] *Id.* at 18416 ¶25

[177] *Id.* at 18415 ¶25.

[178] According to a recent J.D. Power study, the average replacement cycle for a typical handset is 17.6 months. *See* Press Release, J. D. Power and Associates, Overall Satisfaction with Wireless Mobile Phones Increases Significantly as Customers Become More Satisfied with Ease of Operation and Feature Options (May 25, 2006), available at http://www.jdpa.com/pdf/2006075.pdf.

[179] 47 C.F.R. § 22.901(b)(2).

C. Cellular Radiotelephone Service Licensee Obligations

1. Analog Sunset Consumer Notification Practices

42. It is the obligation of cellular radiotelephone service providers, as Commission licensees, to notify each analog-only subscriber individually that the analog service requirement will sunset on February 18, 2008. Moreover, if a cellular service provider intends to discontinue the provision of analog service after the analog sunset date, its common carrier obligations require it to notify each analog-only subscriber well in advance of any such discontinuation of service.

43. We note that AT&T Mobility, Verizon Wireless, and Alltel recently advised the Commission that they intend to discontinue analog service shortly after the analog sunset date.[180] AT&T Mobility is undertaking a comprehensive effort to notify and upgrade its analog subscribers to digital service. In September and October of 2006, for example, the company provided its analog subscribers (individuals and businesses) billing inserts, offering them the opportunity to upgrade to digital service plans.[181] During this same period, it also advised subscribers, by a separate letter, that it would decommission its analog network, and encouraged them to upgrade to digital service.[182] In January and February of 2007, AT&T Mobility sent letters to its remaining analog subscribers, again notifying them of the approaching analog service termination.[183] The company states that, from February through November 2007, individuals will receive direct mail, SMS messages (where available) and direct customer care phone calls on a quarterly basis.[184] After the analog sunset date, the company states that it will provide subscribers an additional 30 days to retain their numbers and migrate to digital service.[185]

44. In February 2007, Verizon Wireless notified all of its analog subscribers of its intention to discontinue analog service after the sunset date.[186] We note that the company is

[180] AT&T Mobility Sunset Report at 13; Verizon Wireless Sunset Report at 7; Alltel Sunset Report at 2. Alltel also notes that it is evaluating whether to continue AMPS service in certain markets. Alltel Sunset Report at 2. Dobson states that it has yet to determine whether it will decommission analog service in the markets it serves. Dobson Sunset Report at 4.

[181] AT&T Mobility Sunset Report at 16.

[182] *Id.*

[183] *Id.* Business customers were notified at the enterprise level and each individual business user who paid AT&T directly for cellular service was notified separately. AT&T states it will contact its business customers every other month through January 2008 via direct mail, voice mail, email and SMS alerts. *Id.* at 18-19. Additional business customer digital migration support initiated by AT&T over the past year includes: dedicated inbound call centers to handle customer inquiries; outbound customer calling campaigns; account manager interface; and a dedicated project management team to address data and specialized business applications. *Id.* at 17

[184] *Id.* at 19.

[185] *Id.* In addition to communicating with its own subscribers, AT&T Mobility advises that it is undertaking outreach efforts to groups representing people with disabilities, including those with hearing loss, to inform them of its planned discontinuance of analog service. The company is also working with public safety organizations to develop methods for those organizations to keep their respective memberships informed of the analog sunset date. *Id.* at 18.

[186] Verizon Wireless Sunset Report at 7.

offering its analog subscribers free digital phones and a range of digital calling plans.[187] Also, each quarter up to and including the first quarter of 2008, Verizon Wireless plans to re-notify its subscribers that have not migrated to digital service.[188] In addition, in the third quarter of 2005, the company began notifying its wholesale customers of its plans to terminate analog service, and reminding them of the need for their own subscribers to upgrade to digital devices.[189] The company also has established an internal working group to evaluate additional outreach efforts including, letters, billing inserts, website information, email and media releases.[190]

45. Alltel intends to initiate an "aggressive communications campaign" to encourage analog-only customers to upgrade to digital technology.[191] Alltel intends to provide subscribers billing inserts and letters, approximately 180 days before the sunset date and intends to target these customers every 30 days thereafter.[192] Dobson has actively sought to migrate analog subscribers to digital service, through various mailings, including free handset offers. Dobson has not determined where it may discontinue analog service, and therefore has made no notifications to that end.[193]

46. The sunset-related notification and transition efforts undertaken, and to be implemented, by AT&T Mobility, Verizon Wireless, Alltel, and Dobson, are consistent with their public trust obligations as common carriers, and we encourage other cellular licensees to implement such measures. We seek to provide the industry certainty regarding their obligations in this regard, and hereby specify, pursuant to our declaratory ruling authority,[194] the minimum steps that all cellular licensees should undertake to notify their remaining analog service subscribers of the analog sunset date. At a minimum, licensees must notify each analog-only subscriber individually of their intention to discontinue analog service at least four months before such discontinuance (by a billing insert, for example), and a second time, at least 30 days before such discontinuance (by separate letter or direct customer contact, for example).

