

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of Consumer &	)	
Governmental Affairs Bureau Seeks to	)	
Refresh the Record on Notices of	)	CG Docket No. 05-231
Proposed Rulemaking Regarding	)	ET Docket No. 99-254
Closed Captioning Rules	)	

To: The Commission

**COMMENTS OF  
THE NATIONAL ASSOCIATION OF BROADCASTERS**

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BROADCASTERS**

1771 N Street, NW  
Washington, DC 20036  
(202) 429-5430

Kelly Williams  
Senior Director  
NAB Science & Technology

Jane E. Mago  
Jerianne Timmerman  
Ann West Bobeck  
Scott A. Goodwin

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## Executive Summary

The National Association of Broadcasters (“NAB”) hereby responds to the *Public Notice* seeking to refresh the record in the Commission’s pending proceeding on closed captioning of video programming. When the FCC originally adopted closed captioning rules to implement Section 713 of the Communications Act, it sought to provide “a fair balance between the interests of persons with hearing disabilities and video programming interests.” To maintain this careful balance, NAB agrees with the Commission that it is appropriate to update the record on closed captioning issues, especially in light of the recent passage of the Twenty-First Century Communications and Video Accessibility Act of 2010. NAB understands the desire of persons with hearing disabilities to have full access to video programming, and supports the FCC’s effort in this proceeding to assess the current state of captioning so that all stakeholders can more effectively work toward continued improvements in the quality of captioning and in captioning technology.

NAB urges the Commission to approach this proceeding as it has prior ones, consistent with Congressional intent, to find a practical, balanced way to increase caption availability and quality. NAB previously supported the Commission’s efforts to modernize the complaint and captioning inquiry process to ensure that viewers could resolve captioning issues in a more timely and effective manner. We also support requiring petitions for exemption from the Commission’s closed captioning rules to be filed electronically.

NAB remains concerned, however, that other proposals previously made in the FCC's pending proceeding will not be effective in improving the quality of captioning ultimately received by viewers. Broadcasters today must continue to rely heavily on captioners, and not automated technology, for the programming they produce. And for the programming that broadcast stations acquire from other sources, they must rely on the program producers to ensure that programming has been properly captioned. Inherent in this complex, multi-step process of transmitting captioned programming – both live and recorded – to consumers, human error and technical challenges preclude perfect captions.

Simply stated, the proposed quality, monitoring and compliance requirements do not adequately recognize the myriad of practical and technological issues involved in the delivery of captioned video programming. As the FCC's own *Report on Digital Closed Captioning Informal Complaints* illustrates, captioning errors can occur at any point in the content delivery chain – many of which are wholly outside broadcaster control. Indeed, according to the report, only 21 percent of the studied complaints – which were limited in number – involved problems caused by broadcaster-controlled equipment.

Placing unachievable goals on broadcasters will not improve the quality of captions or service to viewers overall. A more realistic and productive approach would be to require broadcasters to continue making their best efforts to deliver quality captioned programming, without imposing an arbitrary error rate or some similar benchmark. The Commission should also encourage and facilitate discussions

amongst all stakeholders as they continue working on the complex issues surrounding captioning, including those associated with online captioning in the future.

With regard to certain particular proposals, NAB observes that extending the prohibition on Electronic Newsroom Technique (“ENT”) beyond the top 25 television markets would clearly increase the stress stations are currently experiencing in providing costly local news and emergency information in smaller markets. And, as NAB has previously explained, eliminating the per-channel revenue exemption for nascent digital multicast broadcast channels would likely have the counter-productive result of reducing consumers’ programming choices, including valued niche programming. NAB therefore respectfully submits that neither the record here, nor the Commission’s goal of promoting diverse, locally-oriented programming, would be served by these proposals.

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**I. Introduction and Background.**

The National Association of Broadcasters (“NAB”)<sup>1</sup> submits these comments in response to the Commission’s *Public Notice* in the above-captioned proceeding.<sup>2</sup> Over twelve years have passed since the FCC adopted closed captioning rules to implement Section 713 of the Communications Act, 47 U.S.C. § 613, dealing with Video Programming Accessibility.<sup>3</sup> Consistent with the statute and its legislative history, the Commission established a timetable for gradually increasing the amount of captioned

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<sup>1</sup> NAB is a nonprofit trade association that advocates on behalf of local radio and television stations and broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the Courts.

<sup>2</sup> *Consumer & Governmental Affairs Bureau Seeks to Refresh the Record on Notices of Proposed Rulemaking Regarding Closed Captioning Rules*, Public Notice, CG Docket No. 05-231, ET Docket No. 99-254, rel. October 25, 2010 (“*Public Notice*”).

<sup>3</sup> *In the Matter of Closed Captioning and Video Description of Video Programming*, Report and Order, MM Docket No. 95-176, 13 FCC Rcd 3272 (1997) (“*Report and Order*”); *In the Matter of Closed Captioning and Video Description of Video Programming*, Order On Reconsideration, MM Docket No. 95-176, 13 FCC Rcd 19973 (1998) (“*Reconsideration Order*”).

programming on television.<sup>4</sup> As the Commission recognized, its rules sought to provide “a fair balance between the interests of persons with hearing disabilities and video programming interests.”<sup>5</sup> To maintain this careful balance in any changes to the captioning rules, NAB agrees with the Commission that it is appropriate to refresh the record,<sup>6</sup> especially in light of the recent passage of the Twenty First Century Communications and Video Accessibility Act.<sup>7</sup>

NAB understands the desire of persons with hearing disabilities to have full access to video programming, and supports the FCC’s development of a complete record of the current state of captioning upon which all stakeholders can rely. The Commission can promote improvements in the quality of captioning and related technologies by continuing to facilitate discussion and communication amongst all stakeholders. Practical solutions developed for improving captioning on video programming delivered via broadcast stations or multichannel video programming distributors (“MVPDs”) may also provide guidance in addressing the complex issues associated with online captioning in the future. For example, the Commission may wish to consider whether it should establish a complaint and inquiry process for online

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<sup>4</sup> See H.R. Report 104-458, 104<sup>th</sup> Cong. 2<sup>nd</sup> Sess. (1995) at 182 (“Conference Report”) (“...the Commission shall establish reasonable timetables and exceptions for implementing this section. Such schedules should not be economically burdensome on program providers, distributors or the owners of such programs.”). As of January 1, 2010, all new, non-exempt English and Spanish language video programming was required to be captioned.

