Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of:
Closed Captioning of Internet Protocol-Delivered Video Programming: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010 MB Docket No. 11-154

COMMENTS OF
Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)
National Association of the Deaf (NAD)
Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN)
Association of Late-Deafened Adults (ALDA)
Hearing Loss Association of America (HLAA)
Communication Services for the Deaf (CSD)
Cerebral Palsy and Deaf Organization (CPADO)
Technology Access Program at Gallaudet University (TAP)
IT-RERC at Trace Center, University of Wisconsin-Madison

in response to the Commission’s
NOTICE OF PROPOSED RULEMAKING

Angela J. Campbell, Esq.
Blake E. Reid, Esq.
Counsel for Telecommunications for the Deaf and Hard of Hearing, Inc.
Institute for Public Representation
Georgetown Law
600 New Jersey Ave. NW
Washington, DC 20001
202.662.9535
ipr-efiling@law.georgetown.edu
Filed: October 18, 2011

Andrew S. Phillips, Esq.
Cristina Hartmann, Esq.
Counsel for National Association of the Deaf
National Association of the Deaf
8630 Fenton Street, Suite 820
Silver Spring, MD 20910
TABLE OF CONTENTS

SUMMARY .................................................................................................................................1
COMMENTS ...............................................................................................................................2
I. Section 202(b) .........................................................................................................................2
   A. Entities Subject to Section 202(b) and Their Obligations ....................................................2
      ¶15: Definitions of “Video Programming Distributors” (VPDs), “Video Programming Providers” (VPPs), and “Video Programming Owners” (VPOs) ..........................................................2
         1. The definition of VPD/VPP should be defined to clearly encompass the entity or entities with which a consumer primarily interacts to receive a video. .........................................................2
         2. The Commission’s proposed definition of VPOs does not adequately account for the complex ownership and licensing arrangements involved in the creation of video programming. .................................................................5
      ¶16: Responsibilities of VPDs/VPPs and VPOs ..................................................................7
         1. VPDs/VPPs, as the primary point of contact for consumers, should bear the exclusive responsibility for captioning Internet-delivered videos rather than VPOs. .................................................7
      ¶17-18: Performance Objectives and Captioning Quality ....................................................9
         1. The Commission should implement the VPAAC performance objectives in their entirety and mandate that videos delivered via the Internet are equivalent in quality to those delivered via television. .........................................................9
         2. The Commission should encourage VPDs/VPPs and VPOs to improve captions where possible. .................................................................11
      ¶19: Captions and Copyright ...............................................................................................12
         1. The addition and improvement of captions on Internet-delivered videos does not constitute copyright infringement. ..................................................................................................................12
         2. The Commission should adopt a strong stance against invoking copyright law as an impediment to efforts that improve accessibility by adding or improving captions. ...........................................15
      ¶20-22: The Scope of Video Programming ..........................................................................16
1. The Commission should define limitations on “video programming,” including the exclusion of “consumer-generated media,” as narrowly as possible to maximize the availability of accessible Internet-delivered programming.

2. The Commission should adopt a broad definition of “full-length programming” and narrowly tailor the CVAA’s exceptions for “video clips” and “outtakes.”

3. Video programming published or exhibited on televisions in other countries should be captioned pursuant to the CVAA.

B. Schedule of Deadlines

<table>
<thead>
<tr>
<th>23-28: Scope of Definitions, Scheduling-Related Terminology and Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The scope of definitions for the terms “live programming,” “near-live programming,” “prerecorded programming,” and “edited for Internet distribution” must be limited to the context of scheduling deadlines.</td>
</tr>
<tr>
<td>2. The Commission should offer illustrative examples of “live programming.”</td>
</tr>
<tr>
<td>3. The Commission should prohibit delays in the captioning of simulcast programming.</td>
</tr>
<tr>
<td>4. The Commission should adopt a bright-line definition for “near-live programming.”</td>
</tr>
<tr>
<td>5. The Commission should adopt the proposed VPAAC schedule for captioning compliance.</td>
</tr>
</tbody>
</table>

C. Exemption Process Where Economically Burdensome

<table>
<thead>
<tr>
<th>30-31: Entity-centric Exemptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Commission should not grant entity-based exemptions.</td>
</tr>
<tr>
<td>2. The Commission should summarily deny exemption petitions that do not make a heightened prima facie showing of economic burden.</td>
</tr>
<tr>
<td>3. The Commission should close the Anglers Exemption Order loophole.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>32: Program-centric Exemptions</th>
</tr>
</thead>
</table>

ii
1. The Commission should not grant program-based exemptions.

¶ 33: Delays and Waivers for Live Programming

The Commission should not institute any further delay or waiver for live programming.

D. Mechanism for Information on Video Programming Subject to the CVAA

¶¶ 34-36: The Commission’s Proposed Mechanism

The Commission’s proposed mechanism should not micromanage the arrangements between VPDs/VPPs, VPOs, and other distribution entities.

¶¶ 37-38: Alternative Mechanisms

The Commission should promulgate a mechanism that maximizes captioning responsibility for VPDs/VPPs and makes information available to consumers about whether or not videos are captioned.

E. Technical Standards

¶¶ 39-40: Adoption of Specific Standards

The Commission should not specify a particular interchange format, but should articulate quality and functionality standards that interchange formats must support.

F. Compliance Issues

¶¶ 41-42: De Minimis Failures and Alternate Means of Compliance

The Commission should adopt the narrowest possible definition of “de minimis” allowable under the CVAA.

2. The Commission may allow alternate means of compliance, but only to the extent that they facilitate full captioning compliance with the quality and responsibility standards.

G. Complaint Procedures

¶¶ 43-44: Filing Window

The Commission should eliminate the sixty-day window for filing complaints.

¶ 45: Complaints and Sanctions
1. Consumers should be able to direct complaints to the VPD/VPP, the Commission, or both. ........................................34
2. Commission enforcement actions should proceed in parallel with remedial measures by the VPD/VPP. ..........34
3. The Commission should impose a minimum forfeiture of $10,000 per complaint for violations of the captioning rules. .................................................................................35
4. The Commission should require VPDs/VPPs to respond to complaints within fifteen calendar days........36
5. The Commission should not permit extensions to the response period.........................................................37
6. The Commission should set a fifteen calendar-day shot clock for resolving complaints once a VPD/VPP has filed a response. .................................................................37

¶ 46: Method of Complaints ..........................................................................................................................38

1. The Commission should accommodate multiple delivery mechanisms for consumers filing complaints. ..........38
2. The Commission should adopt flexible requirements for information included in complaints. .................38

¶ 47: VPD/VPP Contact information ...............................................................................................................39

1. The Commission should require VPDs/VPPs to prominently display or provide access to detailed contact information. .................................................................39

II. Section 203 ..................................................................................................................................................40

A. Scope of Section 203....................................................................................................................................40

¶¶ 48-49: “Apparatuses” and Technical Feasibility ..................................................................................40

1. In determining the scope of the term “apparatus,” the Commission should strive to achieve the CVAA’s broad goal of guaranteeing accessibility in video programming technology. .................................................................40

2. The Commission should define “apparatus” broadly to facilitate accessibility in both hardware and software. ....41

¶ 50: Essential Utility Waivers .........................................................................................................................42

1. The Commission should decline to grant any essential utility waivers from the requirements of section 203. ....42
¶ 51: Software as an “Apparatus” ................................................................. 43

1. The Commission must include software within its definition of “apparatus.” .................................. 43

¶ 52: Screen Size Limitations and Display-Only Monitors ......................... 46

1. The Commission should remove the screen size limitation entirely from the captioning rules .................. 46

2. The Commission should limit the “display-only” exemption to video monitors that are incapable of playing back video without interconnection to another device that is required to display captions under section 203. .................................................................................. 46

¶ 53: Achievability ..................................................................................... 47

1. The Commission should exempt devices from section 203 on achievability grounds only in rare cases, given the low expense and performance impact .................. 47

¶ 54: Recording Monitors ......................................................................... 48

1. The Commission should include hardware, software, and combinations thereof in defining “apparatus” for the purpose of requiring the rendering or pass-through of closed captions. ...................................................... 48

¶ 55: Interconnection Mechanisms .......................................................... 48

1. The Commission should require interconnection standards and equipment to carry closed captioning data between connected devices. ................................................. 48

2. The Commission should require intermediate devices that use current interconnection mechanisms to render closed captions on display devices. ................................................. 49

B. Obligations under Section 203 .......................................................... 49

¶ 56: Features .......................................................................................... 49

1. All video playback devices should accommodate adjusting and configuring the appearance and other attributes of closed captions ................................................. 49

C. Schedule of Deadlines ....................................................................... 50

¶ 60: Timeframe for Compliance ............................................................ 50
1. The Commission should require all devices to be capable of displaying captions within six months.
SUMMARY

Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), the National Association of the Deaf (NAD), the Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN), the Association of Late-Deafened Adults (ALDA), the Hearing Loss Association of America (HLAA), Communication Services for the Deaf (CSD), and the Cerebral Palsy and Deaf Organization (CPADO), collectively, “Consumer Groups,” joined by the Technology Access Program at Gallaudet University (TAP) and the IT-RERC at Trace Center, University of Wisconsin-Madison, submit these comments in response to the Federal Communication Commission’s Notice of Proposed Rulemaking (NPRM) in the matter of the closed Captioning of Internet Protocol-Delivered Video Programming: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010, Media Bureau docket no. 11-154.¹

Consumer Groups seek to promote equal access to telecommunications, including video programming, for the 36 million Americans who are deaf, hard of hearing, late-deafened, or deaf-blind (collectively, those who are “deaf or hard of hearing”) so that they may fully experience the informational, educational, cultural, and societal opportunities afforded by the telecommunications revolution. In particular, we seek to offer the perspective of the deaf and hard-of-hearing consumer communities to the Commission as it implements the portions of the landmark Twenty-First Century Communications and Video Accessibility Act of 2010, 76 Fed. Reg. 59,963 (proposed Sept. 19, 2011) (to be codified at 47 C.F.R. pt. 15, 79) [hereinafter NPRM].

