emergency preparedness functions.[143]

41. The TSP program is a voluntary program. As a general matter, "service users" – *i.e.*, individuals or organizations supported by particular telecommunications services or lines –may make a request that particular telecommunications services upon which they rely receive an NSEP priority assignment.[144] As we have noted, in so doing they must show that the telecommunications services support an NSEP function. These requests are directed to the Office of Priority Telecommunications (OPT) of the Department of Homeland Security's National Communications System (NCS). Non-federal TSP users (e.g., state, local, foreign governments) require a federal sponsor.[145] The FCC functions as a sponsoring federal organization.[146] The FCC also provides regulatory oversight of implementation of the TSP system.

42. In the *Second Improved TRS Order & NPRM*, we noted that the NSEP priorities "do not presently address the provision of TRS."[147] We also noted that, in most cases, TRS is the only means of communication between persons with hearing and speech disabilities and emergency services and other persons.[148] The Commission therefore tentatively concluded that in the event of a disaster it is appropriate that TRS services be made available on the same basis that telephone service for the general public is made available.[149] We also sought comment on whether our rules should be amended to provide for the continuity of operations of TRS facilities in the event of an emergency.[150] We reasoned that if operation of the LEC and the TRS facilities were compromised during an emergency, both facilities would be reinstated simultaneously.[151]

43. Although commenters generally support the notion that TRS facilities should have the same level of service restoration priority in the event of a disaster as assigned to LEC facilities,[152] several

[143] *See generally* Telecommunications Services Priority Fact Sheet at http://www.fcc.gov/hspc/factsheets/telecom-priority.pdf.

[144] 47 C.F.R. § 64, Appendix A (Telecommunications Service Priority (TSP) System for National Security Emergency Preparedness (NSEP)) at 6.b.(2).

[145] *See generally* Telecommunications Services Priority Fact Sheet at http://www.fcc.gov/hspc/factsheets/telecom-priority.pdf. Sponsoring federal organizations decide whether to sponsor foreign, state, and local governments and private industry (including telecommunications service vendors) requests for priority actions. Federal organizations forward sponsored requests with recommendations for disposition to the NCS, basing their recommendations on the NSEP TSP system categories described in the TSP regulations. 47 C.F.R. § 64, Appendix A (Telecommunications Service Priority (TSP) System for National Security Emergency Preparedness (NSEP)) at 6.c.

[146] *Id.* at 6.a.

[147] *Second Improved TRS Order & NPRM* at ¶ 104.

[148] *Id.* We also noted that TRS providers are already required to ensure that TRS facilities have redundancy features, including uninterruptible power sources for emergency use, that are functionally equivalent to those in the central switching office in the public switched telephone network (PSTN), as described in 47 C.F.R. § 64.604(b)(4). *Id.*

[149] *Id.* at ¶ 105.

[150] *Id.*

[151] *Id.* We also sought comment on other means by which we might ensure equal treatment of LEC facilities and TRS facilities in this context. Lastly, we sought comment on whether TRS providers and state TRS programs must provide an operational plan, beyond that already required in our rules, to ensure the survivability and continued operation of TRS facilities in case of an emergency. *Id.*

[152] *See, e.g.*, AT&T Comments at 2-3; California Public Service Commission (CA PUC) Comments at 4; Hamilton Comments at 2; Hands On Comments at 2-3; Iowa Utilities Board (Iowa UB) Comments at 2; MCI (WorldCom) Reply Comments at 2; Maryland Department of Budget and Management (MD DBM) Comments at 2; Sprint Comments at 1-2; TDI Coalition Comments at 5-7. A few commenters also suggest that the costs associated with

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commenters suggest that the NPRM was not entirely accurate in describing how the NSEP system works.[153] Verizon notes, for example, that basic telecommunications services to the general public are not addressed by the NSEP priority system.[154] Verizon also states that telecommunications carriers are not included in the NSEP because they are permitted to make repairs to their own networks before restoring service to those on the NSEP list. If telecommunications carriers did not make such repairs, none of the priority service repairs would work.[155] Verizon suggests the Commission engage the expertise of the Commission's Network Reliability Interoperability Council or the TSP Oversight Committee before adopting a new set of rules that might be confusing or conflict with other national security priorities.[156] More generally, several commenters caution that our proposal does not give clear enough guidance to carriers, and may have the unintended effect of slowing down a carrier's ability to respond to other priorities that are important for national security.[157]

44. Only a few commenters addressed the questions raised in the *NPRM* concerning whether TRS providers and state TRS programs should be required to provide an operational plan, beyond that already required in our rules, to ensure the survivability and continued operation of TRS facilities in case of an emergency.[158] The MD DBM urges the Commission to require all TRS providers to establish a formal agreement to support each other during emergency situations.[159] The TDI Coalition suggests the Commission require TRS providers and state TRS programs to develop, and provide to the Commission, operational plans to address how they will respond in the event of an emergency affecting TRS service.[160]

45. *Discussion.* We continue to believe that all appropriate steps should be taken to ensure that service to TRS facilities is made available in time of emergency, and that restoration of service to TRS facilities should occur, to the extent feasible, in tandem with restoration of dial tone service to the

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the Commission's sponsorship of TRS facilities be recovered from the Interstate TRS Fund. *See* MCI (WorldCom) Reply Comments at 2; Sprint Comments at 2.

[153] For example, Verizon questions whether the proposal means that TRS facilities will have the same priority as LEC facilities in the sense that both will have a super priority over all five priority levels, and if TRS service is considered part of the LEC network that is able to supersede the five NSEP levels, does that mean that telephone companies would be required to give priority to restoring service to TRS facilities *before* restoring such service to the President of the United States, the Department of Defense, and 911 providers. Verizon Comments at 8.

[154] Verizon Comments at 6. Verizon notes that basic telecommunication services to the general public are prioritized below the top 5 levels, so they are addressed only after all other priority services have been dealt with. *See also* MCI (WorldCom) Comments at 2; SBC Comments at 2.

[155] Verizon Comments at 7. Verizon notes that telecommunications carriers must get their own systems up and running before they can begin to restore service to the five priority levels established by the NSEP priority system. *See also* SBC Reply Comments at 2 (the 5-priority system does *not* address basic telecommunications service to the general public and a more extensive record should be developed prior to assigning NSEP priority status to TRS to determine the impact such assignment would have on existing NSEP priorities).

[156] Verizon Comments at 3.

[157] *See, e.g.,* Verizon Comments at 6; Verizon Reply Comments at 2-3; SBC Reply Comments at 2. *But see, e.g.,* AT&T Comments at 2-3; MCI (WorldCom) Comments at 1-3; TDI Coalition Comments at 5-7.

[158] *See* MD DBM Comments at 2; TDI Coalition Comments at 6-7.

[159] MD DBM Comments at 2.

[160] TDI Coalition Comments at 6-7. According to TDI, such a report should include, *inter alia,* identification of regional facilities to take over handling incoming TRS calls for TRS facilities located in close proximity to an emergency and FCC encouragement to state TRS program administrators to work with their respective Homeland Security or Emergency Preparedness agencies to designate their state's TRS facilities for priority restoration in the event of state emergencies.

general public, thus ensuring that individuals with hearing or speech disabilities have service available on the same basis as individuals without such disabilities. We do not, however, adopt our tentative conclusion in the NPRM to assign at least the same NSEP priority to TRS that applies to telecommunications carriers or other telecommunications services available to the general public. As noted by several commenters, carriers are permitted to make repairs to their own networks before restoring service to those on the NSEP list.[161] In addition, telecommunication services for the general public are *not* included in the priority system *per se*, but are to be restored only after the designated priorities – such as restoring service to national security leaders, emergency service providers, and public health officials – have been addressed.[162] Since there is no priority assignment for the general public, according TRS providers the same priority as the general public would do nothing to ensure rapid recovery of TRS service.[163]

46. The more relevant question is whether TRS facilities perform a function that falls within one of the NSEP categories so that certain telecommunications services or lines that support this function would be eligible for priority restoration. If the answer to that question is yes, the next step is to identify the particular telecommunications services and lines that should be restored. We believe, for example, that a TRS facility might assert that it falls within the "Public health, safety, and maintenance of law and order" category, and that therefore at least some of the circuits that connect a TRS facility to the switch might be given a priority designation.[164] The particular circuits or lines that might be covered depend in large part, of course, on how calls to the particular TRS facility (e.g., 711 calls) reach the facility.

47. Because the TSP program is voluntary, we are not mandating that TRS facilities apply for priority status, but we strongly encourage them to enroll all qualifying services in the TSP program. In this regard, they will have to work with their telecommunications carrier to identify the particular circuits or lines that link the facility to the switch, or other circuits or lines upon which the facility relies to handle TRS calls. When asked to do so, we will sponsor their applications to the NCS, as we have with PSAPs.[165]

48. Finally, we decline at this time to require TRS providers and states to provide an operational plan, beyond that already required in our rules, to ensure the survivability and continued operation of TRS facilities. However, we encourage the states and TRS providers to work together to ensure that TRS services continue to be available in the case of an emergency, whether this means allowing TRS facilities to remain open when a state of emergency is declared or allowing TRS employees to travel the roads when a weather state of emergency has been declared. We will revisit this issue in the future as necessary.

