

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

In the Matter of)	
)	
Petition for Declaratory Ruling and Petition)	RM-11848
for Rulemaking on Live Closed Captioning)	CG Docket No. 05-231
Quality Metrics and the Use of Automated)	
Speech Recognition Technologies)	

**OPPOSITION TO PETITION FOR RULEMAKING
OF THE NATIONAL ASSOCIATION OF BROADCASTERS**

I. INTRODUCTION AND SUMMARY

Pursuant to 47 C.F.R. § 1.405(a), the National Association of Broadcasters (NAB)¹ respectfully opposes the above-captioned Petition for Rulemaking,² which urges the Commission to launch a proceeding toward the adoption of quantifiable metrics for measuring the quality of live closed captioning. In doing so, Petitioners essentially request belated reconsideration of the Commission’s prescient conclusion in 2014 that accessibility to video programming can be ensured through specific caption quality standards and certified adherence to certain best practices.³ The Commission also created a detailed compliance program for assigning responsibility for caption quality and addressing

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

² Petition for Declaratory Ruling and/or Rulemaking, Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI) *et al.*, CG Docket No. 05-231, RM-8503 (July 31, 2019) (Petition).

³ *Closed Captioning of Video Programming, Telecommunications for the Deaf and Hard of Hearing, Inc. Petition for Rulemaking*, Report and Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking, CG Docket No. 05-231, 29 FCC Rcd 2221, 2264-66 (2014) (2014 Caption Quality Order).

consumer complaints.⁴ NAB submits that the Commission's approach and industry's efforts to serve all Americans have successfully produced high-quality captions that continue to improve. The Petition fails to demonstrate that a change in course is necessary or timely.

Consistent with Section 713 of the Communications Act,⁵ the 2014 Captions Quality Order struck a careful balance between the benefits of ensuring accessibility to video programming and the impact on industry of more prescriptive rules.⁶ The Commission recognized the significant hurdles to creating viable metrics for measuring caption quality, and determined that requiring video programming distributors (VPDs) to monitor programming and measure caption quality against some quantifiable standard would be unduly burdensome.⁷ The Petitioners do not argue otherwise, conceding that the task of creating such metrics "has not become substantially simpler" since 1997.⁸ Instead, the Petitioners note that a new research effort by the Disability and Rehabilitation Research Project on Twenty-First Century Captioning Technology, Metrics and Usability (Captioning DRRP) is developing metrics for caption quality.⁹ This project, however, is not expected to bear fruit for at least three to four years, and there is no guarantee at this point that the results will be useful.

⁴ *Closed Captioning of Video Programming, Telecommunications for the Deaf and Hard of Hearing, Inc. Petition for Rulemaking*, Second Report and Order, CG Docket No. 05-231, 31 FCC Rcd 1469 (2016) (2016 Caption Compliance Order).

⁵ 47 U.S.C. § 613; H.R. Report 104-458, 104th Cong. 2nd Sess. (1995) at 183 (directing the Commission to "balance the need for closed captioned programming against the potential for hindering the production and distribution of programming.").

⁶ 2014 Caption Quality Order, 29 FCC Rcd at 2264.

⁷ *Id.*

⁸ Petition at 15.

⁹ [Disability and Rehabilitation Research Project on Twenty-First Century Captioning Technology, Metrics and Usability](#) (Captioning DRRP).

Broadcasters and other VPDs are committed to ensuring that all Americans, including persons who are deaf and hard of hearing, have access to video programming. In addition, now more than ever, commercial incentives compel TV stations to win as many loyal viewers as possible. To that end, beyond merely complying with the Commission's caption quality standards and best practices, broadcasters follow rigorous quality control measures, review the effectiveness of captions and make technical and procedural improvements as needed. Stations also collect and implement suggestions from helpful viewers on ways to improve captions. These efforts have paid off. Broadcasting staff who are directly responsible for captions report a marked increase in consumer satisfaction as the number and scope of captioning glitches have decreased over the last five years. Simply put, the Commission's approach is working and introducing an unproven metrics-based enforcement scheme could impede this progress. Accordingly, a rulemaking toward the adoption of caption quality metrics is likely unnecessary and, and short of that, premature given the early days and uncertainty of the Captioning DRRP.

The Petition also seeks a declaratory ruling regarding the use of automated speech recognition (ASR), which some VPDs are experimenting with in certain markets.¹⁰ Although NAB welcomes a discussion of the prospects for ASR, a declaratory ruling is both premature and unnecessary given the nascency of ASR and the negative impact that special certifications or other new rules could have on its development. It is critical that the Commission preserve and promote all options for creating captions, old and new. Moreover, the existing best practices sufficiently align with the steps that ASR users already take to improve caption quality. Nevertheless, if the Commission ultimately decides to explore the

¹⁰ Petition at 18.

development of further guidance on how the best practices apply to ASR, NAB submits that the Commission's Disability Advisory Committee would be far more effective venue than a costly, time-consuming rulemaking proceeding.