<sup>5</sup> *Reconsideration Order* at ¶ 15.

<sup>6</sup> See *In the Matter of Closed Captioning of Video Programming*, Notice of Proposed Rulemaking, CG Docket No. 05-231, 20 FCC Rcd 13211 (2005) (“2005 NPRM”).

<sup>7</sup> Pub. L. No. 111–260 (2010).

captioning issues, similar to the streamlined process created for captioning complaints about traditional video programming (which NAB supported to ensure timely resolution of captioning issues).<sup>8</sup>

NAB is concerned, however, that several of the proposals in the FCC's pending captioning proceeding will not be effective in improving the quality of captions ultimately received by viewers. The completion of the digital television ("DTV") transition has not produced significant changes in the way captions are transmitted to viewers, nor ameliorated the various technical and non-technical challenges related to closed captioning. While there have been some strides made in speech-to-text and voice recognition software technology, and research into the metrics for defining captioning quality,<sup>9</sup> captioning is far from being an automated process. Broadcasters, as they did in 2005, must continue to rely heavily on a limited pool of persons to caption the programming they produce. Many broadcasters have enjoyed long-term relationships with the same captioning companies since the Commission initiated this proceeding.<sup>10</sup> For programming that stations acquire from other sources, broadcasters must rely on

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<sup>8</sup> See *In the Matter of Closed Captioning of Video Programming*, Comments of National Association of Broadcasters, CG Docket No. 05-231, Nov.10, 2005 at 4-6. Although the Commission adopted the streamlined complaint process in late 2008, OMB approval was not received and published until February 19, 2010. See *Declaratory Ruling, Order, and Notice of Proposed Rulemaking*, CG Docket No. 05-231, ET Docket No. 99-254, 23 FCC Rcd 16674 (2008); Federal Register, Vol. 75, No. 33 (Feb. 19, 2010). Since the FCC's revised complaint process has come into effect, there have not been significant increases in captioning inquiries or complaints by members of the public.

<sup>9</sup> See, e.g., [http://ncam.wgbh.org/invent\\_build/analog/caption-accuracy-metrics](http://ncam.wgbh.org/invent_build/analog/caption-accuracy-metrics) (last visited Nov. 24, 2010) (The WGBH National Center for Accessible Media is utilizing language-processing tools to develop a prototype automated caption accuracy assessment system for real-time captions for live news programming or classroom-based communication access realtime translation (CART) captioning).

<sup>10</sup> Information about current captioning practices was obtained via an informal survey of NAB member television stations this month.

the program producers and distributors to ensure the programming has been properly captioned. Inherent in the complex, multi-step process of transmitting captioned programming – both live and recorded – to consumers, human error and technical challenges often beyond the broadcasters' control preclude perfect captions. Inflexible qualitative standards, monitoring or reporting requirements simply cannot take account of the human and technical factors in the program captioning chain.

Placing unnecessary burdens and unachievable goals on broadcasters, particularly on financially struggling medium and small market television stations, will similarly not improve the quality of captions or service to viewers overall. For instance, extending the prohibition on Electronic Newsroom Technique (“ENT”) beyond the top 25 television markets would place undue stress on the ability of some smaller market stations to maintain current levels of costly news service. Nor should the Commission eliminate the per-channel revenue exemption for still nascent digital broadcast multicast services. Because these measures would have the counterproductive effect of burdening the production of valued local and niche programming, the Commission should refrain from their adoption at this time.

A more realistic and productive approach would be to require broadcasters to continue making their best efforts to deliver quality captioned programming, without imposing an arbitrary error rate or some similar benchmark. The Commission should also encourage and facilitate discussions amongst all stakeholders as they continue working on the complex issues surrounding captioning. This is consistent with Congress' intent to balance the interests of all stakeholders, and find practical solutions to increase caption availability, advance quality and foster technological development.

## II. Both Congress and the Commission Have Recognized That Captioning Requirements Must Be Implemented in a Balanced Manner.

Section 713 of the Communications Act recognized the need to balance the goal of achieving full accessibility of video programming with the economic and technical constraints broadcasters and other program producers face. The statute empowers the FCC to exempt programs and classes of programs or services where “the provision of closed captioning would be economically burdensome to the provider or owner of such programming.” 47 U.S.C. § 613(d)(1). The statute also permits providers and program owners to seek an exemption on a case-by-case basis where captioning requirements would create an undue burden. 47 U.S.C. § 613(d)(3). As the Conference Report explained, Congress specifically contemplated under this latter provision that the Commission “shall balance the need for closed captioned programming against the potential for hindering the production and distribution of programming.”<sup>11</sup>

The Commission too recognized this need for reasonable application of captioning requirements. Thus, when it concluded on reconsideration that 100 percent of new nonexempt programming should be captioned, the Commission went on to acknowledge that “[t]here are a variety of circumstances where captioning may be problematic. Such situations include, but are not limited to, equipment failures, the inability to obtain captioning resources on short notice or the receipt of programming without the expected captions.” *Reconsideration Order* at ¶ 10. The Commission further emphasized that it would not consider “*de minimis*” amounts of uncaptioned programming a violation of the rules. *Id.* And, the Commission rejected calls for

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<sup>11</sup> Conference Report at 183.

monitoring and reporting because it concluded that the administrative burden of such a requirement would be too great. *Id.* at ¶ 11.

NAB again submits that the Commission correctly interpreted Section 713 and its intent in establishing balanced captioning requirements. As discussed in detail below, the process of captioning video programming and captioning technologies have not altered so much (certainly not since 2005) as to warrant the imposition of obligations previously deemed too burdensome by the Commission or other new requirements that place undue or unachievable burdens on broadcasters and programming producers, including smaller ones.