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[161] *See, e.g.*, MCI (WorldCom) Comments at 2-3; SBC Comments at 2; Verizon Comments at 3.

[162] *See, e.g.*, MCI (WorldCom) Comments at 1-3; Verizon Comments at 3.

[163] To the extent that the NPRM suggested that LECs and the general public enjoy a priority in the TSP system, we clarify that NSEP TSP priority does not typically apply to the local exchange carriers (LECs) or other common carriers or to the general public.

[164] We note that the "Public health, safety, and maintenance of law and order" category states that it covers "the minimum number of telecommunications services necessary" to support this function. Therefore, it may be that not all of the circuits connecting the TRS facility to the switch would be entitled to priority restoration.

[165] *See* http://www.fcc.gov/hspc/emergencytelecom.html. As note above, several commenters suggest that the Interstate TRS Fund pay the costs associated with TRS facilities obtaining TSP assignment (there is a cost, *e.g.*, for enrolling each line in the program). We agree that such costs are a "reasonable cost" of providing TRS that may be submitted to the TRS fund administrator and included in the determination of the appropriate provider compensation rates. We note, for example, that section 64.604(b)(4) of our rules requires TRS facilities to take certain steps to be able to continue to operate in the event of an emergency.

2. Mandatory Minimum Standards (Operational Standards)

a. Security of IP Relay Calls

49. *Background.* In the *Second Improved TRS Order & NPRM*, the Commission sought comment on whether additional requirements might be necessary to ensure the security of IP Relay calls.[166] We noted that IP Relay calls involve information packets that are sent via the Internet, and that the Internet does not have the same privacy protections as does traditional TRS over the PSTN. We therefore sought comment on whether IP Relay calls should have a level of security using encryption that is similar to that used in commercial transactions over the Internet. We also sought comment on whether other security measures exist or are expected that could be used by IP Relay providers to ensure the security of IP Relay transmissions.[167]

50. Commenters addressing the issue of security of IP Relay calls generally agree that IP Relay users should be guaranteed the same standards of security and confidentiality that apply to traditional TRS,[168] and assert that reliance on encryption to ensure the confidentiality of IP Relay calls is superior to other security measures available with current technology.[169] A number of commenters also support security for Internet-based TRS transmissions that would be comparable to that used in protecting Internet commercial transactions.[170] Other commenters, however, assert that a non-relay user of the Internet for communications such as instant messaging or email is not guaranteed encryption, and therefore it should not be mandated for IP Relay.[171] The CA PUC states, for example, that the Commission may want to consider IP Relay to be functionally equivalent to other means of public Internet communication, not to commercial transactions, and cautions that, in fact, mandating certain security levels over the Internet may potentially dampen the development or application of new technologies for Internet access to relay.[172] The MO PSC suggests that if a relay user's communication contains highly sensitive information, the user can make a traditional land line text telephone call, and forego IP Relay for that particular call.[173] MCI (WorldCom) does not support measures such as registration, sign-ins, or passwords as a means to provide security for TRS calls.[174] MCI (WorldCom) asserts that these steps would do nothing to increase confidentiality and that TRS users have consistently stated that requiring registration would violate the notion of functional equivalency.[175] Several commenters also urge the Commission to not require multiple methods to ensure confidentiality, *i.e.* encryption *and* registration, sign-ins or passwords, because imposing such requirements would lead to

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[166] *Second Improved TRS Order & NPRM* at ¶¶ 106-107.

[167] *Id.*

[168] *See, e.g.,* CA PUC Comments at 5.

[169] *See, e.g.,* AT&T Comments at 4; CA PUC Comments at 5; MCI Comments at 8; Sprint Comments at 2. MCI (WorldCom) and Sprint note that their Internet-based TRS (*i.e.,* IP Relay and VRS) are encrypted with secure socket layer (SSL) security up to 128 bits, depending on the capability of the end-user's web-browser

[170] *See, e.g.,* MD DBM Comments at 3-4; MO PSC Comments at 2; TDI Coalition Comments at 7, Reply Comments at 3; *see also* CA PUC Comments at 5-6; MCI (WorldCom) Reply Comments at 3 (not opposed to the Commission mandating a minimum level of transmission security equal to the level utilized in commercial Internet transactions).

[171] Iowa UB Comments at 2; CA PUC Comments at 5.

[172] CA PUC Comments at 5-6.

[173] MO PSC Comments at 2.

[174] MCI (WorldCom) Comments at 4.

[175] MCI (WorldCom) Comments at 4.

delays in handling IP Relay calls.[176]

51. *Discussion.* We believe that providers of IP Relay calls should adopt measures to ensure the confidentiality of those communications. We will not require, however, that providers adopt any particular technology in this regard. We will allow TRS providers to determine for themselves the level of security they will offer consumers, and the means by which they will protect the privacy of the Internet-based TRS callers and their personal identification information, so that no aspect of a relayed conversation is retrievable in any form. Because consumers may choose among several IP Relay providers, we are confident that consumers will factor their desire for security into their choice of provider. We will, of course, revisit this issue if it appears that voluntary efforts by the providers are not sufficiently ensuring the security of IP Relay calls.

b. Emergency Call Handling over Wireless Networks

52. *Background.* In the *Second Improved TRS Order & NPRM*, we noted that dialing 911 is the most familiar and effective way of reaching help in an emergency, and that PSAPs are required to be able to receive direct calls from persons who use a TTY.[177] We also noted that calling 911 via a TTY is the preferred method for reaching assistance. Nevertheless, persons with disabilities may also call a PSAP by dialing 711 (or another direct access number) to reach a TRS facility and CA, who in turn can call the PSAP. With respect to *wireline* calls, we concluded in the *Second Improved TRS Order & NPRM* that emergency calls made through TRS must be routed to the "appropriate" PSAP, not necessarily the "nearest" PSAP, based on the calling party's telephone number and its caller location information.[178] With respect to *wireless* emergency calls made via a TRS facility, however, we noted that additional challenges remain with respect to determining the appropriate PSAP because there is no correlation between a wireless telephone number and the location of the person making the call that the TRS facility can use to determine the appropriate PSAP to call.[179] We therefore noted that in the wireless context, in order to route an emergency call to the appropriate PSAP, the TRS provider must have an alternative way to identify the location of the caller and the telephone number for the appropriate PSAP for that location. We therefore sought comment on how TRS facilities might determine the appropriate PSAP to call when receiving an emergency wireless 711 call.[180] We also sought comment on whether wireless carriers have the capability and should be required to transmit Phase I or Phase II E911 information to TRS facilities.[181]

53. Some commenters urge us not to adopt a requirement that TRS facilities route wireless emergency calls made to the facility with a TTY device to an appropriate PSAP based on the location of the calling party because PSAPs are already required to be able to receive direct calls from TTYs pursuant to the ADA.[182] Commenters also assert that such a mandate would raise serious implementation

[176] *See, e.g.*, AT&T Comments at 4; Sprint Comments at 2.

[177] *Second Improved TRS Order & NPRM* at ¶ 37.

[178] We clarify below in the *Order on Reconsideration* what we meant by the "appropriate" PSAP in the wireline context.

[179] *Second Improved TRS Order & NPRM* at ¶¶ 43-45.

[180] *Id.* at ¶¶ 108-109.

[181] Phase I Enhanced 911 (E911) calls automatically report the telephone number and the location of the antenna that received the wireless call. Phase II requires wireless carriers to provide for more precise location information (*e.g.*, within 50-300 meters). *See, e.g., Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers,* Order to Stay, CC Docket No. 94-102, FCC 02-210, 17 FCC Rcd 14841 (July 26, 2002).

[182] *See, e.g.*, AT&T Comments at 6; AT&T Wireless Comments at 2-5; SBC Reply Comments at 3-4; Sprint Comments at 3-7; T-Mobile Reply Comments at 2-4. *See also* T-Mobile Reply Comments at 4, n.15; DOJ, Access

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difficulties for both wireless carriers and TRS providers.[183] TRS providers also generally oppose such a requirement.[184] T-Mobile also emphasizes that the use of TRS facilities to answer and route emergency calls is not only at odds with the "direct access" requirement, but also makes such calls more time-consuming than direct TTY-911 calls and therefore potentially less effective.[185] The TDI Coalition, however, asserts that functional equivalency requires that an emergency call from a wireless phone be treated in the same manner regardless of whether the call goes to the PSAP through a TRS facility via 711 or directly via 911.[186]

54. *Discussion.* We find that it is premature to implement guidelines for TRS facilities routing wireless emergency TRS calls. We will defer further consideration of how TRS facilities should respond to such calls pending further implementation of the E911 requirements. At the same time, we will continue to monitor the handling of emergency calls via wireless networks by persons with hearing and speech disabilities, and if we determine that these calls are not handled in an efficient manner or in compliance with our regulations for E911 over wireless networks, we will revisit this issue. We also note that the record demonstrates that innovative methods have been developed that allow routing of wireless emergency calls through TRS facilities to an appropriate PSAP.[187] SBC, for example, states if the wireless carrier can provide E911 Phase I or Phase II data, at least one of SBC's TRS facilities can receive this information, even though SBC does not have the capability to then route the 711 wireless call along with the Phase I or Phase II E911 data received to an appropriate PSAP.[188] This suggests that, under certain circumstances, it is technologically feasible to receive some emergency information and to route emergency calls to an appropriate PSAP. Finally, we continue to advise TRS users to call a PSAP directly via 911, rather than through a TRS facility, until such time as it is technologically feasible for TRS facilities to direct wireless emergency calls to an appropriate PSAP.[189]

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for 9-1-1, Section I.B. (Telephone relay services are not as effective for emergencies, because they are far more time-consuming than calls between two TTYs).

