queue; and (3) at the time of answering by the providing LEC's operators for such services. We believe that it is possible to compare the treatment of calls placed by customers of the competing provider with those of calls originating from the providing LEC's customers, and thus determine if unreasonable dialing delays are occurring. Such a comparison would hold all LECs responsible only for delays within their control.

161. In the event that a dispute arises between a competing provider and a providing LEC as to dialing delay, we conclude that the burden is on the providing LEC to demonstrate with specificity that it has processed the call on terms equal to that of similar calls originating from its own customers. Such "terms" include the amount of time a providing LEC takes to process incoming calls, the priority a LEC assigns to calls, and might also take into account the number of calls abandoned by the caller of the competing provider. Furthermore, to the extent that states have adopted specific performance standards for dialing delay between competing providers, we do not preempt such standards, and states may enact more detailed standards.

162. We do not believe that measuring "unreasonable dialing delay" from the period beginning when a caller completes dialing a call and ending when the call is delivered (or "handed off") by the LEC to another service provider is practical with respect to dialing parity or nondiscriminatory access. While we understand that such a measurement can be made, and is fully within the control of one LEC, prohibiting a providing LEC from introducing dialing delay in the originating segment of calls under its control benefits only the customers of the providing LEC. The providing LEC already has sufficient motivation to provide efficient service to its own customers. Finally, we conclude that the proposal to measure dialing delay from the completion of dialing to a network response (*e.g.*, when a caller receives busy-tone signalling information from the called line) is unsatisfactory, because it fails to isolate the segments of a call within an individual LEC's control.

2. Specific Technical Standard for Dialing Delay

a. Background and Comments

163. In the *NPRM,* the Commission asked commenters to identify a specific period of time that would constitute an "unreasonable dialing delay." NYNEX was the sole commenter proposing a quantitative measurement. In this regard, however, NYNEX recommends that the Commission should issue a *recommended* maximum period of delay rather than a mandatory standard.[358] NYNEX states that "an appropriate recommendation for this time period is that it should not exceed 5 seconds."[359] The majority of commenters urge the Commission not to

[358] *See* NYNEX comments at 9-10.

[359] *Id.*

impose a specific technical dialing delay standard at this time.[360] For example, GTE states that "[n]umber portability, dialing parity and other newly required actions will undoubtedly affect network performance, including dialing delay, at least during a transition period. Any current determination of an unreasonable delay will be based on network designs that will bear little resemblance to the network structures of tomorrow."[361] Finally, the Illinois Commission states that it is currently studying the same issue for number portability in Chicago, and suggests that the Commission may wish to adopt the Illinois Commission's standard upon completion of its study.[362]

b. Discussion

164. We conclude that the record does not provide an adequate basis for determining a specific technical standard for measuring unreasonable dialing delays. Commenters do not address separately the dialing delay prohibition as it applies to each of the services covered by section 251(b)(3): local and toll dialing parity, and nondiscriminatory access to operator services and directory assistance. We thus conclude that, until dialing delay can be reliably measured after dialing parity is a reality, the "comparative" standard adopted in paragraph 157, *supra*, will provide a workable national rule for the industry. We intend to revisit the issue at a future date if we should find that our "comparative" standard is inadequate to ensure fair competition.

IV. NETWORK DISCLOSURE

165. Section 251(c)(5) of the 1996 Act requires incumbent LECs to "provide reasonable public notice of changes in the information necessary for the transmission and routing of services using that local exchange carrier's facilities or networks, as well as of any other changes that would affect the interoperability of those facilities or networks."

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[360] *See, e.g.*, Bell Atlantic comments at 9; MFS reply at 8.

[361] GTE comments at 19.

[362] *See* Illinois Commission comments at 70.

A. Scope of Public Notice

1. Definition of "Information Necessary for Transmission and Routing"

a. Background and Comments

166. In our *NPRM*, we tentatively concluded that "information necessary for transmission and routing" should be defined "as any information in the incumbent LEC's possession that affects interconnectors' performance or ability to provide services."[363]

167. Most commenters support the tentative conclusion in the *NPRM*.[364] For example, MFS asserts that our definition would "minimize the risk that an incumbent LEC could take actions inconsistent with [interconnection and interoperability]" and that the term "should be applied as broadly as possible."[365] MCI states that a broad definition is "necessary for new entrants to receive notice of technical changes."[366] Time Warner also asserts that "this broad-based definition . . . is critical to ensuring that [incumbent local exchange carriers] fulfill all of the obligations imposed upon them by Section 251(c)."[367]

168. Some, mostly smaller, incumbent LECs disagree with our proposed standard, stating that it is "too broad," "an onerous burden," "not necessary," and "may not be possible."[368] Other incumbent LECs claim that network disclosure requirements should be limited to "changes that affect the interconnection or interoperability of the network."[369] Their overarching concern is that the proposed definition's reference to "any information" would be interpreted so broadly that virtually any network-related information would fall within the ambit of the disclosure requirement.[370] Some incumbent LECs also express the fear that a broad interpretation of the statute "might expose [them] to unintended liability for giving

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[363] *NPRM* at para. 189.

[364] *See, e.g.*, ACSI comments at 11; ALTS comments at 2; AT&T comments at 23; Bell Atlantic comments at 10; GCI comments at 4; Illinois Commission comments at 59; MCI comments at 15; MFS comments at 12-13; Ohio Commission comments at 4; Telecommunications Resellers Association comments at 11; Time Warner comments at 3; U S WEST comments at 12.

[365] MFS comments at 12-13.

[366] MCI comments at 15.

[367] Time Warner comments at 3.

[368] GVNW comments at 1; Ameritech comments at 26; Rural Tel. Coalition comments at 2.

[369] Bell Atlantic reply at 9.

[370] GVNW comments at 1; Ameritech comments at 26.

information that the local exchange carrier is not qualified to provide" or that the [local exchange carrier] might be held liable for results of decisions that the interconnector made based upon this information."[371] These incumbent LECs claim that competing providers' informational needs would be fulfilled even if public disclosure were limited to "relevant interfaces or protocols."[372] USTA suggests an alternate definition: "all changes in information necessary for the transmission and routing of services using the local exchange carrier's facilities, or that affects interoperability."