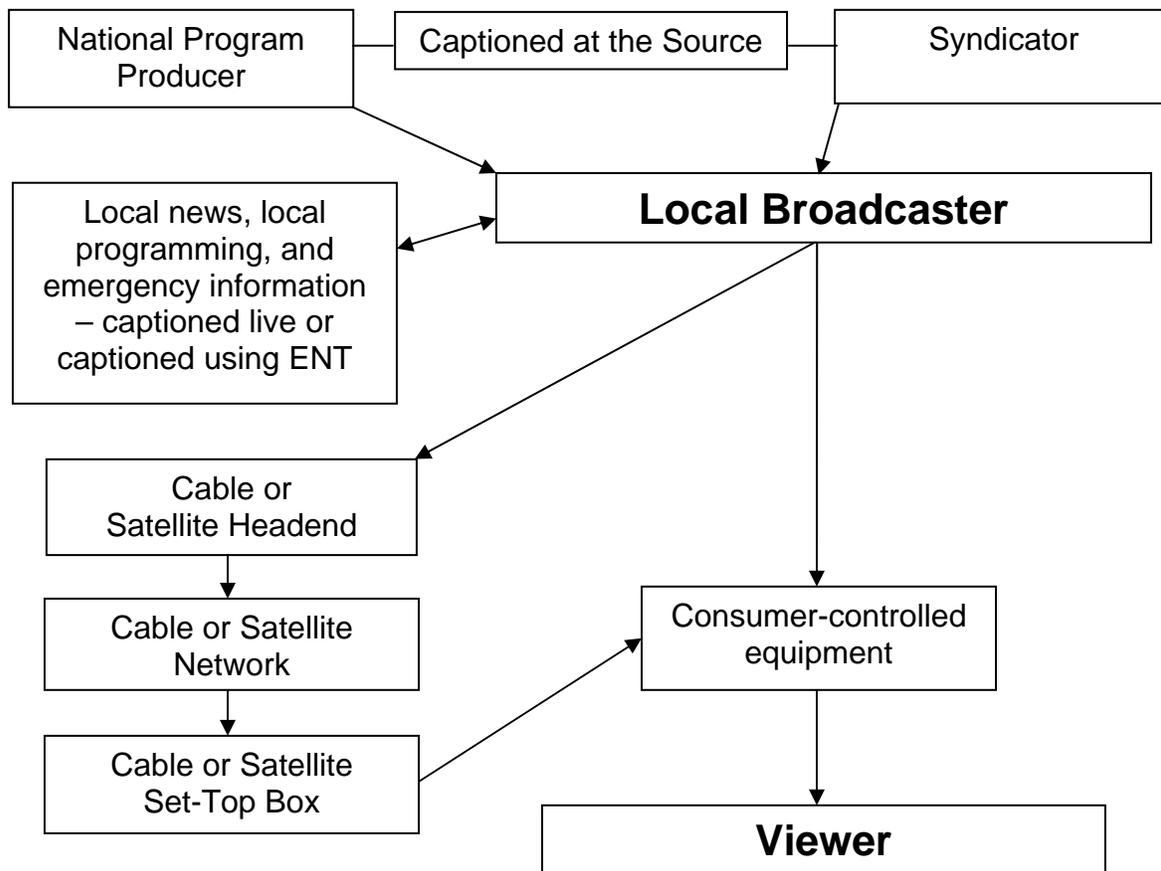
**III. As the Task Force Report Demonstrates, There Are Myriad, Complex Issues Surrounding Captioning That Simply Cannot Be Resolved by Regulatory Fiat.**

**A. Broadcasters Are Responsive to Captioning Complaints.**

The recently streamlined captioning complaint process, which broadcasters support, provides the best means to ensure that the few captioning errors within the broadcasters' control that do occur can be remedied as quickly and efficiently as possible. Given the thousands of hours of television programming – network-produced, syndicated and local – aired each month by every local station, the overall number of closed captioning complaints is exceptionally small. In an ideal world, there would be no complaints and captions would always be perfect. But everyone in the industry – from program producers to station managers to caption service providers – agrees that even the most stringent regulations cannot forestall the errors that inevitably occur in a necessarily complex system. Captions can be added to a video program at multiple points in the content distribution chain – by producers, by syndicators, by broadcasters

– and that program is moved through multiple points at which errors can occur. The following graphic provides a simplified representation of the broadcast TV caption delivery chain:

### The Broadcast Television Caption Delivery Chain



Captioning errors occur for any number of reasons. As the recent *Report on Captioning Informal Complaints* illustrates,<sup>12</sup> captioning errors can occur at any point in the content delivery chain – many of which are wholly outside broadcaster control.

<sup>12</sup> *Report on Digital Closed Captioning Informal Complaints: Review and Analysis May 2009 – May 2010*, Presented to Digital Closed Captioning and Video Description Technical Working Group, Federal Communications Commission, Office of Engineering and Technology, Consumer and Governmental Affairs Bureau (Oct. 27, 2010) (“*Report on Captioning Informal Complaints*”).

According to the report, only 21 percent of the studied complaints involved problems caused by broadcaster-controlled equipment. Another two percent of the studied complaints were the result of real-time captioning delay. See *Report on Captioning Informal Complaints* at 6. The remaining majority of identified problems were caused by issues with the original programming, with an MVPD-supplied set-top box, with cable or satellite TV-controlled equipment or because of consumer error. *Id.* at 7. NAB does not highlight these errors to shift the blame for captioning problems onto other parties; to the contrary, broadcasters appreciate their central role in the distribution of video programming and take their captioning responsibilities very seriously. But this data clearly supports the conclusion of the report – that the causes of captioning problems are, indeed, “varied” and that “there were no obvious patterns” – thus making it difficult to identify and solve such problems by inflexible regulation. *Id.* at 11.

The Commission’s recent revision of the consumer complaint process, along with the requirement that stations provide viewers updated contact information for immediate solutions to timely captioning complaints and inquiries, are efficient measures to ensure that occasional and unavoidable captioning errors are remedied expeditiously. See 47 C.F.R. § 79.1(i). The adoption of this simplified process has empowered thousands of viewers who can immediately report captioning errors to a station via phone, email or fax. Clearly, the revised complaint process has enhanced the channels of communications between stations and their viewers. An informal NAB survey of member stations found that caption complaints often go directly to a station manager, station engineer or other personnel that are in a position to investigate and solve any potential problem more quickly. And as the *Report on Captioning Informal Complaints*

shows, most complaints are either resolved or found to have involved a situation where no resolution was required. *Id.* at 10.

In the nine months that the new complaint process has been in effect, most stations we surveyed reported that they have not seen a substantial increase in viewer complaints, but that those complaints they have received generally are easier to handle and the turn around in responding to viewers has vastly improved. Often, as we note above, the error and available remedy is outside the broadcaster's control. Yet, even in those situations, ensuring that video program providers have updated their publically available contact information helps every entity along the content delivery chain that needs to investigate the source of a possible problem, whether it be with broadcaster-controlled equipment, syndicator-provided programming, cable networks, set-top boxes, or other sources. Communication, therefore, can continue to help minimize the impact of human and technical errors.

