



NATIONAL COUNCIL ON DISABILITY

An independent federal agency working with the President and the Congress to increase the inclusion, independence, and empowerment of all Americans with disabilities.

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Federal Communications Commission
Office of Secretary

In The Matter of Implementation of
Section 255 of the Telecommunications
Act of 1996

WT Docket 96-198

Access to Telecommunications Services, Telecommunications Equipment, and
Customer Premises Equipment by Persons with Disabilities

Reply Comments

Submitted to the Federal Communications Commission
by the National Council on Disability

November 27, 1996

The National Council on Disability (NCD) wishes to thank the Federal Communications Commission (FCC) for making available in accessible, electronic formats the comments submitted to the Commission in connection with its Notice of Inquiry (NOI) in the above-referenced matter.

Upon information and belief, NCD understands that several comments submitted to the Commission in electronic formats were not listed on the Commission's web site as having been so submitted, and were not made available to interested parties for review via that web site. In view of the fact that a number of these comments came from citizens and disability-oriented consumer groups, the NCD recognizes that some of these submissions may have been characterized as "informal comments," due to their failure to meet one or another of the technical requirements for "formal" comment submissions. Nevertheless, to the degree that such comments contain unique views and useful information, and to the degree that they would contribute substantively to creation of a record for use by the Access Board and by the Commission itself, NCD requests and recommends that all comments timely filed in electronic formats be made part of the record under this Docket, and that all such comments, including original and reply comments, be listed among those received in this matter.

Owing to the value of electronic filing as a means for facilitating the widest possible dissemination of information, as a means for facilitating public input, and as a means for ensuring the highest level of participation in the review comments by persons with disabilities, NCD further recommends that the Commission strongly encourage all future proceedings provide for the filing and dissemination of comments or of other industry and consumer input in accessible, electronic

formats. Since it is likely that most or all such comments submitted to the Commission are created and retained in electronic formats, NCD asks the Commission to seek submission in such media--either in addition to or instead of hard copy--as standard filing protocol. Scanning arrangements could be made for the occasional individual who is unable to submit electronic copy.

The reply comments of NCD were developed in consultation with its Tech Watch task force. NCD is an independent federal agency with a fifteen member board appointed by the President and confirmed by the Senate. Our mandate is to advise the administration and Congress on public policy affecting people with disabilities. Tech Watch is a cross-disability task force of NCD which regularly convenes a dozen leaders on technology and disability policy from around the country. It monitors technological developments for accessibility, coordinates communications between industry and consumers with disabilities, and makes recommendations to the Council on ways of promoting access to the information superhighway.

(1) Mode of Enforcement-- As among the three major alternatives for implementation of Section 255 outlined in the NOI (namely, a complaint process, guidelines and suggested policies, or formal regulations), the responses reveal a wide variety of opinions. With a few notable exceptions, representatives of industry favor either a complaint-based, case-by-case approach to implementation, or a voluntary guidelines process falling well short of formal regulations in its precision or prescriptive impact. The Council wishes to urge certain considerations upon the Commission in its evaluation of recommendations for the utilization of a complaint-based model for exercising its jurisdiction. We believe that such an approach, far from achieving the goals of its supporters, may well subject significant sectors of industry to far greater uncertainty and expense than would result from the adoption of formal rules.

Were the law sufficiently clear and unambiguous with respect to all likely issues of contention, a statutory provision such as Section 255 could be expected to give rise to foreseeable and predictable outcomes in particular cases or controversies arising under it. But to the degree that the Commission itself found it necessary to pose many material questions in its NOI, it is apparent that grounds exist for good faith disagreement and for persisting uncertainty regarding many provisions of the section. By remitting the resolution of such disagreements to a succession of individual complaints, posing legal and policy issues in complex and varying factual contexts, prolonged uncertainty and possible inconsistency are rendered likely. Moreover, since complaints would typically be lodged only after the roll-out of new equipment or services, industry would often be in doubt for some prolonged period as to whether its accessibility efforts in the design, fabrication and development of these products and services did or did not meet the requirements of the law. Finally, in those instances where a complaint to the

Commission yielded a finding that a given product, service or class thereof was not sufficiently accessible, or was not designed with sufficient attention to allow for the use of specialized or adaptive peripherals, the costs of necessary remedial action on the part of the firm or industry sector in question would, consistent with the costs of retrofitting in other contexts, typically be far higher than would otherwise have been necessary. Sadly, since good faith as such is not a defense under Section 255, the fact that the defendant had earnestly intended to comply would count for little, if its efforts or results were judged objectively inadequate.