169. According to some competing providers, narrowing the scope of information that must be publicly disclosed would preserve the information advantage that incumbent LECs possessed before the passage of the 1996 Act.[373] Also, AT&T notes that a narrowly constructed disclosure requirement would contradict the language of the statute that specifically identifies "changes that would affect the interoperability of those facilities or networks."[374] AT&T states that some information "is both necessary for proper transmission and routing and can affect the network's interoperability" although it is not directly relevant to the interconnection point.[375] AT&T presents five examples of technical changes that do not directly relate to the interconnection point but that nevertheless could have "profound" implications for competing service providers. These changes include those that (1) alter the timing of call processing; (2) require competing service providers to install new equipment, such as echo cancelers; (3) affect recognition of messages from translation nodes; (4) alter loop impedance levels, which could cause service disruptions; and (5) could disable a competing service provider's loop testing facilities.[376]

170. Some incumbent LECs suggest that network disclosure requirements should also apply to competing service providers.[377] MCI and MFS contend, however, that the plain language of the statute requires imposition of public disclosure requirements only upon incumbent LECs. MFS states that the duty to disclose change information was imposed upon incumbent local exchange carriers because they have sufficient "control over network standards to harm competition" and the "requisite size and market power to change their

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[371] GVNW comments at 1-2.

[372] Nortel states that the incumbent local exchange carrier should only "provide the interface information," and the competing service provider should then "perform its own 'reverse engineering' in developing its own products so as to be compatible with the interface." Nortel comments at 5.

[373] *See, e.g.,* Time Warner comments at 3-4.

[374] AT&T reply at 25-26.

[375] *Id.*

[376] AT&T reply at n.56.

[377] Ameritech comments at 29; BellSouth comments at 2; NYNEX comments at 15-16; Rural Tel. Coalition comments at n.4.

networks in a manner that stymies competition."[378] MFS argues that imposing notification requirements on competing service providers would be an "empty exercise" because "new entrants . . . can do little, if anything,to change their networks in a manner that adversely impacts the [incumbent LECs]."[379] MFS also argues that competing service providers have "powerful economic incentives" for maintaining compatibility with incumbent local exchange networks.[380]

b. Discussion

171. Section 251(c)(5) requires that information about network changes must be disclosed if it affects competing service providers' performance or ability to provide service. Requiring disclosure about network changes promotes open and vigorous competition contemplated by the 1996 Act. We find that additional qualifiers that restrict the types of information that must be disclosed, such as "*relevant* information or protocols," would create uncertainty in application and appear inconsistent with the statutory language. Timely disclosure of changes reduces the possibility that incumbent LECs could make network changes in a manner that inhibits competition. In addition, notice of changes to ordering, billing and other secondary systems is required if such changes will have an effect on the operations of competing service providers, because the proper operation of such systems is essential to the provision of telecommunications services.

172. We agree with MCI and MFS that the plain language of the statute requires imposition of public disclosure requirements only upon incumbent LECs.[381] In addition, we conclude that imposing this requirement upon competing service providers would not enhance competition or network reliability. While competing service providers must respond to incumbent LEC network changes, competing service providers, in general, are not in a position to make unilateral changes to their networks because they must rely so heavily on their connection to the incumbent LEC's network in order to provide ubiquitous service. Accordingly, competing service providers already face sufficient incentives to ensure compatibility of their planned changes with the incumbent LEC's network. In addition, if an incumbent LEC were permitted to obtain such information from a competing service provider, the incumbent LEC might be able to obtain the competing service provider's business plans and thereby stifle competition.[382]

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[378] MFS reply at 26.

[379] MFS reply at 26-27.

[380] *Id.*

[381] MCI reply at 7; MFS reply at 25, 26.

[382] NCTA asserts that incumbent LECs are "entirely capable of providing adequate notice of their network changes without 'full disclosure of competing service provider's operations and future plans.'" NCTA reply at 12.

173. We conclude that our disclosure standard is consistent not only with section 251(c)(5), but also with the requirements of the "all carrier rule"[383] and the scope of the *Computer III*[384] disclosure requirement, both of which have been applied to incumbent LEC activities for some time. In light of these preexisting requirements, we find that the standard we proposed in the NPRM is not burdensome but reasonable, providing sufficient disclosure to insure against anti-competitive acts as well as to ensure certain and consistent disclosure requirements.

174. We have considered the impact of our rules in this section on small incumbent LECs, including Rural Tel. Coalition's and GVNW's requests for a less inclusive definition of "information necessary for transmission and routing."[385] We do not adopt these proposals because we are unable to grant such leniency to small businesses and simultaneously ensure adequate information disclosure to facilitate the development of a pro-competitive environment for every market participant, including other small businesses. We note, however, that under section 251(f)(1) certain small incumbent LECs are exempt from our rules until (1) they receive a *bona fide* request for interconnection, services, or network elements; and (2) their state commission determines that the request is not unduly economically burdensome, is technically feasible, and is consistent with the relevant portions

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[383] Unless clearly specified otherwise, in this *Order*, we use the term "all carrier rule" to refer to the Commission's network disclosure rule contained in 47 C.F.R. § 64.702, as interpreted in the *Second Computer Inquiry*. The all carrier rule obligates "all carriers owning basic transmission facilities [to release] all information relating to network design . . . to all interested parties on the same terms and conditions, insofar as such information affects either intercarrier interconnection or the manner in which interconnected [customer-premises equipment] operates." *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), Memorandum Opinion and Order on Reconsideration*, 84 F.C.C.2d 50, 82-83 (1980), *further recon.*, 88 FCC 2d 512 (1981), *aff'd sub nom. Computer and Communications Indus. Ass'n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied*, 461 U.S. 938 (1983). The all carrier rule also requires that "[w]hen such information is disclosed to the separate corporation it shall be disclosed and be available to any member of the public on the same terms and conditions." *See* 47 C.F.R. § 64.702; *Application of The Southern New England Tel. Co.*, 10 FCC Rcd 4558, 4559 n.23 (1995); *Competition in the Interstate Interexchange Marketplace*, Report and Order, 6 FCC Rcd 5880, 5911 n.270 (1991) (The all carrier rule obligates "all carriers to disclose, reasonably in advance of implementation, information regarding any new service or change in the network."); *Competition in the Interstate Interexchange Marketplace*, Report and Order, 6 FCC Rcd. 5880, 5911 n.270. (1991).

