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January 13, 2000

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BY HAND DELIVERY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: *WT Docket No. 99-196*

96-198

Dear Ms. Salas:

Enclosed you will find an original and four copies of the Comments being submitted by Microsoft Corporation in the above referenced proceeding. Also enclosed is a diskette with the comments in the following electronic formats: (1) Word (.doc); (2) Rich Text Format (.rtf); (3) Text (.txt); and accessible Hypertext Markup Language (.htm).

As directed in the *NOI*, we are also providing a copy of the diskette to Al McCloud of the Commission's Network Services Division, Common Carrier Bureau, and to International Transcription Service.

Please direct any questions regarding this filing to me.

Respectfully submitted,

William M. Wiltshire

Enclosures

cc: Al McCloud
International Transcription Service

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

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FEDERAL COMMUNICATIONS COMMISSION
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WT Docket No. 96-198

In the Matter of

IMPLEMENTATION OF SECTIONS 255 AND 251(a)(2)
OF THE COMMUNICATIONS ACT OF 1934, AS ENACTED
BY THE TELECOMMUNICATIONS ACT OF 1996

ACCESS TO TELECOMMUNICATIONS SERVICE,
TELECOMMUNICATIONS EQUIPMENT AND CUSTOMER
PREMISES EQUIPMENT BY PERSONS WITH DISABILITIES

COMMENTS OF MICROSOFT CORPORATION

Microsoft Corporation submits these comments in response to the further Notice of Inquiry (“NOI”)¹ on the implementation of Section 255 of the Communications Act of 1934, as amended, with respect to emerging technologies and the extent to which government regulation may be necessary to ensure accessibility of telecommunications technology for people with disabilities.

Microsoft fully supports the objectives of Section 255. We also compliment the Commission for its diligent efforts to implement a short, but notably complex, statute. As telecommunication has become an increasingly important and ubiquitous part of everyday life, ensuring that people with disabilities are not left behind takes on ever increasing importance. The rules adopted by the Commission earlier in this proceeding

¹ *Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996, Report and Order and Further Notice of Inquiry, FCC 99-181 (released Sept. 29, 1999)(“NOI”).*

are an important step toward further opening telecommunications systems and the benefits of the Information Age to the disabilities community.

Like the Commission, Microsoft also recognizes that the rapid pace of technological developments in telecommunications-related services and equipment could diminish the utility of the Commission's accessibility rules to the extent that new technologies assume architectures that are not currently covered. As the *NOI* notes, there is an array of rapidly evolving, non-telecommunications services and products ("NTSPs") – such as information services, non-telecom software, and customer equipment that does not connect directly to the network -- that falls outside the ambit of the Commission's Section 255 rules.² The *NOI* points out that if emerging technologies that provide telecommunications-related capabilities remain outside the ambit of today's rules and thwart the accessibility features of "covered" equipment, those with disabilities would risk losing the benefits of the rules – a risk that should not be borne in our telecommunications-dependent society. To mitigate that risk, the Commission has asked how to grapple with two specific NTSPs – Internet telephony³ and equipment that is not traditionally defined as CPE.

Microsoft believes that market forces can and should be the primary driver of innovation in technology, and that in fact both the telecommunications industry and the entirety of the information technology market is starting to drive progress in accessibility. In adopting the initial Section 255 rules, the Commission held that there may be a role for

² *NOI* at ¶ 173. For example, computer hardware and software that does not connect directly to the telecommunications network has not traditionally been regarded as CPE and so would not be covered. *Id.* at ¶ 183.

³ Microsoft is a member of the Voice on the Net ("VON") Coalition, which is also filing comments in response to the *NOI* on Internet telephony. Microsoft supports the work of the VON Coalition, and will not address issues related to Internet telephony in these comments.

Commission regulation of NTSPs where necessary to ensure the accessibility of fundamental *telecommunications* equipment and services. Given the jurisdictional issues involved in imposing accessibility requirements upon NTSPs, the Commission must, as it moves forward, carefully assess its limitations in this regard. However, assuming for purposes of the *NOI* that Section 255 can extend to NTSPs, Microsoft would urge the Commission to do so only where an NTSP is ***integral to and essential for making telecommunications services and equipment accessible to persons with disabilities***. We believe that such an approach, if warranted and carefully implemented, would provide the Commission with a mechanism through which its rules can evolve naturally as technology evolves.