Act (CVAA) that bring closed captioning to Internet-delivered video programming and closed captioning capability to the broad array of devices used by consumers to experience video programming.\(^2\)

While we generally express our support for the extensive groundwork laid by the Commission in setting forth the NPRM, we are concerned that some of the Commission’s proposals, without further refinement, could leave the CVAA’s promise of equal access to Internet-delivered video programming unfulfilled. The Commission must make certain that it promulgates rules that ensure expeditious implementation of high-quality captions on Internet-delivered video, meaningful accountability for online video distributors, and the integration of accessible technology in devices used by consumers to view video programming. Accordingly, Consumer Groups respectfully offer the following comments to address the proposals and questions raised by the Commission in the NPRM.

**COMMENTS**

I. **Section 202(b)**

A. **Entities Subject to Section 202(b) and Their Obligations**

\[15\]: Definitions of “Video Programming Distributors” (VPDs), “Video Programming Providers” (VPPs), and “Video Programming Owners” (VPOs)

1. **The definition of VPD/VPP should be defined to clearly encompass the entity or entities with which a consumer primarily interacts to receive a video.**

Consumer Groups are generally supportive of the Commission’s proposal to use the same definition for both VPDs and VPPs.\(^3\) Consumer Groups are

---


\(^3\) See NPRM, *supra* note 1 at 59,968, ¶ 15.
concerned, however, that the Commission’s proposed definition of VPDs/VPPs “as any entity that makes available directly to the end user video programming through a distribution method that uses [Internet Protocol]” is both under- and over-inclusive, and should be tailored to definitively encompass the distributor or provider entity or entities with which a consumer primarily interacts to receive a video.

In particular, the proposed definition’s inclusion of the term “directly,” without further clarification, might allow entities that should be responsible for captioning to claim that they provide videos only “indirectly” to the end user and thus escape responsibility for captioning Internet-delivered video. At the same time, the proposed definition, without additional clarity, may lay captioning responsibility at the feet of network providers and other entities that lack the ability to assist consumers in fixing videos with insufficient or missing captions.

For example, many IP video providers do not deliver video to end users directly from their own computer servers, but rather contract with third-party content delivery networks (CDNs) who “cache,” or store videos on multiple servers in geographically diverse locations and deliver them to end users via the least-congested Internet routes. In this situation, the party responsible for captioning should be the video provider—with whom the end user has a direct contractual relationship—rather than the CDN, which the consumer may not

---

4 E.g., Supantha Mukherjee, Level 3 to be a primary Netflix CDN provider, REUTERS (Nov. 11, 2010), http://www.reuters.com/article/2010/11/11/us-levelthree-idUSTRE6AA3IQ20101111. See generally Christopher Yoo, Innovations in the Internet’s Architecture that Challenge the Status Quo, 8 J. TELECOM. & HIGH TECH. L. 79, (2010) available at http://jthtl.org/content/articles/V8I1/JTHTLv8i1_Yoo.PDF.
even know exists and which may have no control over the captioning content or display of the video.

Some providers also permit their videos to be embedded on other entities’ websites, such as blogs; consumers then view the videos in an embedded frame on the other entities’ websites, rather than directly on the providers’ websites. In those situations, the party responsible for captioning should be the originating provider of the video, not the operator of the embedding website, because again, the embedding website’s operator may have no control over the captioning content or display of the video and may be unable to assist the consumer in remedying the problem with noncompliant videos.

Finally, technical situations may arise where the delivery of captions requires the joint efforts of multiple entities. By way of example, Netflix streams videos both on its own website, Netflix.com, and on various Netflix-capable devices, such as gaming consoles, Blu-ray players, high-definition televisions, and tablet computing devices. On its own website, Netflix is entirely in charge of the software stack responsible for displaying videos and captions. But on other devices, the display of captions may depend on whether the user has appropriate software installed. For instance, Apple’s second generation Apple TV device requires a software update to display captions on videos streamed from Netflix.

---

7 Jonathan Seff, Apple TV 4.4 update adds Photo Stream, NHL, and more, MACWORLD, Oct. 12, 2011 available at
In these situations, all entities involved in the distribution of video to the consumer—both Apple and Netflix in the case of the Apple TV—should be deemed jointly and severally responsible VPDs/VPPs, because the consumer requires the cooperation of both entities to properly display captions.

Because the Commission’s proposed definition is required as a statutory minimum by section 202(b), the Commission should tailor the definition by clarifying that VPDs/VPPs include “any entity or entities with which a consumer primarily interacts or contracts to view Internet-delivered video.” This clarification will ensure that consumers and the Commission will be able to reliably identify responsible VPDs/VPPs in the event that an Internet-delivered video is insufficiently captioned, while relieving entities downstream of VPDs/VPPs of responsibility for captioning videos whose captioning content and display they cannot control.

2. The Commission’s proposed definition of VPOs does not adequately account for the complex ownership and licensing arrangements involved in the creation of video programming.

As discussed below, Consumer Groups believe that responsibility for captioning should rest exclusively with VPDs/VPPs, rather than VPOs, to facilitate efficient enforcement of the rules and minimize consumer confusion. Nevertheless, should the Commission choose to assign responsibility for

---


8 See CVAA, supra note 2, § 202(b) (2010) (“The regulations prescribed under this paragraph . . . shall clarify that, for the purposes of implementation, of this subsection, the terms ‘video programming distribution’ and ‘video programming providers’ include an entity that makes available directly to the end user video programming through a distribution method that uses Internet protocol.”).

9 See discussion infra I.A.1 (NPRM ¶ 16).
including caption files to VPOs, the Commission should adopt a more robust
definition of the term that accounts for the complex ownership and licensing
agreements that may surround the copyright for a given video.

For example, a music video displayed on a television program may
implicate at least four copyrights— in the musical composition, the sound
recording, the music video, and the television program—all of which may be
owned by different entities. The Commission’s proposed definition of VPOs as
“any person or entity that owns the copyright of the video programming
delivered to the end user through a distribution method that uses IP” does not
appear to account for this possibility.

In order to ensure that entities that own or license video content bear the
appropriate responsibility for captioning content under the Commission’s
proposed enforcement scheme, the definition of a VPO should be expanded to
include any licensees or sublicensees of the VPO that might be responsible for
promulgating videos downward through the distribution chain. Accordingly we
recommend that the Commission expand its proposed definition to “any person
or entity that holds a license or sublicense to any copyright in the video
programming that permits the person or entity to distribute or sublicense the
distribution of the video programming using IP.”

---

1. VPDs/VPPs, as the primary point of contact for consumers, should bear the exclusive responsibility for captioning Internet-delivered videos rather than VPOs.

Consumer Groups object to the Commission’s proposal to divide responsibility for the captioning of Internet-delivered videos between VPOs, who would have to “send program files . . . with all captions,” and VPDs/VPPs, who would merely have to enable “the rendering or pass through” of captions to the consumer. This proposal marks a stark point of departure from the Commission’s exclusive assignment of responsibility for captioning videos on television to VPDs, such as broadcasters and multichannel video programming distributors.11 Because consumers interact directly with VPDs/VPPs and have no relationships with or easy means of identifying VPOs, we join other commenters, including industry representatives,12 in encouraging the Commission to implement a regime of captioning responsibility more closely resembling the television regime by assigning captioning responsibility exclusively to VPDs/VPPs rather than VPOs.

Consumer Groups are concerned that the Commission’s proposed division of responsibility between VPDs/VPPs and VPOs will require sorting out complex factual disputes over why videos are not properly captioned and who is responsible, thereby delaying access to properly captioned programming, needlessly expending the Commission’s and consumers’ time and resources, and reducing entities’ accountability for their failure to comply with the captioning

rules. More specifically, determinations of responsibility will rest on whether a video’s failure to be properly captioned is due to the VPO’s failure to properly caption the video in the first instance, or a subsequent failure by a VPD/VPP or other entity in the distribution chain to properly pass through or render the captions. In the former case, further effort will be required to identify the VPO(s) or relevant licensees or sublicensees, some or all of which may be difficult to identify and contact or based outside of the United States and therefore not subject to the Commission’s jurisdiction.

In contrast, assigning exclusive responsibility for captioning Internet-delivered videos to VPDs/VPPs would allow rapid identification of the responsible party when a video is not properly captioned, thereby expediting consumer access to the properly captioned video and minimizing the amount of time and resources required for the Commission to impose sanctions for the violation. Moreover, assigning responsibility to VPPs/VPDs would eliminate the need for the Commission to promulgate complex, difficult-to-apply regulations that account for the boundless possible arrangements between and responsibilities of multiple owners, licensees, distributors, providers, and other entities in a distribution chain.

