

programming, is closed captioned.<sup>123</sup> NBC provides an average of 94 hours of programming per week to its affiliates and captions a minimum of 72 to 80 hours of such programming, with an average of 83 hours per week, or 88.3%. This weekly total comes to about 3750 to 4150 hours per year of captioned programming. NBC has provided this level of captioning for approximately three years.<sup>124</sup> ABC offers on the average about 90 hours of programming each week to its affiliates.<sup>125</sup> All ABC-produced shows, including news, sports, children's and entertainment programming, with very limited exceptions, are captioned.<sup>126</sup> In 1991, CBS captioned four hours of network programming per day. By the end of 1995, CBS captioned a daily average of 13.5 hours of programming provided to affiliates, or between 85 and 95 hours per week, depending on weekend sports programming schedules. With the exception of its overnight news service, all of CBS's network programming is closed captioned.<sup>127</sup>

63. ABC, CBS and NBC, however, do not caption their overnight news programs broadcast between 2:00 a.m. and 6:00 a.m., such as *World News Now* on ABC,<sup>128</sup> *NBC NewsChannel*<sup>129</sup> and *Up to the Minute* on CBS.<sup>130</sup> These overnight news programs are not captioned because their late night time slots provide relatively low ratings and limited advertising revenues which the networks feel do not justify the cost of captioning.<sup>131</sup> They also are often a compilation of reports sent to the networks by their affiliates without captioning.<sup>132</sup> Furthermore, even if some of the reports were initially captioned, the affiliates may retransmit only portions of these programs to the network for their use, thereby adversely affecting the flow of the captioning.

64. There are three newer commercial national networks -- Fox, United Paramount Network ("UPN") and WB Television Network ("WB"). The Fox television network has

---

<sup>123</sup> NBC Comments at 3; CBS Comments at 9; Capital Cities/ABC Comments at 4; ALDA Comments at 3.

<sup>124</sup> NBC Comments at 3; Telephone Interview with Ellen Agress, Vice President, Legal Policy and Planning, NBC (June 4, 1996).

<sup>125</sup> Capital Cities/ABC Comments at 5.

<sup>126</sup> *Id.* at 6-7.

<sup>127</sup> CBS Comments at 8-9.

<sup>128</sup> Capital Cities/ABC Comments at 5-6.

<sup>129</sup> NBC Comments at 4.

<sup>130</sup> CBS Comments at 9.

<sup>131</sup> Capital Cities/ABC Comments at 6.

<sup>132</sup> NBC Comments at 4.

approximately 140 affiliates,<sup>133</sup> and reaches almost all homes. It distributes 16 hours of prime time, late night and early Sunday morning programming. In addition, it distributes 19 hours of children's programming throughout the week. All of this programming is closed captioned.<sup>134</sup> UPN has 156 affiliates, and covers 92% of the country.<sup>135</sup> UPN distributes six hours of prime time programming, one hour of children's weekend programming and a movie on Saturday afternoons. All of this programming is closed captioned. Closed captioning is one of the network's "delivery requirements" for its programming. Accordingly, the captioning is done by the program producers. Commercials on UPN are generally not closed captioned.<sup>136</sup> WB reaches 84% of the country.<sup>137</sup> It distributes five hours of prime time programming and five hours of children's programming each week. All of WB's prime time programming is closed captioned. The children's programming also is captioned, except for some older cartoons.<sup>138</sup>

65. While nationally broadcast sports programming generally includes captions, none of the three established networks regularly captions regional sports programming. One exception has been the regional games of the 1995 and 1996 NCAA Men's Basketball tournament, which were captioned by CBS through joint efforts with funding and captioning agency partners.<sup>139</sup> The broadcast networks assert that there are several reasons why networks generally do not caption regional sports programming. First, there are technical and logistical problems associated with delivering different games to the affiliates in various parts of the country at the same time. Second, captioning services may not exist in the regions where particular games will be televised, so it is not possible for a stenocaptioner to "see" the game to caption it in real time. Third, there may not be encoding equipment at the game site from which the programming is transmitted by uplink. In addition, broadcast networks state that a sporting event is essentially visual, and statistical information and the progress of the game are often indicated by graphics, thereby reducing or eliminating the need for captioning.<sup>140</sup> Finally, much sports programming is by its very nature perishable; sports events have substantial entertainment value only at the time of their

---

<sup>133</sup> R. R. Bowker, A Reed Ref. Pub. Co., *Broadcasting & Cable Yearbook 1996* at G-69.

<sup>134</sup> Information from Peggy Binzel, Senior Vice President, Government Relations, Fox Broadcasting Company (June 17, 1996).

<sup>135</sup> Cynthia Littleton, *WB, UPN Rally the Troops*, *Broadcasting & Cable*, June 10, 1996, at 20-21.

<sup>136</sup> Telephone Interviews with Robert Kaplan, Programming Director, United Paramount Network ("UPN") and Robert Giese, Vice President, Chris Craft Broadcasting, (May 29, 1996).

<sup>137</sup> Cynthia Littleton, *WB, UPN Rally the Troops*, *Broadcasting & Cable*, June 10, 1996, at 20-21; *Communications Daily*, May 21, 1996.

<sup>138</sup> Telephone Interview with Mitch Nedick, Head, Finance and Administration, the WB Television Network (July 8, 1996).

<sup>139</sup> CBS Comments at 14-15.

<sup>140</sup> NBC Comments at 13-14; ABC Comments at 6; CBS Comments at 6.

occurrence. Since there is no residual market for such programming, commenters argue that production costs, including captioning, cannot be spread over multiple showings. Therefore, the networks claim that they have no real financial incentive to caption most sports programming.<sup>141</sup>

66. Many commercials scheduled during and adjacent to network programs are captioned by the advertising agencies which produce them. These advertisers recognize that without closed captioning they may fail to reach potential consumers who are deaf or hard of hearing. Network promotions of upcoming network programs are generally not captioned. For example, NBC produces approximately 75 to 100 promotional spots a day which are 10 to 20 seconds in length and usually broadcast within 24 hours after being produced. In some cases, especially for news magazines with topical subjects, the promotional spots are produced just a few hours before being aired. These time frameworks may make captioning such spots logistically difficult or impossible. Networks such as NBC state that even for uncaptioned promotional spots, information about the name of the program and the time of the upcoming broadcast is often displayed visually by graphics contained in the spot.<sup>142</sup>

## 2. Local Broadcast Television Stations

67. Local television stations distribute programming they receive from a network, if they are affiliates, purchase programming in the syndication market and produce or acquire programming locally. As discussed above, stations affiliated with a network carry captioned programming during a significant portion of the broadcast week. First run syndicated programming is not produced by or for any particular network and is distributed to stations irrespective of network affiliation. Off-network syndicated programming is programming that originally aired on a particular network and is now available in reruns to stations that wish to purchase it. Examples of such programming are *I Love Lucy* and *M\*A\*S\*H*. The amount of captioned first run syndicated programming varies depending on who produces and who airs the programming. Certain first run syndicated programming such as *Jeopardy!*, *Wheel of Fortune*, and *Oprah* is closed captioned by the program producers and/or distributors.<sup>143</sup> Newer off-network syndicated programming, especially that produced after the mid-1980s, is often closed captioned. Most off-network programming produced before the mid-1980s, such as *Bewitched* and *Jackie Gleason*, was not captioned when produced and remains uncaptioned.<sup>144</sup>

68. According to a study conducted by NAB, 70% of the stations responding to its survey provide closed captioning for some of their non-network programming. This study further divides stations according to market size and indicates that market size plays some role in

---

<sup>141</sup> NCTA Comments at 11; Liberty Comments at 6-7.

