

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

In the Matter of
Section 68.4(a) of the Commission's Rules
Governing Hearing Aid-Compatible Telephones
WT Docket No. 01-309
RM-8658

NOTICE OF PROPOSED RULE MAKING

Adopted: October 29, 2001

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Comment date: January 11, 2002

Reply Comment date: February 11, 2002

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

I. INTRODUCTION

1. In this Notice of Proposed Rulemaking, we reexamine our exemption, pursuant to direction of the Hearing Aid Compatibility Act of 1988, of public mobile service phones from the hearing aid compatibility requirements of that Act. This Notice is being taken pursuant to our obligation under that Act to assess periodically whether the exemptions from the hearing aid compatibility requirement continue to be warranted.

2. Currently, many people who use hearing aids or who have cochlear implants have difficulty finding a digital wireless mobile telephone that functions effectively with those devices because of interference and compatibility problems. Requiring public mobile service devices to be made compatible with these devices would ensure that people with hearing disabilities would be able to enjoy the same access to wireless communications that other consumers do. In this Notice, we explore the extent to which the exemption for public mobile service telephones is still appropriate and whether it needs to be limited under the statutory standards to enable hearing aid users to benefit from the convenience and features offered by digital wireless communications systems. Based on preliminary evidence presented to the Commission, we initiate this proceeding to seek comment on whether public mobile service telephones should be required to be hearing aid compatible.

II. BACKGROUND

3. On October 10, 2000, the Wireless Access Coalition (WAC) formally requested that the Commission reopen the petition for rulemaking filed in 1995 on behalf of the HEAR-IT NOW Coalition,

1 See discussion of public mobile services at para. 30, infra.

seeking to revoke the exemption for Personal Communications Services (PCS) devices from the Commission's rule requiring telephones to be hearing aid compatible.² Promulgated in 1989 as mandated by the Hearing Aid Compatibility Act of 1988 (the HAC Act),³ the rule requires nearly all new telephones to be compatible with hearing aids but exempts, as required by the statute, certain categories of telephones, including those used with public mobile services and private radio services.⁴ Public mobile services are air-to-ground radiotelephone services, cellular radio telecommunications services, offshore radio services, rural radio services, public land mobile telephone services, and other common carrier radio communications services covered by Part 22 of our rules.⁵ Private mobile radio services are private land mobile radio services and other communications services characterized in our rules as private radio services.⁶

4. The statute requires that, unless exempt, all essential telephones and those manufactured in or imported for use in the United States after 1989 must "provide internal means for effective use with hearing aids that are designed to be compatible with telephones which meet established technical standards for hearing aid compatibility."⁷ In addition, the statute directs this Commission to assess periodically the appropriateness of continuing the exemptions.⁸ Specifically, the statute requires us to revoke or otherwise limit the exemptions if we determine that

- (i) such revocation or limitation is in the public interest;
- (ii) continuation of the exemption without such revocation or limitation would have an adverse effect on hearing-impaired individuals;
- (iii) compliance with the requirements of [the rule] is technologically feasible for the telephones to which the exemption applies; and

² See Petition for Rulemaking of Helping Equalize Access Rights in Telecommunications Now (HEAR-IT NOW), In the Matter of Section 68.4(a) of the Commission's Rules, Hearing Aid Compatible Phones, RM-8658 (filed June 5, 1995) (HEAR-IT NOW Petition); Request of WAC to Reopen the Petition for Rulemaking, RM-8658 (filed October 10, 2000) (WAC Request).

³ 47 U.S.C. § 610.

⁴ 47 C.F.R. § 68.4(a).

⁵ 47 C.F.R. § 68.3.

⁶ 47 C.F.R. § 68.3. The terms public and private mobile services were subsequently reclassified to create two new categories of mobile services, commercial mobile radio service (CMRS) and private mobile radio service (PMRS). See Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, Second Report and Order, 9 FCC Rcd 1411 (1994) (implementing Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993). See *infra* para. 30 (discussing scope of the exemptions).

⁷ 47 U.S.C. § 610(b)(1). To date, technical standards for hearing aid compatibility have been established only for wireline telephones. Specifically, Section 68.316 of the Commission's rules sets forth the technical requirements for hearing aid compatibility, and Section 68.112 specifies the telephones that are required to be hearing aid compatible. 47 C.F.R. §§ 68.316, 68.112.

⁸ 47 U.S.C. § 610(b)(2)(C).

(iv) compliance with the requirements of [the rule] would not increase costs to such an extent that the telephones to which the exemption applies could not be successfully marketed.⁹

5. In its 1995 petition, HEAR-IT NOW argued that a limited revocation of the exemptions was warranted under the four criteria.¹⁰ HEAR-IT NOW appended to its petition studies demonstrating interference experienced by hearing aid wearers when attempting to use, or even simply standing near, a GSM mobile telephone.¹¹ HEAR-IT NOW argued that such interference prevents people who are hard of hearing from using PCS devices, thus excluding them from the next phase of the telecommunications revolution.¹²

6. In response to the petition, the Hearing Aid Compatibility and Accessibility to Digital Wireless Telecommunications Summit was convened in January 1996,¹³ and a steering committee and working groups were formed to work on and report to the Commission on solutions. One outcome of the Summit was the initial development of a standard to measure interference between hearing aids and digital wireless telephones and to prescribe tests for evaluating these devices.

7. To date, no technical standards have been developed for wireless hearing aid compatibility, although the standard for measuring interference between hearing aids and digital wireless telephones may provide information about which devices can be used together.¹⁴ In general, analog wireless handsets do not pose an interference problem for hearing aid wearers because they transmit signals at a steady rate that are not demodulated and amplified by the hearing aid, producing audible noise. Hearing aid compatible analog handsets contain an inductive coil known as a “telecoil” which transmits signals that induce an electrical signal in a similar telecoil in the hearing aid, thus allowing the hearing aid to “couple” with the telephone via an electromagnetic field. Unlike analog wireless telephones, however, digital wireless telephones do not transmit electromagnetic energy at a steady rate, and the fluctuations can cause disruptive interference to hearing aid or cochlear implant users.¹⁵ Almost all digital wireless handsets can cause some amount of interference, or “buzzing” to many types of hearing aids and cochlear implants. The extent of the interference appears to depend on the following factors: the air interface the

⁹ 47 U.S.C. § 610(b)(2)(C); 47 C.F.R. § 68.4(a)(4). Although the Commission announced that it would review the exemptions every five years, it has not done so since their initial promulgation in 1989. Access to Telecommunications Equipment and Services by the Hearing Impaired and Other Disabled Persons, 4 FCC Rcd 4596, 4600 (1989).

¹⁰ See HEAR-IT NOW Petition at 5-8.

¹¹ HEAR-IT NOW Petition at Appendices 1-4.

¹² See HEAR-IT NOW Petition at 5-6.

¹³ See Wireless Telecommunications Bureau Fiscal Year 1995-1996 Progress Report, 1996 WL 668142 (Nov. 19, 1996).

¹⁴ The American National Standards Institute (ANSI) adopted a new standard, ANSI C63.19-2001, Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids, on April 26, 2001. See ANSI Standards Action, Vol. 32, No. 11 at 14 (June 1, 2001) available at <http://www.ansi.org/rooms/room_14/public/pdfs/SAV3211.pdf>. Information on obtaining copies of ANSI standards can be found at <<http://www.ansi.org>>. See also *infra* at para. 13 (describing CTIA’s plans to incorporate into its voluntary certification program a requirement that handsets be tested and categorized according to the amount of interference they cause to hearing aids based on the new ANSI standard).

¹⁵ See Verizon Comments at 4.

handset uses to maintain an optimized connection with the transmitter at the cell site, the design and filtering capabilities of the hearing aid, the amount the hearing aid detects and amplifies the audio signal, the distance of the transmitter from the hearing aid, the signal strength from the transmitter, and an individual's level of hearing loss.

8. One possible method to achieve hearing aid compatibility would be to shield the electronics of the hearing aid from the energy emitted from the transmitter.¹⁶ Depending on the type of hearing aid, shielding appears to have varying degrees of effectiveness.¹⁷ Hearing aids worn in the ear are least amenable to shielding because of their small size.¹⁸ Shielding behind-the-ear hearing aids with a metallic coating is relatively easy and apparently very effective.¹⁹ Some cochlear implant components are now shielded to reduce interference to the electronics in the implant from digital cellular signals.²⁰ Another possible method for achieving hearing aid compatibility would be to keep the transmitter at a specified distance from the hearing aid, such as with a separate earpiece or some other external component. However, the use of such external components do not appear to satisfy the statutory requirement that a telephone provide internal means for hearing aid compatibility. Ideally, a hearing aid compatible digital wireless phone would have a high degree of compatibility coupled with a low degree of interference.