Regular communications outside the Commission's complaint and inquiry process can also help address captioning issues. For example, LIN Media's WPRI-TV in Providence, Rhode Island has worked closely with the Rhode Island Commission on the Deaf and Hard of Hearing to address technical captioning issues and strengthen the accessibility of news and information. During live wall-to-wall coverage of historic Rhode Island flooding in 2010, WPRI-TV provided real-time captioning that earned a written commendation from that organization. In light of these successes, the Commission should encourage all parties to continue to work collaboratively to improve communications and address captioning issues.

**B. NAB Supports Requiring Mandatory Electronic Filing for Petitions for Exemption.**

All parties can further collaboratively address captioning matters by ensuring that any requests for exemption from closed captioning rules are handled in an expeditious and predictable manner. NAB accordingly supports the proposal that petitions for exemption from the Commission's closed caption rules be filed electronically. *Public Notice* at 3, *2005 NPRM* at ¶ 52. Electronic filing of these petitions would ensure that all persons, including those who are deaf or hard of hearing, have increased accessibility to relevant Commission proceedings, and also comports with the Commission's policy of increasing electronic filing for all types of FCC submissions.

**C. Rigid Quality Standards Will Not Prevent or Resolve Technical and Human Error and Are Impracticable for a Variety of Reasons, Including the Lack of an Industry Standard Methodology for Assessing Non-Technical Caption Quality.**

Especially in light of the complexity of the television captioning delivery chain described above, NAB remains concerned about a number of other pending proposals including the imposition of technical and non-technical quality standards, potentially covering spelling, grammar and punctuation, incomplete or unsynchronized captions, and whether captions should be verbatim or edited for reading speed. *See Public Notice* at 2, *2005 NPRM* at ¶¶ 10-18. The Commission has also queried whether it should impose standard forfeitures based on the failure to meet any such quality requirements. *See Public Notice* at 2, *2005 NPRM* at ¶ 37. Previously, the Commission declined to impose standards governing the quality of closed captioning, noting the difficulty of establishing standards, the administrative burden that would be imposed on video programming providers and the Commission if such standards were adopted, and the marketplace incentives for programming providers to ensure the high quality of

captioned programs. *Report and Order* at ¶¶ 222-24. Because these same concerns remain valid today, the Commission should again refrain from adopting rigid quality standards.

As discussed above, while the broadcast industry recognizes that caption errors do occur on occasion and that the quality of captioning can be continue to be improved, it does not believe that strict qualitative standards, such as specific error rates, and high, per-incident forfeitures are an appropriate or practical way to accomplish this goal. Broadcasters work diligently to serve their communities, including the millions of Americans who are deaf or hard of hearing.<sup>13</sup> Broadcasters each year collectively caption hundreds of thousands of hours of broadcast programming and strive to ensure that the programming they deliver to their audiences is as error-free as practicable. In fact, built into many broadcaster contracts with captioning service providers are “commercially reasonable” performance standards, although these standards do not generally include a guarantee of a specific percentage or threshold measurement for caption quality. Certainly the record in this proceeding, including the recent *Report on Captioning Informal Complaints*, does not evidence a widespread failure by broadcasters to deliver high-quality captioning that would justify the Commission changing course and imposing specific quality standards.<sup>14</sup>

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<sup>13</sup> Beyond providing valuable news and information, local stations also have invested millions of dollars to ensure that their communities have timely access to critical, often life-saving, emergency information. As just one example, through the Amber Alert System, local stations have been instrumental in the recovery of 523 abducted children. See [http://www.missingkids.com/missingkids/servlet/PageServlet?LanguageCountry=en\\_US&PageId=4319](http://www.missingkids.com/missingkids/servlet/PageServlet?LanguageCountry=en_US&PageId=4319) (last visited Nov. 24, 2010).

<sup>14</sup> See, e.g., *Motor Vehicle Manufacturers Ass’n v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 42 (1983) (“an agency changing its course . . . is obligated to supply a

Despite broadcasters' very best efforts, captioning will have both technical and non-technical errors. Disruptions to phone, VoIP or Internet service, especially during emergencies, are unavoidable, so real-time captioners working remotely via these networks can have their captioning disrupted.<sup>15</sup> Caption encoders do, on occasion, require manual resetting. Additionally, as evidenced by the Commission's own consumer advisory, "there are technical problems with the subscription television provider's system that prevent closed captions from being received and decoded by the set-top box and/or DTV."<sup>16</sup> For example, there have been issues regarding the interconnections of cable and satellite set top boxes to consumers' DTV sets, such as the use of HDMI cables, which did not initially carry caption data resulting in an inability of the DTV set to display captions, leading to consumer confusion.<sup>17</sup>

Moreover, the human factor associated with both creating and encoding captions cannot be somehow eliminated through rulemaking. For example, a verbatim requirement would not reflect the reality that captioning requires artistic judgment on the part of a captioner. In order to caption, there are inherent limitations in the translation of spoken word to written form that is both timely and formatted to avoid screen obstruction. Imposing certain arbitrary quality standards, therefore, may inadvertently undermine the best judgment of captioners.

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reasoned analysis for the change"); *ACT v. FCC*, 821 F.2d 741, 746 (D.C. Cir. 1987) (court found that FCC had failed to establish "the requisite 'reasoned basis' for altering its long-established policy" on certain television commercial limits).

<sup>15</sup> Most real-time captioners continue to work remotely to create captions as they did in 2005.

<sup>16</sup> <http://www.fcc.gov/cgb/consumerfacts/dtvcaptions.html> (last visited Nov. 24, 2010).

<sup>17</sup> This is also an example where the Commission has been constructive in bringing together relevant stakeholders to help identify and resolve technical issues.

