

**Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.**

|  |   |                      |
|--|---|----------------------|
| In re                                      | ) |                      |
|  | ) |                      |
| Telecommunications Relay Services and      | ) |                      |
| Speech-to-Speech Services for Individuals  | ) | CG Docket No. 03-123 |
| With Hearing and Speech Disabilities       | ) |                      |
| Application for TRS Certification to       | ) |                      |
| Provide IP Captioned Telephone Service     | ) |                      |
|  | ) |                      |
| Misuse of Internet Protocol (IP) Captioned | ) | CG Docket 13-24      |
| Telephone Service                          | ) |                      |

**Opposition to Petition for Clarification or, in the Alternative Reconsideration of  
Sprint Corporation**

By this filing, MachineGenius, Inc. (“MachineGenius”), opposes the Petition for Clarification or Reconsideration submitted by Sprint Corporation (“Sprint”)<sup>1</sup> regarding the Declaratory Ruling in the above-captioned proceeding.<sup>2</sup> In its Petition, Sprint requests that the Commission reconsider and reevaluate its decision to declare Internet Protocol Captioned Telephone Service (“IP CTS”) that utilizes fully-automated Automated Speech Recognition (“full-ASR”) to generate captions eligible for compensation from the federal Telecommunications Relay Service (“TRS”) fund if “provided in compliance with applicable TRS mandatory minimum standards.”<sup>3</sup> For the reasons stated below, the Petition should be denied.

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<sup>1</sup> Petition for Clarification or, in the Alternative, Reconsideration of Sprint Corporation, CG Docket No. 13-24 and CG Docket No. 03-123 (Filed July 9, 2018) (“*Petition*”).

<sup>2</sup> *Misuse of Internet Protocol (IP) Captioned Telephone Service; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket Nos. 13-24 and 03-123, Report and Order, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry, FCC 18-79 (rel. June 8, 2018) (“*Declaratory Ruling*”).

<sup>3</sup> *Declaratory Ruling*, ¶48.

**I. The Petition by Sprint Does Not Fulfill the Requirements for a Grant of a Petition for Reconsideration**

Sprint cites several findings by the Commission as the basis for allowing IP CTS providers to offer service utilizing full-ASR as unclear, and seeks relief but does not provide any new facts or basis for reconsideration, despite the Commission already settling these points within the Declaratory Ruling and providing a reasonable basis for doing so.

*A. The Commission Has a Strong Basis for Finding that IP CTS which Incorporates Fully-Automated ASR Meets or Exceeds Minimum Mandatory Standards*

Contrary to the assertion in the Petition, there exists no requirement for an IP CTS provider to be “at least as robust as” current IP CTS offerings, but rather to offer functional equivalence to PSTN service. This distinction notwithstanding, fully-automated ASR-enabled IP CTS not only meets mandatory minimum standards, but also meets or exceeds the performance of current IP CTS offerings with regard to privacy, emergency communications, seamless communications, and accuracy.

For example, Sprint seeks minimum standards for IP CTS providers that utilize fully-automated ASR to provide service.<sup>4</sup> The Commission clearly states in its Declaratory Ruling that these providers will be subject to the same standards as any other IP CTS provider.<sup>5</sup> The rules regarding the standards for IP CTS service did not change as a result of the Declaratory Ruling allowing the use of ASR in the provision of IP CTS. The same standards that apply to

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<sup>4</sup> *Petition*, p. 6.

<sup>5</sup> *Declaratory Ruling*, ¶ 60.

other providers that utilize human CAs will apply to any IP CTS provider that proposes to provide service utilizing ASR exclusively.<sup>6</sup>

### 1. Privacy

Sprint's Petition claims that the Commission's finding in the Declaratory Ruling "does not adequately account for other privacy concerns, such as the need to encrypt transcription information and how providers that rely on cloud-based captioning methods will limit access to transcription data."<sup>7</sup> The role of the minimum mandatory standards is not to prescribe methods for determining compliance with the Rules; it is not clear why detailed methodologies should apply only to providers based on fully-automated ASR; current providers are not subject to such methodologies. With respect to the specific concerns cited by Sprint, encryption is easily afforded by full-ASR providers, and the ability to limit access to transcription data is afforded by all major cloud-based providers of underlying ASR technology.

