
TELEVISION DECODER CIRCUITRY ACT OF 1990

SEPTEMBER 27, 1990.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. DINGELL, from the Committee on Energy and Commerce, submitted the following

REPORT

[To accompany H.R. 4267]

[Including cost estimate of the Congressional Budget Office]

The Committee on Energy and Commerce, to whom was referred the bill (H.R. 4267) to require new televisions to have built-in decoder circuitry, having considered the same; report favorably thereon with an amendment and recommend that the bill as amended do pass.

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The amendment is as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Television Decoder Circuitry Act of 1990".

SEC. 2. FINDINGS.

The Congress finds that—

(1) to the fullest extent made possible by technology, deaf and hearing-impaired people should have equal access to the television medium;

(2) closed-captioned television transmissions have made it possible for thousands of deaf and hearing-impaired people to gain access to the television medium, thus significantly improving the quality of their lives;

(3) closed-captioned television will provide access to information, entertainment, and a greater understanding of our Nation and the world to over 24,000,000 people in the United States who are deaf or hearing-impaired;

(4) closed-captioned television will provide benefits for the nearing 38 percent of older Americans who have some loss of hearing;

(5) closed-captioned television can assist both hearing and hearing-impaired children with reading and other learning skills, and improve literacy skills among adults;

(6) closed-captioned television can assist those among our Nation's large immigrant population who are learning English as a second language with language comprehension;

(7) currently, a consumer must buy a TeleCaption decoder and connect the decoder to a television set in order to display the closed-captioned television transmissions;

(8) technology is now available to enable that closed-caption decoding capability to be built into new television sets during manufacture at a nominal cost by 1991; and

(9) the availability of decoder-equipped television sets will significantly increase the audience that can be served by closed-captioned television, and such increased market will be an incentive to the television medium to provide more captioned programming.

SEC. 3. DISPLAY CLOSED-CAPTIONED TELEVISION.

Section 303 of the Communications Act of 1934 (47 U.S.C. 303) is amended by adding at the end thereof the following:

"(u) Require that apparatus designed to receive television pictures broadcast simultaneously with sound be equipped with built-in decoder circuitry designed to display closed-captioned television transmissions when such apparatus is manufactured in the United States or imported for use in the United States, and its television picture screen is 13 inches or greater in size, measured diagonally."

SEC. 4. SHIPPING OR IMPORTING.

(a) **REGULATIONS.**—Section 330 of the Communications Act of 1934 (47 U.S.C. 330) is amended by redesignating subsection (b) as subsection (c), and by adding after subsection (a) the following new subsection:

"(b) No person shall ship in interstate commerce, manufacture, assemble, or import from any foreign country into the United States, any apparatus described in section 303(u) of this Act except in accordance with rules prescribed by the Commission pursuant to the authority granted by that section. Such rules shall provide performance and display standards for such built-in decoder circuitry. Such rules shall further require that all such apparatus be able to receive and display closed captioning which have been transmitted by way of line 21 of the vertical blanking interval and which conform to the signal and display specifications set forth in the Public

Broadcasting Service engineering report numbered E-7709-C dated May 1980, as amended by the Telecaption II Decoder Module Performance Specification published by the National Captioning Institute, November 1985. As new video technology is developed, the Commission shall take such action as the Commission determines appropriate to ensure that closed captioning service continues to be available to consumers. This subsection shall not apply to carriers transporting such apparatus without trading it.”.

(b) CONFORMING AMENDMENT.—Section 330(c) of such Act, as redesignated by this Act, is amended by deleting “and section 303(s)” and inserting in lieu thereof “and sections 303(s) and 303(u)”.

SEC. 5. EFFECTIVE DATE.

The amendments made by sections 3 and 4 of this Act shall take effect on July 1, 1993.

SEC. 6. RULES.

The Federal Communications Commission shall promulgate rules to implement the amendments made by this Act within 180 days after the date of its enactment.

PURPOSE AND SUMMARY

The purpose of the bill (H.R. 4267) is to promote full and equal access to television programming for all citizens. The bill would require new television sets with picture screens 13 inches or larger, whether manufactured or imported for use in the United States, to have built-in decoder circuitry by July 1, 1993, to display closed captioned transmissions. This requirement will increase the audience for closed captioned television programming, thereby enhancing commercial incentives for private funding of captioning and ensuring the continued availability of captioning services to all those who could benefit. The bill also would mandate the Federal Communications Commission (FCC) to establish performance and display standards for such built-in decoder circuitry and to take appropriate action to ensure that closed captioning services continue to be available to consumers as new video technologies, including high definition television, are developed.

