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

CC Docket No. 87-124

In the Matter of

Access to Telecommunications
Equipment and Services
by the Hearing Impaired
and Other Disabled Persons

NOTICE OF INQUIRY

Adopted: April 24, 1987; Released: May 15, 1987

By the Commission:

1. In response to the Telecommunications for the Disabled Act of 1982, Public Law 97-410 (Disabled Act), the Commission, on December 1, 1983, adopted specific rules designed to improve the availability of telecommunications equipment and services for the hearing impaired and other disabled persons.[1] These rules: (1) require telephones classified as "essential"[2] to be internally compatible with hearing aids specially designed for telephone use; (2) set forth the technical standards hearing aid compatible telephones must meet; (3) require each telephone package to denote whether the telephone is hearing aid compatible or not; and (4) allow carriers to provide "specialized terminal equipment" to persons with hearing, sight, speech and mobility impairments, and permit state commissions to allow carriers to recover through tariffs "reasonable and prudent costs not charged directly to users of such equipment." In addition, consistent with the Disabled Act, the rules delegate enforcement powers for Sections 64.602 and 64.603, 47 C.F.R. §§ 64.602 and 64.603, to all states adopting these rules. During the 1982 Congressional hearings leading to the Disabled Act and in Commission proceedings,[3] it was evident that a segment of the U.S. population was having difficulty obtaining telecommunications services and equipment because of certain physical disabilities. We believed the rules we adopted would improve access to telecommunications services by these disabled persons. Our rules have been in place now for nearly three years. Some argue that the rules have proven inadequate and that additional steps must be taken to assure the disabled reasonable access to telecommunications services. We therefore wish to examine in detail the effectiveness of our current rules, particularly in the wake of recent technological and regulatory changes. This notice of inquiry is also intended to gather information concerning the telecommunications needs of the hearing impaired and other disabled persons and to provide interested parties an opportunity to comment on what action, if any, they believe is necessary or desirable to assist the hearing impaired and other disabled persons in obtaining reasonable access to telecommunications services.

2. Section 610(b) of the Disabled Act directed the Commission to:

> require that essential telephones provide internal means for effective use with hearing aids that are specially designed for telephone use . . . .

In response to this directive we adopted Section 68.112 of the rules, 47 C.F.R. § 68.112. This rule takes cognizance of the Congressional intent to allow the continued manufacture and sale of non-compatible telephones while ensuring that the needs of the hearing impaired are met.[4] Accordingly, our rules require that telephones placed in the following locations be hearing aid compatible: (1) coin-operated telephone sites; (2) elevators, subway tunnels and hospital and convalescent home rooms; (3) ten percent of rooms in hotels/motels; and (4) work stations of employees with hearing impairments requiring the use of a telephone to conduct their work assignments and in places of business or buildings in which visits by the public are reasonably expected.

3. Oral comments presented at an informal meeting on telecommunications needs of the hearing impaired and other disabled persons sponsored by the Common Carrier Bureau on December 5, 1986,[5] show some parties believe that while the intent of our rules was noble, the problem intended to be resolved remains. These parties urge, for example, that the rule which requires an employer to provide a hearing aid compatible telephone for an employee with a hearing impairment if the employee's job requires the use of a telephone in the performance of assigned duties is inadequate. They argue that if such an employee happens to be in another part of the building, isolated from his/her work station, and finds a need to use the telephone, it may be impossible to use the nearest telephone because the employer is not required to provide hearing aid compatible telephones at other work stations. To alleviate this and other potential situations where the hearing impaired may not be able to access the telephone network, some parties advocate regulations requiring that *all* telephones manufactured after a certain date be hearing aid compatible. They argue that the additional cost of producing a hearing aid compatible telephone is *de minimus*, and that the public will benefit from this change.

4. Others attending the December 5th meeting contend that no change to the current regulations is necessary in view of advances in hearing aid technology. The hearing aid industry has introduced an "in-the-ear" device which is finding market acceptance among hearing aid users. This device offers increased power and tends to be more comfortable than earlier hearing aids, but generally does not include the telecoil feature.[6] The information currently available indicates that the number of hearing aids purchased incorporating the telecoil feature is decreasing. If this trend continues, some argue, there will be relatively few units employing telecoil technology and less need for requiring that all telephones be made compatible with telecoil equipped hearing aids. In addition, there are other portable devices available which are designed to enhance the hearing ability of persons with hearing disabilities while using a standard telephone. Also, there are indications that the design of the telephone will undergo substantial changes in the future as telephone companies convert their local loops to digital technology. In sum, a number of persons attending the meeting question the wisdom of imposing what they view as an old hearing aid design on a telephone industry moving toward more advanced technology.

