Proceeding: IMPLEMENTATION OF SECTION 255 OF THE TELECOMMUNICATIONS AC Record 1 of 1

Applicant Name: Institute on Disabilities/UAP Temple University

Proceeding Name: 96-198 Author Name: Institute on Disabilities/UAP

Lawfirm Name: none

Contact Name: none Contact Email: kasday@acm.org

Address Line 1: Ritter Hall Annex, Room 423

Address Line 2:

City: Philadelphia State: PA

Zip Code: 19122 Postal Code:

Submission Type: CO Submission Status: ACCEPTED Viewing Status: UNRESTRICTED

Subject:

DA Number: Exparte Late Filed: File Number: 0001

Calendar Date Filed: 08/14/1998 4:48:56 PM Date Disseminated: Filed From: EMAIL

Official Date Filed: 08/14/1998 Date Released/Denied: Initials:

Confirmation # Date Filed:

DOCKET FILE COPY ORIGINAL

RECEIVED

AUG 1 4 1998

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

INTERNET FILING

96-198
8/14/98

No. of Copies rec'd 1
List A B C D E

FEDERAL COMMUNICATIONS COMMISSION

In the Matter of
Implementation of Section 255 of the
Telecommunications Act of 1996
WT Dkt. No. 96-198

COMMENTS OF THE INSTITUTE ON DISABILITIES, PENNSYLVANIA'S UNIVERSITY AFFILIATED PROGRAM (UAP) AT TEMPLE UNIVERSITY

Diane Nelson Bryen, Ph.D.
Executive Director
Institute on Disabilities/UAP
Temple University
Ritter Hall Annex, Room 423
Philadelphia PA 19122
(215) 204-1356

Leonard R. Kasday, Ph.D.
Engineering Specialist
Institute on Disabilities/UAP
Temple University
Ritter Hall Annex, Room 423
Philadelphia PA 19122
(215) 204-2247

Cc:
Stephen F. Gold, Esq.
Public Interest Law Center of Philadelphia (PILCOP)

Summary of Recommendations

We urge you to consider the following recommendations:

Although the FCC only has authority to regulate transmission of information, and not information itself, we believe that within this mandate the FCC can do much to:

1. Insure access to the Internet

2. Insure accessibility of the interactions needed by users to communicate with interactive telephone services.

We will describe below how this may be done. In addition:

3. We urge you require that all products in all product lines be accessible when readily achievable, and resist requests to require accessibility for only a few select models claimed to be most suited for particular disabilities.

4. Finally, we urge you to require accessibility in underlying hardware and software platforms, increasingly used by manufacturers across products. Building accessibility into the platforms will act proactively to lower the cost and effort to make individual products accessible, and thereby make readily achievable many accommodations that might otherwise be difficult to attain.

Introduction

The Institute on Disabilities at Temple University is Pennsylvania's University Affiliated Program (UAP), one of 60 University Affiliated Programs in the United States authorized under the Developmental Disabilities Assistance and Bill of Rights Act of 1970. UAP's help people with developmental disabilities achieve their fullest potential in becoming independent, productive and fully integrated members of the community through the provision of training, research and information. The Institute has 25 programs, many of which are statewide. Programs include:

- Exemplary community based services to support individuals with disabilities who are living, learning and working in their home communities.

- Interdisciplinary training in university and community settings to expand awareness, enhance knowledge and skills, and develop the resources needed for professionals, paraprofessionals, families and people with disabilities.

- Resources and expertise disseminating information and providing technical assistance to those who support people with disabilities.

- Applied research and evaluation activities that are used in developing enhancing community-based programs.

The Institute on Disabilities/UAP is also the Governor's designated lead agency for implementing the federally-mandated "Tech Act" program in the Commonwealth -- the Pennsylvania Initiative on Assistive Technology (PIAT). The primary goal of PIAT is develop and support statewide entities so that assistive technology devices and services are accessible to all Pennsylvanians with disabilities who might benefit from their use.

Access to telecommunications technology is critical to the people we serve. We now present the rationale behind our recommendations.
1. Internet Web Pages.
The Internet is rapidly becoming an indispensable tool for education and employment, as well as a resource that increases quality of life for all. But much of the benefit of the Internet is unavailable to people with disabilities. At present, the most common and obvious problems are experienced by people who are blind. Information on web pages is often presented in graphical form, e.g., graphical links on which a user •clicks• to reach other web pages. It is usually very simple to accommodate users who are blind: all it takes is to provide a textual equivalent (so-called •ALT text•) for each image. This requires far less time than drawing the image itself. Clearly, a company that can afford the image can afford the ALT text.

