Disability Access Subcommittee of the Federal Communications Commission's Consumer/Disability Telecommunications Advisory Committee

Subcommittee Report
Micaela Tucker, Chairperson

June 1, 2002

Contents:

1. DEFINITIONS

Note: some definitions are collected from the Federal Standard 1037C, *Glossary of Telecommunication Terms,* 1996. at: http://glossary.its.bldrdoc.gov/fs-1037/fs-1037c.htm

3G – Third generation telecommunications standards and technology. The main difference between 3G and current telecommunications technology is availability of broadband networks anabling services such as video over wireless, voice telephony over the Internet and fast data transmission.

Alternate carriers – Those carriers which do not fall under the common carrier definition

Alternate services – Those services which are not included in the services outlined in the common carrier definition; modes of communications covered by NECA guidelines; for example video relay services.

ASL – American Sign Language

Basic Network Functionality – the definition of basic network functionality changes over time and depending on market expectations and de facto standards. Basic functionality includes making calls, accessing the caller, caller information, network or call status (busy, dial tone, ringing tone) and operator access.

Bluetooth – short wave radio transmission standard between electronic information technology commonly understood as a wireless connection or wireless cable between devices such as computers and printers.

Common Carrier – a commercial telecommunications service; a telecommunications company that holds itself out to the public for hire to provide communications transmission services. In the United States, such companies are usually subject to regulation by Federal and state regulatory commissions.

Functional Equivalence – for products, services or other designs, the same result is achieved in some other fashion. In Section 508 there are the high level functional performance specifications (usable without vision, usable with low vision, etc.) then there are technical specifications,which describe how to achieve accessibility for specific products. Products which do not meet the technical specifications must design alternate access according to the functional performace specifications. The result should be “functional equivalence”.

IP – Internet Protocol. A standard protocol designed for use in interconnected systems of packet-switched computer communication networks (common voice networks are circuit switched). The Internet protocol provides for transmitting blocks of data from sources to destinations – either in complete blocks or in fragments if necessary -- where sources and destinations are hosts identified by fixed-length addresses.

IVR (Interactive voice response) – a network and information management system using automated menus to answer and route incoming calls. A common menu option for users in an IVR is “select 1 to continue in English; 2 for Spanish.” Also called AVR, automated voice reponse system.

MMR – Market Monitoring Report. Periodic review of industry progress on Section 255 compliance.

Multi-modal access – access to the same information via several different communication modes, for example: voice , text or video.

NECA fund – National Exchange Carriers Association fund. Used to cover expenses associated with making telecommunications accessible.

Prototype – Pre-production version of a product. Prototypes can range from non-functioning mechanical models to working products in testing

Signalling – audio, text or other visual indicators surrounding basic network functions. Signalling can be obvious to the user, for example ringing signals and busy signals or caller identification. Signalling can also be "hidden" from the user and include billing status and line status as well as available sevices to that line.

Speaker dependent voice recognition – voice control feature requiring the user to train the system; ideal for users with distinctive vocal qualities.

Speaker independent voice recognition – voice control feature designed to respond to a wide variety of vocal commands without training; does not respond well to unusual vocal qualities.

STS – Speech-to-speech (seeTRS, telecommunications relay service).

TRS – Telecommunications Relay Service. Operator assisted TDD/TTY call, usually from a TDD/TTY user to a regular telephone. The operator types the voice input for the TDD/TTY user and reads the text to the regular telephone user. Other relay systems provide: internet messaging systems for text communication, speech translation for people with speech disabilities or Sign Language interpretation for non-text, non-voice communication.

Voice Recognition – a software feature allowing vocal control of a product. Voice recognition can be speaker independent or speaker dependent.

VOIP or VoIP – Voice telephony over Internet Protocol – Voice telephone calls using Internet lines instead of regular voice telephone lines.

2. RECOMMEDED PRIORITIES:

2.1 List of Priority items as submitted by the subcommittee

Through Subcommittee discussion, over e-mail, we have arrived at the following list of priorities for action and further investigation from an original list of twenty items. Below are the items and a brief description. Items are not in order of priority. Consensus has not yet been reached on order.

1) **Functional Equivalency definition:** Quality assurance through clear definitions of vocabulary and measurements in disability related FCC ruling. E.g. "Functional Equivalent."
2) **Outreach and education**: Includes TRS consumer education; education/technical assistance for consumers (including speech-to-speech); better education on FCC consumer complaint process; education and technical assistance for federally funded agencies; education on available technology for consumers and federally funded agencies;

3) **Section 255 compliance appraisal:** Conduct an honest appraisal of progress and compliance on Section 255 of the Telecommunications Act of 1996 (Revised Communications Act of 1934)
4) **Basic Access**: Better access to basic network functionality.
5) **Reimbursement for alternate carriers and/or alternate services**: under this category, FCC reimbursement for providing common carrier solutions if the company is not a common carrier; FCC to reimburse for other means of communication by NECA fund; Reimburse companies for video relay even if not a common carrier.
6) **Universal multi-modal access:** Includes improving & encouraging multi-modal access; Universal Access to information a) voice access b) voice to text c) text to voice d) access to the internet e) text to ASL f) speech-to-speech..
7) **Standards**: Creation of standards that allows equipment manufacturers of assistive technology and mass market products to find common ground (using old versus new technology).
8) **Signaling**: Investigate the use of signaling 'handicap/disability indicators'
9) **Focus on voice services**: Investigate and improve progress of access to enhanced services: such as IVR.
10) **Emerging and future technologies**: Includes: considering the accessibility of emerging technologies by encouraging companies to share best practices in their processes (not product information); Encouraging early testing with disabled users by encouraging confidentiality in the process.

2.2 History of priority items:

The original list of priorities was created and compiled at the first meeting of the CDTAC during the subcommittee breakout session. These items were posted to the Subcommittee email list for feedback (see appendix for specific comments). Primary commenters were Jim Tobias, Judy Harkins, Bob Chrostowski, Brenda Battat, Bob Segalman, Shelley Nixon, Andy Lange, Richard Ellis, Jeffrey Pledger, Stephen Berger, Kevin Balam, Paul Ludwick, Gilbert Becker, and Joseph Gordon.

Original list of items:

1) Quality assurance through clear definitions of vocabulary and measurements in disability related FCC ruling. E.g. “Functional Equivalent.”
2) Consumer outreach and education – especially on TRS.
3) Conduct on honest appraisal of progress and compliance on Section 255.
4) Create better educational programs for consumer understanding of FCC consumer complaint process.
5) Better access to basic network functionality.
6) FCC reimbursement for providing communication solutions if the company is not a common carrier.
7) Improve and encourage multi-modal access to information. E.g. voice recognition and web access.
8) Technical assistance for consumers.

9) Creation of standards that allows equipment manufacturers to find common ground (using old versus new technology).
10) FCC to consider reimbursement for other means of communication by NECA fund
11) Reimburse companies who want to provide video relay if the company is not a common carrier.
12) Universal access to information:
    a. Voice access.
    b. Voice to text.
    c. Text to voice.
    d. Access to Internet.
13) Address the trend of removing pay phones because of the assumptions that everyone is using cell phones/lack of profitability. Many people still use pay phones as their only means of communication 'on-the-go.'
14) Allocate a permanent FM frequency for assistive listening devices and audio description.
    a. Constant hopping or reallocation of these frequency threatens their continued availability for these purposes.
    b. Several different devices are not compatible because of the lack of allocated spectrum.
15) Explore access issues with Bluetooth technology.
16) Consider the accessibility of emerging technologies.
17) Investigate the use of signaling 'handicap/disability indicators'.
18) Focus on voice services – investigate and improve progress of access to enhanced services: such as IVR.
19) Create a formal recognition at the FCC for companies that make progress in telecommunications access.
20) Conduct more research on how to test innovations from companies while ensuring confidentiality of competitive information.