It is immaterial to Consumer Groups how videos become captioned, so long as they are consistently captioned and at a high level of quality that satisfies the standards proposed in the Video Programming Accessibility Advisory Committee Report (VPAAC Report).\textsuperscript{13} We presume that VPDs/VPPs are in the

best position to strike up arrangements with VPOs to ensure the efficient and rapid application and distribution of high-quality captions. Instead of requiring the Commission to engage in the arduous task of micromanaging those entities and their relationships, the Commission should simply hold VPDs/VPPs accountable for videos that are displayed without captions, while leaving the VPDs/VPPs to privately negotiate efficient arrangements with all relevant entities in the distribution chain to ensure that videos are properly captioned.

§ 17-18: Performance Objectives and Captioning Quality

1. The Commission should implement the VPAAC performance objectives in their entirety and mandate that videos delivered via the Internet are equivalent in quality to those delivered via television.

Consumer Groups support the Commission’s general adoption of the VPAAC’s proposed performance standards. In particular, we also encourage the Commission to adopt VPAAC’s “equal captioning experience” standard.\(^\text{14}\) Captions on Internet-delivered programming must be of at least the same quality as those on television. Anything less than captioning parity between the two types of delivery would fall short of the CVAA’s guarantee of equal access for consumers who are deaf or hard of hearing to the increasingly important world of Internet video content.\(^\text{15}\) Hearing viewers generally receive equivalent information from programming whether it is aired on broadcast television or the Internet; consumers who are deaf or hard of hearing must be afforded an equivalent experience with Internet-delivered video. Captions on television are

http://transition.fcc.gov/cgb/dro/VPAAC/First_VPAAC_Report_to_the_FCC_7-11-11_FINAL.pdf [hereinafter VPAAC Report]; see also NPRM, supra note 1, at 59974.

\(^\text{14}\) VPAAC Report, supra note 13, at app. B.

often incomplete or inaccurate; if VPDs/VPPs are permitted to distribute videos on the Internet with further degraded captions, consumers who are deaf or hard of hearing will be unfairly deprived of the essential information and cultural participation afforded their hearing peers. Accordingly, performance objectives are an essential step in providing consumers who are deaf or hard of hearing with equal access to Internet-protocol captioning.

Members of the Senate considered performance objectives and user interfaces as they wrote the CVAA and, by ordering the VPAAC to consider user interfaces and performance objectives, demonstrated a deep level of concern about the caption quality of Internet-delivered video.16 The Internet now pervades our homes, workplaces and schools, and holds great promise to improve the lives of individuals with disabilities.17 The VPAAC’s formation represents a Congressional recognition of a core value of accessibility as we migrate toward an Internet-centric video distribution model and highlights the importance of maintaining the accessibility advances so diligently and arduously developed over the past three decades. A shift to a new medium for video distribution cannot justify a decline in caption quality or accessibility.

Performance objectives are necessary to ensure that all entities in the video programming distribution chain maintain the quality of caption files. Inferior and degraded captions result in a subpar viewing experience for consumers who are deaf or hard of hearing, an unacceptable result in light of the CVAA’s objectives. As the VPAAC Report makes clear, transitioning captions from

16 See id., at 11 (directing the VPAAC to explore and consider performance objectives).
17 The CVAA emphasizes the importance of increasing the employment rates with people with disabilities. Accessibility improvements of Internet-protocol video programming are only one small part of that goal. See id. at 2.
television to the Internet need not result in quality degradation.\textsuperscript{18} And because
the CVAA only applies to programming that is first performed or exhibited on
television, there is no reason to require anything less than the same level of
performance on the same video distributed via the Internet.

Accordingly, the Commission should require all entities to take
technological measures to avoid data corruption and loss in captions to maintain
quality when transitioning television programming to the Internet.\textsuperscript{19} In
particular, the Commission should implement VPAAC’s performance objectives
in full to maintain quality and prevent mismanagement in the distribution chain.
As the VPAAC Report recommends, captioning quality should be evaluated on
factors such as completeness, accuracy, timing, and whenever possible, user
control of caption features.\textsuperscript{20} Such a requirement would ensure that all entities in
the distribution chain exercise an appropriate level of care when applying,
editing, distributing, and rendering captions.

\textbf{2. The Commission should encourage VPDs/VPPs and
VPOs to improve captions where possible.}

Although Consumer Groups agree that the Commission should at least
require VPDs/VPPs to maintain caption quality on Internet-delivered video at an
equivalent level to that of television, the Commission should follow through on
its proposal to encourage VPD/VPPs to improve captions whenever possible.\textsuperscript{21}
The quality of television captions should serve as a floor, not a ceiling; the

\textsuperscript{18} See VPAAC Report, supra note 13, at 17; see also NPRM, supra note 1, at 59,974.
\textsuperscript{19} Unavoidable technical issues may qualify for the CVAA’s required \textit{de minimis}
exception. See discussion infra I.F.1 (NPRM ¶ 41); VPAAC Report at 17.
\textsuperscript{20} See VPAAC Report, supra note 13, at 13-14.
\textsuperscript{21} See infra I.A (NPRM ¶ 19) (discussing the copyright issues implicated by
caption improvements).
baseline quality requirement articulated above leaves substantial room for improvement. The Commission’s rules should in no way facilitate the soft tyranny of low expectations; VPD/VPPs, VPOs, and other entities must be encouraged to evolve and improve captioning services to their consumers—both those who are hearing and those who are deaf or hard of hearing. Encouraging VPDs/VPPs to improve captions whenever possible will improve accessibility and thus vindicates the CVAA’s core value of equal access to video programming.

¶ 19: Captions and Copyright

1. The addition and improvement of captions on Internet-delivered videos does not constitute copyright infringement.

Consumer Groups implore the Commission to reject the assertion apparently made by VPDs/VPPs in undisclosed meetings that they are unable to improve captions on Internet-delivered videos because doing so would violate the copyrights associated with the videos. The United States copyright system is specifically designed to incentivize and facilitate public access to creative and cultural works. The idea that the system could or should be invoked to halt good faith efforts that improve accessibility on videos that have not been adequately captioned by their creators is refuted by, at the very least, the legislative history of the 1976 Copyright Act. In particular, a VPD’s/VPP’s addition or improvement of captions to an Internet-delivered video where a VPO has failed to offer captioning functionality constitutes a non-infringing fair use of

22 See NPRM, supra note 1, at 59,969.
the video—even if doing so in fact implicates the VPO’s exclusive statutory rights.  

A VPO’s ownership of a copyright in a video confers only the limited rights enumerated in 17 U.S.C. § 106 and 106A. Because we are only aware of the vague allegations that improving captions on an Internet-delivered video “would violate the VPO’s copyright” and not which of a VPO’s exclusive rights VPDs/VPPs contend would be implicated by improving captions on an Internet-delivered video, it is impossible to address even the most basic merits of the contention. And even speculation over the specific theory of infringement contemplated by VPDs/VPPs is made difficult by the apparent absence of any actual copyright litigation against entities for improving or adding captions.

But even assuming for the sake of argument that adding or improving captions to a video implicates a VPO’s exclusive rights under § 106 or 106A, doing so would nevertheless constitute a noninfringing fair use. For nearly two centuries, the courts of the United States have recognized the common law doctrine that the fair use of a copyrighted work does not constitute infringement. Congress formally recognized fair use in the 1976 Copyright Act, and in doing so, hailed improving accessibility in general, and captioning specifically, as the type of activities at the heart of fair use. In *Sony v. Universal*  

---


26 *See generally* 1 William F. Patry, *Patry on Copyright* § 10.2 (West 2011).

27 H.R. Rep. No. 094-1476, at 73 (1976) (noting the application of the fair use doctrine to the noncommercial creation of Braille and audio recordings of books for use by those with vision disabilities), cited with approval by *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 455 n.40 (1984); Conf. Rep. at 70 (noting the applicability of fair use to generating captions for television programs in
City Studios, the United States Supreme Court acknowledged Congress’s consideration of accessibility, noting that improving accessibility of a copyrighted work with no more “than a purpose to inform or entertain” is sufficient to tip the scales in favor of fair use.\textsuperscript{28}

While a full fair use analysis is unnecessary for the purpose of these comments, it should suffice to note the most important factor in any fair use consideration—the impact on the copyright owner’s potential market—weighs heavily in favor of recognizing the addition and improvement of captions as a fair use.\textsuperscript{29} Where a VPO has failed to include compliant captions, a VPD/VPP adding captions cannot hinder the VPO’s market for distributing the video over the Internet, because distributing the video without the captions would be illegal under the CVAA. In other words, there is no market for distributing the video without captions; if the VPO fails to implement the captions, the VPD/VPP must be able to do so or it will be illegal to distribute the video. Accordingly, the VPD’s/VPP’s addition of compliant captions can only help, not hinder, the VPO’s market for the video.

Even where a VPO has included compliant captions, a VPD/VPP cannot harm the VPO’s potential market by improving the captions. There can be no cognizable negative impact on the market where a user, such as a VPD/VPP, is

\footnotesize
nonprofit schools for the deaf and hard of hearing).


\textsuperscript{29} Whether a particular activity constitutes a fair use is traditionally guided by the four factors enumerated in 17 U.S.C. § 107: (1) the purpose and character of the use; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work. The Supreme Court has repeatedly recognized, however, that the most important factor in the analysis is the fourth: the effect on the market. See generally Nimmer on Copyright, supra note 23, § 13.05[A][4].
filling a market niche that a copyright owner, such as a VPO, has expressed no interest in occupying.\textsuperscript{30} VPOs’ unwillingness to provide captions at quality standards above and beyond what they have provided for television viewing, despite the decades of pleas to improve captioning quality from the millions of consumers in this country who are deaf or hard of hearing, is a tacit admission that the VPO has no interest in filling the niche that the VPD/VPP would fill by improving the quality of the caption. Accordingly, a VPD’s/VPP’s improvement of captions cannot possibly harm a market that a VPO has made clear it has no interest in serving.