A. Microsoft Has Been and Remains Committed to the Goal of Providing Accessibility to People With Disabilities.

Although Section 255 focuses on telecommunications services and equipment, and the *NOI* focuses on how to keep the Section 255 rules at pace with the evolution of technology, Microsoft recognizes that there exists a larger concern about how people with disabilities will keep pace with the plethora of high-tech tools and services, whether those tools are regulated or not. Microsoft firmly believes that by its very nature innovative technology can be a force that empowers people with disabilities in ways that would have been unthinkable just a decade or two ago. In this regard, we also believe it is useful to keep the record in this proceeding up to date on our various efforts to promote such empowerment.

Microsoft has been deeply involved in the area of accessibility since 1988, when it first provided a set of software add-ins called the Access Pack which was developed by the Trace Research and Development Center at the University of Wisconsin-Madison as

part of a National Institute on Disability and Rehabilitation Research grant program. Microsoft has continuously expanded the features of the Access Pack and has incorporated those features directly into its Windows operating system. For example, computers using Microsoft Windows 95 and Windows NT 4 included features specifically designed for individuals who have difficulty typing or using a mouse, who are deaf or hard-of-hearing, or who have moderately impaired vision. Windows 98 added new features like an Accessibility Configuration Wizard that could help people adapt Windows' options to their needs and preferences, as well as a low-end screen magnifier. Windows 2000 retains these features and adds a text to speech utility that helps people with vision impairments perform basic system configuration and repair as well as work on unfamiliar machines. Microsoft has also incorporated accessibility features into many of its other products, including its word processing software and multimedia encyclopedia.

In addition, in May 1997, we first released Microsoft Active Accessibility™ (“MSAA”), a technology that provides ever-changing software programs and operating systems a standard programming interface for accessibility aids. And our Synchronized Accessible Media Interchange (“SAMI”) captioning is available for anyone to add closed captioning to a web site or CD media for people who are deaf or hard of hearing. Microsoft has made a strong commitment to product-testing in the disability community and has even offered its resources to *other* software developers in order to expand the number of products available to people with disabilities. We have included a range of accessibility requirements as part of our “Designed for Windows” Logo program to encourage all manufacturers of Windows-based software to address accessibility.

Microsoft has also taken a leading role in improving the Internet experience for people with disabilities. Microsoft Internet Explorer 5.0 offers many new accessibility enhancements, including Microsoft IntelliSense technology designed to save time and keystrokes (Using AutoComplete, AutoCorrect, AutoSearch, etc.). As in prior versions, Explorer 5.0 continues to support accessibility aids and allows users to customize the display. Through its efforts in the World Wide Web Consortium's Web Accessibility Initiative, Microsoft has helped develop guidelines for web design practices that provide flexibility for the user and enable assistive technology to function more effectively. We have also played a role in implementing federal accessibility guidelines as a member of both the Electronic and Information Technology Access Advisory Committee (for Section 508 of the Rehabilitation Act) and the Telecommunications Access Advisory Committee (for Section 255 of the Telecommunications Act).

Notably, our efforts encourage an environment in which accessibility becomes part of mainstream product design and where assistive technology has a standard interface across multiple product lines. We believe this will lead to plug-and-play capabilities for assistive technology such that a user can walk up to any system (*e.g.*, a public voting kiosk) and interface with an assistive device (*e.g.*, a Braille keyboard/display via wireless link). Such a combination of accessibility enhancements with plug-and-play connectivity would remove many of the limitations experienced by people with disabilities.