II. A RULEMAKING TOWARD A METRICS-BASED SCHEME FOR ASSESSING AND ENFORCING CAPTION QUALITY IS UNNECESSARY AND PREMATURE

A. The Commission's Approach to Ensuring Video Programming Accessibility Through Caption Quality Standards and Best Practices Has Succeeded

Petitioners claim that captioning problems are widespread and that the Commission's best practices approach has not resulted in high quality captions because it allows VPDs to defer responsibility for caption quality to programming supplier and caption providers that are free to "make and follow their own rules."¹¹ In the Petitioners' view, the solution to this alleged problem is an objective, metrics-based approach to measuring and enforcing caption quality.

NAB respectfully disagrees with both the Petition's premise and its conclusion. To the contrary, the results of the Commission's approach to caption quality set forth in 2014 are unfolding exactly as planned, rendering moot the request for more rigid rules. Broadcasters share the Petitioners' goal to ensure the accessibility of live video programming to persons who are deaf and hard of hearing.¹² To that end, television stations work diligently to provide captions that meet or exceed the four caption quality standards set forth in the rules: (1) accuracy; (2) synchronicity; (3) completeness; and (4) placement.¹³ VPDs and other

¹¹ *Id.* at 7-8.

¹² *Id.* at 2.

¹³ 2014 Caption Quality Order, 29 FCC Rcd at 2240-41; 47 C.F.R. § 79.1(j).

stakeholders go to great lengths and expense to create and provide high quality captions, and to make sure their systems are working as intended.¹⁴

Broadcasters also work diligently to adhere to the required best practices when appropriate, obtaining certifications from programmers or caption vendors that assure compliance with certain performance criteria, training of captioners, material preparation, and equipment operations, among other obligations.¹⁵ VPDs take pains to engage reliable, experienced captioning vendors that provide certified captioners, provide vendors with advance scripts and outlines, and ensure that captions are properly transmitted in compliance with industry standards. And once the captions are aired, stations take steps to spot check the presence of captions and promptly correct any irregularities. Enforcement is ensured through consumer complaints. VPDs also coordinate with consumer advocates to identify aspects of captioning in need of further attention, and facilitate the resolution of viewer concerns. For instance, on October 2, 2019, NAB and NCTA convened a large meeting of consumer advocates and industry representatives to discuss caption quality. This productive meeting was the latest in a series held over the past five years pursuant to a recommendation of the Commission in the 2014 Caption Quality Order.¹⁶ Finally, VPDs continue to step up outreach to viewers about ways to directly interact with stations regarding captioning.

¹⁴ See, e.g., Electronic Newsroom Technique Captioning Progress Report, NAB, CG Docket No. 05-231 (Oct. 28, 2105), at 25.

¹⁵ 47 C.F.R. § 79.1(k). Stations that use electronic newsroom technique (ENT) to create captions must also follow certain best practices to ensure caption quality. 2014 Caption Quality Order, 29 FCC Rcd at 2271-72.

¹⁶ 2014 Caption Quality Order, 29 FCC Rcd at 2263.

Doing any less would be counterproductive. The Commission itself has described the dramatic changes in the media marketplace in recent years. Television stations face rapidly increasing competition for viewers as more Americans turn to online sources for news and entertainment.¹⁷ The market incentives for broadcasters to serve and retain as many viewers as possible have never been stronger. Stations can ill-afford to provide inadequate closed captions.

Broadcasters report that such efforts have paid off. This is in stark contrast to the possibly flawed HLAA survey summary relied upon by Petitioners, which purports to illustrate “significant problems” with live captions.¹⁸ For example, the summary does not indicate in what language respondents were watching television, or what time of day they were watching. The summary also does not provide the gender or age of respondents, or whether they were born deaf, became deaf as a child or experienced hearing loss later in life. Further, the summary lacks information about how the survey was crafted, the response rate or whether respondents had any prior knowledge or bias regarding closed captions or the Commission’s rules. Of note, broadcasters strongly disagree with Petitioners’ utterly unsupported claims that captioning is supposedly getting worse,¹⁹ given that the survey summary references no question about respondents’ views on the recent progress of caption quality. Petitioners have indicated that more information about the survey is forthcoming, but so far have described the survey as offering only a general feeling about

¹⁷ *2018 Quadrennial Regulatory Review – Review of the Commission’s Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996*, Notice of Proposed Rulemaking, MB Docket No. 18-349, 33 FCC Rcd 12111, 12112 (2018).