Another of the Commission's rules, 47 C.F.R. § 68.110(b), requires similar disclosure to customers of network changes "if such changes can be reasonably expected to render any customer's terminal equipment incompatible with telephone company communications facilities, or require modification or alteration of such terminal equipment, or otherwise materially affect its use or performance." We will refer to this rule specifically by number where necessary.

[384] *See infra* para. 204 and n.449.

[385] Rural Tel. Coalition comments at 2; GVNW comments at 1.

of section 254. In addition, certain small incumbent LECs may seek relief from our rules under section 251(f)(2).[386]

2. Definition of "Services"

a. Background and Comments

175. Commenters, including incumbent LECs, interexchange carriers, and industry organizations, unanimously support our tentative conclusion that the term "services," as used in section 251(c)(5), includes both telecommunications services and information services, as defined in sections 3(46) and 3(20), respectively.[387] Parties agree that it is reasonable to require that providers of both telecommunications and information services receive this information. ALTS points out that exclusion of information services or telecommunications services from our definition would be "needlessly restrictive."[388] BellSouth also notes that the inclusion of information services for public notice purposes should not vest information service providers with substantive rights under Section 251, except where they are also operating as a telecommunications carrier under the 1996 Act.[389]

b. Discussion

176. We conclude that the term "services" includes both telecommunications services and information services, as defined in sections 3(46) and 3(20) of the Act, respectively. Providers of both telecommunications services and information services may make significant use of the incumbent LEC's network in making these offerings. Accordingly, exclusion of either information services providers or telecommunications services providers would be needlessly restrictive. We also affirm that the inclusion of information services for public notice purposes does not vest information service providers with substantive rights under other provisions within section 251, except to the extent that they are also operating as telecommunications carriers.

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[386] For a discussion of the implications and operation of section 251(f), *see First Report and Order* at section XII.

[387] 47 U.S.C. § 153(20), (46). *See NPRM* at para. 189; ALTS comments at 2; Ameritech comments at 25; BellSouth comments at 3; District of Columbia Commission comments at 6-7; GCI comments at 4; Illinois Commission comments at 59; MCI comments at 15; MFS comments at 12; Telecommunications Resellers Association comments at 11; U S WEST comments at 12.

[388] ALTS comments at 2.

[389] BellSouth comments at 3.

3. Definition of "Interoperability"

a. Background and Comments

177. The Commission tentatively concluded that the term "interoperability," as used in section 251(c)(5), should be defined as "the ability of two or more facilities, or networks, to be connected, to exchange information, and to use the information that has been exchanged."[390] This definition of "interoperability" was taken from the *IEEE Standard Dictionary of Electrical and Electronics Terms*.[391] Commenters, including incumbent LECs, interexchange carriers, state commissions, and industry associations, are unanimous in their support for our tentative conclusion.[392] The Ohio Commission also suggests that we expand our definition of "interoperability" to "recognize that the exchange of traffic between an [incumbent local exchange carrier] and an interconnector must be seamless and transparent to both parties' end users."[393] No alternative definitions for the term "interoperability" were proposed by commenting parties.

b. Discussion

178. We define the term "interoperability" as "the ability of two or more facilities, or networks, to be connected, to exchange information, and to use the information that has been exchanged." As this definition of "interoperability" was taken from the *IEEE Standard Dictionary of Electrical and Electronics Terms*, we believe that this well established and widely accepted industry standard can be applied easily and consistently. We find that the concepts of seamlessness and transparency are already adequately incorporated into this definition's specific interoperability criteria, and that further exposition of these concepts is not necessary.

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[390] *NPRM* at para. 189.

[391] *See IEEE Standard Dictionary of Electrical and Electronics Terms* 461 (J. Frank ed. 1984).

[392] ALTS comments at 2; Ameritech comments at 25; AT&T comments at 23; District of Columbia Commission comments at 6-7; GCI comments at 4; Illinois Commission comments at 4; MCI comments at 15; MFS comments at 12-13; Ohio Commission comments at 4; Telecommunications Resellers Association comments at 12; U S WEST comments at 12.

[393] Ohio Commission comments at 4.

4. Changes that Trigger the Public Notice Requirement

a. Background and Comments

179. In the *NPRM*, we noted that "public notice is critical to the uniform implementation of network disclosure, particularly for entities operating networks in numerous locations across a variety of states."[394] We requested comment as to what changes should trigger the notice requirement.

180. Several commenters suggest that timely notice should be provided whenever an upcoming change in the incumbent LEC's network may affect the way in which a competing provider offers its service.[395] Examples of such changes include, but are not limited to, changes in transmission, signalling standards, call routing, network configuration and logical elements.[396] Also, commenters assert that public notice should be required when a change will affect the electronic interfaces, data elements, or transactions that support ordering, provisioning, maintenance and billing of the network facilities.[397] The Illinois Commission notes, however, that the types of changes that trigger public notice should not be "micro-defined" because overly specific trigger requirements could create situations in which carriers would not be required to provide public notice if a particular change has not been clearly identified.[398] ALTS also supports a broadly defined class of changes that trigger network disclosure requirements, asserting that some changes, such as those affecting provisioning and billing for a carrier's service, might not otherwise be reported adequately, resulting in service disruptions.[399]

181. Ameritech claims that disclosure obligations should only be triggered by a new or "substantially changed" network interface, or a change that "otherwise affects the routing or termination of traffic delivered to or from the incumbent LEC's network."[400] Ameritech also claims that changes "that do not impact interconnection and interoperability . . . do not need

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[394] *NPRM* at para. 190.

[395] ACSI comments at 11; ALTS comments at 2-3; AT&T comments at 23; Cox comments at 9-10; GCI comments at 5; Ohio Commission comments at 4; and Time Warner comments at 4.

[396] ACSI comments at 11.

[397] *See, e.g.,* AT&T comments at 24; Time Warner comments at 4.

[398] Illinois Commission comments at 59.

[399] ALTS comments at 2, 3.

