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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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Secretary
Federal Communications Commission
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Washington, D.C. 20554

EX PARTE OR LATE FILED

Re: Implementation of Section 255 of the Telecommunications Act of 1996; Access to Telecommunications Services, Telecommunications Equipment, and Customer Premises Equipment by Persons With Disabilities, WT Docket No. 96-198

To the Commission:

Pursuant to Section 1.1206 of the Commission's rules (47 C.F.R. § 1.1206), the Telecommunications Industry Association ("TIA") hereby submits this written *ex parte* filing in the above-captioned proceeding. TIA has been an active participant in this proceeding from its inception and has consistently urged the Commission to adopt rules that will provide manufacturers with the necessary degree of flexibility to continue to innovate in the design of their products and to realize the fundamental goal of Section 255 -- increased accessibility to telecommunications services for consumers with disabilities.

After reviewing the record in this proceeding, TIA is submitting this letter in an effort to move the rulemaking process forward by clarifying and expanding on its positions in response to certain issues raised by other commenters. Specifically, TIA provides herein an extensive definition of the product line approach to Section 255. In addition, TIA provides further clarification of its positions concerning the Section 255 complaint process.

The Product Line Approach Will Result in Increased Accessibility

TIA consistently has urged the Commission to adopt rules which allow manufacturers to use a "product line" approach rather than a "product by product" approach to Section 255 compliance.¹ A product line approach would afford manufacturers a greater degree of flexibility to innovate in the development of products and would result in increased accessibility for all consumers with disabilities. While TIA has described the advantages of a product line versus a product by product approach in this proceeding, several parties have requested that TIA provide a more specific definition of product line. TIA recognizes the validity of these requests and the need to clarify the product line approach for the Commission as it prepares the rules implementing Section 255. TIA, therefore, is enclosing an expanded

¹ TIA Comments at 10; TIA Reply Comments at 7.
Government and International Affairs Office

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explanation of the product line approach, entitled "*Section 255 of the Telecommunications Act of 1996: A Product Line Compliance Implementation.*" This paper provides a description of the product line approach as it relates to the manufacturing process and demonstrates how the product line approach will provide manufacturers the ability to innovate and ultimately will result in greater access to telecommunications services than a product by product approach to increased access to telecommunications services.

The Section 255 Complaint Process

TIA shares the Commission's goal of quickly resolving consumer inquiries or complaints regarding the accessibility of mass market CPE with minimal government intervention. With this in mind, TIA submits the following proposals regarding a "fast track" complaint process, statute of limitations, standing requirements and confidentiality provisions. TIA believes that the adoption of these proposals, in their entirety, will achieve this result through a process that is both fair and efficient for consumers, manufacturers, as well as the Commission.

A "Fast Track" Process

In its comments and reply comments, TIA argued that parties should be required to raise potential complaints with the manufacturers of CPE for consumer markets before initiating a formal complaint proceeding with the Commission. TIA continues to assert this view, remaining confident that manufacturers will be able to resolve many consumer inquiries informally without the need for Commission involvement.

TIA agrees with the Commission that manufacturers and service providers should provide to the Commission a point(s) of contact within their respective organizations that are responsible for handling consumer inquiries governed by Section 255. TIA proposes that a required informal consumer inquiry to a point of contact initiate the complaint process. After receiving such an informal inquiry, a manufacturer should be required to make an initial contact with the complainant within 5 business days. This initial contact, if it does not in itself result in the consumer's needs being addressed, will inform the complainant that the manufacturer is investigating the problem and will begin the process of attempting to identify and solve the accessibility problem. At this point, the manufacturer must put the consumer inquiry on a "fast track," meaning that the manufacturer is given 60 days to meet the consumer's needs.

Manufacturers must be given a sufficient amount of time in which to resolve these informal consumer complaints. During the response period, a manufacturer must contact a complainant and identify the complainant's specific needs. The manufacturer also may need to contact potentially widespread personnel who are familiar with the design and availability of consumer products. TIA and a majority of commenters agreed that 5 days are inadequate to accomplish all of these tasks. If a 5-day response time is retained, the Commission will be forced to grant requests for extensions of time or

will receive formal complaints from virtually all complainants. In either case, the Commission will be unnecessarily involved.

TIA therefore proposes that manufacturers be given 60 days from receipt of the initial inquiry to resolve it to the satisfaction of the consumer. In most instances, this period of time will enable manufacturers to solve consumer problems without Commission involvement, thus fostering cooperative and mutually beneficial relations between manufacturers and consumers and conserving scarce Commission resources. If resolution cannot be achieved within 60 days, at that point the complainant may file a formal complaint with the Commission. This proposed "fast track" process is likely to avoid unnecessary and prolonged conflicts between consumers and manufacturers.

Statute of Limitations

In its comments and reply comments, TIA contended that a statute of limitations for bringing section 255 complaints must be imposed. Although TIA originally offered a 6-month requirement, TIA now proposes that the Commission require complainants to file "fast track" complaints within one year of purchasing mass market CPE. TIA believes that creating such a window strikes the proper balance between ensuring the rights of consumers and imposing reasonable requirements on manufacturers.

Consumers with disabilities who purchase CPE should be able to determine whether the equipment meets their needs within a reasonable period of time. TIA suggests that most consumers should be able to assess the accessibility of CPE well within one year of its purchase. Not imposing a filing window effectively requires manufacturers to provide CPE that meets the changing needs of consumers. For example, if a 40 year old man purchased a telephone in 1999 and then developed a hearing impairment 10 years later, the manufacturer should not be subject to a complaint from that consumer that the original telephone is not accessible to persons with hearing disabilities. Equipment that is purchased must meet only the current needs of the consumer, as the manufacturer should not be expected to anticipate a consumer's future changed circumstances.

Failure to impose any statute of limitations is without precedent in civil law and would require manufacturers to provide lifetime accessibility guarantees for their products. Although manufacturers are responsible for their products, they cannot be expected to guarantee the accessibility of their products indefinitely. CPE designed for consumer markets have relatively short product lifecycles, *i.e.*, 1-2 years, and the section 255 complaint process must reflect this reality. A cellular phone that is currently in the design phase may not contain the same accessibility features that may be present in a similar phone 5 years from now and should not be held to the same standards as a phone of the future. Similarly, a disabled consumer who purchases a product available today, whether accessible or not, should not be permitted to file a complaint 5 years from now in order to obtain the latest technology. Imposing a one-year statute of limitations will reasonably limit manufacturers' liability and expectations for their products while affording customers sufficient time to sample their purchases.

Standing

In its comments and reply comments, TIA, as did several disability groups, supported imposing reasonable standing requirements for section 255 complainants because such requirements would help eliminate abusive, anti-competitive, and fraudulent complaints. TIA continues to support this position and suggests that the Commission only entertain complaints against CPE designed for consumer markets² by:

a person or persons with a disability or someone filing a complaint on behalf of a specific identifiable individual with a disability (such as an organization that represents people with disabilities, or a parent, spouse, or legal guardian).