3. NON-PRIORITY LIST ITEMS OF DISCUSSION BETWEEN MEETINGS

3.1 Clarification of Items under FCC authority

Does the FCC have authority to enable better and more confidential collaboration between consumers and manufacturer research and development teams? If this cannot be done directly, can it be done through standards work?

What is the current status of FCC jurisdiction over the Internet? For instance, does the FCC have authority over methods of information delivery in general? Will the FCC have authority over voice telephony over IP (VOIP) only?

What type of access issues concerning Bluetooth technology is under FCC domain?

3.2 Funding availability for recommended items

As the subcommittee suggests ideas about how to improve awareness of disability-related issues, funding becomes an important factor in deciding how far to pursue them. For instance, one of the priorities is consumer outreach and education. The potential solutions for improving outreach and education would cost money. There are several possible sources for funding if it is not available directly from the FCC. There are also several other agencies that might be employed to help with such efforts. However, the subcommittee needs to know the status of funds so that it can make recommendations for both in-house and external activities.

3.3 Recommendation and request for subcommittee education

Members of the Disability Access Subcommittee recommend making training modules available to the Committee on various technologies relevant to the business of the Committee. Such technology topics may include but are not limited to: new regulatory models, 3G wireless, Internet telephony, and Speech to speech relay.

3.4 Speech to speech TRS promotion

Several members of the subcommittee feel it is vital that the FCC insure that outreach and awareness program requirements are established for Speech-to-Speech Telephone Relay Service. This has now been addressed in a presentation to the CDTAC. The Subcommittee hopes to see continued support for outreach on this issue.

3.5 Questions from Subcommittee to be addressed

The following questions need to be addressed by personnel from the FCC. They are meant to focus the subcommittee work on areas where it can be most effective and to prevent time being spent on issues which do not fall under the Committee's or the Commission's purview.

How can the FCC act to ensure that new technology "improvements" do not remove accessibility features for people who depend on them and who have no other alternatives. The example was given of voice recognition software becoming more voice independent but simultaneously less trainable for people with severe speech impairments. There are already voice recognition software systems that have been discontinued, leaving consumers stranded and without options for computer access.

How is the FCC keeping track of TRS complaints filed with the states? Is it only tracked in the five-year state certification? If so, is it possible to improve tracking?

How can the FCC better combine incentives for companies and agencies with detailed oversight to ensure that the real needs of disabled customers are being addressed?

Does the FCC have the authority to recommend or call for standards making?

4. SUBCOMMITTEE OBJECTIVES

4.1 Establish Working Groups Concerning TRS and Section 255 Issues

Most of the Subcommittee's priorities fall under one of the two categories, TRS or Section 255. Therefore, the Subcommittee plans to establish two working groups to addresses our priorities. Other issues -- possibly warranting a working group on standards -- are under consideration.

TRS Workgroup issues would include quality assurance issues, outreach and education for a wide range of constituencies on a wide range of topics, better access to basic network functionality and reimbursement to carriers for other means of communication such as video or to carriers not falling under the "common carrier" label.

Subcommittee Workgroup concerns relevant to Section 255 include appraising progress to date on compliance, ensuring access to basic network functionality, improving public awareness of the complaint process, encouraging multi-modal access (e.g. voice controlled Internet), improving access to voice services such as interactive voice response systems, ensuring emerging technologies incorporate accessible design and do not push earlier more accessible technology out of the market, exploring prototype testing schemes which will provide valuable user input while protecting company confidentiality and competitive information

Both of these committees would also address the need for recognition of companies' and agencies' progress in these areas.

4.2 Working Group Objectives and Procedures

Business of both the TRS and Section 255 Workgroups will be conducted over the existing Disabilities Subcommittee e-mail list and will be open to participation by all Committee and Subcommittee members and the public. Membership and leadership from the Subcommittee on the working groups has not yet been determined. The objectives of each workgroup will be to investigate the priorities, advise on further action and make recommendations to the Subcommittee. The Subcommittee will then consider, discuss and dispose of these recommendations to either the full Committee or back to the Workgroup if appropriate.

5. APPENDIX

5.1 Correspondence relevant to priority list items: Discussion 1

Micaela - If you are asking us to vote on our top 3 priorities, my choices are:

1) Quality assurance through clear definitions of vocabulary and measurements in disability related FCC ruling. E.g. "Functional Equivalent."
2) Consumer outreach and education – especially on TRS
3) Create better educational programs for consumer understanding of FCC consumer complaint process.

These 3 issues affect Speech to Speech which is my main concern.
- Bob

To: CDTAC Disability Subcommittee

I must add to Jim's comment that it is vital that the FCC insure that outreach and awareness program requirements are established for Speech to Speech (STS), the telephone access service for people with speech disabilities (See http://www.stsnews.com for more information on STS.) Karen Strauss's comments at our March meeting on this issue reassured me that the FCC is moving in this direction.

Thanks to the efforts of Judy Viera and Gil Becker of our committee, the FCC's Advisory Committee on the Interstate TRS Fund at NECA recently took an important first step by allocating significant funds to TRS/STS awareness and outreach. It is vital that an appropriate portion of this money go to STS and that those funds are used effectively. Historically, people with speech disabilities have not advocated for such funds while the Deaf and Hard-of-Hearing Communities have done so. Many state PUCs and relay services do not know how to do STS outreach and are not motivated to do it. People with speech disabilities (PSDs) often have other disabilities which prevent them from being effective advocates and need these requirements to insure that advocacy occurs in all states.

Right now, effective STS outreach and consumer training programs in several states have resulted in recent, comparatively high monthly outbound call volumes from this very isolated community. In Minnesota, outreach staff often go into consumers' home to train these consumers, many of whom are house-bound with disabilities similar to mine.

Recent data show: CA (4,000 to 5,000 calls), MN (800 calls for March 2000), and MD and WA (200 to 600 calls each). .Unfortunately, as far as I can determine most of the other states have much lower call volumes. Some states have close to zero calls simply because of insufficient outreach. Our committee members from the telephone companies may have more up-to-date call volume data.

About 13% of perspective TRS users are people who could use STS. This figure may change as new disability census data becomes available.

Most of my professional work over the last decade has been devoted to the establishment and promotion of STS, first in California and then nationally and in Australia. Sweden has a similar service. I have a 20 minute video on STS which I'd like to show at one of our future committee meetings. This video will show you how thousands of people with speech disabilities can use the telephone.

