Access to Global Telecommunications:

A Comparative Discussion of the International Legal Issues Confronting the Telecommunications Relay Service[1]

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Abstract:

The U.S. Telecommunications Relay Service ("TRS") strives to facilitate access to telecommunications services for hearing and/or speech impaired people. This system, and other countries' similar efforts, fails to take account of new technologies such as Internet Protocol ("IP") and the increasingly global reach of telecommunications networks. The system works well for traditional domestic calls, but performs poorly when challenged by calls that traverse international networks or leave the Public Switched Telephone Network ("PSTN"). In these cases, conflicting regulatory obligations, network architectures, cross-border funding mechanisms, and international standardization issues interfere with TRS users' ability to communicate in a functionally equivalent manner. This paper analyzes current U.S. TRS regulations and technologies, compares this system to Great Britain's TypeTalk regime, explains system faults in international and IP contexts, and argues that U.S. and international telecommunications regulators should understand and attempt to resolve these challenges by: 1) a registration system for IP Relay, 2) a shared funding mechanism for required TRS provision tied to TRS usage, and 3) international negotiation on industry-wide standards.

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I – Introduction

A: Traditional regimes for telecommunications disability accommodations must adapt to a new international environment brought about by technological development.

Without accommodations such as the Telecommunications Relay Service ("TRS") an individual with a hearing and/or speech impairment would not be able to call a friend, order a pizza, or join a conference call.[3] While many able-bodied people take those simple actions for granted,[4] the ability of hearing impaired and/or speech impaired individuals to use the telecommunications infrastructure is facilitated by a complex system of legal, regulatory, political, and technological factors that converge to provide TRS. The TRS system is not a singular technology or equipment type, but rather a set of technologies that depend on a mix of the factors presented above.

As our society becomes more global, the implications of government programs like TRS that once only had domestic reach must be analyzed under an international framework. This paper seeks to analyze the intersection of national disability regimes and the international environment, and focuses on TRS because of the vital importance of international communications[5] and the needs of hearing-impaired individuals to receive accommodations for their cross-border activities. An analysis of the interaction between two leading national TRS disability accommodations regimes and the international telecommunications infrastructure makes clear that traditional telecommunications accommodations regimes (specifically, TRS regimes) must adapt to a new international

[3] Consumers' Guide to the Telecommunications Relay Service, http://www.fcc.gov/cgb/dro/trs/con_trs.html (Last visited Nov. 4, 2005).
[4] ADA Anniversary Congratulatory letter from FCC Chairman Kevin J. Martin, www.ftp.fcc.gov/cgb/dro/martinadaletter.htm (Last visited Nov. 4, 2005).
[5] Edward R. Leahy & Michael O'Brien, Telecommunications Law and Technology in the Developing World, 22 B.C. Int'l & Comp. L. Rev. 1 (1999).

marketplace brought about by technological development. This paper highlights international legal issues for these traditional regimes and recommends policy steps to ensure that individuals with disabilities are continued beneficiaries of the tremendous technological growth in the international telecommunications system.

These policy recommendations will concentrate on the marketplace differences of the U.S. free market highly-regulated model and the U.K. former government monopoly model as representative examples of the state of many national telecommunications industries. Within these systems, analyses will be conducted and recommendations provided regarding issues concerning Internet Protocol ("IP") Relay, TRS funding, reimbursement from TRS funding mechanisms, regulatory requirements for TRS capabilities, standardization, and foreign language capabilities. Most of these international issues are directly related to international calling and possible extra-territorial and/or conflicts of law concerns in that regard, although other isolated international legal issues are selectively enumerated. If not properly addressed, these areas of international legal and regulatory concern for TRS could hinder the availability and innovation of telecommunications disability accommodations in countries with pre-existing TRS regimes as well as countries contemplating TRS implementation.

B: TRS allows individuals with hearing and/or speech impairments to communicate with hearing society via text-based equipment, software, or internet applets with the aid of a communications assistant ("CA").

In order to understand the legal and comparative discussions, the reader must understand the tangible form of TRS as a text-based or ASL-based system that allows individuals with hearing and/or speech impairments to communicate with hearing society via a communications assistant ("CA").. TRS is not a single technology or equipment

type, but rather is a system that can be provided via land-line telephone lines and specialized equipment or software, over the internet using IP Relay, or in video format.

Current types of TRS include: Text-to-Voice TRS (Traditional TTY-TTS),[6] Voice Carry Over (VCO),[7] Hearing Carry Over (HCO), [8] IP Relay,[9] Speech-to-Speech Relay,[10] Video Relay Services (VRS),[11] Spanish Relay Service,[12] One-Line Captioned Telephones,[13] and Two-Line Captioned Telephones.[14] The U.S. and the U.K. have differing requirements and reimbursement systems for varying types of TRS, which will be discussed later in this paper, yet both are receptive to new innovations in the field.

Using any of the systems, a hearing impaired or speech impaired user (User A) with a special telephone or computer software dials a 10 digit phone number, adding the

[6] Required. In the Matter of Telecommunications Services for Individuals with Hearings and Speech Disabilities and the Americans with Disabilities Act of 1990, (Report and Order and Request for Comments), CC Docket 90-571, FCC 91-213, 6 FCC Rcd 4657, released July 26, 1991.
[7] Not required – use own voice, but text responses. Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Second Report and Order, Order on Reconsideration, and Notice of Proposed Rulemaking, CC Docket No. 98-67, CG Docket No. 03-123, 18 FCC Rcd 12379, at 12401-12404, paras. 28-34 (June 17, 2003) (Second Improved TRS Order & NPRM).
[8] Not required – speech disabiled individuals can type but hear responses. Telecommunications Relay Services, and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Declaratory Ruling, CC Docket No. 98-67, FCC 03-190, 18 FCC Rcd 1621 (rel. August 1, 2003).
[9] Not required – much like a java "chat" function found in many online chat rooms. In the Matter of Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Declaratory Ruling and Second Further Notice of Proposed Rule Making), CC Docket 98-67, FCC 02-121, 17 FCC Rcd 7779, released April 22, 2002.
[10] Required – CA trained in speech disorders repeats what caller says. In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Report and Order and Further Notice of Proposed Rulemaking), CC Docket 98-67, FCC No. 00-56, 15 FCC Rcd 5140 (2000), 65 FR 40093, released March 6, 2000.
[11] Not required – use ASL with CA translation. In the Matter of Telecommunications Services for Individuals with Hearing and Speech Disabilities - Recommended TRS Cost Recovery Guidelines/Request by Hamilton Telephone Company for Clarification and Temporary Waivers, (Memorandum Opinion and Order and Further Notice of Proposed Rulemaking), CC Docket 98-67, 16 FCC Rcd 22948, FCC 01-371, released December 21, 2001.
[12] Required – same as above, but in Spanish. In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Order on Reconsideration), FCC 05-139, adopted July 14, 2005, released July 19, 2005.
[13] Not required – CA voices what is said and voice technology transcribes it into text. In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Order), FCC 05-141, adopted July 14, 2005, released July 19, 2005.
[14] Not required – connected on single line so can use call waiting, caller id and have a captioned discussion. Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Order), FCC 05-141, adopted July 14, 2005, released July 19, 2005.