BACKGROUND AND NEED FOR THE LEGISLATION

HISTORY OF CLOSED CAPTIONING

Captioning is the process by which audio portions of a television program are converted into written words, which appear on the television screen in a form similar to English subtitles in foreign films. Captions allow viewers to read the dialogue and narration of television programs.

Until the 1970s, deaf and hearing-impaired people had no access to television. As I. King Jordan, President of Gallaudet University, described in testimony before the Committee's Subcommittee on Telecommunications and Finance:

After becoming deaf, I pretty much stopped watching television. Television is said to be a visual medium. Well I

can tell you that without knowing what is being said, the visual part is not very worthwhile.¹

The development of captioning enabled deaf and hearing-impaired people, for the first time, to see what others heard on television. The Commission on the Education of the Deaf (COED) stated that "captioning of television * * * is the most significant technological development for persons who are deaf."²

Beginning in the early 1970s, open captions were available only on a few public television programs. The captions for the programs were produced with federal funding by the Caption Center at Boston's public television station WGBH. Since open captions appear on all television receivers and cannot be turned off by the viewer, it was assured that hearing viewers would object to widespread open captioning. As a result, in 1972, the Public Broadcasting Service (PBS) began using federal funds to develop closed captioning. Closed captions are included in a video signal as invisible data and are seen only when special decoding devices are activated.

Early on, the FCC took a number of steps to facilitate the development of the captioning industry. In 1970, it advised broadcasters to utilize television's capacity to "alert, assist, and entertain persons with impaired hearing * * * to the fullest extent."³ The Commission explained that its notice was "advisory in nature", but warned that mandatory requirements might be imposed if voluntary efforts were not satisfactory. In 1976, the FCC reserved line 21 of the television broadcast signal for transmitting closed captions, although it did not impose requirements for mandatory captioning.

In 1979, the National Captioning Institute (NCI) was founded with \$6 million in federal start-up funds as a private nonprofit corporation and was charged with captioning television programs using "line 21" technology.⁴ One year later, closed captioning services were launched as a cooperative arrangement between NCI, the American Broadcasting Company (ABC), the National Broadcasting Company (NBC), PBS, and Sears Roebuck & Company. ABC, NBC, and PBS agreed to caption up to 16 hours of their programming per week, and Sears agreed to manufacture and sell decoders. Four years later, the Columbia Broadcasting System (CBS) also agreed to transmit closed captions using both Line-21 and its own teletext technologies.

Presently, the federal government provides about 40 percent of the funding for captioning programs. Federal funds, provided through the Department of Education, support a variety of captioning activities, including captioning of local and national news, children's programs, syndicated programs, sports programming, prime-

¹ Testimony of I. King Jordan, Legislative Hearing of the Subcommittee on Telecommunications and Finance of the Committee on Energy and Commerce on H.R. 4267, May 2, 1990, p. 16.

² "Toward Equality: Education of the Deaf," a report to the President and the Congress of the United States, The Commission on Education of the Deaf, February 1988, p. 112.

³ 26 FCC 2nd 917 (1970).

⁴ Although a television picture consists of 525 lines, not all of the lines are used as part of the regular picture. The unused or blank lines, known as the Vertical Blanking Interval (VBI), appear as a black bar on the screen when the picture needs adjustment. Line 21, the last line in the VBI, is used for encoding captions. Captioners transcribe the program's dialogue and narration on a magnetic disk and electronically insert the captions into the television program. The captions then are transmitted along with the regular audio and visual signals. The decoder translates the line 21 signals and generates the visible characters on the screen, enabling the viewer to read the dialogue and narration of the program.

time movies, and activities to increase public awareness of captioning. The remaining 60 percent of funding for captioning comes from the commercial broadcast television networks, PBS, the Corporation for Public Broadcasting, television producers, corporate advertisers, foundations, and individual contributors.

During the 1980s, the amount of closed captioned television programming increased greatly. In the early 1980s, only 16 hours per week of prime-time television were closed captioned. According to COED, at the end of 1987, more than 125 hours of programming per week were closed captioned. Today, all prime-time programming broadcast by the three major commercial broadcast networks is captioned, as are most major national news and sporting events. The three major networks offer 50–55 hours of captioned programming per week. Today, roughly 290 hours per week of national programming are captioned on network and independent television; the total amount of nationally distributed captioned programming increases to 390 hours per week when cable television programming is included.