2. Cellular Geographic Service Area Requirements

47. Section 22.911 of the Commission's rules defines a cellular geographic service area (CGSA) as "the geographic area considered by the FCC to be served by the cellular system" and "within which cellular systems are entitled to protection" from interference.[195] A CGSA is a composite (an aggregation) of the service areas of all cells in a system.[196] The service area of a

[187] *Id.*

[188] *Id.*

[189] Verizon Wireless also intends to send its wholesale customers additional notices each quarter up to and including the first quarter of 2008. *Id.* at 8.

[190] *Id.*

[191] Alltel Sunset Report at 2.

[192] *Id.*

[193] Dobson Sunset Report at 4.

[194] 5 U.S.C. § 554(e); 47 C.F.R. § 1.2.

[195] 47 C.F.R. § 22.911.

[196] 47 C.F.R. § 22.911(a).

cell is defined by its service area boundary (SAB), which is determined by calculating the radial distance from the cell site in 8 cardinal directions (0º, 45º, 90º, 135º, 180º, 225º, 270º, and 315º) with respect to true north. The radial distance calculated using the SAB formula is a function of effective radiated power (ERP) in the relevant direction, and antenna center of radiation height above average terrain along that radial. All cellular licensees currently have CGSA maps on file with the FCC, which are calculated based on their analog service.

48. Alltel, AT&T Mobility, Dobson, and Verizon Wireless provide wireless service to more than 130 million American consumers using either CDMA or GSM digital technology. Each of these service providers recently advised the Commission that they have, or soon will, ubiquitously overlay their analog cellular service areas with digital service.[197] In addition to constructing base stations to improve digital coverage in rural and other areas, cellular licensees are taking other measures to address the needs of consumers transitioning to digital service. Verizon Wireless, for example, intends to offer a CDMA digital "bag phone," coupled with an amplifier and antenna, which it claims will "replicate the coverage" of high-powered analog bag phones that some consumers use to obtain additional range in rural areas.[198] Alltel also is making a CDMA digital bag phone and amplifier available to consumers in order "to augment digital coverage along the edges of its network."[199] Similarly, AT&T Mobility has certified a GSM digital bag phone to provide "analog customers the option to transition to an equivalent product on [its] more advanced digital network."[200] We encourage cellular service providers to take measures such as these in order to facilitate the transition of consumers from analog to digital service.

49. Under the current rules, when a cellular licensee alters its analog service, it must make a revised CGSA showing if the CGSA-defining location, power, or height parameters for any CGSA changes.[201] Because of the efficiencies present in digital cellular technologies such as

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[197] *See* Alltel Sunset Report at 1 ("Alltel is working to make its network 100% digital . . . by the end of the year" 2007.); AT&T Mobility Sunset Report at 14 ("AT&T's GSM network is now substantially coextensive with its analog coverage, . . . and GSM will be deployed in the remaining remote areas by end-of-year 2007."); Dobson Sunset Report at n.1("Dobson has . . . upgraded its networks nationwide with GSM/GPRS/EDGE technology to provide advanced digital services to virtually the entire population in its licensed areas."). Verizon Wireless Sunset Report at 7 ("Digital CDMA service is already available nearly everywhere on Verizon Wireless' network and will be available to subscribers in each of" its cellular markets.)

[198] *See* Verizon Wireless Ex Parte Letter at 1, dated April 30, 2007.

[199] *See* Alltel Sunset Report at 2.

[200] *See* AT&T Mobility Ex Parte Letter at 1, dated May 11, 2007.

[201] Where revised information would result in a decrease of any CGSA defining site (arising from a reduction in operating power or the removal or relocation of a transmitter, for example), a licensee must notify the FCC by filing FCC Form 601, including full-sized maps, reduced maps, and supporting engineering as described in Section 22.953(a)(1)-(3) of the Commission's rules. 47 C.F.R. § 22.953 (a) (1)-(3). Licensees must submit a full-size 1:500,000 scale map, and a reduced scale 81/2x11 inch map with cellular applications involving a change to the CGSA. Because it is not practical to scan the large maps and upload them when filing applications on-line, applicants are asked to manually file these maps with the Commission. The map(s) should be attached to a cover letter containing the name of the applicant, the ULS assigned file number, and the date the application was submitted via the ULS. The cover letter and maps should be mailed to: Federal Communications Commission, Attn: Chief, Mobility Division, 445 Twelfth Street, SW, Washington, D.C. 20554.