2. The Commission should adopt a strong stance against invoking copyright law as an impediment to efforts that improve accessibility by adding or improving captions.

Because a VPD/VPP at most makes a noninfringing fair use of a video by adding or improving captioning, we urge the Commission to alter its statement that VPDs/VPPs should only be encouraged to improve the quality of captions “[t]o the extent that [they] have permission to alter captions.”\textsuperscript{31} Of course, VPPs/VPDs are welcome, and should be encouraged, to reach contractual arrangements with VPOs and other entities in the distribution chain to facilitate the systematic improvement of captions for Internet delivery. But, as previously discussed, getting permission from a VPO or multiple VPOs may be burdensome and difficult.\textsuperscript{32} Because VPDs/VPPs arguably do not infringe on any of a VPO’s exclusive rights by adding or improving captions, the Commission should not imply that VPDs/VPPs require permission to do so.

\textsuperscript{30} See Twin Peaks Prods., Inc. v. Publ’ns Int’l, Ltd., 996 F.2d 1366, 1377 (2d Cir. 1993).
\textsuperscript{31} See NPRM, supra note 1, at 59,969 ¶ 19.
\textsuperscript{32} See discussion supra I.A.2 (NPRM ¶ 15).
We encourage the Commission to take a strong stance against the idea that copyright law can or should be invoked as an impediment to improving accessibility. But if the Commission is uncomfortable taking a strong stance on fair use, it should at least remain neutral and not imply that improving captions necessarily implicates copyright. For example, the Commission could encourage VPDs/VPPs to add and improve captions “to the extent that doing so would not constitute copyright infringement.” In this way, the Commission can avoid prejudicing the valuable work of accessibility technology professionals if they ever face the unwarranted threat of copyright litigation for trying to add and improve captioning to programming not covered by the CVAA.

¶ 20-22: The Scope of Video Programming

1. The Commission should define limitations on “video programming,” including the exclusion of “consumer-generated media,” as narrowly as possible to maximize the availability of accessible Internet-delivered programming.

The CVAA’s definition of the term “video programming” as “programming by, or generally considered comparable to programming provided by a television broadcast station, but not including consumer-generated media” appears to be a vestigial remnant of Congress’s initial effort to apply the CVAA’s captioning requirements to all video delivered via the Internet.33 We are exceedingly disappointed with Congress’s decision to limit the CVAA’s captioning requirements for Internet-delivered videos to those first published or exhibited on television. Nevertheless, we encourage the Commission to clarify the

definitions of “video programming” and “consumer-generated media” in a way that maximizes the availability of captioned programming to consumers.

First, the limitation of “video programming” to “programming by, or generally considered comparable to programming provided by a television broadcast station” is essentially non-operative because the CVAA’s captioning requirements are already limited to programming “first published or exhibited on television.” Consumer Groups are aware of no programming “first published or exhibited on television” that is not by definition also “programming by, or generally considered comparable to programming provided by a television broadcast station.” Because the limitations encompass virtually identical spheres of programming, the Commission should clarify that the limitation of “video programming” to “programming by, or generally considered comparable to programming provided by a television broadcast station” does not narrow the scope of the CVAA’s captioning requirements any more than the requirements’ built-in limitation to programming “first published or exhibited on television.”

The exclusion of “consumer-generated media” from the term “video programming” should be construed in a similarly narrow fashion because of the CVAA’s limitation of captioning requirements to programming “first published or exhibited on television.” To whatever extent a video may constitute “consumer-generated media” when originally posted exclusively to the Internet, the video must subsequently be published or exhibited on television to fall within the bounds of the CVAA. To publish or exhibit such a video on television, a television VPD must caption the video in accordance with the Commission’s

34 CVAA, supra note 2, at § 202(b).
35 See id.
existing captioning rules. If the television publication or exhibition is then delivered over the Internet, the CVAA’s captioning requirements should attach. Accordingly, the Commission should define “consumer-generated media” as videos that are not “published or exhibited on television,” thus mirroring the CVAA’s language.

Consumer Groups recognize that the importance of this term may change in the future as models of Internet-only video delivery take increased prominence. Accordingly, we encourage the Commission to limit its definition of “consumer-generated media” to the scope of the CVAA’s captioning requirements in the context of Internet-delivered video that has first been published or exhibited on television. Future legislative and rulemaking actions to expand captioning requirements to Internet-delivered video that has not first been published or exhibited on television should reexamine the scope of the term in order to maximize the accessibility of video in an increasingly Internet-centric media landscape.

2. The Commission should adopt a broad definition of “full-length programming” and narrowly tailor the CVAA’s exceptions for “video clips” and “outtakes.”

Consumer Groups urge the Commission to carefully balance the divide between “full-length programming” and “video clips.” Accordingly, we recommend that the definition of “video clips” be limited to videos no longer than thirty seconds in duration that contain only promotional materials and advertisements for other programming.

---

36 47 C.F.R. § 79.1.
37 CVAA, supra note 2, § 202(b).
On traditional television, a bright-line time limit could have reliably separated full-length programming, generally distributed in 30- or 60-minute blocks, from video “clips” generally less than a minute in length. The rise of Internet-delivered video, however, has led to a rise in conceptually and thematically complete short-form programming with durations of mere minutes or even seconds. This shifting landscape demands that the Commission define “full-length programming” broadly and “video clips” narrowly to ensure accessibility in the spirit of CVAA.

On television, video “clips”—generally, brief videos highlighting exciting or interesting portions of full-length programming—have traditionally served as advertising tools for broadcasters and cable providers, interspersed during commercial breaks during full-length programs to entice viewers to view other full-length programming. On the Internet, similar “clips” may still be used to advertise and entice a viewer to watch full-length programming. But “clips” may also be used as a user-friendly mechanism to present full-length content of a short duration, or to present traditional longer-duration full-length programming by splitting it into pieces to overcome technological size and bandwidth constraints.

---

39 For example, the popular video programming site Hulu uses video clips as promotional materials for full-length programming on Hulu and its paid companion site, Hulu Plus. HULU, http://www.hulu.com (last visited Oct. 18, 2011).
Because an overly large scope of uncaptioned “video clips” will deny consumers who are deaf or hard of hearing access to cutting-edge short-form programming, we ask the Commission to limit the definition of video clips to videos no longer than 30 seconds in duration that contain only promotional materials and advertisements for full-length programming. Consumer Groups agree with industry literature that suggests that 30 seconds is a more than ample amount of time to showcase dramatic or humorous moments in the advertisement of full-length programming. This regime balances the accessibility needs of consumers with the promotional needs of distributors.

The Commission should also expressly exclude from the definition of “video clips” any full-length programming that is distributed on the Internet in segments, as this could create an incentive for VPDs/VPPs to split up full-length programming into short segments to avoid captioning requirements.

Finally, Consumer Groups agree with the Commission’s proposed definition of “outtakes” as “content that is not used in an edited version of video programming shown on television.” If a VPD/VPP chooses to omit material from a television program and distribute it exclusively via the Internet, it necessarily falls outside of the scope of the CVAA’s captioning rules because it has not been published or exhibited on television. On the other hand, if a VPD chooses to publish or exhibit bloopers or other incidental material that does not fall within the definition of “video clips” during a television broadcast, the material must be captioned. There should be a limited marginal burden to the

______________________________
41 See NPRM, supra note 1, at 59,969 ¶ 21.
VPD/VPP to caption that incidental material for Internet distribution along with the rest of the program, and it should therefore be required to do so.

3. Video programming published or exhibited on televisions in other countries should be captioned pursuant to the CVAA.

As the Commission acknowledges, the CVAA’s captioning requirements contain no textual limitation on programming published or exhibited on television in other countries. Consumer Groups see no tenable rationale for excluding the broad range of foreign programming that is available via Internet distribution in the United States. Accordingly, the Commission should require any VPD/VPP choosing to distribute foreign television programming over the Internet to properly caption the programming.

B. Schedule of Deadlines

¶ 23-28: Scope of Definitions, Scheduling-Related Terminology and Deadlines

1. The scope of definitions for the terms “live programming,” “near-live programming,” “prerecorded programming,” and “edited for Internet distribution” must be limited to the context of scheduling deadlines.

In general, Consumer Groups wish to emphasize that the Commission’s definitions of the terms “live programming,” “near-live programming,” “prerecorded programming,” and “edited for Internet distribution” must be limited to the context established by the CVAA: the scheduling of deadlines. In particular, we ask the Commission to specifically emphasize that these definitions cannot be used to determine whether or not a particular video falls

42 See id. ¶ 22.
under the CVAA’s captioning requirements. Whether a video is live, near-live, or pre-recorded, edited or not edited for Internet distribution, it must be shown on the Internet with captions subject to the Commission’s scheduling requirements.

2. **The Commission should offer illustrative examples of “live programming.”**

We generally support the Commission’s proposed definition of “live programming.” We request, however, that the Commission provide examples of programs that would be considered “live programming” under the new rules despite being aired with a slight delay. Providing these examples would help clarify the phrases “substantially simultaneously” and “slight delay.” The Consumer Groups are concerned that, absent illustrative examples, the terms “substantially simultaneously” and “slight delay” could be construed contrary to the Commission’s intent, causing essentially prerecorded programs to be considered “live,” thus delaying implementation of captioning for distribution to the end user. In particular, “live programming” with a “slight delay” should be limited to programs where there is a short time delay for broadcaster to censor expletives or other objectionable content, such as the split-second display of nudity during the broadcast of the 2004 Super Bowl halftime show.