¹⁸ Petition at 10-11 citing an “informal” survey by the Hearing Loss Ass’n of America (HLAA) (May-June 2019).

¹⁹ *Id.* at 2 and 10.

caption quality. NAB would be the first to concede that flawless live captions remain a challenge, but without more background and analysis we are unpersuaded that the HLAA survey presents a realistic picture of the state of captions. We look forward to more information about HLAA's survey.

Broadcasters' experiences also contradict Petitioners' claims. NAB has solicited feedback from a range of television stations, specifically their engineers and newsroom staff who are directly responsible for captioning. The vast majority reports relatively few viewer complaints about closed captions. In fact, broadcasters report that the number of viewer complaints has actually dropped in recent years, despite the hundreds of hours of captioned programming that stations provide every month to hundreds of thousands or even millions of viewers. Consumer complaints have remained steady or decreased despite the growth in social media, Twitter, station websites and other easy ways to share concerns with stations, in addition to the requirement that stations make contact information publicly available for the receipt and handling of consumer concerns.²⁰ These accounts are consistent with the Commission's own data. In the 2014 Caption Quality Order, the Commission stated that it had received a total of 2,323 consumer complaints about closed captioning during the five-year period from 2009 through 2013, or an average of 465 per year.²¹ NAB has reviewed the Commission's consumer complaints database, which similarly reveals a remarkable decrease in the number of such complaints following adoption of the caption quality standards and best practices. During the four-year period from 2015 through 2018, NAB could identify approximately 1,082 complaints, or an average of only 270 per year and a

²¹ 2014 Caption Quality Order, 29 FCC Rcd at 2233.

42% drop compared to pre-2013.²² The trend appears to be positive, with only 240 complaints during 2018 and approximately 90 from January to September 2019.²³ Moreover, this reduction has occurred despite the Commission's launch of the new online Consumer Help Center in 2015, which has simplified and streamlined the process for filing consumer complaints.²⁴

Consumer groups have raised concerns, including during our October 2 meeting, that captioning issues are underreported. However, given that it is easier than ever for viewers to raise captioning concerns – either directly with stations or through the Commission – this reduction in complaints may be attributed to increased familiarity with the rules and enhanced procedures for compliance, the effectiveness of the best practices, better coordination among VPDs and caption providers and improved captioning techniques and training, among other developments.²⁵ During our October 2 meeting, industry and consumer groups discussed ways to motivate deaf and hard of hearing viewers to contact television stations directly about captioning concerns, to the extent there are any remaining barriers to viewers who wish to provide feedback regarding stations' captions. VPDs take pride in their responsiveness to consumer complaints, and would welcome more helpful feedback from consumers.

Thus, although NAB recognizes there is more work to do to and VPDs will continue efforts to further improve caption quality, NAB disagrees with the Petitioners' view of current caption quality and its future prospects. The rules, best practices and ample compliance

²² See <https://opendata.fcc.gov/Consumer/CGB-Consumer-Complaints-Data/3xyp-aqkj>.

²³ *Id.*

²⁴ FCC Blog, [New Consumer Help Center is Designed to Empower Consumers, Streamline Complaint System](#) (Jan. 5, 2015).

²⁵ Comments of the National Court Reporters Ass'n (NCRA), CG Docket No. 05-231 (Sep. 16, 2019).

program, combined with broadcasters' commitment to serve the needs and interests of their audience, have produced high-quality captions that continue to improve. NAB sees no need to consider upending the existing regulatory regime by imposing a metrics-based system for assessing and enforcing caption quality.

B. A Metrics-Based Scheme for Measuring Caption Quality Seems Unnecessary and Unduly Burdensome to Implement

Petitioners claim that a metrics-based system that assesses the end results of captioning would better ensure caption quality than the current quality standards and best practices.²⁶ NAB submits that metrics are likely unnecessary, given the success of the Commission's approach to caption quality, but could be impractical to create and enforce. We also note that Commission previously considered and rejected the exact same request of consumer groups in the 2014 Caption Quality Order. There, the Commission found that adherence to the best practices would ensure quality captions by providing the captioning industry with concrete steps to achieve quality captions and ensure that problems that do arise are quickly corrected.²⁷ Moreover, the captioning rules are guided by Congress's directive to provide access to video programming through captions without unduly burdening VPDs and others charged with providing captions.²⁸ The Commission rejected metrics as more burdensome, yet less effective than the quality standards and best practices it adopted.²⁹ Nothing in the Petition justifies a policy reversal.