Again, commitment to effective outreach and consumer training by the STS providers (Sprint, MCI, AT&T, Hamilton, VISTA, GTE, SBC, etc.) and the PUCs in each state is essential

- Bob

Bob Segalman, Ph.D.
Founder of Speech-to-Speech
1-800-854-7784 (ask for me at 916-263-8689)
To Learn More about STS see http://www.stsnews.com

>"2) Consumer outreach and education? especially on TRS JT: this is an important state TRS function right now, but there are wide variations between states. Should the FCC establish outreach program requirements as part of its TRS docket? Also, in general there is too little consumer and advocate training on telecom technology. This actually holds back advocacy, as it's hard to see the important issues. Also industry does not really respect under informed stakeholders. Often results in unnecessary conflicts.
Also, how can we reach the large majority of consumers who do not identify themselves as disabled and are not? joiners¶? /JT"
>

Hi Micalea,

I vote for these top 3 issues (ironically, there were the top three on the list!).

1) Quality assurance through clear definitions of vocabulary and measurements in disability related FCC ruling. E.g. "Functional Equivalent."

2) Consumer outreach and education - especially on TRS

3) Conduct on honest appraisal of progress and compliance on Section 255.

Thanks!
Andy Lange

Hello fellow committee members -

This is Shelley Nixon. I just finished the last of my finals yesterday -- YEA! -- And I am now

going to turn to answering Micaela's call for discussion. Mr. Tobias, I will use your remarks as a jumping off point. I am going to just address the first two for now --- and see what answers or discussion I generate. I am personally going to try to address two or three each day, and work my way down the list. I know that all of you are MUCH more knowledgeable about these issues, so please bear with me if I ask for explanations.

Here goes --

1) **Quality assurance through clear definitions of vocabulary and measurements in disability related FCC ruling, e.g. 'functional equivalent'** -- (First of all, can someone please tell me what ADIT is, and then for awhile anyway, can everyone define their acronyms in case some of us are unfamiliar.)

My questions: if the definitions/vocabulary are first issued in gov't rulings, how would "industry consensus meaning" (from Mr. Tobias' remarks) evolve? Does anyone have any ideas on that? I think it would be easy to end up suggesting "industry consensus" but maybe we need to have a clear definition of that and how it could happen. Also, it sounds like government intervention in any further definitions (i.e. reference to food labeling) would be undesirable -- I would like to know why that is an unacceptable route. In general, I think clear definitions are always a pre-requisite to adequate compliance. What has been the roadblock?

2) **Consumer outreach and education -- especially on TRS.** I totally agree. How can we advocate for ourselves if we do not know what is available?! I look back on my own experiences and note that there were *many* missed opportunities for me to have received information /education on what telecommunication adaptations are available. For example: Under IDEA (Indiv. w/ disabilities education act) - there are IEPs (individualized educational plans) required yearly in schools -- most specifically, the Transition component which kicks in at age 16. This would have been an ideal time for me and my family to have received information. It was never mentioned.

When I contacted OVR (Office of Voc. Rehab) after high school graduation, my case manager never mentioned anything about TRS or any other consumer education. My local CIL (Center for Independent Living -- a federal network) has a huge resource bank, and I have taken classes there, and I have never been educated about telecommunication resources.

My Disability Advisor on campus --- every campus has one. I'm sure she doesn't know anymore about it than I, but what a wonderful opportunity to distribute information. I attend (and my theater group performs) at a regional Disabilities Expo in New Jersey every year. I have never seen any information or booths there. Libraries, bookmobiles..... I think you get my point by now.

So....I throw this out to each of you to examine your own experiences and identify where *your* missed opportunities for consumer outreach were. Then, maybe we can have some solid suggestions on how to plug those holes.

That's all for now, thanks --
Shelley ---
As I continue down the list ---

3) **Conduct an honest appraisal of progress and compliance on Section 255.** I agree with Mr. Tobias' comments.

4) **Create better educational programs for consumer understanding of FCC consumer complaint process.** I agree. I also tie this to #2 on consumer outreach & education. The complaint process could be given out at the same time.

5) **Better access to the basic network functionality.** I second Mr. Tobias' comments. I don't know what this means.

6) **FCC reimbursement for providing communication solutions if the company is not a common carrier.** Does the FCC have money in its budget to do this? If not, is it realistic to think it can be gotten?

7) **Improve and encourage multi-modal access to information. e.g. voice recognition and web access.** This is my #1 issue. I must use voice recognition and while there are many "mainstream" items that may offer voice accessibility to the web, there are few (if any) that I know of which accommodate dysarthic speech -- meaning not totally clear, crisp speech. My voice changes with my muscle tone, and of course fatigue. If there *are* products out there for people like myself, then I have not been able to locate them, which speaks to information dissemination for the disabled population. Also, we cannot forget that universal web design plays a huge part in surfing the web. How is universal web design being encouraged? How is development of voice recognition for those with less than perfect speech being encouraged in the industry? The digital divide is getting larger for me in my college classes. As my classes are becoming more web-integrated, professors are expecting wider, more sophisticated research and many are using email for assignments -- lack of high-grade voice recognition to the web & email becomes more critical. (By the way, I would love to hear any and all ideas from you if you know of a product or products that provide such voice input/output for the web.)

That's all for now...
Shelley

I echo Shelley's concern about the lack of a high-grade voice recognition system I haven't found a voice recognition system that can understand my variable whisper. I am open to suggestion. - Bob

Bob Segalman, Ph.D.
Founder of Speech-to-Speech

1-800-854-7784 (ask for me at 916-263-8689)
To Learn More about STS see http://www.stsnews.com

Bob,

Many of the problems I have seen with voice recognition can be directly tied back to either the input mechanism or the environment where the voice recognition is being done in.

First, you need to throw away the cheap microphone which comes with just about every voice recognition system I have seen and buy a high quality lavaliere or cordal (single directional) headset microphone. You must stay away from the omni directional microphone as they pick up too much background ambient noise. Specifically in your situation with such a low volume of enunciation in your voice, this is imperative to success. Spend a $100 - $200 on a high quality microphone. Did you ever wonder why speech recognition headset mics can be bought for $29.95 per microphone?

Secondly, you need to try to remove any background ambient noises that are within your control. A very good one that most people don't know about is the electro-magnetic radiation that comes from overhead fluorescent lighting. This has a direct effect on the ability of voice recognition systems to work in what I would call an acceptable range.

Third, you must practice, practice and then practice some more with any of the speech recognition systems out there. The more you use it and fine tune it to your voice the better it will become. Sorry, the computer from Star Trek or HAL from 2001 a Space Odyssey isn't quite there just yet, but it will be there. Hope this helps.

Jeffrey Pledger
President, Able TV

Mr. Pledger (and all other interested CDTAC members) -

Re: your response to Bob Segalman about voice recognition

Thank you for your reply. It is obvious that you have a more-than-average knowledge base on voice recognition. It is true what you say about the quality of the microphone. I have been using Power Secretary (works only on MAC) for 5 years and the microphone originally cost an *amazing* $1,000 -- but after several years of searching and finding that Power Secretary was the *only* word processing software that allowed trainability and eventual recognition of my voice -- we bought the overly priced package. It took me an entire summer to build a basic voice file, working every day, as you described. And, then of course, I have been building it ever since. So what, you may be wondering, is my problem? The answers point in several directions:

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(1) Foremost, I recently discovered that Power Secretary is no longer being made or marketed, and therefore no longer technically supported. Discovering that, I immediately bought a second microphone (the key component) before it went out of stock entirely -- and discovered that the price had dramatically dropped to the bargain basement price of *only* $400 (sarcasm noted, I hope). But, that illustrates why Power Secretary is no longer being marketed: there was simply not enough demand.