Confronted with a statute that is not self-executing or entirely free of interpretive ambiguity, a complaint process, if it is to afford predictability, cannot take Section 255 alone as its point of reference. For this reason, guidelines are necessary to structure any complaint process. Apparently recognizing this, a number of commenters urge the adoption by the Commission of voluntary guidelines. But these arguments of voluntary guidelines fail to take account of a key distinction between Section 255 and other statutory formulations where that approach has been used.

The problem with voluntariness here is simple. Since Section 255 vests exclusive jurisdiction in the Commission for resolution of complaints arising under the section, adoption of voluntary guidelines would leave the Commission with no sanction, beyond that of rendering advisory rulings, for violation of the law. If the guidelines are voluntary, then what legal basis or meaningful recourse exists to deal with their violation? Moreover, what would motivate consumers to avail themselves of the complaint process, given the time and difficulty required under even the most streamlined and efficient complaint processing system, if favorable adjudication of their complaints yields no binding or enforceable results?

The Commission recognizes that Section 255 is not voluntary or optional in nature. While there are cases when voluntary guidelines may represent the best means of enforcing a statutory mandate, and while there are indeed cases in which statutory mandates include no mode of enforcement whatsoever, we believe that the vesting of jurisdiction for the receipt and resolution of complaints in the Commission, as well as the specific denial of any private right of action under the section imposes an obligation on the Commission to adopt some mode of enforcement that goes beyond treating the mandate of Section 255 as merely voluntary, aspirational, or rhetorical.

(2) **The Role of Market Forces**--A number of commenters state or suggest in various terms that the inherent processes of the competitive marketplace can be relied upon to bring about the development and dissemination of accessible telecommunications and customer premises equipment, and accessible and usable telecommunications services. Though there is an undoubted demand and market for accessible and usable equipment and services, there exists little evidence to

suggest that the market will, without the kind of encouragement offered by appropriate implementation of Section 255, be in a position to meet this demand. First it must be noted that, while entirely free to do so, the existing market system has not to date responded systematically to the accessibility needs of customers with disabilities. Moreover, though many respondents emphasize their commitment to the concept, few give any indication of the procedures they have adopted, either before or since enactment of the Telecommunications Act, to operationalize their commitment to accessibility in the design, development, deployment or continuing review of their products. With only one or two exceptions, the Commission and the public are asked in essence to accept on faith that procedures and standards sufficient to achieve the stated aspirations and commitments are in place.

If market forces acting alone within the current structure with the telecommunications industry were sufficient to ensure accessibility, we might at least expect some commenters to provide estimates of how long, for which categories of their products, or for what proportion of their products and services such accessibility might be anticipated. If market forces were by themselves sufficient to ensure accessibility we might expect commenters to tell us what specific steps they had taken or were contemplating to ensure the incorporation of accessibility considerations into the product designed and marketing cycles. But again, with only a very few exceptions, while many commenters speak glowingly of their own achievements in this area, few offer any hints into the internal processes, outcome measures, consumer research, market forecasts or other means they are using to bring accessibility about.

(3) Classes of Equipment Versus Specific Items-- A number of commenters suggest that compliance with the law should not be determined on a device-by-device or service-by-service basis. Instead, they contend this should be done either on the basis of a company's overall effort or on an industry-wide basis. While these proposals vary in their particulars, they all appear to contemplate either that the availability of accessible devices or services from any source would suffice to demonstrate industry compliance with respect to that class or group of products, or in the alternative, to effectively exempt given manufacturers or service providers from any obligations under the law with respect to some products or classes of products, if on balance they have made given degrees of progress across their product lines as a whole.

While it would be reasonable for the Commission to authorize or facilitate industry-wide cooperative efforts designed to ensure the accessibility of an adequate range of devices and services in all product categories, the questions of classification and consumer choice are not addressed in any depth by those making these suggestions. Unless such an approach could assure that the customer with a disability had a comparable choice of features, functions and prices to those available to other customers, such an approach would not meet the requirements

of accessibility specified by the law.