Adopting TIA's proposed standing requirement will reduce the possibility of abuse of the complaint process³ and enable manufacturers to devote more of their resources to the development of accessible products. At the same time, the standing requirement will preserve the ability of individuals who experience difficulty using mass market CPE to file complaints.

Confidentiality

TIA has emphasized throughout this proceeding that the confidentiality of information submitted by a manufacturer in defending a Section 255 complaint is of critical concern to manufacturers as such information goes to the very core of a manufacturer's design and development process. Such information would include highly proprietary and sensitive cost and financial information regarding a product or product pricing strategies. TIA has voiced its concern with proposals from several disability rights organizations that manufacturers be required to provide "all relevant" documents in response to a complaint. These proposals would require manufacturers to make available documents that contain their most confidential processes and calculations. Moreover, such a requirement is unnecessary for the Commission to resolve Section 255 complaints.

TIA has stated that the Commission's existing rules which are designed to protect the disclosure of confidential information are not sufficient to protect manufacturers' legitimate interests and that absent more forceful measures to protect the disclosure of confidential information, the Section 255 complaint process might be abused by unscrupulous entities seeking merely to obtain information for retaliation or competitive advantage. To ensure that manufacturers' confidential information is adequately protected in the complaint process, TIA proposes the following confidentiality guidelines:

- 1) Trade secrets and commercial or financial information submitted to the Commission by a manufacturer in response to a complaint shall be treated as *prima facie*

² Separate standing requirements for telecommunications and business equipment may be appropriate because such products are not sold to end-user consumers.

³ For example, a manufacturers' competitors may seek to obtain sensitive information through the section 255 process, or a political group may use the section 255 process to harass a manufacturer because of political beliefs.

confidential and shall be considered as falling within exemption 4 of the Freedom of Information Act;

- 2) No confidential materials are required to be disclosed unless the complainant executes a confidentiality agreement;
- 3) Complainants (and their counsel, if applicable) shall not be allowed to make copies of any material deemed confidential;
- 4) Confidential materials may be reviewed only under the supervision of FCC personnel; and
- 5) Where the submitting party demonstrates a clear and compelling need to refrain from disclosing confidential materials, regardless of the existence of a protective order, confidential materials shall be subject only to an *in camera* review by Commission personnel. An example of where such protection may be appropriate is when the submitting party demonstrates that the requesting party is likely to violate the protective order.

TIA is pleased to offer the foregoing proposals as the Commission considers rules implementing the mandate of Section 255. TIA is confident that the definitions provided herein will provide manufacturers with the flexibility to continue to design innovative and accessible products and that the proposals regarding the complaint process will allow manufacturers to devote their resources to ensuring that their products are accessible to, and usable by, the largest number of consumers possible, rather than having to defend against frivolous complaints. This will result in increased accessibility of telecommunications equipment -- precisely the goal of Section 255.

Respectfully Submitted,

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

In the Matter of)	
)	
Implementation of Section 255 of the)	
Telecommunications Act of 1996)	
)	WT Docket No. 96-198
Access to Telecommunications Services,)	
Telecommunications Equipment, and)	
Customer Premises Equipment)	
By Persons with Disabilities)	

**SECTION 255 OF THE TELECOMMUNICATIONS ACT OF 1996:
A PRODUCT LINE COMPLIANCE IMPLEMENTATION**

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I. EXECUTIVE SUMMARY

In order to increase the number of accessible features in telecommunications products available in the marketplace, TIA has proposed that manufacturers meet the requirements of Section 255 across families or lines of products. TIA strongly believes that this approach is preferable to the product-by-product approach because it will best meet the goals of Section 255 within the realistic context of the manufacturing process.

The product-line approach would be applied in two situations: (1) in the design of a new product; and (2) in response to a complaint alleging that a product is not accessible to an individual with a disability.

A product-line approach focuses on measurable outcome – does the company have products that meet the needs of persons with a broad range of disabilities, to the extent “readily achievable,” within a well-defined product line? Applying Section 255 to a product line will address all of the Access Board’s 18+ guidelines¹ in a balanced manner. Under a product-line approach, manufacturers will be able to coordinate the expenditure of “readily achievable” resources to produce products within a product line that: (a) provide a meaningful level of access for persons with particular functional limitations, both product inputs and outputs, and hopefully, includes more complicated product features as well as the most basic ones; and (b) increase the accessibility of mainstream products for persons with a range of disabilities.

¹ 36 C.F.R. §§ 1193.41, 1993.43, and 1193.51.

In comparison, a product-by-product approach only measures process, i.e., whether the company attempted to include features to promote access for all categories of disability in each and every product. For consumers, the failure of this approach will be that it limits the degree to which access can be achieved for a given disability and may prevent some disabilities from being addressed at all. The product-by-product approach forces a company to examine and attempt to satisfy multiple, often conflicting guidelines in each product it designs. In addition, it will not be “readily achievable” to incorporate more sophisticated access solutions or a combination of those solutions in every product. Not only does the product-by-product approach limit the degree to which accessibility can be achieved for a given disability, but it also forces the manufacturer to expend significant non-value added documentation efforts in anticipation of complaints that will result from the impossible task of designing every product so that it is totally accessible to every user.

TIA recognizes that a specific definition of “product line” is necessary in order to fully understand the concept and to demonstrate that this approach will increase the number of products made by each manufacturer that provide greater access for a broader range of functional limitations. To that end, TIA proposes to define product line as follows:

A product line is that subset of a manufacturer’s products which provides the consumer with a like primary telecommunications function, over a like telecommunications transmission standard or media. The “primary telecommunications function” is the dominant mode of telecommunication for which the product was designed, e.g., voice telephony, one-way numeric paging, two-way data transmission, etc. The “telecommunications transmission standard or media” is the method of transport used to accomplish the primary telecommunications function, i.e., GSM, TDMA, CDMA, FLEX, etc.

Under this definition, the scope of a product line is limited by two characteristics: (1) the primary telecommunications function; and (2) the primary transmission standard or media used by a product. The primary telecommunications function is the function seen and understood by the consumer – the reason the product is purchased – such as one-way numeric paging or voice paging. The second component of the definition, the telecommunications transmission standard or media, while less visible to the consumer, is important because different infrastructures may be provided by different carriers.

TIA's proposed definition has several strengths:

- Each service provider is assured that it can obtain from its chosen manufacturers, and make available to its customers, a line of accessible products, to the extent "readily achievable." A broad-based manufacturer of cellular telephones, for instance, would be required to build accessible phone(s) for the hearing impaired, if "readily achievable," using GSM and CDMA technologies, if it produced phones under both standards. Consequently, persons with disabilities will have the same array of choices among carriers as persons without disabilities.
- TIA's proposed definition limits the potential for abuse. "All cellular phones," for example, would not qualify as part of the same product line. Thus, consumers will have a broad range of accessible products because manufacturers will provide access, to the extent "readily achievable," within concise groupings of products within a manufacturer's overall portfolio.