9. In 1996, Section 255 of the Telecommunications Act was enacted, requiring "manufacturer[s] of telecommunications equipment or customer premises equipment [to] ensure that the equipment is designed, developed, and fabricated to be accessible to and usable by individuals with disabilities, if readily achievable," and requiring "provider[s] of telecommunications service [to] ensure that the service is accessible to and usable by individuals with disabilities, if readily achievable."²¹ Regulations implementing Section 255 have been in place for over two years.²²

10. In its request last fall, WAC urges the Commission to re-open the HAC rulemaking proceeding because of the lack of progress made toward achieving hearing aid compatibility with digital wireless telephones.²³ WAC states that while analog cellular services are an alternative for some hearing aid

¹⁶ This shielding is also known as "immunizing" the device against interference. Different hearing aids have different levels of "immunity" to interference, depending on the extent to which shielding is employed.

¹⁷ See Dana Mulvany Comments at 1 and Reply Comments at 2; Verizon Comments at 4; George DeVilbiss Reply Comments at 2-3; Ronald H. Vickery Reply Comments at 2; Jo Waldron Reply Comments at 5-6.

¹⁸ U.S. Congress, Office of Technology Assessment, *Wireless Technologies and the National Information Infrastructure*, OTA-ITC-622 at 256 (U.S. Government Printing Office, July 1995).

¹⁹ University of Oklahoma Center for the Study of Wireless Electromagnetic Compatibility, *Study of the Interaction of Wireless Phones and Hearing Aids, Phase I: Results of the Clinical Trials* (Aug. 1996) (summary available at <<http://www.ou.edu/engineering/emc>>).

²⁰ See L. Tearney, "Making Cellular Phones Compatible with the Cochlear Implants," Chapter Connections (newsletter of Cochlear Implant Association, Inc.), Vol. 1, Issue 4 at 2 (March 15, 2001).

²¹ 47 U.S.C. § 255.

²² See 47 C.F.R. §§ 6.1-6.23, 7.1-7.23; Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities, WT Docket No. 96-198, FCC 99-181, *Report and Order and Further Notice of Inquiry*, 16 FCC Rcd 6417 (1999).

²³ WAC Request at 3.

users, analog services are being displaced by digital services because of their superior quality of service, additional features, and more attractive pricing.²⁴ WAC expresses concern that people with hearing disabilities may be left without access to wireless services in the event analog services are eventually phased out.²⁵ WAC also contends that access to communications for hearing aid and cochlear implant users is threatened by the potential replacement of traditional wireline services by digital PCS devices.²⁶

11. On October 25, 2000, the Wireless Telecommunications Bureau released a Public Notice seeking comment on WAC's request to reopen the petition for rulemaking regarding hearing-aid-compatible telephones.²⁷ Consumer commenters support revocation of the exemptions in order to promote equal access to digital wireless telecommunications for hearing aid and cochlear implant users.²⁸ Industry commenters urge the Commission not to open a rulemaking, citing industry progress in the absence of governmental intervention.²⁹

III. DISCUSSION

A. Propriety of Initiating a Rulemaking

12. In accordance with our mandate under the HAC Act,³⁰ we open this proceeding to examine the issue of hearing aid compatibility for wireless public mobile communications devices. As indicated by the legislative history of the HAC Act, Congress granted telephones used with public and private mobile services a temporary exemption from the hearing aid compatibility requirements, and directed this Commission to review the exemptions periodically to determine whether they should continue in effect.³¹

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* at 3-4.

²⁷ Public Notice, "Wireless Telecommunications Bureau Seeks Comment on Request to Re-Open the Petition for Rulemaking Regarding Hearing Aid Compatible Telephones," DA 00-2402, 15 FCC Rcd 20,404 (2000).

²⁸ *See generally* AG Bell Comments; ATA Comments; Steve Barber Comments; Gene A. Bechtel Comments; COR Comments; Nancy A. Dietrich Comments; Ronnie I. Gerstein Comments; Sam Goody Comments; Joseph Gordon Comments; GLAD Comments; Richard L. Hause Comments; Shera M. Katz Comments; Neil Kran Comments; Leo A. LaPointe Comments; Dana Mulvany Comments; Nebraska Commission for the Deaf and Hard of Hearing Comments; Martha I. Nesser Comments; Linda Baker Oberst Comments; Jack O'Keeffe Comments; Helen Rohrer Comments; Eliot D. Samuelson Comments; Wendy B. Samuelson Comments; SHHH Comments; SHHH-NM Comments; SHHH-VA Comments; Brian Snyder Comments; Carolyn Snyder Comments; Catherine A. Snyder Comments; TDI Comments; Alison M. Turner Comments; Ronald H. Vickery Comments; Hermine Willey Comments; Alex Alviar Reply Comments; Diana D. Bender Reply Comments; Sharon Campbell Reply Comments; George DeVilbiss Reply Comments; Richard C. Diedrichson Reply Comments; Kelly M. Gutshall Reply Comments; Allen Ivey Reply Comments; Tressa Sloan Kentner Reply Comments; Dorri Majeska Reply Comments; Massachusetts Commission for the Deaf and Hard of Hearing Reply Comments; M.E. Wasson Moore Reply Comments; Kelly Rehbeck Reply Comments; San Francisco Hearing Impaired Professionals Reply Comments; Bob Segalman Reply Comments; Terrelle Terry Reply Comments; Jo Waldron Reply Comments; Melba Westfall Reply Comments; Ray M. Wetzel Reply Comments; Craig Woempner Reply Comments.

²⁹ *See* CTIA Comments at 2-3; TIA Reply Comments at 1; Verizon Comments at 1-2.

³⁰ 47 U.S.C. § 610(b)(2)(C).

³¹ "The Committee recognizes that certain kinds of telephones currently available cannot be made HAC today. These include telephones used with public and private mobile services. In order to keep these telephones from (continued....)

Now that the regulations implementing the statute have been in effect for over 10 years, we are opening this proceeding to consider whether it is appropriate to revoke or limit the exemptions, particularly with respect to telephones used with public mobile services.

13. We note at the outset that CTIA, supported by TIA and Verizon, asserts it is premature for the Commission to begin a rulemaking because the industry has been working on the problem, most notably by developing a standard for measuring interference between hearing aids and digital wireless telephones.³² Industry commenters indicate that progress is being made and that governmental intervention is unnecessary.³³ Verizon and TIA also argue that the Commission should not begin a rulemaking because the four statutory requirements have not been met.³⁴ CTIA states that it plans to incorporate into its voluntary certification program a requirement that handsets be tested and categorized according to the amount of interference they cause to hearing aids based on the new standard.³⁵ Under this approach, manufacturers of hearing aids would also voluntarily test those devices and consumers would “pair” a hearing aid with a wireless telephone based on their respective interference ratings.³⁶ Many consumer commenters disagree that progress made to date has been sufficient.³⁷ Many consumers express concern that, after Section 255 of the Telecommunications Act was enacted, the industry has focused only on what was cheap and easy, and that long-term solutions are no longer being pursued because they only need to provide access if doing so is “readily achievable.”³⁸

14. We note that, when the HAC Act was enacted in 1988, the Commission had not yet licensed PCS in the United States.³⁹ Recognizing the substantial expense and difficulties associated with making telephones used for public land mobile and private radio services compatible at that time, Congress created exemptions for these telephones from the hearing aid compatibility requirements it imposed on

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being pulled from the market while an exemption is sought under the new technology provision [47 U.S.C. § 610(b)(3)], the bill grants a temporary exemption for these telephones.” S.Rep. 100-391 at 8 (Comm. on Commerce, Science, and Transportation) (1988).

³² See CTIA Comments at 3, 5-8 (describing ANSI Standard C63.19, which was adopted by ANSI on April 26, 2001). See also CTIA Comments at 1-3; Verizon Comments at 6-8; TIA Reply Comments at 1.

³³ CTIA Comments at 6; Verizon Comments at 6-8.

³⁴ Verizon Comments at 2; TIA Reply Comments at 1.

³⁵ CTIA Ex Parte Presentation (Feb. 26, 2001).

³⁶ *Id.* We note that, because there are no rules requiring hearing aid manufacturers to undertake categorization of their products, this would be a voluntary effort on the part of hearing aid manufacturers.

³⁷ AG Bell Comments at 8-11 and Reply Comments at 5; Steve Barber Comments at 1; Susan Barnhill Comments at 2; Dana Mulvany Comments at 1; Jack O’Keeffe Comments at 1; SHHH Comments at 3-4, 10 and Reply Comments at 5-6; TDI Comments at 3-4; COR Reply Comments at 2; Joseph Gordon Reply Comments at 1-2; Leo LaPointe Reply Comments at 1; Massachusetts Commission for the Deaf and Hard of Hearing Reply Comments at 1; Jo Waldron Reply Comments at 2.

³⁸ Sharon Campbell Reply Comments at 1; Dana Mulvany Reply Comments at 2. See also Richard L. Hause Comments at 1; Eliot Samuelson Comments at 1; Wendy B. Samuelson Comments at 1.