nationwide TRS prefix, 711.[15] The caller is connected to a relay center, where a Communications Assistant ("CA") connects the user to a hearing person. The hearing person (User B) does not need any technology other than a standard telephone.[16] The CA translates the conversation from the format of User A to spoken words for User B, and translates the spoken words of User B into coherent communication for User A. Using 711, a hearing person can reverse the process to reach a relay center in order to call a TRS user. The differences in the systems come from varied inputs from User A and outputs from the CA to User A. These inputs/outputs include: a voice with captioned response, typed text, American Sign Language ("ASL") on video, or Spanish language. Several of these services are now available on mobile devices.[17] There is an effort underway to remove the CA from the equation by replacing the human interaction with voice recognition software and hardware in order to lower costs, increase system availability to users, and decrease delay.[18]

II – Background Information

Background – TRS challenges on an international scale have become a timely issue because of a U.S. Supreme Court case on the international applicability of the now 15-year old Americans with Disabilities Act ("ADA"), recent U.S. Federal Communications Commission ("FCC") and U.K. Office of Communications (OfCom) attention to the system, and a preliminary general recognition of the importance of disability accommodations in the telecommunications sector in the international arena.

The Telecommunications Relay Service is a hot topic for both domestic and international law due to a policy environment that thrusts disability accommodations and

[15] Speech-To-Speech relay, which does not require special equipment, is the exception to this rule.
[16] Consumers' Guide to Telecommunication Relay Service, http://www.fcc.gov/cgb/dro/trs/con_trs.html (Last Visited Nov. 3, 2005).
[17] Suzanne Robitaille, New Telecom Connections for the Deaf, Business Week Online, at http://www.businessweek.com/technology/content/oct2002/tc2002109_4505.htm (Last Visited Nov. 3 2005).
[18] Sprint and Ultratec Announce Technology Trial, http://www3.sprint.com/PR/CDA/PR_CDA_Press_Releases_Detail_PF/0,3680,962,00.html (Last Visited Nov. 27, 2005)

communications in general to a highlighted position in the public debate, forcing traditional domestic systems to rethink their interaction with the international system. This section specifically about the U.S. Supreme Court's decision regarding the international applicability of the now-15-year-old Americans with Disabilities Act ("ADA") in Spector Et Al v. Norwegian Cruise Lines, U.S. FCC and U.K. OfCom regulatory actions, and preliminary attention to telecommunications disability accommodations in the world forum of the International Telecommunications Union ("ITU") as part of "Access to Knowledge" ("A2K") initiatives.

In the courtroom, several high profile cases regarding the ADA have reached the U.S. Supreme Court and have sparked interest in the international applicability of America's premier disability accommodations laws.[19] To lay out the background legal environment, government officials, citizen activists, and persons with disabilities celebrated the 15th anniversary of the ADA in 2005. This statute is often described as one of the most significant civil rights laws ever passed,[20] because of its comprehensive anti-discrimination regime based on the concepts of "reasonable accommodation" and "functional equivalence" that provides for facility access and protections from various forms of government and private discrimination.[21] During the ADA's 15th anniversary year, a case came before the U.S. Supreme Court that included a direct intersection between international law and the ADA that bears directly on the applicability of a government-sponsored disability accommodation regime such as TRS because of its international calling capabilities. In Spector, Et Al v. Norwegian Cruise Line, LTD.,

[19] *See* Bragdon v. Abbott, 524 U.S. 624 (1998), PGA Tour, Inc. v. Martin, 532 U.S. 661 (2001), Tennessee v. Lane 541 U.S. 509 (2004)
[20] Jamie C. Ruff, *Making Campuses Accessible is Goal Colleges Seek to Meet the Needs of Students Who Use Wheelchairs*, RICHMOND TIMES-DISPATCH, Aug. 8, 2005, at B1.
[21] 42 U.S.C. §§ 12101 (2000).

several plaintiffs who use wheelchairs sued the cruise ship company for failing to provide reasonable accommodations for their cruise trip out of Galveston, TX.[22] The question reviewed by the court was, "Whether and to what extent Title III of the Americans with Disabilities Act applies to companies that operate foreign-flag cruise ships in United States waters?"[23] The cruise ships included in the allegations were following industry practice and flying under "flags of convenience,"[24] and therefore under traditional maritime law would not be subject to U.S. law when in international waters. In a fractured set of opinions, the Supreme Court provided the plaintiffs with a small win and found that the ADA applied to foreign-flagged ships in U.S. waters as long as the accommodations did not directly affect the internal affairs of the ship.[25] This holding was heavily influenced by the maritime situation of the fact pattern.[26] While entire notes could be written on Spector, the differences in opinions and the application of traditional international maritime law is beyond the scope of this paper. What does matter is that the Court has recognized the intersection of the ADA with international law and has provided for some (albeit maybe not much) extra-territorial applicability of the statute, making questions posed today about TRS interesting and relevant to the times.

Within the environment described above, the U.S. FCC has been diligently strengthening its rules on disability accommodations and the U.K. OfCom has completed reviews of the British TRS system. Under Title IV of the ADA, the FCC was charged with implementing the TRS regime. In July 2005, the Commission approved four rulings

[22] Spector v. Norwegian Cruise Line Ltd., 125 S.Ct. 2169 (2005).
[23] http://www.supremecourtus.gov/qp/03-01388qp.pdf (Last visited Nov. 4, 2005).
[24] BARRY E. CARTER, INTERNATIONAL LAW 840 (2003)
[25] Spector v. Norwegian Cruise Line Ltd., 125 S.Ct. 2169 (2005).
[26] The intricacies of international maritime law are beyond the scope of this paper.

in one day regarding TRS.[27] Commissioner statements in these orders have specifically included references to the anniversary of the ADA and the importance of TRS to the modern telecommunications world.[28] In England, OfCom has not recently gone as far as the FCC, but has completed an important study of Universal Service Obligations ("USO Review").[29] In this review, OfCom recommended a study on the feasibility of bringing IP Relay and the Video Relay Service to the British TRS system, but noted that it might be hampered by a lack of statutory authority.[30] Issues of statutory authority aside, OfCom's proposed study of VRS and IP Relay will certainly require the researchers to analyze international effects of their decisions because of the emerging integration of Europe and the technological issues discussed below.