[400] Ameritech comments at 26, 27.

to be disclosed at all."[401] AT&T observes, however, that public notice requirements should also apply to some changes that do not directly relate to the interconnect point.[402]

b. Discussion

182. We conclude that an incumbent LEC must provide public notice in accordance with the rules and schedules we adopt in this proceeding, once the incumbent LEC makes a decision to implement a change that either (1) affects competing service providers' performance or ability to provide service; or (2) otherwise affects the ability of the incumbent LEC's and a competing service provider's facilities or network to connect, to exchange information, or to use the information exchanged. We believe that a broad standard is appropriate, to reduce the possibility that incumbent LECs may fail to disclose information a competing service provider may need in order to maintain adequate interconnectivity and interoperability in response to incumbent LEC network changes. Examples of network changes that would trigger public disclosure obligations include, but are not limited to, changes that affect: transmission; signalling standards; call routing; network configuration; logical elements; electronic interfaces; data elements; and transactions that support ordering, provisioning, maintenance and billing. This list is not exclusive but exemplary; incumbent LECs are not exempted from public notice requirements for a particular change that is not included among these examples.

5. Types of Information to be Disclosed

a. Background

183. In the *NPRM*, we tentatively concluded that incumbent LECs should be required to "disclose all information relating to network design and technical standards, and information concerning changes to the network that affect interconnection."[403] We also tentatively concluded that incumbent LECs specifically must provide: (1) the date changes are to occur; (2) where changes are to be made or to occur; (3) the type of changes; and (4) the potential impact of changes; and that these four categories represented the "minimum information that a potential competitor would need in order to achieve and maintain efficient interconnection."[404]

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[401] *Id.*

[402] AT&T reply at 26 n.56.

[403] *NPRM* at para. 190. We referred, as an example, to the "All Carrier Rule," which requires public disclosure of "all information relating to network design and technical standards . . . [affecting] interconnection . . . prior to implementation and with reasonable advance notification." *See* note 383, *supra.*

[404] *NPRM* at para. 190.

b. Comments

184. A number of commenters agree with our tentative conclusions regarding the breadth of information that must be reported, as well as our minimum reporting requirements.[405] Ameritech, however, claims that our requirement is "too broad" and would "impose an onerous burden" on incumbent LECs, exceeding the statutory requirements of section 251(c)(5).[406] Ameritech asserts that "excessive exchange of information between competitors is inconsistent with . . . a competitive marketplace" and could spur "allegations of collusion and concerted action."[407] Cox and Time Warner, however, state that uniform public notice of sufficient information can attenuate anticompetitive behavior. ALTS, AT&T and MCI suggest that the information that must be disclosed should include, but should not be limited to, technical specifications and references to standards regarding transmission, signaling, routing and facility assignment as well as references to technical standards that are applicable to any new technologies or equipment, or which may otherwise affect interconnection.

185. A significant cross-section of commenters specifically advocates disclosure of the potential impact of changes.[408] For example, Cox notes that disclosure should, at a minimum, enable a competing service provider to understand: "(1) how its existing technical interconnection arrangements will be affected; and (2) how the form and content of the information passed between the interconnected networks will change."[409] ACSI clearly states that "the content of the notice should specifically identify . . . the impact of the change on current interconnection or access arrangements."[410]

186. Some incumbent LECs, however, take exception to our tentative conclusion to impose on them an obligation to make public disclosure of the potential impact of network

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[405] Illinois Commission comments at 60; ALTS comments at 3; AT&T comments at 23-24; District of Columbia Commission comments at 7; Excel comments at 10; GCI comments at 4-5; MCI comments at 15; MFS comments at 12-13; NCTA comments at 12; Telecommunications Resellers Association comments at 12.

[406] Ameritech comments at 26.

[407] *Id.*

[408] ACSI comments at 11; ALTS comments at 3; District of Columbia Commission comments at 7; Excel comments at 10; GCI comments at 5; MCI comments at 15; MFS comments at 12-13; Ohio Commission comments at 5; TCC reply at 23; Telecommunications Resellers Association comments at 12; Time Warner comments at 8.

[409] Cox reply at 13.

[410] ACSI comments at 11.

changes.[411] They argue that this obligation would require incumbent LECs to become "experts on the operations of other carriers," or impose a "duty to know what [an] interconnector's service performance abilities are."[412] Specifically, USTA expresses concern that this requirement "could be misconstrued as a duty to predict what the precise impact might be, or to educate a competitor on how to re-engineer their network."[413] Ameritech claims that this requirement is "unfair," and "of little or no value," and implies that this requirement creates a "general duty for [incumbent LECs] to operate their competitor's businesses or help them market their services."[414] BellSouth asserts that "the better approach would be to [disclose] information from which an interconnecting carrier would be able to determine for itself whether its service performance or abilities might be affected."[415] NYNEX alleges that "[s]uch proposals are over-broad and unnecessary to ensure . . . network interconnection/interoperability."[416] NYNEX rejects responsibility for evaluating the effect that changes it would make might have upon competing service providers and asserts that "there is no basis for changing the traditional responsibility of each carrier to maintain its own network and respond to technological and market changes."[417] NYNEX also claims that while it has the ability to "make an assessment of the likely impact of a technical change at the interface with a competitor's network," it would require "detailed knowledge of a competitor's network architecture" in order to calculate the impact a change may have on a competing service provider's performance.[418]

187. MCI and TCC suggest that an incumbent LEC should also be required to designate a contact for additional information in its public notice. PacTel argues, in response, that such a requirement would be "impossible to fulfill" because it would require an incumbent LEC to designate a "single omniscient individual."[419] MFS states that the public notice should also include: "(a) the charges that the incumbent LEC anticipates will apply to the carrier for the change; (b) the specific number of circuits affected if the change occurs at

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[411] Ameritech comments at 28; BellSouth comments at 3; GVNW comments at 3; NYNEX reply at 9; USTA reply at 11.

[412] BellSouth comments at 3. *See, e.g.,* Ameritech comments at 28; GVNW Comments at 3; NYNEX reply at 9.

[413] USTA reply at 11.

[414] Ameritech comments at 28.

[415] BellSouth comments at 3.

[416] NYNEX reply at 9.

[417] *Id.*

[418] NYNEX reply at 9 n.24.