³⁹ The Commission began its investigation of broadband PCS in 1989 and, in 1994, it established a plan to allocate spectrum and award licenses by auction. See Amendment of the Commission’s Rules to Establish New Personal Communications Services, Memorandum Opinion and Order, GEN Docket No. 90-314, 9 FCC Rcd 4957 (1994).

virtually all other telephones.⁴⁰ However, Congress clearly sought to ensure reasonable access to telephone service for hard-of-hearing individuals “to the fullest extent made possible by technology and medical science.”⁴¹ Among Congress’s specific findings were that “anticipated improvements in both telephone and hearing aid technologies promise greater access in the future” and “universal telephone service for hearing-impaired persons will lead to greater employment opportunities and increased productivity.”⁴² Congress contemplated that, as telephones used with mobile services moved from being “specialized second phones” to substitutes for wireline telephones, the exemptions should be removed.⁴³

15. In the time since the passage of the HAC Act, public mobile services and devices have flourished and have become indispensable communications tools for many Americans.⁴⁴ During this time, the industry has made some progress in the area of accessibility for individuals with hearing disabilities but, based on the record in this proceeding, many consumers continue to have difficulty finding a wireless telephone that works with their hearing aid or cochlear implant. In light of the changes that have occurred since the initial promulgation of the hearing aid compatibility rules, and in light of our statutory mandate that we “periodically assess the appropriateness of the exemptions” provided in the Act,⁴⁵ we are opening this proceeding to carefully consider the issue and determine the validity of continuing the exemption with respect to wireless public mobile communications devices used with public mobile services. Therefore, we seek comment on the appropriateness of continuing in effect the exemption for these devices from the hearing aid compatibility requirements provided in our regulations. We seek comment on the extent to which we should or must limit or revoke the exemption. In addition, because we may determine that the exemptions should be limited so that public mobile services telephones are subject to the hearing aid compatibility requirements, we seek comment on the best way to phase in hearing aid compatibility in the covered equipment and services, and the time needed for implementation. We seek comment on these issues, which we address in greater detail below.

B. Statutory Requirements

16. According to the statute, once technical standards for hearing aid compatibility are established, covered telephones must provide internal means for effective use with hearing aids that are designed to be compatible with telephones that meet such technical standards.⁴⁶ This portion of the statute appears to require several things. First, it requires the establishment of *technical standards* governing wireless-hearing aid compatibility. Although the wireless industry has developed a standard that can be used to measure interference between wireless telecommunication devices and hearing aids, procedures for testing these devices, and a method by which wireless devices may be paired with hearing aids, these

⁴⁰ See H.Rep. 100-674 at 9 (Comm. On Energy and Commerce) (1988); S.Rep.100-391, reprinted in 1988 U.S.C.C.A.N. 1345 (1988); 47 U.S.C. § 610(b)(2).

⁴¹ Pub.L. 100-394, Section 2 (Aug. 16, 1988).

⁴² *Id.*

⁴³ H. Rep. 100-674 at 9 (“As changes in technology or life-style make [cordless and cellular phones] necessities, the FCC may remove the exemption.”).

⁴⁴ See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993: Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Sixth Report, FCC 01-192, 16 FCC Rcd 13,350 at 13,353-56 (2001) (*Sixth Competition Report*).

⁴⁵ 47 U.S.C. § 610(b)(2)(C).

⁴⁶ 47 U.S.C. § 610(b)(1).

standards do not appear to constitute “established technical standards for hearing aid compatibility,” as required by the statute.⁴⁷ Therefore, under the statutory provision, we tentatively conclude that, in the event we remove or limit the exemption for public mobile services, the industry will be required to develop technical standards for compatibility between covered wireless devices and hearing aids.⁴⁸ We seek comment on this interpretation.

17. Second, the statute requires that, once these standards are established, the wireless industry will be responsible for providing *internal means* for making the covered telephones compatible with hearing aids.⁴⁹ This means that compatibility must be provided within the telephone, and not through external, add-on components. This responds to the desire of hearing aid users to be able to use wireless devices without cumbersome external components.⁵⁰ It is important to note, however, that new models of hands-free wireless telephones may have various components – an earphone, microphone, and transceiver – which are separated, but which remain integral components of the wireless device, and which are generally necessary for the device’s use by the general population. One possible interpretation of the term “internal means” would be to require compatibility within at least one of these integral components of the device. Under this interpretation, where use of one of these separate components is not integral for general use of the device, but specifically needed only for the population of hearing aid or cochlear implant users, such component would be considered “external” to the phone. Incorporation of compatibility in such an external device would not bring the telephone into compliance with the statute. We seek comment on this interpretation of “internal means” and other possible interpretations.

18. Third, the statute appears to limit the compatibility requirement to only “hearing aids that are *designed to be compatible* with telephones that meet established technical standards for hearing aid compatibility.”⁵¹ On its face, this indicates that there may be some instances in which a hearing aid is *not* designed to be compatible with wireless telephones. We seek comment on whether this is, in fact, the case and the implications for our proceeding.

C. Statutory Criteria for Revocation or Limitation

19. The HAC Act established four criteria that, if satisfied, would compel the Commission to “revoke or otherwise limit” the exemptions.⁵² We seek comment on whether the statutory criteria for revocation or limitation of the exemptions to the rule have been satisfied. Although the record compiled in response to the Public Notice provided some information pertinent to this determination, we seek additional information that would permit us to make a reasoned decision on whether there is continued

⁴⁷ *Id.*

⁴⁸ See 47 U.S.C. § 610(c) (authorizing the Commission to establish or approve such technical standards as are required to enforce the hearing aid compatibility requirements).

⁴⁹ *Id.*

⁵⁰ See AG Bell Comments at 3-4; SHHH Comments at 9; TDI Comments at 6; Steve Barber Comments at 1; Nancy Dietrich Comments at 1; Gary Ericson Comments at 1; Joseph Gordon Comments at 1; Wendy B. Samuelson Comments at 1; Dana Mulvany Comments at 1 and Reply Comments at 3; George DeVilbiss Reply Comments at 1; Dorri Majeska Reply Comments at 2; Kelly Rehbeck Reply Comments at 1; Ronald H. Vickery Reply Comments at 4; Jo Waldron Reply Comments at 3-4.

⁵¹ 47 U.S.C. § 610(b) (emphasis added).

⁵² 47 U.S.C. § 610(b)(2)(C).

utility in maintaining the exemptions in whole or in part and whether a solution is technologically feasible.

1. Public Interest

20. Under the language of the statute, we seek comment first on whether revoking or limiting the exemptions is in the public interest.⁵³ Industry commenters argue that alternatives are available to persons with hearing disabilities, such as wireless analog services and external devices that permit hearing aid users to utilize wireless digital services.⁵⁴ For example, some equipment manufacturers have developed neckloop sets as a short-term solution that make it possible for people who have telecoils in their hearing aids to use digital wireless telephones.⁵⁵ Consumer advocates assert that analog services are not a satisfactory alternative because they are difficult to find, suffer from occasional static and disconnection, are not as secure as digital services, do not offer nearly as many features, do not conserve battery life as well as digital, are more expensive, and are on networks that are not as well maintained and cannot accommodate rapid subscriber growth.⁵⁶ We note that, while the Commission's rules currently require cellular systems to provide analog service, the Commission is considering whether to eliminate or modify this rule.⁵⁷ Consumers and consumer groups also express dissatisfaction with external devices, such as neckloops, because they are expensive, cumbersome, and inconvenient.⁵⁸ Neckloops are not an option for many hearing aid users because only about 20 percent of hearing aids contain a telecoil, which is necessary for electromagnetic coupling with the neckloop.⁵⁹ In addition, according to TDI, because not all digital wireless telephones will work with all accessories, hearing aid users have a limited choice of telephone models and, often, service providers, putting them at a practical

⁵³ 47 U.S.C. § 610(b)(2)(C)(i).

⁵⁴ See Verizon Comments at 6-7; CTIA Comments at 8-9; TIA Reply Comments at 3.

⁵⁵ See CTIA Comments at 8; Verizon Comments at 6-7; TIA Reply Comments at 3.

⁵⁶ TDI Comments at 7; SHHH Comments at 10; Susan Barnhill Comments at 2; COR Comments at 2; Wendy B. Samuelson Comments at 2; Ex Parte Submission of George DeVilbiss (Jan. 18, 2001) (because analog is not spectrum-efficient, it results in poor service and interference).

⁵⁷ See 47 C.F.R. §§ 22.915, 22.933; 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, Notice of Proposed Rulemaking, WT Docket No. 01-108, FCC 01-153, 16 FCC Rcd 11,169 at 11,181-82 (2001) (seeking comment on the potential effect of eliminating analog service requirement on people with hearing disabilities).