At least in the relatively undeveloped form thus far available to us, this suggestion of an industry sector-by-industry sector or a product line-by-product line approach to compliance poses two other serious difficulties as well. The first of these derives from the fact that each manufacturer of equipment or provider of competitive telecommunications services claims that its product and service offerings are superior to those of competitors. If these claims partake of any sincerity, then denial of access to anyone of their products in favor of those of a competitor would consign the customer with a disability to an inferior status.

The second problem with the suggestion relates to how classes of equipment or services would be defined, and how responsibility for providing accessible versions would be allocated among the various available providers. If, as we believe to be the case, considerable enhancement in market share is foreseeable from the provision of accessible devices and services, then many firms would wish to be assigned the task. If, as some seem to fear, accessibility would involve added costs in product design, production or distribution and support, then these same competitors would each insist that the other do it. In the name of avoiding governmental intervention, the Commission would surly be forced into the role of arbiter in many of these cases. This is surely not a role that either it or industry would desire the Commission to assume. Moreover, if those commenters who fear that accessibility is costly were correct, then some mechanism would presumably have to be developed to compensate them for the added costs they incur in being assigned the responsibility for making a given product accessible, where their competitors are not also obliged to do so. Clearly, a product-line-by-line or sector-by-sector scheme for allocation of accessibility responsibility would engender far more distortion in the competitive market place than would a transparent, uniformly applicable requirement applicable to all relevant manufacturers and service providers. The very distortion of the competitive market which all, from the disability community and the various concerned sectors of industry alike wish to prevent, can be avoided only if the Commission puts into place clear and uniformly applicable rules, equally accessible to and equally effectual for everyone.

(4) Differentiation of Requirements for Small Business-- At least one commenter suggests that small businesses, manufacturers and providers of service, should be exempted from some or all of the requirements of Section 255, as the Commission interprets them. Three arguments militate against this approach. First, there is no basis in the law for creation of such an exemption by regulation. In those contexts, such as rural telephone service, where Congress believed that exemption from LEC competition requirements and other special treatment was warranted, it incorporated provisions in the Act designed to bring about this result. Given this obvious congressional sensitivity to the special circumstances of some

telecommunications industry participants, there is no basis for assuming that it forgot, let alone that it intended to provide similar exemptions under Section 255. Second, even if the Commission were disposed to create such an exemption or dispensation, what definition of small business would it adopt, and what basis would there be for choosing one definition over another?

The third major problem here relates to the structure of the telecommunications industry. Even if the Commission were able, based on precedence in other regulatory settings, to promulgate a workable definition of "small business," what tests or standards would be used to determine the degree of independence from larger parent firms or other group members required for such an exemption to apply? In this connection, if the Commission were to grant any exemption on this basis, what barrier would there be to prevent larger companies from utilizing subsidiaries, spinoffs, and new ventures specifically for the purpose of avoiding the application of Section 255? In order to determine whether a company had created or entered into contract a "small business" for the purpose of evasion, the Commission would be obliged to make inquiry into its business motives and practices. Surely, no one wants this, but as is so often the case, a proposal aimed at reducing governmental involvement in the market proves on closer inspection to be workable only if that involvement is actually increased.

(5) Evaluation of Accessibility and Usability-- A number of commenters suggest that it would be unreasonable to expect given devices or services to be "accessible to" and "usable" by people with all major disabilities. They argue in the main, that a manufacturer or service provider should be deemed to have met its obligation if a particular product or service is accessible to and usable by one or more, but not necessarily all, of the classes of persons contemplated by Section 255. They further argue, in several instances, that application of Section 255 should be limited to specific disabilities, characterizable as telecommunications disabilities, such as those of vision, hearing, speech, manipulation, reach and memory.

Even assuming the Commission accepts the creation of what may be termed telecommunications disabilities, we submit that the law's "readily achievable" standard is well-suited to determining the scope of the accessibility requirement. Manufacturers and service providers should be expected to make their products and services accessible to people with all disabilities, subject only to the requirement that they are not obliged to do that which is not readily achievable. Thus, at the point where, or in connection with which, provision of access ceases to be readily achievable, the obligation to go further ceases. But up to that point, all disability categories must be taken into account.