### 2. Emergency Communications

Emergency Communications are supported in full-ASR IP CTS via the same methods as CA-based IP CTS (namely, routing calls to the appropriate PSAP based on location information), with the exception of the method of generating captions. As such, the current mandatory minimum standards pertaining to Emergency Communications apply equally to full-ASR IP CTS and CA-based IP CTS, with no need for additional clarification.<sup>8</sup>

### 3. Seamless Communications

The Petition makes the claim that there exist "exigencies that are more likely to impact ASR-based systems (e.g., cyber-attacks, bandwidth disruptions, platform upgrades)." Given that CA-based IP

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<sup>6</sup> *Id.* (stating that the Bureau may only grant an ASR provider's certification application if it demonstrates that its offering is at least as robust as current IP CTS offerings relating to accuracy, privacy, emergency communications, and seamless communications.)

<sup>7</sup> *Petition*, pp. 10-11.

<sup>8</sup> *Declaratory Ruling*, ¶ 60.

CTS also relies by definition on Internet-based communication, current IP CTS are no less susceptible to cyber-attack, bandwidth disruptions, or platform upgrades. In fact, standard and commonplace best-practices for achieving scalability, availability, reliability, redundancy, and failover permit full-ASR IP CTS to be more “seamless” than CA-based IP CTS, which relies upon human CA availability. The current mandatory minimums apply equally to full-ASR IP CTS and CA-based IP CTS, with no need for additional clarification.

#### 4. Accuracy

The Petition claims that the record does not support the assertion that ASR technologies can consistently match the level of accuracy achieved by an IP CTS CA.<sup>9</sup> This is false, and the record amply demonstrates that fully-automated ASR can match or exceed the accuracy of human CAs – which already rely on ASR to generate captions.<sup>10</sup>

The Petition cites a reliance by the Commission on a 2016 MITRE study, and concludes that the study demonstrates that “speech-to-text engines often have extremely poor accuracy and are not usable”. In fact, the MITRE study found that by appropriate selection of ASR engines, ASR performed equal to or better than human CAs.<sup>11</sup> For the Commission’s purposes, it is not the case that every ASR engine in the world needs to have acceptable levels of accuracy, only that there exist those that do – which is what MITRE concluded. Furthermore, ASR accuracy has improved dramatically in the two years since the MITRE study, and the claim that “ASR appears to be approaching – if not exceeding – the levels of accuracy achieved by CA-assisted IP CTS” is well-motivated by published results from major ASR services which have been entered into the record and cited by the Commission.<sup>12</sup>

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<sup>9</sup> *Petition*, p. 8.

<sup>10</sup> *Declaratory Ruling*, ¶ 51.

<sup>11</sup> *Id.*

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

*B. Establishment of a Separate Process and Standards for the Certification of ASR-Based IP CTS Providers Places Undue Burdens on New Entrants*

Sprint also seeks an additional step of establishment of a comment cycle for any ASR-based IP CTS provider prior to certification.<sup>13</sup> Affirmatively requiring public comment on all ASR-based IP CTS provider applications would unnecessarily delay deployment of new technology, and, as a result, place a further burden on the TRS fund.<sup>14</sup> The Commission, rightfully, has delegated to the Bureau the review of each application on a case-by-case basis to ensure that any provider, regardless of the technologies utilized, can meet the minimum standards of service.<sup>15</sup> A separate process exclusively for ASR-based providers will place undue burdens upon new entrants into this space and thus discourage new providers from bringing innovative solutions to bear which benefit hard-of-hearing consumers. This, in turn, will reduce the field of competitors providing IP CTS, and the TRS fund will not fully realize the benefit of downward pressure on costs that competition and innovation brings, in addition to the savings realized by moving traffic to full-ASR-based IP CTS providers.<sup>16</sup>

Indeed, holding full-ASR IP CTS providers to a different standard, or to a different certification process, would be prejudicial and run counter to a technology-neutral review.