<sup>142</sup> NBC Comments at 4.

<sup>143</sup> VITAC Comments at 12; CTA Comments at 3.

<sup>144</sup> NAD Comments at 16.

determining how much non-network programming stations caption. The study suggests that the highest percentage of stations captioning programs are those in the mid-sized markets (Nielsen designated market area or DMA market ranks 26 to 50 and 51 to 100), where over 75% of the stations reported that they provide captioning.<sup>145</sup> The actual amount of captioned programming also varies according to the NAB study, with the stations in the largest markets (Nielsen DMA market ranks 1 to 25) airing an average of approximately 158 hours of captioned non-network programming over the last year.<sup>146</sup>

69. Most commercial stations that caption local news use electronic newsroom ("ENR") captioning. Because ENR captioning is created from the text of the newsroom's teleprompter, the quality of ENR captioning depends on the amount, completeness, and accuracy of the information entered into the system. Live reports from the field or reports of breaking stories, much sports and weather reporting, and ad libs and banter by the anchors will not be captioned unless a verbatim script is added to the computer running the text from the teleprompter.<sup>147</sup> According to NAB, 81.5% of stations caption their local news.<sup>148</sup> All ten of ABC's owned and operated stations caption their local news.<sup>149</sup> Eight of NBC's nine network-owned television stations caption their local news programs.<sup>150</sup> However, any unscripted remarks by anchors are not captioned.<sup>151</sup> Some stations sell captioning sponsorships that give the sponsors commercial mention as a means of defraying the cost of captioning.<sup>152</sup>

### 3. Cable Television Systems

70. Cable television systems distribute the programming of local broadcast stations and cable programming networks, and their own locally produced programming to subscribers. To the extent that the broadcast programming they carry is captioned they are required by Commission rule to retain the captioning.<sup>153</sup> There are more than 100 satellite delivered cable

---

<sup>145</sup> Fratrick, "The Television Industry's Provision of Closed Captioning Services in 1996," National Association of Broadcasters (March 15, 1996) ("NAB Study"), NAB Comments, Attachment at 2.

<sup>146</sup> NAB Study at 3-4.

<sup>147</sup> CBS Comments at 17.

<sup>148</sup> NAB Comments at 3; NAB Study at 4-5.

<sup>149</sup> Capital Cities/ABC Comments at 9.

<sup>150</sup> NBC Comments at 5.

<sup>151</sup> *Id.* at 5.

<sup>152</sup> Capital Cities/ABC Comments at 9.

<sup>153</sup> 47 C.F.R. §76.606.

programming networks. In addition to carriage by cable systems, these programming services also are distributed to subscribers by other MVPDs. These networks range from those, such as CNN and USA, that are available to almost all cable subscribers, to many with more limited distribution, either because they are new or they offer programming aimed at more limited niche audiences.<sup>154</sup>

71. According to NCTA, the overall percentage of captioned programming (for the top 20 basic and expanded basic cable services<sup>155</sup> and the most widely distributed six premium networks<sup>156</sup>) is nearly 24%.<sup>157</sup> For premium services alone, NCTA asserts that the number is over 54% with individual premium services ranging as high as 80% of the entire weekly schedule. These percentages translate to over 30,000 hours per year of closed captioned programming provided by the top 20 basic networks and the top six premium networks.<sup>158</sup> According to NCTA, nearly 30% of prime time programming on the top 20 basic cable networks and over 60% on the top six premium networks is closed captioned.<sup>159</sup>

72. A number of cable programming networks are available on a per channel or per program basis. These premium services generally provide movies and special events. Home Box Office ("HBO") and Cinemax, two of the most widely available of these services, provide a variety of programming, much of which is captioned. In 1995, HBO and Cinemax had captioning on 76% of their theatrical motion pictures, 83% of their musical programming, 94% of their documentaries, 72% of their family programming, 82% of their series, 100% of their comedy programs, and 100% of other categories of programming.<sup>160</sup>

73. According to NCTA, there are several reasons why the percentage of closed captioning on cable television is lower than that of closed captioning on broadcast television. First, there are over 100 national cable programming networks, most of which operate 24 hours

---

<sup>154</sup> For example, CNN and USA, which began in 1980 are currently available to over 60 million homes, while a newer channel, such as the Outdoor Life Channel which began in 1995, is available to only 2.4 million homes. NCTA Cable Television Developments Spring 1996 at 35, 66, 78.

<sup>155</sup> The top twenty basic cable networks are: AMC, A&E, CNBC, CNN, C-SPAN, Discovery, ESPN, The Family Channel, Headline News, Home Shopping Network, Lifetime, MTV, Nickelodeon, QVC, TNN, TNT, The Weather Channel, USA Network, VH1 and TBS. NCTA Comments at Attachment A, citing *TV Guide*.

<sup>156</sup> The most widely distributed premium cable networks are Disney, Encore, HBO, Cinemax, Showtime, and The Movie Channel. NCTA Comments at Attachment A, citing *TV Guide*.

<sup>157</sup> NCTA Comments at 4 and Attachment A, citing *TV Guide*.

<sup>158</sup> *Id.* at 4.

<sup>159</sup> *Id.*

<sup>160</sup> HBO Comments at 7.

a day, seven days a week.<sup>161</sup> Furthermore, there are more than 40 regional and local cable programming networks. All of these networks combined represent thousands of hours of television programming daily. In contrast, there are only four major commercial broadcast networks, which combined present only 40 hours of network television programming daily. In addition, NCTA emphasizes that most government funding that has enabled programmers to close caption programming has historically been directed to the broadcast networks, both commercial and noncommercial, rather than the cable networks.<sup>162</sup>

74. Cable networks also differ significantly from broadcast networks in their audience reach. Unlike the four major broadcast networks which reach nearly 100% of the television households in the U.S., even the most widely available cable network reaches only the 65% of the nation's television households that choose to subscribe to cable and DBS, and the approximately 5% of homes subscribing to other MVPDs.<sup>163</sup> Thus, even though cable networks may be available nationwide, they only obtain carriage on a limited number of systems. Even when they obtain carriage, they gain only a limited number of viewers. Some cable networks are also limited to certain regions, which further reduces their audience reach.<sup>164</sup> In addition, many cable networks target niche markets, some are quite new compared to the established broadcast network, and others do not have the audience viewership or the money to support captioning.<sup>165</sup> NCTA points out that the costs of captioning are fixed and do not hinge on the number of subscribers reached or the production budget for a program. Some cable networks operate with proportionately smaller programming budgets than large broadcast networks or the producers of shows for premium cable channels. For example, Arts & Entertainment Television Networks ("A&E") states that the four major broadcast networks spend more on prime time programming in two weeks than does a cable network the size of A&E or The History Channel in the course of a year.<sup>166</sup> Given these financial realities, NCTA asserts that many cable networks may find that the costs of captioning exceed their programming budgets for the entire year.<sup>167</sup> Therefore, in the cable context, NCTA believes that the size of the audience viewership and

---

<sup>161</sup> NCTA Comments at 6. See also *1995 Competition Report*, 11 FCC Rcd at 2131 ¶150.

<sup>162</sup> NCTA Comments at 6.

<sup>163</sup> Jim McConville, *The Search for DBS Homes*, *Broadcasting & Cable*, May 27, 1996, at 35.

<sup>164</sup> NCTA Comments at 6-7.