⁵⁸ AG Bell Comments at 3-4; SHHH Comments at 9; TDI Comments at 6; Steve Barber Comments at 1; Nancy Dietrich Comments at 1; Gary Ericson Comments at 1; Joseph Gordon Comments at 1; Wendy B. Samuelson Comments at 1; Dana Mulvany Comments at 1 and Reply Comments at 3; George DeVilbiss Reply Comments at 1; Dorri Majeska Reply Comments at 2; Kelly Rehbeck Reply Comments at 1; Ronald H. Vickery Reply Comments at 4; Jo Waldron Reply Comments at 3-4. Among other things, consumers assert that external devices are awkward to use, particularly for elderly persons who suffer from arthritis or others with limited dexterity, and the time needed to attach the external device could be critical in the event of an emergency. See Nancy Dietrich Comments at 1; Dana Mulvany Comments at 1. Several commenters point out that requiring hearing aid users to bear the added expense of an external device may be particularly burdensome, in light of the fact that many people with severe hearing loss are more likely to be unemployed and have limited budgets than people in the general population. See Survey of Income and Program Participation, 1991-1992, U.S. Dept. of Commerce, ESA, Bureau of Census.

⁵⁹ See AG Bell Comments at 3-4.

and economic disadvantage.⁶⁰ As a result, many consumers consider these external devices unsuitable as a long-term solution.⁶¹ Moreover, as we have already indicated, it does not appear that external components such as neck loops can satisfy the statutory requirement that compatibility must be provided through “internal means.”⁶²

21. As noted by some parties, the Commission’s Fifth Competition Report on Commercial Mobile Services contains evidence that wireless analog service is declining and is being supplanted by more efficient, feature-rich digital services that are offered at competitive prices.⁶³ It appears this trend is likely to continue. As a result, the wireless options for people who are hard of hearing are becoming increasingly limited, while choices for people who are able to use digital wireless devices are growing. Revocation or limitation of the exemptions would benefit people with hearing disabilities by allowing them access to digital wireless services, enabling them to more fully participate in employment opportunities and daily life.⁶⁴ Requiring public mobile service telephones to be hearing aid compatible could provide hearing aid users with additional communications choices at a lower cost because of the efficiencies of digital services. For these reasons, we tentatively conclude that limiting the exemptions to require devices used with public mobile service to be hearing aid compatible would serve the public interest. We seek comment on this tentative conclusion.

2. Effect on People With Hearing Disabilities

22. We seek comment on whether the continuation of the exemptions without revocation or limitation would have an adverse effect on people with hearing disabilities.⁶⁵ As commenters have noted, digital wireless telephones offer many features that would benefit deaf and hard-of-hearing individuals, including short messaging service, email, and Internet access.⁶⁶ It also can allow employees with hearing aids to work in the field and communicate with dispatchers and co-workers, greatly enhancing their ability to find employment opportunities and participate and communicate in the modern world.⁶⁷

⁶⁰ TDI Comments at 6.

⁶¹ AG Bell Comments at 3-4; SHHH Comments at 9; TDI Comments at 6; Steve Barber Comments at 1; Nancy Dietrich Comments at 1; Gary Ericson Comments at 1; Joseph Gordon Comments at 1; Dana Mulvany Comments at 1 and Reply Comments at 3; Kelly Rehbeck Reply Comments at 1; Ronald H. Vickery Reply Comments at 4; Jo Waldron Reply Comments at 3-4.

⁶² See para. 17, *supra*; 47 U.S.C. § 610(b)(1).

⁶³ See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993: Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Fifth Report, FCC 00-289, 15 FCC Rcd 17,660 at 17,672-73 (2000) (*Fifth Competition Report*); WAC Request at 3; TDI Comments at 7-8; COR Comments at 2; SHHH Comments at 6. See also *Sixth Competition Report*, 16 FCC Rcd 13,350 at 13,374-76 (describing continued rise of digital).

⁶⁴ TDI Comments at 4-5.

⁶⁵ 47 U.S.C. § 610(b)(2)(C)(ii).

⁶⁶ Dana Mulvany Comments at 1; TDI Comments at 5.

⁶⁷ TDI Comments at 5; Shera M. Katz Comments at 1; Gene A. Bechtel Comments at 2; Gary Ericson Comments at 1; Sam Goody Comments at 1; Wendy B. Samuelson Comments at 1; Linda Baker Oberst Comments at 1; Ronald H. Vickery Comments at 1-2; Kelly Gutshall Reply Comments at 1; San Francisco Hearing Impaired Professionals Reply Comments at 1.

However, as long as the exemptions to the hearing aid compatibility rule continue in effect, the incompatibility between digital wireless devices and hearing aids and cochlear implants will continue to prevent users of these devices from having full access to digital wireless services and products. Many consumers have commented in this proceeding and have submitted complaints concerning their difficulties using digital wireless telephones. While external accessories are available that, in some situations, may allow access to some hearing aid or cochlear implant users, as we have discussed, these accessories are not universally available to or usable by all people with hearing disabilities, nor would they satisfy the statutory requirement that hearing aid compatibility must be provided through internal means.⁶⁸

23. With the growing prevalence of wireless digital telephones and declining availability of analog telephones, continuing the exemption for public mobile services would severely limit the communications options available to people with hearing disabilities. In addition to helping to ensure wireless access for the more than 28 million Americans with hearing loss, a number which continues to grow with the “graying” of the population,⁶⁹ limitation or revocation of the exemptions would also benefit future generations of people with hearing disabilities as well.⁷⁰ For these reasons, we tentatively conclude that continuation of the exemption without limitation or revocation would have an adverse effect on individuals with hearing disabilities. We seek comment on these tentative conclusions.

3. Technological Feasibility

24. We seek comment on whether compliance with the requirements of the hearing aid compatibility rule is technologically feasible for the telephones to which the exemption applies. To this end, we seek empirical data based on test results or other specific information concerning the technological feasibility of making wireless telephones hearing aid compatible. If testing has not been conducted, we seek comment on the types and nature of testing that would empirically demonstrate the feasibility of achieving such compatibility. According to the legislative history of the HAC Act, technological infeasibility means “impossible” or “undoable.”⁷¹ The record developed in response to the Public Notice does not contain a high level of detail on this issue. A few consumer commenters suggest possible methods of achieving hearing aid compatibility, but they themselves acknowledge that further testing is needed. TIA and Verizon Wireless contend that technology has not yet advanced to the point where digital wireless handsets can be made hearing aid compatible with the vast majority of hearing aids.⁷²

⁶⁸ See paras. 17 and 20, *supra*.

⁶⁹ COR Comments at 2. According to SHHH, approximately 6 million people use hearing aids and 20,000 people have cochlear implants, and one in 10 of the population has some degree of hearing loss, which is increasing as a result of noise exposure and the aging of society. SHHH Comments at 2.

⁷⁰ According to some commenters, children with hearing loss are now being identified within hours of birth and an increasing number are benefiting from dramatic improvements in hearing aids and cochlear implants. As a result, a new generation of children with significant hearing disabilities is growing up with the capacity to use telephones and would benefit from access to wireless services. AG Bell Comments at 7-8. See also Alison M. Turner Comments at 1; Jo Waldron Reply Comments at 7.

⁷¹ S.Rep. 100-391 at 11 (Comm. on Commerce, Science, and Transportation) (1988). As noted by TDI, the standards used to determine whether the exemptions are warranted are the same as those used to determine whether exemptions may be granted for new technologies. TDI Comments at 3 (citing S. Rep. 100-391).

⁷² TIA Reply Comments at 3; Verizon Comments at 2, 4. As we have noted, the statutory standard suggests that the hearing aid compatibility requirement does not apply to all hearing aids. See para. 18, *supra* (discussing (continued....))

25. On the other hand, industry commenters indicate that the newly developed interference standard will facilitate the categorization of wireless products and hearing aids to make these devices usable together. Industry commenters assert that, because hearing aids are uniquely fitted to optimize the hearing of the user, designs vary and make a “one size fits all” solution or standard difficult.⁷³ These commenters also point out that the design of the hearing aid is beyond the control of the wireless industry, and that hearing aid manufacturers must play a role in achieving compatibility between hearing aids and digital wireless devices.⁷⁴ As AG Bell notes in its comments, hearing aid manufacturers have attempted to respond to the digital incompatibility problem by boosting the interference immunity of most new models of hearing aids.⁷⁵

26. We seek comment on ways in which hearing aid manufacturers, digital wireless telephone manufacturers, and service providers can work together to develop long-term compatibility solutions. In addition, we seek comment on whether the “pairing” approach suggested by industry commenters would be satisfactory to hearing aid users and whether it would satisfy the technological feasibility condition such that the Commission could limit the exemptions.⁷⁶ We also seek comment on whether this pairing approach, which is intended to reduce the interference between digital wireless devices and hearing aids, will resolve the compatibility issue.

