

May 25, 2018

*via ECFS and e-mail*

Marlene H. Dortch  
Secretary, Office of the Secretary  
Federal Communications Commission  
445 12th Street, SW, Room TW-A325  
Washington, DC 20554

**Re: Telecommunications Relay Services and Speech-to-Speech Services for  
Individuals with Hearing and Speech Disabilities • CG Docket No. 03-123  
Misuse of Internet Protocol (IP) Captioned Telephone Service • CG Docket  
No. 13-24**

Dear Ms. Dortch,

On May 23, 2018, Claude Stout of Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), Lise Hamlin of the Hearing Loss Association of America (HLAA), Christian Vogler and Linda Kozma-Spytek of the Gallaudet University Technology Access Program (TAP), and I met with Nirali Patel of the Office of Chairman Pai and separately with Karen Peltz Strauss, Robert Aldrich, and Michael Scott of the Consumer and Governmental Affairs Bureau and David (Raster) Schmidt and Andrew Mulitz of the Office of the Managing Director regarding the draft item in the above-referenced proceedings tentatively scheduled for the June Open Meeting.<sup>1</sup> We expressed our general support for the Commission's efforts to ensure the sustainability of Internet Protocol (IP) Captioned Telephone Service (IP CTS) service and appreciate the Commission's decision to make the draft item for public review in advance of the Open Meeting.

However, we join other stakeholders in expressing significant concerns<sup>2</sup> about the item's Declaratory Ruling on the use of Automated Speech Recognition (ASR) technology.<sup>3</sup> While we support in principle the Commission's efforts to shift to a technology-neutral framework

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<sup>1</sup> Draft Report and Order, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry (May 17) ("Draft Item"),  
<https://www.fcc.gov/document/reforming-internet-protocol-captioned-telephone-service>.

<sup>2</sup> Ex Parte of ClearCaptions (May 18, 2018),  
<https://ecfsapi.fcc.gov/file/105181324914921/2018-05-18%20-%20ClearCaptions%2C%20LLC%20Notice%20of%20Ex%20Parte.pdf>; Ex Parte of Hamilton Relay (May 24, 2018),  
<https://ecfsapi.fcc.gov/file/10524161153707/Hamilton%20ex%20parte%20re%20draft%20IP%20CTS%20item.pdf>.

<sup>3</sup> See Draft Item at ¶¶ 46-64.

for evaluating IP CTS providers,<sup>4</sup> the Declaratory Ruling’s approach of delegating to the Bureau the responsibility of applying the existing TRS minimum standards to IP CTS applicants proposing to use ASR<sup>5</sup> does not acknowledge that the minimum standards are replete with explicit references to human communications assistants (CAs)<sup>6</sup> and provides little guidance as to how the Bureau should evaluate compliance with those standards by machine-learning algorithms.<sup>7</sup> We agree with Hamilton Relay that the Declaratory Ruling raises significant legal issues<sup>8</sup> and are concerned that this approach will result in the Bureau issuing determinations that effectively result in the modification of the minimum standards without solicitation of public comment, potentially giving rise to violation of the notice and comment requirements of Administrative Procedure Act and miring the deployment of IP CTS improvements in litigation.<sup>9</sup>

Substantively, we expressed concern that the Declaratory Ruling opens the door for ASR solutions to widespread deployment without the implementation of quality standards or performance metrics. While the Commission acknowledges that Section 225 of the Communications Act requires it ensure that IP CTS solutions provide functional equivalence to consumers with disabilities,<sup>10</sup> the draft item relegates this task to a Notice of Inquiry with no obvious timeline<sup>11</sup> while immediately opening the door to the deployment of ASR solutions with potentially serious quality shortcomings.<sup>12</sup>

These quality concerns are not mere speculation. For example, the Commission has already received IP CTS applications contemplating the use of ASR technology from

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<sup>4</sup> *See id.* at ¶ 51.

<sup>5</sup> *See id.* at ¶ 58.