In order to demonstrate why a product-line approach to Section 255 implementation will best accomplish the goals of Section 255, TIA provides a detailed discussion of the product design process. This discussion demonstrates the many complicated analyses, interactions, and trade-offs that will be involved in determining whether a feature to promote access is "readily achievable." Moreover, this discussion demonstrates that a product-by-product application of the Access Board's guidelines would negatively impact not only the

product design process, but also progress towards increased accessibility. Under a product-by-product approach:

- Highly complex trade-off and impacts analyses would be required for each of the 18+ Access Board guidelines even though it is almost certainly not “readily achievable” to meet all of the guidelines in a single product.
- Performing these complicated analyses for each of the Access Board guidelines for every product would in turn significantly delay product time to market.
- Innovation would be stifled and manufacturers discouraged from developing and experimenting with new access solutions.
- Manufacturers would be required to build detailed and costly “defensive” data bases of every design decision related to the 18+ guidelines for every product because manufacturers would be exposed to complaints on every product from individuals with every disability.

The FCC’s proposal in the NPRM, which may permit a product line defense, but appears to require manufacturers to consider all 18+ Access Board guidelines with respect to every product, is still essentially a product-by-product approach, with all of its attendant disadvantages.

Conversely, the product-line approach averts or at least limits many of the disadvantages of the product-by-product approach on (1) the product design process; and (2) the availability of products with features to promote access. A product-line approach has the following process-related benefits:

- Permitting manufacturers to evaluate, plan for, and provide an optimal array of features to promote access over an entire product line, rather than attempt to do so for each individual product.
- Reducing the number of access impact analyses required for each product, thereby reducing delay in product time to market.

- Preserving manufacturers' flexibility to innovate and experiment by placing fewer constraints on the design process for each product, and reducing the exposure to complaints on any single product (where a comparable accessible product is available).
- Reducing documentation and defense costs that do not contribute to increased accessibility.

These advantages of the product-line approach will result in more products that are accessible to people with a range of functional limitations and will thus accomplish the goals of Section 255 more rapidly than if a product-by-product approach were adopted. A product-by-product regime is unlikely to achieve meaningful gains in accessibility because it:

- Encourages a “cover all bases approach” to accessibility that provides only superficial levels of access for as many disabilities as possible in a given product. Under this approach, it will often not be “readily achievable” to incorporate more expensive or sophisticated features to promote access.
- Results in individuals with some disabilities not being served by any product.

In contrast,

- only a product-line approach preserves the flexibility for manufacturers to provide meaningful levels of access – **depth of accessible features** – for a particular functional limitation in a given product. Depth of features to promote access entails accessibility of not only basic product features, like the ability to place and receive a telephone call, but also accessibility of other features like programmable autodial or ringer functions.
- only a product-line approach provides accountability to ensure that manufacturers provide a **breadth of accessible features** to serve persons with a broad range of functional limitations. While it may not be “readily achievable” to provide access for a particular functional limitation in every phone, manufacturers will have more difficulty justifying such gaps in access in the context of a product line.

While a product-by-product regime may sound like an approach that serves the interests of persons with disabilities, TIA, based upon the experience of its member companies in

manufacturing products, firmly believes that only a product-line approach will result in products that all consumers, including persons with disabilities, want and are able to use.

II. A PRODUCT LINE DEFINITION

Throughout this proceeding, TIA has advocated a product-line approach that would permit manufacturers to comply with Section 255 by incorporating the Access Board's 18+ guidelines, to the extent that it is "readily achievable" to do so, across lines of products. TIA recognizes that a specific definition of "product line" is necessary in order to fully understand the concept and to demonstrate that this approach will increase the number of products made by each manufacturer that provide greater access for a broader range of functional limitations.

TIA proposes that "product line" be defined as follows:

A product line is that subset of a manufacturer's products which provides the consumer with a like primary telecommunications function, over a like telecommunications transmission standard or media. The "primary telecommunications function" is the dominant mode of telecommunication for which the product was designed, e.g., voice telephony, one-way numeric paging, two-way data transmission, etc. The "telecommunications transmission standard or media" is the method of transport used to accomplish the primary telecommunications function, i.e., GSM, TDMA, CDMA, FLEX, etc.

Under this definition, the scope of a product line is limited by two characteristics:

(1) the primary telecommunications function; and (2) the primary transmission standard or media used by a product.

The primary telecommunications function is the function seen and understood by the consumer – the reason the product is purchased. For example, a consumer who wants to receive remote messages may select a pager based upon the primary telecommunications function that the consumer desires, such as one-way numeric or voice paging.

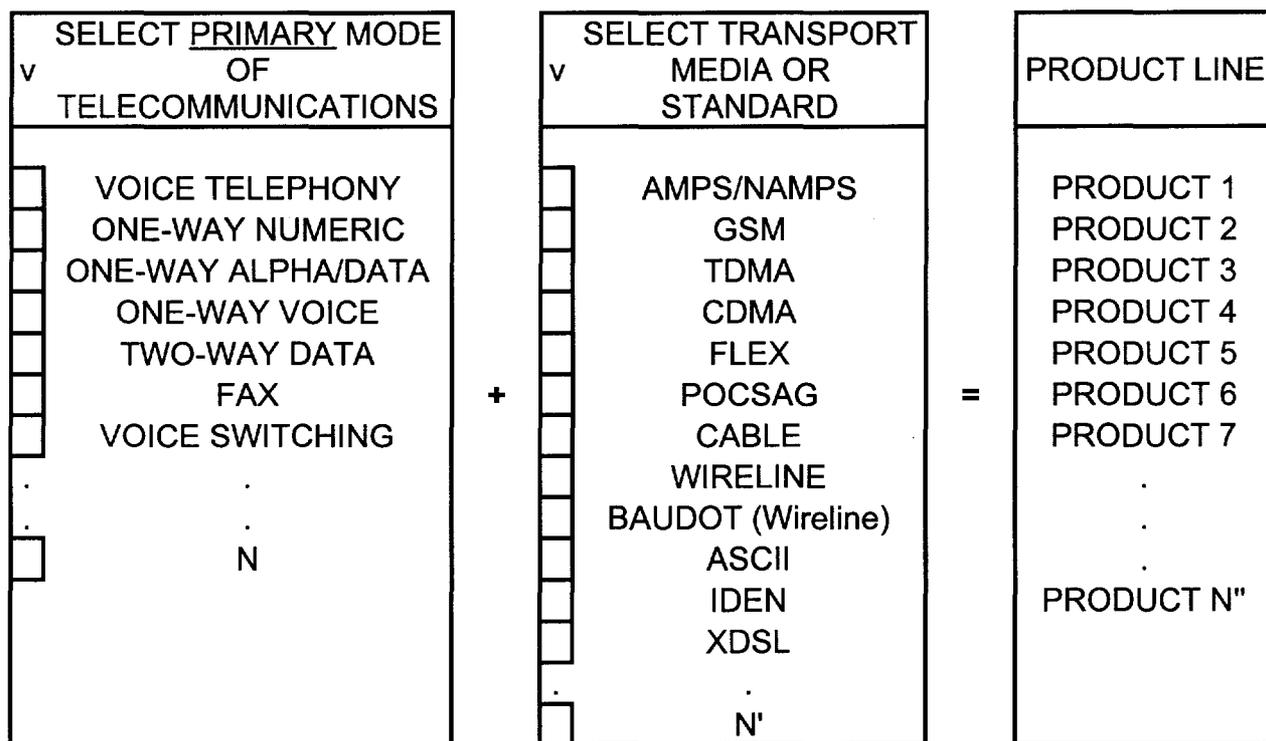
The second component of the definition, the telecommunications transmission standard or media, while less visible to the consumer, is important because it is tied to the service provider offering the service. Generally service providers provide service utilizing one transmission standard. In a given service area with multiple service providers (as is the case in most markets), more than one standard can be used. Including the transmission standard in the product line definition ensures that, to the extent “readily achievable,” manufacturers will make accessible products that can be used on the infrastructure provided by all carriers within a given service area. A broad-based manufacturer of cellular telephones, for instance, would be required to build accessible phone(s) for the hearing impaired in GSM, as well as CDMA, if it produced phones under both standards. Thus, each service provider is assured of a line of accessible products from its chosen manufacturers that the carrier can make available to consumers.