In the international arena, there has been a preliminary effort to bring attention to disability affairs in the general sense as well as within the telecommunications industry with few concrete results that serves as a baseline for the analysis of international implications of TRS. Generally, the World Bank has held two International Disability Conferences,[31] and the UN High Commissioner on Human Rights has recognized "a dramatic shift in perspective has been taking place over the past two decades, and persons

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[27] Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Order (CC Docket No. 98-67, CG Docket No. 03-123), FCC 05-141; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Report and Order (CG Docket No. 03-123, CC Docket No. 98-67), FCC 05-140; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Order on Reconsideration (CC Docket No. 98-67, CG Docket No. 03-123), FCC 05-139.

[28] *Id.*

[29] Ofcom Website: Ofcom Review of Universal Service Requirements, http://www.ofcom.org.uk/media/news/2005/01/nr_20050110#content (Last Visited Nov. 3, 2005)

[30] Ofcom Website: Universal Service Requirements FAQ, http://www.ofcom.org.uk/media/mofaq/telecoms/usofaq/ (Last Visited Nov. 3, 2005)

[31] 2004 World Bank International Disability Conference, http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALPROTECTION/EXTDISABILITY/0,,contentMDK:20245996~pagePK:148956~piPK:216618~theSitePK:282699,00.html (Last visited Nov. 4, 2005).

with disabilities are increasingly viewed as holders of rights."[32] In the telecommunications industry specifically, several foundation-level actions have occurred within the ITU, a United Nations organization devoted to fostering an environment where "governments and the private sector could work together to coordinate the operation of telecommunication networks and services and advance the development of communications technology."[33] There is some standardization for the original TRS, but none of the other types of TRS.[34] Beyond that highly technical 2000 standardization report, the ITU has recently seen the promulgation of general policy statements in relation to its World Summit on the Information Society ("WSIS").[35] Both the 2003 Geneva WSIS and 2005 Tunisia WSIS included forums on disability.[36] The "Tunis Declaration on Information Society for Persons with Disabilities, November 18, 2005" requested generally that governments and private sector actors consider individuals with disabilities in their technological and regulatory undertakings.[37] In addition, the ITU has highlighted several grassroots telecommunications pilot projects for persons with disabilities and held a forum on accessibility standards in 2003.[38] These actions are but a beginning step in an international telecommunications legal environment that is currently devoid of much actionable law, yet these actions evidence a growing body of political, diplomatic, and legal actions that national TRS systems must accommodate and ideally will shape.

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[32] Disability, http://www.ohchr.org/english/issues/disability/ (Last visited Nov. 4, 2005).
[33] Purposes, http://www.itu.int/aboutitu/overview/purposes.html (Last visited Nov. 4, 2005).
[34] http://www.itu.int/itudoc/itu-t/com16/contr/125.html (Last Visited Nov. 27, 2005)
[35] http://www.itu.int/wsis/tunis/statements/docs/pe-forum-disability/1.doc (Last Visited Nov. 27, 2005)
[36] *Id.*
[37] *Id.*
[38] See, ICTs for Disabilities, http://www.itu.int/osg/spu/wsis-themes/ict_stories/Cross-Cutting/Disabilities.html (Last Visited: Jan. 28, 2006). Accessibility II: Communication by all means: Accessibility for all in telecommunications enabled, http://www.itu.int/ITU-T/worksem/accessibility-II/ , (Last Visited: Jan. 28, 2006).

B: The United States and the United Kingdom – The U.S. and U.K. TRS policies are specifically reviewed because the countries' background legal frameworks for the telecommunications industry together represent national frameworks around the world, and both countries are facing international challenges of extra-territoriality of requirements, cross-border funding mechanisms, and IP protocol concerns in their world-leading TRS systems.

The United States and United Kingdom have been chosen as starting points in the road to defining and resolving international issues for TRS because they host the two most successful TRS regimes and their overall telecommunications industry structures are representative in other areas of the world. The United States has historically provided more accommodations for individuals with disabilities than any other country in the world. Indeed, former President George H.W. Bush commented: "The passage of the ADA, the world's first declaration of equality for people with disabilities, made this country the international leader on this human rights issue."[39] The relatively early passage of the ADA and its subsequent timely implementation by the FCC has made the U.S. TRS system the world's leading regime. The U.K. TRS system also is one of the world's strongest as British Telecommunications ("BT") created a system-wide regime that reached many customers. In regard to general telecommunications regulation, the U.S. free market model without a government-ownership legacy and including universal service obligations (such at TRS) has been widely imitated. In contrast, the U.K. system presents the state of many current national telecommunications markets as they attempt to transition from a government-owned monopoly carrier to a free-market approach. A comparison of U.S. and U.K. regimes will be useful in fashioning resolutions to current

[39] George Bush Presidential Library and Museum, Remarks Commemorating the First Anniversary of the Signing of the Americans with Disabilities Act of 1990 July 26, 1991, http://bushlibrary.tamu.edu/research/papers/1991/91072603.html (Last visited Nov. 4, 2005).

international legal concerns for both of these nations as well as many other nations attempting to implement a TRS regime because the comparative histories provide a launching point for solutions.

C: US – While technologically advanced, the TRS model requires all common carriers to provide TRS with a contribution and reimbursement funding scheme that fails to accommodate international concerns because of extra-territoriality jurisdiction and cross-border funding mechanisms compounded with IP technology advances.

The U.S. TRS model has provided a wealth of innovation in the TRS field because of a legal requirement on common carriers and a shared funding mechanism, yet these two items are also points of international legal concern in regards to extra-territoriality as international calling becomes more prevalent in our globalized society. This section will discuss first the background of these two issues, while the international legal concerns will be elaborated upon later in this paper.