[419] PacTel reply at 6-7.

the time of the notification; (c) the projected minimum, maximum, and average down times per affected circuit; (d) alternatives available to the interconnector;[420] and (e) any other information necessary to evaluate alternatives and effectuate necessary changes or challenges."[421] The Ohio Commission, in contrast, claims that information relating to network design should be excepted from public disclosure, and that incumbent LECs should only be obliged to disclose information regarding changes to existing interconnection arrangements.[422]

c. Discussion

188. We conclude that we should adopt a requirement of uniform public notice of sufficient information to deter anticompetitive behavior and that, at a minimum, incumbent LECs should give competing service providers complete information about network design, technical standards and planned changes to the network. Specifically, public notice of changes shall consist of: (1) the date changes are to occur; (2) the location at which changes are to occur; (3) types of changes; (4) the reasonably foreseeable impact of changes to be implemented, and (5) a contact person who may supply additional information regarding the changes. Information provided in these categories must include, as applicable, but should not be limited to, references to technical specifications, protocols, and standards regarding transmission, signaling, routing and facility assignment as well as references to technical standards that would be applicable to any new technologies or equipment, or that may otherwise affect interconnection.

189. We find that making available a contact person will simplify the public notification process and reduce the risk that the notifications will be misunderstood or misconstrued. Commenters have requested that public notices include a variety of specific information categories, some of which may not be covered by the specific categories identified in the *NPRM*. Such specific information, however, may be inapplicable, unnecessary or proprietary in some circumstances and inadequate or confusing in others. Accordingly, we require instead that incumbent LECs identify a contact person. Such a contact need not be "omniscient," but rather should be able to serve as an initial contact point for the sharing of information regarding the planned network changes.

190. Providing notice of the reasonably foreseeable potential impact of changes does not require incumbent LECs to educate a competitor on how to re-engineer its network, or to be experts on the operations of other carriers, or impose a duty to know the competing service provider's service performance or abilities. Rather, we intend that incumbent LECs perform

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[420] Although MFS does not elaborate on this requirement, we interpret this suggestion as a request that an incumbent LEC identify in its public notice a range of proposed competing service provider responses to the planned change that will maintain interconnectivity and interoperability of the carriers' networks.

[421] MFS comments at 14.

[422] Ohio Commission comments at 5.

at least rudimentary analysis of the network changes sufficient to include in its notice (where appropriate) language reasonably intended to alert those likely to be affected by a change of anticipated effects. We find that such cautionary language will be a valuable, but not burdensome, element of reasonable public notice.

191. We do not limit network disclosure to information pertinent to those changes in incumbent LEC network design or technical standards that will affect existing interconnection arrangements, as requested by the Ohio Commission. Such a limitation is neither consistent with the obligations imposed by section 251(c)(5) nor consistent with the development of competition. In formulating interconnection and service plans, both actual and potential competing service providers need information concerning network changes that potentially could affect anticipated interconnection, not just those changes that actually affect existing interconnection arrangements.

B. How Public Notice Should be Provided

1. Dissemination of Public Notice Through Industry Fora and Publications

a. Background

192. Section 251(c)(5) requires incumbent LECs to provide "reasonable public notice" of relevant network changes. In the *NPRM*, the Commission requested comment on how this notice should be provided. The Commission tentatively concluded that "full disclosure of the required technical information should be provided through industry fora or in industry publications."[423] The Commission stated that "this approach would build on a voluntary practice that now exists in the industry and would result in broad availability of the information."[424] The Commission sought comment on this tentative conclusion. The Commission also requested comment on whether a reference to information on network changes should be filed with the Commission and, if so, where that information should be located.

[423] The Commission gave as examples the Network Operations Forum (NOF) and the Interconnection Carrier Compatibility Forum (ICCF). *NPRM* at para. 191.

[424] *NPRM* at para. 191.

b. Comments

193. Most commenters agree with our tentative conclusion in the *NPRM* that existing industry fora and publications are appropriate vehicles for public notice of network changes.[425] Bell Atlantic notes that "industry participants with an interest in new interfaces routinely monitor publications and announcements for disclosures."[426] Some incumbent LECs support the use of industry fora and publications because they are well established, already in place, reach the targeted audience, have worked effectively for a number of years, or allow for widespread dissemination.[427] USTA states that "voluntary practices can serve as a platform from which to implement this act."[428]

194. Several commenters, however, caution that industry fora and publications should not be the only vehicles used for the public dissemination of network change information[429] and request flexible disclosure methods.[430] Although MCI does not object to utilizing industry fora and publications, MCI cautions against over reliance on these vehicles because it "do[es] not believe that . . . parties affected by technical changes [will] receive information in sufficient detail, objectivity, and timeliness."[431] Many commenters indicate that additional disclosure vehicles are required because not all carriers participate in these fora on a regular basis (partly as a result of limited resources)[432] or because the BOCs, in the past, have used industry fora to limit competitors' access to full and timely information in order to put them at a competitive disadvantage.[433] Several commenters have noted the potential of the Internet

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[425] ALTS comments at 3-4; Ameritech comments at 28-29, reply at 17-18; AT&T comments at 24; Bell Atlantic comments at 10; Cox reply at 13; GCI comments at 5; Illinois Commission comments at 62; MCI comments at 15; MFS reply at 25; NCTA reply at 11; NYNEX comments at 15, reply at 10; PacTel comments at 7, reply at 6; Teleport comments at 11; Telecommunications Resellers Association at 12. *See also NPRM* at para. 191.

[426] Bell Atlantic also states that exchange carriers should be able to satisfy their disclosure obligation by indicating their intention to deploy specifications at the time that they are published by a standards organization. Bell Atlantic comments at 10-11.

[427] Ameritech reply at 17-18; GTE comments at 7.

[428] USTA comments at 11-12.

[429] *E.g.*, Cox reply at 12; MCI comments at 17; GVNW comments at 4; Rural Tel. Coalition comments at 3.

[430] *E.g.*, Rural Tel. Coalition comments at 3,5.

[431] MCI comments at 17-18.

[432] *See, e.g.*, Cox comments at 11, reply at 13; MCI comments at 17; GVNW comments at 4; Rural Tel. Coalition comments at 3.