Tie this thought to the recent discussions online about "newer technology" vs. "old technology". There are some of us out here who *use* "old" and actually *need* "the "old". The newer technology is getting smaller and lighter (which means microscopic buttons to push, which rules out most of the physically disabled population). The newer voice recognition software is definitely more marketable...yet it is *less* trainable for impaired speech. Discontinuing "old" technology leaves many of us **back** at square one....and the disarming thing is that the industry people inventing/selling this new technology continue to advertise how fast they are moving **forward.**

(2) Which brings me to the next point: there is this huge myth 'out there' that everything is going to be voice controlled soon...and won't that be wonderful for all of us who have difficulty using our limbs! (It's not just our limbs, by the way....Bob rightly pointed out that many reasons for physical disability include brain damage....and quite often breath control is affected.) The scenario you described as being necessary for successful voice recognition (i.e. quiet room, no background noise, not even fluorescent lighting, etc) is certainly *far* from mainstream usage! That scenario only isolates us to the max. Wireless doesn't help us a bit if we can't use the tiny buttons and the background noise of the real world prevents voice control. This myth about "easy to use" and "anyone can do it" (which is on all the packages) is exactly that....a myth.

So, where is this diatribe going?
(1) How can people like Bob Segalman and myself dispel the myth that the current push on voice controlled technology is *not* including those people who may need it most?
(2) How can we encourage companies who write this stuff to actually include or consult the people who *need* it ....and to consult us in the *design* phase? How can we get technology companies to understand the hidden barriers in their designs? For example, to train new words on Power Secretary one must spell each letter using the phonetic alphabet (Alpha, Beta, Charlie...) I challenge all of you to verbally write a coherent sentence using that alphabet form. Try it. It requires a very, very high level of mental organization...which is sometimes impossible due to the brain injury that is *causing* the physical disability.
(3) How can we protect ourselves from the discontinuation of "old" technology that we find helpful....when it is being discontinued because the market share is too small? Profitability rules.
(4) And....as always I continue to beat this drum....how do we get voice access that allows us to surf the web, use email and IM....that doesn't require us to sit alone in a baffled, noiseless room hooked to an expensive, space-age microphone that is so sensitive it requires null macros for each sigh (as mine does)?

So, yes....HAL is not available yet. I understand that. But I fear that the HAL which industry is

moving toward will best serve the able bodied...and the world at large will continue to believe they have met *our* needs.

As always...I invite discussion,

Shelley

Shelley,

you raise some excellent points and I would offer the following thoughts on how to best interact with industry to influence product development. What is needed is a simple (not easy but simple) 3 step process. First, human needs must be translated into engineering specifications. Second, those specification need to be vetted through a review process for wide recognition. Third, those now consensus specifications need to be available to product developers when they are planning new products.

So how is this done?

The first step is illustrated by your E-Mail and the other notes on this topic. However, this discussion will soon pass away and may or may not have an impact. It would be very helpful to have some go the extra mile and write it up into an article or set of articles so that it will have a more lasting presence. AAES (Association of Access Engineering Specialists) has been publishing articles like this in the NARTE News, which gets it in front of a number of engineers, in this case about 7000 engineers. Published articles can also be referenced in the future.

The second step for engineering specifications is normally done by developing a document through a recognized consensus standards process. These working groups are best conducted through a "REAL" standards group, recognized by ANSI, such as the IEEE, TIA, ATIS etc. Anyone can proclaim themselves "king" and put the word standard on a document they write. But the "REAL" standards process is carefully guarded to assure openness, fairness and inclusion of all materially affected parties. We get a lot of rump standards in this area by self-appointed groups and they usually don't accomplish much. Going thru the consensus process takes a lot of time and effort but at the end there is usually wide spread by-in.

Once that work is complete and a consensus engineering specification is available it must be promoted to the target industry. Sometimes that is easy and sometimes it is very hard. However, at this point you have a well written and technically specific specification. The task is to convince product planners that it is in their business interest to follow it.

For 20 some years I have worked in this system. It takes a lot of work and it isn't quick but it work and works well. So my encouragement would be that the next step on this issue is to develop and publish articles on this topic and get those in front of product planners and engineers.

Best Regards,
Stephen Berger ---

Hi everyone -

This is Shelley and I am still working my way down the list. All of you must be looking at this by now and wondering *when* will she *ever* get done?? I promise I won't be filling your email box daily for much longer. I am trying to get this done before I start my summer job in a couple of weeks. back to # 4, first - I read with interest that the TRS complaints must be filed with the states. And that there is no central source of information about how many complaints are filed, or resolved --- except in the summary part of the state certification process to the FCC every 5 years? So, the FCC really doesn't know how effectively the states are responding. Is this still the case, or has it changed?

Continuing with # 8.

8. **Technical Assistance for Consumers**
Mr. Tobias, I agree with you. This is imperative. When students are still in elementary, middle & high school and are covered by IDEA, there is (hopefully!) some tech assistance available to them via their yearly IEPs. (However, one of the problems is that our colleges & universities have not kept up with the times and they are not turning out teachers that have been trained in assistive technology and AT assessment. Even Special Ed teachers are lacking. So, usually there is one "tech-y" that ends up advising a whole district, rather than a district of informed teachers.) Once those students leave the umbrella of the IDEA, that tech assistance disappears. Then we all have to become super-consumers. Vendors are not inclined to loan equipment to make sure it works, prior to purchase. So, as in my case, I have a 'graveyard' of purchased equipment that was supposed to solve accessibility and didn't. I recently accidentally found out about the ATA (Alliance for Technology Access). This is a nonprofit organization based in California made up of 40 independent, community-based tech resource centers around the country, in alliance with 80 vendors of conventional and assistive technology. My state (PA) does not have one of its centers, but Maryland does. I am scheduled to go to Baltimore next week to try different assistive technology. The great thing about these centers is that you can try the equipment prior to purchase, and there is on-site expertise, and training. Again, I stress: I *accidentally* learned about this resource. This type of tech assistance information should be widely distributed! And there are probably lots of other similar resources that I have yet to accidentally uncover. A central clearinghouse is badly needed.

9. Creation of standards that allows equipment manufacturers to find common ground (using old versus new technology). I think that this has already been discussed at length, about how some of us still need "old" technology because the "new" technology sometimes comes with new barriers.

10. FCC to consider reimbursement for other means of communication by NECA fund?

What is the NECA fund? Also, I asked once before and didn't receive a reply: does the FCC have funding for such? Is it realistic to expect the FCC to get it in its budget? I have learned in my social work classes that it is not uncommon for the gov't to pass mandates/laws/regulations -- - which looks good to the voters -- and then those same mandates, etc. are never put into effect because they are unfunded.

11. Reimburse companies who want to provide video relay if the company is not a common carrier. See above about $$$.

12. Universal access to information, a) voice access b) voice to text c) text to voice and d) access to the internet. I think this is the same issue as mentioned in #7 (improve & encourage multi-modal access). I have a little more to add to my previous comments. Since Section 255 of the Telecommunications Act specifically identifies e-mail and voice mail within the definition of "telecommunications".....I think that is where a *requirement* to continue to address voice access to the web should originate. Otherwise, people like I, will be locked out from use of email and IM. Both are very mainstream today. In business, in school, and socially.