A potential problem area arises in those circumstances where provision of accessibility for people with one disability substantially prevents or makes

materially more difficult its simultaneous provision for people in another of the major disability categories. For instance, touch-screens and membrane keypads are highly desirable for persons with certain motor disabilities, but are typically problematic, if not preclusive of use, for persons who are blind. Similarly, control panels requiring only a very light touch and panels needing a more differentiated and forceful action may both be indicated in varying situations. So also with the size and spacing of buttons or other controls. In such cases, it may be possible to provide dual input modalities or to incorporate some measure of user- definability. But where it is not, and choices must be made, it may be appropriate for manufacturers to market two versions of certain devices. In cases where this is not readily achievable, which are likely to be exceedingly rare and may be more hypothetical than real, it may be appropriate for the Commission to allow or encourage industry to allocate the responsibility among producers, provided that consumer choice among the entire range of functions, features and price ranges is not compromised in any way. In the meantime, manufacturers who foresee such difficulties should be asked for specifics as to how and when these situations would occur. They may be hard pressed to do so.

(6) International Markets-- A number of commenters suggest those domestic manufacturers or service providers who also sell their products and services in foreign markets should be granted some exemption from the application of the law. Their predominant reasoning appears to be that enforcement of its requirements upon them would make their products less competitive in these foreign markets, or would cause their products to run afoul of standards or regulations applicable in such markets. Leaving aside the absence of any case histories illustrating the occurrence of either of these contingencies, the proposal is an extraordinary one, as can be seen by reference to other product contexts. What, for example, would be our reaction were automobile manufacturers to ask to be exempted from pollution-control requirements on their domestic fleet because such requirements raised the marginal costs for their vehicles in some or other foreign market? Our reaction would be, as it has been, either that pollution controls are a valuable and marketable enhancement, or that the manufacturer must build different models to meet the needs and requirements of different target markets.

No suggestion is made that international manufacturers or service providers wishing to participate in the U.S. market should be exempted from any of the requirements of the law. That being so, domestic manufacturers and service providers are not being asked to compete at a disadvantage here, vis-a-vis their overseas competitors. But what the proposal for a relaxation of requirements for domestic manufacturers selling in foreign markets would do is actually far more insidious. While it would not provide any advantage for or against foreign competitors, it would have a potentially significant impact on the competitive balance among domestic manufacturers. Since, under such proposals, those domestic manufacturers who sell abroad would be exempted in some measure from

the requirements of the law while those domestic manufacturers who do not also market their products abroad would not be, the inescapable consequence would be to give a marginal competitive advantage in the domestic market to global over purely domestic firms. International competitors, not similarly favored though they too are obliged to meet the needs of varying markets, might well also feel aggrieved by such targeted and intentional market distortion in favor of a subset of American manufacturers. Indeed, it is likely that exemption of U.S. exporting companies from the coverage of the law, without simultaneous and comparable exemption for companies that import products into the United States, would give rise to challenges under the General Agreement on Tariffs and Trade (GATT) as impermissible subsidies or as illegal barriers to market penetration.

Leaving aside the paradoxical specter of those who demand a level playing field seeking special protection, and leaving aside the issues associated with free trade in our increasingly integrated global economy there remains the fact that no one has made a factual showing that accessibility either raises prices materially, or that it contravenes the procurement requirements of any major purchaser anywhere in the world, governmental or private. To the extent that bona fide concerns may exist as to any of these areas, the effort at harmonization of requirements, through bilateral and multilateral agreements and compacts, should be vigorously pursued. Manufacturers, instead of considering accessibility a barrier to entry into foreign markets, should also consider its market value, as an element of their promotional activities and as a unique attribute that many of their competitors are unlikely to be able to offer.

(7) **Coordination--**Situations exist in which the potential for accessibility is clear, but the locus of responsibility for its provision is less so. For instance, it may be that the provider of network services equipment, the provider of telecommunications services, or the manufacturer of CPE is best-positioned to ensure the necessary features and functions. Or it may be that overlapping decisions made by all of these will determine the end result. No better example than this exists to support the proposition that regulations, structuring and requiring the necessary consultation and cooperation among manufacturers and service providers, are needed.