To summarize, the following matrix outlines TIA’s proposed definition of product line, which would apply to both telecommunications equipment² and CPE.

² Both telecommunications and consumer premises equipment have primary modes or functions -- a cellular phone may have voice telephony for a primary function, while a telephone switch (telecommunications equipment) may have voice circuit switching as a primary function.

PRODUCT LINE DEFINITION MATRIX

v one in each column



Note: The table does not list all possible modes or transports. When a primary mode is selected, and a key transport means is selected, all products that fall within that set of parameters are listed in the box at the right. That collection of products becomes the product line, which is represented in the last box as Product 1, Product 2, etc.

In applying the definition matrix, the first step is to specify the primary mode of telecommunication achieved by the product (e.g., voice telephony, one-way numeric paging). The next step is to specify the transport standard used to achieve the telecommunications (e.g., GSM). The products within a manufacturer's portfolio which satisfy these two elements constitute a manufacturer's product line (in this example, the GSM cellular voice phone product line).

Where a manufacturer makes a large number of products with the same primary telecommunications function and transport standard, those products are typically differentiated or "tiered" according to richness of features, which is further reflected in differences in price. Under these circumstances, a manufacturer should attempt to provide a product that is accessible to persons with particular functional limitation(s) which have features, functions, and a price that are comparable to the model(s) within the product line that are not accessible to that particular functional limitation(s). As a result, a manufacturer should not concentrate features to promote access only in its high-end products. Instead, a manufacturer should make a given feature to promote access (e.g., the vibrate function in an alphanumeric pager) available in a high-tier and a low-tier product, if it is "readily achievable" to do so. In some cases, where a costly new feature to promote access is at issue, it may be "readily achievable" for a manufacturer initially to incorporate that feature only in a high-end product. Historically, however, when such new

features become popular, competition works to reduce the costs, and the features become available in the lower cost models.³

TIA recognizes that this last consideration – comparable features, functions, and price – does not establish quantifiable criteria for determining what products within a product line are “comparable.” Evaluating comparability on a case-by-case basis has the benefit of allowing for the fast changing world of telecommunications products. The features available are simply too diverse to permit such quantification. Similarly, comparable price cannot be defined either as an absolute number or as a percentage of the product cost. The range of what is comparable in a relatively low-cost product like a one-way numeric pager, which is subject to fierce competitive pressures, would be much more narrow than the range of what is comparable in a relatively high-cost product, such as a two-way pager with remote internet access made by very few manufacturers. Because comparability is not easily quantified, consumers and industry will be best served by determining what is comparable on a case-by-case basis. The ADA provides ample support for addressing such complex factual situations through a case-by-case approach.⁴

³ When the vibrate feature was first added to pagers in the mid-1970s, it was an option which added \$50.00 to the price of the pager. Today, the vibrator is so commonplace that its price is transparent (but not free) in the end price of the product.

⁴ See Department of Justice Preamble to Regulation on Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, 36 C.F. R. Part 36, App. B (commenting on definition of “readily achievable”):

Although some commenters sought more specific numerical guidance on the definition of readily achievable, the Department has declined to establish in the final rule any kind of numerical formula for determining whether an action is readily achievable. It would be difficult to devise a specific ceiling on compliance costs

(Continued ...)

Moreover, it is important to emphasize that TIA's proposed definition of product line will narrow the number of instances where comparability of features and price is at issue. Comparability will only be an issue when the product line definition is satisfied – where products have the same (1) primary telecommunications function; (2) transport media or standard; and (3) a manufacturer makes more than one product within the product line. In some cases, such as small manufacturers that produce a narrow range of products, there may be only one product within a product line, in which case the 18+ point checklist would apply in its entirety to that product.⁵ Thus, a product line is narrowly defined – a manufacturer could not characterize “all cellular phones” using a variety of transport standards as a product line. TIA's proposed definition of product line thus establishes concise groupings of products within a manufacturer's total portfolio of products, thereby ensuring that a broad range of accessible products will be provided for all consumers.

that would take into account the vast diversity of enterprises covered by the ADA's public accommodations requirements and the economic situation that any particular entity would find itself in at any moment. The final rule, therefore, implements the flexible case-by-case approach chosen by Congress.

Id.

⁵ In the case of telecommunications equipment, a manufacturer of a telephony switch may have only one model. A start-up or small CPE manufacturer may also have only one product. The product-line approach will have little or no impact on the requirements such manufacturers face under Section 255.

III. THE PRODUCT-LINE APPROACH WILL ACCOMMODATE CHANGING TELECOMMUNICATIONS TECHNOLOGY

A. The Product-Line Approach Will Encourage Development And Dissemination Of New Accessible Technologies

Like TIA, many commentors in this proceeding agree that technological innovation is the key to enhanced accessibility, and that the FCC must therefore adopt a compliance regime that fosters, rather than stifles, innovation.

The product-line approach preserves manufacturers' flexibility to innovate and incorporate a broad range of access solutions. For instance, a new feature which offers great benefits to many users, including persons with disabilities, may preclude the inclusion of features that enhance access which were (and are) available in existing products. It may be that the new feature requires a great amount of the available software memory, or the new technology is incompatible with the existing transmission standards or media. In the competitive telecommunications market, this is a temporary situation. Chip capacity and computing power double every 18 months⁶ and products are replaced by improved ones at ever decreasing time intervals. The ongoing review of the accessibility of products within product lines as products are added and discontinued will result in continuing improvements. The more flexible product-line approach allows for such innovation to occur in the design of new products while the FCC's proposed product-by-product approach would not. The product-by-product approach forces a manufacturer to attempt to apply all 18+ of the Access Board guidelines with respect to every

⁶ Moore's Law.

product it designs. The Access Board's guidelines include so many different requirements that application of the 18+ checklist to the design of an individual product inhibits a manufacturer's ability to apply new technologies to achieve access and encourages only superficial access solutions.