---

43 See VPAAC Report, supra note 13, at 35 (“It is understood that this definition of near-live programming is only to be used for determining the schedule of deadlines for the provision of closed captioning.”).
44 See NPRM, supra note 1, at 59,970 ¶ 24.
3. **The Commission should prohibit delays in the captioning of simulcast programming.**

Consumer Groups encourage the Commission to consider that programming delivered via both television and the Internet tends to include programs of great national importance, such as the Olympics, electoral coverage, and presidential addresses. Accordingly, the Commission should not delay the captioning of such programs on the Internet.

4. **The Commission should adopt a bright-line definition for “near-live programming.”**

Consumer Groups believe that ensuring compliance with scheduled deadlines requires the Commission to aid VPPs/VPDs and VPOs by articulating a clear, bright-line distinction between near-live programming and prerecorded programming. Accordingly, we propose that the Commission define “near-live programming” as “programming that was produced within 24 hours of being shown on television,” thus eliminating the term “substantively” from the Commission’s proposed definition but increasing the 12-hour time limit to 24 hours. This compromise should serve to avoid potential confusion stemming from a nebulous percentage threshold for program production or vagueness surrounding the term “substantially” and harmonizes the definition of the term in this context with the Commission’s definition of the term in the context of video description.  

---

Finally, no additional processes should be necessary to provide captions for “near-live” programs. VPDs/VPPs should have the same responsibilities with respect to “near-live” programming as they would with other programming, and therefore cannot air near-live programming if it is not captioned by a VPO or amenable to captioning by other means prior to distribution.

5. **The Commission should adopt the proposed VPAAC schedule for captioning compliance.**

As the Commission notes, the deadlines proposed in the VPAAC Report for captioning compliance reflect support from both industry representatives and consumer groups.\(^{47}\) Accordingly, we agree with the VPAAC’s proposal as adopted by the Commission in the NPRM.

C. **Exemption Process Where Economically Burdensome**

\(\text{¶30-31: Entity-centric Exemptions}\)

1. **The Commission should not grant entity-based exemptions.**

Consumer Groups agree with the Commission’s acknowledgement that in order to be subject to the CVAA’s captioning requirements, a video must be published or exhibited on television with captions. That a video is published or exhibited on television with captions demonstrates that it likely posed no collective economic burden for the entities in the distribution chain to caption the video, even if an exemption had previously been granted to any of the entities.

Accordingly, we urge the Commission not to grant entity-based exemptions from the CVAA’s captioning requirements for Internet-delivered videos. In particular, the first factor of the Commission’s proposed “undue burden”

\(^{47}\) *See NPRM, supra* note 1, at 59,970 ¶ 23.
analysis—under 47 U.S.C. 613(e)—the nature and cost of the closed captions for the programming—should generally be resolved against an Internet-delivery exemption, because the nature and cost of the captions on any program that must be delivered with captions via the Internet are likely non-burdensome by virtue of the program’s publication or exhibition with captions on television.

Accordingly, conclusive evidence must exist, despite the fact that the CVAA requires captioning only of videos published or exhibited on television with captions, that it is somehow economically burdensome to display the same captions when delivering those videos via the Internet. Given the broad requirements for devices to include the capability to display captions under section 203, Consumer Groups are unaware of any circumstances that would warrant an exemption from the CVAA’s captioning requirements for Internet-delivered video also published or exhibited on television with captions. Thus, the Commission should not grant any entity-based petitions.

2. The Commission should summarily deny exemption petitions that do not make a heightened *prima facie* showing of economic burden.

Given the low likelihood that any exemption from the CVAA’s captioning rules is warranted, Consumer Groups are concerned that entities will be able to abuse the petition process to shirk their captioning responsibilities for up to six months simply by filing non-meritorious exemption requests. While we acknowledge that legitimate petitions for exemption may arise in the rare circumstance that the provision of captions on Internet-delivered video is economically burdensome even where it is not economically burdensome to

---

48 See NPRM, *supra* note 1, at 59,970 ¶ 23.
49 § 613(e)(1).
provide them for the same show on television, we believe a strong presumption against such petitions should stand.

Accordingly, the Commission should summarily dismiss exemption petitions that do not make a heightened *prima facie* showing of economic burden—which, as previously discussed, should be a difficult bar to cross in light of the apparent dearth of circumstances that would warrant an exemption from captioning rules for Internet-delivered video for videos published or exhibited on television with captions.

3. **The Commission should close the Anglers Exemption Order loophole.**

As several of the Consumer Groups noted in a separate petition for rulemaking in 2005, the decision of the Consumer and Government Affairs Bureau in the *Anglers Exemption Order* to grant nonprofit entities what amounts to a blanket exemption without conducting a rulemaking exceeded the Commission’s authority under the Telecommunications Act of 1996 and violated the Administrative Procedures Act. We continue to object to the exemptions granted under these grounds to entities from the television captioning rules. The impropriety of granting such blanket exemptions would be substantially magnified if the Commission chose to grant them to entities involved in the delivery of video via the Internet. Accordingly, we again ask the Commission to abide by its statutory responsibilities and decline to offer blanket exemptions to classes of entities. The Commission should engage in proper rulemaking proceedings if it seeks to grant blanket exemptions and grant individual

---

exemptions only with fair notice and a meaningful opportunity for public participation and consumer opposition.

¶ 32: Program-centric Exemptions

1. The Commission should not grant program-based exemptions.

Again, Consumer Groups agree with the Commission’s acknowledgement that in order to be subject to the CVAA’s captioning requirements, a video must be published or exhibited on television with captions. That a video is published or exhibited on television with captions likely demonstrates that it could not have been economically burdensome to caption, even if an exemption previously had been granted for the program or class of programs, such as for programs in a language other than English or Spanish. While we again express great disappointment that the CVAA’s captioning requirements are limited to videos that are published or exhibited on television, this limitation again likely forecloses the possibility that it is economically burdensome to caption any Internet-delivered video that must be captioned under the CVAA—because it must be captioned to fall under the CVAA. Simply put, the Commission should not afford exemptions for a program where an exemption is demonstrably unwarranted. Accordingly, the Commission should not implement any exemption for videos that have already been captioned on television.

To the extent that the Commission chooses to promulgate exemptions for Internet-delivered programming, it must articulate cogent rationales for why a program or class of programming is not economically burdensome to caption on television but is economically burdensome to caption online. We are unaware of any such rationales and encourage the Commission to remain skeptical of any
that may be proffered in the future. The Commission should offer fair notice and meaningful opportunities for public participation and consumer opposition.

§ 33: Delays and Waivers for Live Programming

1. The Commission should not institute any further delay or waiver for live programming.

As previously discussed, the schedule of deadlines proposed in the VPAAC Report, which accommodate a longer compliance deadline for live programming, reflect support from both industry representatives and consumer groups. Accordingly, we agree with the Commission’s proposal not to further delay or waive applicability of the CVAA’s captioning rules to live programming delivered via the Internet.

D. Mechanism for Information on Video Programming Subject to the CVAA

¶¶ 34-36: The Commission’s Proposed Mechanism

1. The Commission’s proposed mechanism should not micromanage the arrangements between VPDs/VPPs, VPOs, and other distribution entities.

As discussed above, Consumer Groups object to the Commission’s proposal to divide responsibility for captioning between VPDs/VPPs and VPOs. Accordingly, we also object to the Commission’s proposed mechanism for making available information on video programming subject to the CVAA by absolving VPDs/VPPs from responsibility for captioning content. The proposed mechanism demands a rigid process for promulgating captions—or

51 See discussion supra I.B.5 (NPRM ¶ 28).
52 See discussion supra I.A.1 (NPRM ¶ 16).
53 See NPRM, supra note 1, at 59,973 ¶ 36.
certifications that captions are not required—from every VPO, through every entity in a distribution chain, to every VPD/VPP at the end of the chain.

Just as it is immaterial precisely how VPDs/VPPs caption the videos they distribute so long as the captions meet the required quality standards, it is immaterial to Consumer Groups how VPDs/VPPs determine which videos need captions. Again, we presume that VPDs/VPPs are in the best position to strike up arrangements with VPOs and other distribution entities to efficiently manage and disseminate information about which videos require captioning. As with captions themselves, we see no benefit in the Commission micromanaging the process by which VPOs and other distribution entities go about passing along information about whether captioning is required for particular videos, nor in promulgating rigid regulations to that end.

¶¶ 37-38: Alternative Mechanisms

1. The Commission should promulgate a mechanism that maximizes captioning responsibility for VPDs/VPPs and makes information available to consumers about whether or not videos are captioned.

Instead, we ask the Commission to focus on its alternative proposal of allowing VPDs/VPPs to obtain accurate captioning information, whether via private arrangements, technological encoding mechanisms, or other procedures, so long as the VPDs/VPPs retain responsibility for the accuracy of the information.54 Most importantly, the Commission should require VPDs/VPPs to provide consumers with accurate information about which videos are captioned and if a video is not captioned, why it is not captioned.55

54 See NPRM, supra note 1, at 59,974 ¶ 37.
55 If a video is captioned, it should be indicated using the universal boxed “CC” symbol. E.g., WGBH About: Services for Hire: Captioning and video description:
A consumer should be able to view a video and, if the VPD/VPP represents that it is captioned, see accurate and compliant captions. If a video that the VPD/VPP asserts is captioned is not compliant, the consumer will know that something is amiss and that a complaint is warranted. Conversely, if a VPD/VPP represents that a video does not need to be captioned for some reason that the consumer knows to be untrue, the consumer again will know that something is amiss and that a complaint is warranted.