<sup>165</sup> For example, for April 1996, the average prime time rating for the USA Network, the highest rated cable network was 2 compared to the prime time rating for NBC, the highest rated broadcast network, of 10.5. Paul Kagan Associates, *Cable TV Programming*, June 30, 1996, at 10; *People's Choice: Ratings According to Nielsen*, *Broadcasting & Cable*, April 15, 1996, at 52, April 22, 1996, at 38, April 29, 1996, at 34 and May 6, 1996, at 21.

<sup>166</sup> A&E Comments at 17-18.

<sup>167</sup> NCTA Comments at 22.

advertising base rather than the size of the market reached by the programming service, should be a key factor in determining a cable network's economic ability to afford captioning.<sup>168</sup>

75. Furthermore, much of the programming aired by many cable networks is significantly different from that of broadcast networks in terms of scheduling, format and content. The nature of cable programming varies significantly from network to network, and this may affect the logistics and costs of closed captioning. According to NCTA and many cable networks, these qualitative differences in cable programming account in large part for the quantitative differences in the percentage of closed captioning on cable networks. For example, many cable networks regularly show a substantial number of older films and television series, none of which were captioned when produced. NCTA asserts that some cable networks present topical or perishable programming with a short shelf life, such as music videos and sports programming. Numerous cable networks present live programming on a continuous basis, 24 hours a day, which would require real-time captioning. Other cable programming, such as home shopping channels or weather reports, often contain textual material or other visual depictions of the information being described verbally, which according to the cable networks reduces the need for captioning.<sup>169</sup>

76. Some national news on cable is closed captioned. For example, CNN captions approximately 50% of its day, and CNN Headline News captions approximately 25%. CNN Headline News also provides on-screen financial and sports information in textual form 24 hours a day. CNBC, a 24-hour consumer news and business programming service on basic cable that is owned and operated by NBC, currently stenocaptions 47 1/2 hours of programming per week.<sup>170</sup> America's Talking, another basic cable network owned and operated by NBC which focuses on news and information, does not currently caption any of its programming.<sup>171</sup> The Cable Satellite Public Affairs Network ("C-SPAN" and "C-SPAN 2") captions the proceedings of the U.S. House of Representatives and the U.S. Senate. Pursuant to a grant, C-SPAN also captions the one hour program *Booknotes* which airs on Sunday evenings, but the continuation of this grant is uncertain.<sup>172</sup> Furthermore, cable local news channels generally do not caption live programming.<sup>173</sup>

---

<sup>168</sup> *Id.* at 13.

<sup>169</sup> *Id.* at 7-8; The Weather Channel Comments at 3-4.

<sup>170</sup> NBC Comments at 5.

<sup>171</sup> *Id.* at 5-6. On July 15, 1996, America's Talking was replaced by MSNBC, which is not captioning its programming. Telephone Interview with Ellen Agress, Vice President, Legal Policy and Planning, NBC (July 9, 1996).

<sup>172</sup> Telephone Interview with Marge Amey, Viewer Services Assistant, C-SPAN (June 17, 1996).

<sup>173</sup> NCTA Comments at 9.

77. Kaleidoscope, a 24-hour a day cable programming network started in September 1990, was established for the purpose of serving persons with disabilities. This network is distributed by 201 cable systems and now reaches approximately 15 million subscribers. Kaleidoscope provides both general interest programming and programming specifically addressing topics relevant for persons with disabilities. All of Kaleidoscope's programming is "open captioned" so that the captioning is visible to all viewers. Kaleidoscope does its own captioning and also "open captions" programming it receives which is closed captioned.<sup>174</sup>

78. In addition to national cable networks, cable operators provide regional and local programming. The regional programming is primarily news and sports channels. Much locally originated programming carried by cable operators is on their PEG channels. Programming over PEG channels is usually produced by individuals, schools, local governments or small non-profit organizations working with volunteer personnel. Most of these program producers usually operate with very limited funding that results in a low level of captioning of PEG programming.<sup>175</sup>

#### 4. *Other Types of Programming*

79. Broadcast and cable programming include movies. Nearly all widely distributed motion pictures currently produced and distributed by member companies of the Motion Picture Association of America ("MPAA") are closed captioned for distribution over broadcast television, home video and cable television following their theatrical release. Following first run release, a "submaster" of each motion picture is created, which is then closed captioned by the NCI or another captioning service. All prints of the motion picture distributed for broadcast television, cable television or home video exhibition are manufactured from the initial captioned submaster prepared for home video release, or from a subsequent submaster edited for broadcast television, and are therefore captioned themselves. More than 6000 closed captioned titles have been distributed.<sup>176</sup> According to MPAA, there are approximately 24,000 previously released films that have not been closed captioned and which would cost \$38.4 million to caption.<sup>177</sup> MPAA and other commenters believe that, because of the need to pass through these costs, broadcasters and other video programming providers would simply not purchase older programs and films which

---

<sup>174</sup> NCTA Comments at 5; Telephone Interview with Ryan Prince, Director of Kaleidoscope's National Advisory Board (May 29, 1996) ("Prince Interview"). Kaleidoscope has transmitted its service using digital compression technology since April 1995, and is currently trying to expand its coverage through the DirecTV and Primestar DBS systems. HSD owners who subscribe to Kaleidoscope need a special decoder to receive the digital signal.

<sup>175</sup> Alliance Comments at 7.

<sup>176</sup> MPAA Comments at 3-4.

<sup>177</sup> *Id.* at 12.

would then sit on the shelf unviewed. This situation would result in reduced diversity of programming products available to the public.<sup>178</sup>

80. Closed captioning of programming for non-English speakers on both broadcast and cable channels is quite limited because captioning, particularly in multiple languages, can pose various logistical problems. Because such programming is targeted to a narrow niche market -- minority and ethnic viewers -- and is programmed in non-English languages, it has much more limited distribution, as well as more limited advertising and subscriber revenues than most English language programming. These factors can make the cost of captioning programming for non-English speakers significantly higher than English language captioning. Furthermore, expertise in non-English language captioning may be scarce and, for some languages, virtually unavailable.<sup>179</sup> In addition, the alphabets and characters used in certain non-English languages cannot be processed with standard computerized word processing and closed captioning equipment.<sup>180</sup> Even if such languages can be captioned with special equipment, the captioning decoders currently available in television sets used in the U.S. can only decode Latin based alphabets and symbols. Accordingly, captioning that uses non-Latin characters, such as Chinese, Russian and Hebrew, cannot be decoded on the television sets used by U.S. viewers.<sup>181</sup> Another logistical factor is that closed captioning in English would require a staff with multiple translators of numerous languages. Whether captioned in English or a particular non-English language, it can be extremely difficult to assure the accuracy and quality of such multi-lingual captioning.<sup>182</sup>

##### 5. *Other Multichannel Video Providers*

81. Television programming is also delivered to consumers through several other MVPDs. These video distribution technologies retransmit programming also delivered over broadcast and cable delivery systems. One such new provider is the direct-to-home ("DTH") satellite systems. Approximately 2.2 million homes subscribe through direct broadcast satellite ("DBS") service and 2.3 million homes subscribe via home satellite dishes ("HSDs"). The total 4.5 million DTH subscribers represent approximately 5% of U.S. television households.<sup>183</sup> DTH

---

<sup>178</sup> *Id.* at 12.

<sup>179</sup> International Cable Channel Partnership, Ltd. ("ICCP") at 3.

<sup>180</sup> Among the languages with distinctive alphabets and characters are Arabic, Cambodian, Chinese (including various Chinese dialects) and Japanese, Farsi, Hebrew, Hmong, Hindi, Korean, Russian, Tagalog (Filipino), Thai and Vietnamese.