CLOSED CAPTIONING AS A LITERACY TOOL

The Committee notes that the potential audience for closed captioning is significantly larger than the 20–40 million deaf and hearing-impaired population, which includes nearly 40 percent of America's elderly people. The potential audience for captioning also includes individuals seeking to acquire or improve literacy skills, including 23–27 million functionally illiterate adults, 3–4 million immigrants learning English as a second language, and 18 million children in grades kindergarten through three, learning to read.

Several studies forwarded to the Committee indicate that captioned television, used in both a structured classroom setting as well as an informal home viewing environment, improves the reading, comprehension, and retention skills of both hearing and non-hearing individuals at various stages of the educational process. In addition, these studies conclude that captioned television offers educators a motivational tool for developing students' vocabulary and spelling abilities.

For example, Professors Rita M. Bean (University of Pittsburgh) and Robert M. Wilson (University of Maryland), in a 1989 study entitled, "Using Closed Captioned Television to Teach Reading to Adults", determined that closed captioning improves students' word recognition skills and reported that student attitudes toward closed captioning were extremely positive, not only toward its use as a means of learning to read, but also as a means of increasing general knowledge. Bean and Wilson concluded that closed captioned television holds promise for instruction of basic adult literacy students. The Committee believes that this result is significant in light of a U.S. Department of Education finding that 13 percent of the adult population is unable to read and that 20 percent is "functionally incompetent". Further, in his book "Illiterate America", author Johathan Kozol indicates that 45 percent of the adult population does not read a daily newspaper—10 percent by choice, the remainder because it is functionally illiterate.

In another study, Harvard University Professors Karen Price and Ann Dow found captioning to be effective especially for students learning English as a second language, noting that captioning enables viewers to acquire the cultural script and speech patterns of their American peers. In testimony before the Committee's Subcommittee on Telecommunications and Finance, NCI noted that last year, hearing people, especially Hispanic Americans and Asian Americans, purchased more decoders than deaf and hearing-impaired people purchased. The Committee believes that increased availability of captioning technology greatly will benefit the portion of the viewing audience that is illiterate or for which English is a second language.

STAND-ALONE DECODERS

Presently, consumers must purchase a stand-alone decoder in order to receive closed captions. When decoders first were introduced in 1980, analysts projected that at least 100,000 decoders would be sold annually and that the size of the audience soon would permit a self-supporting industry. However, decoder sales did not come close to projections, principally because only 16 hours of programs per week were captioned. Many would-be users were hesitant to purchase a decoder without assurance that the number of captioned hours would increase.

Since 1986, NCI has introduced three additional generations of decoders, all available at increasingly lower prices because of technological improvements and federal government subsidies. Decreasing decoder prices during the last ten years have been associated with wider decoder usage. NCI notes that from 1980 to 1985, only 100,000 units were sold. However, NCI reported that from July 1989 to March 1990 alone, nearly 50,000 decoders were sold.

This growth notwithstanding, the gap between the number of individuals owning decoders and the number of individuals who potentially could benefit from the technology remains substantial. NCI estimates the total installed base of decoders at only 300,000 units, a small fraction of the 20-24 million person deaf and hearing-impaired population.

COED has concluded that the cost of decoders for consumers—\$160 to \$200—appears to act as a major deterrent to purchase. This finding was echoed in a study conducted for the Department of Education, which stated that high decoder prices function as a deterrent for two groups in particular: hard-of-hearing people, especially those who do not perceive their hearing loss to be severe, and deaf people from low income backgrounds. The Department of Education study further noted that low income individuals, through age 74, are more likely to be hearing-impaired than people in higher income categories.⁵

I. King Jordan summarized the "cost deterrent" issue in testimony before the Committee's Subcommittee on Telecommunications and Finance:

⁵ "Analysis of Demand for Decoders of Television Captioning for Deaf and Hearing-Impaired Children and Adults", Pelavin Associates, June 1989.