<sup>6</sup> *See generally* 47 C.F.R. § 64.404; *e.g.*, 47 C.F.R. § 64.404(a)(1)(ii) (requiring CAs to have “competent skills in typing, grammar, spelling, . . . and familiarity with hearing and speech disability cultures, languages and etiquette.”).

<sup>7</sup> Draft Item at ¶ 60 (declining to “prescribe the specific manner in which a provider must use ASR in order to be certified” and directing the Bureau to “determine on a case-by-case basis the extent to which an applicant’s proposed method of providing ASR will enable it to provide IP CTS in a manner that meets the Commission’s minimum TRS standards for functionally equivalent service”) and ¶ 61 (directing applicants to “support all claims regarding their use of ASR and its efficacy through [unspecified] documentary and other evidence).

<sup>8</sup> *See* Hamilton Relay Ex Parte at 1-2.

<sup>9</sup> *See* 5 U.S.C. § 553(b).

<sup>10</sup> Draft Item at ¶ 153.

<sup>11</sup> *See id.* at ¶¶ 150-176.

<sup>12</sup> *See id.* at ¶ 46.

MachineGenius<sup>13</sup> and VTCSecure<sup>14</sup> that do not adequately address the quality of the underlying technology. For example, VTCSecure’s public application cursorily contends that “[a]dvancements in ASR allow it to be extremely accurate and almost on par with human speech recognition” and that it operates with “over 99% accuracy” while promising dramatic cost savings<sup>15</sup> but does not appear to even reference ASR in its explanation of how its service will meet the minimum standards.<sup>16</sup> Likewise, MachineGenius’s public application is replete with vague promises of “high-quality” and lower-cost captions,<sup>17</sup> but requests waivers of numerous minimum standards.<sup>18</sup>

We are also concerned that the Declaratory Ruling leaves open serious questions about protecting the privacy of sensitive conversations conducted over IP CTS systems. For example, the Declaratory Ruling declares that conversations must be “kept confidential”<sup>19</sup> but appears to contemplate that ASR providers can use internet-based ASR engine providers,<sup>20</sup> which inherently require transferring call recordings to third-party providers. Moreover, many engine providers collect and utilize audio recordings for the purpose of improving the accuracy of the underlying machine learning technology that powers their engines.<sup>21</sup> The Declaratory Ruling leaves unclear the Commission’s intent for how the Bureau should approach the complex tradeoffs between privacy and quality improvements inherent in the use of machine learning algorithms for voice transcription, the Commission’s expectations for and approach to ensuring that the use of third-party voice engine providers

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<sup>13</sup> See MachineGenius Application (October 13, 2017), [https://ecfsapi.fcc.gov/file/1014215719459/IPCTS%20Application\\_%20PUBLIC%20NON-CONFIDENTIAL.pdf](https://ecfsapi.fcc.gov/file/1014215719459/IPCTS%20Application_%20PUBLIC%20NON-CONFIDENTIAL.pdf).

<sup>14</sup> See VTCSecure Application (May 26, 2017), <https://ecfsapi.fcc.gov/file/10526309423109/VTCSECURE%20PUBLIC%20APPLICATION.pdf>.

<sup>15</sup> VTCSecure Application at 3, 4-5.

<sup>16</sup> See *id.* at 10-17.

<sup>17</sup> See MachineGenius Application at 7-8.

<sup>18</sup> See *id.* at 12.

<sup>19</sup> *Id.* at ¶ 58 & n.187 (citing 47 C.F.R. § 64.604(a)(2)(i)).

<sup>20</sup> *Id.* at ¶ 61 & n.202.

<sup>21</sup> See, e.g., Google Cloud, Terms for Opt-In Data Logging (“Customer will provide [voice recordings] to Google to allow Google to develop, improve and model Google’s machine learning technology.”), <https://cloud.google.com/speech-to-text/docs/data-logging-terms> (last visited May 24, 2018); IBM Cloud Docs / Speech to Text (“When you agree (opt in) to request logging, IBM reserves the right to store and use [voice recordings] to improve the service’s base language models”).

does not result in the unlawful disclosure of sensitive call information, or whether and how particular practices and interactions between ASR-based IP CTS providers and ASR engine providers will comply with relevant legal regimes such as the Wiretap Act.