<sup>181</sup> *Electronic Industries Association of America (EIA) Standard Recommended Practice for Line 21 Data Service (EIA Document #608) September 1994 at 14-22; Telephone Interview with Gerald Freda, Vice President, Production & Engineering, NCI (June 17, 1996).*

<sup>182</sup> ICCP at 3.

<sup>183</sup> Satellite Broadcasting and Communications Association ("SBCA") Comments at 4.

is purely a program delivery system. Until now, it has not participated (other than through program licensing), in the creation of closed captioned programming, except for retransmitting intact the closed captioning already encoded in the programming it delivers to subscribers. All closed captioned pay-per-view, off-air broadcast signals carried on satellite, satellite-delivered programming and PBS broadcasts carrying closed captioning are included in satellite transmissions.<sup>184</sup>

82. Another multichannel video provider is the wireless cable industry, which includes licensees of multipoint distribution service ("MDS") stations and ITFS stations that lease transmission capacity to wireless cable operators. Currently, wireless cable operators rely heavily on program suppliers such as broadcast networks and cable networks for their commercial programming. Most wireless cable systems voluntarily retransmit to their subscribers intact any closed captioning provided with that programming. The only exception to this general rule is when the scrambling system employed by some wireless cable systems does not allow line 21 of the VBI to be passed through to the subscriber's television set.<sup>185</sup> Much of the educational programming carried on ITFS channels and retransmitted on wireless cable systems is not closed captioned.<sup>186</sup>

83. Local exchange carriers ("LECs") also can provide video programming service through telephone lines. For example, Bell Atlantic is current delivering video programming that has previously been captioned by the programming provider over its digital video system in Dover Township, New Jersey.<sup>187</sup> Many of the hardware and software components of advanced digital systems that Bell Atlantic will deploy, however, are in the prototype stage or not yet engineered to accommodate captioning. Bell Atlantic states that it cannot ensure compliance with any captioning requirements for any future systems it will deploy until it has had the opportunity to develop and test all system components required to support such requirements.<sup>188</sup> Pursuant to Section 653 of the Communications Act, LECs operating open video systems ("OVS") will be subject to the must-carry requirements applicable to cable systems.<sup>189</sup> Accordingly, under the must-carry requirements, OVS providers will be required to transmit intact any captioning contained in the must-carry signals they retransmit.

---

<sup>184</sup> SBCA Comments at 2, 6.

<sup>185</sup> Wireless Cable Association International, Inc. ("WCA") Comments at 2, 3, 7.

<sup>186</sup> *Id.* at 6.

<sup>187</sup> Bell Atlantic Comments at 4.

<sup>188</sup> *Id.* at 4-5.

<sup>189</sup> See *Implementation of Section 302 of the Telecommunications Act of 1996 Open Video Systems, Second Report and Order in CS Docket No. 96-46, FCC 96-249* (released June 3, 1996), summarized at 61 Fed. Reg. 28698 (June 5, 1996).

## F. Funding of Closed Captioning

84. Currently, closed captioning is funded by a variety of sources. The Federal government is a major source of funding which is administered by the DOE. Last year, DOE provided \$7.9 million for closed captioning, which represents roughly 40% of the total amount spent on captioning.<sup>190</sup> Once Congress has made an annual appropriation to DOE, the Department allocates some of that funding to captioning, establishes priorities for programs and awards grants to captioning providers that have applied for Federal funding. Winning applicants supply proposed budgets and program selections for approval by DOE. Among the categories of programming receiving DOE funding for closed captioning are national news, public information, children's and sports programs, movies, mini-series, and special programs broadcast during prime time, syndicated programming and daytime programming.<sup>191</sup> The national broadcast networks rely heavily on DOE grants to fund captioning of network programming. For example, approximately 45% of ABC's 1996 closed captioning costs are funded by DOE grants.<sup>192</sup> Historically, most DOE funding has been provided to broadcast television rather than cable networks.<sup>193</sup> However, the future of Federal funding for closed captioning is uncertain.<sup>194</sup> Several commenters note that this possible defunding scenario appears inconsistent with the 1996 Act, which requires that the Commission adopt rules to implement captioning. These commenters also voice concerns about the Federal government issuing an unfunded captioning mandate.<sup>195</sup>

85. Programmers and program providers also receive funding for captioning from private sources. For example, Capital Cities/ABC states that it will pay for about 46% of the \$2,840,000 cost of closed captioning its own programming in 1996, with DOE funding about 45% and private sources contributing about 9% of that cost.<sup>196</sup> For some of its news and public affairs programming, CBS has obtained support from advertisers who subsidize captioning as a public service. CBS also has been able to defray a portion of the costs of captioning its national and regional sports programming by providing open video credits to advertisers in return for

---

<sup>190</sup> *Taking Aim at Captioning*, Broadcasting & Cable, June 3, 1996 at 18.

<sup>191</sup> NAD Comments at Attachment H.

<sup>192</sup> Capital Cities/ABC Comments at 7-8.

<sup>193</sup> NCTA Comments at 16.

<sup>194</sup> On June 10, 1996, the U.S. House of Representatives passed a bill that would limit government funding of captioning to news and educational programs. See Individuals With Disabilities Act (IDEA Improvement Act of 1996), H.R. 3268, Sec. 662(a)(10). A similar bill has been introduced in the U.S. Senate, S. 1578.

<sup>195</sup> Schwartz, Woods & Miller Comments at 3; ALTV Comments at 4-5; Media Captioning Services Comments at 6.

<sup>196</sup> Capital Cities/ABC Comments at 7-8. Capital Cities/ABC states that about 70% of the private source funding is from program producers and the other 30% is from network advertisers.

financial support of the closed captioning for this type of programming. For its entertainment programming, CBS states that it funds closed captioning in partnership with program producers and advertisers and financial support from the government.<sup>197</sup>

86. Local broadcast stations also use private funding sources for captioning who are then acknowledged during the broadcast. NAB reports that 67.9% of the stations in their survey that carry captioned news programs have sponsors for the closed captioning.<sup>198</sup> This sponsorship by private companies and nonprofit organizations is appreciated by some members of the deaf and hard of hearing community and is credited for the increase in the amount of captioned programming in recent years.<sup>199</sup> Some representatives of the deaf and hard of hearing community, however, find it troubling that the closed captioning is sponsored by private organizations separate from that of the programming itself.<sup>200</sup> They argue that since the audio portion of a program does not include similar statements of sponsorship, there is an appearance that captions are a "charity provided by the goodness of a benefactor, and not as it should be: sound business sense, good education strategy and equal access to information."<sup>201</sup>

#### G. The Quality and Accuracy of Closed Captioning

87. The quality, accuracy and completeness of closed captioning is a relevant factor in examining the accessibility of video programming for persons with hearing disabilities.<sup>202</sup> Unless closed captions accurately reflect the audio portion of the video programming to which they are attached, they may be of limited use to the viewer. Captions, unlike words in books or periodicals, are impermanent. When there are typographical errors or incorrect word usage, the reader does not have the time to look over the previous words to deduce the intended meaning. Part of the art of captioning is the presentation, including the manner of captioning, its placement and timing.<sup>203</sup>

---

<sup>197</sup> CBS Comments at 14-15.

<sup>198</sup> NAB Comments at 5

<sup>199</sup> ALDA Comments at 6.

<sup>200</sup> MCAHI Comments at 1; Northern Virginia Resource Center for Deaf and Hard of Hearing Persons ("NVRC") Comments at 5; VITAC Comments at 12.

<sup>201</sup> NVRC Comments at 5. *See also* VITAC Comments at 13.