First, many television stations caption their own content with the assistance of live captioners, ENT, ASR or some other technique. The quality of such captions is governed by

²⁶ Petition at 6 and 13.

²⁷ 2014 Caption Quality Order, 29 FCC Rcd at 2257.

²⁸ *Id.* at 2264 citing 47 U.S.C. § 613(b)(1).

²⁹ *Id.* at 2264.

the non-technical quality standards set forth in the rules.³⁰ Similarly, the Commission has stressed that the best practices for situations when VPDs engage third-party caption providers also focus on the “end result, *i.e.*, the provision of captions that effectively convey video programming,”³¹ consistent with the quality standards. Therefore, the current rules are already results-oriented, as the quality standards and best practices allow industry and consumers to sufficiently assess the output of various captioning techniques. Consequently, the Petitioners’ request to impose metrics in place of the quality standards and best practices rings hollow. Their only argument is that metrics would better allow a comparison of different captioning techniques, especially ASR.³² However, the growth of ASR changes none of the facts that led the Commission to conclude that adopting quantitative metrics for caption quality would be overly burdensome and ineffective, and it thus provides no basis for relitigating the previously rejected request for a metrics-based scheme.

Second, creating and enforcing a metrics-based scheme would be extremely difficult. Regardless of the captioning technique used, occasional errors are bound to occur when live programming is captioned. Problems can arise due to equipment or Internet failures, manual errors, unexpected deviations from a script, unplanned background noise and other disruptions. Inflexible metrics-based standards will not be able to accommodate the range of circumstances that can affect caption quality.³³ In addition, a metrics-based process would force live captioners to attempt to produce transcripts that are one hundred percent verbatim. However, sometimes verbatim captions are less understandable than captions

³⁰ *Id.* at 2240.

³¹ *Id.* at 2264.

³² Petition at 13-14.

³³ 2010 NAB Refresh Comments at 11-12.

that reflect the judgment of captioners who take steps to maintain the context and comprehension of captions, such as paraphrasing sentences or dropping non-essential utterances.³⁴ Real-time captions may not lend themselves to a specific benchmarking type of assessment.³⁵

Third, a metrics-based system, with enforcement presumably tied to the number of mistakes, raises the difficult questions of what constitutes an error and how to count errors. For example, should an error count turn on words or phrases, and should errors be measured against a verbatim transcript?³⁶ Should errors in spelling, punctuation and grammar count for enforcement purposes, even if they are unnoticed by viewers or unneeded to comprehend the content?³⁷ How should sound effects be treated, and should omission of a sound effect should count as an error? Accordingly, there is no agreed-upon industry method for defining and counting captioning errors.³⁸ Even supporters of rigid standards, such as Media Captioning Services, have conceded the difficulty of creating workable metrics, stating that there are “significant administrative/analytical challenges in computing accuracy on a statistically significant basis.”³⁹

Finally, even if a metrics-based system could be designed, caption quality would still need to be monitored to be measured at a micro level. The Commission itself has expressed concern about the burdens on VPDs if they are required to monitor “millions of hours” of programming to make sure that no more than a certain percentage of words are wrong,

³⁴ NCTA Reply Comments, CG Docket No. 05-231 (Dec. 16, 2005), at 5.

³⁵ Comments of Media Captioning Services (MC), CG Docket No. 05-231 (Nov. 24, 2010).

³⁶ 2010 NAB Refresh Comments at 13.

³⁷ *Id.* at 14; Reply Comments of Home Box Office, Inc., CG Docket No. 05-231 (Dec. 16, 2005), at 5.

³⁸ NCRA Comments, CG Docket No. 05-231 (Nov. 14, 2005), at 4.

³⁹ MCS Comments, CG Docket No. 05-231 (Nov. 14, 2005), at 9.

misspelled or missing.⁴⁰ Broadcasters already monitor programming for the presence of captions, as required under the Commission's rules.⁴¹ Stations may conduct spot checks for captions via monitors in the master control room, inspect the studio signal paths and encoding equipment to ensure proper operation⁴² or monitor the return network feed.⁴³ However, any obligation to monitor live programming captions for quality would be extremely time-consuming and cost-prohibitive. For too many VPDs, compliance would be impossible.⁴⁴ Further complicating matters is that monitoring live programming cannot detect the cause of captioning errors (e.g., a problem in the television studio, the set-top box, a viewer's home), or remedy errors in real-time.⁴⁵

Initiating a rulemaking toward the adoption of an inflexible, metrics-based scheme could disserve the public interest if some television stations are compelled to reduce the amount of news and other programming that must be captioned. The better course is to retain the caption quality standards and best practices that have improved accessibility to video programming since 2014. Petitioners note that the Captioning DRRP is working on creating metrics for caption quality and urges the Commission to "immediately initiate an inquiry" to "incorporate the results of that project."⁴⁶ However, this project is not expected to produce results for at least several years, and even then, whether it produces a workable,

⁴⁰ *Closed Captioning and Video Description of Video Programming*, Report and Order, 13 FCC Rcd 3272, 3374 (1997); see also 2014 Caption Quality Order, 29 FCC Rcd at 2264.