Having just had extensive conversations with the ATA center in Baltimore, I learned that there are 3 classifications of voice recognition: Static **vs**. adaptive - A static system must learn each vocabulary word individually. The user corrects the software until it learns those sounds. Now, most systems are adaptive not static.

Speaker dependent **vs.** speaker independent - A dependent system must learn each user's voice in order to operate effectively. An independent system is one that works for everyone with no individual training necessary. Now, most
systems are speaker independent.

Discrete **vs.** continuous - Discrete speech means the speaker needs to have a small pause between words. Continuous speech means that one does not need to pause. Currently there is a push for continuous speech, which does not adapt as well for some users with disabilities.
So...you can see the trend. I mentioned before that my Power Secretary voice recognition software (discrete speech) for the MAC has been discontinued and is no longer technically supported. The tech expert at ATA in Baltimore sent me information that the only other discrete speech voice recognition software that he knows of --- Dragon Dictate, owned by Lemout & Hauspie (which is currently under bankruptcy protection) has discontinued its discrete voice recognition software, and will no longer offer technical support. Of the list of 43 available voice recognition packages that he sent info on, only Dragon Dictate & Power Secretary had static, speaker dependent, discrete features .and they are discontinued.

So since we are truly *supposed* to have access to the web & email & IM (according to 255) then it seems to me that some type of industry incentive, or requirement, to continue this "old" technology must be addressed. But, my question to the group is: Is the FCC the agency to do this? If so, how? And, if you agree then what do you suggest that the CDTAC recommend?

Mr. Berger, I totally understand the process you described in how we could educate the industry, however, if 255 *mandates* it then I question whether we should have to make those tremendous individual efforts.

That's all today folks! Hang in there with me....only a few more to go!
As always, I invite discussion.

Shelley 5/25/2001

Kevin -
Thanks for you reply. Hmm...I think what you raise is precisely why I asked "Is the FCC the right agency to address these problems?"

I cannot think of new barriers that are the *result* of standards (but, I must confess I'm not educated on the standards!). So...I guess what I mean is that I wonder if new standards are *needed* to prevent new barriers. My example is that discrete voice recognition is disappearing as an option to those of us who need it, in favor of continuous speech & speech independent. Should there be a standard requiring some type of consideration to that issue in the industry? If that is the product development side, then isn't that where the standards are considered? I know there must be more examples.....perhaps the one that has been raised about pay phones being discontinued in favor of cell phones, when some people who are deaf or hard of hearing still need pay phones. Does that need a standard....or a regulation....or is it all circling back to the debate over phasing out "old" in place of "new".

Not sure if I answered or clarified your questions. I think one thing that needs to be clarified for me is what exact role can the FCC play in this discussion? Maybe I am bringing up issues that really do not pertain to this committee? Anyone?

PS - Kevin also said my email is coming across as if it is written in HTML instead of plain text. I know Scott mentioned that in a housekeeping issue. This is the first I've heard of it. Is anyone else getting this from my messages? ---

5/26/2001 Shelley Nixon

I would like to ask CDTAC disability list a couple of questions in response to Shelley's email.

Shelley, you refer to a central clearinghouse. I am currently reading a 1999 report "Deaf Australia Online" which recommends the same thing here. My question: is a central clearinghouse really required, or just better service by existing suppliers and retailers?

Second: you discuss the perceived problem of new standards creating barriers. If disability advocates are seriously involved in standards development, barriers should be prevented. Standards development is one of the most democratic processes I have ever come across, so our

needs would be seriously considered if we were seriously involved. However, I feel you may be confusing product development with standards development. Do you have any particular examples of standards that create "new barriers"? Are the barriers you mention really the result of standards?

/ Kevin 5/26/2001

Hi Shelley and all,

This discussion about RF interference reminds me that one of the purposes of the CDTAC should be to share information in a "training" format. That is, there are many technical and business issues that consumers want to know more about, and many disability issues that industry wants to know about. CDTAC is a good venue for that. We might want to devote a certain amount of time each meeting for such presentations. We could even go further and say that the materials for these presentations should be distributed more widely. High quality training materials -- both for consumers and for telecom and IT companies -- are in short supply, right now when the need is greatest.

We could begin by making a list of the things we want to know more about. Here are my items:

1. New regulatory models that could be adapted to accessibility regs. That is, how can we better combine incentives with detailed oversight to guarantee that the real needs of disabled consumers are being addressed?
2. 3G wireless: not just the glowing techno babble, but the realities: what features will be offered at what prices in what timetable?
3. Internet telephone, both equipment and services.

If we can develop a good list online, we might be able to have a consensus on some of the content for the August meeting.

Jim Tobias
Inclusive Technologies
tobias@inclusive.com
732.441.0831 v/TTY.
www.inclusive.com
5/30/2001

Hello all -

I am determined to finish my way down the list today. Micaela, you said initially that you wanted us to vote for our top #3 items after enough discussion. Do you want us to do that before the August meeting?

13. **Address the trend of removing pay phones because of the assumptions that everyone is using cell phones/lack of profitability.** I concur with Mr. Tobias' comments. How would CDTAC go about getting the statistics he suggested (how many pay phones are still out there, where, etc.)

14. **Allocate a permanent FM frequency for ALDs and audio description.** There has already been quite a bit of discussion on this, and ALDs. I guess my next question would be: What are the barriers to this happening? In other words, what are we up against?

15. **Explore access issues with Bluetooth technology.** Yes. Since it seems that wireless is becoming dominant. My question: what type of "access issues" are in the FCC domain?

16. **Consider the accessibility of emerging technologies.** Mr. Tobias, you mentioned that there should be a way for companies to consider accessibility early on in R&D. I would actually tie this #16 to #20 **Conduct more research on how to test innovations from companies while ensuring confidentiality of competitive information.** Seems to me that those two are going after the same thing. Your "proving ground" example was really, really interesting. I can see the resistance....industrial espionage being a possibility. Again, how do you (or anyone) see the CDTAC addressing this in any way that is enforceable? Or, are we just aiming to suggest a possible solution?

17. **Investigate the use of signaling 'handicap/disability indicators'.** In understand the idea. Could someone explain the need or the usage? How would it help?

18. **Create formal recognition at the FCC for companies that make progress in telecommunications access.** Mr. Tobias, I'll follow the web site you mentioned for the awards program (International Coalition of Access Engineers & Specialists). My first thought is, any recognition program that stimulates access is wonderful....but, it would be even better if those awards/recognitions were made known to the people who use/need the products. Again, information dissemination. If we consumers are left to find out about access features through the mercy of advertising, or by grapevine, then that means fewer purchases, less profitability, etc. I see it as a circle. So a formal recognition followed by a widespread consumer blitz. Am I wrong?

I've finished, folks. Unfortunately, I've generated more questions than answers. Thanks again to all of you who have taken the time to come back to me with explanations & comments.