As with quality, existing applications before the Commission fail to sufficiently address these concerns. For example, the VTCSecure public filing does not appear to specifically address confidentiality for the ASR portion of its proposed service.<sup>22</sup> And the MachineGenius public filing vaguely states that “[a]udio and transcripts of calls are not stored remotely” but notes that the service is subject to unspecified privacy policies, including of an unidentified third-party engine provider.<sup>23</sup>

Finally, we agree with Hamilton Relay that the Declaratory Ruling does not sufficiently address the interaction of ASR-based IP CTS providers with 9-1-1 to ensure their ability to safely handle emergency calls.<sup>24</sup> To forge ahead with ASR-based solutions without confidence that they will work properly in an emergency could seriously jeopardize the lives and safety of consumers with disabilities.

While we believe these concerns can be overcome with the development of a detailed record and further dialogue among stakeholders in this proceeding, the Commission risks substantial harm to the civil rights of consumers who are hard of hearing by proceeding with the deployment of ASR technologies without developing a more rigorous approach to ensuring quality and privacy. Accordingly, we urge the Commission:

- **To convert the substance of the draft item’s Declaratory Ruling on ASR into questions and migrate them to the Further Notice of Proposed Rulemaking (FNPRM);**
- **Alternatively, to leave the Declaratory Ruling intact but incorporate questions regarding ASR quality and privacy into the FNPRM and stay the consideration of ASR applications by the Bureau until an order implementing the FNPRM is issued; or**
- **At a bare minimum, to put out on public notice and solicit public comment on all IP CTS applications, specifically on quality and privacy issues, to ensure that quality and privacy issues are not overlooked when the Bureau considers ASR (and other) IP CTS applications, and insert specific language in the Declaratory Ruling making clear that the Commission will not approve ASR-based IP CTS services that do not deliver functionally**

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<sup>22</sup> See VTCSecure Application at 8 (referring only to confidentiality practices for CAs).

<sup>23</sup> MachineGenius Application at 8 & n.11.

<sup>24</sup> Hamilton Relay Ex Parte at 2.

**equivalent quality and protect the privacy and confidentiality of consumers with disabilities.**<sup>25</sup>

Relatedly, we agree with Hamilton Relay that **the Commission should migrate the draft item's Notice of Inquiry into the Further Notice of Proposed Rulemaking** to ensure that the critical development of performance goals and measures is not unnecessarily delayed, particularly if ASR-based offerings are approved in advance of the completion of those goals and measures.<sup>26</sup>

We also:

- Urged the Commission to make clear that proposed Rule 64.604(c)(13) in paragraph 44 of the draft item, which clarifies the scope of “unauthorized use” of IP CTS services, does not preclude the use of IP CTS services in emergency shelters, which is the subject of a pending recommendation before the Commission's Disability Advisory Committee;
- Urged the Commission to reconsider the draft item's approach to eligibility certifications,<sup>27</sup> which we are concerned will disenfranchise consumers from acquiring access to necessary IP CTS while adding unnecessary complexity and cost; and
- Supported the Commission's further investigation into the potentially significant cost of allowing potentially dubious intellectual property licensing fees to be billed to the fund.<sup>28</sup>

Please don't hesitate to contact me if you have any questions.

Respectfully submitted,

/s/

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<sup>25</sup> These possible approaches are similar to those outlined and supported by Hamilton Relay. *See id.* at 3.

<sup>26</sup> Hamilton Relay Ex Parte at 3.

<sup>27</sup> Draft Item at ¶¶ 115-136.

<sup>28</sup> *See* Draft Item at ¶¶ 72-74.

CC:

Nirali Patel, Office of Chairman Pai

Karen Peltz Strauss, Consumer and Governmental Affairs Bureau

Robert Aldrich, Consumer and Governmental Affairs Bureau

Michael Scott, Consumer and Governmental Affairs Bureau

David (Raster) Schmidt, Office of the Managing Director

Andrew Mulitz, Office of the Managing Director