To many deaf and hard of hearing people, the purchase of a separate decoder is an economic hardship. A Lou Harris survey found that two-thirds of all disabled Americans between the ages of 16 and 64 are not working. Those disabled people who are working are often in low paying jobs.⁶

Richard Dysart, Chairman, Council for Better Hearing and Speech Month, also referred to the financial burden that the purchase of a stand-alone decoder would impose on many senior citizens who are hard of hearing:

The decoders that are presently on the market cost up to \$200 * * * I believe the average income of people over 65 in this country is less than \$25,000. The majority of the people cannot afford to buy these personal decoders.⁷

The Committee has identified several further reasons for low decoder sales. First, the hearing-impaired population, in general, lacks information on the capabilities of decoders, their price, and their place of purchase. In addition, many hearing-impaired people believe their hearing has not deteriorated sufficiently to warrant the purchase of a decoder. Further, many individuals, including the nearly 40 percent of America's elderly with moderate or severe hearing loss, fail to purchase a decoder because of the perceived stigma associated with its purchase. As Richard Dysart, Chairman, Council for Better Hearing and Speech Month, described in testimony before the Committee's Subcommittee on Telecommunications and Finance:

There is something within all of us, particularly those who are hearing-impaired * * * [that compels us to] refuse to better ourselves by taking advantage of the various technologies and devices that are open to us * * * We may perceive it as a sign of personal weakness * * * Stigma is a difficult thing to overcome.⁸

Finally, there are perceived, and sometimes real, difficulties in learning how to make the wire connections needed to receive closed captions through use of a decoder. John Ball, President of NCI, testified that "people are intimidated by technology—and you don't have to be old."⁹ Instructions for connecting decoders to television sets, which also must be connected frequently to video cassette recorders (VCRs) and cable converter boxes, are sufficiently complex to act as a deterrent to the purchase of decoders for many individuals.

The Committee believes that the low penetration of decoders into American homes is threatening the long-term viability of the cap-

⁶ Testimony of I. King Jordan, Legislative Hearing of the Subcommittee on Telecommunications and Finance of the Committee on Energy and Commerce on H.R. 4267, May 2, 1990, p. 17.

⁷ Testimony of Richard Dysart, Legislative Hearing of the Subcommittee on Telecommunications and Finance of the Committee on Energy and Commerce on H.R. 5267, May 2, 1990, p. 11.

⁸ Testimony of Richard Dysart, Chairman, Council for Better Hearing and Speech Month, Legislative Hearing of the Subcommittee on Telecommunications and Finance of the Committee on Energy and Commerce on H.R. 4267, May 2, 1990, p. 11.

⁹ Testimony of John Ball, President, NCI, Legislative Hearing of the Subcommittee on Telecommunications and Finance of the Committee on Energy and Commerce on H.R. 4267, May 2, 1990, p. 34.

tioning industry and the continued availability of captioned programming. In a 1988 report, COED determined that the limited usage of decoders has resulted in a lack of commercial incentives for private funding of captioning services and is one of the main impediments to a self-sustaining captioning industry. According to NCI, it costs roughly \$2500 and requires 20-30 person-hours to closed caption a one hour program. As a result of limited market incentives to incur this cost, relatively few local news, daytime, and basic cable programs are closed captioned. For example, only 90 out of the 1400 television stations in the United States provide closed captioned local news programs. This situation creates problems in emergency situations, where deaf and hearing-impaired people frequently are unable to receive critical local news and information. During Hurricane Hugo and the California earthquakes, for example, most local news broadcasts were not closed captioned and hence were inaccessible to deaf and hearing-impaired individuals.

In a recent letter to the Committee, Neil Pilson, President of CBS Sports, wrote:

As a businessman and broadcaster, I am concerned about this imbalance between the cost of captioning programming and the very limited number of viewers. This gap makes it difficult to justify the expansion of captioning beyond those widely-viewed kinds of programming being captioned today. Furthermore, some in the industry who have demonstrated their growing support of captioning through funding may begin to reevaluate their commitment and, I fear, gradually reduce that commitment.¹⁰

The Committee concludes that providing the necessary marketplace incentives for the provision of captioning services is in the public interest, and that H.R. 4267 provides an appropriate remedy for the problem. The Committee believes that passage of H.R. 4267 is important because television is not only a medium of entertainment, but also is a vital link to the world, providing news and information and serving an ever increasing educational role.

BUILT-IN DECODER CIRCUITRY

The Committee believes that newly developed technologies could facilitate individuals' access to closed captioning, enlarge the audience for captioned programming, and thereby ensure the continued availability of captioning services. These technologies would enable decoder circuitry to be built into new television sets, thus eliminating the need for consumers to purchase stand-alone decoders. H.R. 4267 would require all television sets with screens 13 inches or larger to be equipped with such built-in decoder circuitry. At least two companies currently are working to develop these technologies.