Microsoft's commitment to accessibility arose entirely without government mandate, and the company continues to work with others in the computer and

information technology community to build upon these efforts and provide ever better tools for everyone, including those with disabilities.⁴

B. The Commission Should Proceed Carefully Where Its Jurisdiction to Regulate is Not Clear.

Section 255, by its terms, applies only to telecommunications services, telecommunications equipment, and customer premises equipment. In the Report and Order issued along with the *NOI*, the Commission adopted rules to implement Section 255 with respect to such services and equipment. It also asserted ancillary jurisdiction to extend accessibility requirements beyond the categories enumerated in the statute, to reach two *information* services (voicemail and interactive menus) which, by definition, are not directly subject to Section 255.⁵ The Commission concluded that these services are “so integral” to the meaningful use of telecommunications services and equipment that *are* covered by the statute that, if they were inaccessible and unusable, it would seriously undermine the accessibility and usability of the underlying telecommunications services and equipment.⁶ The Commission declined to extend accessibility obligations to any other information services because they are not “essential” to making telecommunications services and equipment accessible.⁷

In the *NOI*, the Commission seeks comment on the necessity for and advisability of extending its rules beyond the “discrete and limited”⁸ assertion made to date, to cover

⁴ For more information on accessibility efforts at Microsoft, visit www.microsoft.com/enable.

⁵ *NOI* at ¶ 93.

⁶ *NOI* at ¶¶ 99, 103.

⁷ *NOI* at ¶ 107.

⁸ *NOI* at ¶ 108.

additional NTSPs. As of this writing, we understand it is likely that one or more parties will seek judicial review of the Commission's extension of accessibility requirements beyond telecommunications services and equipment. Before taking a step to extend its ancillary jurisdiction, the Commission should be sure that it is currently on solid ground. It does the disability community no good if well-intentioned but overreaching rules are struck down by the courts – and in fact overreaching may undercut other, more limited assertions of jurisdiction. At a minimum, the Commission should be sure that any further extension meets the Commission's own criteria by reaching only those products and services that are *integral to and essential for making telecommunications services and equipment accessible to persons with disabilities*.

Both Congress and the Commission have repeatedly stated their preference for reliance on market forces rather than regulatory mandate to achieve their goals where possible.⁹ That preference should be especially strong where the Commission would have to exceed its core competency through an assertion of ancillary jurisdiction. A cautious approach would be particularly warranted in this case because (as discussed below) market forces are moving manufacturers and service providers to address accessibility concerns without direct government intervention.

⁹ See, e.g., *Annual Assessment of the Status of Competition in Markets for Delivery of Video Programming*, 13 FCC Rcd. 24284, 24481 (1998)(Kennard, concurring)(“When Congress passed the Telecommunications Act of 1996, it affirmed the principle that when it comes to innovation and consumer choice, competition is preferable to regulation”); *Telecommunications Services Inside Wiring*, 13 FCC Rcd. 3659, 3704 (1997)(“In the 1992 Cable Act, Congress specifically embraced a ‘preference for competition’ over regulation”); *Price Cap Performance Review for Local Exchange Carriers*, 10 FCC Rcd. 8961, 9241 (1995)(Quello concurring)(“For the twenty years I have served on this Commission we have repeatedly, in every regulatory area entrusted to us, stressed the preferability of competition to regulation as a means of enhancing consumer welfare”).

C. *Market Forces Continue to Drive Advances in the Accessibility of New Technologies.*

Any assessment of the need for extending Section 255 to cover additional products and services necessarily must examine the degree to which market forces may already be driving the private sector toward accessible designs. As discussed below, the information technology industry as a whole has strong incentives to design accessible NTSPs, and as a result numerous efforts are ongoing around the world to develop accessibility standards for information technologies.

One of the most powerful tools available to the government *other* than regulation is the power of the purse – and Congress has used exactly that power to encourage accessibility. The 1998 reauthorization of Section 508 of the Rehabilitation Act of 1973 imposes strict accessibility requirements for any electronic and information technology (“EIT”) developed, maintained, procured, or used by a federal agency.¹⁰ The statute directs the Architectural and Transportation Barriers Compliance Board (the “Access Board”), after consultation with a number of federal officials including the Chairman of the Commission, to develop and issue by February 7, 2000, standards setting forth (a) a definition of EIT¹¹ and (b) the technical and functional performance criteria necessary for achieving EIT accessibility. With few exceptions, all EIT procured by federal agencies after August 7, 2000 will have to meet these accessibility criteria. And under the

¹⁰ See 29 U.S.C. § 794d.