[433] MCI comments at 17-18, reply at 7. Bell Atlantic refutes this allegation. Bell Atlantic reply at 10.

as a vehicle for providing public notice of network changes.[434] Others specifically suggest that incumbent LECs should be required to file technical change information with the Commission "in order to ensure a complete, reliable, and consistent body of information that all parties may utilize."[435] Some incumbent LECs, however, disagree, arguing that the Commission need not become a repository of disclosure notices because such Commission filings would be "redundant with existing industry functions and contrary to the Commission's current initiative to eliminate unnecessary filings."[436]

195. Bell Atlantic suggests that "direct disclosure to a mailing list of interconnectors should also be allowed."[437] MFS proposes extending direct mail notification to "any other carrier . . . who specifically requests such notice."[438] PacTel, however, claims that imposing these sorts of requirements would "impose excessive and unnecessary costs on [incumbent] LECs."[439]

196. BellSouth argues that no Commission rule is necessary because current voluntary practices are "sufficient to ensure that this information is broadly available."[440] Similarly, GVNW suggests that information should only be passed to competing service providers "case by case . . . as required."[441] Several commenters, however, disagree. Time Warner, for example, contends that "the Commission must adopt a uniform . . . rule which prescribes a specific method by which notification and disclosure must be provided" and that will allow interested parties to gain ready access to the information they require.[442]

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[434] *See, e.g.,* ALTS comments at 3-4; U S WEST comments at 14; MCI comments at 17; Time Warner comments at 10 n.12; MFS reply at 25; TCC reply at 24.

[435] MCI comments at 19; MFS comments at 13. *See also* Time Warner comments at 10 (establishing the Commission as a "central point of reference" could be less burdensome on incumbent LECs than other means of providing public notice).

[436] BellSouth comments at 4 n.11. *See also* NYNEX reply at 10; PacTel reply at 6.

[437] Bell Atlantic comments at 10.

[438] MFS comments at 14, reply at 25.

[439] PacTel reply at 6.

[440] BellSouth comments at 4.

[441] GVNW comments at 4.

[442] Time Warner comments at 9. *See also* AT&T reply at 27 n.58. (arguing that the very existence of such broad disagreement on this issue itself bespeaks the need for a uniform national rule and that the absence of a uniform public disclosure requirement would lead to "disparate application of a uniform federal statutory duty, unduly narrow interpretations of that duty by [independent local exchange carriers] . . . and competitive harm to new entrants").

197. The District of Columbia Commission asserts that state commissions may also require information to be filed at the state level, and may need the same information in order to comply with section 252. As such, state commissions could also be used to make information available to small competing service providers. AT&T, however, argues that there are no specific differences among the various states that are "material" to our network disclosure requirements.[443]

c. Discussion

198. We conclude that incumbent LECs may fulfill their network disclosure obligations either (1) by providing public notice through industry fora, industry publications, or on their own publicly accessible Internet sites; or (2) by filing public notice with the Commission's Common Carrier Bureau, Network Services Division, in accordance with the format and method requirements of the rules we are adopting in this proceeding. In either case, the public notice must contain the minimum information categories identified in paragraph 188, above. Incumbent LECs using public notice methods other than Commission filings must file a certification with the Common Carrier Bureau, Network Services Division, identifying the proposed change(s), stating that public notice has been given in compliance with this Order, identifying the location of the information describing the change and stating how the information can be obtained by interested parties. This certification must also comply with the rules we adopt in this proceeding.

199. As discussed above, we conclude that industry fora, industry publications, and the Internet may be used to make public disclosure of network changes and required technical information. We affirm our belief that "this approach would build on a voluntary practice that now exists in the industry and would result in broad availability of the information."[444] Reliance solely on voluntary participation in industry fora and publications, however, may inhibit the ability of some small carriers to disseminate or receive this information. Because of their more limited resources, some smaller incumbent LECs and competing service providers do not participate in these fora on a regular basis; nevertheless, all carriers, competing service providers, and potential competitors must have equal opportunities to provide and to receive change information on a national scale. We believe that wide availability of pertinent network change information effectively removes potential barriers to entry, which could otherwise frustrate the efforts of new competitors. As a consequence, we conclude that the Commission should function as a "backstop" source of information for other interested parties. Accordingly, in lieu of disclosure in industry fora, publications, or the Internet, an incumbent LEC may file network change information directly with the Commission. In the alternative, if an incumbent LEC chooses to provide public notice through one or more industry fora or publications, or the Internet, we require that it also file a certification with the Commission containing the information outlined above. We are

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[443] AT&T reply at n.59.

[444] *NPRM* at para. 191.

confident that even small incumbent LECs with limited resources will be able to use one of these alternatives to give public notice of network changes.

200. An incumbent LEC must maintain both the information disclosed in its public notice and any nondisclosed supporting information that is nevertheless relevant to the planned change, until the change is implemented. As discussed in paragraph 235, *infra*, once a change is implemented in the incumbent LEC's network, information on the change must be disclosed under the general interconnection obligations imposed by section 251(c)(2).

201. We find that information filed with the Commission under section 251(c)(5) should eventually be made available on the FCC Home Page or through other online access vehicles, such as "LISTSERV" subscription mailings or others, and we intend to explore this option fully for the future. In addition, we will explore vigorously the possibility that hypertext links from the Commission Home Page to incumbent LEC Internet sites could both facilitate public notice and centralize access to change information. We find that direct mail notification alone does not comport with our interpretation of "public notice" as used in this proceeding, because such direct mailings do not provide notice to the "public," but rather provide individual notice to a selected group of recipients. Such mailings could, however, supplement other methods of notification.

202. We also address the impact on small incumbent LECs. We agree with GVNW[445] and Rural Tel. Coalition[446] that we can mitigate the impact of our rules on small incumbent LECs by allowing public notice to be given at several alternative locations. Because many of these carriers lack the resources to participate in industry fora, we have also provided low cost alternatives, including Internet postings or Commission filings. We expect that our requirement that either public notice or certification be filed with the Commission will allow small entities, both incumbent LECs and new entrants, to locate network change information quickly and inexpensively. In any event, under section 251(f)(1), certain small incumbent LECs are exempt from our rules until (1) they receive a *bona fide* request for interconnection, services, or network elements; and (2) their state commission determines that the request is not unduly economically burdensome, is technically feasible, and is consistent with the relevant portions of section 254. In addition, certain small incumbent LECs may seek relief from our rules under section 251(f)(2).[447]

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[445] GVNW comments at 4.

[446] Rural Tel. Coalition comments at 3,5.

[447] For a discussion of the implications and operation of section 251(f), *see First Report and Order*, section XII.

2. When Should Public Notice of Changes Be Provided?

a. Background

203. Section 251(c)(5) requires an incumbent LEC to provide "reasonable public notice" of certain changes to its network. In the *NPRM*, we tentatively concluded that this statutory language requires incumbent LECs: (1) to provide notice of these changes within a "reasonable" time in advance of implementation; and (2) to make the information available within a "reasonable" time if responding to an individual request.[448] We sought comment on what constitutes a reasonable time in each of these situations, and on whether the Commission should adopt a specific timetable for disclosure of technical information.