In contrast, the product-line approach allows for rapid deployment of new technology. Increasingly, regulators of telecommunications equipment have expressed concern about making advanced technologies available to the general public as quickly as possible.⁷ The product-by-product approach suggested by the FCC will stifle this effort and in some cases, will preclude the deployment of such innovation altogether. Technical innovation drives the success of new products which leads to success for manufacturers, which leads to further investment in design and development, which will ultimately lead to the development of more accessible products. The product-line approach is critical in maintaining the current pace of innovation and rapid deployment of new technologies. Accordingly, in order to comply with Section 255 manufacturers must have flexibility to use their best judgment.

⁷ *In the matter of Amendment of Parts 2, 15, 18 and Other Parts of the Commission's Rules to Simplify and Streamline the Equipment Authorization Process for Radio Frequency Equipment*, Notice of Proposed Rulemaking, ET Docket No. 97-94, FCC 97-84, at ¶ 5 (rel. March 13, 1997) ("We observe that the current multiplicity of equipment authorization processes has resulted in an extensive and complicated set of regulations. Manufacturers are often confused as to the requirements and procedures they must follow, which can sometimes lead to delays in introducing products to market. Such delays can cause a manufacturer to lose its competitive advantage. The fast pace of today's telecommunications and electronics industries has heightened the need for equipment authorization procedures that are clear, rapid and efficient."); *In the matter of 1998 Biennial Regulatory Review – Testing New Technology*, Notice of Inquiry, CC Docket No. 98-94, FCC 98-118 at ¶ 2 (rel. June 11, 1998) (citing 47 U.S.C. § 157).

The product line regime will give manufacturers incentives to invent new approaches to accessibility. The product-line approach, coupled with the competitive marketplace, will result in widely diverse products within a product line from multiple manufacturers. It will result in a broad choice of products for all consumers and it will result in features to promote access being advertised and highlighted in product literature. It will fulfill the mandate of Section 255 in a timely and efficient manner.

B. TIA's Proposed Definition Of Product Line Is Flexible Enough To Adapt To Changing Telecommunications Technologies

As technology moves forward, the boundary lines between the telecommunications functions performed by products may become blurred. TIA's proposed definition of product line is flexible enough to adapt to changing and converging telecommunications technologies. For example, some cellular phones now provide data capability as an adjunct to voice service. TIA's definition of product line can adapt to ensure that these products are developed within the requirements mandated under Section 255. While these phones still provide a primary telecommunications function of voice telephony, the addition of the data function to the phone's capability adds a unique feature to the phone. With the new data feature, such a phone would be seen as the top tier product among voice cellular phones. Since the manufacturer should offer accessible products with comparable features, functions and price under the product-line approach, the new product would receive a full guideline review, and those guidelines which were "readily achievable" to implement should be included in this new product. If the data function became more and more central to the function

of the phone, it could develop into the primary telecommunications function of the phone, and under TIA's definition, a new product line would be formed.⁸

IV. A PRODUCT-LINE APPROACH TO COMPLIANCE IS NECESSARY

A. Comments Submitted In This Proceeding Have Identified Many Advantages Of The Product-Line Approach Over A Product-By-Product Approach

Comments by TIA, its member companies and others have pointed out that a is superior to a product-by-product approach to Section 255 implementation because:

- It is not practical, or even possible, to make every product accessible to every person regardless of the type or severity of his or her disability.⁹
- The 18+ guidelines cannot be considered independently as called for by the Access Board, because they interrelate; e.g. it makes little sense to consider the accessibility of the inputs of a product without considering the outputs at the same time.¹⁰
- Treating the 18+ guidelines independently without considering the cumulative impact of those guidelines for the entire product, the companies will be forced to implement a number of "readily achievable" guidelines, even though total cost of such actions could be not "readily achievable." Such a result is inconsistent with Section 255.

⁸ Another example of technology convergence is the introduction of multi-mode phones which have the capability of operating on more than one transport standard. As in the case of data phones, this product could be initially considered an upper tier phone. As the function becomes the primary reason for buying the phone, this category of product could become a new line of "multi-mode roaming" phones.

⁹ Reply Comments of National Association of the Deaf and Consumer Action Network at 6-7.

¹⁰ For instance, referring to the Access Board guidelines, it makes little sense to design a product that satisfies the requirements of Section 1193.41 (a) (inputs operable without vision), without also satisfying the requirements in Section 1193.43 (a) (availability of visual output information in auditory form).

Furthermore, the comments of TIA and others have demonstrated that the product-by-product implementation proposed by the Access Board results in the following problems:

- Creates products with combinations of features that will not be desired or usable by individuals with or without disabilities.
- Results in individuals with some disabilities not being served by any product.¹¹
- Exposes companies to complaints on every product from individuals with any disability or multiple disabilities.
- Requires companies to build a detailed, “defensive” data base of every design decision related to the 18+ guidelines for every product.

A product-line approach builds upon the progress made by the Access Board in developing its guidelines. Manufacturers would utilize the Access Board’s guidelines to help design better products in the context of a product-line implementation. Product-line compliance ensures that the 18+ Access Board guidelines are applied in a logical and meaningful way across a series of related products manufactured and marketed by a company.

Use of the Access Board’s guidelines across a product line would have the following benefits:

¹¹ In a product-by-product implementation regime, the requirement to include all 18+ guidelines, if “readily achievable” in every product, will result in some of the guidelines being unaddressed. This will occur because of the difficulty of including all of them in each design and because some of the guidelines conflict. Forcing all 18+ guidelines on every product will result in manufacturers achieving minimal or less than optimum access on as many of the guidelines as possible -- some of the guidelines will be justifiably neglected.

- Individuals with a broader range of different disabilities will be served by a manufacturer's product line.¹²
 - The depth of features and functions offered will increase.
 - Flexibility for future innovation is preserved.
 - Compliance and documentation costs are lower.
 - Resources are directed at solutions to access issues.
 - The process is more consumer-friendly.¹³
- B. A Closer Look At The Product Design Process Also Demonstrates Why A Product-Line Approach Is Superior To A Product-By-Product Approach**

The design and development of telecommunications equipment and CPE is complex process that involves consideration of inter-related factors and difficult trade-offs, all in the context of a highly competitive marketplace. The FCC should adopt regulations that promote the goals of Section 255 by accounting for the complexity of the product design process and encourage manufacturers to be creative and to innovate in the area of accessible design.