<sup>202</sup> The House version of this section required the Commission to examine the quality of closed captioning and the style and standards which are appropriate for the particular type of programming. Conference Report at 182.

<sup>203</sup> VITAC Comments at 19. *See also* JoAnn M. Myers ("Myers") Comments at 1.

88. Currently, there is no standardization of captioning styles or presentation.<sup>204</sup> Captions can be displayed in pop-up or roll-up form. Pop-up captions are displayed and then erase entirely. They are used most often for off-line captioning. Roll-up captions, which are mostly used for real-time captioning, scroll onto and off the screen in a continuous motion.<sup>205</sup> Some captioning is verbatim, following exactly what the speakers are saying, while other captioning is not and reflects some editing on the part of the captioners. Other differences among captioning styles include the manner in which speakers are identified and how voice inflections, background noise, audience reaction and sound effects are indicated.<sup>206</sup> For example, some entities identify speakers using parentheses and others provide the speaker's name followed by a colon.<sup>207</sup> In addition, some captions are centered and others are left-justified. Expert captioners do not appear to agree on the best presentation style.<sup>208</sup>

89. A number of problems have been observed with closed captioning. Commenters report that often captions are omitted from any review of a prior week's program at the beginning of a show or any preview of a coming episode of a program.<sup>209</sup> They state that it is not uncommon for the commercials or station breaks to lack captions during a program that is otherwise captioned.<sup>210</sup> It is also reported that the closed captions are sometimes turned off five to eight minutes before the end of national network programming.<sup>211</sup> Open character generated announcements, such as emergency messages, election results, weather advisories and school closing information, which crawl across the bottom of the screen are obscured by captions.<sup>212</sup> The closed captions also tend to disappear when the picture is reduced to a small size in order

---

<sup>204</sup> NCI Comments at 7.

<sup>205</sup> NAD Comments at Attachment I.

<sup>206</sup> *Id.* at 18-19.

<sup>207</sup> *Id.* at 17.

<sup>208</sup> VITAC Comments at 20.

<sup>209</sup> NAD Comments at 18.

<sup>210</sup> *Id.* at 18; Barbara Liss Chertok ("Chertok") at 2; American Society for Deaf Children ("ASDC") Comments at 3.

<sup>211</sup> Jeannette Costa ("Costa") Comments at 2. According to Jeffrey M. Hutchins, Vice President & General Manager, VITAC, this may occur when a local station switches from its master control center to the control center in its news room at the end of a prime time program and just prior to the local news. If that control room is not set up to pass the VBI through properly, the result is the stripping of the captions during the final segment of the program. Telephone Interview with Jeffrey Hutchins (June 17, 1996).

<sup>212</sup> WGBH Comments at 31; ASDC Comments at 3-4; NAD Comments at 23.

to show other information (e.g., school closings) and they do not return until the picture returns to its normal size.<sup>213</sup>

90. In addition, commenters observe that the closed captions may not remain with a program throughout the distribution chain, as would be expected.<sup>214</sup> It is reported that, sometimes, a prime time program broadcast on network television may not have the captions when it is rerun in syndication or redistributed by a cable network.<sup>215</sup> When a prime time program goes into syndication it may be edited to fit a shorter time frame. While the video and audio portions remain intact, the captioning may be removed.<sup>216</sup> For example, some PBS programming originally broadcast with closed captions has been redistributed on cable by A&E without the captions included.<sup>217</sup> It is also reported that a program may be captioned in one place and not another. For example, one commenter claims that *Jeopardy!* is captioned in Washington, D.C. and Nashville, Tennessee, but not in Atlanta, Georgia.<sup>218</sup> Further, commenters state that movies on HBO can appear one day with clear, error-free captions and be repeated on another day with captions that are scrambled and unreadable.<sup>219</sup> Additionally, programs may have the "CC" logo indicating that they are closed captioned when they do not actually have the captions.<sup>220</sup>

91. Moreover, there are often errors in captions, including misspelled words, incorrect grammar, poor timing, inaccuracies and poor placement. Captions do not always match what the speaker is saying.<sup>221</sup> Sometimes they are out of synchronization with the audio portion of the

---

<sup>213</sup> NVRC Comments at 6.

<sup>214</sup> EEG Enterprises Comments at 3; NAD Comments at 22.

<sup>215</sup> Colorado Assistive Technology Project Comments at 4.

<sup>216</sup> American Society of Deaf Children Comments at 4.

<sup>217</sup> Massachusetts Commission for the Deaf and Hard of Hearing Comments at 3. A&E does not respond to this assertion in its reply comments.

<sup>218</sup> Atlanta Hears Chapter/SHHH Comments at 2. It is not clear to what extent the commenter monitored this programming and whether the lack of captions reflects a transmission problem on a specific day or the failure of the local broadcaster to distribute the programming with the captions intact. *Id.*

<sup>219</sup> Atlanta Hears Chapter/SHHH Comments at 3.

<sup>220</sup> Mary Clepper ("Clepper") Comments at 2.

<sup>221</sup> Boston Chapter/SHHH Comments at 2.

program.<sup>222</sup> Accuracy is a problem, particularly with real time captioning.<sup>223</sup> When the ENR type of captions is used it is common for abbreviations, camera cues and anchor cues that appear on the teleprompter to be included in the closed captions.<sup>224</sup> The result of such errors is garbled captions, which one commenter points out are "a nuisance and sometimes funny."<sup>225</sup>

92. Some of the errors in captions noted above are likely due to captionwriter errors. It has been noted that even highly skilled captionwriters, with up to 99% accuracy rates, often make up to two mistakes per minute. These mistakes occur either because of captionwriter's error or the software mistranslation of the operator's keystrokes. Software mistranslation occurs when the software does not recognize the machine shorthand and the mistakes appear as a phonetic rendering of the word.<sup>226</sup>

93. Problems also occur because of inadvertent errors in the transmission of captions by the broadcaster, distributor, cable network, local station or cable system operator. In many cases, the captions have been stripped, moved to the wrong line of the VBI or flipped onto the wrong field of line 21 by maladjusted signal processing equipment. The critical technical steps of a quality captioning service are accurate encoding, transmission reception and decoding of the signal. To avoid such errors, it is important that the captioned signal be monitored as it is fed, monitored during the duplication process and checked to ensure that the equipment used is not inadvertently stripping the captions, moving them onto the wrong line or placing them in the wrong field.<sup>227</sup>

#### IV. Video Description of Video Programming

##### A. Introduction

94. Video description<sup>228</sup> is a more recent innovation than closed captioning. It provides aural descriptions of a program's key visual elements that are inserted during the natural pauses in the program's dialogue. For example, it describes an action that is otherwise not reflected in

---

<sup>222</sup> *Id.*; Burlington Chapter of North Carolina Association of the Deaf at 3-4.

<sup>223</sup> League for the Hard of Hearing Comments at 5.

<sup>224</sup> WGBH Comments at 31.

<sup>225</sup> Chertok Comments at 2. *See also* Boston Chapter/SHHH Comments at 2.

<sup>226</sup> WGBH Comments at 32.

<sup>227</sup> *Id.* at 30. *See also* ASDC Comments at 4; NAD Comments at 22.