5. These conflicting views lead us to conclude that a careful review of these issues is necessary. One option suggested by those who claim the hearing impaired still do not have adequate access to telephone service, is to require that all telephones manufactured after a certain date be hearing aid compatible, *i.e.*, comply with the technical standards specified in Section 68.316.[7] Any such approach need not require the removal of existing non-compatible telephones or the retrofitting of such telephones. Parties commenting in response to this notice should provide details on the costs of modifying non-hearing aid compatible telephone manufacturing processes to produce hearing aid-compatible telephones. Also, it is requested that data be provided as to the number of telephones retailed in the U.S. and the percentage of them that are currently hearing aid compatible, as well as information concerning future trends in this regard. In addition, commenters are asked to supply data on the population of hearing aid users, including the (1) total number of hearing aid users; (2) number of hearing aids equipped with telecoils; (3) number of users requiring the use of hearing aids equipped with telecoils; (4) number of "in-the-ear" units equipped with telecoils; and (5) the number of users employing the in-the-ear model.

6. Other matters warranting consideration include the impact of technological advances in hearing aids and telephone designs. As noted above, many hearing aid users are selecting the less obtrusive "in-the-ear" device that generally does not have the telecoil. This trend may imply that telecoil equipped hearing aids will become outmoded. Commenting parties should offer their views on the future need for telecoil hearing aid compatible telephones, particularly in light of these reported trends and on the impact of imposing current telephone hearing aid compatibility technology on future telephone system designs. Interested parties are also asked to comment on the special requirements, if any, of hearing impaired persons who use non-telecoil equipped hearing aids. We also ask for comments on whether a universal compatibility requirement could impede technological developments in terminal equipment or the telephone network. The American Telephone and Telegraph National Special Needs Center (Special Needs Center) also markets a portable telephone amplifier which serves as a telecoil adapter and handset amplifier. The information currently available to us indicates that it is adaptable to most telephones and sells for a fraction of the cost of a hearing aid. With the cosmetic attractiveness of the "in-the-ear" hearing aid, devices such as the portable amplifier may constitute a reasonable alternative to hearing-aid-compatible telephones in certain circumstances. To assist us in this matter commenters are asked to identify areas in which research and new product development is underway and to assess the likely impact of that research and development on our current rules or on the desirability of requiring universal compatibility for new telephones.

7. Another option involves the creation of a committee consisting of representatives from the hearing aid and telephone industries and parties representing the hearing impaired and other disabled persons. Through this committee, interested parties could coordinate changes that would affect access of the hearing impaired to telephone services. We solicit comments on the merits of such a committee and its proposed structural arrangement and operation. Commenters should also discuss the possibility of coordinating such changes under the auspices of some existing organization, such as the Exchange Carriers Standards Association's T-1 committee.

8. Deaf[8] and speech-impaired individuals require other specialized equipment and services such as Telecommunications Devices for the Deaf (TDDs or TTYs) and special operator and directory assistance, that are incidental to transmission services, in order to communicate via the telephone network. At the national level, AT&T, through its Special Needs Center, provides communications equipment to deaf persons as well as individuals with speech, vision and motion disabilities. The Special Needs Center offers TDD users operator services which include assistance in making AT&T credit card calls, third-number billed calls, collect calls, person-to-person calls and calls from hotels/motels. In addition, operators will translate for the TDD caller information received from a recording at the called number. Some states have developed TDD programs designed to provide means of communications for the deaf, hearing impaired, deaf-blind and speech impaired persons. These programs are primarily funded by either a surcharge levied on local subscribers or a special assessment against telephone companies. (For example, the state of California levies a surcharge of $0.03 per month per telephone subscriber in the state. These funds are used to purchase and maintain TDD equipment and to develop a statewide message relay service.) Under these programs qualified individuals are offered TDDs, light signalling devices, training on how to use the equipment and in some cases message relay service free or at reduced charges.

9. Some concerns of the deaf are the lack of such programs in all states and the inability to take advantage of, or the unavailability of, compatible services offered by AT&T's competitors. The absence of such programs in many states precludes some deaf people from being able to communicate with others, forcing them to depend upon non-disabled relatives and friends. Even in those areas with TDD programs users complain of limited hours of operator services and a shortage of operators who can deal with the special communication needs of the deaf. We request information concerning the size of the deaf population, the assistance provided through these programs, the extent of their use by the deaf, and the costs involved. In addition, we request that AT&T provide, for the official record, a narrative of the services it provides through its Special Needs Center along with information on the related costs.

10. In addition, because the deaf are unable to hear they must manually keystroke their messages using a TDD. The data are transmitted at a much slower rate than oral messages, resulting in a higher cost to the TDD user to convey a like message. Some states subsidize these transmission charges. AT&T offers, pursuant to tariff (F.C.C. No. 1), reduced rates to qualified hearing impaired TDD users. Under this tariff, qualified TDD users may make calls during the day rate period (8:00 a.m. to 5:00 p.m.) at the evening rates and calls during the evening rate period (5:00 p.m. to 11:00 p.m.) at the night-weekend rate. It is unclear whether similar offerings are available from other interstate common carriers, or whether disabled persons can effectively use these carriers. We request information concerning these matters from interested parties, including information on the use of AT&T's discounted service, as well as the related savings for the deaf, and whether other carriers have similar

offerings. We also ask commenters to address the obstacles that TDD users encounter in trying to use other interexchange carriers' services for transmission of messages. In regard to the latter, parties should outline the technical constraints which prevent access to such carriers, as well as any transmission rate reductions for qualified TDD users offered by these carriers, and, to the extent known, supply details regarding programs designed for these TDD users planned by AT&T's competitors.