While the process of developing new products varies from manufacturer to manufacturer, the process is typically driven by management and marketing, using such tools as market research, strategic planning, and considerations related to the company vision or overall strategy. Normally, a product is developed with a specific customer niche as a target; i.e., the

¹² By focusing on specific disabilities, the products will have features to promote better access for persons with that disability. At the same time, the manufacturer cannot neglect any of the 18+ guidelines across the product line, resulting in the availability of products which serve the needs of individuals with a broad range of disabilities.

¹³ With mainstream products that provide enhanced access for persons with particular functional limitations across a product line, manufacturers will have an economic incentive to highlight the features to promote access included in specific products, which will in turn, help persons with disabilities find the products that meet their specific needs.

product is designed to meet the needs of a specific part of the market demographics. Each market segment is defined by the need for specific core features (function, size, and appearance); the teenage paging market, for instance, calls for a much different look and features than does the market for executives. These core features, in combination with company strategies, define the fundamental characteristics of the product being developed.

In many companies, the product development process is controlled by a product definition document called a “contract book.” This document defines the product in terms of overriding goals and sets targets to achieve those goals such as cost, size, and reliability. In addition, the product definition document sets a series of product operational and technical parameters such as features, frequency range, product registration time,¹⁴ and audio quality. A product design team’s job is to translate the product definition document into an actual product. To accomplish this, the product design team translates the product goals into “product drivers” and sets budgets for accomplishing them. A hypothetical set of “product drivers” and budgets for CPE product, might include: cost, battery life, registration time, part count,¹⁵ size, memory (RAM, ROM), feature set and audio quality.

¹⁴ Product registration time is the interval between the moment that the product is activated by the user and the time that it is actually capable of performing its various functions. For example, the first time a user turns on a cellular phone or two-way pager, the device initiates a “handshake” or registration with the system switch. This can take several minutes and until completed, the system will not recognize the user’s unit.

¹⁵ In manufacturing, part count has a highly significant impact on product reliability and quality. The fewer parts involved, the fewer errors that are likely to be generated in the manufacturing process. Part count is also related to the ultimate reliability of a product, with fewer parts resulting in higher reliability. Adding parts also increases the size of the product circuit board and thus, the size of the product.

(Continued ...)

These “product drivers” and the corresponding “budgets” established to achieve them, have a complex inter-relationship. The product drivers used in this discussion are illustrative in nature. They represent the typical drivers used by many manufacturers in designing today’s products. This list is dynamic and changes over time as new features and functions are developed. From current discussions, we already know that 3G¹⁶ technology, for example, will support a broad array of new features, such as video displays and special keyboards for two way interactivity, and thereby, will likely result in the addition of new product drivers. The addition of these new drivers and more will only make the development process described here increasingly complex going forward.

Once the product drivers are identified, the progress of the design effort is measured in terms of these budgets. For instance, the target size of the product usually determines the size of the battery that can be used, and this, with the desired battery life of the product, determines the amount of power available to support the product (current drain budget). If the current drains of product features are added-up and exceed the budget, the design will have to be changed so that the overriding current drain goal will be met. This may involve making

In addition to the basic part count driver there are other practical issues related to manufacturing difficulties and costs. Even an accessibility feature, like a speaker jack (which is perceived as “simple” because the components may not be very expensive and the change may not interfere with use of the product by a person who does not need that feature) may involve substantial, costly changes to the product assembly line. On an assembly line, components that are similar in size and shape can typically be incorporated into a product by the same robot. A speaker jack, for example, which is a one-of-a-kind component, typically requires a custom placement, either manually (by a human being) or by another specially programmed robot, which can add significant assembly and product costs.

¹⁶ 3G refers to third generation cellular, the next generation mobile telephony system which is the subject of current worldwide discussions and telecommunications planning efforts.

trade-offs (choosing the features that stay, and the features that are dropped to meet the current drain budget). In almost every case, if the trade-offs compromise the ability to achieve product goals, management will terminate development of the product.

The matrix on page 21 through 23 provides a flavor for the complex effect of the Access Board's proposed 18 point checklist for defining accessibility on the product drivers that govern the development process. In this matrix, the vertical axis lists the 18 items on the accessibility checklist, with some possible implementation strategies under each one. The horizontal axis lists the overriding budgets which are derived from the product drivers. The intersection points for each of the columns and rows represent the location of an interaction between the access strategy and the respective design budget. If there is interaction, the point is marked with an "X." The matrix demonstrates that in virtually every instance, the inclusion of a single feature to promote access would implicate not just one, but many, of the product drivers.

EXAMPLES OF FEATURES TO PROMOTE ACCESS AND IMPACT ON PRODUCT DRIVERS								
Audition Quality	Tiering	Memory (RAM, ROM)	Part Count	Registration Time	Battery Life	Size	Cost	Product Drivers
								Input, Control & Mechanical Functions
								Operable w/o Vision
x	x	x	x		x	x	x	voice chip
							x	nib on 5 key
			x			x	x	Braille key pad
								Operable w/ low vision
x	x	x	x		x	x	x	voice chip w/ enhanced audio
x		x	x		x	x	x	voice chip w/ speaker jack
		x				x	x	zoom w/ enhanced audio
		x				x	x	zoom w/ speaker jack
								Operable w/ little or no color perception
								no exclusive use of color to designate key functions
							x	enhancements to contrast on visual displays
								Operable w/o hearing
		x	x		x	x	x	vibrating feature
		x						visual cues
								Operable w/ limited manual dexterity
						x	x	big buttons
x	x	x			x		x	speaker phone
	x	x	x	x	x	x	x	voice-activated features
								Operable with limited reach or strength
	x	x	x	x	x	x	x	voice-activated features

EXAMPLES OF FEATURES TO PROMOTE ACCESS AND IMPACT ON PRODUCT DRIVERS								
Auditing Quality	Tiering	Memory (RAM, ROM)	Part Count	Registry	Battery Life	Size	Cost	Product Drivers
x	x	x			x		x	speaker phone
								Operable w/o time-dependent features
		x					x	ability to opt-out of time-dependent features
								Operable w/o speech
		x	x			x	x	text inputs
								Operable w/ limited cognitive skills
		x					x	expanded number storage/memory
								Output, Display & Control Functions
								Availability of visual information
x		x	x		x	x	x	voice chips
		x					x	incorporation of auditory cues
								Availability of visual info ... low vision users
		x	x			x	x	zoom features
								Access to moving text
		x					x	"freeze-frame" function
								Availability of auditory information
		x	x			x	x	text display
								Availability of auditory info... hard of hearing
x		x	x		x	x	x	enhanced audio
		x	x			x	x	text display
		x					x	visual cues
								Prevention of visually-induced seizures
		x					x	ability to deselect flashing features
								Availability of auditory cutoff

EXAMPLES OF FEATURES TO PROMOTE ACCESS AND IMPACT ON PRODUCT DRIVERS								
Auditing Quality	Tiering	Memory (RAM, ROM)	Part Count	Registry Configuration Time	Battery Life	Size	Cost	Product Drivers
						x	x	ability to shut off volume
								Non-interference w/ hearing technologies
x		x	x			x	x	EME emissions do not generate interference
								Hearing Aid Coupling
x			x			x	x	all product outputs hearing aid compatible

The interaction between the feature to promote access and the budgets (e.g., memory or battery life budgets) often requires a complex design analysis and decision. The interaction may result in the following required actions:

1. If the impact of the access solution or feature on the budget(s) is known, it must be reviewed to make sure that it does not cause an overall problem in the product meeting its target budget(s).
2. If the access solution or feature causes the budget to be exceeded, the design must be reviewed to see if other changes can be made to permit the inclusion of the feature.
3. If the access solution or feature is not technically feasible, a case must be made for why it is not, and this must be carefully documented.