[183] The record demonstrates that the receipt of Phase I/Phase II location information is a condition precedent to any requirement that TRS facilities be capable of routing wireless emergency calls to a PSAP, and that the amount of time required to implement automatic emergency call handling for wireless calls will be contingent on when wireless carriers are capable of providing TRS facilities with necessary Phase I and Phase II information. *See, e.g.,* Hamilton Comments at 3; Hands On Comments at 3; Wireless RERC (Research Engineering and Rehabilitation Center) (Wireless RERC) Reply Comments at 3.

[184] *See, e.g.,* MCI (WorldCom) Reply at 3; Sprint Comments at 3-4; Verizon Wireless Comments at 5. *But see, e.g.,* TDI Coalition Reply Comments at 3-4 (TDI argues that, because it has not been a requirement to do so, it is currently not technically feasible to route emergency TRS calls to the same PSAP that would receive an emergency call if it were placed directly by a wireless carrier).

[185] *See* T-Mobile Reply Comments at 4. fn 14.

[186] *See* TDI Coalition at 7-8; *see also* Wireless RERC (wireless providers should be required to provide the same 911/E911 information to TRS users that they provide for speaking/hearing subscribers).

[187] *See, e.g.,* MCI (WorldCom) Comments at 5-6; SBC Comments at 3-4.

[188] SBC Comments at 4.

[189] The record demonstrates that wireless E911 capability is limited to the E911 network deployed between wireless carriers, LECs, and PSAPs that is accessed only by dialing 911. *See, e.g.,* Verizon Wireless Comments at 3. We emphasize that the paramount focus and concern must be placed on training and development of PSAP facilities to provide functionally equivalent service to persons with hearing and speech disabilities when they dial 911, even over wireless networks. In addition, Wireless RERC also suggests that current technology is sufficiently developed that it would be reasonable for us to consider investigating the feasibility of requiring that pagers with Internet browsers be able to connect with IP Relay in order to contact hearing parties and other emergency services. *See* Wireless RERC Reply Comments at 3. We will defer consideration of that issue to a future proceeding.

c. Non-Shared Language TRS

55. *Background.* Our regulations define "[n]on-English language relay service" as a "telecommunications relay service that allows persons with hearing or speech disabilities who use languages other than English to communicate with voice telephone users in a shared language other than English, through a CA who is fluent in that language."[190] In the *1998 TRS NPRM*,[191] we noted that "some TRS providers may be offering 'translation' services to TRS users (*i.e.*, communication between two parties who each use a different language) including Spanish-language and ASL [American Sign Language] translation services."[192] We tentatively concluded, however, "that any such 'translation' TRS, especially foreign language translation services, are value-added TRS offerings that go beyond 'relaying' of conversation between two end users."[193] At the same time, we asked whether an exception should be made for ASL translation services. We noted that ASL is a language unique to the deaf community," and therefore "ASL translation services may be necessary to provide 'functional equivalency' to ASL users."[194]

56. In the *Improved TRS Order & FNPRM*, the Commission concluded that the provision of ASL translation service was necessary to provide "functional equivalency" to ASL users.[195] We noted that ASL is a language with a syntax and grammar different than that of English, and that because many ASL relay users type in ASL syntax rather than in English syntax, a CA must be able to correctly translate the ASL text message to English in order to avoid translation inaccuracies.

57. In response to the *Improved TRS Order & FNPRM*, the Public Utilities Commission of Texas (TX PUC) filed a petition requesting that the Commission allow other non-shared language relay translation service (beyond ASL to English translation service) to be reimbursable from the Interstate TRS Fund.[196] The TX PUC asserted that there is a great demand for the translation of non-shared language through TRS.[197] For so many of these children, Spanish is the spoken language in their homes. However, because these children are educated in school in ASL and English, many deaf children of Spanish speaking families are not able to participate in family communications.[198]

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[190] 47 C.F.R. § 64.601(13). By relaying a conversation in a "shared language" we mean that both the calling and called party use the same language; therefore, in relaying the conversation the CA does not translate what is typed or voiced from one language to another.

[191] *Telecommunications Services for Hearing-Impaired and Speech Impaired Individuals, and the Americans with Disabilities Act of 1990,* Notice of Proposed Rulemaking, CC Docket No. 90-571, FCC 98-90, 13 FCC Rcd 14187 (May 20, 1998) (*1998 TRS NPRM*).

[192] *1998 TRS NPRM* at ¶ 39.

[193] *Id.*

[194] *Id.*

[195] *Improved TRS Order* & FNPRM at ¶¶ 44-46. With the exception of ASL-English translation, the Order did not address non-shared language TRS.

[196] Public Utilities Commission of Texas (TX PUC), Petition for Reconsideration, CC Docket No. 98-67 (filed March 24, 2000). This service would require TRS providers to offer translation services for those non-English languages common in their area, for example, Spanish-to-English conversations through a CA/translator.

[197] Hispanics are the fastest growing minority group in the deaf school age population in the United States. This is particularly true in Texas. Schildroth & Hotto, Changes In Student And Program Characteristics. American Annals Of The Deaf, 141(2), 68-71 (1996), Published in Hispanic Outlook in Higher Education, May 2000, Jean F. Andrews, Ph.D. & Donald L. Jordan, Ph.D. Lamar University, Beaumont, TX.

[198] There are more than 7,000 deaf children from Spanish-speaking homes in the U.S. ASL becomes the first language for many of these Hispanic youths because it is the first language that is fully accessible to them, even

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58. In the *Second Improved TRS Order & NPRM,* we noted that multi-lingual translation services through TRS might meet the unique needs of certain identifiable TRS user populations.[199] We therefore sought comment on whether the Commission should find that *non-shared* (or multi-lingual) language translation service through relay is a form of TRS compensable from the Interstate TRS Fund. More specifically, we asked whether provision of such service is consistent with, or necessary under, our functional equivalency mandate. Recognizing new types of relay services offered since the Commission originally raised this question in 1998, we also asked how, if adopted, non-shared language TRS would be implemented for VRS, STS, and other forms of TRS, and how the service would be funded.

59. Commenters representing TRS providers and disability advocacy groups assert that non-shared language relay should be recognized as TRS because it provides functionally equivalent relay access to millions of deaf children, parents, or friends with Spanish speaking Americans who wish to communicate by telephone but cannot because the persons who are deaf have been educated in ASL and English.[200] This support, however, is not unanimous. Several LECs and state utility commissions oppose a requirement that non-shared language TRS, whether traditional TRS or VRS, be reimbursed.[201]

60. *Discussion.* We recognize that the provision of non-shared language relay service may satisfy a specific need for persons with hearing or speech disabilities desiring to communicate with persons who use a different language. Nevertheless, we affirm our conclusion in the *1998 TRS NPRM* that such a service exceeds the functional equivalency mandate.[202] The Commission finds that non-shared language TRS is equivalent to a translation service, which is a "value-added" service for hearing parties.[203]

61. We recognize, however, that states, in their efforts to tailor intrastate TRS to meet the needs of their citizenry while meeting or exceeding the Commission's minimum standards, may identify the need to offer non-shared language TRS. We support, and in fact encourage, states to assess the need for, and if appropriate offer, non-shared language intrastate TRS.[204] The Commission does not find that offering non-shared language TRS conflicts with Commission rules, but rather is an example of an entity permissibly exceeding the mandatory minimum standards.[205] We therefore agree with commenters that

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though ASL is not the primary language used in their home. Schildroth & Hotto, Changes In Student And Program Characteristics. American Annals Of The Deaf, 141(2), 68-71 (1996).

[199] *Id.* at ¶ 113. In particular, we noted that in states with large Hispanic populations there are often a large number of Hispanic children who are deaf and, as a result, do not learn Spanish. Because these children are educated in ASL and English, many deaf children of Spanish speaking families cannot communicate with their relatives through shared-language TRS.

[200] *See, e.g.,* CSD Comments at 5-6; Hands On Comments at 2; Sprint Comments at 8-9; TDI Coalition Reply Comments at 5-6; MD DBM at 4.

[201] *See, e.g.,* AT&T Comments at 9; Iowa UB Comments at 3; MO PSC Comments at 3; SBC Reply Comments at 4; Verizon Comments at 12-13; also see, e.g., CA PUC Comments at 6, Verizon Reply Comments at 5, (states should be allowed to voluntarily provide intra-state non-shared language VRS).

[202] *1998 TRS NPRM* at ¶39.

[203] *See* AT&T Comments at 7; Iowa UB Comments at 3; MO PSC Comments at 3; SBC Reply Comments at 4; Verizon Comments at 12.

[204] With regard to non-English relay service, we have stated in the *Improved TRS Order* that we urge states to [...] be sensitive to changes in local demographics that may warrant the addition of non-English relay services. *Improved TRS Order& FNPRM* at ¶31.