11. Furthermore the deaf find it difficult to communicate via the telephone with non-hearing impaired persons. Under current practice, TDD users avail themselves of manned relay stations to converse with parties without TDD units. Because many of these stations operate during limited hours, the disabled are unable in some cases to reach the called party at the desired time. In addition, the deaf may be reluctant to use the service to discuss sensitive matters in the presence of a stranger. We understand there is at least one firm exploring software technology which may prove suitable for unmanned relay stations. International Business Machine Corporation is testing a program which allows an individual to "talk" to a computer which converts keystrokes into a synthesized voice, and vice versa. In addition, the system is designed to take advantage of TOUCH-TONE signaling to permit the telephone user to either speak or use the key pad to communicate. If this technology is adaptable to TDD systems it would greatly enhance the communications capabilities of the deaf. If there are others developing similar mechanisms which would be beneficial to this group, we would like to be advised of these efforts. Perhaps these undertakings should also be reviewed or coordinated by the proposed committee discussed at paragraph 7 above since it may be preferable to avoid the development of a number of incompatible software programs and TDD devices. We encourage interested parties to comment on present and future efforts to develop unmanned relay stations. In addition, commenters should address the merits of monitoring the progress of unmanned relay stations by the earlier-referenced committee.

12. In view of the foregoing, we seek to obtain information, and views from interested persons in order to establish a sound factual basis for evaluating the telecommunications need of the deaf and hearing impaired. Interested parties are also invited to propose solutions for any problems which they perceive. Based on this information the Commission will evaluate the need for consideration of further regulatory measures or legislative initiatives designed to ensure reasonable access to telecommunications services by the deaf and hearing impaired. We seek comments on the issues set out in this Notice and on any other issues relevant to consideration of this subject matter which may not have been raised herein.

13. Accordingly, pursuant to Sections 4(i), 4(j), 201-205, and 403 of the Communications Act of 1934, as amended, IT IS ORDERED THAT AN INQUIRY IS HEREBY INSTITUTED.

14. Interested persons may file comments on or before **June 29, 1987** and reply comments on or before **July 20, 1987.** All relevant and timely comments will be considered by the Commission. In reaching its determinations in this proceeding, the Commission may also take into account other relevant information before it, in addition to the specific comments invited by this Notice.

FEDERAL COMMUNICATIONS COMMISSION

William J. Tricarico,
Secretary

FOOTNOTES

[1] Access to Telecommunications Equipment by the Hearing Impaired and Other Disabled Persons *Order*, CC Docket No. 83-427, 49 Fed. Reg. 1352 (Jan. 11, 1984), *modified*, 49 Fed. Reg. 19666 (May 9, 1984), *further modified*, FCC 84-382, (released Aug. 13, 1984).

[2] "Essential telephones" include only coin-operated telephones, telephones provided for emergency use, and other telephones frequently needed for use by persons using hearing aids specially designed for telephone use. 47 U.S.C. § 610(b).

[3] *See*, Telecommunication Services for the Deaf and Hearing Impaired, *Notice of Inquiry*, CC Docket No. 78-50, 67 F.C.C. 2d 1602 (1978), *terminated* FCC 83-177 (released May 3, 1983) and CC Docket No. 83-427, *supra*.

[4] The House Report accompanying the Disabled Act stated:

> The reported bill does not require all telephones to be compatible with hearing aids. Rather, the bill preserves consumer choice while ensuring that the needs of the hearing impaired are fully served. The legislation focuses on those "essential telephones" to which the hearing impaired must have access if they are to function effectively in a modern society. Companies are free to manufacture and to market non-compatible telephones, and business and consumers may purchase these instruments for use by persons who do not have hearing impairments.

House Report No. 97-888 97th Cong. 2d Sess., at p. 9 (House Report).

[5] *See* Public Notice No. 0626 (November 13, 1986).

[6] Most external hearing aids have a built-in telephone pickup, or "telecoil," which is activated by a switch on the hearing aid. When this switch is placed in the "telephone" position, the microphone is turned off and the hearing aid can be used at full volume without feedback and with minimal background noise. These hearing aids are activated by the magnetic field generated by telephone handsets. Unless otherwise indicated, reference to hearing aid compatible telephones, refers to equipment which is compatible with a telecoil type hearing aid. *See* House Report at p. 8.

[7] Section 68.316 specifies the magnetic field parameters a telephone must meet in order to achieve inductive coupling with a compatible hearing aid.

[8] A deaf individual is one who can not hear or whose hearing impairment is so severe that use of the telephone is impossible even with a hearing aid equipped with a telecoil.