CDMA, some cellular licensees may elect to use less transmitter power to reliably serve the same geographic area as they can with analog technology. Under the SAB formula required by the rules to calculate CGSA boundaries, however, the reduction in power will predict a smaller CGSA, even though coverage has not diminished.[202] The reason for this is that the SAB formula includes a power variable intended to predict analog coverage, which, when used in the digital context, may understate coverage for some digital technologies. The ramifications of the SAB formula's limitation could be significant: any area no longer covered by a CGSA would be forfeited and available for reassignment under the Commission's cellular unserved area rules.[203] Accordingly, some carriers converting to digital technology will be forced to unnecessarily reconfigure their digital sites or make alternative CGSA showings simply to maintain the interference protection associated with their analog-determined CGSAs. To rectify this situation, and thereby reduce the financial, administrative, and technical burdens to the maximum extent practicable, we will permit licensees, in lieu of making a revised CGSA showing, to certify that the discontinuance of AMPS service will not result in any loss of wireless coverage throughout the carrier's CGSA.[204] Of course, if the licensee cannot so certify, it must file a revised determination. If a licensee elects to file such a certification, its analog-determined CGSA (on file with the Commission as of the certification filing date) will remain its CGSA, and it will not be required to file a revised CGSA determination.[205] However, if at any time after the certification filing date, a licensee modifies a site that composes part of its CGSA, it must file revised CGSA information for that site pursuant to Section 22.911.[206]

D. Public Outreach Campaign

50. In addition to the measures we take above, we find that the public interest would be served by Commission staff taking affirmative steps to ensure that the American public is fully apprised of next year's sunset of the analog service requirement. We note that the Commission adopted the five-year analog sunset period principally to provide persons with hearing disabilities and emergency-only users of analog handsets sufficient time to transition to digital wireless devices.[207] The record before us demonstrates that digital alternatives are now widely available to these consumer groups.[208] To the extent these consumers, and others, have not migrated to digital technology, however, it is imperative that they be made aware that their

[202] 47 C.F.R. § 22.911(a) (SAB formula).

[203] *See* 47 C.F.R. § 22.949 (unserved area licensing process).

[204] The certification must be filed at least 60 days before discontinuing analog service, comply with Section 1.16 of the Commission's rules, be signed by an officer or director of the licensee, and filed though the Commission's Analog Cellular Status Reports portal, http://esupport.fcc.gov/cellular/reports/submitreport.jsp. *See* 47 C.F.R. § 1.16 (unsworn declarations under penalty of perjury in lieu of affidavits).

[205] We are thus waiving Section 22.911(a) to the extent we accept a certification in lieu of a revised CGSA determination.

[206] For example, if one of 12 CGSA defining sites were modified, the analog-determined CGSA, as modified, would become the licensee's new CGSA.

[207] *Analog Sunset Order*, 17 FCC Rcd at 18406 ¶8.

[208] *See supra* discussion at paras. 14-17, 39-40.

analog service may terminate after the analog sunset date.[209] Similarly, to the extent that the alarm industry fails to upgrade subscribers from analog to digital equipment, it is important that these users also be advised by their alarm companies of the potential for a loss of analog service.

51. Accordingly, we hereby direct and delegate authority to the Consumer and Governmental Affairs Bureau, in conjunction with the Wireless Telecommunications Bureau, to commence a public outreach campaign to ensure that persons with hearing disabilities, public safety groups, and other interested parties are fully apprised of the sunset of the analog service requirement. Staff's public outreach efforts may include, but are not limited to, development of Consumer Alerts and other informational materials to be made available to the public through the Commission's website and national consumer call center, and oral and written communications with media outlets to inform them of the sunset of the analog service requirement.

IV. PROCEDURAL MATTERS

A. Paperwork Reduction Act of 1995 Analysis

52. This *Memorandum Opinion and Order* (MO&O) contains new information collection requirements subject to the Paperwork Reduction Act (PRA) of 1995, Public Law 104-13. The Commission, as part of its continuing efforts to reduce paperwork burdens, invites the general public, the Office of Management and Budget (OMB) and other Federal agencies to comment on the information collection requirements contained in this MO&O, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002 (SBPRA), 44 U.S.C. § 3506(c)(4), we are seeking comment on how the Commission might "make efforts to further reduce the information collection burden for small business concerns with fewer than 25 employees." We do not believe that the information collection burdens herein will affect a significant number of small businesses as defined in the SBPRA.