In this connection, a number of commenters expressed concern over cost-shifting within and among various sectors of industry, and a number argue that particular components or processes should not be subject to the provisions of Section 255. One commenter, for example, contended that software should not be included within the definition of CPE.

Recognizing that accessibility and its ready-achievability often hinge, not on the efforts of just one company, but on the continuum of activities and efforts emanating from all participants in a given setting, a number of commenters

therefore call for Commission action to ensure the necessary coordination and cooperation. In view of such related provisions as those of Section 251 (a)(2), and in view of its broad authority to implement the Act, there can be little doubt that the Commission possesses the requisite authority to develop and implement processes that will assure this result. To do otherwise would indeed lead to the unfortunate result of manufacturers and service providers each contending that someone else was responsible for accessibility. Failure to achieve coordination could also result in the arguably unfair allocation of more responsibility to one participant in a long chain than that particular firm might otherwise deserve. Depending on the vagaries of the complaint process, individual companies might be held liable for accessibility costs that are much higher than would have been the case had a coordinated approach been used.

Those commenters who argue for voluntary or informal guidelines, backed up by a complaint process, therefore run a grave risk, not merely of inhibiting the development of an accessible telecommunications system, but of being denominated the responsible entity under circumstances where someone else, who doesn't happen to be the object of a complaint, whose identity may in fact be unknown to the consumer complainant, would actually have been better situated to accomplish the goal. The likelihood that a particular manufacturer or vendor would be held singly responsible is heightened by the fact that the law appears to contemplate no impleader process within the complaint context, whereby a defendant that believed itself to be wrongfully selected or charged could in turn prefer charges against the entity that it believed to be the more appropriately responsible one. In the end, then, absence of a formal process for ensuring cooperation in the development of a sinuous and fully integrated telecommunications system would expose individual companies to risks of far greater scope and indeterminacy than need be the case. Absent such a system, allocation of the responsibility for accessibility would be converted from a rational process to a sort of lottery. Surely no one wants that.

Already, in the comments submitted, attempts are visible by network service providers on the one hand, and CPE manufacturers on the other, to each contend that the other is primarily responsible for accessibility. Thus, one commenter contends that software should not be included within the definition of CPE, while another contends that "As a general matter, networks are not well-suited for the insinuation of features or options that serve idiosyncratic end-user demands." Still a third contends that services-provider noncooperation should be an absolute defense to a complaint against a manufacturer for the inaccessibility of its equipment, and that manufacturers should be responsible, not for the accessibility for their products, but only for the particular components they themselves manufacture. (What greater incentive to outsourcing could be imagined? How curious it is that the claim for a noncooperation defense is not accompanied by any acknowledgement of an obligation to document efforts made to secure the

necessary cooperation, or by any request for a mechanism for filing a cross-complaint against the allegedly uncooperative service provider.) What prospect for voluntary cooperation can realistically be anticipated in the face of such early positioning efforts aimed at cost-shifting and avoidance of responsibility?

(8) **Peripheral Devices--** A number of commenters note the importance of these in addressing situations where accessibility and usability are not directly possible. Unfortunately, beyond urging dialog between manufacturers of such devices and consumers, and dialogue generally between the telecommunications industry and the disability community, few commenters display any specific awareness of what the most commonly used access peripherals are, or of what design steps they must take to ensure the interconnection and use of such devices. For this reason, the suggestion of one commenter regarding the necessity of creating a systematic knowledge-base concerning the range, features and uses of the most common of these devices emerges as critically important. This is especially so if various sectors of industry are each going to contend that accessibility is the responsibility of another sector.