As another example, regulatory requirements will also find it difficult to account fairly for obscure words, regional dialects, and little known names of places that are common across communities served by broadcasters. A captioner located in the southwest who is captioning breaking news for a station in Pittsburgh, PA, is not likely to be familiar with the precise spelling of Monongahela or Duquesne, for reasons that are evident. It would be manifestly unfair to impose an unrealistically high or rigid quality standard or similar benchmark in light of such complexities. A more realistic and productive approach is to require broadcasters to continue making their best efforts, and working with their caption service providers, to ensure commercially reasonable standards for captioning.<sup>18</sup>

Finally, as the Commission considers whether it should establish quality standards for non-technical aspects of closed captions, it is important to realize that there is no current agreed-upon industry method for assessing caption accuracy. There are a number of components that would need to be fully contemplated, including defining what constitutes an error and the impact of that error on the meaning of the captions. For example, captions that are a verbatim transcript of a program, while 100 percent accurate, might be unusable because the captions would likely pass by on the screen faster than the viewer could read them since humans typically speak faster than they can read. Other components are sound effects. Programs often contain nonverbal audio, or sound effects such as “*dog barking.*” Should all sound effects be included in a

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<sup>18</sup> The Commission must also be careful not to impose stringent regulatory benchmarks with the potential unintended consequence of acting as a deterrent to the production and airing of local programming. See H.R. Rep. No. 458, 104<sup>th</sup> Cong., 2d Sess. 183 (1996) (House Report provided that “the Commission shall balance the need for closed captioned programming against the potential for hindering the development and distribution of programming.”).

program's captions? Would an omission of a sound effect be considered an error? Not all errors in spelling, punctuation and grammar are even noticed by viewers. The omission, for example, of a comma might not have the same impact on the captions as the omission of a question mark.

Further, while there has been research on identifying errors, there is not an agreed upon uniform industry methodology for counting those errors.<sup>19</sup> For instance, should the error count be measured based on words or letters or phrases? Should the captions be compared to a literal transcript of a program, and, if so, what party or parties would be responsible for creating the transcript? Importantly, there is currently not an automated real-time (or even near real-time) monitoring technology that could be used to quantify non-technical errors, thereby making compliance, and subsequently, enforcement, extremely problematic. For all these reasons, the Commission should continue its long-established policy of not imposing quality standards as part of its captioning rules.

**D. The Commission Should Continue to Refrain From Imposing Onerous and Impractical Monitoring and Reporting Requirements.**

In addition to proposing technical and non-technical quality standards for captioning, in 2005 the Commission also sought comment on whether it should impose specific requirements for monitoring captioning and maintaining equipment and signal transmissions. See *Public Notice* at 2, *2005 NPRM* at ¶ 25. The Commission also asked whether video programming distributors should be required to file compliance reports. See *Public Notice* at 2, *2005 NPRM* at ¶ 43. Such requirements would reverse

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<sup>19</sup> See [http://ncam.wgbh.org/invent\\_build/analog/caption-accuracy-metrics](http://ncam.wgbh.org/invent_build/analog/caption-accuracy-metrics) (last visited Nov. 24, 2010).

the Commission's findings in 1997 that "specific recordkeeping or filing requirements would be unnecessarily burdensome and administratively cumbersome." *Report and Order* at ¶ 244.

NAB submits that the burden to television stations and to the agency that would result from monitoring and reporting requirements remains substantial. In fact, now that nearly 1,500 multicast DTV channels are broadcasting over-the-air,<sup>20</sup> the cost is significantly greater, without a commensurate consumer benefit.

There may also be a fundamental misunderstanding of what is practicable for television broadcast stations in both monitoring and resolving captioning errors. Broadcasters, as programmers of live sports, news and information, already carefully coordinate captions on both a local and national basis. For example, the CBS Television Network coordinates up to eleven teams of live captioners for NFL games each Sunday. For its morning, evening and weekend news programs, CBS utilizes staff closed captioning program coordinators, embedded in each of its national news program teams, to ensure that caption quality is monitored throughout each step of production. CBS also follows detailed procedures to ensure advance coordination for captioning of special events, and plans for the availability of on-call personnel for emergency and unscheduled events. And at WJLA, the ABC affiliate here in Washington DC, staff continuously monitors incoming signals and its off-air signal to ensure captioning is present and to coordinate live captioning for local programming. Additionally, master control ensures its hourly checklist includes a captioning check.

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<sup>20</sup> BIA, Media Access Pro, 2010.

However, it would be impracticable for stations, beyond their monitoring for the *presence* of captioning, to employ full-time staff devoted to monitoring for the *accuracy* of such captioning. Such monitoring requires that a person devote 100 percent of his or her attention to proofreading all captions as they are being transmitted, and would require multiple personnel at the approximately 1,758 full power television stations. And for the nearly 1,500 multicast channels, this undertaking would be extremely labor-intensive and likely cost-prohibitive, particularly for stations in smaller markets.

Importantly, monitoring often cannot remedy the problem of non-technical caption errors since, at most, monitors could only call the third party retained to provide the live captioning and report the problems – well after the fact. Nothing could be done by the monitoring person to actually correct any errors (e.g., misspellings) in live captions as they occur and are observed. And nothing, of course, could be done by a station monitor for programs supplied by syndicators, networks or other third party programmers who may have made errors in the programs previously recorded or live-captioned at a source other than the local broadcast station.

Even for programming acquired substantially in advance of its broadcast, the process of repairing/reformatting damaged or missing captions is considerable. The broadcaster could either contact the original captioner of the program, have the captions reformatted and the program re-fed, or attempt to repair and reformat the captions itself. Either scenario involves significant delays and costs. A broadcaster would need to own the caption authoring equipment and employ staff properly trained to perform such a

task.<sup>21</sup> The economic burden of requiring full time captioning staffs for every station would be enormous. The record here fails to demonstrate that the problem of occasional errors would justify the imposition of such a burden.

The Commission therefore should not require broadcasters to be responsible for captions damaged by others or by the normal editing processing. Absent evidence of a widespread captioning failure, the occasional failure of a program producer to supply captioned material should not result in a station being regarded as failing to meet its captioning responsibilities. Indeed, the House Report on the Telecommunications Act makes clear that it was Congress' understanding that the obligation to insert captioning into programming would generally rest with producers, recognizing the burdens and inefficiencies that would be created if all stations were obliged to caption programs they did not produce. See H.R. Rep. No. 204, 104<sup>th</sup> Cong., 1<sup>st</sup> Sess. 114 (1995).

Another fundamental problem associated with imposing monitoring and reporting requirements, as well as quantity standards, is that compliance would be impossible. The fact remains that once a caption has aired incorrectly, there is simply no way to correct the captions – the moment is gone. Regulation therefore simply cannot eliminate errors that are discovered during the airing of programs. Moreover, since many captioning errors can occur downstream, in the set-top box, at a cable headend, or at the viewers' home, for example, monitoring and reporting can neither identify nor remedy these types of errors.