There are both statutory and regulatory requirements for common carriers to provide TRS in the United States, and an understanding of these requirements is integral for comprehension of advanced international legal arguments promulgated later. The ADA defines TRS as allowing individuals with disabilities to "engage in communications by wire or radio with a hearing individual in a manner that is functionally equivalent" to an individual without an impairment. [40] Title IV of the ADA requires each common carrier to provide TRS and subsequent FCC regulations require TRS be available 24 hours a day, 7 days a week, with no higher charges and no refusal of calls or time limitations.[41] As mentioned above, the FCC recognizes a variety of different types of TRS as meeting that standard, and has required carriers to provide several forms of TRS while designating

[40] 47 U.S.C. § 225
[41] *Id.*

others as optional.[42] The role of Congress and the FCC in requiring TRS should not be understated. Due to the fragmented nature of the U.S. telecom system in the 1990s (when the ADA passed), it would have been difficult for a small group of individuals with disabilities to leverage nearly non-existent market power for nationwide TRS. Some states had TRS via government bodies or public-private partnerships,[43] but the creation of a nationwide network required national law. After the breakup of AT&T,[44] the FCC set national rules on interconnection, services provided, and other items. State public service commissions still had an effect after the Telecommunications Act,[45] yet national telecommunications issues were solved at the federal level. Because of the instant market created by the requirement, entrepreneurs were able to develop new types of TRS to satisfy demand. Particularly relevant to the inquiry of this paper, federal enforcement still left international legal issues without a central regulatory power. There is no singular and binding international regulator for conflicts of national laws, although the ITU and the WTO have may have jurisdiction in regard to some aspects of a TRS regime.[46]

In addition to requiring common carriers to provide TRS, the FCC also established a shared funding mechanism to compensate TRS providers for the TRS portion (not the underlying phone call cost) of a TRS call, which has led to questions about payments for international calling and the use of international revenues in the contribution formula.

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[42] See FN 5-13 for more information on the different types of TRS recognized by the FCC.
[43] In the Matter of the Use of N11 Codes and Other Abbreviated Dialing Arrangements, (Second Report and Order), CC Docket No. 92-105, FCC 00-257, 15 FCC Rcd 15188, released August 9, 2000 at n.4.; Intrastate calls are still funded by states, not through the Interstate TRS fund.
[44] The American telecommunications landscape was forever altered with the breakup of "Ma Bell." ROBERT W. CRANDALL, AFTER THE BREAKUP (1991).
[45] Pub. LA. No. 104-104, 110 Stat. 56 (1996).
[46] For example, the ITU may have some jurisdiction in standardization issues and the WTO may have jurisdiction in regard to intellectual property concerns. Neither, however, has direct control over conflicts of law in regard to disability issues.

Modeled after the Universal Service Fund ("USF"), the Interstate TRS Fund was established in 1993 and is administered by the National Exchange Carrier Association ("NECA"), a non-profit organization that also administers the USF.[47] Based on a "TRS Fund Worksheet" all common carriers must file, NECA uses revenues from interstate, international, and intrastate communications services to decide the required contribution.[48] Cellular, paging, mobile radio, operator services, PCS, access, packet-switched, 800, 900, private line, telegraph, video, satellite, international, intraLATA, and resale services must contribute to the fund, even though some of these services arguably have nothing to do with TRS and have international reach and/or revenues.[49] This cost sharing the costs from being directly and exclusively funded by TRS users and distributes them among the telecommunications market. The FCC approved the shared funding mechanism because it was worried about carriers providing only minimal TRS,[50] finding the shared funding mechanism provides "strong incentives for TRS providers to offer high quality, innovative services at reasonable cost."[51] By spreading the costs, the FCC created a market for innovation and quality service with a guaranteed revenue stream.[52]

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[47] In the Matter of Telecommunications Services for Individuals with Hearing and Speech Disabilities and Americans with Disabilities Act of 1990, (Order on Reconsideration, Second Report and Order and Further Notice of Proposed Rulemaking), CC Docket 90-571, FCC No. 93-104, 8 FCC Rcd 1802, released February 25, 1993. (Hereinafter "Interstate TRS Fund Order"). NECA also administers the Universal Service Fund, see www.neca.org. Because the FCC approves all rates and worksheets, NECA can be viewed as an extension of the FCC, not an abdication of authority.

[48] http://www.fcc.gov/Forms/Form499-A/499a-2004.pdf (Last visited: Nov. 27 2005).

[49] *Id.*

[50] Interstate TRS Fund Order at ¶19-27

[51] Id. at ¶ 24

[52] The shared funding mechanism for TRS also bears a strong relationship to the goals and reasoning underlying Universal Service policies to bring access to underserved individuals as a matter of public policy. The market creation theory rather than the moral public policy theory is discussed here, but there is a strong argument for the expression of ADA "functional equivalence" as a public policy moral judgment. For more information on Universal Service, see National Telecommunications and Information Administration, http://www.ntia.doc.gov/opadhome/uniserve/univweb.htm (Last Visited: March 2, 2006) (summarizing the FCC's approach to Universal Service to bring benefits of competition to all users). For more information on Universal Service, See Robert W. Crandall, Leonard Waverman, *Who Pays for Universal Service?: When Telephone Subsidies Become Transparent*, Brookings Institution Press (2000).

The FCC has barred TRS providers from advertising discounts to obtain more TRS users and/or more compensable TRS minutes.[53] All subscribers are paying a portion of the TRS cost, and the FCC has determined it is unfair to charge them more. In effect, the FCC has foreclosed price competition, which means competition must be had on quality and availability. By doing so, the FCC has pushed for even more innovation and better quality service because those items that differentiate TRS providers.

D: UK – Mostly due to a government-owned history, the technologically inferior U.K. TRS system without a shared funding mechanism fails to adequately face the current international telecommunications technological and commercial environment.

Unlike the U.S. statutory and regulatory regime, Britain's TypeTalk TRS system began as a voluntary venture by a government-owned monopoly that has provided basic service to hearing and speech impaired British citizens, but has failed to keep pace with the rapidly changing international telecommunication market. The U.K. model has much more limited requirements than the U.S. model, but the requirements they do have may still have international legal ambiguity and concern. The U.K. does not, however, have any shared funding mechanisms, which limits questions about taxpayer funds being utilized for extra-territorial purpose. However, as a telecommunications provider with a large amount of market share due to its past government-owned monopoly status, the requirement on BT to both provide and fund the TypeTalk system could be viewed as an effective tax that subsidizes international activities in the international TRS calling situation.

[53] Federal Communications Commission Clarifies That Certain Telecommunications Relay Services (TRS) Marketing And Call Handling Practices Are Improper And Reminds That Video Relay Service (VRS) May Not Be Used As A Video Remote Interpreting Service, (Public Notice), CC Docket 98-67 and CG Docket 03-123, DA 05-141, released January 26, 2005.