27. We also seek comment more generally on possible methods of achieving compatibility between digital wireless telephones and hearing aids covered by the statute.⁷⁷ For example, it would be useful to know whether there are ways to separate or shield the transmitter portion of a digital wireless telephone from the user’s hearing aid in order to make the two components usable together. As noted by Verizon, given most customers’ desire to own small portable wireless devices, the public interest would not be served by requiring manufacturers to separate the earpiece and the transmitter in all digital wireless telephones in the name of hearing aid compatibility.⁷⁸ Moreover, this physical separation would prevent the compatibility from being provided internally, as required by the statute.⁷⁹ As a result, we seek comment on potential solutions that would make wireless devices usable by persons with hearing aids without resorting to cumbersome or additional external devices.

(Continued from previous page) _____

statute’s requirement that compatibility must be provided only with respect to hearing aids designed to be compatible with telephones meeting established technical standards for hearing aid compatibility).

⁷³ CTIA Comments at 6; TIA Reply Comments at 2.

⁷⁴ Verizon Comments at 6.

⁷⁵ AG Bell Comments at 4.

⁷⁶ See para. 13, *supra* (describing approach proposed by CTIA in which hearing aids and digital wireless telephones would be “paired” for effective use).

⁷⁷ We note that the legislative history of the exemption indicates that induction is not the sole method of achieving hearing aid compatibility with telephones. See H.Rep. 100-674 at 12 (definition of hearing aid compatibility is flexible and allows for other methods of compatibility).

⁷⁸ Verizon Comments at 7-8.

⁷⁹ 47 U.S.C. § 610(b)(1). See para. 17, *supra* (discussing internal means requirement).

4. Effect Upon Marketability of Telephones

28. Fourth, we seek comment on whether compliance with the requirements of the rule would increase costs to such an extent that the telephones to which the exemption applies could not be successfully marketed.⁸⁰ With respect to this criterion, we seek comment on the costs required for service providers and telephone manufacturers to make their products hearing aid compatible. Industry parties should address the extent to which costs would be increased and at what point such cost increases would begin to affect the marketability of covered telephones. Considering the learning curve effects and the economies of scale that would be involved with implementing hearing aid compatibility in the telephones, parties should estimate how quickly the cost of complying with the requirement could be expected to fall.⁸¹ How substitutable are alternative products that would not be subject to the hearing aid compatibility requirements? How price sensitive would the market be as a result of the changes?

29. As required by Section 610(e) of the HAC Act, we seek comment on the costs and benefits to all telephone users, including persons with and without hearing disabilities, and we seek comment on ways in which we can encourage the use of currently available technology and not discourage or impair the development of improved technology.⁸² For example, we seek comment on whether there are ways to phase in implementation of the hearing aid compatibility requirements to minimize the cost impact so that telephone costs stay low for all customers, including those with and without hearing disabilities. With respect to the benefits to all telephone users, we seek comment on whether the incorporation of hearing aid compatibility into public mobile service telephones would benefit users without hearing disabilities. We also seek comment on ways in which hearing aid compatibility could be incorporated into the covered telephones with currently available technological means so as to avoid or minimize redirecting industry resources away from the development of new technology. In addition, we seek comment on ways in which the Commission can be assured that, as technology develops, hearing aid compatibility will be considered in the design, development, and manufacturing of wireless handsets.

D. Scope of the Exemptions

30. The HAC Act specifically exempts telephones used with public mobile services and private radio services, pending Commission revocation or limitation of such exemption.⁸³ We note that the petitioners seek to revoke the exemption only insofar as it applies to broadband PCS devices capable of voice transmission or reception.⁸⁴ In 1994, Congress amended Section 332 of the Communications Act of 1934, replacing private and public mobile service categories with two new categories of mobile services,

⁸⁰ 47 U.S.C. § 610(b)(2)(C)(iv); 47 C.F.R. § 68.4(a)(4)(iv).

⁸¹ For example, since the implementation the Television Decoder Circuitry Act of 1990, P.L. 101-431, 47 U.S.C. § 303(u) (TDCA), the cost of television-captioning decoders have dropped substantially. *See* In the Matter of Closed Captioning Requirements for Digital Television Receivers; Closed Captioning and Video Description of Video Programming, Implementation of Section 305 of the Telecommunications Act of 1996, Video Programming Accessibility, 15 FCC Rcd 16788, 16793-94 (para. 14) (2000). The TDCA requires all televisions with screens larger than 13 inches to have the built-in capability to display closed captioning television transmissions. 47 U.S.C. §§ 303(u), 330(b).

⁸² 47 U.S.C. § 610(e). *See also* CTIA Comments at 5.

⁸³ 47 U.S.C. § 610(b)(2)(A)(i) & (ii). The Commission's rules broadly define public mobile services as "radio services in which common carriers are authorized to offer and provide mobile and related fixed radio telecommunication services for hire to the public." *See* 47 C.F.R. § 22.99.

⁸⁴ HEAR-IT NOW Petition at 1; WAC Request at 1, 3.

commercial mobile radio service (CMRS) and private mobile radio service (PMRS), and treating CMRS providers, which includes PCS and cellular service providers, as common carriers.⁸⁵ As we have done in the context of other proceedings, we believe that we should consider the hearing aid compatibility exemption with respect to telephones used with all wireless systems to the extent that they offer real-time, two-way switched voice service that are interconnected with the public switched network, and utilize an in-network switching facility which enables the provider to reuse frequencies and accomplish seamless handoffs of subscriber calls.⁸⁶ Therefore, in addition to telephones used with broadband PCS,⁸⁷ we here seek comment on our treatment of telephones used with other public mobile services: Cellular Radio Telephone Service,⁸⁸ as well as Geographic Area Specialized Mobile Radio (SMR) Services and Incumbent Wide Area SMR Licensees in the 800 MHz and 900 MHz bands.⁸⁹

31. In addition, we seek comment on whether we should limit the exemptions with respect to fewer than all telephones used with public mobile services.⁹⁰ For instance, could the exemption be limited so that manufacturers and service providers must offer one or more digital wireless telephones for use with public mobile services that are hearing aid compatible, but allow other telephones to remain non-compatible? Verizon has argued that, because many customers desire small portable wireless devices, it may not be desirable to require manufacturers to separate the earpiece and the transmitter in all digital wireless telephones in order to make them internally compatible with hearing aids.⁹¹ Consumer Dana Mulvany asserts that many customers actually prefer larger multi-function phones with a larger screen to display wireless Internet browsing and two-way e-mail paging features.⁹² We seek comment on whether a modification of the exemption that would result in the compatibility of at least some digital telephones would be preferable to maintaining or eliminating the exemptions in their entirety. A “product line” approach may not be desirable if it resulted in limitation of consumers with hearing disabilities to limited choices among “specialized” products. At the same time, there may be costs to requiring that every wireless telephone be compatible with every hearing aid, if it would have the effect of preventing the manufacture of certain kinds of telephones that would otherwise be desirable for many consumers. We seek comment on approaches that would provide a wide variety of choices for all consumers, including, in particular, consumers with hearing disabilities. We also seek comment on whether a “product line” approach would meet the statutory requirements of the HAC Act regarding whether the exemption should be eliminated, limited, or continued, including whether a “product line” approach would be in the public interest. We are cognizant that such an approach was rejected in the context of our proceeding

⁸⁵ See Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, Second Report and Order, 9 FCC Rcd 1411 (1994). We note that “commercial mobile radio service” is defined as a mobile service that is: “(a)(1) provided for profit . . . (2) An interconnected service; and (3) Available to the public, or to such classes of eligible users as to be effectively available to a substantial portion of the public; or [the functional equivalent thereof].” See 47 C.F.R. § 20.3.

⁸⁶ See 47 C.F.R. § 20.18(a) (identifying carriers subject to E911 rules); 47 C.F.R. § 52.21(c) (identifying carriers subject to local number portability rules).

⁸⁷ Broadband PCS is described in Part 24, Subpart E of our rules, 47 C.F.R. §§ 24.200-24.253.

⁸⁸ Cellular Radio Telephone Service is described in Part 22, Subpart H of our rules, 47 C.F.R. §§ 22.900-22.967.

⁸⁹ These services are described in Part 90, Subpart S of our rules, 47 C.F.R. §§ 90.601-90.699.

⁹⁰ See discussion of statutory “internal means” requirement, *supra* para. 17.

⁹¹ Verizon Comments at 7-8.

⁹² Dana Mulvany Reply Comments at 4.

implementing Section 255 of the Telecommunications Act of 1934, as amended, in which we determined that a universal design approach was more appropriate under the readily achievable statutory standard.⁹³

E. Implementation Issues

32. In the event we decide to revoke or limit the exemptions, wireless service providers, handset manufacturers and hearing aid manufacturers will need to work together to achieve hearing aid compatibility. We expect that changes to digital wireless telephones and, possibly, hearing aids will be required, which will take time and may not be best accomplished by a “flash cut”-type of implementation. We seek comment on whether the best way to implement hearing aid compatibility in the covered telephones is a phased-in approach or some other method. Those parties that support a phased-in approach should provide specific suggestions on what should be included within a phase-in plan. We seek comment on how much time will be necessary and what would be a reasonable date to expect parties to begin complying with the hearing aid compatibility requirements. In addition, we seek comment on ways in which the Commission can stay informed on progress toward compliance by both the wireless industry and the hearing aid manufacturing industry. For example, should we impose a reporting requirement on affected entities to facilitate monitoring and the exchange of information between the two industries? If so, on whom should we impose the requirement? We seek comment on the frequency of these reports and what information should be included in them. In order to help the Commission monitor activities of the industries involved, it seems appropriate to require quarterly reports that provide information about ongoing testing and other pertinent information.