Problems are experienced by people with other disabilities as well. Some pages have links contained in •Server Side Image Maps• requiring a person to use a mouse, which can be extraordinarily slow or impossible for people with some motor disabilities. Pages may transmit information via speech recording, which is inaccessible to people who are deaf unless a textual transcript or captioning is provided. Pages may contain flashing text or images, which make reading a page

difficult for people with some types of cognitive disabilities. Simple remedies are available for these situations as well (cf. The Web Accessibility Initiative, http://www.w3.org/WAI/)

It might appear that web pages constitute information services that the FCC lacks authority to regulate. However, we believe that there are a number of aspects or uses of web pages for which the FCC has authority to require accessibility.

a. Documentation and support for telecommunications services and equipment
b. Directories and Links
c. Representations of database information

We now examine these in turn.

a. Documentation and support for telecommunications services and equipment

The NPRM (paragraph 75) proposes that an evaluation of whether services and equipment are "accessible to and usable by" people with disabilities must include an evaluation of whether documentation and support services are accessible. We believe that such access is indeed essential. Therefore, as suggested in the NPRM (paragraph 76), when documentation and support is offered via the Internet, they should be accessible. It may be possible to send the user information in an alternative form (e.g., Braille, tape, CD-ROM, floppy disc, large print), and such alternate presentations are also valuable. However, web access has a number of advantages: it is immediately available 24 hours per day and 7 days per week; can be maintained to be always up to date; can be searched electronically; and can be manipulated electronically by people with severe motion disabilities. These advantages translate into job performance, income and employment; convenience; and greater independence. No other media has all these advantages.

We urge you therefore to require that all web based documentation and support for telecommunications services and equipment be accessible.
b. Directories and Links.

The FCC states in its NPRM states (paragraph 39) that some services

are basic in purpose and facilitate the completion of calls through utilization of basic telephone service facilities

The NPRM includes •computer-provided directory assistance• as one such service, since it facilitate[s] the establishment of a transmission path over which a telephone call may be completed, without altering the fundamental character of the telephone service. Some web pages (e.g., anywho.com, and many other services listed at http://www.yahoo.com/Reference/Phone_Numbers/Individuals/) are exactly that: computerized telephone directory services for phone numbers and addresses of individuals and businesses. Therefore the FCC can and should require these directories to be accessible.

The telecommunications act applies to all types of information that can be transmitted. A voice stream is one type of information that may be

transmitted. The content of web pages is another type of information that may be transmitted. There are many computer-provided directories of Internet web pages, e.g., (Yahoo, Altavista, Excite, Magellan, Lycos). These directories furnish the addresses (URL's) of the web pages, and therefore, like directories for voice communication, facilitate the establishment of a transmission path over which the information may be transmitted, without altering the fundamental character of the information transmission. Therefore, the FCC can and should require these sites to be accessible as well.

This argument extends to any page containing hyperlinks which, when selected, bring the user to another page. Any page containing links is essentially a directory. Hence, by the previous argument, the page must be accessible at least to the degree needed to make the links accessible.

Another argument[1] that links must be accessible follows the consideration that links are a defining, fundamental, and basic feature of the web. Since all links are basic in purpose, they must all be accessible.

This requirement that links be accessible implies, for example, that if a link is represented by an image, a textual equivalent of that image must be provided for use by people who are blind. It also implies that when links are represented by areas on an image (•image maps•), these image maps must be accessible. This implies that the image maps be operable via a keyboard, so that people who are blind or have severe motor disabilities may use them. Furthermore, as noted above, all page content needed to use the links must be accessible.

c. Database Information

Another feature of the Internet, which we feel the FCC has authority to regulate, is the transmission of database information. Consider, for example, a database of a manufacturers products and prices. Typically, such the content of such databases is made accessible to users via a Common Gateway Interface (CGI) program that creates an HTML transmission •on the fly• encoding the information. The user sees this as a •web page•, but in reality, it•s just a transient transmission of information. No page is formed until the transmission is decoded in the user•s browsers. (It may be temporarily stored, or cached, but this no more affects its status as transmission than, e.g., the temporary storage of packets in packet switched voice telephony).

Since this is transmission of information, the FCC has authority to require it to be accessible. Suppose, for example, that the database has a text entry like •Toaster•. If this is transmitted as characters in the HTML, the text will be accessible to people who are blind. However, the text is transmitted as a picture of the word (i.e. a picture of the characters T O A S T E R), it will no longer be accessible. Transmitting the text as pictures of the characters is not a change in form or content any more than transmitting voice digitally instead of by analog would be a change in form or content. It is only a change in internal encoding. Therefore, the FCC has authority to require it to be accessible. Accessibility is readily achievable (e.g., by attaching ALT text to the picture).

Extending this further, we believe that the FCC has authority to

regulate any web page which serves to transmit information.

We therefore urge you to require accessibility in the cases we have described. We of course do not mean to imply that these are the only cases eligible for regulation. We would welcome accessibility requirements on any other aspects the Internet you feel are appropriate.

2. Interactive Telephone Dialogs

The dialogs in interactive telephony services are typically designed with timeouts that automatically transition the user to a different part of the dialog or disconnect the user entirely. This is a severe problem for two groups of users: people with movement impairments and people who rely on telephone relay service.

People with movement impairments may not be able to press keys fast enough to prevent the timeout from occurring.