[205] 47 C.F.R. § 64.605(b)(1) (certified state programs must meet or exceed all operational, technical, and functional TRS mandatory minimum standards).

states and TRS providers should be able to make the determination on whether to offer non-shared language TRS.[206] Because we find that this service is beyond the scope of section 225, however, even though we encourage the voluntary provision of intrastate (or interstate) non-shared language TRS, non-shared language TRS is not reimbursable from the Interstate TRS Fund.[207]

62. Sprint proposes that any non-shared language TRS offerings should require that at least one party be using English or ASL.[208] We decline to adopt such a requirement. We believe that the determination whether to offer such services, and the possible combinations of languages, should be left to the states to determine.

3. Mandatory Minimum Standards (Technical Standards)

a. Call Set-up Time

63. *Background.* In the *Second Improved TRS Order & NPRM*, the Commission noted that our TRS speed of answer rule currently requires that providers shall answer 85% of all calls within 10 seconds.[209] We further noted that after a call is answered, the TRS provider may require additional time to set-up the call, but that our rules currently do not specify a call set-up time and some consumers have expressed frustration with the length of time it takes to set up certain TRS calls. The Commission recognized that there may be several ways to reduce call set-up time, especially for non-traditional TRS calls. We therefore sought comment on how call set-up can be effectively and efficiently handled for the various forms and types of TRS with the aid of new technology or by any other methods. We also sought comment on whether the Commission should require a specific call set-up time for various types and forms of TRS calls, and if so, how such set-up time should be measured.[210]

64. Nearly all commenters oppose any requirement that TRS providers complete the call set-up time for TRS calls within a specific period of time. They note, for example, that call set-up times vary significantly depending on the type of TRS call, the caller's disability, and the caller's preferences, making it difficult to generalize various call set-up times.[211] Commenters also assert that specific call set-up times are not necessary because there is a financial incentive for TRS providers to set-up the calls as quickly as possible, since the time spent on setting up calls is not compensable from the Interstate TRS Fund.[212] The TDI Coalition, however, suggests that the Commission could reasonably determine an average set-up time for the various forms and types of TRS, and require that a certain percentage of all call set-ups be completed within such a time.[213]

65. *Discussion.* We decline to adopt either a standard call set-up time for all forms of TRS,

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[206] *See, e.g.*, CA PUC Comments at 6; MCI (WorldCom) Comments at 6-7; *see also* SBC Reply Comments at 4; Verizon Reply Comments at 5.

[207] We note that while ASL-Spanish VRS has been voluntarily offered, it is not reimbursable from the Interstate TRS Fund.

[208] Sprint Comments at 9.

[209] *Second Improved TRS Order & NPRM* at ¶ 115-117 (citing 47 C.F.R. § 64.604(b)(2)).

[210] *Id* at ¶ 117.

[211] *See, e.g.*, AT&T Comments at 11; CSD Comments at 6; MCI (WorldCom) Comments at 7; SBC Comments at 5; CA PUC Comments at 7; Sprint Comments at 10; MCI (WorldCom) Reply Comments at 5.

[212] *See, e.g.*, AT&T Comments at 10-12; CSD Comments at 6; MCI (WorldCom) Comments at 7.

[213] TDI Coalition Reply Comments at 8-9. TDI Coalition states that this approach would alleviate the concern expressed in the comments that each TRS call may have different set-up requirements that could increase or decrease the normal set-up time.

or specific set-up times for the various forms of TRS and types of TRS calls. We believe that it would be difficult to determine appropriate set-up times, and that the established principle of not compensating the TRS providers for setting up the call is sufficient incentive for providers to continue to attempt to minimize this time period. In this regard, we urge TRS providers to set-up all TRS calls as expeditiously as possible. At the same time, we encourage consumers to file complaints should they experience unreasonable delays in setting up their TRS calls. Finally, we do not believe that TDI Coalition's suggestion for establishing standards for call set-up times, and mandating percentage-based compliance, would be more effective in reducing call set-up times than the inherent incentive a TRS provider has to minimize the non-compensable time their CAs are occupied.

b. TRS Facilities

(i) Communication Access Real-time Translation

66. *Background.* In the *Second Improved TRS Order & NPRM*, the Commission explained that communication access real-time translation (CART) can be used to increase the speed of a TRS call.[214] The Commission sought comment to determine whether TRS providers should offer CART or CART-type services to improve the speed of TRS. We requested detailed information regarding how CART, or similar technology and equipment, may be utilized by a TRS facility, as well as relevant technical requirements, CA training issues, and other challenges that may exist to providing this service through TRS.

67. Some commenters agree that CART's greater transmission speed may shorten the conversational lag in a TRS call.[215] They generally note, however, that the use of CART by a TRS facility has several disadvantages. Several commenters note that there would be an insufficient number of CART-trained CAs to meet the demand for CART if it were required for TRS, and that therefore the labor costs for stenographers would increase and drive up the cost of providing TRS.[216] MCI (WorldCom) and MO PSC assert that most TTY users would not realize increased communication speed from CART because of the limited transmission speed coming from the end user's TTY.[217] Sprint also notes that stenographer-based CART and CART-type technologies may well become obsolete because of increasing advances in voice recognition technology.[218] Although CART is offered in Maryland, its state TRS administrator proposes further study before determining whether CART should be required for TRS.[219] On the other hand, because CART increases the speed of a TRS call and therefore makes it more functionally equivalent, and it is technologically feasible to use CART with TRS, the TDI Coalition

[214] *Second Improved TRS Order & NPRM* at ¶¶ 118-119. Communication access real-time translation (CART) is an instant translation of the spoken word into written English using a stenotype machine, notebook computer, and real-time software. *See* National Court Reporter's Association, CART, http://cart.ncraonline.org/index.html (visited March 26, 2004). With CART, a stenographer can type speech verbatim at a significantly higher word per minute (wpm) rate than is possible with typing on a standard keyboard. As a result, the conversation pace proceeds at a much higher rate (150 to 200 wpm) during a call.

[215] *See, e.g.,* Hamilton Comments at 5; MO PSC Comments at 4.

[216] *See, e.g.,* CA PUC Comments at 8; MCI (WorldCom) Comments at 8-9; SBC Reply Comments at 4; Sprint Comments at 11-12.

[217] MO PSC Comments at 4; MCI (WorldCom) Reply Comments at 6.

[218] *Id* at 12. Sprint claims that the existing voice recognition software has about a 92 percent accuracy rate.

[219] MD DBM Reply Comments at 5. We note that presently Federal Relay Service is offering a CART based service called Relay Conference Captioning. *See* http://www.fedrcc.us/info/VRC.aspx. Because it remains relatively new, we will monitor its use and reliability.

recommends that we mandate the use of CART in the provision of TRS.[220]

68. *Discussion.* We conclude that it would be premature to require the use of CART at this time. The record reflects that the use of CART by TRS facilities has several disadvantages that warrant further analysis. The record also demonstrates that CART is not the only technology available that is designed to increase communication speed in this context, and also that it is not economical to offer such service for conference calls.[221] We will revisit this matter when it appears that CART or other technologies such as speech recognition technology develop to the point where they not only are effective in improving the transmission speed of a TRS call, but are also economically feasible to use for TRS.

(ii) Interrupt Functionality

69. *Background.* In the *Second Improved TRS Order & NPRM,* we sought comment on the technological feasibility of providing TRS consumers with interrupt functionality.[222] We noted that this feature allows a TTY user to interrupt incoming text messages in order to convey a message back to the CA, so that the TRS conversation is more like a conventional telephone conversation in which each party can begin speaking before the other party has finished speaking.[223] As a general matter, when a TTY user is typing or receiving a TTY message he or she cannot type in response until the sending party is finished typing on his or her TTY. We noted, however that some TRS providers were already offering some type of interrupt functionality.[224] We sought additional information about how the interrupt functionality is being provided, whether any non-proprietary TTY protocols are able to support interrupt functionality, and the experiences consumers have had with use of this feature. We noted, for example, that Ultratec's TurboCode TTYs and other TTYs with this feature have been available for nearly a decade.[225]

70. Commenters assert that there are no non-proprietary TTY protocols on the market that would enable TRS providers to offer interrupt functionality.[226] The MD DBM and AT&T explain, for example, that although interrupt functionality can be made available with consumer premises equipment (CPE) or TTYs supported by non-Baudot protocols,[227] the vast majority of existing TTYs are supported by the Baudot protocol for which only a proprietary type of interrupt functionality exists.[228]

71. *Discussion.* We decline to mandate interrupt functionality at this time. First, we believe that it is not appropriate to mandate specific TRS features that can only be provided via proprietary

[220] TDI Coalition Reply at 6.

[221] *See, e.g.,* Hamilton Comments at 5; Sprint Comments at 12.

[222] *Second Improved TRS Order & NPRM* at ¶ 120.

[223] *Id.*

[224] Sprint Relay service offers Ultratec Turbo Code to relay users. *See* http://www.sprintbiz.com/government/relay/services.html.

[225] TurboCode is a proprietary protocol for Baudot code based TTYs that enables interrupt functionality. *See* Ultratec's website www.ultratec.com. Ameriphone's Q140 protocol also enables the interrupt functionality. *See* http://www/clarityproducts.com/store/Downloads/Q-90DU.pdf; *see also* MO PSC Comments at 4-5.