(9) **Cost Factors in Readily Achievable--** All commenters certainly agree that it would serve no good purpose to impose unreasonable costs on the telecommunications industry. No one wishes to stifle innovation or to introduce delay into the development and deployment of new products and services. NCD recognizes as fully as anyone that only through the encouragement of innovation and the steady flow of new and enhanced products and services can their aspirations for equal opportunity in telecommunications hope to be realized. But while many commenters emphasize the necessity of minimizing costs, only one offers any formula or suggested standards for determining what costs are attributable to accessibility, or what costs are in fact unreasonable. Absent clear guidelines for determining what costs are properly allocable to accessibility; absent clarity in the accounting principles used for categorizing and identifying these costs; and absent attention to the properly cognizable, longer-term financial rewards of accessibility, claims of undue costs will have to be accepted on faith. So also with delay, especially when it is recognized that even well-intentioned firms may incur unnecessary costs or delays if their approach to accessibility isn't a well-informed, coordinated and timely one. Without clear and broadly understood criteria for what costs can be taken into account in determining the economic burden, if any, of proposed accessibility measures, companies that approached accessibility in an inefficient way would be granted an almost unlimited opportunity to, in effect, pass their unnecessary or excess costs on to customers with disabilities by claiming these costs rendered accessibility too expensive.

A further dimension of the cost issue warrants our attention at this point. One commenter contends that cost effectiveness should be taken into account in determining what manufacturers should be required to do. In support of its

approach, this commenter contends that no valid public policy objective justifies incorporation of accessibility features into a broad range of mainstream products. Apart from the fact that Section 255 must be read as articulating precisely such a public policy goal, the commenter in question attempts to support its position by citing a 17 year old National Health Information Survey showing that only about 30 million Americans, or between 12-20% of the nation's population have disabilities. If it were up to the Commission to determine ab initio whether accessibility represented good public policy for our nation, it would be well to remind the Commission of the spuriousness of these demographic data.

In the Americans With Disabilities Act of 1990, Congress adopted the figure of 43 million as a credible estimate of the number of Americans with disabilities. More recent, widely accepted estimates place the current figure at approximately 49 million. All demographic studies point to a rapid and continuing increase in the incidents of disabilities in association with the ageing of the population through the first third of the 21st century.

Those who seek to evaluate the public policy value or cost effectiveness of readily achievable accessibility measures should also bear in mind the 1994 American Medical Association publication "Guidelines For Assistive Technology" which stated on page 1 that the average American can expect to live 13 years with a disability. While no reliable figures exist concerning how many of these disabilities can be characterized as telecommunications disabilities, the probability is that this proportion is very high, given the prevalence of vision, hearing, speech, manipulation and reach, and memory disabilities among those experienced with advancing age. If the commenter in question believes that serving the telecommunications needs of the "average American" does not represent a worthwhile policy goal, and was not intended by Congress, it should certainly be urged to provide its reasons for this extraordinary belief.

(10) Definition of Telecommunications Services and Customer Premises Equipment-- One commenter claims that the definitions of telecommunications services and of customer premises equipment are considerably narrower than most observers believe. While this argument is complex and closely bound to a number of textual sources, it primarily rests on two contentions: first, that what are termed "information services" represent an exception to the definition of "telecommunications services"; and second, that by reason of the "contamination" doctrine, many devices potentially or actually used to access telecommunications services are nevertheless not subject to denomination as CPE. Several of the links in the long chain of arguments supporting these contentions appear to be extremely weak.

Addressing the first contention, the argument essentially runs as follows: While "basic" telecommunications services are subject to Commission regulation in

a variety of contexts, these services cease to be subject to the Commission's authority when provided as an element of "enhanced" telecommunications services, which are not subject to regulation in any major context. In fact, it is not at all clear that the authorities cited support the claimed exclusion. It is by no means clear either that Congress meant to exclude all services characterized in the Telecommunications Act as "information services" from the applicable definition of telecommunications services covered under Section 255; or, even if Congress intended without expressly saying it so dramatic a narrowing in the scope of Section 255 (c), that the term "information services" as used in the Act in fact has precisely the same meaning as the term "enhanced services" used in the Commission's Computer II and Computer III regulatory proceedings. Moreover, even if the new definition of information services and the older definition of enhanced telecommunications services are identical, the regulatory context in which the authority of the Commission to regulate enhanced services was determined involved both issues and authority totally unrelated to those at issue in connection with Section 255. Finally, even if the precedents cited by the commenter for the proposition that enhanced services are not subject to regulation were applicable here, several key distinctions in the situations would warrant reconsideration by the Commission of the applicability of any such precedent.