33. With respect to any implementation plan, we seek comment on what steps will be necessary to achieve hearing aid compatibility. Parties should estimate the amount of time that will be needed for each step, as well as any additional information that would be relevant to an appropriate effective date for compliance. In addition, commenters should discuss how an implementation plan might build on efforts already undertaken by CTIA to categorize handsets and hearing aids.⁹⁴ A number of consumer advocates have commented on the need to train retail personnel in order to ensure that people with hearing disabilities are informed regarding their options with respect to wireless telephone products and services.⁹⁵ We note that Section 6.11(c) of the Commission’s rules requires manufacturers and service providers to consider accessibility issues in developing training programs.⁹⁶ We seek input from the industry on what actions can be taken to ensure that this training takes place.

34. Finally, we note that the complaint procedures set forth in Subpart E of Part 68 of the Commission’s rules⁹⁷ apply to complaints under the Commission’s rules implementing the HAC Act. In

⁹³ See Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities, WT Docket No. 96-198, FCC 99-181, *Report and Order and Further Notice of Inquiry*, 16 FCC Rcd 6417, 6440-41 (1999).

⁹⁴ See *supra* paras. 13 and 16.

⁹⁵ See AG Bell Comments at 9-10; Tressa Sloan Kentner Reply Comments at 1; Jo Waldron Reply Comments at 4-5.

⁹⁶ See 47 C.F.R. § 6.11(c) (in developing or incorporating training programs, requiring consideration of (1) accessibility requirements of individuals with disabilities; (2) means of communicating with individuals with disabilities; (3) commonly used adaptive technology used with the manufacturer’s products; (4) designing for accessibility; and (5) solutions for accessibility and compatibility).

⁹⁷ 47 C.F.R. Part 68, Subpart E.

particular, Section 68.414 delegates enforcement of the Commission's hearing aid compatibility rules to those states that adopt these rules and provide for their enforcement.⁹⁸ Where states do not adopt and enforce these rules, the Commission is responsible for doing so, via the informal complaint procedures in Sections 68.415 through 68.420⁹⁹ and the formal complaint procedures in Sections 68.400 through 68.412.¹⁰⁰ In the event that we revoke or limit the exemptions to the HAC Act for wireless phones, we seek comment on whether we should modify these complaint procedures as they apply to wireless phones.¹⁰¹

F. Other Issues

35. In light of the fact that we are reviewing the exemptions to the hearing aid compatibility rule for the first time, we seek comment on whether there are additional steps the Commission should take to implement the HAC Act. For example, this proceeding presents an opportunity for us to evaluate the exemption under the HAC Act for telephones used with private radio services, although the petitioners have focused primarily upon PCS.¹⁰² In addition, we note that the temporary exemption granted by Congress in the HAC Act for cordless telephones terminated by the terms of the statute August 17, 1991, and we seek comment on the status and the nature of the compliance efforts with that mandate.¹⁰³ We seek comment on these issues and any other issues associated with hearing aid compatibility, particularly as it concerns telephones used with wireless services.

IV. PROCEDURAL MATTERS

A. Ex Parte Rules

36. Pursuant to Section 1.1206 of the Commission's ex parte rules, 47 C.F.R. § 1.1206, this rulemaking proceeding proposing the amendment of the Commission's rule governing hearing aid compatible telephones is a permit-but-disclose proceeding. Provided they are disclosed in accordance with the Commission's rules, ex parte presentations are permitted, except during the Sunshine Agenda period.

B. Filing Procedures

37. Pursuant to Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on this Notice on or before January 11, 2002, and reply comments on or before February 11, 2002. Comments and reply comments should be filed in WT Docket No. 01-

⁹⁸ 47 C.F.R. § 68.414.

⁹⁹ 47 C.F.R. §§ 68.415 – 68.420. *See* 2000 Biennial Regulatory Review of Part 68 of the Commission's Rules and Regulations, CC Docket No. 99-216, Report and Order, 15 FCC Rcd 24,944, 24,988-90 (2000) (incorporating into Part 68 informal complaint procedures adopted pursuant to 47 U.S.C. § 255).

¹⁰⁰ 47 C.F.R. §§ 68.400 – 68.412.

¹⁰¹ For instance, we note that the preemption of state regulation of market entry and rates under Section 332 of the Communications Act applies to wireless services but not to wireline services. 47 U.S.C. § 332(c)(3). Any delegation to the states of authority to enforce the HAC Act with respect to wireless phones must be consistent with Section 332.

¹⁰² *See* 47 U.S.C. § 610(b)(2)(A)(ii); HEAR-IT NOW Petition at 1; WAC Request at 1, 3.

¹⁰³ *See* 47 U.S.C. § 610(b)(2)(A)(iii).

309. All relevant and timely filings will be considered by the Commission before final action is taken in this proceeding. To file formally in this proceeding, interested parties must file an original and four copies of each comment or reply comment. Commenters who wish each Commissioner to receive personal copies of their submissions must file an original and nine copies of each comment and reply comment. Comments and reply comments must be directed to the Office of the Secretary, Federal Communications Commission, 445 12th St., S.W., Room TW- A325, Washington, D.C. 20554. Copies of all comments also should be provided to (1) the Commission's duplicating contractor, Qualex International, Portals II, 445 12th Street, SW, Room CY-B402, Washington, DC, 20554, and (2) Policy Division, Wireless Telecommunications Bureau, Federal Communications Commission, 445 12th Street, S.W., Washington, D.C. 20554.

38. Comments may also be filed using the Commission's Electronic Comment Filing System (ECFS).¹⁰⁴ Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, only one copy of an electronic submission must be filed. Parties may also submit an electronic comment by Internet e-mail. To obtain filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message: "get form <your e-mail address>". A sample form and directions will be sent in reply. Or you may obtain a copy of the ASCII Electronic Transmittal Form (FORM- ET) at <<http://www.fcc.gov/e-file/email.html>>.

39. Comments and reply comments will be available for public inspection during regular business hours at the FCC Reference Information Center, Room CY-A257, at the Federal Communications Commission, 445 12th St., S.W., Washington, D.C. 20554. Copies of comments and reply comments are available through the Commission's duplicating contractor: Qualex International, Portals II, 445 12th Street, SW, Room CY-B402, Washington, DC, 20554, telephone 202-863-2893, facsimile 202-863-2898, or via e-mail at qualexint@aol.com. This Notice of Proposed Rulemaking can be found on the Consumer Information Bureau, Disabilities Rights Office home page at <<http://www.fcc.gov/cib/dro/hearing.html>>.

C. Regulatory Flexibility Act

40. Pursuant to the Regulatory Flexibility Act, 5 U.S.C. § 603, the Initial Regulatory Flexibility Act Analysis is set forth at Appendix B. We request written public comments on the Initial Regulatory Flexibility Analysis. These comments must be filed in accordance with the same filing deadlines as the comments on the rest of the Notice of Proposed Rule Making, but they must have a separate and distinct heading designating them as responses to the Initial Regulatory Flexibility Analysis. The Commission's Consumer Information Bureau, Reference Information Center, shall send a copy of this Notice of Proposed Rule Making, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration, in accordance with the Regulatory Flexibility Act.

D. Paperwork Reduction Act

41. This Notice contains either a proposed or modified information collection. As part of our continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this Notice, as required by the Paperwork Reduction Act of 1995.¹⁰⁵ Public and agency comments are due 60 days from the date of publication of this Notice in the Federal Register, and OMB

¹⁰⁴ See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24,121 (1998).

¹⁰⁵ Pub. L. No. 104-13.

comments are due 120 days from the date of publication of this Notice in the Federal Register. Comments should address:

- Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility.
- The accuracy of the Commission's burden estimates.
- Ways to enhance the quality, utility, and clarity of the information collected.
- Ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

42. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judy Boley, Federal Communications Commission, Room 1-C804, 445 Twelfth Street, S.W., Washington, D.C. 20554, or via the Internet to jboley@fcc.gov, and to Ed Springer, OMB Desk Officer, 10236 NEOB, 725 – 17th Street, N.W., Washington, D.C. 20503, or via the Internet to Edward.Springer@omb.eop.gov.

E. Ordering Clauses

43. Authority for the issuance of this Notice of Proposed Rule Making is contained in Sections 4(i), 303(r) and 710(a) and (b) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r) and 610(a) and (b).