204. In the *NPRM*, we specifically sought comment on whether we should adopt a disclosure timetable similar to that adopted by the Commission in the *Computer III* proceeding.[449] In Phase II of that proceeding, the Commission required AT&T and the BOCs to disclose information about network changes or new network services that affect the interconnection of enhanced services with the network at two points in time.[450] First, these carriers were required to disclose such information at the "make/buy" point -- that is, when the carrier decides to make itself, or to procure from an unaffiliated entity, any product the design of which affects or relies on the network interface.[451] Second, carriers were required to release publicly all technical information at least twelve months prior to the introduction of a new service or network change that would affect enhanced service interconnection with the network.[452] If a carrier could introduce a new service between six and twelve months of the

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[448] *NPRM* at para. 192.

[449] *Amendment of Section 64.702 of the Commission's Rules and Regulations* (*Computer III*), *Phase I*, 104 F.C.C.2d 958 (1986) (*Phase I Order*), *recon.*, 2 FCC Rcd 3035 (1987) (*Phase I Recon. Order*), *further recon.*, 3 FCC Rcd 1135 (1988) (*Phase I Further Recon. Order*), *second further recon.*, 4 FCC Rcd 5927 (1989) (*Phase I Second Further Recon.*), *Phase I Order and Phase I Recon. Order vacated*, *California v. FCC*, 905 F.2d 1217 (9th Cir. 1990) (*California I*); *Phase II*, 2 FCC Rcd 3072 (1987) (*Phase II Order*), *recon.*, 3 FCC Rcd 1150 (1988) (*Phase II Recon. Order*), *further recon.*, 4 FCC Rcd 5927 (1989) (*Phase II Further Recon. Order*), *Phase II Order*, *vacated*, *California I*, 905 F.2d 1217 (9th Cir. 1990); *Computer III Remand Proceedings*, 5 FCC Rcd 7719 (1990) (*ONA Remand Order*), *recon.*, 7 FCC Rcd 909 (1992), *pets. for review denied*, *California v. FCC*, 4 F.3d 1505 (9th Cir. 1993) (*California II*); *Computer III Remand Proceedings: Bell Operating Company Safeguards and Tier 1 Local Exchange Company Safeguards*, 6 FCC Rcd 7571 (1991) (*BOC Safeguards Order*); *BOC Safeguards Order*, *vacated in part and remanded*, *California v. FCC*, 39 F.3d 919 (9th Cir. 1994) (*California III*), *cert. denied*, 115 S.Ct. 1427 (1995).

[450] *Phase II Recon. Order*, 3 FCC Rcd at 1164. Although the Ninth Circuit vacated the *Phase II Recon. Order*, the Commission reimposed the network disclosure requirements on remand. *See BOC Safeguards Order*, 6 FCC Rcd at 7602-7604.

[451] *Phase II Recon. Order*, 3 FCC Rcd at 1164.

[452] *Id.* at 1164-65.

make/buy point, public disclosure was permitted at the make/buy point, but in no event could the carrier introduce the service earlier than six months after the public disclosure.[453]

205. The disclosure obligations imposed by section 251(c)(5) are broader than those adopted in the *Computer III* proceeding. While *Computer III* applies only to the BOCs and to AT&T, section 251(c)(5) imposes disclosure requirements on all incumbent LECs. Furthermore, while the *Computer III* disclosure requirements apply only to technical information related to new or modified network services affecting the interconnection *of enhanced services* to the BOC networks, section 251(c)(5) mandates disclosure of a much broader spectrum of information.[454] Accordingly, we sought comment in the *NPRM* on whether the Commission should adopt a timetable comparable to that imposed in *Computer III* for section 251(c)(5) network disclosure purposes and, if so, how such a timetable should be implemented.

b. Comments

206. Most commenters express support for our tentative conclusion that section 251(c)(5) requires incumbent LECs to disclose publicly information on network changes within a reasonable time in advance of implementation.[455] No commenters suggest that the timing of disclosure is not governed by section 251(c)(5)'s "reasonableness" standard, although at least two commenters appear to indicate that it would be reasonable to implement network changes immediately upon disclosure.[456] Commenters also support our tentative conclusion that an incumbent LEC must make this information available within a "reasonable" time if responding to an individual request.[457] Time Warner requests a concrete standard in this area and suggests that the Commission should indicate that, once an incumbent LEC has released a public notice of change under section 251(c)(5), it must respond to individual requests for detailed, technical information concerning network changes under section 251(c)(5) within ten business days of receiving the request.[458]

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[453] *Id.* at 1165.

[454] *See* discussion of the definitions of "information necessary for the transmission and routing of services" and "interoperability," *supra.*

[455] *See, e.g.,* Ameritech comments at 29; GCI comments at 5; MCI comments at 15; Time Warner comments at 6; U S WEST reply at 1.

[456] BellSouth argues that "the Commission should permit the offering of the new interface immediately upon the disclosure of the requisite information." BellSouth comments at 5; *see also* Nortel comments at 4.

[457] *See, e.g.,* MCI comments at 15.

[458] Time Warner comments at 11.

207. Commenters were split on whether we should adopt a specific disclosure timetable for section 251(c)(5) purposes. Several commenters[459] oppose the adoption of a specific timetable, primarily arguing that: (1) any regulations adopted under section 251(c)(5) should define only minimum guidelines, allowing the states flexibility under section 251(d)(3) to adopt more stringent disclosure requirements dictated by local conditions; (2) a fixed disclosure timetable will needlessly or arbitrarily delay the introduction of new services or technical advances; (3) overly long advance disclosure periods will put the incumbent LECs at a competitive disadvantage because competitors will be able to bring planned services to market more quickly; (4) the industry already has in place detailed disclosure guidelines that are widely followed on a voluntary basis and that obviate the need for independent Commission examination of this issue; and (5) the Commission's existing "all carrier" rule, which contains a flexible standard, adequately addresses the obligations imposed by section 251(c)(5).[460] GVNW warns that the interval from the make/buy decision to in-service for small LECs is often less than twelve months and states that the Commission should not require technology to be implemented at a slower pace than is technically feasible merely to satisfy a notice requirement.[461] Commenters also argue that carriers already face powerful incentives to ensure that their networks interconnect properly because the reputation of both the incumbent LEC and the interconnecting LEC are at stake if service fails.[462] In addition, BellSouth claims that section 251(c)(5) is "self-effectuating and needs no interpretive regulations."[463]