But...I have one more question that pertains to my own needs. I want to pick your collective brains. Is there any kind of text reader for TVs or theaters? In other words, I need subtitles on foreign movies read. I also need the scrolling messages that appear on the TVs (like emergency announcements) read out loud. Is there a device that does that?
Thanks - Shelley
6/5/2001

5.2 Correspondence relevant to priority list items: Discussion 2

From: ext micaela.tucker@nokia.com [micaela.tucker@nokia.com]
Sent: Monday, June 11, 2001 3:57 PM
To: CDTAC disability subcommittee
Subject: Subcommittee issues; consolidation / organization of notes #1

Hi everyone.
First some housekeeping issues. In order for us to have a concise report to the Committee in August, I need to know from the subcommittee what our priorities are. I suspect from reviewing these mails that we cannot narrow down to three or four, but I bet we can start to prioritize. _So, please send me your top three most important issues from our original list of twenty (included below). I have already received this input from Bob and from Andy. Second, I have taken the notes from past mails on our Brainstorming issues and tried to put them in order and have also consolidated where it was recommended. I don't claim perfection. In fact, please consider this a first effort, open for discussion. You will find those notes in a mail immediately following this one.
Issues raised during brainstorming:

1) Quality assurance through clear definitions of vocabulary and measurements in disability related FCC ruling. E.g. "Functional Equivalent."
2) Consumer outreach and education - especially on TRS
3) Conduct an honest appraisal of progress and compliance on Section 255.
4) Create better educational programs for consumer understanding of FCC consumer complaint process.
5) Better access to the basic network functionality
6) FCC reimbursement for providing communication solutions if the company is not a common carrier
7) Improve and encourage multi-modal access to information. E.g. voice recognition and web access.
8) Technical assistance for consumers
9) Creation of standards that allows equipment manufacturers to fin common ground (using old versus new technology)
10) FCC to consider reimbursement by (for?) other means of communication by NECA fund
11) Reimburse companies who want to provide video relay if the company is not a common carrier
12) Universal access to information including a) Voice access b) Voice to text c) Text to voice d) Access to Internet
13) Address the trend of removing pay phones because of the assumptions that everyone is using cell phones / lack of profitability. Many people still use pay phones as their only means of communication 'on-the-go.'
14) Allocate a permanent FM frequency for assistive listening devices and audio description.
    a. Constant hopping or reallocation of these frequency threatens their continued availability for these purposes

b. Several different devices are not compatible because of the lack of allocated spectrum
15) Explore access issues with Bluetooth technology.
16) Consider the accessibility of emerging technologies
17) Investigate the use of signaling 'handicap/disability indicators'
18) Focus on voice services - investigate and improve progress of access to enhanced services: such as IVR
19) Create a formal recognition at the FCC for companies that make progress in telecommunications access.
20) Conduct more research on how to test innovations from companies while ensuring confidentiality of competitive information.

From: Tucker Micaela (NMP-RD/Dallas)
Sent: Monday, June 11, 2001 3:57 PM
To: 'CDTAC disability subcommittee'
Subject: Subcommittee issues; consolidation / organization of notes #2

Second issue: recap of brainstorming and other items consolidated.
Please voice your acceptance or not by citing the letter of the item and then commenting.
Here are the items to consider consolidating:
A. Reimbursement for alternate carriers and/or alternate services: under this category, 6) FCC reimbursement for providing common carrier solutions if the company is not a common carrier; 10) FCC to reimburse for other means of communication by NECA fund; 11) Reimburse companies for video relay even if not a common carrier.
B. Outreach and education: 2) TRS consumer education; education/technical assistance for consumers (including speech-to-speech; 8) education and technical assistance for federally funded agencies; education on available technology for consumers and federally funded agencies; 4) FCC consumer complaint process;
C. Universal multi-modal access: include 7) improve & encourage multi-modal access; 12)Universal Access to information a) voice access b) voice to text c) text to voice d) access to the internet e) text to ASL f) speech-to-speech
D. Emerging and future technologies: including 16) Consider the accessibility of emerging technologies by encouraging companies to share best practices in their processes (not product information); 20) Encourage early testing with disabled users by encouraging confidentiality in the process.

Agreeing to all of these would reduce the number of items to 14. This may make our discussions more manageable.

Next I will try to bring up a list of new questions and items for further discussion or for comment by the FCC.

Best regards,
Micaela

June 11, 2001
Hello Micaela,

All items on your list are important. But, as per your request, I submit the following three as my priority topics to be considered for submission to the board at the August meeting.

1) Quality assurance through clear definitions of vocabulary and measurements in disability related FCC ruling. E.g. "Functional Equivalent."

8) Technical assistance for consumers.

13) Address the trend of removing pay phones because of the assumptions that everyone is using cell phones / lack of profitability. Many people still use pay phones as their only means of communication 'on-the-go.'

Joseph Gordon
Chair Telecommunications Committee
Advocates for Better Communication
205 West End Avenue Apt. 8-J
New York, NY 10023

Phone 212-724-4856
Email nyjgordon@aol.com
URL. www.lhh.org
URL. www.lhhh.org/abc/

June 19, 2001
Thanks, Micaela, for putting these together so neatly. I think that #11 can be subsumed under #6.

I like these best (meaning they're most important, feasible, and I'd be willing to work on them):

1
2
3
6
9
18
20

I know that's more than 3, but hey...

Jim (Tobias)

June 19, 2001

My comments below.

Jim Tobias

> Here are the items to consider consolidating:
> A. Reimbursement for alternate carriers and/or alternate services: under this category, 6) FCC reimbursement for providing common carrier solutions if the company is not a common carrier; 10) FCC to reimburse for other means of communication by NECA fund; 11) Reimburse companies for video relay even if not a common carrier.

JT: Yes, please consolidate these as you suggest.

> B. Outreach and education: 2) TRS consumer education; education/technical assistance for consumers (including speech-to-speech; 8) education and technical assistance for federally funded agencies; education on available technology for consumers and federally funded agencies; 4) FCC consumer complaint process;

JT: Yes. These should be developed a bit, such as the FCC establishing a list of best outreach practices and materials.

> C. Universal multi-modal access: include 7) improve & encourage multi-modal access; 12)Universal Access to information a) voice access b) voice to text c) text to voice d) access to the internet e) text to ASL f) speech-to-speech

JT: These are all good ideas, but what can the FCC and CDTAC do to realize them? I'm dubious. But demos and technical briefings at CDTAC meetings would be useful.

> D. Emerging and future technologies: including 16) Consider the accessibility of emerging technologies by encouraging companies to share best practices in their processes (not product information); 20) Encourage early testing with disabled users by encouraging confidentiality in the process.

JT: Again, what can FCC and CDTAC do?

June 20, 2001

I don't see Michaela's number 18 on this list. That's an item that I consider most important. It's been changed since I proposed it at our meeting. It started out as: Access to basic network services. That can be anything from a network recording to Operator Services, to anything in between. If the network isn't accessible at the lowest levels it will never be accessible at the highest.

Another that I proposed which doesn't appear in its original form is: Network Services Access through existing and emerging technologies. Example: The SS7/ISDN User Part contains parameters for handicap indications. The FCC regulates access to SS7. Network Service

Providers don't make use of that capability today in most cases. The FCC can be advised on these types of issues.

I agree that it's important that we stay in-line with our charter and operating protocols. Our operating protocol states that our mission is "make recommendations to the Commission regarding consumer and disability issues within the jurisdiction of the Commission and facilitate the participation of consumers (including people with disabilities and underserved populations) in proceedings before the Commission." I don't discourage discussion on any issue, but if we are to make a significant contribution we must cull our list at the next meeting and define the remaining line items in detail. While all of the items are important, interesting, and fun to talk about, there are a few on the list which are not within the jurisdiction of the FCC, and therefore should not be allowed the floor for discussion.