While OfCom now requires TypeTalk as part of BT's license,[54] it is statutorily limited in its ability to require additional forms of TRS beyond the most basic system and therefore has been unable to foster innovation, which may lead to international standardization concerns. TypeTalk started as a voluntary and charitable venture between BT and the Royal National Institute for Deaf People ("RNID") in 1989.[55] Much like in the U.S., several local TRS systems via charitable or public partnerships had existed, often with volunteers.[56] In 1994, then-regulator Office of Telecom (OFTEL) required BT to provide TRS as part of their "licence,"[57] but that was not the original impetus.[58] Indeed, TypeTalk is described by RNID as a "direct result of lobbying…"[59] While lobbying a company still qualifies as lobbying, it does appear there was some element of governmental influence. Like 711, 18001 and 18002 TypeTalk prefixes exist and BT guarantees a 60% rebate when they are used (but not for international calls).[60]

The funding for TypeTalk is provided solely by BT and since it is required to provide the service, it is effectively being taxed in order to provide TRS to the British public, which could include international calling service. As in the U.S., the user does not bear TRS costs, and further gets a rebate on the cost of the underlying call. Thus, BT now competes for TRS users as subscriber by means of automatic processing and ease of use. Today, there are other U.K. telecommunications providers, but BT still provides

[54] What is Typetalk? - The History of TypeTalk, http://www.typetalk.org/what/history.html (Last Visited Nov. 3, 2005).
[55] What is Typetalk? - The History of TypeTalk, http://www.typetalk.org/what/history.html (Last Visited Nov. 3, 2005).
[56] *Id.*
[57] *Id.*
[58] The British version of the ADA, (the Disability Discrimination Act) refers in § 19 to communications, but does not appear to be the basis of TypeTalk. The Disability Rights Commission, http://www.drc-gb.org/thelaw/index.asp (Last Visited Nov. 3, 2005).
[59] *Id.*
[60] *Id.*

only the basic TRS system with RNID. Consumers of other carriers still have access to TypeTalk, but do not get the same automatic rebates BT TRS customers.[61] BT provides TRS service for international calls, but does not apply the 60% rebate to those calls. [62]

OfCom has entered into a consent decree requiring BT to undertake many structural competition reforms.[63] One potential outcome of these competition reforms could be to allow competition in TypeTalk, which is currently exclusive to BT. Because the competitive reforms process is relatively new and OfCom has not specifically mentioned TypeTalk in this context there has been a trend of more strict regulation that may have a future impact on TypeTalk.[64]

III – International Legal Concerns – There exist possible adaptations each country (or countries with a similar current or contemplated overall telecommunications industry structure) can make for a strong, innovative, and fair TRS system in the current and future international telecommunications marketplace in various areas of international legal concern.

With the backgrounds of current leading TRS models previously discussed, this section will specifically highlight deficiencies and possible adaptations these models can make to ensure a strong, innovative and internationally-sensitive TRS system. This section will focus on A) IP Relay, B) shared funding mechanisms and reimbursement from those mechanisms, C) legal requirements for TRS provision, and D) standardization and highlight the current and proposed interactions between domestic TRS systems and the international legal, regulatory, and technological order.

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[61] What is TypeTalk – Billing, http://www.typetalk.org/what/billing.html (Last Visited Nov. 3, 2005)
[62] *Id.*
[63] OfCom Wwebsite, http://www.ofcom.org.uk/telecoms/btundertakings/ (Last Visited: Nov. 3, 2005)
[64] See, Olswang : Lawyers to Technology, Media, Telecommunications and Property Sectors, http://www.olswang.com/news.asp?page=newssing&sid=123&aid=715 (Last Visited: March 3, 2006) (suggesting that OfCom may be a stricter regulator in the area than predecessor OfTel).

A - IP Relay – The borderless nature of IP Relay provides the most significant challenge to the current TRS world-view that can be met via registration requirements, technological adaptations, or special fees.

IP Relay has already proven to be a sore point of contention for extraterritoriality of funding mechanisms in the U.S.,[65] and will surely continue to cause international legal concerns if potential solutions like registration requirements, technological adaptations, or special fees (or a combination of these activities) are not utilized. While the innovative US TRS system has IP Relay capabilities, British users have not been given the same technologically advanced opportunities, although OfCom is studying the issue.[66] As background, IP Relay works in the same manner as other TRS systems, where a CA serves as a translator between a hearing and/or speech impaired individual and an able-bodied individual. The key difference between IP Relay and other forms of TRS is that the underlying call is made over Internet Protocol packet technology that is relayed from server to server across the Internet, often using a mere Internet applet that can be accessed by any Internet browser,[67] rather than point to point over the traditional telecommunications infrastructure lines. Because of this difference, much like the modern Voice Over IP ("VOIP") systems, IP relay costs much less than traditional TRS.[68] Indeed, IP Relay has no additional costs to the user, unlike traditional TRS long-distance fees for the underlying call. It is also becoming more preferred by the technology-savvy

[65] In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking), CC Dockets 90-571 and 98-67 and CG Docket 03-123, FCC 04-137, 19 FCC Rcd 12475, released June 30, 2004 at Note 368.
[66] Ofcom Website: Ofcom Review of Universal Service Requirements, http://www.ofcom.org.uk/media/news/2005/01/nr_20050110#content (Last Visited Nov. 3, 2005)
[67] I.E. Internet Explorer or Netscape Navigator. For more information on IP Relay, see IP Relay, http://www.fcc.gov/cgb/consumerfacts/iprelay.html (Last Visited: Jan. 30 2006). To see a working IP Relay applet, see www.ip-relay.com.
[68] In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Order), CC Docket No. 98-67 and CG Docket No. 03-123, FCC 05-135, adopted June 28, 2005, released June 28, 2005.

user base, and in fact after January 2003 more IP Relay minutes were recorded in the U.S. than traditional TRS minutes.[69]

Neither the FCC nor OfCom require the provision of IP Relay, and therefore the system does not raise international legal issues in that regard, but rather it is the inherent nature of the service that raises international legal concerns. The anonymity and international scope of the internet provides a unique legal and policy problem – fraud. Because there is no special equipment required (only a browser and internet connection), anyone in the world can use IP Relay. IP Relay has no additional costs to the user, unlike traditional TRS long-distance fees for the underlying call. There are two distinct problems that could overlap: 1) persons from outside the U.S. using a U.S.-funded system and 2) persons without disabilities using IP Relay. In a glaring example, based on a spike in international IP Relay and anecdotal/statistical evidence that a large number of those calls were not being made by persons with disabilities, the FCC staff (and later the Commission) refused to fund international calling via IP relay.[70] Particularly disturbing was that hearing impaired TRS users were denied opportunities for CA response because a non-impaired user was monopolizing the CA. In addition, the sheer volume of international minutes threatened to push the Fund into the red. The decision was not made on extra-territoriality concerns, but rather on practical funding concerns. With reimbursement, IP Relay providers no longer allow users to make international calls, cutting off that use for individuals with disabilities.[71] Because the British system does

[69] http://neca.org/media/090805NASRAPRESENTATION.pdf (Last Visited Nov. 3, 2005)
[70] In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking), CC Dockets 90-571 and 98-67 and CG Docket 03-123, FCC 04-137, 19 FCC Rcd 12475, released June 30, 2004 at Note 368.
[71] See, http://www.consumer.att.com/relay/internet/ (Last Visited Nov. 27, 2005)

not yet have IP Relay capabilities, no such example is available in their system, but regulators will surely take heed of the U.S. experience with international concerns as they study the feasibility of IP Relay.