4. If an access solution or feature is not known, the literature must be searched or internal technical experts must be sought to find a viable approach; this often requires lengthy investigations, including iterative design and testing.
5. If an access solution or feature is known, its effectiveness for the particular product must be tested to confirm that it works; this may require extensive testing of prototypes using actual market tests.
6. If the access solution or feature is found to be not “readily achievable” for any reason, the analysis resulting in that determination must be documented.

As can be seen in the matrix, the FCC's recommended approach requires dozens of these design exercises to take place for each case. The actions described above are not simple. Depending on the nature or degree of the interaction, weeks of technical effort may be necessary.

Requiring this effort on every product designed for all 18+ guidelines, as suggested by the FCC proposal, will make products more expensive, put additional documentation burdens on manufacturers,¹⁷ and slow product time to market, while resulting in products with less than optimal access. Furthermore, the interactions represented in this matrix would be different for every product; considering features to promote access is not a formulaic exercise.

Typically, making a product accessible to persons with particular functional limitation(s) will not be a question of “tweaking” one product feature, but many – inputs, outputs, controls, etc. – further complicating this analysis. Providing selectable product inputs and outputs to accommodate different disabilities in a product usually requires more than adding a simple switch; it requires additional parts, software design, and memory and power capacity.

¹⁷ Currently, the hundreds of design decisions that take place are rarely documented in any manner that can be retrieved.

Referring again to the matrix, an example of how this might work is to look at the first item on the Access Board accessible checklist, “Operable without Vision.” Strategies for making product inputs accessible to persons without vision might include a nib on the 5 key or a Braille key pad, while product outputs might be made accessible through the use of a voice chip. Looking at the voice chip example, there are a significant number of budget interactions which must be considered. Adding the voice chip adds a significant number of peripheral components and requires additional memory to support the software required. Even in a hypothetical world in which voice chips were so pervasive that cost of the part itself was minimal, inclusion of the voice chip would still have dramatic impacts on other product drivers such as current drain, size, component count, cost, memory, etc. Consequently, each of the budgets would have to be evaluated to see if it could "accept" this new requirement. Furthermore, the audio quality would have to be tested and verified with human subjects, because there are no "lab tests" for audio quality. This type of exercise would then have to be repeated for the remaining 17 items on the accessibility checklist and for each strategy which might accomplish the checklist items.¹⁸

¹⁸ The complexity of the determination of what is “readily achievable” in virtually every instance demonstrates that the FCC’s position that its proposed rules do not require any documentation other than establishment of a point of contact is incorrect. See Initial Regulatory Flexibility Analysis, Appendix E to the NPRM at E22. The need for such documentation will arise not only in the context of a complaint process, but also internally. Many conscientious manufacturers will attempt to monitor compliance with Section 255 within their own organizations. Certainly, the FCC should want manufacturers to take such actions to ensure compliance without FCC involvement. The discussion above, however, should demonstrate the onerous system that the FCC will establish if it adheres to its proposed 18 point mandatory checklist for accessibility, which would require manufacturers to conduct the complicated “readily achievable” calculus described above for each of the 18 items on the checklist for every product.

This is an oversimplified example. However, it makes the point that the design process is already a complex, inter-related analysis and decision-making exercise. The FCC's proposed approach adds nearly 100 interactions (in this example) in the evaluation of the accessibility of a single product. One must only consider the six action items on pages 23-24 expanded across the 100 or so interactions produced in this example to realize how unrealistic and costly the product-by-product approach really is.

Moreover, the impact of features to promote access upon each of the product drivers demonstrates the impact, in terms of “difficulty,” and particularly “expense,” on product design and development.¹⁹ A determination of what is “readily achievable” in terms of cost requires consideration of not only the cost of the feature to promote access itself, but also includes:

- the cost of any increased requirements for power or memory capacity;
- the cost of additional quality control and test requirements generated by a higher part count, and the feature to promote access; and
- opportunity costs when features subject to tiering (sold for an additional fee) are sacrificed to include features to promote access.

All of these costs are relevant in determining whether the feature is “readily achievable.”

Likewise, a determination of whether a feature to promote access would “fundamentally alter” the nature of the product requires consideration, for example, of any increase in size caused not

¹⁹ See 42 U.S.C. 12181(9) (defining “readily achievable”).

only by the feature to promote access itself, but also any increase in size caused by increased requirements for power or memory capacity.²⁰

Furthermore, this discussion demonstrates that trade-offs will inevitably be required to incorporate features to promote access. Even if it were “readily achievable” to incorporate some features to promote access without sacrificing others, other product features will be sacrificed to achieve access – a product that could have been smaller, had a longer battery life, been less expensive, or could have included some new feature desired by consumers (disabled or non-disabled) if there had been additional product memory or power available to support it – will not be made.

Manufacturers do not dispute that Section 255 requires the expenditure of additional effort and expense to achieve access. Manufacturers strenuously oppose, however, a product-by-product approach to implementation because its negative impacts would far exceed its benefits. The FCC’s proposal in the NPRM, which may permit a product line defense, but appears to require manufacturers to consider all 18+ Access Board guidelines with respect to every product, is still essentially a product-by-product approach, with all of its attendant disadvantages.

Application of the Access Board guidelines on a product-by-product basis would negatively impact manufacturers and consumers by stifling innovation. A product-by-product approach would add significant time to the design process in an industry in which design cycle-times must be continuously reduced to maintain competitiveness. The proposed approach forces

²⁰ A product battery, for example, occupies between 20 and 60% of the total product size.

activities away from creative design and innovation, and directs a manufacturer's energies toward defensive documentation and internal legal reviews. In short, a product-by-product approach would require effort and expense that will not promote the goals of Section 255 – increasing the number of products accessible to a broad range of disabilities that are available in the marketplace.

V. HOW WOULD MANUFACTURERS APPROACH PRODUCT DESIGN UNDER A PRODUCT-LINE REGIME?

A. Product Design Would Consider Any Gaps In The Accessibility Of Existing Products Within A Product Line

As the starting point for compliance with Section 255, a manufacturer should assess the accessibility of its current products in light of the Access Board's guidelines. As pointed out by many of the comments submitted in this proceeding, many products today offer features to promote access which make them accessible to individuals with disabilities.²¹ This accessibility assessment will help to identify where a manufacturer should expend the most effort going forward. When a new product is conceived, accessibility goals should be established for that product in light of the accessibility features already included in the existing product line. The guidelines must be logically applied so that a meaningful depth of access²² for individuals

²¹ A number of examples of accessible products have been given throughout these proceedings. For instance, the zoom feature on an alphanumeric pager makes it more accessible to those with visual disabilities, while speed dialing on a cellular phone makes it more accessible to those with cognitive or motor skill disabilities.