In 1988, the U.S. Department of Education awarded EEG Enterprises, a Farmingdale, New York firm, a contract to study the possibility of reducing the cost of decoders. As a result of that study, EEG concluded that a single Application Specific Integrated Circuit

¹⁰ Letter submitted to the Subcommittee on Telecommunications and Finance of the Committee on Energy and Commerce by Neil Pilson, President, CBS Sports, June 11, 1990.

(ASIC) could be developed to perform the Line-21 decoder functions previously achieved by decoder chip sets containing as many as 10 integrated circuits. After further research, EEG also concluded that a single decoder ASIC could be incorporated directly into a television receiver. According to EEG, the cost to manufacture the chip would be \$5 per unit, based on moderate production quantities of 100,000 units per year, and \$3 per unit, assuming high volume production of 10-20 million units annually. EEG further asserts that future technology improvements and learning curve-related production efficiencies could drive the per unit chip cost below the \$3 level.

In May 1989, NCI also embarked on a technical development project to facilitate the incorporation of the line 21 closed captioned television decoder circuitry onto a single integrated circuit chip. Shortly thereafter, NCI entered into a contract with ITT corporation to develop and produce the decoder chip. NCI expects small volume production of the chip to be completed by year's end and high volume production to commence in the first quarter of 1991. ITT is required, by contract, to sell the chip to television set manufacturers for no more than \$5. However, NCI, like EEG, believes that the cost of the chip will fall below \$5. The Committee notes that other entities, including television set manufacturers, are developing alternative built-in methodologies to provide closed captioning using line 21 technology.

Based on information submitted to the Committee in testimony and in writing, the Committee expects that built-in decoder circuitry initially will increase the retail price of television sets by no more than \$5 to \$15 per set. Industry experts predict that, over time, the costs further will decrease because of reduced labor and design costs and decreased costs in chip production, among other factors, until ultimately the costs of the decoder circuitry are absorbed completely into production and manufacturing costs of television sets.

NEED FOR LEGISLATION

The Committee believes that H.R. 4267 is necessary to reduce the cost of receiving closed captioned programming. This, in turn, will enlarge the audience for closed captioned programming, and create incentives for the private sector to increase the amount of such programming. As Capital Cities/ABC, Inc. stated in a letter to COED, if:

Decoders were more widely used and viewership [were] to grow, the marketplace [could] be relied upon to increase captioning because more viewers would be reached at a decreased per capita cost. Increased decoder ownership—not just more captioning—is required for a strong, self-sustaining captioning service.¹¹

NCI concurs that the future of closed captioned television service is:

¹¹ COED Report, "Toward Equality: Education of the Deaf," p. 119, quoting comments from Capital Cities/ABC, Inc. response to Notice of Draft Recommendations of Commission on Education of the Deaf, 52 Federal Register 32,731 (1987).

[i]nextricably tied to the number of households who access it. In order to eliminate the need for ongoing federal funds and to make the captioned service economically viable and self-sustaining, captioning must reach into at least 500,000 homes and ideally 1,000,000 by 1990.¹²

The Committee concludes that H.R. 4267 will expand greatly the accessibility to closed captioning services of both hearing and deaf and hearing-impaired viewers by eliminating their need to purchase stand-alone decoders. This legislation will enable the widest possible audience to benefit from closed captioning technology, while ensuring that broadcasters and others have incentives to invest in and provide greater amounts of captioned programming. The Committee believes that this legislation is wholly consistent with, and necessary to meet, the mandate in the Communications Act of 1934 that communications services be "made available, so far as possible to all the people of the United States."¹³

HEARINGS

The Committee's Subcommittee on Telecommunications and Finance held a hearing on H.R. 4267 on May 2, 1990. Testimony was received from Geoffrey Owens, actor ("The Cosby Show"); Richard Dysart, actor ("LA Law") and 1990 National Chairman, Council for Better Hearing and Speech Month; Linda Bove, actress ("Sesame Street"); I. King Jordan, President, Gallaudet University; Larry Goldberg, Director, The Caption Center; John Ball, President, National Captioning Institute; and Thomas P. Friel, Group Vice President, Consumer Electronics Group, Electronics Industries Association.

COMMITTEE CONSIDERATION

On July 12, 1990, the Subcommittee on Telecommunications and Finance met in open session and ordered reported the bill H.R. 4267, as amended, by a voice vote, a quorum being present. On September 25, 1990, the Committee met in open session and ordered reported the bill H.R. 4267, with an amendment, by voice vote, a quorum being present.