Given the international fraud and funding concerns, there are several possible actions regulators and/or the market can take, including registration, special-use technology, or special fees. Some mix of the three might actually provide the best solution. While there is some uneasiness in the United States about requiring sensitive medical information in order to utilize government services, [72] it is a technique used by transit agencies as a means to screen applicants for their ADA-compliant paratransit services.[73] Due to the importance of communication in modern society, it could be said there is a very strong analogy between transportation between points and transportation on the information network that would justify the use of a registration mechanism imposed by the FCC in order to use TRS. Because there is competition between TRS providers,[74] one provider would not be able to implement a registration system alone as consumers would quickly switch to another provider. Therefore, in order to solve the system-wide international legal/regulatory issue, the FCC and/or other national regulatory authorities would have to be the organization(s) imposing this remedy if chosen. There is a question as to whether registration and the use of assigned unique identifiers[75] to utilize the service should be required for all TRS services, or just IP Relay. Because other services (with the exception of VRS over IP Relay) require specialized equipment that an

[72] See, Watson v. City of Miami Beach, 177 F.3d 932 (11th Cir. 1999).
[73] See: Metro – MetroAccess Paratransit Information and Application Forms, http://wmata.com/metroaccess/eligibility.cfm (Last Visited Jan. 30, 2006). (Discussing the need for healthcare professional verification forms).
[74] see IP Relay, http://www.fcc.gov/cgb/consumerfacts/iprelay.html (Last Visited: Jan. 30 2006).
[75] Such as a username and password, which could be assigned randomly.

ordinary consumer would not purchase, the equipment itself serves as a barrier to entry for fraudulent users. Perhaps IP Relay could be the only registration-based system so that individuals who do not wish to provide medical information still have access to the other methods of TRS while ordinary able-bodied consumers would not be able to exploit the ease of use of IP Relay for fraudulent purposes. Such a distinction might lead to claims the FCC is no longer observing "functional equivalence" aims as VOIP becomes the predominant means of communication for the hearing community. At the same time, there is a chance that technology itself could make a registration system unnecessary. If IP Relay services can be incorporated in specialized mobile devices at modest cost[76] or are somehow linked to other adaptive technology (such as hearing aids), IP Relay would be like other TRS services where the purchase of specialized equipment serves as a low, but effective barrier to fraud. Perhaps a single VRS provider could be designated for IP Relay international calls to better screen calls (because the CA will quickly notice when neither side speaks ASL). However, because sign languages differ between countries and there is a high expense for the broadband connection for VRS, that model would not work. Another technological option would be to block IP addresses of individuals or areas of the world, but because of the ease of masking IP addresses, it would likely not be successful and does not address the problem of domestic fraud. Limiting international calls to non-IP formats (as the FCC has done) is an effective temporary stopgap because of necessity of special equipment for other forms of TRS, but as the entire phone system

[76] IP Relay can now be used on popular consumer handsets such as the RIM Blackberry and PalmOne Treo, but that availability [while great for relay users, See: Suzanne Robitaille, New Telecom Connections for the Deaf, Business Week Online, at http://www.businessweek.com/technology/content/oct2002/tc2002109_4505.htm (Last Visited Nov. 3 2005)] does not help distinguish between fraudulent and non-fraudulent use without access to consumer use records, which is currently a controversial topic in Congress and the FCC. See: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-263577A1.pdf

moves toward IP, it would likely be a violation of "functional equivalence" to hold back TRS.[77] It can be argued that just because the FCC stopped reimbursing the international calling minutes, that does not necessarily mean an intrepid competitor won't provide international access, but the most popular IP Relay services have responded by limiting calls to 10 digit numbers or outright banning international calling.[78]

Recommendation: National Regulatory Authorities should develop a registration system to provide international calling over IP Relay for qualified users while leaving other TRS methods free from registration requirements while at the same time encouraging technology-specific solutions.

B - Funding – A funding mechanism is required for a strong, innovative TRS system, but the source of the funding and contribution calculations are national questions with moral and international implications regarding fairness.

For the best TRS system possible, an obligation to spread the costs among all common carriers and all subscribers would be preferred because it allows for a pool of money as an incentive for technological innovation and quality service, yet that sharing mechanism could end up requiring domestic users to fund foreign programs and vice versa. The shared funding mechanism could draw its revenue from common carriers (via charitable or required payments) or from subscribers, but either way there is a concern about domestic funds used for international calling. Charitable provision of TRS should be dismissed out of hand because fewer risks will be taken with charitable money to provide innovative service because of a desire to avoid embarrassment to the donor by

[77] In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking), CC Dockets 90-571 and 98-67 and CG Docket 03-123, FCC 04-137, 19 FCC Rcd 12475, released June 30, 2004 at Note 368.

[78] See: http://www.hiprelay.com/, http://www.ip-relay.com/, https://www.sprintip.com/ for examples of the lack of international calling capability over IP Relay.

failure and a lack of for-profit incentive, preferring the status quo. In any event, given the proliferation of deserving telecommunications charities,[79] the chances of finding another large donor like BT are small to none. Requiring common carriers to foot the TRS bill by an effective tax may seem like a good solution, but in the end, the costs are merely passed on to consumers. For all subscribers to pay for the special needs of a few may seem unfair, but in the end the shared pool creates an incentive for innovation and customer recruitment and retention, therefore creating positive network effects.[80] There is an alternative that the shared funds could be provided from the public treasury, but it would still mean that all subscribers are funding the needs of a few. However, it may be preferable to have the users also contributing to the fund (assuming they pay taxes and are not exempt) as to level the playing field. Social welfare programs aimed at discrete populations can often prove to be unpopular and inefficient in America, but in a more socialist or communitarian government, they could provide many of the same benefits as a TRS fund (like guaranteed funding as an incentive and a lack of burden on individual users). The other problem with a public treasury funding mechanism is that the TRS system would then be subjected to the annual vulgarities of the budget process and would always be in limbo.. The United States uses this shared funding mechanism at the subscriber level, and OfCom has hinted at alternatives that could make IP Relay and/or TRS feasible, which is assumed to include a shared funding mechanism of some sort. [81] Perhaps a middle ground would be to base fund contributions off of subscriber use of the system via regulatory rulemaking. It would seem the statutory authorization is already