On the other hand, if a VPD/VPP provides no rationale for why captions are missing, a consumer may waste time filing a complaint only for the Commission to eventually discover that the video has never been published or exhibited on TV and is therefore not subject to the captioning rules. Conversely, a consumer may be dissuaded from filing a valid complaint because he or she is not certain whether a particular video must be captioned.

Displaying information about captioning is not substantially burdensome to VPDs/VPPs; whether a video is captioned and if not, why not, are simply pieces of metadata about the video, no different in kind than the video’s title, date, length, or other information. Virtually all VPDs/VPPs already have sufficient data structures in place to store this information and the operational ability to easily enter the data. As previously discussed, VPDs/VPPs should be responsible for ensuring that videos are properly captioned or making certain that they need not be captioned for some valid reason, so there should be little burden to passing that information along to their consumers along with other video metadata.\textsuperscript{56}

\textsuperscript{56} For these reasons, Consumer Groups also oppose the Commission’s proposal to allow VPDs/VPPs to rely specifically on private databases of captioning

E. Technical Standards

¶¶ 39-40: Adoption of Specific Standards

1. The Commission should not specify a particular interchange format, but should articulate quality and functionality standards that interchange formats must support.

Consumer Groups support the Commission’s proposal not to specify a particular interchange format. The Commission, however, should require that interchange formats facilitate converting CEA 608/708 captions to appropriate web and Internet standards at the levels of quality previously discussed. CEA 708 captions should be given preference when available.

F. Compliance Issues

¶¶ 41-42: De Minimis Failures and Alternate Means of Compliance

1. The Commission should adopt the narrowest possible definition of “de minimis” allowable under the CVAA.

In articulating the de minimis standard required by the CVAA, the Commission should bear in mind that even a single minor captioning failure such as garbled characters or words prevents consumers who are deaf or hard of hearing from accessing a video in an equivalent manner to their hearing peers. Accordingly, the Commission should limit the de minimis standard to truly extraordinary, unavoidable circumstances of technical malfunction where a

information. In addition to the potentially high cost of purchasing that data, consumers have little way to validate whether the data is accurate. If VPDs/VPPs chose to rely on these databases to obtain information about the videos they show, the VPDs/VPPs must retain responsibility for verifying the accuracy of the data or face penalties if they rely on inaccurate private data in failing to provide captions.

57 See discussion supra I.A (NPRM ¶ 17-18).
VPD/VPP takes immediate remedial action to restore accessibility to consumers. Even a single failure should be sufficient to trigger a violation and enforcement by the Commission. The Commission must reject attempts by VPDs/VPPs to expand the *de minimis* exception as a loophole to shirk their responsibility for properly captioning videos.

2. **The Commission may allow alternate means of compliance, but only to the extent that they facilitate full captioning compliance with the quality and responsibility standards.**

Consumer Groups agree that the Commission should facilitate a flexible approach when it comes to the application and distribution of captions by VPOs and other entities upstream in the distribution chain. Nevertheless, it is essential that VPDs/VPPs are held to the quality and distribution standards articulated throughout these comments. Accordingly, Consumer Groups implore the Commission not to permit “alternative means” of compliance with the captioning rules unless they facilitate a demonstrably equal or superior captioning experience to that of videos that comply with the Commission’s rules.  

---

58 One example of an alternative means of compliance might be the type of “paint-on” captions embedded in a video that are frequently used to subtitle movies with non-English dialogue. We ask the Commission, however, to specifically exclude the provision of transcripts or plot summaries of a program or plot summaries as an alternative means of compliance, as such summaries provide no time coding to link them to a video’s visual content and thus fail to provide the equivalent experience to deaf and hard-of-hearing viewers contemplated by the CVAA.
G. Complaint Procedures

¶¶ 43-44: Filing Window

1. TheCommission should eliminate the sixty-day window for filing complaints.

Consumer Groups agree with the Commission’s observation that much Internet-delivered programming is available continuously, rather than at specific times. We add, however, that Internet-delivered programming is often removed by VPDs/VPPs, and that removal of a video should not foreclose complaints about captioning failures. Because determining when a video was removed may be difficult or impossible for consumers and for the Commission, we recommend that the Commission allow complaints at any time following the delivery of a noncompliant video.

Should the Commission choose to impose a time limitation, however, it should be no shorter than the existing sixty days available to consumers when filing a complaint about noncompliant captions on television. Such a window should begin at the last time a video was distributed via the Internet to any consumer without compliant captions. Moreover, the Commission should treat complaints as presumptively timely to avoid delays in enforcement stemming from having to determine when a video was removed. VPDs/VPPs are in the best position to know when they added and removed programming from an Internet delivery mechanism and thus should bear the burden of demonstrating that a complaint was filed not timely filed.
¶ 45: Complaints and Sanctions

1. **Consumers should be able to direct complaints to the VPD/VPP, the Commission, or both.**

   Where a video on television is not properly captioned, consumers are able to file complaints either with a responsible VPD, the Commission, or both. We believe a similar regime is appropriate for Internet-delivered video; consumers should be able to file a complaint with a VPD/VPP, the Commission, or both. Should a consumer direct a complaint to a VPD/VPP—the most likely scenario—the VPD/VPP must forward the complaint immediately to the Commission and begin expeditious remedial measures. Should a consumer direct a complaint to the Commission, the Commission must immediately forward the complaint to the VPD/VPP.

2. **Commission enforcement actions should proceed in parallel with remedial measures by the VPD/VPP.**

   Consumer Groups believe that once a video has been delivered without compliant captions, denying a consumer equal access in contravention of the principles of the CVAA, sanctionable harm has occurred. Accordingly, the Commission should proceed with enforcement efforts immediately upon receipt of a complaint. Of course, VPDs/VPPs can and should be encouraged to engage in immediate remedial measures to stem continuing violations of the rules. Further, the Commission should consider a VPD’s/VPP’s urgency in restoring captions to a noncompliant video in determining the severity of sanctions to impose. But we urge the Commission to use quick remediation by a VPD/VPP only as a mitigating factor in imposing sanctions, and not as a reason to forgo sanctions altogether. VPDs/VPPs must not be able to deliver videos without compliant captions and escape liability simply by adding captions when a
consumer files a complaint. Consumers may not always be able or willing to file complaints; accordingly, a filed complaint over a noncompliant video must carry sufficient weight to represent all consumers that were denied access to that video, whether or not they also filed complaints.

3. The Commission should impose a minimum forfeiture of $10,000 per complaint for violations of the captioning rules.

As noted by the Commission, several consumer groups urged a base forfeiture of $8,000 in 2004.\textsuperscript{59} We believe that the underlying principles behind that recommendation—namely, the need to deter violations by setting a forfeiture level high enough that noncompliance cannot simply be a “cost of doing business”—are still valid today. Forfeitures serve as an accountability measure, requiring VPDs/VPPs to take responsibility for the effect that every captioning violation has on numerous consumers who are deaf or hard of hearing.

Unfortunately, the previous recommendation of assessing a single violation for an initially noncompliant program, along with a new violation accruing after each hour of noncompliant programming, does not cleanly translate to Internet-delivered video. On the Internet, videos generally are not aired at a given time, but rather delivered on-demand at the request of individual consumers, and may stay online. VPDs/VPPs should not be afforded the opportunity to pay a fine and leave noncompliant videos online indefinitely.

The recommendation for television captioning failures used the amount of hours of noncompliant programming as a rough proxy for the amount of consumers denied equal access by a VPD’s failure to caption a television program. Accordingly, we propose that the Commission use a new proxy for the amount of users affected by a VPD’s/VPP’s failure to caption a video delivered via the Internet. In particular, we propose that the Commission assess a new violation for each filed and verified complaint for noncompliant captioning on a particular video. Like assessing a violation for each hour that a television program airs, this assessment will increase fines as more consumers are affected, holding VPDs/VPPs accountable for failing to expeditiously fix noncompliant videos.

Having proposed a basis for assessing violations, we recommend that the Commission set the base forfeiture level for each violation similar to the previous recommendation of $8,000. Adjusting that level for inflation, we recommend that the Commission set a $10,000 minimum forfeiture for each violation of the captioning rules—as measured by the number of filed and verified complaints for each noncompliant video. Moreover, we recommend that the Commission increase this minimum each year to adjust for inflation. We also recommend that the Commission impose increased forfeitures and other available sanctions for each violation where a VPD/VPP has repeatedly violated the captioning rules or where other aggravating circumstances exist.

4. The Commission should require VPDs/VPPs to respond to complaints within fifteen calendar days.

The Commission should limit VPDs/VPPs to a fifteen calendar-day window to respond to complaints. Noncompliant videos delivered via the Internet are generally available on-demand and thus pose the likelihood that
access will be repeatedly denied to consumers until the noncompliance is rectified. As discussed above, the VPDs/VPPs should have all necessary information on hand to determine whether or not a video is subject to the CVAA’s requirements, and should have provided that information to the consumer along with the video. Accordingly, if a consumer files a complaint, it should be a simple factual matter for a VPD/VPP to determine whether the video at issue required captions or not, and if it did, whether it was in fact displayed with captions. Fifteen calendar days are more than enough to make this determination and reply to the Commission.