¹¹ The statute provides that the definition of EIT must be consistent with the definition of information technology contained in the Clinger-Cohen Act, 40 U.S.C. § 1401(3), which is defined as “any equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the executive agency,” and specifically includes computers, ancillary equipment, software, firmware, support services, and related resources.

Assistive Technology Act of 1998, states are required to provide assurances of their compliance with Section 508 as a condition to receiving federal funds for their technology assistance programs.¹² Thus, any manufacturer that hopes to sell EIT to a federal or state government agency will have to design its products and services to meet the accessibility standards developed by the Access Board – or miss out on the opportunity to compete for billions of dollars in business.

The United States government is not alone in developing access standards. A number of national and international standards have been developed and continue to emerge. For example, two committees of the International Organization for Standardization are currently working on accessibility issues related to software (ISO Technical Committee 159 WG 5) and on technical systems and aids for disabled and handicapped persons (ISO Technical Committee 173). The European Commission has issued a document providing advice to all European standards bodies regarding access to information technology for people with disabilities (SOGITS No. 1032). Japan is leading an effort in the International Electrotechnical Commission to define, expand, and publish guidelines that address ease-of-use of appliance controllers to meet the needs of people with disabilities (IEC Technical Committee 100). And the World Wide Web Consortium has published a set of Web Accessibility Initiative Guidelines that provide suggested design practices that will enable assistive technology to function more effectively.¹³

Access to information technology is clearly on both the domestic and international agendas. The level of interest and effort evidenced by the activities of

¹² See 29 U.S.C. § 3011. Some states, such as Texas, require vendors to certify that their products meet accessibility standards. See, e.g., Tex. Gov't Code Ann. § 2157.005(b).

¹³ The guidelines can be found at <http://www.w3.org/TR/WD-WAI-PAGEAUTH/>.

Congress, the Access Board, the information technology industry, and international standards bodies is likely to lead to further investment in and advancement of accessibility technologies in many countries across multiple products and services. And as accessibility becomes the standard – and increasingly a requirement in public and private sector procurements – manufacturers will have ever greater incentive to design equipment that will enhance rather than degrade opportunities for people with disabilities.

D. Accessibility Requirements Should Be Extended Only to Non-Telecommunications Equipment and Services That are Integral to and Essential for Telecommunications Accessibility.

Microsoft recognizes that, although sincere and laudable, voluntary efforts and market incentives are no guarantee that emerging technologies will be accessible to persons with disabilities. The adoption of Section 255 itself illustrates the fact that good intentions are not always sufficient and that government intervention may be necessary to achieve the timely delivery of accessible products and services. But there is good reason to believe that the information technology industry will be different in this respect.

The contrast between the telecommunications systems of the twentieth century and the information technologies of the new millennium are stark. The nation's original telecommunications systems arose in a monopoly environment at a time when there was little consciousness of the concerns of the disabled. Information technology is a much more recent phenomenon, born in an era when disability issues have entered the national consciousness and are an important part of the domestic policy agenda (as evidenced by the Americans with Disabilities Act and other legislation).¹⁴ Information technology is

¹⁴ As the Commission noted, an estimated 54 million Americans have disabilities, making them the largest minority group in the country – a minority that is virtually certain to grow as the portion of the population over age 55 increases with the aging of the Baby Boom generation. *See NOI* at ¶ 2.

also developing in a highly competitive market where failure to respond to consumer demands can lead to business failure. In such circumstances, ensuring accessibility is not only the right thing to do, but also the smart thing to do. As a result, accessibility has been a concern from early in the history of the information technology industry in a way that it was not with telecommunications.

Nonetheless, there is sure to be some information technology integral to the provision of telecommunications services that is not accessible. Assuming the Commission's assessment of its jurisdiction is correct, the question then becomes which such technologies the Commission should require to meet accessibility standards and how it should make that determination. In the Report and Order, the Commission exercised its ancillary jurisdiction to reach NTSPs that might render telecommunication (*i.e.*, covered) services effectively inaccessible. It follows, then, that if in the future the Commission finds that a non-regulated environment has failed to deliver accessible NTSPs that are integral to essential telecommunications services, the Commission would again have a basis for proposing a regulatory solution.