COMMITTEE OVERSIGHT FINDINGS

Pursuant to clause 2(1)(3)(A) of Rule XI of the Rules of the House of Representatives, the Subcommittee held oversight hearings and made findings that are reflected in the legislative report.

COMMITTEE ON GOVERNMENT OPERATIONS

Pursuant to clause 2(1)(3)(D) of rule XI of the Rules of the House of Representatives, no oversight findings have been submitted to the Committee by the Committee on Government Operations.

¹² Statement of National Captioning Institute, March 17, 1987, quoted in COED Report, "Toward Equality: Education of the Deaf."

¹³ 47 U.S.C. 151(1988).

COMMITTEE COST ESTIMATE

In compliance with clause 7(a) of rule XIII of the Rules of the House of Representatives, the Committee believes that the cost incurred in carrying out H.R. 4267 would be less than \$100,000 per year.

CONGRESSIONAL BUDGET OFFICE ESTIMATE

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, September 27, 1990.

HON. JOHN D. DINGELL,
*Chairman, Committee on Energy and Commerce,
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has reviewed H.R. 4267, the Television Decoder Circuitry Act of 1990, as ordered reported by the House Committee on Energy and Commerce on September 25, 1990. We estimate that implementation of this bill would result in annual costs to the Federal Government of \$80,000 to \$100,000 during fiscal years 1991 through 1995, assuming appropriation of the necessary amounts.

H.R. 4267 would require each apparatus that is designed to receive television pictures broadcast with sound and that meets certain specifications to contain build-in equipment to display closed-captioned television transmissions. This requirement would be effective on July 1, 1993. The bill would require the Federal Communications Commission (FCC) to prescribe rules establishing performance and display standards for the equipment within 180 days of enactment. In addition, H.R. 4267 would require the FCC to monitor standards for new technologies to ensure that closed-captioning service remains available.

Based on information from the FCC, CBO estimates that the FCC would incur costs of between \$80,000 and \$100,000 each year in fiscal years 1991 to 1995 to carry out the bill's requirements. We estimate that developing the rule and responding to requests for interpretation of the rule would impose costs of about \$75,000 in 1991, \$20,000 in 1992, and \$10,000 annually thereafter. In addition, it would cost the FCC about \$50,000 each year beginning in 1992 to test equipment to assure compliance with the standards. Finally, CBO estimates that the FCC would spend about \$20,000 annually beginning in 1991 to monitor standards for new technologies.

No costs would be incurred by state or local governments as a result of enactment of this bill.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Laura Carter, who can be reached on 226-2860.

Sincerely,

ROBERT D. REISCHAUER, *Director.*

INFLATIONARY IMPACT STATEMENT

Pursuant to clause 2(1)(4) of rule XI of the Rules of the House of Representatives, the Committee makes the following statement with regard to the inflationary impact of the reported bill:

The implementation of the bill will result in a nominal (\$3.00) increase in the price of a television set. This represents approximately 3 percent for the least expensive sets available, and substantially less as the price of the unit increases.

SECTION-BY-SECTION ANALYSIS

SECTION 1. SHORT TITLE

This section states that the short title of the bill is "The Television Decoder Circuitry Act of 1990."

SECTION 2. FINDINGS

This section enumerates the findings made by Congress concerning closed-captioned television transmission and decoder circuitry technology.

The Congress finds that:

(1) Deaf and hearing-impaired people should have equal access to the television medium to the fullest extent made possible by technology.

(2) Closed-captioned television transmissions have made it possible for thousands of deaf and hearing-impaired people to gain access to the television medium, thus significantly improving the quality of their lives.

(3) Closed-captioned television will provide access to information, entertainment and a greater understanding of the United States and the world to over 24,000,000 people in the U.S. who are deaf or hearing-impaired.

(4) Closed-captioned television will provide benefits for the nearly 38 percent of older Americans who have some loss of hearing.

(5) Closed-captioned television can assist both hearing and hearing-impaired children with reading and other learning skills and can improve literacy skills among adults.

(6) Closed-captioned television can assist those in the large immigrant population in the U.S., who are learning English as a second language, with language comprehension.

(7) Currently, a consumer must buy a separate decoder and connect the decoder to a television set in order to display closed-captioned television transmission.

(8) Technology now is available to enable that closed-caption decoding capability to be built into new television sets during manufacture at a nominal cost by 1991.

(9) The availability of decoder-equipment television sets will increase significantly the audience that can be served by closed-captioned television. Such an increased market will provide an incentive to the television medium to offer more captioned programming.