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<sup>21</sup> This equipment would need to be separate and in addition to the "on-air" caption encoding equipment.

#### **IV. Technological Developments Do Not Warrant Additional Regulatory Requirements.**

##### **A. Technological Changes Have Not Produced Improvements in Caption Quality.**

The Commission notes that since 2005 the broadcast industry has completed its transition to digital television and asserts that the DTV transition, coupled with other technology advances such as speech-to-text, may provide for improved caption quality. See *Public Notice* at 1. It is true that the DTV transition has provided a new structure for transmitting caption data, as described in ATSC and CEA technical standards,<sup>22</sup> and that so-called 708 captions include improved display features, such as the ability to change font size and color, which enhance the viewing experience. However, the completion of the DTV transition itself did not bring about significant changes as to the way captions are transmitted to viewers, nor did the transition ameliorate the various technical and non-technical challenges related to captioning. Indeed, the shift to DTV has resulted in a vastly more complex content production, storage and distribution process of which, as mentioned above, only a small portion is under the broadcasters' control.

Broadcasters in today's digital environment work diligently to ensure that the 708 caption data is correctly inserted into their DTV transmissions and monitor their off-air signals for the presence and correctness of that data. While the 708 caption data stream can carry additional information, this data is not necessarily of higher quality.

The increased capacity inherent in 708 captions simply allows for the extra data needed

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<sup>22</sup> See CEA-708-D, 2008 (which defines the method for coding text with associated parameters to control the display of Closed Captions in Digital Television (DTV) technology); see also ATSC A/53:2007 Part 4 (which documents caption carriage within the ATSC DTV transport stream).

to describe the improved display features and does not automatically make the captioning itself “better.”<sup>23</sup>

With regard to advances in speech-to-text technology, there has been little improvement in this area since the Commission last examined this issue in 2005. Interestingly, the underlying theory behind speech-to-text, speech recognition, has not changed in many years. The ability of a computer to recognize human speech has not substantially improved since around 2001.<sup>24</sup> Some gains have been achieved through the use of progressively larger word dictionaries and through increases in computing power. However, reliable results employing speech recognition technology are, as a practical matter, obtainable only in a trained environment, where the computer is trained to recognize the speech of a single individual.<sup>25</sup>

Automated speech recognition is likely still years away from being able to accurately and reliably recognize multiple voices speaking with multiple dialects or accents as might occur in live entertainment programming, news, and emergency event coverage. While there are research and pilot projects in existence whose goal is to develop such technology, these systems have not yet fully matured.<sup>26</sup> Thus, a majority

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<sup>23</sup> We also note that viewers can turn those additional display features (e.g., color, font, etc.) on and off or change them as desired at the DTV receiver.

<sup>24</sup> See, e.g., <http://robertfortner.posterous.com/the-unrecognized-death-of-speech-recognition> (last visited Nov. 24, 2010).

<sup>25</sup> NAB notes that many caption service providers now use speech recognition technology employing a “re-reader” – a person listening to the program audio, speaking into a “trained” speech recognition apparatus.

<sup>26</sup> See, e.g., Google/youtube project at <http://googleblog.blogspot.com/2009/11/automatic-captions-in-youtube.html> (last visited Nov. 24, 2010).

of broadcast stations must continue to rely on a limited pool of captioners, coupled with the use of the ENT and scripted captions, for live, local content, as well as content that may be delivered live or near-live over-the-air.

**B. The Commission Should Support the Continued Development of New Captioning Technologies.**

Rather than attempting to establish quality and monitoring requirements, the Commission should instead focus on continuing to bring stakeholders together to resolve complex captioning issues and to encourage the development of new caption technologies. Since 2005, while there have been improvements, technology simply has not advanced to the point where the captioning process is automated. Cost-efficient technologies, such as speech-recognition, still need the opportunity to develop and improve. While speech recognition currently does not match the accuracy level of a real-time stenocaptioner, it may provide – due to its lower cost – a means to caption some programming that would not otherwise be able to be captioned.

Establishing specific accuracy benchmarks and onerous monitoring requirements may, however, discourage innovation and experimentation. Broadcasters, MVPDs and others will be deterred from utilizing new technologies that are still improving because of the real possibility of FCC enforcement actions. The inevitable result would be a slow-down in developing and employing these new automated captioning technologies. Moreover, companies that develop other technologies which, in the future, could be applied to captioning would be discouraged from entering the captioning market because these technologies might not initially meet rigid accuracy benchmarks. Thus, adopting specific accuracy requirements could have the unintended consequence of deterring captioning innovation.

**V. The FCC Should Not Extend the Prohibition Against Electronic Newsroom Technique Use Beyond the Top 25 Markets.**

In refreshing the record, the Commission also asks whether it should extend the prohibition on the use of ENT for captioning news beyond the top 25 markets. *Public Notice* at 2-3. As discussed below, such an extension would seriously strain the news resources of small and medium-sized broadcasters who have recently borne the costs of the DTV transition, faced a significant economic downturn, and experienced declining revenues. Especially in light of the FCC's concern with local news production, it should refrain from burdening the provision of local journalism, even unintentionally, by prohibiting local stations from utilizing ENT.

In 1998, the Commission prohibited the major national broadcast networks and their affiliates from using ENT in the top 25 Designated Market Areas ("DMAs"). See *Reconsideration Order* at ¶ 5. In imposing this limitation, the Commission recognized that a "real-time captioning requirement could impose an economic burden on smaller entities since resources are likely to be limited, costs for real-time captioning remain high and methods for remote real-time captioning are still being developed." *Reconsideration Order* at ¶ 37.

Many stations outside the top 25 markets continue to rely on ENT to provide captions for local programs, including local affairs programming and news. This technology permits them to feed teleprompter or other scripted material into the captioning encoder, substantially reducing the cost of captioning. While it recognized that stations using ENT may have some unscripted portions of the newscasts uncaptioned, the Commission balanced this against the cost of live captioning and the absence of a large pool of trained stenocaptioners. It chose to urge stations to script

(and therefore caption) additional portions of their news programs, and it committed itself to reexamining this issue in light of station experience and the availability of live captioning services or other new captioning technologies, including voice-recognition software. In the intervening years, however, there have not been substantial developments in captioning technologies that justify altering this regulatory balance.