44. IT IS ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rule Making, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

F. Further Information

45. For further information, contact Mindy Littell, Wireless Telecommunications Bureau, Policy Division, at (202) 418-1310 (voice) or (202) 418-1169 (TTY); or Dana Jackson, Consumer Information Bureau, Disabilities Rights Office, (202) 418-2517 (voice) or 418-7898 (TTY).

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary

APPENDIX A**LIST OF COMMENTERS AND ABBREVIATIONS****Parties Filing Comments on the Public Notice**

Alexander Graham Bell Association for the Deaf and Hard of Hearing [AG Bell]
Alliance for Technology Access [ATA]
American National Standards Institute (ANSI) Accredited Standards Committee 63 for Electromagnetic Compatibility (EMC) standards [ANSI ASC 63]
Steve Barber
Susan Barnhill
Gene A. Bechtel
Cellular Telecommunications & Internet Association (prior to January 1, 2001, known as Cellular Telecommunications Industry Association) [CTIA]
Council of Organizational Representatives on National Issues Concerning People who are Deaf or Hard of Hearing [COR]
Nancy A. Dietrich
Gary Ericson
Ronnie I. Gerstein
Sam Goody
Joseph Gordon
Greater Los Angeles Council on Deafness, Inc.
Richard L. Hause
Clyde Hostetter
Shera M. Katz
Neil Kran
Leo A. LaPointe
Charlene MacKenzie
Dana Mulvany
Linda Munsey
Nebraska Commission for the Deaf and Hard of Hearing
Martha I. Nesser
Linda Baker Oberst
Jack O'Keeffe
Peggy Rakow
Helen F. Rohrer
Eliot D. Samuelson
Wendy B. Samuelson
Self Help for Hard of Hearing People [SHHH]
Self Help for Hard of Hearing People New Mexico State Association [SHHH – NM]
Self Help for Hard of Hearing People Virginia State Association [SHHH-VA]
Brian Snyder
Carolyn Snyder
Catherine A. Snyder
Telecommunications for the Deaf, Inc. [TDI]
Alison M. Turner
Verizon Wireless
Ronald H. Vickery
Hermine Willey

Parties Filing Reply Comments on the Public Notice

Alex Alviar
Alexander Graham Bell Association for the Deaf and Hard of Hearing [AG Bell]
Gene A. Bechtel
Francis Beecher
Diana D. Bender
Sharon Campbell
Council of Organizational Representatives on National Issues Concerning People who are Deaf of Hard
of Hearing [COR]
George DeVilbiss
Richard C. Diedrichson
Joseph Gordon
Kelly M. Gutshall
Allen Ivey
Tressa Sloan Kentner
Leo A. LaPointe
Dorri Majeska
Massachusetts Commission for the Deaf and Hard of Hearing
M.E. Wasson Moore
Dana Mulvany
Nebraska Commission for the Deaf and Hard of Hearing
Jack O'Keeffe
Kelly Rehbeck
San Francisco Hearing Impaired Professionals
Bob Segalman
Self Help for Hard of Hearing People [SHHH]
Telecommunications Industry Association [TIA]
Terrelle Terry
Ronald H. Vickery
Jo Waldron
Melba J. Westfall
Ray M. Wetzel
Craig Woempner

APPENDIX B**INITIAL REGULATORY FLEXIBILITY ANALYSIS**

As required by Section 603 of the Regulatory Flexibility Act (RFA),¹ the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this Notice of Proposed Rule Making (NPRM). Written public comments are requested on this IRFA. Comments must be identified as responses to this IRFA and must be filed by the deadlines for comments on the NPRM provided above in Section IV. The Commission will send a copy of the NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the NPRM and IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need for, and Objectives of, the Proposed Rules

Pursuant to the Hearing Aid Compatibility Act (HAC Act),⁴ Section 68.4 of the Commission's rules requires most new telephones to be hearing aid compatible but exempts certain categories of telephones, including those used with public mobile services and private radio services.⁵ The HAC Act directs the Commission to assess periodically the appropriateness of continuing the statutory exemptions. In 1989, at the time that the Commission issued its initial rules implementing the HAC Act, the Commission announced that it would review the exemptions every five years. However, the Commission has not done so since the rules were initially promulgated. The Commission believes a proceeding should be initiated to consider whether it is appropriate to revoke or limit the exemptions with respect to telephones used with public mobile services.

The HAC Act established four criteria that, if satisfied, would compel the Commission to revoke or otherwise limit the exemptions. In the NPRM, the Commission seeks comment on whether the criteria are satisfied and tentatively concludes that revocation or limitation of the exemption would be in the public interest and that continuation of the exemption would have an adverse effect on persons with hearing disabilities. Amendment of the rules to revoke or limit the exemption for public mobile service telephones would benefit people with hearing disabilities by allowing them access to digital wireless services, enabling them to participate more fully in employment opportunities and daily life. Requiring public mobile services telephones to be hearing aid compatible could provide hearing aid users with additional communications choices at lower cost because of the advanced capabilities and efficiencies of digital services. In addition, with the growing prevalence of wireless digital telephones and declining availability of analog telephones, continuing the exemption for public mobile services would severely limit the communications options available to people with hearing disabilities.

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601 *et seq.*, has been amended by the Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

² See 5 U.S.C. § 603(a).

³ See *id.*

⁴ 47 U.S.C. § 610.

⁵ 47 C.F.R. § 68.4.

B. Legal Basis

The proposed action is authorized under the Communications Act of 1934 as amended, Sections 4(i), 303(r) and 710(a) and (b), 47 U.S.C. §§ 154(i), 303(r) and 610(a) and (b).

C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply

The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.⁶ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁷ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁸ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.⁹

Neither the Commission nor the SBA has developed definitions for small providers of the specific industries affected. Therefore, throughout our analysis, unless otherwise indicated, the Commission uses the closest applicable definition under the SBA rules, the North American Industry Classification System (NAICS) standards for “Cellular and Other Wireless Telecommunications” and “Wired Telecommunications Carriers.”¹⁰ According to this standard, a small entity is one with no more than 1,500 employees. To determine which of the affected entities in the affected services fit into the SBA definition of small business, the Commission has consistently referred to Table 5.3 in *Trends in Telephone Service (Trends)* a report published annually by the Commission’s Common Carrier Bureau.¹¹

Wireless Telephony Including Cellular, Personal Communications Service (PCS) and SMR Telephony Carriers. There are 806 entities in this category as estimated in *Trends*, and 323 such licensees in combination with their affiliates have 1,500 or fewer employees and thus qualify using the NAICS guide, as small businesses.

⁶ 5 U.S.C. § 603(b)(3).

⁷ 5 U.S.C. § 601(6).

⁸ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

⁹ 15 U.S.C. § 632.

¹⁰ North American Industry Classification System (NAICS) codes 513322 and 51331.

¹¹ FCC, Common Carrier Bureau, Industry Analysis Division, *Trends in Telephone Service*, Table 5.3 (December 2000). Estimates of entities employing 1,500 or fewer employees are based on gross revenues information filed April 1, 2000, combined with employment information obtained from ARMIS and Securities and Exchange Commission filings as well as industry employment estimates published by the Bureau of Labor Statistics. The estimates do not reflect affiliates that do not provide telecommunications services or that operate only in foreign countries.

Other Mobile Service Providers. *Trends* estimates that there are 44 providers of other mobile services, and again using the NAICS standard, 43 providers of other mobile services utilize with their affiliates 1,500 or fewer employees and thus may be considered small entities.

Hearing Aid Equipment Manufacturers. Hearing aid manufacturers are not regulated by the Commission, but may be affected by the proposed actions taken in this proceeding. In light of the potential impact, we have chosen to include hearing aid manufacturers in this IRFA, although we are not required to do so. Hearing aid manufacturers are not licensed, but the Commission estimates that there are approximately 35 to 40 hearing aid manufacturers.