SECTION 3. DISPLAY CLOSED-CAPTIONED TELEVISION

This section amends Section 303 of the Communications Act of 1934 to require that all television sets, with picture screens 13 inches or larger, manufactured or imported for use in the U.S., be equipped with build-in decoder circuitry designed to display closed-captioned television transmissions.

In mandating the inclusion of decoder circuitry in television sets, the Committee notes that deaf and hearing-impaired people gain access to television only to the extent that there are closed captioned programs to watch. Evidence presented to the Committee indicates that while all primetime programming on the three commercial broadcast networks is closed captioned, as are most nationally television sporting and news events and children's programs, close captioning is much less prevalent on daytime and fringe programming, local news programs, and basic cable programming. Therefore, the Committee believes it important that increased closed captioning of broadcast and cable programming be pursued aggressively. The Committee intends to monitor closely the progress made toward achieving the Committee's goal of universal accessibility for deaf and hearing-impaired viewers to the television medium through close captioning.

The Committee further recognizes that deaf and hearing-impaired individuals will enjoy incomplete benefits from closed captioning technology if such technology is not physically present and available to them in all Federally funded or assisted facilities. The Committee, therefore, intends to monitor closely the extent to which decoder-equipped sets are installed in such facilities, included publicly assisted or supported hospitals, airports, prisons, and schools.

SECTION 4. SHIPPING OR IMPORTING

This section amends Section 330 of the Communications Act of 1934 to prohibit any person from shipping in interstate commerce, manufacturing or assembling in the U.S., or importing from any foreign country into the U.S. any television set described in Section 3 above that does not comply with rules prescribed by the Federal Communications Commission pursuant to this Act. Such rules shall provide performance and display standards for such built-in decoder circuitry. In addition, such rules shall require that all such television sets be able to receive and display closed captions that are transmitted by way of line 21 of the vertical blanking interval and that conform to, or are equivalent to, the signal and display specifications set forth in the May 1980 Public Broadcasting Service engineering report numbered E-7709-C as amended by the Telecaption II Decoder Module Performance Specification published by the National Captioning Institute, November 1985.

The Committee does not intend for the Commission to interpret section 4 to require the inclusion in television sets of a particular decoder chip or decoder circuitry. Rather, the Committee's intent is to allow various technologies to be implemented in the course of complying with the Commission's rules. This flexibility should stimulate the evolution of lower-cost decoding technology so that consumers are not subjected to excessive price increases in television sets.

Conformity with the established signal and display specifications is critical to ensure that television viewers universally can receive and read closed captions. These display specifications insure that the intent of the program producer, captioning agency, and program distributor is conveyed properly to the viewer. The display

specifications define such characteristics as placement, color, font, and mode of the captions. Such specifications are essential to ensure that caption producers will be able to create captions that are readable regardless of which television set or decoder circuitry is used. Equivalent specifications must ensure that television viewers universally can receive and read closed captions with the same clarity and consistency, and to the same extent, as such viewers would be able to receive and read closed captions produced in accordance with the PBS engineering report, as amended.

The Committee recognizes that, with the advent of digital and "menu-driven" television receivers in recent years, the television manufacturing industry is developing the capability to incorporate into television sets a wide variety of performance features made possible by digital electronics, including the capability to decode and display closed captions. The Committee also recognizes that the television manufacturing industry in the U.S., for a number of years, has been characterized by low selling margins and very low or negative profitability. Accordingly, the Committee does not intend the legislation to require, directly or indirectly, standardization upon a specific decoding chip or specific decoding circuitry—which could freeze performance levels and chill competitive research and development in the industry—but only to mandate that television sets be capable of decoding and displaying adequately closed-captions transmitted by line 21 of the vertical blanking interval. It is the expectation of the Committee that competition in the marketplace for built-in decoder circuitry will spur the development of innovative approaches to the provision of captioning and that such competition will reduce the cost of the technology.

The Committee further recognizes that the degree of specificity in display standards may have a significant bearing upon manufacturing costs. The Committee does not intend this bill to foreclose television manufacturers from developing cost-effective approaches to closed caption decoding that are an integral part of their market-driven design processes. Indeed, the Committee expects that in developing display standards, the FCC will pay due regard to considerations of cost-effectiveness and evolving technical capability, as well as the benefits to the competitive process of allowing manufacturers the widest possible latitude consistent with the purposes of the bill.