While the Commission has noted that the costs of real-time captioning have generally declined since 1998,<sup>27</sup> the total costs to stations that must caption thousands of hours of programming annually is still significant<sup>28</sup> and can quickly reach hundreds of thousands of dollars per year per local station. Some stations continue to pay a premium for stand-by, unanticipated captioning, and may have difficulty ensuring 24/7/365 live captioners, especially during overnight hours or emergencies on short notice. Other stations with long-term captioning contracts pay a flat rate for all live captioning services. We also observe that the cost to stations is inversely proportional to a station's "buying power" – small and medium market broadcasters who are not part of a station group may pay more than stations that contract with captioning companies for a "bulk discount."

Local television stations' commitment to providing their communities with local news has been demonstrated time and again. Earlier this year, a Radio TV Digital News Association ("RTDNA")/Hofstra University study found that "2009 meant another year of TV news doing more with less," with the amount of local news rising to an

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<sup>27</sup> See 2005 NPRM at ¶ 48.

<sup>28</sup> According to an informal survey of NAB member television stations conducted this month, the cost of contracting for real-time captioning averages around \$100 to \$140 per hour.

average of five hours per station each weekday, despite job losses in the industry and challenging financial circumstances for local stations.<sup>29</sup> A spring 2010 NAB survey of stations for the Commission's Future of Media proceeding showed that the average station produced 26.6 hours of local news programming per week, and an average of 27.2 hours per year of additional special news and emergency journalism.<sup>30</sup> Obviously, only financially viable stations can offer these amounts of costly local programming, and the burdens associated with local news production have only increased as station revenues have declined.<sup>31</sup> And medium and small market stations have experienced particularly sharp revenue declines in recent years.<sup>32</sup>

ENT helps these medium and small market stations deliver timely and relevant news programming to the local communities they serve. Because much of the programming in local news and public affairs is scripted, the ENT conveys the primary substance of news broadcasts. Additionally, some stations utilizing ENT supplement it with live captioning of weather, traffic and late-breaking news.

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<sup>29</sup> Bob Papper, "2010 TV and Radio Staffing and News Profitability Survey," RTDNA/Hofstra University, *summarized at* [www.rtdna.org/pages/media\\_items/2010-tv-and-radio-news-staffing-and-profitability-survey1943.php?id=1943](http://www.rtdna.org/pages/media_items/2010-tv-and-radio-news-staffing-and-profitability-survey1943.php?id=1943)

<sup>30</sup> *In the Matter of Examination of the Future of Media and Information Needs of Communities in a Digital Age*, Comments of the National Association of Broadcasters, GN Docket No. 10-25, May 7, 2010, at Attachment B, "The Economic Realities of Local Television News – 2010" ("NAB Future of Media Comments"). This survey also documented the costly nature of producing local news. See Attachment B at 12-13 (average station's news operating budget represents more than 25% of the station's total budget).

<sup>31</sup> See NAB Future of Media Comments, Attachment C at 1 (pre-tax profits of average television station nationwide declined 56.3% from 1998-2008).

<sup>32</sup> *Id.* at 4 (pre-tax profits of average television station in DMAs 50-210 declined 63.7% from 1998-2008).

Were the Commission to mandate that news be captioned only through the use of real-time captioning, it could substantially increase the costs associated with news production for those medium and smaller market stations utilizing ENT. This would unnecessarily burden the production of local journalism in many markets, contrary to the public interest. Eliminating hundreds of stations' ability to utilize ENT would likely force a number of them to seek waivers of the FCC's increased captioning requirements, or even consider limiting the amounts or types of local news programming they produce. Such results are clearly inconsistent with the Commission's goal of localism and the promotion of local journalism.<sup>33</sup>

For all these reasons, the Commission should continue to permit medium and smaller market stations to use ENT to provide their communities with important local news and information. Rather than increasing the costs and burdens associated with local news production, NAB urges the Commission to work with industry to develop feasible solutions for improved, cost-effective methods of news captioning, including the continued development of voice-recognition and other technologies. The Commission should ensure that it gives video programming providers the flexibility to avoid any loss

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<sup>33</sup> See, e.g., *Broadcast Localism*, Notice of Inquiry, 19 FCC Rcd 12425 (2004) at ¶ 4 (The "Commission's overarching goal" is to "establish[ ] and maintain[ ] a system of local broadcasting that is responsive to the unique interests and needs of individual communities"); *2002 Biennial Regulatory Review*, Report and Order, 18 FCC Rcd 13620 (2003) at ¶¶ 77-78 ("We remain firmly committed to the policy of promoting localism among broadcast outlets," which the FCC measured by using "local news quantity and quality.").

of valuable programming for the public at large while meeting the needs of the deaf and hard of hearing community.<sup>34</sup>

**VI. Multicasting Remains A Nascent Service and Multicast Program Streams Should Be Considered Separate Channels For Purposes of the Closed Captioning Exemptions.**

The *Public Notice* also addresses a question first presented in the *2008 Notice* – whether the Commission should consider multicast channels as separate channels for purposes of the closed captioning revenue exemptions. *Public Notice* at 3. NAB continues to believe that the Commission should refrain from making regulatory changes that would add to the burdens on, and likely impede the growth of, still developing DTV services, including multicasting.

As a result of the transition to digital broadcasting, broadcasters can “multicast” – offer more than one stream of free programming on each 6 MHz channel. Multicast channels hold considerable promise as new sources of diverse programming for local television viewers. Currently, there are nearly 1,500 multicast channels across the nation providing programming independent of the station’s primary channel. And that programming runs the gamut from local news, sports and weather to health information, foreign language programming and children’s programming.<sup>35</sup>

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<sup>34</sup> In this regard, NAB observes that the Commission is required to reasonably assess the costs of its actions. See, e.g., *Motor Vehicle Mfrs. Assn. v. State Farm Mut. Ins.*, 463 U.S. 29, 54 (1983) (agency needs to “look at the costs as well as the benefits” of a regulatory standard); *United States Telecom Association v. FCC*, 227 F.3d 450, 461 (D.C. Cir. 2000) (finding that FCC’s failure to explain how it implemented provisions of the Communications Assistance for Law Enforcement Act in a “cost-effective” manner was “a classic case of arbitrary and capricious agency action”).