Best regards,

Paul W. Ludwick
Sprint TRS Product Manager
paul.ludwick@mail.sprint.com

June 24, 2001

Hi Paul,

I agree with your #18 as being important, but what should CDTAC do to support the FCC in this? I could imagine an accessibility audit of network features and services. For example, you mention the intercept messages ("The number you have dialed is not in service at this time...."). I know that there is TTY access to some of these in some jurisdictions. Maybe the FCC should ask carriers to report on the current and planned status of them, and we (CDTAC) could develop the list.

On the SS7/ISDN User Part -- can you point me to the indicators you refer to? I'd like to understand what opportunities they offer. That would be a great project, too.

Thanks.

Jim Tobias
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July 13, 2001

Hi Micaela,

Hope all is well with you and you are enjoying your summer. Have you taken leave from work yet? Hope all goes well with the birth! Congratulations in advance.

I wanted to provide you with my list of three priorities as you requested and give you some additional comments.

Priority 1. (your number 2) Consumer Outreach and Education- especially on TRS.
The National Exchange Carrier Association (NECA) who is the interstate TRS fund administrator has requested $5.45 million for a national TRS educational program. This has been approved in NECA's interstate TRS filing by the FCC. NECA has asked that the FCC grant them a temporary arrangement to establish and manage this program. The FCC is reluctant to do so without considerable consumer input. May I suggest that we establish a separate TRS subcommittee under our CDTAC Disability Sub-committee to work with NECA and the FCC in developing guidelines to accomplish this effort as quickly as possible?

Priority 2. (your number 1) Quality Assurance through clear definitions of vocabulary and measurements in disability related to FCC ruling. e.g. functional equivalence.
I agree, and have just been informed that a group of consumer organizations (TDI, CAN, NAD and others) have developed a definition for functional equivalency. This should give us a good starting point.

Priority 3. (your number 11) Reimburse companies who want to provide video relay if the company is not a common carrier. I agree, this opens up the market to allow companies capable of providing services such as video relay the ability to do so and get reimbursed.

Thanks. Gil Becker
Maryland Relay, Director
1-800-552-7724

5.3 Correspondence relevant to priority list items: Discussion 3

Micaela -
Thanks for getting back to me on whether our recommended issues must clearly be within the FCC's domain. Your email said that we need to "report back our top concerns regardless of whether the FCC can address them" and then we can sort it out later ---so I submit the following. Also, I'm sorry you've only gotten six responses so far from the committee of 20. I am really surprised.

My priorities would be:

1. **Outreach & education** -- I feel that if people with disabilities do not *know* and *understand* that telecommunications is legally supposed to be accessible, and if they do not know how to complain if they are *not* accessible, then the whole point of Section 255 is moot. I don't work in the telecommunications industry. Advocating for people with disabilities is not my profession. I am a college student with disabilities who is just *now* learning about Section 255 and that it even exists. I feel I am a perfect example of why Outreach & Education must be number one. I wrote in one of my emails that there were many lost opportunities in my schooling (especially in IEP meetings and Transition meetings) when I could have been informed. After high school, I did not receive any 'education' on these issues from any agency serving the disabled population.

2. **Universal Access to Information (including voice access, voice to text, text to voice, etc.)** I think this ties back to number one. We are living in what is called the Information Age. There must be a better outreach for that information....but it also must be accessible to everyone in various formats. (I'm not sure if this is where it fits, but I recently read that the Government Printing Office which maintains 30 federal agency Web sites is exempt from federal accessibility laws and regulations, including Section 508 as they pertain to Web sites. I don't think this is acceptable. Universal access means just that. Should or could our committee address that exemption as well?)

3. **Focus on voice services: Investigate and improve progress of access to enhanced services such as IVR.** I asked for more information from Karen Strauss about IVR. She recently emailed me that "Last year the FCC issued a public notice reminding Mfgrs. of their obligations to fulfill this mandate [of IVR accessibility] ....unfortunately many manufacturers have not yet done this..." She says a new IVR Forum has been developed and they are hopeful that "this Forum can provide an industry/consumer partnership that resolves IVR accessibility problems." It seems to me that we all encounter the telephone directory trees of IVR daily. I certainly know I have trouble pushing buttons in the limited time given, or multiple buttons, and many IVRs will not recognize my voice. I think since IVR is *so* widespread, this should be a priority for the FCC....and, as an extra bonus, enforcement would encourage the continuation of research into better speech recognition for all kinds of voices. Definitely a need that spills over into other areas.

As to the list that your six responses produced: I don't disagree with any of them. I do believe that a clear definition of what is meant by functional equivalency needs to be addressed. I think an appraisal of the progress & compliance of Section 255 only makes sense. But I admit I still don't understand what "basic network functionality" means so I can't offer any intelligent comments on it.

I hope this helps. And I hope you get some more responses. We'll miss you at the August meeting and I hope you are feeling well and doing well in your pregnancy!

Shelley
7/18/2001

Hi All,

Here are my votes, and why:

5) Reimbursement for accessibility products and services. Why: right now, there are only a few ways to be reimbursed for TRS and a few other services, and there is a pretty high barrier to entry: you have to be a common carrier, which is a big deal -- not like opening a lemonade stand! But there is a huge and under- exploited opportunity for providing advanced services, especially on the Internet and through wireless, that actually serve users better for less money. There is no reimbursement mechanism. So I think we should develop an annotated list of potential services to whet everyone's appetite, and come up with some mechanisms to fund them. This is an area where consumers and industry have a lot in common!

3) Appraisal of status of 255.
Without knowing where things look good and where they look bad, no one knows what to work on first, and this goes for regulators as well as industry. The Access Board commissioned Market Monitoring Report 2 years ago to create a snapshot of telecom accessibility (my company, Inclusive Technologies, performed the study):
http://www.access-board.gov/telecomm/marketrep/
There's a database where you can search by product type and the
Access feature you're interested in:
http://www.access-board.gov/telecomm/marketrep/type_feat_srch.asp

But that data is now outdated -- things move too quickly in telecom. 255 will be with us for a long time, and there should be to make sure that companies and consumers know where progress is being made, and what its current status is.

2) Outreach and education
This is essential. Without it there will not be any progress. I would expand outreach beyond consumers to include companies and public procurement staff. There is a lot of attention on training these folks on Section 508, but so much of that material is on web access. Little

guidance is being offered on telecom. And an idea on consumer education that's been kicked around for a while is to train people how to complain. Not file a formal FCC complaint, but how to communicate with customer service personnel when a product doesn't meet your needs. Too many times the consumer either gets frustrated and gives up, or just tells the support person, "It doesn't work!" The support lines need specific guidance to help them identify accessibility issues in order to make improvements.

So there are my 3 votes. See you in a few weeks!

Jim
7/19/2001

Following up on Jim's vote for reimbursement. One attractive service that could be offered now, if there was a reimbursement mechanism, is internet relay. It is available at Internet Kiosks that are popping up in airports and hotels. But today internet relay is not available to individuals in their homes or workplaces because there is no way for the provider to be reimbursed. One way would be to ask the FCC to approve reimbursement for internet relay and to have NECA administer it as they do reimbursement for intrastate relay services.

Another big issue for relay users is conference calls. There is no satisfactory way to do conference calls via relay today and that creates real barriers for people with hearing loss in the workplace. With internet relay the provider could offer captioning of the conference call through a remote dial up for example, but that won't happen unless they can get reimbursed for the service.