<sup>228</sup> Some commenters suggest that video description is an inaccurate term and this service should more properly be called "audio description." *See, e.g.,* Clark Comments at 4. We will use the term video description because it is the terminology used in the statute. 47 U.S.C. § 613(g).

the dialogue such as the movement of a person in a scene. It was first used in theatrical performances in the early 1980s, and since that time has been developed for television programming primarily by WGBH and other PBS affiliates.<sup>229</sup> PBS first tested broadcast video description in 1988.<sup>230</sup> The video description of a television program is most often transmitted through the SAP channel. The SAP channel is a subcarrier that allows each distributor of video to transmit an additional soundtrack. Essentially video distributors which utilize a SAP channel allow the viewer to choose between the primary soundtrack and an additional, or secondary, soundtrack transmitted on the SAP channel for the program. In addition to video description, the SAP channel is also frequently used for alternative language programming.

95. This ancillary service is permitted under the Commission's rules so long as it causes no observable degradation to any portion of the visual or aural broadcast signal.<sup>231</sup> To receive the service, the audience member must have a stereo television or a videocassette recorder ("VCR") that is capable of receiving the SAP channel, or a television adapter for this channel. There are presently no regulatory requirements regarding video description.

#### **B. Audiences that Benefit from Video Description**

96. The precise number of persons with visual disabilities likely to benefit from video description is difficult to estimate.<sup>232</sup> This is, in part, due to the wide differences in the degree of visual disability. Indeed, many persons with sufficient vision to watch normal television programming may still benefit from video description.<sup>233</sup> According to the National Center for Health Statistics there are 8.6 million persons who are visually disabled.<sup>234</sup> However, other estimates of the population of persons with visual disabilities who would benefit most from video description range between eight and 12 million persons.<sup>235</sup> Beyond the direct benefit to such persons, video description can relieve family and friends of persons with visual disabilities of the

---

<sup>229</sup> WGBH has established the Descriptive Video Service to provide video description. See WGBH World Wide Web home page: <http://www.boston.com/wgbh/pages/dvs/dvshome.html>.

<sup>230</sup> APTS Comments at 2. PBS went on to air the first nationally described program, *American Playhouse's* "Sense and Sensibility" in 1990.

<sup>231</sup> See 47 C.F.R. §§ 73.646 and 73.682(a)(23)(ii).

<sup>232</sup> See, e.g., Audio Optics Comments at 1.

<sup>233</sup> American Foundation for the Blind ("AFB") Comments at 5-8. Narrative Television Network ("NTN") refers to these persons as the "hidden visually impaired." NTN Comments at 4.

<sup>234</sup> National Center for Health Statistics, Current Estimates from the National Health Interview Survey, 1994, Series 10, No. 193, at 93, Table 62.

<sup>235</sup> AFB Comments at 5-8 (estimating the population of visually impaired to be between eight and 10.8 million). But see American Council of the Blind ("ACB") Comments at 2 (estimating that there are probably at least 12 million Americans with visual disabilities who could potentially benefit from video described programming).

task of providing on the spot descriptions while viewing programming, thereby essentially serving as ad hoc describers.<sup>236</sup>

97. Many of these individuals are children for whom educational programming with video description would offer significant benefits.<sup>237</sup> Estimates suggest that up to 500,000 persons under the age of 18 can be classified as visually disabled.<sup>238</sup> Video description would allow these children to enjoy the same educational experience as their sighted peers.<sup>239</sup> Finally, video description may allow parents with visual disabilities to participate more fully in their children's educational experience.<sup>240</sup>

98. As the population ages, an increasing number of people will become visually disabled as part of the aging process.<sup>241</sup> These people may also become increasingly dependent upon television for information, entertainment and companionship.

99. Some sources have suggested that video description services can also offer ancillary benefits to nonvisually disabled persons.<sup>242</sup> Video description may also benefit persons with cognitive or learning disabilities.<sup>243</sup> Furthermore, video description may offer an educational opportunity for the sighted to improve their vocabulary and even writing skills by suggesting more creative and informative ways of describing a scene.<sup>244</sup> Persons without visual disabilities may sometimes choose to passively "watch" television while engaged in other activities. These persons, like those in the visually disabled community, are already partially served by conventional television and television band radio receivers. However, their experience, like that

---

<sup>236</sup> Washington Metropolitan Ear Comments at 6.

<sup>237</sup> AFB Comments at 9. *See also* Laurence Anne Coe ("Coe") Comments at 3.

<sup>238</sup> AFB Comments at 9. ABC Comments at 3. *But see* WGBH Comments at 3 (estimating that 45,000 school children are "legally blind").

<sup>239</sup> AFB Comments at 9; ACB Comments at 3.

<sup>240</sup> *See, e.g.*, Louis M. Smith ("Smith") Comments at 1.

<sup>241</sup> Washington Metropolitan Ear Comments at 7.

<sup>242</sup> Coe Comments at 2-4. *See also* NTN Comments at 3. AFB cites the popularity of play-by-play sports broadcasting among sighted persons as support for this proposition. AFB Comments at 10.

<sup>243</sup> AFB Comments at 9.

<sup>244</sup> *Id.*

of people with visual disabilities, might be enriched through video description.<sup>245</sup> The widespread availability of video description might increase this type of use.<sup>246</sup>

### C. Methods of Distribution of Video Description

100. Generally, video description service is provided using the SAP channel.<sup>247</sup> The SAP channel allows for the delivery of a third audio track for a program in addition to the monaural and stereophonic audio tracks. The transmission of the SAP channel is accomplished with the use of a secondary carrier called a subcarrier. The ancillary audio (in this instance video description) is transferred onto the SAP subcarrier through the use of a modulator. Therefore, any program distributor wishing to deliver SAP would need to install an additional modulator at the transmission facility. In comparison, closed captioning information is carried on the VBI and does not require the use of additional equipment at the transmission facility. The VBI is available as an inherent feature of the Broadcast Television System Committee ("BTSC") video signal standard and is part of the transmission of a television signal, whereas the SAP channel requires the video distributor to generate a separate subcarrier containing the additional audio track.

101. In order for a viewer to access the SAP channel, the consumer must have a television or VCR equipped to receive the SAP channel.<sup>248</sup> Approximately 52% of American households own SAP-compatible televisions, and 20% own VCRs capable of receiving the SAP channel.<sup>249</sup> A consumer who has a television or VCR with SAP capability can activate this feature to receive the video description or other audio, if available, in lieu of the primary soundtrack.

102. When the SAP channel is employed, the program can be transmitted with two separate audio tracks. The additional track "follows" the main program signal through the

---

<sup>245</sup> Coe Comments at 4-5. NTN asserts that 60% of their audience mail comes from sighted viewers who enjoy the programming. NTN Comments at 3.

<sup>246</sup> Inclusive Technologies Comments at 4. Anna Dresner ("Dresner") also suggests that the popularity of books on tape hints at the possible popularity of video description among sighted viewers. Dresner Comments at 2. Washington Metropolitan Ear also suggests that such an application may be popular. Washington Metropolitan Ear Reply Comments at 9. Interestingly, Turner Classic Movies has suggested that the video description soundtracks may have some value as part of the books on tape market. Telephone Interview with Ken Schwab, Director of Programming, Turner Classic Movies (June 7, 1996)

<sup>247</sup> CEMA Comments at 7.

<sup>248</sup> Audio Optics Comments at 1. Audio Optics also notes that stand alone SAP receivers were previously available but are no longer distributed. *Id.*

<sup>249</sup> CEMA Comments at 7-8.

distribution process.<sup>250</sup> For example, the SAP channel as currently used by PBS for its video description follows the main program signal from the network's master control facility and satellite distribution system to the local station's broadcast facility and through the local transmitter. The accommodation of this additional soundtrack typically requires changes to the network and local station plant wiring and equipment. At the local transmitter, the distributor must have the technical facilities to remodulate the subcarrier signal to include the SAP channel information.<sup>251</sup>

103. Video description may also be provided as an "open" service with the descriptive narrative incorporated as part of the regular sound track. Narrative Television Network ("NTN") is currently providing nearly 20 hours per week of such programming over more than 1000 cable systems.<sup>252</sup> NTN states that this method has the advantage of being available without the special equipment required to access the SAP channel.<sup>253</sup> One potential disadvantage to this method is that the additional narrative may act as a distraction to the wider, sighted audience who wish to watch programming in a conventional manner.