People accessing interactive telephony dialogs though relay service also experience problems. When they reach, for example, a voice menu, the communications assistant needs to type the announcement to the user and receive the customer's reply before selecting a menu item. Often, the menu times out, sending the communications assistant and the user to a different part of the dialog. In that case the communications assistant must disconnect the dialog, dial in again, reach the menu, and proceed to the next menu, where the same problem may occur. This can make the dialog impossible to use in practice. Even when the user and communications assistant can manage to utilize the dialog, the user•s time is wasted. It also increases the cost of relay service.

There is a simple solution to this problem: a requirement for an option to lengthen or extend timeouts. This could be implemented by a special touchtone command, or by accessing the dialog through a different telephone number.

One might think, as obviously desirable as this requirement might be, that it falls outside the FCC•s jurisdiction. However, we are not asking regulation of information itself. We are only asking regulation of the basic means necessary to control transmission of the information: timeouts on responses to touchtone signals. So we suggest that this simple timeout requirement falls within the FCC's authority.

3. Require all products to be accessible when readily achievable.

We applaud the FCC for requiring, in paragraph 170, that all individual products in a product line be assessed to determine if accessibility is readily achievable. However paragraph 170 appears to then encourage a manufacturer to offer accessibility in only a select number of products in each product line. Manufacturers may take this to support an approach in which there is one product for each individual disability, e.g., one for vision, one for hearing, etc.

There may indeed be cases where a particular product is useful for people with a particular disability. However, this should not excuse manufacturers from making other products accessible when readily

achievable. Limiting accessibility to individual products•which we•ll call here •select products••has a number of drawbacks.

a. Having different select products for different disabilities fails to accommodate people who have more than one disability.

b. The select product would tend to be a more expensive model, having features like speech recognition, which aren't always needed for accommodation. For example, a manufacturer might have an inexpensive phone that would only require an additional audible beep to make it accessible to someone who is blind, or an option to press keys sequentially instead of simultaneously to make it accessible to a person with a motor disability. However, if the manufacturer only had to make one model accessible then, instead of adding those simple features to the inexpensive model, the manufacturer could require the blind consumer to buy a more expensive model with recorded speech prompts, and force the person with a motor disability to purchase a model with speech recognition. Speech prompts and recognition can be valuable access aids, but users should not be required to pay for them when simpler methods would suffice. In addition, the more expensive model would typically have additional features which the user might not desire but which add to the complexity of operation.

c. When there are different models in a product line, they are tailored to different user needs, needs usually unrelated to disability. Adapting only one model for each disability deprives the disabled customer of the choices available to other consumers.

d. An employer, e.g., a small business, that already had non-select equipment, would be forced to buy the select equipment to accommodate a disabled employee, adding to the employer•s costs. It might also add to the cost of supporting the users, since the disabled employee would have a different model, and would require different training. Special procedures might also be needed for the disabled employee because she or he is would be using different models.

e. A non-disabled person who already owns equipment and becomes disabled would incur the cost of buying new equipment if the model he or she already owned didn't happen to be the appropriate select model.

f. A person visiting a public accommodation such as a hotel which provides telecommunications in guests• rooms•or a person simply visiting a friend--would be less likely to find that the equipment meets his or her needs.

4. Accessibility in Underlying Hardware and Software Platforms

Manufacturers are increasingly reliant on hardware and software platforms they obtain from other parties. Platforms such as UNIX, Mac OS and Windows 95/98/NT have long been available for computers of laptop and larger sizes. More recently, programmable platforms have become available or been announced that are applicable to devices as small as palm sized personal digital assistants or even pagers. These

include, e.g., the Java, Psion, PalmPilot, Windows CE, Inferno, and FLEX platforms.

It is highly advantageous to build accessibility features into these platforms. This allows access to be built from the beginning of the development and design process, an approach deemed critical in the NPRM (cf. Paragraph 3). The platforms typically provide standard user interface objects (e.g., menus, text boxes, check boxes etc.). Once the objects are made accessible, any applications using those objects inherit accessibility with little or no additional work on the part of the manufacturer.

Platforms can help make a device directly accessible to and usable by individuals with disabilities. For example, the "Swing" user interface objects components in Sun•s Java can be represented in a different modes by "plugging in" different "look and feel". Thus, as Sun has pointed out, a menu, for example, could be presented in visual form, or, by "plugging in" a speech "look and feel", be presented in speech for a user who was blind.

Specific platform features are also needed to interface to additional accessibility hardware. For example, the platform needs to communicate which user interface objects (menus, buttons, etc.) are active and what their states are. Provision for communicating this information is currently built into Sun Microsystems Java and Microsoft's Windows 95, 98, and NT.

For an equipment manufacturer, the access built into a platform can make the difference between an accommodation being readily achievable being difficult to achieve. We therefore urge you to require these access features in all platforms that may be used in Telecommunications CPE.

Footnotes

1. The argument for making links accessible is based on the observation by Janina Sajka, American Foundation for the Blind, that links are as fundamental to the operation of the web as touchtone signals are to the operation of the voice telephone system.