*C. IP CTS Incorporating Fully-Automated ASR is More Efficient and Cost- Effective than CA-based IP CTS*

The Petition makes the claim that “if it is less expensive to provide ASR than it is to provide today’s IP CTS technologies, a decision to compensate ASR providers at the current IP

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<sup>13</sup> *Petition*, p. 4.

<sup>14</sup> *See Declaratory Ruling*, ¶ 63, n. 215. The Commission leaves it in the Bureau’s discretion in the establishment of a comment cycle on any IP CTS certification applications is necessary.

<sup>15</sup> *Declaratory Ruling*, ¶¶ 62-63.

<sup>16</sup> *Declaratory Ruling*, ¶ 50, n.166.

CTS rate, even on an interim basis, would plainly be inefficient and wasteful.”<sup>17</sup> If we take this to be true, then the converse is also true: If full-ASR can deliver IP CTS at lower cost than current IP CTS technologies, then current IP CTS technologies utilizing CAs are inefficient and wasteful. MachineGenius agrees with this proposition. The very purpose of introducing full-ASR to IP CTS is to increase efficiency and lower compensation rates, and this is in line with the Commission’s goal of a sustainable TRS fund and IP CTS service.

## **II. The Commission Properly Followed Rulemaking Procedures in the Declaratory Ruling**

In its Declaratory Ruling, the Commission clarified its position on the current rules in the application of ASR to the provision of IP CTS, rather than breaking new ground and substantively altering its current rules.

Sprint claims in its Petition that a rule is substantially changed, and therefore that the APA requires parties in interest be given an opportunity to comment prior to the implementation of the change.<sup>18</sup> Sprint contends that because the definition of “iTRS” includes the term “Communication Assistant” (“CA”), any IP CTS service utilizing full-ASR cannot not become a certified provider, absent the amending of the current rules. However, as the Commission clearly considered the issue and noted in its Declaratory Ruling, “[T]he definition of IP CTS in our rules does not specify how captions must be generated, including whether they should be generated through automation or human assisted methods.”<sup>19</sup> Further, even if the definition of iTRS

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<sup>17</sup> *Petition*, p. 13.

<sup>18</sup> 47 C.F.R. § 1.411 *et seq.*

<sup>19</sup> *Declaratory Ruling*, ¶ 55, *citing* 47 C.F.R. § 64.601(a)(17) (defining IP CTS as “[a] telecommunications relay service that permits an individual who can speak but who has difficulty hearing over the telephone to use a telephone and an Internet Protocol-enabled device via the Internet to simultaneously listen to the other party and read captions of what the other party is saying”).

somehow pertains, the Commission correctly finds that the operative part of the definition that iTRS is Internet-based, and that the mention of CAs is incidental.

As the Commission also noted, a majority of IP CTS providers currently use ASR in conjunction with human CAs.<sup>20</sup> The only differentiating process is that fully-automated ASR does not require “re-voicing” before processing by an ASR engine. From the perspective of the Rules, this is a transparent change and requires only a clarifying interpretation of the current rules, and not a change to them.<sup>21</sup>

By the Declaratory Ruling, the Commission demonstrated its authority to clarify current rules to include full-ASR-based IP CTS providers as eligible to provide these services and receive compensation from the federal TRS fund.<sup>22</sup>

### **III. Conclusion**

MachineGenius supports the Commission’s efforts to provide consumers of IP CTS with access to the latest technology, and to reduce the burden on, and increase the efficient use of, the federal TRS fund. The Petition raises no new issues not already fully addressed by the Commission in making its Declaratory Ruling. For the foregoing reasons, the Commission should deny the Petition.

Respectfully Submitted,

**MACHINEGENIUS, INC.**

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<sup>20</sup> *Declaratory Ruling*, ¶ 49 and n. 162.

<sup>21</sup> 47 C.F.R. § 1.412(b)(3)

<sup>22</sup> *Declaratory Ruling*, ¶¶53-55.

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Date: September 7, 2018

### **CERTIFICATE OF SERVICE**

I, Erik Strand, hereby certify that on the 7<sup>th</sup> day of September, 2018, I have caused a copy of the Opposition to Petition for Clarification or, in the Alternative Reconsideration of Sprint Corporation to be served via electronic mail upon:

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/s/ Erik Strand

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