[226] *See, e.g.,* AT&T Comments at 12; CA PUC Comments at 8; Sprint Comments at 13; MCI (WorldCom) Reply Comments at 6-7.

[227] Text telephones transmit and receive coded messages. The primary code in which text telephones transmit information is known as Baudot. The code consists of tones – a different one for each character and command on the keyboard. The device both generates tones and translates them into characters and commands. *See* Franklin H. Silverstein, Ph.D., Telecommunications Relay Service (TRS) Handbook, Empowering the Hearing and Speech Impaired (1999).

[228] *See* AT&T Comments at 12 n.26; MD DBM Reply Comments at 5-6.

technology. Second, TRS consumers are increasingly using other forms of TRS, such as IP Relay and VRS. With respect to VRS, it is possible for the consumer and VRS CA to interrupt one another because they see each other signing. With respect to IP Relay, it is also technologically possible for the consumer and the CA to interrupt each other.[229] We nevertheless continue to encourage TRS providers to be innovative with new telecommunications technologies that would further place persons with hearing and speech disabilities on an equal footing with voice callers.

(iii) TRS Consumers' LEC Offerings

72. *Background.* In the *Second Improved TRS Order & NPRM*, we sought comment on the applicability of certain LEC features – *i.e.*, anonymous call rejection, call screening, and preferred call-forwarding[230] – to TRS. These features are all services that affect how incoming calls to the subscriber will be handled or directed; the services respond to either the identification of the caller or the lack of such identification. We tentatively concluded that these features should be provided to TRS customers, whether the called party is the voice user or the TTY user, if they are offered by the subscribing TRS customer's local carrier *and* if the TRS facility can send Caller ID to the local carrier. We sought comment on this tentative conclusion, as well as on how these features or services could be implemented by TRS providers.

73. Commenting TRS providers note that they would be able to provide anonymous call rejection, call screening, and preferred call-forwarding to the extent that they have the necessary technology (such as Signaling System 7 (SS7)) and the TRS consumers subscribe to these features through their LEC.[231] TRS providers explain that these features may be provided in a TRS call only when the TRS facility possesses the necessary technology to pass the subscriber's ten-digit Caller ID information to the LEC.[232] Several TRS providers emphasize the need for the LECs' cooperation in giving the TRS provider access to the Caller ID information if the TRS provider is going to be able to provide these LEC-based services to the TRS consumers who subscribe to them.[233]

74. *Discussion.* We conclude that TRS providers are capable of providing anonymous call rejection, call screening, and preferred call-forwarding as long as the TRS consumer seeking to use these features, whether the calling party or called party, subscribes to the service. The provision of these features is akin to provision of Caller ID, which we addressed in the *Second Improved TRS Order & NPRM.*[234] In that order, we concluded that "when a TRS facility is able to transmit any identifying information, the TRS facility must pass through, to the called party, the number of the TRS facility, 711, or, if possible, the 10-digit number of the calling party."[235] We also noted that "TRS providers are

[229] *See* e.g., www.ip-relay.com; www.relaycall.com; www.sprintrelayonline.com; and www.hiprelay.com.

[230] *Second Improved TRS Order & NPRM* at ¶¶ 121-122. Anonymous call rejection is a feature that automatically rejects calls to the user's number when the calling party has blocked his or her Caller ID information. Call screening (or selective call blocking) allows a user to create a list of telephone numbers (no-call list) from which the user does not wish to accept calls. Calls from numbers on the no-call list receive an announcement that informs the caller that the called party is not receiving calls at this time. All calls not on the no-call list are placed to the called party. Preferred call-forwarding allows a user to create and maintain a list of "special" telephone numbers where, if a call is received from one of those numbers, the call will be forwarded to another number.

[231] *See, e.g.,* AT&T Comments at 12; Hamilton Comments at 5; MCI (WorldCom) Comments at 9; Sprint Comments at 13-14.

[232] *See, e.g.,* MCI (WorldCom) Comments at 9; SBC Reply Comments at 5; Sprint at 13-14.

[233] Sprint Comments at 13-14; CA PUC Comments at 9.

[234] *Second Improved TRS Order & NPRM* at ¶ 23-25.

[235] *Id.* at ¶ 25.

required to observe the Commission's rules pertaining to Caller ID and call blocking services."[236] The same result applies here. Since the same technology that is used to transmit the Caller ID data also enables anonymous call rejection, call screening, and preferred call-forwarding, we require the offering of these features to the extent such features are provided by the subscriber's LEC and the TRS facility possesses the necessary technology to pass through the subscriber's Caller ID information to the LEC.

75. With respect to the LECs' cooperation in giving the TRS provider access to the Caller ID information for the TRS provider to be able to provide these LEC-based services to the TRS consumers who subscribe to them, we note that in the *Second Improved TRS Order* we required the Caller ID transmission to the extent that the providers have access to SS7 technology or similar technology.[237] We reach a similar conclusion here and encourage LECs to allow TRS providers access to a subscriber's information that would enable the TRS provider to support these features. At the same time, we remind LECs not to interfere with TRS providers' ability to provide functionally equivalent TRS service under our rules, just as is the case with a consumer's ability to have equal access to his or her interexchange carrier of choice.[238]

(iv) Talking Return Call

76. *Background.* Talking return call, sometimes referred to as "automatic call-back," is a feature widely available to non-TRS users, which allows a consumer to automatically call the last incoming telephone call received, whether or not the call was answered. To use this feature, the user enters a code (such as "*69") to obtain the telephone number of the party that last called the user's telephone number. The customer will then receive by voice the telephone number of the last incoming telephone call. The feature also includes an additional option for the consumer to enter another code, such as "1," to request that the carrier call the telephone number of the last party that called the consumer.[239] In addition, this feature can be used to automatically call a telephone number that has been busy once the called party hangs up (busy line monitoring).[240] Because this feature relies on voice, it is largely unusable by persons who are deaf.

77. In the *Second Improved TRS Order & NPRM*, we noted that in certain circumstances the deaf TRS user might be able to use an automatic call back feature.[241] We explained that we believed it was possible for the TRS facility to provide the identification of the last party who called the TRS consumer via the TRS facility (unless the caller's information was blocked by the caller). We also noted that if the TRS consumer is a TTY user, it may also be possible for the TRS facility to provide this information via a TTY interface (*i.e.*, by text), instead of the voice interface used by LECs. The Commission, therefore, sought comment on the feasibility of TRS providers offering this feature and whether this feature should be required as a mandatory minimum standard. The Commission also sought comment on whether it was feasible for the TRS provider to do busy line monitoring to determine when the line becomes idle and is able to receive a call.

78. Commenting TRS providers and the CA PUC agree that offering talking return call to the

[236] *Id.* at ¶ 22.

[237] *Second Improved TRS Order & NPRM* at ¶22-25.

[238] *See, e.g.*, 47 C.F.R. §64.604(b)(3).

[239] *See Second Improved TRS Order & NPRM* at ¶¶ 123-124.

[240] *See id.* at ¶ 123.

[241] *Id.* at ¶¶ 123-124.

TRS user with a hearing disability would be either cost-prohibitive or technologically infeasible.[242] Sprint contends that the TRS provider would have to build and operate a large database that would capture and store the last called number for each call placed through its TRS platform.[243] Hamilton and the MO PSC contend that this feature depends on a TTY or CPE that enables such functionality.[244] Hamilton points out that this feature is available only in a "station-to-station" environment, and not when an operator, or a CA in the case of TRS, is involved in the call.[245] The TDI Coalition, however, emphasizes that because TRS providers have the obligation to ensure the functional equivalency of TRS, they should place much effort in facilitating the talking return call feature for TRS consumers.[246]

79. With respect to busy line monitoring, some TRS providers oppose having to offer this feature because the TRS provider would have to undertake an extensive network build-up.[247] For example, a provider would likely be required to have a separate line to monitor the busy line, and such "monitoring lines" would not be used for the provision of other TRS services, and therefore would be underutilized, increasing costs of providing TRS services.[248]

80. *Discussion.* We will not require the talking return call and busy line monitoring features at this time. We find that the feasibility of TRS providers offering the talking return call feature depends on the technical capability of a TRS user's TTY or CPE, and that presently no TTY or CPE is capable of offering a LEC-based talking return call feature. We also agree with the commenters that it is not practical to offer busy line monitoring because requiring a CA to monitor a busy line involves the CA waiting idly on line for an unforeseeable length of time until the line becomes available, at which time the CA will need to call the TRS user to inform the TRS user of the intended called party's availability. Furthermore, our TRS reimbursement scheme does not provide for compensating a CA's idle time. We conclude that busy line monitoring would be unduly burdensome to the TRS provider and to the TRS user.

c. Technology

(i) Speech Recognition Technology

81. *Background.* In the *Second Improved TRS Order & NPRM*, the Commission sought further comment on computer-assisted speech recognition technology (SRT), sometimes referred to as voice-to-text (VTT) technology, and its possible use in the TRS environment.[249] We noted that SRT

[242] *See, e.g.,* CA PUC Comments at 10; Hamilton Comments at 6-7; Iowa UB Comments at 3; MCI (WorldCom) Comments at 9-10 (this feature will work only if the LECs make the voice announcements associated with *69 accessible via TTY); Sprint Comments at 15 (the build-up requires a separate line to monitor the busy line and that such "monitor lines" would not be used for the provision of other TRS services that would be underutilized).