To put this matter in a more concrete setting, it need only be noted that many new telecommunications services will fall into the category traditionally considered as "enhanced." Indeed, "basic" telecommunications services represent a fairly mature area of service, where innovation is relatively less likely to occur. While it is possible that Congress meant to mandate accessibility only for basic services, or even only for existing basic services, it is unlikely that Congress would have intended so radical a constriction in the plain meaning of its words, without clearly saying so. If Congress had in fact intended to exclude all those services traditionally characterized as enhanced services from the applicable definition of telecommunications services, it would have been easier and more logical for Congress simply to list the "basic" telecommunications services that it intended to be covered by Section 255 than to use the broad term "telecommunications services." Indeed, narrowed as the scope of Section 255 (c) would be if the exclusion from coverage of so many, including almost all innovative, telecommunications services were accepted, it is not clear that any services of significance, or any new services at all, would remain subject to coverage under the law. Absent any intention or authority to provide accessibility for the range of new telecommunications services being steadily brought on line, it becomes less than clear what Congress had in mind by including "telecommunications services" at all under the requirements of Section 255.

If this commenter's interpretation of Section 255 (c) went no further, some small residuum of "basic" telecommunications services would remain subject to regulation in the interests of accessibility. But the commenter does go further,

much further than this. By arguing that even basic services cease to be subject to regulation when provided in conjunction with, or as an element of, enhanced services, it would exclude even many basic services that are provided in this way from coverage under Section 255. Thus, as a practical matter, adoption by the Commission of the contentions here discussed would result in virtually no telecommunications services being subject to regulation, or for that matter being subject to a complaint process or to the promulgation of voluntary guidelines, under Section 255, notwithstanding the clear and unambiguous statutory language regarding coverage of "telecommunications services."

With regard to the second issue, we believe that application of the contamination doctrine is inapposite. The commenter suggests that inasmuch as certain devices including computers are not manufactured primarily for use in telecommunications, they are not subject to treatment as CPE under the law. Leaving aside the fact that no computer is marketed as having the virtue of being unable to utilize a modem or as being unsuitable for telecommunications, an argument based on the uses for which the device is intended misses the point. Rather, what is at issue is the accessibility to users with disabilities of those functions or features that are necessary for, or utilized in, the performance of whatever telecommunications activities the equipment is intended to perform or capable of performing. If a manufacturer can find a way to make these, and only these, functions and features accessible, it is theoretically free to do so. But to argue that because the equipment is also capable of performing non-telecommunications functions, its telecommunications functions and features are not subject to Section 255 would be to contend that virtually no devices meet the definition of CPE. After all, can a common device be readily identified that is not capable of some non-telecommunications use?

Congress was fully aware of the contamination doctrine when it adopted the Telecommunications Act. If it had intended so drastic a narrowing of the definition of CPE as to exclude from its definition any device that was intended for or capable of mixed telecommunications and non-telecommunications uses, if it had intended CPE to apply only to devices which can be used for telecommunications alone, it surely would have said so. No intention of such a nature emerges, and none can be plausibly inferred.

(11) Conclusion-- A number of commenters assume, almost as a truism, that accessibility will be prohibitively costly. One contends in a hyperbolic manner that it could cost an amount exceeding the size of the national debt; another states that it will result in increased product costs to the non-disabled public; and others likewise make the same assumption, more or less explicitly, in a variety of ways. Two facts are noteworthy about these assumptions and contentions. None is accompanied by any case histories, case studies or other evidence, based on internal efforts to achieve accessibility, as to what the actual costs of such efforts

were. We believe the Commission has a right to expect that such apocalyptic contentions would be backed-up by case histories or other experience data tending to prove, or at least to support, the claims. But such data, anecdotal or statistical, are uniformly lacking. The Commission, Congress and the public are asked to take on faith that accessibility will be expensive.

NCD does not know or contend that accessibility will always be possible, or that where possible it can always be provided at acceptable cost. But Congress's careful crafting of the "readily achievable" standard into the law provides ample safeguards against any industry participant or sector being asked or compelled to incur excessive costs. Thus, even if some of the dire cost forecasts prove true, the law contains ample mechanisms for protecting industry, and for reconciling the many competing values at play within the Section 255 context.

