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

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| In the Matter of | ) | |
| | ) | |
| Telecommunications Relay Services And Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities | ) | CC Docket No. 98-67 |

## COMMENTS OF SPRINT CORPORATION

Sprint Corporation ("Sprint") hereby respectfully submits its comments on the *Further Notice of Proposed Rulemaking* ("*Further Notice*") issued with the Commission's *Report and Order*, FCC-00-56, released March 6, 2000, in the above-referenced docket.

## I. INTRODUCTION

The *Further Notice* is part of the Commission's "ongoing efforts to evaluate technology and the needs of the disability community" and seeks to examine "emerging and existing technologies...for inclusion in relay service." *Id.* at ¶125. Specifically, the Commission requests comments on (1) whether a separate nationwide access number for speech-to-speech ("STS") relay service should be required (¶126); (2) whether relay service providers should have access to Signaling System 7 (SS7) technology, (¶¶127-133); (3) whether a nationwide advertising campaign funded by the interstate TRS fund to make the general public more aware of TRS service should be mandated (¶¶134-136); and (4) whether various technologies and protocols may be useful in the provision of TRS (¶¶137-146). Sprint discusses these issues *seriatim*.

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## II. USE OF A STANDARD TOLL-FREE ACCESS NUMBER NATIONWIDE FOR STS IS READILY ACHIEVABLE.

Sprint supports the use of a separate national toll free number for access to STS relay service. Implementation of a single nationwide number is technically feasible since it primarily involves the loading of the proper routing instructions into the SMS/800 database so that a person in a particular State making an STS relay call will be directed to the relay provider for that State. Such relay provider upon receiving the STS call could direct it to its regional or national center providing STS relay service.[1] Moreover, a requirement to use a single toll free number is justified by the fact that, as the Commission points out, "many people with speech disabilities have memory problem, and consequently, find it easier to say one number over again than to say different numbers." *Further Notice* at ¶126. In this regard, the Commission will need to ensure that the toll-free number selected be easy to remember and contain as many repeat digits as possible. Failure to adopt an appropriate toll free number will likely reduce the use of STS since many of those with speech impairments are unlikely to avail themselves of STS if the number is difficult to remember.[2]

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[1] Given that the volume of STS relay calls is likely to be small, at least until users become more familiar and comfortable with STS, the Commission has encouraged the offering of STS relay services through regional or national centers. *Report and Order* at ¶20.

[2] The Commission also appears to suggest that, in lieu of an single toll free number for STS, the 711 number that the Commission has set aside for TRS for use on a nationwide basis be used by those seeking access to STS relay. *Further Notice* at ¶126. Such dual use of 711 is simply not possible. Sprint is unaware of any technology that would enable a relay provider to automatically distinguish a STS caller from a conventional TRS caller so that the STS call could be routed to a properly trained communications assistant if 711 was used by both types of callers to access the relay center.

## III. SS7 TECHNOLOGY SHOULD NOT AND NEED NOT BE MADE AVAILABLE FOR USE BY NON-COMMON CARRIER TRS RELAY PROVIDERS.

As defined by the Commission's Rules, SS7 is a "carrier-to-carrier out-of-band signaling network used for call routing, billing and management." 47 CFR §64.1600(f). Despite such definition, the Commission proposes that TRS providers, which the Commission has found are not engaged in the provision of common carrier services subject to Title II of the Act and therefore are not carriers, be given access to such signaling network. The Commission's stated reason for its proposal here is that relay providers "may be able to provide Caller ID, improved access to 911, and eliminate the need to collect some of the information collected manually today through caller profiles." *Further Notice* at ¶127. Sprint respectfully recommends that the Commission's proposal here not be adopted.

Initially, as the *Further Notice* itself suggests, it is highly questionable whether the Commission has the authority under Title II of the Act to require carriers to give non-common carriers access to a inter-carrier signaling system. *See id.* asking for "comment on whether the Commission has jurisdiction to allow TRS centers access to SS7 technology." The Commission does not cite any Title II provision that gives it such authority and there does not appear to be any. Access to an inter-carrier signaling system, which is used only to facilitate the "transmission of information of the user's choosing" and does not involve the actual transmission itself, is not a "telecommunications service" as that term is defined under the Act, *see* 47 U.S.C. §153(43) and (46). Thus, Sections 201(a), 225 and 255 of the Act, 47 U.S.C. §§§201(a), 225, and 255, do not give the Commission the authority to order the furnishing of SS7 technology to non-common carriers. Those provisions impose duties upon common carrier only with respect to their telecommunications service offerings. It is true that the Commission has required that incumbent LECs provide signaling networks as an unbundled network element pursuant to

Section 251 of the Act, 47 U.S.C. §251. *See In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking,* FCC 99-238 (released November 5, 1999) at ¶383. But the responsibility of the LECs in this regard extends only to "requesting carriers." *See id.* ("We therefore require incumbent LECs to provide requesting carriers with unbundled access to their signaling networks.").