[243] Sprint Comments at 14. Sprint adds that they are unaware of any demand within the deaf and hard-of-hearing community for this type of functionality. *See also* MCI Comments at 9-10.

[244] *See, e.g.,* Hamilton Comments at 5; MO PSC Comments at 5.

[245] Hamilton Comments at 7.

[246] TDI Coalition Comments at 12. *See also* MO PSC Comments at 5; Sprint Comments at 14; CA PUC Comments at 10. CA PUC recommends the Commission allow for a sufficient amount of time for testing and research to see if offering such a feature is feasible in a TRS environment. Iowa PUC Comments at 3. Iowa PUC supports mandating such feature if it is technologically feasible.

[247] *See, e.g.,* Hamilton Comments at 7; Sprint Comments at 14; MCI (WorldCom) Comments at 9-10.

[248] Sprint Comments at 15.

[249] *Second Improved TRS Order & NPRM* at ¶ 125. With VTT or speech recognition technology, the CA, instead of typing, re-voices the voice caller's message into a specialized speech recognition device that translates the speech into text.

could significantly shorten the time it takes for the voice caller's message to be converted into text, and therefore could greatly improve the use of TRS. The Commission noted, however, that it lacked sufficient information on this technology to require its use by TRS providers, and therefore sought comment on the current status of the development of speech recognition technology, including the extent, if any, to which TRS providers have already integrated speech recognition technology into their operations.

82. Although some commenters note that use of SRT is becoming increasingly prevalent,[250] other commenters also assert that further research and development of such technology is necessary before its use can be mandated for TRS.[251] Several commenters also suggest that we should not mandate the use of SRT because the market, and not regulation, should drive its availability in the TRS industry.[252] In addition, two commenters report that there is no non-proprietary SRT available for use by TRS providers.[253]

83. *Discussion.* We conclude that it is premature to mandate the use of SRT by TRS facilities. Such technology remains in an experimental stage, and there is no non-proprietary SRT available for use by TRS providers. We will, however, closely monitor the development of SRT and may revisit this matter in the future.[254] We believe that the use of any technology, such as SRT, that can substantially speed up a TRS call is important to the provision of TRS consistent with the functional equivalency mandate.

(ii) Transmission Speed

84. *Background.* In the *Second Improved TRS Order & NPRM*, we noted that text-based TRS calls generally take four times as long as similar voice-to-voice calls, and therefore that faster transmission speeds for text-based TRS calls would move the speed of such calls closer to that of voice-to-voice calls.[255] We therefore sought comment on whether improved transmission speeds for the TTY leg of a TRS call is technologically feasible, and whether mandating improved transmission speeds would be compatible with legacy TTYs.

85. The few commenters on this issue have not proposed a specific requirement that would promote increased transmission speed. Rather, they recommend that we encourage continued research into this issue.[256]

86. *Discussion.* We conclude that it is premature to mandate any particular transmission speed technology. Such technology continues to develop. At the same time, the sharp increase in the use of IP Relay and VRS may render this issue less relevant to the evolution and growth of TRS. Nevertheless, we will continue to monitor the development of technology that can enhance the transmission speed of TTY-based TRS calls.

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[250] *See, e.g.,* Hamilton Comments at 4-5; Relay Nevada Administrator Comments at 1-2; TDI Coalition Comments at 13.

[251] Relay Nevada Administrator Comments at 1-2; TDI Coalition Comments at 12.

[252] *See, e.g.,* SBC Reply Comments at 5; Sprint Comments at 15-16.

[253] CA PUC Comments at 10. Ultratec's CapTel service uses its proprietary SRT.

[254] Several TRS providers have undergone SRT trials, using technology such as Ultratec's FasTran.

[255] *Second Improved TRS Order & NPRM* at ¶ 126.

[256] *See, e.g.,* Hamilton Comments at 4; MO PSC Comments at 6; TDI Coalition Comments at 12-13.

(iii) TTY Protocols

87. *Background.* In the *Second Improved TRS Order & NPRM,* we noted that we previously sought comment on the use of new transmission TTY protocols, such as the V.18 protocol, for TTYs and similar products that might improve the interconnection of TRS facilities or TTYs with wireless devices.[257] We also noted, however, that we had not received adequate information on this issue; therefore, we sought further comment regarding the extent to which innovative non-proprietary protocols for TTY products are currently being used and could be used by TRS providers. We note that our rules presently require that TRS be capable of communicating with ASCII and Baudot formats.[258]

88. The record demonstrates that there are no new non-proprietary TTY protocols available on the market.[259] The TDI Coalition nevertheless recommends that the Commission encourage the adoption and prompt implementation of new, faster TTY protocols as soon as they are commercially available and have widespread use among TTY users.[260]

89. *Discussion.* We will not mandate the use of additional TTY protocols. We recognize that it is desirable to make TRS "universal" for all types of callers by ensuring its compatibility with various TTY protocols. The record reflects, however, that presently there are no TTY protocols available that are not proprietary, and we will not mandate proprietary protocols.[261] Nevertheless, this is an issue we will continue to monitor.

4. Public Access to Information and Outreach

90. *Background.* In the *Second Improved TRS Order & NPRM,* we noted that although our mandatory minimum standards require providers to take certain steps to inform the general public about TRS,[262] the rule may not be fully effective. We therefore sought comment on a variety of issues regarding the public's access to information about TRS and outreach.[263] In particular, we sought comment on the effectiveness of current outreach efforts, the availability of state programs to serve as models for a national program, and the types of additional outreach requirements that might be required for TRS providers and states.[264] We also sought comment on the role, if any, federal funding should have in these efforts, including whether, if the Commission were to require a coordinated outreach campaign (instead of, or in addition to, the outreach required of individual TRS providers), such a campaign could be supported by the Interstate TRS Fund. We noted that our rules provide for payments from the Interstate TRS Fund to compensate eligible TRS providers for their reasonable costs of providing interstate TRS.[265] We sought comment on whether the Interstate TRS Fund may be used to compensate third parties (*i.e.,* non-providers) for the cost of a coordinated outreach program.[266] We also sought comment on whether the cost recovery provisions of section 225[267] require that portions of an outreach

[257] *Second Improved TRS Order & NPRM at* ¶ 127.

[258] 47 C.F.R. § 64.604(b)(1).

[259] *See, e.g.,* Sprint Comments at 15-16; TDI Coalition Comments at 13; SBC Reply Comments at 5.

[260] TDI Coalition Comments at 9.

[261] *Second Improved TRS Order & NPRM* at ¶ 127.

[262] 47 C.F.R. § 64.604(c)(3).

[263] *Second Improved TRS Order & NPRM* at ¶¶ 128-133.

[264] *Id.* at ¶¶ 129-133.

[265] 47 C.F.R. § 64.604(c)(5)(iii)(E).

[266] *Second Improved TRS Order & NPRM* at ¶ 133.

[267] 47 U.S.C. § 225(d)(3).

campaign designed for implementation at the state level must be paid for by the states. Finally, we instructed the Consumer Advisory Committee (CAC) to review the issues concerning outreach as set forth in the *NPRM,* and make recommendations to the Commission regarding this matter.[268]

91. Generally, the comments reflect a need for more outreach to educate the public about TRS and support a nationwide awareness campaign that is funded by the Interstate TRS Fund, and assert that the Commission has authority under section 225 to use the Interstate TRS Fund to fund outreach, whether by paying individual TRS providers' outreach expenses or by funding programs administered by the Interstate TRS Fund Administrator or a government body.[269] For example, the TDI Coalition states that nearly all commenters (1) documented the need for a national outreach program, (2) supported the Commission's authority to implement such a program, and (3) provided useful insights into how such a national outreach program could be administered and funded.[270] At the same time, the TDI Coalition recognizes there was a difference in opinion about how to fund a national outreach program.[271] The TDI Coalition also asserts that the record clearly demonstrates that despite the Commission's exhortations for carriers to voluntarily engage in outreach, adequate successful outreach is not occurring.[272]

92. AT&T cautioned, however, that TRS is now in a transitional phase between reliance on the circuit switched network and Internet-based relay services, and therefore that imposing additional and unnecessary obligations on TRS providers to popularize TRS based on an obsolescent technology may be inconsistent with the Commission's broader ADA mandate.[273] The CA PUC also cautioned that establishing specific outreach standards or dollar requirements would not treat all providers fairly, and that in a multi-vendor environment (such as California) there is competitive pressure to provide TRS outreach to consumers.[274] CSD points out that while some states have taken the initiative to broaden TRS awareness, others have done little. CSD also believes that some of the duplication occurring across the state programs can be eliminated through a single national campaign that would benefit all subscribers uniformly across America.[275] CSD urges the Commission to permit the TRS Fund Administrator to procure the services of vendors to conduct a coordinated and comprehensive outreach program to promote

[268] *Second Improved TRS Order & NPRM* at ¶ 79. The mission of the Consumer Advisory Committee is to make recommendations to the Commission regarding consumer issues within the jurisdiction of the Commission and to facilitate the participation of consumers (including people with disabilities and underserved populations), in proceedings before the Commission. *See* Comments of the Consumer Advisory Committee.