<sup>35</sup> For example, NBC Local Media recently announced new “Nonstop” multicast channels in Philadelphia and Washington D.C. that will feature about eight hours of local programming per day. See Malone, Michael, “Exclusive: NBC Local Media Sets ‘Nonstop’ Launch Dates,” *Broadcasting and Cable*, Oct. 21, 2010, available at

By almost any measure, however, multicasting remains a nascent service. Due in part to the economic recession and the decline in traditional advertising, multicast channels have yet to emerge as a major source of revenue for broadcasters. Data from the 2010 NAB Television Financial Survey show that the average major network affiliate in 2009 earned only \$66,520 in multicast revenue, constituting only 0.4 percent of the average affiliate's annual net revenues.

**Multicast Revenue**  
*Includes Affiliates: ABC, CBS, FOX, NBC*

<b>Market Size</b>	<b>2009 Average Dollar Amount</b>	<b>% of Net Revenue</b>
All Affiliate Stations	\$66,520	0.4%
1-25	\$53,084	0.1%
26-50	\$30,869	0.1%
51-75	\$66,136	0.5%
76-100	\$81,245	0.8%
101-125	\$71,083	1.0%
126-150	\$63,046	1.1%
151-175	\$63,696	1.6%
176+	\$132,918	4.4%

Source: 2010 NAB Television Financial Survey Database

*Multicast Revenue* is defined as any revenue that is derived directly from a station's subchannels.

Additionally, unlike a broadcaster's primary channel, multicast channels do not have must-carry rights, and many are not currently carried by MVPDs. Nonetheless, many analysts expect that multicast channels will emerge as an important element of

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<http://www.broadcastingcable.com/article/458817-Exclusive-NBC-Local-Media-Sets-Nonstop-Launch-Dates.php> (last visited Nov. 24, 2010). NAB's Future of Media Comments (at 17-22) describes local broadcasters' multicast offerings in some detail.

all-digital television.<sup>36</sup> Indeed, as more and more consumers “cut the cord” with pay TV, a robust offering of free multicast channels, coupled with high-definition primary channels and broadband video, appears increasingly likely to be a key part of the future of television.<sup>37</sup>

The recent *Public Notice* inquires whether the current rule that exempts from closed captioning requirements all channels with gross revenue of less than \$3 million per year should apply to each multicast channel separately, or whether the \$3 million threshold should apply to a broadcaster’s digital offerings as a whole (including any and all multicast channels).<sup>38</sup> To promote the continued development of new and diverse multicast programming, and consistent with congressional intent, Commission precedent and the treatment of non-broadcast video programming providers, NAB urges the Commission to continue apply the revenue exemption on a per channel basis.

When adopting this exemption in 1997, the Commission said that gross revenues should “be calculated for *each channel individually*.”<sup>39</sup> This and other exemptions were designed to prevent closed captioning requirements from being “economically burdensome” for video providers. *Report and Order* at ¶ 144. The Commission

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<sup>36</sup> See Nielson, Justin, “TV stations multiplatform analysis: Digital conversion creates opportunities for multicasting,” SNL Kagan, January 22, 2010, available at <http://www.snk.com/interactivex/article.aspx?id=10604572&KLPT=6>.

<sup>37</sup> See, e.g., “Home economics and the spectrum crunch,” Economist.com Science and Technology Blog, available at <http://www.economist.com/node/21012775>.

<sup>38</sup> See 47 C.F.R. § 79.1(d)(12). Under this exemption, “[n]o video programming provider shall be required to expend any money to caption any channel of video programming producing annual gross revenues of less than \$3,000,000 during the previous calendar year other than the obligation to pass through video programming already captioned when received . . . .”

<sup>39</sup> *Report and Order*, at ¶ 165 (emphasis added). See also *id.* at ¶ 79 (compliance with “closed captioning requirements will be measured on a channel-by-channel basis”).

implemented these exemptions pursuant to the clear guidance of Congress in Section 713 of the Communications Act. Section 713(d)(1) directs the Commission to exempt “programs, classes of programs or services” that would be “economically burdensome” for programmers to caption. 47 U.S.C. § 613(d)(1).

The intent behind the exemption – to ensure that closed captioning requirements do not impede the production and airing of programming to all audiences – strongly supports the argument that still developing multicast channels earning less than \$3 million per year should be exempt from these requirements. This treatment of broadcaster-owned multicast channels would be consistent with the regulatory treatment afforded to other video programming providers that own multiple non-broadcast programming channels. And maintaining this exemption for broadcast multicast channels would also serve the Commission’s localism goals by encouraging the production of locally-oriented multicast programming, including news, information and public affairs.<sup>40</sup>

For these reasons, NAB continues to encourage the Commission to apply the \$3 million gross revenue exemption to each channel separately for those broadcasters that choose to serve the public by offering additional channels of free, over-the-air programming. As we previously noted, multicast channels will become subject to all

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<sup>40</sup> Idaho Public Television, for example, uses one of its multicast channels to provide live coverage of the Idaho Senate and House of Representatives. If FCC rules required that multicast channel to be captioned, then Idaho Public Television would be “forced to eliminate” its live state house coverage. Comments of The Association of Public Television Stations and Request for Clarification in CG Docket No. 05-231, at 4 (Feb. 12, 2009) (“Because the schedule for the legislature is unpredictable, Idaho PTV would have to have two captioners on standby for between 30 and 40 hours per week at an estimated cost of \$80,000 per year).

captioning requirements if and when they become established in the marketplace and increase their gross revenues past the \$3 million threshold. In addition, all multicast channels regardless of their revenues are already subject to the “pass-through” requirement, which will ensure that certain amounts of the programming on these channels is captioned. See 47 C.F.R. § 79.1(c).

**VII. Conclusion.**

Based on the record, as refreshed, in this proceeding and for the above-described reasons, NAB urges the Commission to continue to work toward pragmatic solutions for resolving the myriad of complex, technical issues surrounding captioning, including continuing to encourage discussions amongst all relevant stakeholders. The adoption of additional, inflexible regulatory requirements at a time of economic challenges are unlikely to lead to improvements in either captioning quality or video programming quality or diversity overall.

Respectfully submitted,

**NATIONAL ASSOCIATION OF  
BROADCASTERS**

1771 N Street, NW  
Washington, DC 20036  
(202) 429-5430

A handwritten signature in black ink, consisting of a stylized star-like symbol followed by the name "Bobeck".

Kelly Williams  
Senior Director  
NAB Science & Technology

Jane E. Mago  
Jerianne Timmerman  
Ann West Bobeck  
Scott A. Goodwin

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