[79] Both the UN Foundation (www.unfoundation.org) and the Federal Communications Bar Association Foundation (www.fcba.org/foundation) provide charitable outlets with a communications worldview.
[80] Dennis L. Weisman, Assessing Market Power: The Trade-off Between Market Concentration and Multi-Market Participation, 1 J. Competition L. & Econ. 339 at n. 5.
[81] *USO FAQs* at 27-28.

available in America for the FCC to change the TRS model,[82] but in the U.K., OfCom would likely need new statutory authorization or a reinterpretation of the DDA. There could be a minimum pay-in, but at above a certain level the fund contribution would be tied to the amount of TRS subscribers or minutes. Such a funding mechanism would ensure that those companies that have as customers the most TRS subscribers pay in the most. It would also be an incentive to keep TRS services in-house and retain customers with internal cost-cutting and innovation because they could potentially receive more reimbursement than they payments. Or, it could be an incentive to get more TRS users so that reimbursement overcomes the pay-in rate. This scenario requires reimbursement levels to be set at a point where with good management and economies of scale, common carriers would be able to entirely recoup (and perhaps even profit) on their TRS offerings. However, there may be the side effect that companies would be unwilling to play the game and would try to dissuade TRS users from becoming subscribers, so a requirement that all common carriers provide TRS would be instrumental in stopping bad faith actions. In any event, some shared funding mechanism based off subscribers would be preferable.

Recommendation: National Regulatory Authorities should establish (or maintain) a shared funding mechanism tied to TRS usage in order to provide market demand for innovation, but the shared funding scheme must be accompanied by a requirement for TRS provision so free-riding is avoided.

Once a shared funding mechanism is chosen, the two key international concerns revolve around 1) extraterritorial funds in the contribution requirements and 2) domestic

[82] Telecommunications Act of 1996, Pub. LA. No. 104-104, 110 Stat. 56 (1996); 47 U.S.C. § 225

funds being used to reimburse international calls. Each is discussed in turn, but the emphasis is on the U.S. FCC because OfCom has not yet specifically addressed the issues.

The FCC has not yet responded to a 2004 petition to exclude international revenues from the Fund contribution calculation.[83] OfCom has not yet faced the issue because it does not have a shared funding mechanism, but because BT's customer base is no longer domestic-only,[84] requiring TRS provision is effectively taxing foreign non-users. Is it fair and/or an exercise of extra-territorial jurisdiction by the FCC or OfCom to include these revenues? On the fairness point, it could be argued that the foreign customers will never see the benefits of the contributions because TRS is limited to Americans. There is even the possibility of a double-taxation if the country where the international revenues were created taxes them for the general treasury and/or universal service obligations in that country's domestic laws. Beyond the fairness point, there is also an extra-territoriality concern. The D.C. Circuit has given the FCC some leeway in extra-territorial applicability for setting settlement rates for international calling.[85] In that case, the court found because the regulated parties were actually domestic carriers forced not to pay more than a certain rate, there was no extra-territorial jurisdiction. The criticism of the case was that domestic companies had to ask the FCC to enforce against themselves. Granted, in the case of the Fund, the common carriers have been licensed to operate in the U.S. and the discussion is only about foreign revenues, not entirely foreign

[83] Telco Group, Inc. Files Petition for Declaratory Ruling or Waiver to Exclude International Revenues from the Revenue Base Used to Calculate Payment to the Interstate TRS Fund, (Public Notice), CC Docket 98-67, DA 04-3352, 19 FCC Rcd 20965, released October 25, 2004.
[84] "BT is a leading provider of communications solutions serving customers throughout the world." BT Group Homepage, http://www.btplc.com (Last Visited: Jan. 30, 2006).
[85] Cable & Wireless PLC v. FCC, 166 F.3d 1224 (D.C. Cir. 1999).

companies. Because the FCC is only regulating domestically licensed common carriers in order to sustain U.S. business perhaps it is not reaching past its sphere of authority. However, that case could also be read to denote a line between domestic carriers and foreign carriers that could be breached by requiring inclusion of international revenues beyond the FCC's purview. Telco's petition could go either way in subsequent litigation, but it is likely the FCC would lose because of forced repatriation of revenues without an explicit congressional extraterritorial command.[86] The FCC would be on safer shores to discontinue the inclusion of foreign revenues in the calculation by rulemaking or adjudication.[87] OfCom is a relatively new entity on the British regulatory scene because of the combination of several agencies to create it in order to comply with E.U. Directive.[88] It is therefore unknown what sort of deference the British courts and/or political branches would provide to OfCom's presumed requirement that BT use pooled resources (which presumably includes international revenues) to fund TypeTalk.

Recommendation: The FCC (and other National Regulatory Authorities) would be on the strongest legal ground to discontinue the utilization of foreign revenues in fund contribution formulas, but as a broader matter, a fund formula based on TRS usage would alleviate these concerns.

On the second issue of reimbursement, when an American makes a call from Seattle to Vancouver, should American subscribers be funding the TRS costs? The same question could be asked as to whether British subscribers of BT should be cross-subsidizing the required TRS service for a call from London to Paris, notwithstanding the

[86] Spector v. Norwegian Cruise Line Ltd., 125 S.Ct. 2169 (2005).
[87] 5 U.S.C. 554
[88] Super-Regulator Ofcom Launches, http://news.bbc.co.uk/1/hi/entertainment/tv_and_radio/3354093.stm (Last Visited Nov. 3, 2005).

lack of a discount for the underlying price international calling. To address this issue, it must be assumed that a form of TRS other than IP Relay is being utilized with some user cost for the underlying call.[89] With those assumptions, calling from the US to Canada seems to fit within the ADA and FCC regulatory framework and within the language of the DDA, even though it has not bee used as a basis for TypeTalk. Indeed, language that states "any type of call normally provided by the common carrier,"[90] has led the FCC to reimburse international TRS minutes, although NECA does not separate international statistics. In the reverse situation, where the TRS Fund or BT internal processes reimburse a call from Canada to the U.S. (or Paris to London) there might be more apprehension on the part of the American or British consumer because it was not initiated in domestically. NECA currently funds such calls, but it is more difficult to describe a functional equivalence right to receive a call than it is to make a call, especially since an ordinary citizen most likely rarely receives few incoming international calls. A foreign government, of course, will not mind the reimbursement chance for its citizen. Since outgoing calls as a matter of fairness should be funded by the nation of initiation (much like international calling settlement negotiations), a process like the settlement negotiations described in the Cable & Wireless case above would be ideal.

Recommendation: Outgoing international calls should be funded by individual nations through negotiating a process similar to the current international settlement process.