[269] For example, Hands On supports an outreach program being targeted to the hearing community to publicize how to reach deaf and hard of hearing persons via TRS, and believes that the TRS Advisory Council should have a role in coordinating a nationwide outreach effort. Hands On Comments at 6-10. The MD DBM asserts that a national non-branded (not provider or state specific) outreach effort would allow for consistency in providing information to the general public, benefiting all relay users, and that providers are reluctant to incur outreach and education costs that could benefit a competitor. MD DBM Reply Comments at 7. Verizon notes that the Commission has allowed the use of the Interstate TRS Fund to pay for outreach efforts by TRS Providers according to the N11 Order, and that because the Commission has allowed TRS providers' outreach expenses to be paid by the TRS fund, it also has the ability to fund outreach efforts that are conducted by the TRS Fund Administrator. Verizon Comments at 10-11. Verizon suggests that the Commission should instruct the TRS Fund Administrator to implement a national outreach program, and to synchronize its efforts with successful outreach programs that are already being administered in many states. Verizon Reply Comments at 3-4; *see also* CSD Comments at 11; Sprint Comments at 17.

[270] TDI Coalition Comments at 10.

[271] *Id.* at 10.

[272] *Id.* at 11.

[273] AT&T Comments at 13-14.

[274] CA PUC Comments at 12.

[275] CSD Comments at 9.

universal access to all forms of TRS.[276]

93. At the November 20, 2003, CAC meeting the recommendations of the TRS Working Group were adopted, and subsequently submitted to the Commission. The CAC reported that approximately 10% of outbound calls result in hang-ups by hearing parties, and that these hang-ups result from a lack of understanding of TRS; that current efforts for educating the public on TRS are not effective, as many hearing people still associate a relay service call with a telemarketing-type call; that although some states have a formalized outreach program, the programs are "branded" to an individual state or a specific relay provider; and that TRS information appearing in the front of local telephone directories was the most common form of outreach in many states, but that this information needs to be standardized and made more understandable.[277]

94. The CAC stated that only a coordinated information and outreach program could achieve a "national consciousness" on the use and benefits of TRS. In this regard, the CAC believes that the Commission has authority to conduct a national TRS outreach campaign pursuant to its broad ancillary jurisdiction contained in section 4(i) of the Act.[278] The CAC notes that the Commission has, on many occasions, been involved with customer education or outreach programs to one extent or another.[279] The CAC asserts that since the Commission has statutory authority to direct carriers to engage in a customer outreach program, and it also has authority to direct that such program be funded from TRS contributions from carriers and their customers. The CAC recommends that the TRS national outreach campaign be funded by monies approved by the Commission in whatever capacity it deems appropriate, whether that be the Interstate TRS Fund or another mechanism within the responsibility of the Commission. In addition, the CAC believes that a new advisory board should be established to operate under the chosen funding mechanism, which will advise the Commission on a national outreach campaign and direct the outreach payments to an approved professional outreach firm.

95. *Discussion.* We recognize that outreach is an issue of recurring and serious importance for TRS users. Those who rely on TRS for access to the nation's telephone system, and thereby for access to family, friends, businesses, and the like, gain little from the mandate of Title IV if persons receiving a TRS call do not understand what a relay call is and therefore do not take the call, or if persons desiring to call a person with a hearing or speech disability do not know that this can easily be accomplished through TRS (and dialing 711). We also recognize the strong sentiment reflected in the comments that outreach efforts to date have not been adequate. At the same time, we note that our regulations presently require that common carriers take certain steps to "assure that callers in their service areas are aware of the availability and use of all forms of TRS."[280] These regulations reflect that it is the

[276] *Id.* at 10. CSD states that a directive for a comprehensive TRS outreach campaign would be consistent with the Commission's actions in its Report and Order on 711 access where the Commission laid out what it said it believed to be necessary to achieve a successful campaign: dissemination of "information through the mainstream media, including newspaper, radio, and television advertisements and articles, which can more effectively reach substantial portions of the American public."

[277] CAC Comments at 1.

[278] CAC Comments at 1.

[279] For example, the CAC points out that in 1992 the Commission decided that AT&T should not be permitted to receive all calling card calls dialed from payphones on a 0+ basis and devised a regulatory plan that permitted coin phone subscribers to select the long distance carrier or operator services provider of choice (*i.e.*, coin phone presubscription). Therefore, the Commission directed AT&T to "educate its cardholders to check payphone notices and to use 0+ access only at public phones identified as presubscribed to AT&T. CAC Comments at 3, *referencing, Billed Party Preference for 0+ InterLATA Calls*, CC Docket No. 92-77, Phase I, Report and Order and Request for Supplemental Comment, FCC 92-465 (Oct. 8, 1992).

[280] *See* 47 C.F.R. § 64.604(c)(3).

duty and responsibility of common carriers obligated to provide TRS to ensure that the public is aware of TRS.[281] Moreover, state TRS programs play a vital role in providing outreach; pursuant to our state certification requirements, the states must ensure that the providers in their state program also provide outreach as required under our regulations.[282]

96. Our current regulatory scheme, therefore, has not overlooked the importance of outreach, and we have reminded carriers on a number of occasions of their obligations under our rules.[283] We now reiterate that common carriers obligated to provide TRS must take steps to educate the public about TRS. We take this opportunity to clarify that the responsibility for outreach lies with all carriers to "assure that callers in their service areas are aware of TRS. The term 'callers' refers to the general public, not just consumers with speech and hearing disabilities. It is crucial for everyone to be aware of the availability of TRS for it to offer the functional equivalence required by the statute."[284] In this regard, given the continued existence of some anecdotal evidence indicating that recipients of TRS calls may hang-up on the calls, and at the same time the sharp increase in the use of TRS generally, the common carriers obligated to provide outreach might consider directing some of their outreach efforts towards the general public.

97. We decline to permit or require the Interstate TRS Fund to fund a national outreach campaign. We have noted in the past the question whether the Interstate TRS Fund can fund such a program.[285] Even apart from that issue, however, we conclude that the cost of an effective *national* outreach campaign would be prohibitive, with uncertain outcomes. Further, the amount of money that the Interstate TRS Fund might devote to an outreach campaign would have to be balanced with our efforts in other parts of this *Order* (and in other recent orders) to more precisely define and manage the costs that determine the compensation rates from the Interstate TRS Fund in an effort to safeguard the integrity of the fund. These costs, as we have noted, may include costs attributable to reasonable outreach efforts, and in this way some of the costs for outreach are already supported by the Interstate TRS Fund. We also note that the majority of TRS calls are local and intrastate, which suggests that the state TRS providers and state TRS programs should be taking the lead in providing meaningful outreach.

98. Finally, we decline to implement the recommendation of the CAC that we charge it with a continuing role in TRS outreach planning and implementation. We appreciate their willingness to continue in this capacity; however, with our recognition that it is ultimately the responsibility of the common carriers to provide effective outreach, it is unnecessary to further impose upon the CAC at this time. At the same time, we suggest the CAC develop voluntary Best Practice Guidelines for state TRS programs, TRS providers, and common carriers. We will work with the working group on this effort, and will ensure that the results of this effort, and other relevant materials, are available on our website so that common carriers, TRS providers, state programs and advocates will have the opportunity to share their outreach ideas and approaches. In this regard, we also direct the Consumer & Governmental Affairs Bureau to take concrete steps through educational and outreach efforts to further enhance public awareness of TRS. In addition to making factsheets and other informational materials available for dissemination through the Commission's web site and national consumer call centers, the Commission will launch a comprehensive outreach campaign that will include participating in conferences and other

[281] Although the statute and our rules provide that all common carriers providing telephone voice transmission services are obligated to provide TRS, our rules allow carriers to provide TRS individually, through designees, through a competitively selected vendor or in concert with other carriers. *See* 47 C.F.R. § 64.603. As such, most states have selected one or two carriers to provide TRS.

[282] 47 C.F.R. § 64.605(b).

[283] *See, e.g., Second Improved TRS Order & NPRM* at ¶ 80.

[284] *Improved TRS Order & FNPRM* at ¶ 105; *see also TRS I* at ¶ 28.

[285] *Second Improved TRS Order & NPRM* at ¶ 133.

events that provide opportunities for Commission staff to further educate not only users of TRS, but also the general public, about TRS. Finally, the Commission will provide media outlets likely to reach individuals who use TRS, as well as those of general distribution, with information about the availability of, and further developments in, the provision of TRS.