104. In Canada, video description has been provided using a Radio Reading Service. AudioVision Canada transmits descriptive audio separately from regular audio over a radio reading service available on most Canadian cable television FM systems. This allows the consumer to receive either the video signal with the primary soundtrack or the video description soundtrack alone, but not both. For this reason, this technique works best for those not interested in or able to see the video portion of the program, since only one television channel can be accessed at a time. This would partially undermine the value of video description by not allowing persons with visual disabilities to enjoy television programming with their friends and family. However, this technique, as with open video description, allows the audience access to the descriptive narrative without special equipment.<sup>254</sup>

105. Finally, video description may also benefit from digital television technology. This technology may allow operators to provide the viewer with a choice between video description and alternative language programming because it may permit the transmission of multiple audio

---

<sup>250</sup> See *An Investigation of Vertical Blanking Interval (VBI) Audio Encoding for Technical Distribution of Television Programs Containing a Special Soundtrack for Blind and Visually Impaired Viewers, Final Report*, CPB/WGBH National Center for Accessible Media, Department of Education, National Institute of Disability Rehabilitation and Research Grant #H133C10223, February 28, 1995, at 2.

<sup>251</sup> *Id.* at 3.

<sup>252</sup> NTN Comments at 4.

<sup>253</sup> *Id.*

<sup>254</sup> AFB Comments at 4. See also ACB Comments at 2. ABC also asserts that it may be possible to deliver descriptive narrative audio using the VBI, or over telephone lines, but provides no further information. NTN also mentions this possibility but fails to provide specifics. NTN Comments at 5.

tracks.<sup>255</sup> According to NAB, digital television may also allow a viewer to listen to more than one audio channel at the same time. This feature may lower the cost of providing video description by allowing the consumer to select both the main audio program with the conventional soundtrack and a descriptive narrative video description audio program synchronized with the natural pauses in the conventional soundtrack simultaneously. This would allow the producer to eliminate the costly process of mixing the main soundtrack with the descriptive narrative.<sup>256</sup>

#### D. Cost of Video Description

106. Estimates for the cost of providing video description vary widely. The service is labor intensive and the actual costs seem to vary considerably depending on the particular project.<sup>257</sup> NCTA estimates that the cost of providing descriptive video service for a full length feature film can range up to \$10,000.<sup>258</sup> However, the NTN estimates the cost of high quality narrative programming, when included as part of the primary audio track, to be between \$1000 and \$1200 per program hour.<sup>259</sup> In addition to NCTA and NTN, other commenters address the issue of cost. PBS estimates the cost at one and one half times the cost of closed captioning or \$3000 per program hour.<sup>260</sup> Audio Optics estimates that the cost alone for adding video description to a one and a half hour feature film would be about \$4000, exclusive of profit or overhead.<sup>261</sup> This would equal about \$2667 per program hour.

107. Video description also entails increased distribution costs.<sup>262</sup> Currently, the commercial broadcast networks do not have the facilities to distribute the SAP channel to affiliated stations for retransmission. In order to distribute programming with SAP channel audio, the network must encode the SAP signal into the transmission to the satellite using a costly digital encryption system. The encrypted signal must be decrypted when received by the ground station. ABC, while unable to provide precise estimates, states that the required upgrades at the network

---

<sup>255</sup> NAB Comments at 14.

<sup>256</sup> WGBH Comments at 30.

<sup>257</sup> NCTA Comments at 16. *See also* WGBH Comments at 19.

<sup>258</sup> NCTA Comments at 16.

<sup>259</sup> NTN Comments at 6. NTN also asserts that digital technology will bring costs down further and shorten the turn around time required. *Id.*

<sup>260</sup> PBS Comments at 3.

<sup>261</sup> Audio Optics Comments at 3.

<sup>262</sup> Closed captioning does not involve additional distribution costs because the VBI is an integral part of the transmitted television signal. The costs associated with closed captioning are for the production of the captions.

production facilities and the over 200 affiliated stations could cost "many hundreds of thousands of dollars."<sup>263</sup> NBC and CBS estimate the total cost of retrofitting their network facilities and infrastructure with equipment to provide video description using a SAP channel to be at least several million dollars.<sup>264</sup>

108. After receiving the decrypted signal from the networks the ground station must encode the SAP signal into its signal using a SAP generator. The commercial networks estimate that individual stations that do not have SAP reception and decoding capability would have to spend between \$30,000 and \$1 million for each local station to obtain it.<sup>265</sup> According to the commercial broadcast networks, upgrades to current facilities necessary to provide video description would be wasted after conversion to digital television.<sup>266</sup>

109. Cable systems are technically able to transmit information on the SAP channel. However, cable operators face the same problems as broadcast stations regarding the reception and retransmission of SAP signals. In the case of cable the problems are somewhat compounded because the cable system requires a separate SAP generator for each channel it wishes to distribute with the SAP channel.<sup>267</sup>

#### E. Funding for Video Description

110. To date, the primary source of funding for video description has been through government grants administered by the PBS, National Endowment for the Arts, National Science Foundation and especially the DOE.<sup>268</sup> The DOE currently allocates \$1.5 million for video description or about \$0.19 per American with a visual disability.<sup>269</sup>

---

<sup>263</sup> Capital Cities/ABC Comments at 15-16.

<sup>264</sup> NBC Comments at 15. *See also* CBS Comment at 38.

<sup>265</sup> NBC Comments at 15 (estimating the cost of the upgrade to be between \$30,000 and \$100,000). *See also* CBS Comments at 38 (estimating the cost to be between \$100,000 and \$1 million). According to CBS only about 10% of stations broadcast through the SAP, while slightly more, perhaps 20% of CBS affiliates do so. *Id.*

<sup>266</sup> Capital Cities/ABC Comments at 15; NBC Comments at 16; CBS Comments at 40-41.

<sup>267</sup> Leaming Industries, Inc., SAP-1 and SAP-2 Second Audio Program Generators (1996).

<sup>268</sup> WGBH Comments at 23. WGBH's Descriptive Video Service receives about 65% of its budget from such sources. *Id.*

<sup>269</sup> Coe Comments at 4-5. This calculation is made assuming the population of persons with visual disabilities is 8 million which is the most conservative estimate of the number of persons with visual disabilities. Coe also notes that this compares with about \$0.35 spent on closed captioning for each person with a hearing disability. *Id.*

111. In addition to public funding, private sources have begun to support video description. WGBH's Video Description Service receives 35% of its funding from corporations and foundations, home video revenues and individual viewer donations.<sup>270</sup> Video description also has begun to enjoy some success as a commercially viable product as witnessed by the success of NTN, Kaleidoscope and the recent introduction of described programming on Turner Classic Movies.<sup>271</sup> However, even these commercial projects benefit from public funding. For instance, NTN has received government grants.<sup>272</sup> Turner Classic Movies has developed its video description programming in partnership with WGBH, which as noted receives 65% of its funding from government grants.<sup>273</sup>

#### F. Current Availability of Video Description

112. Public broadcasting has contributed substantially to the development and availability of video description.<sup>274</sup> PBS currently distributes video description on 22 programs, including *Mister Rogers' Neighborhood*, *Masterpiece Theater* and *Mystery*.<sup>275</sup> PBS's video description programming is currently being broadcast by 130 PBS stations reaching 71% of the U.S. population.<sup>276</sup> PBS also provided video description for the 1993 presidential inauguration, the only example of live video description to date.<sup>277</sup>

113. There is no video description on the commercial broadcast networks.<sup>278</sup> According to the networks, providing video description would be prohibitively expensive and logistically onerous.<sup>279</sup> For instance, NBC observes that PBS is able to describe some of its programming

---

<sup>270</sup> WGBH Comments at 24.