Brenda Bettat
7/19/2001

Brenda -

Are there technological barriers to TRS providers offering conference calls through TRS? If not, could we ask the FCC to require that all TRS providers make conference calling available through TRS? This requirement could be part of the FCC's next set of TRS regulations.

- Bob

Great point, Rich. There is a project at NIDRR, I think, that established a "media office" presence of some type. They should be doing this, right? Plus there would be value if the outreach being done by companies, TRS programs, equipment distribution programs, etc., had access to some centrally produced media that they could cut and paste from, especially if it was constantly being refreshed with new information, images, video, etc.

Jim

7/19/2001

> -----Original Message-----
> From: richard.t.ellis@verizon.com [mailto:richard.t.ellis@verizon.com]
> Sent: Thursday, July 19, 2001 9:41 AM
> To: CDTAC disability subcommittee
> Subject: RE: Subcommittee priority issues. Please comment.
>
> Lots of good info and ideas being discussed. However, as we "blue sky" ideas about how to improve awareness of disability-related issues, we also need to figure out who is going to pay the bills. Consumer outreach isn't cheap, and corporations, government agencies, and consumer groups are all cutting budgets to the bone in the current economic downturn. We somehow need to find ways to get the mainstream media interested in our issues so that we receive positive news coverage, not just ADA abuse horror stories.

6. ADDENDUM

CDTAC Disability Subcommittee Report
Presentation Speaking-points
June 28, 2002

6.1 Opening remarks:

In nearly every discussion about Disability Access that I have had in the last year, there is the prevailing issue of communication. Consumers are not able to access the information they need either through their usual information sources, at the point of purchase or even on the Internet. There is information, for example, on the FCC website and on other industry or organizational sites but it is hard to find. And existence of these resources is little known. From the Industry point of view, manufacturers have complied with Section 255 and Section 508 in significant ways, but consumers are not getting the information. Industry needs knowledge from consumers about effective means of communication beyond what already is in use. Encompassing all this must be an efficient means of updating information as it changes, often weekly or monthly to keep up with the pace of product development and availability.

In the meantime, technology continues to emerge which inconsistently satisfies the needs of consumers with disabilities. Whatever the reason, there is a clear need for an effective mode of information sharing between regulators, consumers and product designers about emerging and future technologies while maintaining the confidentiality necessary to a competitive marketplace.

6.2 Background:

The Disability Subcommittee (Subcommittee) of the Consumer / Disability Telecommunications Advisory Committee (Committee) was formed at the first Committee meeting in March of 2001. The Subcommittee has met at each Committee meeting since and has held discussions over e-mail via the CDTAC – Disability e-mail list. This list, as well as the Subcommittee membership, is open to public participation.
From discussions over the preceding year, I, as Subcommittee chair, have composed a report of discussed priorities. Priorities are a combined list of items from the Subcommittee. From the twenty original items we created larger, more general categories where issues were linked. The result is the top ten priority items at the beginning of the Subcommittee report and the establishment of two, possibly three working groups recommended at the end of the document. To date, the full Committee has already addressed some of the top ten priorities as agenda items. With that acknowledgement, the bulk of this presentation will cover the items on which work has not yet begun.

6.3 Top ten priorities & Recommendation for Subcommittee workgroups:

You can get a list of the top ten priorities in list form on pages 3 and 4 of the Subcommittee report. Most of the Subcommittee's priorities fall under one of the two categories, TRS or

Section 255. Therefore, the Subcommittee recommends two working groups to addresses priorities. Other issues may warrant a working group on standards.

6.3.1 Telecommunications Relay Service (TRS) Workgroup issues would include quality assurance issues, outreach and education for a wide range of constituencies on a wide range of topics, better access to basic network functionality and reimbursement to carriers for other means of communication such as video or to carriers not falling under the "common carrier" label.

6.3.2 Subcommittee Workgroup concerns relevant to Section 255 include appraising progress to date on compliance, ensuring better access to basic network functionality, improving public awareness of the complaint process, encouraging multi-modal access (e.g. voice controlled Internet), improving access to voice services such as interactive voice response systems, ensuring emerging technologies incorporate accessible design and do not push earlier more accessible technology out of the market, exploring prototype testing schemes which will provide valuable user input while protecting company confidentiality.

6.3.3 Standards related items include defining Functional Equivalence beyond the current definition, creation of common standards or guidelines that allow equipment manufacturers of both assistive technology and mass market technology to find common ground, investigate and potentially define handicap / disability signaling standards

6.4 Progress to date and outstanding issues:

I will discuss here *progress* on some of the Workgroup concerns.
6.4.1 On Relay: STS presentation was done in March by Bob Segalman. Further support and promotion of STS is crucial, especially to a constituency that has little in the way of public advocacy or information networking. We support the recommendations made by the Complaints and Outreach group on consumer education about Relay services. The establishment of the "711" service is an important acknowledgement of how vital these services are to consumers.

6.4.2 Progress on Section 255 compliance: The Committee hosted a five year review of the 1996 Telecom Act at the November 30th meeting. Besides general comments on consumer benefits, there has not been a formal review of Section 255 yet. Questions remain about how and who best to conduct such a review, what its scope would be, and how it would be reported. Should MMR be reestablished? Is this an effective way of distributing information? Considering the speed with which technology changes and new products come out at what point is the current state frozen for progress evaluation?

In order to further progress on *outstanding* Workgroup concerns, the Subcommittee in this report asks for clarification on the questions below

6.4.3 Clarification of Items under FCC authority

Does the FCC have authority to enable better and more confidential collaboration between consumers and manufacturer research and development teams? If this cannot be done directly, can it be done through standards work?

What is the current status of FCC jurisdiction over the Internet? For instance, does the FCC have authority over methods of information delivery in general? Will the FCC have authority over voice telephony over IP only?

How can the FCC act to ensure that new technology "improvements" do not remove accessibility features for people who depend on them and who have no other alternatives? The example was given of voice recognition software becoming more voice independent but simultaneously less trainable for people with severe speech impairments. There are already voice recognition software systems that have been discontinued, leaving consumers stranded and without options for computer access.

What type of access issues concerning Bluetooth technology is under FCC domain?

Does the FCC have the authority to recommend or call for standards making?

6.4.4 Funding availability for recommended items

As the subcommittee suggests ideas about how to improve awareness of disability-related issues, funding becomes an important factor in deciding how far to pursue them. For instance, one of the priorities is consumer outreach and education. The potential solutions for improving outreach and education would cost money. There are several possible sources for funding if it is not available directly from the FCC. There are also several other agencies that might be employed to help with such efforts. However, the subcommittee needs to know the status of funds so that it can make recommendations for both in-house and external activities.

6.5 Closing Statement

I want to close with an issue that has emerged for manufacturers as accessibility regulations and standards expand to Europe and Asia and as current U.S. regulations extend to, for instance, telecomm operators in Latin America that have US partnerships or parent companies. It is in the best interest of everyone that Accessibility requirements and standards are similar across national and regional boundaries. Not only does this reduce manufacturing costs, but more importantly it also ensures that consumers can expect the same level and type of accessibility wherever they go. The United States has served as a leader in Accessibility standards before. There is an immediate opportunity for U.S. regulators, consumers and manufacturers to lead again by sharing our lessons learned.

Adopted: June 28, 2002

Consumer Advisory Committee