B. Congressional Review Act Analysis

53. The Commission will send a copy of this *Memorandum Opinion and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A).

C. Ex Parte Rules

54. This proceeding has been designated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules.[210] Parties making oral ex parte presentations in this proceeding are reminded that memoranda summarizing the presentation must contain the

[209] As the Commission noted in the *Analog Sunset Order*, although cellular carriers will be permitted to cease analog service after the analog sunset date, this does not preclude carriers from continuing to provide analog service. *Analog Sunset Order*, 17 FCC Rcd at 18419-20 ¶33. Nonetheless, it appears that many consumers may face termination of their analog service as both nationwide cellular service providers, AT&T Mobility and Verizon Wireless, have stated they intend to discontinue analog service at or soon after the analog sunset date. AT&T Mobility Sunset Report at 13; Verizon Wireless Sunset Report at 7.

[210] *See* 47 C.F.R. §§ 1.1200(a), 1.1206.

presentation's substance and not merely list the subjects discussed.[211] More than a one- or two-sentence description of the views and arguments presented is generally required.[212]

D. Further Information

55. For further information concerning this *Memorandum Opinion and Order*, contact Richard Arsenault, Chief Counsel of the Wireless Telecommunications Bureau, Mobility Division, at (202) 418-0920, TTY (202) 418-7233, or via email at richard.arsenault@fcc.gov or Joyce Jones, Attorney Advisor of the Wireless Telecommunications Bureau, Mobility Division, at (202) 418-1327, TTY (202) 418-7233, or via email at joyce.jones@fcc.gov.

V. ORDERING CLAUSES

56. Accordingly, IT IS ORDERED that, pursuant to the authority in Sections 1, 2, 4(i), 4(j) and 309 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(j) and 309, and Sections 1.403 and 22.901 of the Commission's rules, 47 C.F.R. § 1.403, 22.901, the petition for rulemaking filed by the Alarm Industry Communications Committee and ADT Security Services, Inc. on November 30, 2006, IS DENIED.

57. IT IS FURTHER ORDERED, pursuant to Sections 4(i), 201, and 303(r) of the Communications Act of 1934, 47 U.S.C. §§ 154(i), 201, and 303(r), Section 5(d) of the Administrative Procedure Act, 5 U.S.C. § 554(e), that each cellular radiotelephone service licensee notify each analog-only subscriber individually of their intention to discontinue Advanced Mobile Phone Service (AMPS) compatible analog service at least four months before such discontinuance, and a second time, at least 30 days before such discontinuance.

58. IT IS FURTHER ORDERED that, pursuant to Sections 1, 4(i), and 4(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), and 154(j), and Sections 0.131, 0.201 and 0.331 of the Commission's rules, 47 C.F.R. §§ 0.131, 0.201, 0.331, that the Consumer and Governmental Affairs Bureau, in conjunction with the Wireless Telecommunications Bureau, shall commence a public outreach campaign to ensure public awareness of the sunset of the analog service requirement.

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[211] *See* "Commission Emphasizes the Public's Responsibilities in Permit-But-Disclose Proceedings," *Public Notice*, 15 FCC Rcd 19945 (2000).

[212] *See* 47 C.F.R. § 1.1206(b)(2). Other rules pertaining to oral and written presentations are set forth in Section 1.1206(b) as well. *Id.* § 1.1206(b).

59. AND IT IS FURTHER ORDERED that this Order SHALL BE EFFECTIVE upon adoption, except that implementation of the new or modified reporting and recordkeeping requirements imposed by this action SHALL BE EFFECTIVE upon approval by the Office of Management and Budget as prescribed by the Paperwork Reduction Act of 1995.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX

RM No. 11355

Comments

Alarm Industry Communications Committee (AICC)

ACS Wireless, Inc.

Advantage Cellular Systems, Inc., Artic Slope Telephone Association Cooperative, Inc., CGKC&H No. 2 Rural Cellular Limited Partnership, CT Cube, L.P. d/b/a/ West Central Wireless, Iowa RSA No. 2 Limited Partnership, d/b/a Lyrix Wireless, Leaco Rural Telephone Cooperative, Inc., Mid-Tex Cellular Ltd., Missouri RSA#5 Partnership d/b/a Chariton Valley Wireless Services, Northwest Missouri Cellular L.P., Panhandle Telecommunications Systems, Inc., and RSA 1 Limited Partnership d/b/a Cellular 29 Plus

ALLTEL Corporation, Dobson Communications Corporation, Verizon Wireless (ALLTEL et al.)