²² Depth of access refers to the range of product features that are accessible to a given functional limitation. It would not be a wise use of resources, for example, to make a product input accessible if it was not "readily available" to make the output of that same product accessible. Depth of access also entails accessibility of other product features – programmable

(Continued ...)

with a given disability(ies) is achieved.²³ If the manufacturer has a product in the line which satisfies the Access Board guidelines for a particular functional limitation(s), it should seek to meet the guidelines for other functional limitations which are not currently addressed in its existing line of products.

For example, if the existing product line includes products which address the guidelines related to access for persons who are deaf, the manufacturer, in designing a new product in the product line, should:

1. Attempt to preserve the successful features to promote access included in existing models²⁴ to the extent that they do not prevent achieving compliance with Access Board guidelines which are not currently addressed in the product line.
2. Examine the new design for compliance with Access Board guidelines not currently addressed in the product line.
3. Implement those features that address the unaddressed guidelines, if “readily achievable.”

This approach will ensure that all of the 18+ Access Board guidelines will be met within a manufacturer’s product line, to the extent it is “readily achievable” to do so. It will also result in a balanced product line with features that are more focused on the diverse needs of a greater number of consumers with a broader range of functional limitations.

autodial, ringer and other settings, for example – not just the accessibility of the most basic ones (i.e., the ability to place a call).

²³ As pointed out in TIA Reply Comments at 11, it makes little sense to consider access to the input of a device for a given disability without also considering the output.

²⁴ Features to promote access that are widely accepted and straightforward to implement should be included in as many products as possible to the extent it is “readily achievable” to do so.

Under a product-line approach, where a manufacturer can identify another product within the same product line that satisfies the Access Board guideline at issue in a complaint, the FCC will dismiss the complaint. Where a product line includes only one or just a few products, the manufacturer would be required to design and develop the product considering all 18+ guidelines, and could not rely upon a product-line defense. Consequently, a small manufacturer (or one narrowly defining its product line) would be required to meet all 18+ points under Section 255,²⁵ to the extent it is “readily achievable” to do so.

Each manufacturer would thus assess its new product effort and ultimately make the decision on which set of logical access guidelines should apply to that design. In the final analysis, as the TAAC recognized,²⁶ it is important that the manufacturer have discretion in deciding which features to include in its products. The product-line approach would create a flexible, dynamic process. It would create a continual examination of balance in the product line to ensure that the needs of all consumers are met.

B. While The Product-Line Approach To Compliance Focuses Primarily On The Accessibility Of Products Introduced To Market, Under This Approach, Manufacturers Can Also Adopt Process-Oriented Strategies To Ensure That The Goals Of Section 255 Are Achieved

TIA endorses a product-line approach to compliance because its member companies, experienced manufacturers of telecommunications products, believe that the product-

²⁵ Thus, TIA’s definition of product line addresses the concern that small manufacturers not be relieved of Section 255 obligations. See Reply Comments of National Association of the Deaf and Consumer Action Network at 8 (raising this concern).

²⁶ TAAC Final Report § 5.3.

line approach is best-suited to achieving the goals of Section 255 – getting products that include existing and as yet undeveloped features to promote access for a broad range of functional limitations into the marketplace. It is an incentive-based approach to the implementation of Section 255 which preserves manufacturers’ ability to create new technologies and continually improve the accessibility of their products. The product-line approach will allow manufacturers to include features to promote access in mainstream products that are designed for and marketed to a target market that includes persons with disabilities. Thus, the FCC can implement Section 255 in a way that capitalizes upon ordinary market forces to achieve the end goal of increased accessibility of telecommunications products.

Procedurally, how a company achieves the goal of producing an accessible product line must be left to the individual company. The FCC’s focus in assessing manufacturers’ compliance with Section 255²⁷ should be the ultimate goal rather than the specific processes used to achieve the goal. In this regard, many of the recommendations made by the TAAC, the Access Board, and commentors on the FCC’s NPRM related to accessibility and the design process are valuable and should be considered by each manufacturer, to the extent that they fit into the manufacturer’s strategy.

The following strategies are suggestions, but TIA believes that manufacturers will find some of them useful in developing better products with more accessible features.

- A documented process plan

²⁷ The market monitoring report commissioned by the Access Board may provide a useful vehicle for assessing gains in accessibility, as well as identifying unmet needs on an industry-wide basis.

- Employee training
- Market research which includes individuals with disabilities
- Product testing which includes individuals with disabilities

It is difficult to produce consistent results without a documented process. Thus, many manufacturers will elect to establish processes to ensure that efforts to improve the accessibility of their products are built into their product development systems. Similarly, training of manufacturers' personnel may be useful. Manufacturers should, however, retain the flexibility to elect to hire one or more experts who oversee the process of ensuring access to their products. Market research and product testing are used by some companies to help specify the features/performance desired by the market, and to verify the achievement of the intended product goals. Certainly these tools could also be useful in addressing the requirements of Section 255.

While the FCC should not dictate how a company achieves the end goal of improved accessibility of telecommunications products, insofar as the FCC feels these tools are indicative of positive effort by a manufacturer, use of these process-oriented strategies should be given significant weight by the FCC as good faith efforts to be considered in the context of a complaint.

VI. CONCLUSION

TIA has demonstrated why a product-line approach to implementation of Section 255 will be the most effective strategy for increasing accessibility, providing greater depth of access for particular functional limitations and products that meet access needs for a greater

range of disabilities. In contrast, rules that discourage a product-line approach will favor more superficial features to promote access for limitations more common in the population at the expense of features for others and will result in only simplistic access solutions being included in most products. A product-line approach will allow manufacturers to invest resources to achieve results that create products with more accessibility features for a larger population base rather than investing resources on defensive actions in anticipation of complaints.

TIA has provided a definition of product line that is limited by two product characteristics: (1) the primary telecommunications function; and (2) the primary transmission standard or media used by a product. In so doing, TIA has provided a model in which each service provider is assured of a line of accessible products, to the extent “readily achievable,” from its chosen manufacturers that the carrier can make available to consumers. Persons with disabilities thus should have the same choice among the carriers as persons without disabilities, to the extent “readily achievable.” Moreover, by including the transmission standard or media as a criteria, TIA’s proposed definition limits the breadth of product lines and thus the potential for abuse. TIA believes that the significant advantages of the product-line approach, when viewed

against the many disadvantages of the product-by-product approach, strongly support a decision by the FCC to adopt a product-line approach to compliance with Section 255.

Respectfully submitted,

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