5. **The Commission should not permit extensions to the response period.**

As discussed above, VPDs/VPPs should retain sole responsibility for captioning. Accordingly, there should be no need for complicated determinations about who is responsible for a captioning failure; that entity should always be the VPD/VPP responsible for delivering the noncompliant video to the complaining consumer. Determination of liability, then, should turn simply on whether the video is subject to the CVAA’s captioning rules—which the VPD/VPP must know in advance of delivering the video—and if so, whether it was delivered with compliant captions. Thus, there is no tenable reason to afford VPDs/VPPs extensions to the response period.

6. **The Commission should set a fifteen calendar-day shot clock for resolving complaints once a VPD/VPP has filed a response.**

As previously noted, there should be minimal factual issues to resolve when determining whether a given VPD/VPP is liable for violating the captioning rules. Accordingly, we recommend that the Commission adopt a
fifteen calendar-day or shorter shot clock for resolving complaints once a VPD/VPP has filed a response to a complaint with the Commission. Fifteen calendar days should provide the Commission with ample time to confirm the consumer’s allegations of noncompliance and determine appropriate sanctions.

¶ 46: Method of Complaints

1. The Commission should accommodate multiple delivery mechanisms for consumers filing complaints.

   We encourage the Commission to adopt the Video Description Order’s permissive standard of allowing consumers to file complaints by “any reasonable means.”60 The Commission itself should accommodate online complaints by providing straightforward revisions to its existing complaint form to accommodate complaints about online-delivered video. The Commission should also continue to accommodate complaints filed by fax or postal mail.

2. The Commission should adopt flexible requirements for information included in complaints.

   In adopting standards for information required to be included in a complaint, the Commission should impose minimal burdens on consumers who have been denied the equal access afforded to them under the CVAA. Accordingly, the Commission should require complaints to include no more than: (1) information sufficient to communicate with the consumer, such as the consumer’s name and one piece of contact information, such as an e-mail address, postal address, or fax number; (2) the name of the allegedly noncompliant VPD/VPP and any information sufficient to contact the VPD/VPP, such as a website or e-mail address, postal address, or telephone or fax number;

60 See Video Description Order, supra note 46, at 55,598.
(3) information sufficient to identify the allegedly noncompliant video, such as its name or a web address; (4) the date the consumer viewed the video; and (5) a brief description of the problem with the video’s captions. Consumers should also be permitted, but not required, to submit photo or video evidence of the captioning problem when filing a complaint. The Commission should also accommodate evidence of captioning compliance submitted in American Sign Language (ASL).

¶ 47: VPD/VPP Contact information

1. The Commission should require VPDs/VPPs to prominently display or provide access to detailed contact information.

In addition to the Commission, VPDs/VPPs are the logical point of contact for consumers seeking to file complaints about noncompliant videos. We note that the Commission maintains a database of contact information of VPDs for television delivery that may be infeasible to maintain for VPDs/VPPs online. Accordingly, the Commission should require VPDs/VPPs to prominently display contact information via all avenues by which they distribute video over the Internet.

While the Commission should be flexible in accommodating sensible technological methods of contact information display depending on the interface of the software and hardware involved in displaying the video, captions should be accessible to all consumers who are deaf or hard of hearing. For example, a website might display a link entitled “Captioning Complaints” that takes consumers to a page with detailed contact information. A video player on a mobile phone or tablet device might include within the portion of its user interface dedicated to enabling closed captioning a similar link or clickable
button that brings up the information. Regardless of how VPD/VPP chooses to display contact information, it should contain all reasonable means of communication by which a user can file a complaint, including e-mail addresses, fax numbers, and postal mail addresses.

II. Section 203

A. Scope of Section 203

¶¶ 48-49: “Apparatuses” and Technical Feasibility

1. In determining the scope of the term “apparatus,” the Commission should strive to achieve the CVAA’s broad goal of guaranteeing accessibility in video programming technology.

In the burgeoning world of video programming distribution, advanced devices and services unimaginable only a decade ago now present consumers with a panoply of methods by which they can experience informational, educational, and entertainment content delivered via video. The rapid evolution of this technology, however, has left consumers who are deaf or hard of hearing unable to fully experience video programming on terms equivalent to their hearing peers.

By enacting the CVAA, Congress sought to bring equal access to consumers who are deaf or hard of hearing by requiring the technology industry as a whole to design devices and services with accessibility as a cornerstone of the user experience. We encourage the Commission to bear this goal—accessibility by design—in mind as it engages in the complex process of implementing section 203’s requirements. In particular, we implore the Commission to maximize this opportunity and avoid the mistakes of the past, when overly specific regulations became rapidly dated and left accessibility trailing years behind video
programming technology. Instead, the Commission should articulate strong but flexible principles that ensure that accessibility is encoded in the DNA of all modern video playback devices.

2. The Commission should define “apparatus” broadly to facilitate accessibility in both hardware and software.

Bearing the CVAA’s broader goal of accessibility by design in mind, the Commission should decline the invitation by members of the consumer electronics industry to limit the definition of “apparatus(es)” — for which accessibility is mandated under section 203 — to “physical products” and thereby exclude “software.”61 Users do not experience video programming and captioning on “physical products” independently of the software on which the products run, nor is there any utility in attempting to draw a bright line between the two for the purposes of the CVAA.

Rather than attempting to define the term “apparatus” in terms of specific technology, Consumer Groups recommend that the Commission define the term more generally to include hardware, software, and combinations thereof that function to facilitate the playback of video programming. In short, any technology — and its constituent hardware and software — that affords hearing consumers the ability to fully experience video programming should provide an equivalent experience to consumers who are deaf or hard of hearing via captioning functionality, whether that functionality is implemented in the hardware, the software, or both. As discussed below, however, that functionality

---

is generally implemented in software, where captioning is particularly easy and inexpensive to implement.

¶ 50: Essential Utility Waivers

1. The Commission should decline to grant any essential utility waivers from the requirements of section 203.

Consumer Groups implore the Commission not to grant waivers to any apparatus on the grounds that video playback is not its essential utility. We believe that any device capable of playing back video has the essential utility of video playback, in addition to any other utility it might also possess.

A device’s utility is in the eye of its user, not its designer, the Commission, or anyone else. Any consumer purchasing a multifunctional device with video playback capability may make the purchase for the express purpose of playing videos, among any number of other reasons. At the moment that the consumer decides to exercise the video playback functionality, video playback is that device’s essential utility. If the user is a hearing consumer, she will be able to fully experience the video playback functionality. Unless the device is capable of captioning, a consumer who is deaf or hard of hearing will be denied equal access to that experience, thus undercutting the CVAA’s goal of accessible video programming technology.

Accordingly, Consumer Groups oppose any blanket waiver, whether temporary or permanent, for a device “primarily designed for activities other than receiving or playing back video programming.” In our view, if a device is capable of video playback, it was designed for the playback of video. Fortunately, the CVAA does not obligate the Commission to grant waivers, temporary or

62 See NPRM, supra note 1, at 59,977 ¶ 50.
otherwise. 63 Given CVAA’s flexibility in this regard, the Commission should only waive a class of apparatus when reasonably necessary to do so. In this case, it is neither reasonable nor necessary.

Should the Commission determine that devices exist that warrant a waiver from the requirements of section 203, such waivers should require clear evidence that video playback is absolutely incapable of serving as an essential utility of the device. In those cases, we urge the Commission to grant such waivers only on a temporary basis and require continuing justification from manufacturers who are unwilling to integrate affordable accessibility technology into their devices.

¶¶ 51: Software as an “Apparatus”

1. The Commission must include software within its definition of “apparatus.”

In reality, video playback and captioning are and have always been accomplished in some form of “software.” Even the earliest television broadcasts in the United States used encoded and decoded light waves to transmit pictures—essentially, an algorithm. And traditional CEA-608 analog television captions were encoded and decoded using software algorithms, which could be permanently installed in dedicated decoding “firmware” in analog television sets, 64 or compiled and run in the form application software on personal computers. 65

63 See CVAA § 203(a)(2)(c)(providing that the Commission shall have the authority . . . to waive . . . any apparatus or class of apparatus . . . primarily designed for activities other than receiving or playing back video programming.” (emphasis added)).


Today, virtually every device capable of displaying video programming relies on some form of caption decoding. In addition to devices that must already support captions, such as analog and digital televisions, other examples of devices that support video programming include:

- Tablet computers, such as the Apple iPad and Amazon Fire;
- Personal desktop and laptop computers from manufacturers such as Apple, Dell, and HP that use dedicated video applications such as Apple’s iTunes and Amazon’s Unbox Player and web-based or embeddable players such as those based on the HTML5 standard, Adobe’s Flash player, and Microsoft’s Silverlight;
- Smartphones, such as the Apple iPhone and HTC EVO;
- Gaming consoles, such as the Nintendo Wii and DS, Microsoft Xbox 360, and Sony Playstation 3;
- Dedicated set-top television boxes, such as the Apple TV, Roku Streaming Player, and Boxee Box; and
- Internet-connected televisions and Blu-ray players from manufacturers such as Sony and Samsung;

We do not present these technologies as an exhaustive list, but rather as illustrative examples of the complex technologies that bring video programming to consumers. Most importantly, all of these devices use some form of software to deliver video programming.

For example, Google’s Android operating system for mobile phones includes a video playback application in software that allows the phone’s user to control video playback using a phone’s hardware video processor, screen, and
audio output. Similarly, Apple’s Apple TV device includes software that allows a user to select and control the playback of videos distributed by Netflix, which are then rendered using the Apple TV’s video processor and output to the user’s connected television screen.