In this light, the second noteworthy aspect of the pessimistic contentions becomes particularly interesting. Many of the commenters who contend, without evidence, that accessibility will be too costly also simultaneously trumpet their own achievements in this area. Were those efforts and achievements unduly costly, or sufficiently costly to disadvantage the companies that undertook them in the competitive marketplace? If so, why were they done? If not, what reason is there to believe that continued efforts in this area will prove otherwise? Looked at another way, the question may be asked why, if regulation would be unduly burdensome, provision of accessibility under the aegis of voluntary guidelines would not be? If accessibility is going to be expensive if mandated, will it not be equally expensive if undertaken voluntarily? Supporters of voluntary guidelines may well regard their approach as allowing them the flexibility to provide accessibility when convenient, while foregoing it when it is too expensive. Again, the "readily achievable" provision already provides that flexibility.

Though much of the discussion among commenters has focused on this choice between voluntary guidelines and formal rules, the equally important question of the approach that should be taken by either requires further discussion. Broadly speaking, there are two basic approaches available for the Access Board's and potentially the Commission's use. One contemplates an emphasis on process, the other on outcomes. These approaches are by no means mutually exclusive, inasmuch as satisfactory results can be assured only as the end result of a sound product development, design and testing process, but to the extent that the two approaches reflect opposite polarities or opposite ends of the spectrum, considerable variation in emphasis is possible.

Accordingly, NCD believes that both approaches must be pursued and united, if the goals of accessibility are to be achieved. As indicated above, we could be much more sanguine about a mainly process-oriented approach, had the commenters who favor it demonstrated any substantial experience with, or

knowledge of, integrating accessibility into their product and service planning and development. Likewise, we could accept a predominantly process-oriented approach if the commenters favoring it, instead of claiming by turns that, on the one hand, they were already providing accessibility but on the other, that doing so would be too expensive, had gone beyond rhetoric to set forth in their responses details of the performance criteria and evaluation measures they had developed and utilized for measuring the efficacy and responsiveness of their accessibility measures.

Accordingly, whether voluntary or prescriptive, the Access Board and the Commission must adopt standards and provisions which ensure an effective process, and which provide for adequate performance testing of products and services for which accessibility is claimed. In the end, no great mystery surrounds the performance standards at issue. Can the device or service, the telecommunications functions and features, be accessed and used in the absence of normal or any: vision, hearing, speech, reach, manipulation, etc? If not, are alternative means for accessing the service, or means for utilizing suitable access peripherals, available? These are not ineffable questions. While work must be done to develop uniform, objective, testable and replicable procedures for definitively answering these question with respect to particular devices and services or classes of devices and services, the questions themselves are ultimately simple ones of fact. Process guidelines alone would be of little value if it could not be shown that in fact they yielded equipment and services meeting these accessibility standards. Likewise, performance guidelines by themselves would be largely unattainable if unaccompanied by guidelines for navigating the often novel steps and processes necessary to bring these results to fruition. As the telecommunications system can only be understood through recognition of the interdependence of numerous manufacturers, vendors and processes, so can accessibility ultimately only be understood and accomplished through awareness of the inextricable connection between process and results. The Board and the Commission must act to strengthen and apply this recognition in all appropriate ways. If they do, the goals to which all are pledged can be reached.

Accessibility is no great mystery. As one commenter points out, citing the guidelines developed by the Trace Research and Development Center of the University of Wisconsin, it boils down to such simple questions as: can the feature be accessed or the function be used in the absence of normal or of any: vision, hearing, speech, reach, etc. If the market had simply gotten on with the business of ensuring that the answer to these questions was in the main "yes," no need for Section 255 would have existed. Nevertheless, Section 255, consistent with the overall scheme of the Act, is meant to assist and encourage the process, not as a coercive measure. By its actions and decisions the Commission can effectuate its spirit and purpose. Ultimately, neither consumers with disabilities nor telecommunications equipment and services providers can win, if the other does

not also win. By embracing world leadership in accessibility, American industry can strengthen its position and market share. Let all parties continue, as they have begun to do through the Access Board's TAAC (Telecommunications Access Advisory Committee) process work together in the spirit of cooperation and shared interest to make Section 255 work, for the mutual and reciprocal benefit of all.

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