Even if the Commission had the statutory authority to require the provision of SS7 technology to non-common carriers -- and as demonstrated, it does not -- it still should not adopt such requirement. The costs of requiring relay providers to modify their systems so as to be able to utilize SS7 technology would be substantial running into several millions -- if not hundreds of millions -- of dollars for the industry as a whole. The costs that Sprint alone would to incur in order to modify its relay systems to provision SS7 technology could run as high as $25 million, if not higher. Sprint would incur such costs because, at a minimum, it would be required to install new switching matrixes at all of its TRS host sites; provision SS7 circuits, SS7 test equipment and signaling links; and alter existing call control equipment (if possible) in order to accommodate the data format of SS7 signaling. And, because Sprint would necessarily have to recover these increased costs, it is likely that the furnishing of TRS service would become more expensive not only for Sprint's contractors -- the individual States -- but perhaps from the TRS user community itself.

Of course, if such costs were outweighed by the benefits that would be realized, the requirement would be in the public interest. This is simply not the case here. The benefits to the using public -- to the extent that any benefits are realized -- from the deployment of SS7 technology by relay providers would be limited.

One of the benefits envisioned by the Commission from the deployment of SS7 technology by relay providers is the elimination of the need to collect most customer profile information manually. According to the Commission, "TRS providers' current practice of building databases manually by interviewing each TRS user does not appear to be the most efficient manner of providing TRS." *Further Notice* at ¶128. But, relay providers would still have to conduct such interviews even if they had access to SS7 technology. They would need to use the interview to gather such basic information as the identity of the user's presubscribed carrier as well as the user's particular calling preferences.[3] In fact, the relay provider would have to interview the TRS user to gather most, if not all, of the customer profile information since Sprint is unaware of any information currently carried by SS7 networks that would be useful in establishing a customer profile. And, other basic information such as automatic number identification, dialed number identification and originating line information are furnished electronically by Inband Feature Group D signaling which is the primary method being used by relay providers today.

The Commission also apparently believes that use of SS7 technology by relay providers would improve access to 911, *Further Notice* at ¶127, although it does request comment on whether such technology would "allow relay providers to transfer emergency calls with the originating number to 911 operators." *Id.* at ¶132. Any improvement in access to 911 service is in large measure dependant upon the architecture of the various 911 systems throughout the country. Although SS7 technology may enable the relay provider to transfer certain necessary

[3] Presubscribed carrier information would not be furnished to the relay provider through the SS7 network. The SS7 signal will contain the identity of owner of the switch to which the call is being directed, *e.g.*, Sprint Relay; it will not contain the caller's presubscribed carrier. Further, as the Commission recognizes, a user's calling preferences are not provided by SS7 technology. *Further Notice* at ¶128.

information to the network, it does not necessarily mean that the 911 system to which the information is being directed can receive the information in any useful or usable format. In short, SS7 technology will not necessarily improve access to 911 emergency services by TRS users.[4]

The last benefit cited by the Commission for requiring carriers to give relay providers access to their SS7 networks is that it would provide TRS users with Caller ID. *Further Notice* at ¶129. Sprint agrees that SS7 signaling would give relay providers the necessary information so that TRS users would be able to avail themselves of Caller ID services. But Sprint believes that other technologies are currently being developed that would also allow TRS providers to offer Caller ID services, perhaps in a more efficient manner. In Sprint's view, the Commission should not mandate that a particular technology be used to achieve a particular goal. Indeed, the Commission itself has found that "[t]echnological neutrality will allow the marketplace to direct the advancement of technology and all citizens to benefit from such development" and that "by following the principle of technological neutrality, [the Commission] will avoid limiting providers...to modes of delivering ...service[s] that are obsolete or not cost effective." *Federal-State Joint Board on Universal Service*, 12 FCC Rcd 8776, 8802 (¶49) (1997). *See also Further Notice* at ¶137 citing Section 225(d)(2) of the Act, 47 U.S.C. §225(d)(2) (requiring the Commission to "ensure that regulations prescribed to implement this [Section 225] encourage, consistent with section 7(a) of this Act, the use of existing technologies and do not discourage or

[4] The Commission asks for comment on "the impact of the Reveal and Anonymous Call Rejection features on TTY-to-TTY calls." According the Commission, it has received "information that these features block TTY calls...even where the calling party's line does not block Caller ID information." *Further Notice* at ¶132. The Commission does not disclose the exact information or its source so that commenting parties can determine whether the information has received is accurate. As far as Sprint is aware, these features work the same regardless of whether the call is a voice to voice call, a TTY-to-TTY call, or a TTY to voice call.

impair the development of improved technology"). Thus, if the availability of Caller ID services to TRS users is considered desirable, the Commission should simply mandate that such services be provided and leave it the TRS providers themselves to implement the technology that enables them to provide Caller ID services in the most efficacious manner.