⁴¹ 47 C.F.R. § 79.1(k)(iii)(B).

⁴² 2010 NAB Refresh Comments at 15-17.

⁴³ CBS Reply Comments at 3.

⁴⁴ NCTA Refresh Comments at 7 (describing the burden of monitoring captions on hundreds of cable channels).

⁴⁵ 2010 NAB Refresh Comments at 16-17.

⁴⁶ Petition at 15.

consensus approach is uncertain. Accordingly, NAB submits that a rulemaking to examine caption quality metrics is unwarranted, and short of that, extremely premature.

III. IMPOSING NEWS RULES ON AUTOMATED SPEECH RECOGNITION CAPTIONING IS UNNECESSARY AND COULD HINDER ITS DEVELOPMENT

The Petitioners seek a finding that VPDs must cease using ASR unless they certify that ASR captions comport with the quality standards.⁴⁷ They also request a declaratory ruling or rule change to clarify the applicability of the best practices to ASR, stating that some elements of the best practices may not be applicable, such as the training of “employees and contractors.”⁴⁸

No such inquiry or rule change is warranted. ASR is still a nascent technology and not yet widely deployed. Only a handful of television broadcasters are experimenting with ASR to date, and those doing so are proceeding with caution to help ensure high quality captions. For example, stations and ASR developers strive to ensure that the ASR engine is informed by the news script and a national lexicon of widely used nouns, and trained on a localized content library of nouns (e.g., names, places, terms of art). They also try to achieve a specific average word error rate and synchronicity and produce a comprehensible transcript as close to verbatim as possible.

ASR’s artificial intelligence (AI) software is designed to improve through repetition and use, and imposing special certifications or obligations could impede its development by deterring users concerned about enforcement. Such rules could also limit the wider use of ASR, making it difficult for ASR software developers to collect the feedback needed to fine-tune the product and implement updates. Instead of adopting special requirements that

⁴⁷ *Id.* at 18.

⁴⁸ *Id.* at 17.

could choke the development of ASR, the better course for the Commission is to allow this new technology to continue to develop and monitor its progress through the Commission's consumer complaint help center.

Given the care with which ASR is being deployed, NAB submits that broadcasters and ASR developers are best positioned to certify that ASR captions comply with the Commission's rules, and satisfy the caption quality standards or that the user has fulfilled the appropriate best practices.⁴⁹ Regarding the latter, NAB submits that the existing best practices may be sufficiently broad to accommodate new captioning techniques like ASR. Stations and ASR developers already work to assess the quality of ASR captions, evaluate whether they meet certain minimum acceptable standards, make sure that transcripts are as close to verbatim as possible and conduct extensive training of the caption creating engine, among other measures captured in the best practices.⁵⁰

Accordingly, NAB submits that a declaratory ruling regarding best practices for ASR captioning is unnecessary. However, if the Commission decides that further discussions may be useful, the best venue would be the Commission's Disability Advisory Committee (DAC). There, representatives of the deaf and hard of hearing, industry and other stakeholders could efficiently exchange information and viewpoints, and consider whether additional guidance would help implement ASR in way that fulfills the Commission's directive to improve the accessibility of video programming while remaining mindful of the impact on industry.

⁴⁹ Petition at 18; 47 C.F.R. § 79.1(m)(1).

⁵⁰ 47 C.F.R. § 79.1(k)(2).

IV. CONCLUSION

For the reasons stated above, NAB opposes the proposals in the Petition and requests that the Commission refrain from initiating the requested rulemaking proceeding.

Respectfully submitted,

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October 15, 2019

CERTIFICATE OF SERVICE

I, Larry Walke, do hereby certify that a copy of the foregoing Opposition was served, this 15th day of October 2019, to the following:

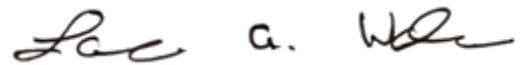
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A handwritten signature in black ink, appearing to read "Larry Walke", written in a cursive style.

Larry Walke