The challenge, of course, is to devise a mechanism supple enough to respond to advances in technology and changes in the nature and architecture of telecommunications services going forward. Rather than address individual Internet telephony or CPE technologies in the absence of clear guidelines, Microsoft suggests the following, long-term approach to the fundamental questions raised by the *NOI*. Specifically, the Commission should:

- Develop a list of criteria for determining when an NTSP is integral to and essential for the accessibility of telecommunications equipment and services.

- Leave this docket open as a vehicle for an annual assessment of developments in the impact of specific NTSPs on the accessibility of telecommunications equipment and services.
- Whenever a particular NTSP appears to meet the established criteria, initiate a rulemaking to add that NTSP to the list of equipment and services subject to the Commission’s accessibility requirements.

This approach will create a “living” mechanism that can respond as societal norms and technology change – *e.g.*, when a new telecommunications service or product develops or an existing NTSP reaches critical mass. By refreshing the record annually, the Commission will have available the information it needs to track and assess technological innovations on an ongoing basis and to create a record for proposing a further assertion of ancillary jurisdiction, if necessary.

In its discussion of voicemail and interactive menus, the *NOI* suggests some criteria that would be relevant to this analysis. First, the prevalence or widespread deployment of a particular NTSP would be an important factor.¹⁵ No NTSP, no matter how ingenious, would be essential if it is lightly deployed or sparingly used in connection with telecommunications. Second, an NTSP must cross the threshold of “becoming available as mainstream services” that are “critical to successful participation and competition in our society.”¹⁶ This factor would draw a distinction between a “neat-to-have” and a “got-to-have” NTSP – and only the latter would support an assertion of ancillary jurisdiction. The Commission should use this proceeding to develop and refine the criteria for bringing an NTSP under the accessibility requirements.

¹⁵ *NOI* at ¶ 100.

¹⁶ *Id.* (quoting comments by UCPA).

In order to apply these criteria, we suggest that the Commission establish an annual comment period for collecting and assessing information from the public on the extent to which developments in telecommunications equipment and services may have rendered an NTSP integral and essential. This would be similar to the current practice of collecting information on competition in the markets for the delivery of video programming and for commercial mobile radio services.¹⁷ The Commission could use this information to create a “watch list” of NTSPs that are of particular interest for future monitoring. If this information indicated that a particular NTSP met the established criteria, the Commission would have a basis for proposing to further assert its ancillary jurisdiction with respect to the NTSP and for conducting an expedited rulemaking to impose accessibility requirements.¹⁸

In addition, there may be times when a new service arises that the Commission decides to classify (or even reclassify) as a telecommunications service. Such a determination would have immediate implications for the NTSPs that operate with that technology. Thus, any time that the Commission identifies a new telecommunications service, it should initiate a follow-on proceeding to determine which, if any, NTSPs should be subject to the accessibility rules. In this way, as views on what constitutes “telecommunications” evolve the NTSPs that are integral and essential will automatically evolve as well.

¹⁷ See, e.g., *Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, 13 FCC Rcd. 24284 (1998); *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, 14 FCC Rcd. 10145 (1999).

¹⁸ Again, this assumes that the assertion of ancillary jurisdiction survives judicial review.

CONCLUSION

Microsoft is committed to the proposition that advances in technology must not become setbacks to people with disabilities. We support the Commission's efforts to ensure that the *all* people have meaningful access to and use of emerging technologies. We encourage the Commission to move carefully before extending the requirements of Section 255 any further beyond its specific mandate in light of jurisdictional uncertainties and evidence that market forces are driving progress in accessibility. The process outlined herein should enable the Commission to maximize accessibility while minimizing the bases for judicial review.

Microsoft looks forward to continuing to work with the Commission and other groups to develop standards and practices that enable all people to participate fully in the Information Age.

Respectfully submitted,

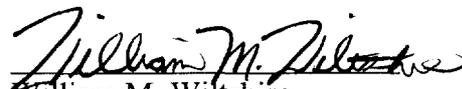
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