Section 4 amends Section 330 of the Communications Act (47 U.S.C. 330) and is consistent with the precedent established by that section when it was signed into law in 1962. This law, the All Channel Receiver Act, stated the policy objective to be met, assigned the broad technical framework of the matter to the FCC, and left details of product design to the manufacturers.

Section 4 also requires the FCC to take appropriate action to ensure that closed captioning services continue to be available to consumers as new video technologies are developed. The Committee does not intend to mandate that the FCC impose identical requirements on old and new video technologies, so long as closed captioning remains accessible to viewers. For example, the FCC should ensure that the standard it selects for high definition television broadcast transmission does not require the use of a stand-alone decoder to receive closed captions.

The Committee also intends that the Commission will establish technical requirements that provide both for closed captioning and allow cable systems to continue to use existing security techniques, such as scrambling channels on the cable system, in order to guard against unauthorized reception of cable programming. It is the Committee's further intent that scrambling technologies utilized by the cable industry and other industries not interfere with viewers' ability to receive close captioned programming.

The prohibitions contained in this section are not intended to apply to entities, such as trucking companies, that merely transport television sets but do not engage in the sale, or other similar transfers, of such sets.

SECTION 5. EFFECTIVE DATE

This section states that the amendments made by sections 3 and 4 of this Act shall take effect on July 1, 1993.

The Committee believes that this date will give television set manufacturers sufficient time to redesign receiver circuitry and the remote control unit technology and to adjust factory assembly processes in order to conform with the requirements of this legislation.

The Committee recognizes that on July 1, 1993, manufacturers and dealers of television sets may have an unsold inventory of finished television sets that are not equipped with built-in decoder circuitry. It is not the Committee's intent to burden consumer electronics dealers and manufacturers with an inventory of television sets that cannot be sold legally as a result of this legislation. Hence, the prohibition in Section 4 from "shipping in interstate commerce" on or after July 1, 1993 television sets that do not contain built-in decoder circuitry applies only to products manufactured on or after that date. This section places no restriction on the shipping or sale of television sets without built-in decoder circuitry that were manufactured before July 1, 1993 and that remain in factories or stores as unsold inventory after that date.

SECTION 6. RULES

This section requires the FCC to promulgate rules to implement the amendments made by this Act within 180 days after the date of its enactment.

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

COMMUNICATIONS ACT OF 1934

* * * * *

TITLE III—PROVISIONS RELATING TO RADIO

PART I—GENERAL PROVISIONS

* * * * *
GENERAL POWERS OF COMMISSION

SEC. 303. Except as otherwise provided in this Act, the Commission from time to time, as public convenience, interest, or necessity requires shall—

(a) * * *

(u) Require that apparatus designed to receive television pictures broadcast simultaneously with sound be equipped with built-in decoder circuitry designed to display closed-captioned television transmissions when such apparatus is manufactured in the United States or imported for use in the United States, and its television picture screen is 13 inches or greater in size, measured diagonally.

* * * * *
PROHIBITION AGAINST SHIPMENT OF CERTAIN TELEVISION RECEIVERS

SEC. 330. (a) * * *

(b) No person shall ship in interstate commerce, manufacture, assemble, or import from any foreign country into the United States, any apparatus described in section 303(u) of this Act except in accordance with rules prescribed by the Commission pursuant to the authority granted by that section. Such rules shall provide performance and display standards for such built-in decoder circuitry. Such rules shall further require that all such apparatus be able to receive and display closed captioning which have been transmitted by way of line 21 of the vertical blanking interval and which conform to the signal and display specifications set forth in the Public Broadcasting Service engineering report numbered E-7709-C dated May 1980, as amended by the Telecaption II Decoder Module Performance Specification published by the National Captioning Institute, November 1985. As new video technology is developed, the Commission shall take such action as the Commission determines appropriate to ensure that closed captioning service continues to be available to consumers. This subsection shall not apply to carriers transporting such apparatus without trading it.

[(b)] (c) For the purposes of this section [and section 303(s)] and sections 303(s) and 303(u)—

(1) The term "interstate commerce" means (A) commerce between any State, the District of Columbia, the Commonwealth of Puerto Rico, or any possession of the United States and any place outside thereof which is within the United States, (B) commerce between points in the same State, the District of Columbia, the Commonwealth of Puerto Rico, or possession of the United States but through any place outside thereof, or (C) commerce wholly within the District of Columbia or any possession of the United States.

(2) The term "United States" means the several States, the District of Columbia, the Commonwealth of Puerto Rico, and the possessions of the United States, but does not include the Canal Zone.

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