AT&T Mobility LLC (AT&T Mobility)

ATX Group (ATX)

CTIA – The Wireless Association (CTIA)

Space Data Corporation

United States Cellular Corporation (US Cellular)

Reply Comments

AICC

Alltel et al.

AT&T Mobility

National Telecommunications Cooperative Association

Ex Parte Presentations

ADT Security Services, Inc.

AICC

Alarm Association of Florida

Alarm.com

Alkema, Don

Alltel et al.

Association of Public-Safety Communications Officials – International, Inc.

AT&T Mobility

ATX

CTIA

Fraternal Order of Police

Honeywell

Home Safety Council

International Association of Fire Chiefs

Members of the U.S. House of Representatives (Congressman Inslee, and 23 cosignatories)

National Network to End Domestic Violence

National Crime Prevention Council

National Safety Council

US Cellular

Verizon Wireless

Wireless Access Coalition

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS

RE: Sunset of the Cellular Radiotelephone Service Analog Service Requirement and Related Matters, RM No. 11355

In our initial decision to sunset over time the cellular radiotelephone service analog requirement, I expressed concern about whether industry would be able to develop digital devices in sufficient time to enable digital service for individuals with hearing and speech disabilities (who, at that time, relied exclusively on analog devices). As it turned out, carriers, equipment manufacturers, members of the disability community and the FCC were able to work together to develop digital equipment solutions, even with some time to spare. Likewise, other affected groups, such as the telematics industry, went to great effort to prepare for the transition, and they now inform the Commission that they, too, are ready for the transition. A lot of good work has been done. I commend all the parties who came together to work on this.

We ***are*** transitioning to a new digital America. The changes and wonders it will usher in are mind-boggling. But getting there, and getting there together, takes some special commitment and some very hard work. In this instance, we can now work to move the ball forward. This action permits the wireless industry to redeploy spectrum from analog to digital use, much to the enhancement of carriers' ability to provide wireless broadband services. This change is of particular importance to rural carriers, for whom the analog requirement is disproportionately burdensome.

I do wish to comment briefly on the alarm industry's assertion that—despite more than five years warning—it now requires additional time to prepare for the transition. I am aware of the challenges this industry, like others, confronted. But I think it is neither equitable nor necessary to hold up the transition on this account. As today's item explains, some of this industry's own data indicates that there has been sufficient time to replace those alarms that rely on cellular analog service as a primary means of communication. It is an objective that can ***still be accomplished on time*** if the industry determines that its single-minded focus going forward should be on replacing radios rather than prolonging a search for regulatory relief.

My thanks to all who worked so hard, both in the affected industries and here at the Commission, to get this job done.

STATEMENT OF
COMMISSIONER JONATHAN S. ADELSTEIN

RE: Sunset of the Cellular Radiotelephone Service Analog Service Requirement and Related Matters, RM No. 11355

Our analog service requirement has played a critical role in the development and deployment of cellular service in this country. Today, as is often the case in the telecommunications world, technology has moved on. While analog service was the backbone of cellular service for so many years, it has been replaced for some time now by second- and even third- generation digital wireless technologies.

With digital technology, we see more efficient networks and a dramatic increase in capacity. American consumers now have many benefits of more advanced services that come with digital networks, including the critical personal safety benefit of access to E911 location-capable digital handsets. Carriers, equipment manufacturers, and representatives of the deaf and hard of hearing communities have worked hard, and continue to work collaboratively, on developing a robust selection of digital handsets that are hearing aid compatible. So, after a transition period of over five years, it is right to affirm the sunset of the analog service requirement.

The work required by our transition from analog is not done yet, however. There are remaining analog customers who, if not transitioned, will lose service as service providers shut down analog networks. It is critical that carriers redouble their efforts to ensure that all affected customers have multiple opportunities to retain their service during the final transition to digital service. I am particularly pleased that our item puts in place a number of safeguards to ensure continuity of wireless service, including a strong incentive for carriers to ensure that the discontinuance of analog service will not result in any loss of wireless coverage on a geographic basis.

Finally, I strongly urge the alarm industry and analog carriers to work together to ensure that the analog sunset does not result in an unnecessary disruption to consumers with analog alarm radios. Cooperation and dedication is essential on both sides. The alarm industry, in particular, needs to devote its full resources to transition these customers to digital radios as soon as possible, especially those customers who have analog radios as their primary line of communications. I realize that this is a challenging task. The affected customers, many of whom acquired their analog alarm radios well after the Commission adopted its analog sunset item in 2002, deserve the best treatment possible, and should not have their personal security compromised.