The lodestar of the CVAA—accessible video programming—cannot be followed by limiting captioning-compliant “apparatus[es]” to physical hardware devices capable of playing back video when virtually all of those devices require some sort of underlying software to accomplish playback. Accordingly, software must be included in the Commission’s definition of “apparatus.” Including software in the definition of “apparatus” will ensure that cutting-edge video distribution platforms such as Netflix, Hulu, and YouTube are accessible to consumers who are deaf or hard of hearing. Otherwise, the CVAA’s promise of accessibility will not reach the most important part of video playback technology—the software. If the Commission accepts the industry’s invitation to omit software from the definition of “apparatus,” it will exclude virtually all modern video playback technology. Such a result would directly contradict the CVAA’s goal of encoding accessibility by design in video programming hardware.

¶ 52: Screen Size Limitations and Display-Only Monitors

1. **The Commission should remove the screen size limitation entirely from the captioning rules.**

   Consumer Groups support the Commission’s proposal to remove the screen size limitation entirely from the captioning rules. As mobile Internet-connected devices increase in prominence, millions of Americans are watching video programming on screens as small as three inches or less.\(^6^8\) Moreover, software now permits the proportional display of captions even on small screens, and increased connectivity facilitates connecting smaller devices to larger screens. Thus, screen-size should no longer be a deciding factor in determining which devices include captioning functionality.

2. **The Commission should limit the “display-only” exemption to video monitors that are incapable of playing back video without interconnection to another device that is required to display captions under section 203.**

   Consumer Groups acknowledge the Commission’s desire to avoid requiring manufacturers of “display-only” video monitors—those incapable of supporting the software necessary to accomplish video playback—to include superfluous captioning functionality when the monitor is solely intended for use with other devices that must include captioning capability. In order to limit unwarranted expansion of this exemption, however, we ask that the Commission limit its application to devices that are incapable of playing video except by

---

\(^6^8\) Sean Hollister, *HP Veer, first hands-on*, ENGADGET (Feb 9th 2011 4:02PM), http://www.engadget.com/2011/02/09/hp-veer-first-hands-on/
interconnection to another device that is required to display captions under section 203. Examples of such devices could include computer monitors that are only capable of displaying video played back on personal computers.

¶ 53: Achievability

1. The Commission should exempt devices from section 203 on achievability grounds only in rare cases, given the low expense and performance impact.

Modern software facilitates quick, easy, and inexpensive captioning decoding and display without performance penalties. Because video is primarily played back using software, technology manufacturers and developers need merely incorporate existing, readily available technology to facilitate caption decoding and display. The movement from hardware- to software-based video playback technology has made it easier and less expensive to include caption decoding and display functionality. The Commission must recognize this movement and respond to any claims of expense and difficulties with skepticism.69

69 For example, Valve Software, a video game developer, recently noted that “‘[t]he expense of doing [closed captioning] was very small and there was no negative aspect [to doing so].’” Interview with Marc Ludlow, Game Accessibility, http://gamescc.rbkdesign.com/arti-views/marc_laidlaw_cc.php (last visited on October 14, 2011). Many video games designers, following Valve’s lead, now use software to decode captions for the gamers’ benefit. Richard A. Van Tol, The Sound Alternative, Game Accessibility Paper, http://www.game-accessibility.com/index.php?pagefile=soundalternative (listed on October 14, 2011). Even lightweight web technologies used to distribute video with a small software footprint on personal computers and mobile devices include captioning functionality.
¶ 54: Recording Monitors

1. The Commission should include hardware, software, and combinations thereof in defining “apparatus” for the purpose of requiring the rendering or pass-through of closed captions.

As in the context of video playback, many video recording devices rely on software to facilitate recording and storage functionality. Accordingly, Consumer Groups again recommend that the Commission define “apparatus” generally as hardware, software, or a combination thereof that facilitate the recording of video for the purpose of requiring such apparatuses to render or pass-through of closed captions.

¶ 55: Interconnection Mechanisms

1. The Commission should require interconnection standards and equipment to carry closed captioning data between connected devices.

Consumer Groups have been informed that some current interconnection mechanisms, such as HDMI, do not accommodate carrying closed captions. This issue illustrates the difficulties that may arise if the Commission does not implement standards and requirements for interconnection equipment. The Commission must prevent this situation from recurring, as technical interconnection standards must accommodate closed captioning to satisfy the accessibility mandate of section 203. Accordingly, Consumer Groups recommend that the Commission require all interconnection standards and all equipment manufactured following the promulgation of rules enacting section 203 to implement the pass-through of closed captions.
2. **The Commission should require intermediate devices that use current interconnection mechanisms to render closed captions on display devices.**

Because current interconnection mechanisms may be unable to facilitate carrying closed captions, Consumer Groups encourage the Commission to mandate that devices relying on those mechanisms to render captions prior to transmitting video to a display device. Examples of these devices would include DVD and Blu-ray players, set-top boxes, and home theater personal computers (HTPCs).

**B. Obligations under Section 203**

¶ 56: Features

1. **All video playback devices should accommodate adjusting and configuring the appearance and other attributes of closed captions.**

Consumer Groups agree generally with the VPAAC’s feature set and configurability recommendations. We note additionally that all devices, whether mobile or fixed-use, Internet-connected or not, equally require the display and configurability of captions. The ability to adjust the color, size, font, and other attributes of captions is as essential to the viewing experience for consumers who are deaf or hard of hearing as control over the volume of a video’s audio track is for their hearing peers. Just as a mobile device’s video playback functionality would be sufficiently hampered by the absence of a volume control, the inability to control the appearance of captions may render captions difficult to view for a consumer who is deaf or hard of hearing. Given the aforementioned affordability, robustness, and ease of implementing captions in software, Consumer Groups recommend that the Commission require all devices capable of playing back
video accommodate for the robust set of captioning adjustments and configurations recommended in the VPAAC Report.

C. Schedule of Deadlines

¶ 60: Timeframe for Compliance

1. The Commission should require all devices to be capable of displaying captions within six months.

In six months, a substantial portion of Internet-delivered video content should be captioned. Accordingly, Consumer Groups encourage the Commission to require captioning capability on all devices by that time so that consumers who are deaf or hard of hearing have a means by which to view captioned content. Six months is a generous allotment given the relative ease by which captioning functionality can be implemented in software; for example, the sole author of the caption decoder for the xine media playback software, written nearly a decade ago, created a fully functional caption decoding mechanism in only 10 days of part-time programming. In that light, we ask the Commission to reject disingenuous claims by industry representatives that captioning functionality will take up to three years to implement.


Respectfully submitted,

/s/

Angela J. Campbell, Esq.
Blake E. Reid, Esq.

Counsel for Telecommunications for the Deaf and Hard of Hearing, Inc.

Institute for Public Representation
Georgetown Law
600 New Jersey Ave. NW
Washington, DC 20001
202.662.9535
ipr-efiling@law.georgetown.edu

Andrew S. Phillips, Esq.
Cristina Hartmann, Esq.

Counsel for National Association of the Deaf

National Association of the Deaf
8630 Fenton Street, Suite 820
Silver Spring, MD 20910

† Counsel thank Georgetown Law student clinicians Jeffrey B. Aris and Lucas W. McFarland for their assistance in preparing these comments.
SIGNATORIES AND CONTACT INFORMATION

Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)
Claude Stout, Executive Director • cstout@TDIforAccess.org
Contact: Jim House, CEPIN Outreach/Public Relations • jhouse@TDIforAccess.org
8630 Fenton Street, Suite 604, Silver Spring, MD 20910
301.589.3786
www.TDIforAccess.org

National Association of the Deaf (NAD)
Howard Rosenblum, Chief Executive Officer • howard.rosenblum@nad.org
Contact: Shane Feldman, Chief Operating Officer • shane.feldman@nad.org
8630 Fenton Street, Suite 820, Silver Spring, MD 20910
301.587.1788
www.nad.org

Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN)
Contact: Cheryl Heppner, Vice Chair • CHeppner@nvrc.org
3951 Pender Drive, Suite 130, Fairfax, VA 22010

Association of Late-Deafened Adults (ALDA)
Contact: Cynthia Amerman, President
8038 Macntosh Lane, Rockford, IL 61107

Hearing Loss Association of America (HLAA)
Brenda Battat, Executive Director • Battat@Hearingloss.org
Contact: Lise Hamlin, Director of Public Policy, LHamlin@Hearingloss.org
7910 Woodmont Avenue, Suite 1200, Bethesda, MD 20814
301.657.2248
www.hearingloss.org

Communication Services for the Deaf (CSD)
Contact: Benjamin J. Soukup, President/CEO • bsoukup@c-s-d.org
102 N. Krohn Place, Sioux Falls, SD 57103
605.367.5760
www.c-s-d.org

Cerebral Palsy and Deaf Organization (CPADO)
Contact: Mark Hill, President • deafhill@gmail.com
1219 NE 6th Street #219, Gresham, OR 97030
503.468.1219
Technology Access Program at Gallaudet University (TAP)

*Contact:* Christian Vogler, Ph.D.
Director, Technology Access Program
Department of Communications Studies
christian.vogler@gallaudet.edu
SLCC 1116, Gallaudet University, 800 Florida Avenue, NE, Washington, DC 20002
202.250.2795
tap.gallaudet.edu

IT-RERC at Trace Center, University of Wisconsin-Madison

*Contact:* Gregg Vanderheiden Ph.D., Director • gv@trace.wisc.edu
1550 Engineering Dr. Rm. 2107, Madison, WI 53706
608.263.5788
trace.wisc.edu