D - Standards – Problems with conflicting international obligations could be resolved via international negotiation on technological, legal, and regulatory standards.

[89] As discussed above, international calling on IP Relay is no longer reimbursed by the FCC or provided by carriers.

[90] In the Matter of Telecommunications Services for Individuals with Hearings and Speech Disabilities and the Americans with Disabilities Act of 1990, (Report and Order and Request for Comments), CC Docket 90-571, FCC 91-213, 6 FCC Rcd 4657, released July 26, 1991 at ¶ 18.

Both the U.S. and U.K. regulators require TRS provision, which seems to be solely domestic in character, even if the product was international calling, but a combination of a lack of interoperability and that requirement could cause international legal strife and cause extraterritorial application of laws and regulations. The lack of international standards is a mixed blessing. On one hand, it ensures that domestically funded systems are limited to the national level. On the other hand, a lack of standards slows international discourse and leads to international conflicts of law and technology. What if an individual who wanted to call someone who also used TRS in another country and neither could utilize the CA because of interoperability concerns even though the common carrier was required to provide it? Both the conflict of technologies and the conflict of laws would need to be addressed. Even within the U.S., concerns about interoperability of TRS have led to a APA petition,[91] and it would not be hard to see a lack of standardization limiting the growth of TRS. It is currently possible to call from the U.S. to the U.K. using the most basic form of TRS, but not other forms of TRS because of a lack of standardization.[92] As with the funding mechanism, international negotiations and/or the ITU may be a solution. Yet, the ITU is a slow decision-making body and international negotiations can also be slow, expensive, and cumbersome. Because of the fast pace of telecommunications technology, international diplomatic efforts could always be playing catch-up. The ITU's current standard for only the most

[91] Petition for Declaratory Ruling Filed by the California Coalition of Agencies Serving the Deaf and Hard of Hearing (CCASDHH) Concerning Video Relay Service (VRS) Interoperability, (Public Notice), CC Docket No. 98-67 and CG Docket No. 03-123, DA 05-509, released March 1, 2005.

[92] http://www.typetalk.org/html/informationservice/informationserv_downloads.asp (Last Visited Nov. 27, 2004) There may be an ability to clone an IP address and attempt to use a U.S. IP system for the call.

basic form of TRS,[93] evidences such a problem. In that event, perhaps private industry bodies with consultation from the FCC, OfCom, the ITU and other national regulatory authorities would be the best forum to set international technical standards for inoperability. In both the legal and technical domain, the FCC and OfCom could also create exceptions to the requirement for international calling, but unlike fostering standardization development, such a move would just eliminate the consequences of separate systems and would not support the effort required for common standards. Alternatively, if a country eschews the free market approach with a blanket requirement, and instead designates a single carrier as the TRS provider and sets fair and reasonable rates (with public treasury compensation) would provide a slow, inefficient, and costly TRS system (like state-owned telecommunications companies) as a political measure, but would not resolve any of the international concerns unless the regulators participate in international standardization negotiations and understand the extraterritoriality of funding questions. Additionally, as standardization grows, foreign language TRS provision will increase and will exacerbate the concerns listed above. In July 2005, the FCC agreed to reimburse for ASL to Spanish VRS.[94] Since some forms of VRS still are IP based, it is presumed that reimbursable international TRS calling from the U.S. to Spanish-speaking nations could increase greatly. While VRS does not pose much risk of fraud because a CA will quickly notice when neither side knows ASL, attempted fraud would still deprive users of CA time. The use of IP formats and VRS as a means to prevent fraud could eventually mean that countries could collaborate to create a supra-national TRS regime

[93] http://www.itu.int/itudoc/itu-t/com16/contr/125.html (Last Visited Nov. 27, 2004)
[94] In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, (Order on Reconsideration), FCC 05-139, adopted July 14, 2005, released July 19, 2005.

with shared capabilities in a variety of languages. The European Union could be a candidate for a forum for such a supra-national system that would remove many standardization concerns in the international calling context because if their membership of a large number of industrialized states could agree on an internal protocol, it could easily become the predominant world standard. The EU previously used ambiguous directives (which require national harmonization legislation) for universal service issues.[95] Directives would not be the most appropriate manner to institute a European-wide TRS system because slight differences in national legislation and regulation could doom a single TRS market. The use of EU regulations, which are directly binding, could provide a strong European TRS system. However, the EU's foray into telecommunications has been relatively recent with a focus on competition policy,[96] and given the deference traditionally afforded to National Regulatory Authorities to determine universal service obligations from ambiguous directive language it is doubtful the EU would force a TRS system upon its members from scratch.[97]

Recommendation: National Regulatory Authorities should encourage and work with national diplomatic corps to speed the formulation of TRS technical standards in an international forum, whether in a private industry group or the ITU.

IV - Conclusion – A free-market telecommunications system with a requirement for TRS provision and the use of a shared funding mechanism will provide the strongest

[95] http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_108/l_10820020424en00510077.pdf (Last Visited Jan. 3, 2006).

[96] Directive 2002/21 of March 7, 2002, on a Common Regulatory Framework for Electronic Communications
Networks and Services, O.J. 2002 L108/33

[97] J. Scott Marcus, The Potential Relevance to the United States of the European Union's Newly Adopted Regulatory Framework for Telecommunications, 17 at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-224213A2.pdf (Last Visited: Jan. 6, 2006) (discussing the interaction between NRAs and the EU for the related Framework Directive. The Universal Service Directive is even more ambiguous and lacks language giving the EU the ability to set definitions and/or overturn NRA contentions).

domestic TRS regime, which can be supplemented by international standardization to overcome international technological, legal, and regulatory concerns.

By utilizing a free-market approach with competition on service with a requirement for TRS provision and a shared funding mechanism, nations can ensure the best TRS systems for their citizens, but may face international legal issues. Concerns of extra-territoriality of requirements and funding can be alleviated, however, with the use of international standardization that in the far future could lead to a supra-national TRS system. Specific recommendations include: 1) use of a registration system for IP Relay, 2) creation and/or maintenance of a shared funding mechanism tied to TRS usage, 3) a requirement of TRS provision supplementing the shared funding mechanism, 4) removal of international revenues from fund contribution formulas, 5) international negotiation in private industry bodies or the ITU for promulgation of TRS technology industry-wide standards.. It is of utmost importance that politicians and regulators consider the international effects of their choices regarding requirements, funding, and standardization of TRS systems. After all, "accessing communication services is vital to the ability of the individuals with disabilities to participate fully in society."[98]

[98] ADA Anniversary Congratulatory letter from FCC Chairman Kevin J. Martin, www.ftp.fcc.gov/cgb/dro/martinadaletter.htm (Last visited Nov. 4, 2005).