5. Procedures for Determining TRS Providers' Eligibility for Receiving Payments from the Interstate TRS Fund

99. *Background.* In the *Second Improved TRS Order & NPRM,* we noted that there is no federal certification process for TRS providers seeking compensation from the Interstate TRS Fund for the provision of eligible TRS services.[286] Presently, our regulations provide for the certification of state TRS programs,[287] and that TRS providers seeking compensation from the Interstate TRS Fund may establish their eligibility by showing that they operate "under contract with and/or by certified state TRS programs."[288] In these circumstances, the state program is responsible for ensuring that the provider offers its services in compliance with the TRS mandatory minimum standards. In addition, our regulations currently provide that TRS providers may establish their eligibility by showing that they are "owned by or operated under contract with a common carrier providing interstate [TRS] services,"[289] or are "[i]nterstate common carriers offering TRS pursuant to 64.604."[290] In these circumstances, however, because of the absence of any certification process, there is no means by which the Commission can determine whether the providers are offering the TRS services in compliance with our rules. For this reason, we sought comment on whether, and if so, how, we should amend our rules to address the eligibility of TRS providers for compensation from the Interstate TRS Fund in those circumstances not presently covered by our regulations.[291]

100. We sought comment on proposed rules that would require the Commission to certify a TRS provider desiring to offer TRS independent of a certified state program or eligible common carrier providing TRS and to receive compensation from the Interstate TRS Fund.[292] Further, we sought comment on whether the Commission should institute a certification process specifically for providers of IP Relay, VRS, and any other technology that does not fit easily into the traditional separation of intrastate and interstate services, for the period of time that such services are totally reimbursed from the Interstate TRS Fund.[293] We also sought comment on whether we should require all TRS providers seeking reimbursement from the Interstate TRS Fund to apply to the Commission, under the rules proposed above, regardless of their involvement in a certified state program.[294]

101. Commenters generally agree that we should continue allowing interstate TRS providers to be reimbursed from the Interstate TRS Fund so long as the TRS provider participates in a certified state TRS program, without having a federal certification requirement. Commenters also generally agree, however, that a federal certification requirement is appropriate if a TRS provider does not participate in a state TRS program, is not a common carrier, and is providing Internet-based TRS, such as IP Relay and

[286] *Id.* at ¶ 136.

[287] 47 C.F.R. § 64.605.

[288] 47 C.F.R. § 64.604(c)(5)(iii)(E)(1).

[289] 47 C.F.R. § 64.604(c)(5)(iii)(E)(2).

[290] 47 C.F.R. § 64.604(c)(5)(iii)(E)(3).

[291] *Second Improved TRS Order & NPRM* at ¶¶ 134-140.

[292] *Id.* at ¶¶ 136-140.

[293] *Id.* at ¶ 139.

[294] *Id.* at ¶ 140.

VRS.[295] In this regard, the MO PSC[296] and Sorenson,[297] among others, assert that a federal certification process should be an alternative to participating in a state TRS program, and not an additional regulatory requirement for new or existing TRS providers. SBC opposes a certification requirement for existing TRS providers, and believes that imposing the proposed federal certification or other requirements on TRS providers that already qualify for federal reimbursement is wholly unnecessary and would prove duplicative, inefficient, wasteful, and ultimately burdensome for these providers.[298]

102. Sorenson states that the current requirement that a non-common carrier be associated with a certified state program creates a burden for potential TRS providers, discouraging potential TRS providers that are unfamiliar with state regulatory processes.[299] Sorenson therefore contends that a federal certification process would reduce the administrative and regulatory costs experienced by potential TRS providers and ensure they are not stymied by individual state regulatory processes. [300] The TDI Coalition asserts that it is vital that measures be implemented to ensure that interstate TRS providers provide quality of service, and that a federal certification program can ensure a baseline national level of quality, consistency of service, and outreach requirements.[301] The TDI Coalition strongly urges us to establish a federal TRS certification program to ensure the quality provision of TRS when there is no state program oversight of interstate TRS providers.[302]

103. *Discussion.* We will defer at this time any decision about requiring Commission certification of providers seeking compensation from the Interstate TRS Fund, but invite further comment on this issue in the *FNPRM* below as part of our broad inquiry into issues relating to the provision, compensation, and oversight of IP Relay and VRS. As a general matter, we recognize that the underlying issue we are facing is two-fold: (1) how to define those entities providing TRS that are eligible for compensation from the Interstate TRS Fund for providing eligible services; and (2) how to ensure that such entities are providing TRS in compliance with the TRS mandatory minimum standards. With regard to the first point, our regulations set forth the eligibility requirements for TRS providers seeking compensation from the Interstate TRS Fund.[303] As a general matter, we have construed these requirements to require eligible providers to be either part of a state program or to provide service under contract with another provider obligated to provide TRS services.[304] Because Title IV puts the obligation on the entities providing telephone transmission service to also offer TRS, and also grants states the

[295] *See, e g.,* CA PUC Comments at 13; Hamilton Comments at 8; Hands On Comments at 12-14, Hamilton Reply Comment at 4-5; MCI (WorldCom) Comments at 12-14, MCI (WorldCom) Reply Comments at 8; MD DBM Reply Comments at 14; Sorenson Comments at 2-4; TDI Coalition Comments at 14.

[296] MO PSC Comments at 7.

[297] Sorenson Comments at 4.

[298] SBC Comments at 6-7. *But see* Hands On Comments at 13-14 (a federal certification program would promote competition and innovation and decrease the cost of service by allowing the providers actually delivering the service to bill the Interstate TRS Fund directly).

[299] Sorenson Comments at 2.

[300] *Id.*

[301] TDI Coalition Comments, at 14.

[302] TDI Coalition Comments at 10.

[303] 47 C.F.R. § 64.604(c)(5)(iii)(F).

[304] There is a third eligibility category: "[i]nterstate common carriers offering TRS pursuant to § 64.604." This category applies to common carriers offering telephone voice transmission services that are obligated to provide TRS in a state that does not have a certified TRS program. The three eligibility categories, therefore, are modeled upon the ways in which common carriers may be deemed to be in compliance with their underlying obligation, as set forth in or at sections 225(c)(1) – (2) of the Act, to provide TRS.

primary jurisdiction over the provision of TRS, we believe that requiring eligible providers to fall into one of these categories is consistent with the statutory scheme.[305]

104. With regard to ensuring that TRS providers meet our applicable mandatory minimum standards, presently all states have certified state TRS programs, which are primarily responsible for providers' compliance with our rules. Although it is conceivable that there may be eligible TRS providers that neither provide service under contract with another provider obligated to provide TRS services or operate outside of any state program (*e.g.*, if a state no longer has a certified program), we do not believe that that possibility warrants the adoption at this time of a new regulatory scheme for TRS providers. We also note that the complaint process provides a mechanism by which we can learn about service problems and take necessary corrective action when it is not possible for a state to address the matter.[306] Finally, we note that to the extent we adopt separation of cost rules for Internet based services presently compensated solely from the Interstate TRS Fund, and therefore require the states to fund the intrastate calls, state oversight of such services will necessarily follow. For these reasons, we will not adopt a procedure at this time by which providers seeking compensation from the Interstate TRS Fund must be certified by the Commission, but will seek further comment on this issue below with respect to providers of IP Relay and VRS.

D. VRS WAIVERS OF TRS MANDATORY MINIMUM STANDARDS

1. Background

105. In 2001, Hamilton and Sprint filed requests for waiver of certain aspects of the *Improved TRS Order & FNPRM* relating to the TRS mandatory minimum standards as applied to the provision of VRS. On December 31, 2001, the Commission issued the *VRS Waiver Order* granting, for a period of two years ending December 31, 2003, the requests for waiver.[307] The waivers were for the following TRS requirements: (1) types of calls that must be handled; (2) emergency call handling; (3) speed of answer; (4) equal access to interexchange carriers; and (5) pay-per-call services.[308]

106. In September 2003, Hamilton, Hands On,[309] and AT&T filed petitions to extend these

[305] Again, circumstances where a state does not have a TRS program certified under our rules presents other issues. We note that presently all states Puerto Rico and the District of Columbia have certified TRS programs.

[306] 47 C.F.R. § 64.604(c)(6).

[307] *VRS Waiver Order.*

[308] *VRS Waiver Order* at ¶¶ 9-20; see 47 C.F.R. §§ 64.604(a)(3), (a)(4), (b)(2), (b)(3) & (b)(6). We note that previously, in the *Improved TRS Order & FNPRM* that recognized VRS as a form of TRS, we concluded that certain other mandatory minimum standards did not apply to VRS. *See Improved TRS Order & FNPRM* at ¶ 42. In addition, in the *TRS Cost Recovery MO&O* we clarified that providers of VRS need not also provide video-based STS or Spanish relay. *See TRS Cost Recovery MO&O* at ¶¶ 25-27. Further, VRS – like all non-mandatory forms of TRS – need not be offered every day, 24 hours a day. *See* 47 C.F.R. § 64.604(b)(4).

[309] We note that Hands On also seeks clarification that VRS providers may immediately terminate calls where: (1) the VRS communications assistant is subjected to harassment or indecency, and (2) calls directed to third parties appear to be designed to harass or annoy such parties, either as a result of obscenity or other threatening or annoying conduct. We raise issues concerning the abuse of CAs handling TRS calls in the *FNPRM* below. We also note that CSD seeks clarification that American Sign Language (ASL) to Spanish Relay is not currently a form of VRS reimbursable from the Interstate TRS Fund. CSD Comments at 6. That is correct. In the *Improved TRS Order & NPRM* we stated TRS includes "any non-English language relay services which relay conversations in a *shared* language." *Improved TRS Order & FNPRM* at ¶¶ 28-31 (emphasis added). We subsequently sought comment on this issue in the generic context of TRS in the *Second Improved TRS Order & FNPRM* in response to a petition filed by the Texas PUC that urged the Commission to find that multi-lingual translation relay services (*i.e.*, non-shared language TRS) provided by an interstate TRS providers are compensable from the Interstate TRS Fund. *See Second Improved TRS Order & NPRM* at ¶¶ 98, 110-114. We resolved that issue in the *Report and Order* above.