## IV. SPRINT SUPPORTS AN NATIONAL OUTREACH CAMPAIGN SUPPORTED BY THE INTERSTATE TRS FUND.

The State of Maryland has, in the recent past, conducted a media-based campaign explaining TRS to the residents of the State and instructing them on how to avail themselves of the services provided through Maryland Relay. As the Commission notes, the campaign was highly successful. In Maryland, "public awareness [of TRS] is at an all-time high, telephone inquiries to the State's Maryland Relay customer service department for information regarding relay have risen dramatically, and call volumes to the relay center have increased." *Further Notice* at ¶134. The Commission seeks to duplicate Maryland's success throughout the country by requiring "a nationwide awareness campaign" designed to reach not only current and potential TRS users but also the general public. *Id.* Sprint agrees that such outreach efforts are desirable and necessary if the Commission wants to ensure that all potential users of relay services are to be informed of the availability of TRS services. Sprint also agrees that the campaign should be supported by the interstate TRS fund. Leaving the funding to the individual States may well limit the effectiveness of such a nationwide effort.

## V. ENHANCED PROTOCOLS ARE STILL IN DEVELOPMENT AND MAY NOT PROVE EFFICACIOUS IN THE PROVISION OF TRS SERVICES.

In the *Further Notice*, the Commission has requested that the parties provide information on what the Commission terms are the enhanced protocols that are being developed in the market today. The Commission does not propose to mandate the use of any of these protocols; rather,

much like it does in a Notice of Inquiry, it is seeking to gather data to perhaps be used as the basis for proposals in future rulemakings.

The protocols specifically designated by the Commission for additional comment are the V.18 and the T.140 standards. Sprint provides the following information with respect to such protocols.

Sprint understands that the V.18 protocol was originally designed to be a blueprint for ASCII operations in TTYs so as to promote ASCII use by TTYs. This original purpose was abandoned due to lack of progress and acceptance in the market. However, it was thought that the V.18 protocol could be used standardize TTY operation in Europe.[5] The theory here was manufacturers would incorporate the V.18 protocol in their ASCII modems so that such modems could determine whether they were on-line with or had connected to a TTY. Such modems could be used to connect with TTYs around the world and to migrate TTYs to a more standard ASCII data transmission method.

The V.18 protocol is, however, still in development and is simply not capable of being widely deployed at this point in time. In fact, only one modem manufacturer -- located in the United Kingdom -- has developed a modem with V.18 capability and such modem is still being tested and is still subject to revision. There are simply no products on the market today that employ the V.18 protocol. And if there are no such products, there is no reason for relay

[5] Currently there are at least 5 different TTY protocols in use in Europe. In contrast, the North American TTY industry has been using a *de facto* standard for many years and TTYs manufactured in North America readily communicate with one another despite being made by different manufacturers. The Commission mentions that this de facto standard "is currently undergoing balloting within the TIA TR-30 committee. However, the purpose of this ballot is not to formally adopt the North American standard; rather it is to provide wireless service providers with the standard so that they meet their FCC mandate to successfully handle TTY calls.

providers to develop technology that would be compatible with such technology. Moreover, Sprint is unaware of any benefits that would be realized by North American relay users from the deployment of V.18 protocol and technology based upon such protocol. On the other hand, there may be significant detriments from the use of V.18. For example a V.18 modem may lead to delays in time necessary to connect TTYs especially if the V.18 modem cannot readily determine the correct call type.[6]

As stated the Commission also asks for information on the digital T.140 protocol. This protocol is intended to be a standard for permitting the use of chat mode between devices of different types. It addresses character sets and formats, multipoint connections, and how sessions are started, stopped, and managed. However, there are no T.140 devices in use in the marketplace at this time. Nevertheless Sprint is monitoring the availability and rate of adoption by end users of digital terminals and services and if demand so dictates intends to offer services made possible by such devices.

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May 5, 2000

[6] Given the number of different TTY devices and ASCII protocols, such delay may be as long as 30 seconds and perhaps more.

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing **COMMENTS OF SPRINT CORPORATION** was sent by hand or by United States first-class mail, postage prepaid on this the 5th day of May, 2000.

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