<sup>271</sup> These commercial offerings are discussed more completely below. See ¶¶ 114-116 *infra*.

<sup>272</sup> NTN Comments at 7-8.

<sup>273</sup> Telephone Interview with Ken Schwab, Director of Programming, Turner Classic Movies (June 7, 1996) ("Schwab Interview"). See also note 268 *supra*.

<sup>274</sup> APTS Comments at 3

<sup>275</sup> DVS Update, August 1995, WGBH Descriptive Video Service. However not all episodes incorporate video description. In addition to describing public television programs, DVS is used for describing popular movies on home video. *Id.*

<sup>276</sup> APTS at 3. Other public television stations are in the process of upgrading their equipment for SAP capability and the ability to carry video description. *Id.*

<sup>277</sup> WGBH Comments at 12.

<sup>278</sup> NBC Comments at 15; Capital Cities/ABC Comments at 14.

<sup>279</sup> See, e.g., NBC Comments at 15.

because it receives the master tape two to three weeks in advance.<sup>280</sup> In contrast, commercial networks state that they receive their master tapes two to three days in advance.<sup>281</sup>

114. Kaleidoscope, the cable programming network devoted to the needs of persons with disabilities, provides movies that include video description. Kaleidoscope's programming schedule includes between two and two and one half hours of such movies each week.<sup>282</sup>

115. In addition to Kaleidoscope, NTN also provides video description.<sup>283</sup> NTN does not use the SAP channel but rather uses "open video description" incorporating the descriptive narrative into the regular soundtrack.<sup>284</sup> NTN programming is distributed by satellite, cable and broadcast. Cable subscribers who receive NTN's programming as part of their basic service are the majority of its audience. NTN maintains that there is some evidence that the availability of NTN programming acts as an inducement to persons with visual disabilities to subscribe to cable.<sup>285</sup> NTN also cites its experience in Canada where it is usually distributed as part of a premium channel. It asserts that its experience there indicates that the availability of such programming may induce persons with visual disabilities to take premium services.<sup>286</sup>

116. Turner Classic Movies began airing movies with video description narrative as its "DVS Showcase" series.<sup>287</sup> This series is aired weekly and runs for about two hours every Sunday afternoon. Turner Classic Movies' efforts are a joint project with WGBH and currently include 12 titles, such as Casablanca and the Maltese Falcon.<sup>288</sup> Turner Classic Movies plans to add 15 more video description titles this fall.<sup>289</sup>

---

<sup>280</sup> NBC Comments at 15.

<sup>281</sup> *Id.*

<sup>282</sup> Prince Interview *supra* note 174.

<sup>283</sup> NTN Comments at 8.

<sup>284</sup> *Id.* at 4.

<sup>285</sup> *Id.*

<sup>286</sup> *Id.*

<sup>287</sup> Schwab Interview *supra* note 273.

<sup>288</sup> *Id.* Turner Classic Movies is responsible for production and presentation costs while WGBH's Video Description Service is responsible for the descriptive narrative. A more precise break down of the costs is not available.

<sup>289</sup> *Id.*

117. Video description poses varying degrees of additional difficulty for other MVPDs.<sup>290</sup> DTH satellite systems face the same problems as other distributors. For example, these providers express general concerns regarding the availability of described programming, a conflicting demand for bilingual programming on the SAP channel and the possible expense of creating and adding descriptive narrative.<sup>291</sup> HSD is not capable of passing through the SAP channel.<sup>292</sup> Using current technology many MMDS operators are unable to decode SAP programming without upgrading a significant portion of their equipment.<sup>293</sup> While the systems are generally capable of passing the SAP channel through, many of the current set top boxes are not capable of decoding the signal.<sup>294</sup> Similarly, SMATVs are able to transmit and receive the SAP channel but are faced with the same limitations of the current SAP channel technology as other MVPD operators.<sup>295</sup>

118. With the exception of the service provided by PBS, Kaleidoscope, NTN and Turner Classic Movies noted above, video description, as such, is unavailable on local, regional or syndicated broadcast television and local or regional cable services. Thus, persons with visual disabilities must rely on these limited video description services or the information that can be gleaned from the conventional television soundtrack.

#### G. Obstacles to Video Description

119. Barriers to video description can be divided into two broad categories: technical issues and obstructions inherent to the service. Technical concerns include the unavailability of the SAP channel or the inability of some broadcast and cable networks to distribute programming with the SAP channel.<sup>296</sup>

120. Other barriers to more widespread use of video description are inherent to the service. For instance, the service requires development of a second script.<sup>297</sup> The development

---

<sup>290</sup> See generally SBCA Comments at 10-11; WCA Comments at 8-10.

<sup>291</sup> SBCA Comments at 10-11.

<sup>292</sup> Interview with Robert M. Zitter, Senior Vice President, Technical Operations, HBO (June 26, 1996) ("Zitter Interview").

<sup>293</sup> WCA Comments at 8.

<sup>294</sup> Zitter Interview *supra* note 292.

<sup>295</sup> *Id.*

<sup>296</sup> NBC Comments at 15.

<sup>297</sup> NCTA Comments at 14.

and production of this second script can add considerably to both the production time and the budget required to produce a program.<sup>298</sup>

121. In addition to the increased costs, some commenters suggest that there may be significant copyright issues associated with the addition of descriptive narration to video programming.<sup>299</sup> Whereas closed captioning is essentially a verbatim transcript of the original script, video description necessarily involves creative decisions and thus may create a distinct derivative work.<sup>300</sup> A derivative work is an addition to a pre-existing work which transforms or otherwise modifies the original work.<sup>301</sup> To the extent that video description is subject to copyright laws, an unauthorized video description of an underlying work might constitute a copyright infringement.<sup>302</sup> As a consequence, commenters assert that, absent a statutory exception, mandatory video description regulations may conflict with the copyright holders' exclusive rights to create derivative works from their copyrighted works.<sup>303</sup>

122. Advocates for persons with visual disabilities argue that copyright issues can and will be resolved by the marketplace if video description requirements are put into place.<sup>304</sup> According to this line of reasoning, video description will simply become a routine part of licensing agreements if the service is required.<sup>305</sup>

123. Furthermore, because video description requires breaks in the dialogue to permit the insertion of the description, some programming may simply not be amenable to video description. For instance, programming with a great deal of dialogue may not permit the additional description while a classical music concert or popular music video might not be appropriate for video description because the descriptive narrative would interfere with the primary substance of the programming.<sup>306</sup> In other cases, programming such as an action

---

<sup>298</sup> See, e.g., NBC Comments at 15.

<sup>299</sup> MPAA Comments at 10-11.

<sup>300</sup> *Id.* See also NAB Comments at 13.

<sup>301</sup> *Id.* (citing *Nimmer on Copyright*, § 3.03 (1995)).

<sup>302</sup> *Id.*

<sup>303</sup> *Id.*

<sup>304</sup> Washington Metropolitan Ear Reply Comments at 6.

<sup>305</sup> *Id.*

<sup>306</sup> See, e.g., ALTV Comments at 16.