Handset Manufacturers. The Commission does not license or regulate handset manufacturers. Therefore no data exists indicating the number of entities manufacturing handsets. The applicable definition of small entity in this respect is the definition under the SBA rules applicable to Communications Services, Not Elsewhere Classified. This definition provides that a small entity is one with 11 million dollars or less in annual receipts.¹² According to Census Bureau data, there are 848 firms that fall under the category of Communications Services, Not Elsewhere Classified. Of those approximately 775 reported annual receipts of \$11 million or less and qualify as small entities.¹³ Thus, the Commission, for purposes of this analysis estimates that no more than 775 handset manufacturers qualify as small entities.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

The NPRM seeks comment on whether the exemption of public mobile services from the hearing aid compatibility requirements of the HAC Act should be revoked or limited. In the event that the exemption is revoked, telephones used with public mobile services will be required to be compatible with hearing aids and cochlear implants. While it is possible that, in this proceeding, the scope of the exemption may be fashioned so that not all telephones used with public mobile services will be subject to the hearing aid compatibility requirements, for purposes of this analysis we will assume the broadest possible impact. The NPRM seeks comment on how such a requirement would be implemented in the telephones that would be subject to the rule. The NPRM contemplates that wireless service providers, handset manufacturers, and hearing aid manufacturers will work together to achieve compatibility, primarily by establishing technical standards for hearing aid compatibility between the covered wireless devices and hearing aids. The NPRM suggests that the changes to digital wireless telephones and, possibly, hearing aids could be made using a phased-in approach. In addition, the NPRM seeks comment on ways in which the Commission can stay informed on progress toward compliance by both the wireless industry and the hearing aid manufacturing industry, such as through a quarterly reporting requirement. The NPRM asks whether such a reporting requirement is necessary and, if so, on whom should we impose the requirement, the frequency of the reports, and what information should be included in them. Also, the NPRM tentatively concludes that, in the event the Commission removes or limits the exemption for public mobile services, the industry will be required to develop technical standards for compatibility between covered wireless devices and hearing aids. According to one approach proposed by the Cellular Telecommunications & Industry Association, wireless devices would be categorized and “paired” with a categorized hearing aid to enable the use of the two devices together.¹⁴ In the event the Commission decides to limit or revoke the exemption, and it determines that the CTIA plan is the appropriate mechanism to satisfy the requirements of the HAC Act, the NPRM seeks comment on the series of steps

¹² NAICS Code 513322.

¹³ NAICS Code 513322.

¹⁴ See NPRM at para. 13.

CTIA asserts will be necessary before such a pairing approach can be implemented, part of which necessitates an educational effort to inform consumers and retail sales personnel about the plan.

E. Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.¹⁵

The NPRM seeks comment on a number of matters related to implementation of hearing aid compatibility in the wireless devices used with public mobile services, all of which could affect small entities. We note that, to the extent that manufacturers would make changes to telephone handsets to enable carriers subject to the hearing aid compatibility requirements to comply with those requirements, in many cases, those updated handsets may be usable by smaller carriers as well as larger carriers. The two most obvious alternatives in this proceeding are whether to keep the exemption or whether to eliminate or limit the exemption. Depending on the final action taken, small entities could be affected. In the NPRM, we seek comment on the best way to implement the hearing aid compatibility requirements, and we indicate that a phased-in approach might be a good way to minimize burdens on all carriers, including small entities. Because of the impact of the rule on people with hearing disabilities, the Commission has little flexibility in terms of providing a less burdensome approach for small entities. The incompatibility between hearing aids and wireless devices affects all persons with hearing disabilities in the same way regardless of the size of the carrier or manufacturer. In paragraph 26, the NPRM seeks comment on whether the “pairing” approach suggested by CTIA, along with its educational component, would be a satisfactory solution to the incompatibility problem. The NPRM, in paragraph 31, also asks whether the exemptions should be limited with respect to fewer than all telephones used with public mobile services. We invite comment on the impact on small entities of the alternatives here suggested. We further invited interested parties to offer additional alternatives.

In paragraph 32, the NPRM seeks comment on whether a reporting requirement is needed to assist the Commission in monitoring the industry’s progress toward implementation of hearing aid compatibility in the covered wireless devices. Commenters are encouraged to provide input on the content and frequency of these reports so as to facilitate monitoring and the exchange of information between the wireless industry and the hearing aid manufacturing industry. Because of the compelling public interest in making public service telephones accessible to persons with hearing disabilities, the Commission proposes to require quarterly reports by affected entities to ensure that progress is being made toward achieving hearing aid compatibility. Paragraphs 28 and 29 of the NPRM seek comment on how to minimize the financial burden on those currently exempt from hearing aid compatibility if the exemptions are limited or removed. The Commission invites comments on these issues.

¹⁵ 5 U.S.C. § 603(c).

F. Federal Rules That May Overlap, Duplicate, or Conflict With the Proposed Rules

None.

SEPARATE STATEMENT OF COMMISSIONER KATHLEEN ABERNATHY

In re: Section 68.4 of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, RM-8658, Notice of Proposed Rulemaking (rel. November 14, 2001).

I write to give my strong support for today's Notice. It is past time that we evaluate whether it is appropriate to uphold hearing aid compatibility exemptions for public mobile services. Not only is hearing aid accessibility an important issue for many members of the American public, but review of these exemptions is long overdue.

There are more than 28 million Americans with hearing loss. We can only expect that number to increase in future years, because of noise exposure and people living longer lives.¹ Thirty percent of people between the age of 65 and 74 experience difficulty hearing.

Moreover, wireless telephony – inaccessible to many people with hearing loss – continues to grow in importance, providing an essential means for connecting employees, friends, and family members. Today roughly 124 million Americans use wireless telephones.²

Unfortunately, despite countless advances in wireless telephony technology over the past decade, the FCC failed to review mobile services' ability to provide access to Americans with hearing loss. Indeed, it has been twelve years since the Commission has looked at hearing aid accessibility exemptions. This failure to act conflicts with our statutory obligations. Congress, in the Hearing Aid Compatibility Act, mandated that "the Commission shall periodically assess" whether or not it should continue the exemptions.³ It is unlikely that Congress contemplated a 12-year period between assessments. I am disappointed by the fact that over the past decade time and resources were devoted to many discretionary proceedings, while Congress's mandate for a review of hearing aid accessibility exemptions went unanswered.

A critical statutory policy goal is at issue here. Congress provides a clear guide for the Commission's priorities: "a provider of telecommunications service shall ensure that the service is accessible to and usable by individuals with disabilities, if readily achievable."⁴ Congress laid out a policy map for the FCC, yet we have failed to follow the legislators' explicit directives.

Just as troubling is the fact that the Commission ignored its own guidelines. In 1989, the FCC declared that, regardless of technological developments, it would review hearing aid access exemptions

¹ Comment of Self Help for Hard of Hearing People (SHHH), In the Matter of Reallocation of the 216-220 MHz (filed February 15, 2001).

² Cellular Telecommunications and Internet Association web site (<http://www.wow-com.com/>).

³ 47 U.S.C. § 610.

⁴ 47 U.S.C. § 255.

at least once every five years.⁵ Thus, even by our own timetable today's review comes seven years late. Failing to live up to our own commitments undermines our credibility and effectiveness.

I am, therefore, pleased to vote in favor of this Notice of Proposed Rulemaking, and I look forward to a full record on hearing aid compatibility – and a prompt decision by the Commission.

⁵ Access to Telecommunications Equipment and Services by the Hearing Impaired and Other Disabled Persons, 4 FCC Rcd 4600 (1989).

Separate Statement of Commissioner Michael J. Copps

Re: *Section 68.4 of the Commission's Rules Governing Hearing Aid-Compatible Telephones, Notice of Proposed Rulemaking (rel. November 14, 2001).*

I support the Notice of Proposed Rulemaking.

It is our challenge and responsibility to harness the power of technology for the benefit of all Americans. Congress has told us that we must make communications technologies accessible by people with disabilities. The digital tools of the Information Age are the keys to unlocking the doors of opportunity. We must make sure that those doors are open -- and remain open -- for all Americans, and not locked shut for some, as, unfortunately, they are today in many cases. My goal as an FCC Commissioner is to help bring the best, most accessible, and cost-effective telecommunications system in the world to our people -- and I mean all of our people. Each and every American should have access to the wonders of telecommunications.

As we begin this proceeding on hearing aid compatible wireless telephones I want to highlight the strides that the Commission made before I arrived:

- The Commission wrote new rules to ensure that communications products and services are accessible to those with disabilities, as Congress directed, in Section 255.
- The Commission overhauled and updated our Telecommunications Relay Services (TRS) rules to provide for faster, more effective relay services.
- The Commission also established 711 for relay services so that consumers will no longer need to remember different TRS numbers and TRS users will be able to put one number on their business cards, thereby making it easier for people to call them. The Commission recently put this into effect.
- The Commission took action on captioning to ensure that everyone has access to televised information, including, most importantly, warnings about emergency situations.

Now our new Commission has taken the first step to addressing compatibility problems between wireless phones and hearing aids. As we move forward with this NPRM, I want to recognize the commitment of the wireless industry to serving people with disabilities. Working closely with both manufacturers, service providers, and organizations that represent people with hearing loss will be critical as we move toward an Order. Business plays a critical role by innovating and investing in ways that can make products accessible. History has shown that incorporating accessibility at the design stage makes good business sense. Industry benefits greatly by making products and services accessible to the broadest range of users.

Businesses have committed themselves to this task. A few months ago, over forty chief executives of high-tech and telecommunications companies pledged to develop and market products and services that are accessible to those with disabilities. I commend these companies and urge others to join their efforts to remove barriers to opportunity. We should all work together on this important matter.

The Commission has taken a positive step today, but it is only a beginning. We have so far to go. We must continue to do what we can to ensure that Americans with disabilities are not left behind, as has happened too often in the past. I commend the Wireless Bureau staff for their hard work on this item and hope that we can issue an Order quickly.