208. Several other commenters argue that, while a disclosure timetable may be necessary, the *Computer III* requirements are too rigid. The District of Columbia Commission notes that any eventual disclosure timetable must balance "the need to ensure the earliest possible disclosure of information needed by competitors [against] the need to impose the least administrative burden on" incumbent LECs.[464] Accordingly, the District of Columbia Commission maintains that state commissions should be afforded flexibility to set timetables that are appropriate in light of local conditions.[465] Several commenters note existing industry notification timing standards adopted and issued by the Industry Carriers Compatibility Forum

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[459] *See, e.g.*, Ameritech comments at 29; BellSouth comments at 2, 5; District of Columbia Commission comments at 6, 7-8; GVNW comments at 5; Bell Atlantic reply at 8-9.

[460] The requirements of the all carrier rule are discussed in note 383 *supra*.

[461] GVNW comments at 4.

[462] *See, e.g.*, Ameritech comments at 30.

[463] BellSouth comments at 1.

[464] District of Columbia Commission comments at 8.

[465] *Id.*

("ICCF")[466] and argue that widespread industry use of these standards has obviated the need for an additional Commission-imposed timetable.[467] MCI, however, cautions that these existing industry guidelines are inadequate because industry fora, in general, have historically been controlled by the RBOCs.[468] U S WEST supports disclosure at the "make/buy" point, but argues that additional notice should not be required for deployment of standard interfaces and services.[469] While MCI supports adoption of the *Computer III* timetable in this proceeding, it requests that, in addition: (1) we impose a mandatory 6-month disclosure period for network changes that can be implemented within 6 months of the "make/buy" point; and (2) we clarify that incumbent LECs must disclose relevant information they discover after services have been introduced, if such information would have been subject to prior disclosure.[470] AT&T also supports the general parameters of the *Computer III* timetable, but requests that we specifically impose a one year minimum advance disclosure obligation on changes to network elements or operations support system technology.[471] Similarly, while ACSI notes that the *Computer III* timetable is a "useful starting place," it argues for a minimum one-year notice period for modification of the physical form of interconnection, with an additional 6 month period in which use of the changes by a competing service provider is permissive only.[472]

209. Cox argues that disclosure should be made at the "earliest possible time" and, in particular, at the time the decision is made internally to implement a change, with the "make/buy" point being considered the "absolute latest date" on which disclosure is permitted.[473] In addition, Cox requests that we obligate incumbent LECs to disclose any unimplemented network changes that are subject to the section 251(c)(5) notice requirement at the outset of interconnection negotiations.[474]

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[466] Industry Carriers Compatibility Forum, *Recommended Notification Procedures to Industry for Changes in Access Network Architecture*, ICCF 92-0726-004, Rev. 2 (Jan. 5, 1996).

[467] USTA comments at 13; NYNEX comments at 16-17; SBC comments at 14.

[468] MCI reply at 7.

[469] U S WEST comments at 13.

[470] MCI comments at 20-21.

[471] AT&T comments at 25.

[472] ACSI comments at 12.

[473] Cox comments at 10-11.

[474] *Id.* at 11.

210. MFS proposes a tripartite scheme, loosely based on the *Computer III* timetable, that classifies certain changes as "major," "location," or "minor."[475] "Major" changes, would be defined as those "introducing any change in network equipment, facilities, specifications, protocols, or interfaces that will require other parties to make any modification to hardware or software in order to maintain interoperability." Major changes would be subject to 18 months advance notice. "Location" changes would be defined as those "that require changes in the geographic location to which traffic is routed, or at which unbundled network elements can be obtained, but [that] do not otherwise change the manner of interconnection or of access"; such changes could be implemented on 12 months notice. "Minor" changes, including those in "numbering, routing instructions, signalling codes, or other information necessary for the exchange of traffic that do not require construction of new facilities or changes in hardware or software" could be made upon notice in accord with the time intervals prescribed by the ICCF.[476]

211. Many commenters recognize the need for a concrete disclosure timetable. AT&T argues that the broad disagreement among commenters itself is evidence that section 251(c)(5) is not self-effectuating.[477] AT&T opposes the state-by-state approach advocated by the District of Columbia Commission, as well as the case-by-case approach advocated by Rural Tel. Coalition, because these approaches could lead to the disparate application of the uniform statutory duty imposed by section 251(c)(5). AT&T notes that the record does not reflect any material conditions that vary among states or justify differing rules. In addition, AT&T disputes the applicability of the ICCF timetable, since that document sets forth only guidelines to be used by the independent LECs in notifying the BOCs of network changes.[478]

212. Of the commenters supporting concrete federal standards, most support the adoption of the *Computer III* disclosure timetable.[479] PacTel notes that existing Commission disclosure requirements are familiar to the industry and adequate to meet the requirements of section 251(c)(5); accordingly it supports the establishment of "safe harbor" rules based on *Computer III* and the disclosure requirements contained in our existing rules.[480] As discussed above, although it advocates certain revisions, U S WEST agrees that "disclosure pursuant to the Computer [III] Rules would seem to satisfy the requirements of the [1996] Act."[481] GTE

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[475] MFS comments at 15-16.

[476] These intervals are prescribed in the ICCF *Recommended Notification Procedures*. *See* note 466 *supra*.

[477] AT&T reply at 27.

[478] *Id.*

[479] *See, e.g.*, Teleport comments at 11; GCI comments at 5; AT&T reply at 27.

[480] PacTel comments at 5. *See* 47 C.F.R. §§ 64.702(d)(2), 68.110(b).

[481] U S WEST comments at 12-13.

notes that the "make/buy" point is an appropriate disclosure trigger because it ensures both the delivery of timely information to parties that use the networks and the promotion of carriers' development efforts to support network innovation.[482]

213. Several commenters urge us to adopt rules prohibiting an incumbent LEC from disclosing network changes to certain preferred entities, including long distance or equipment manufacturing affiliates, prior to public disclosure.[483]

c. Discussion

214. We find that it would be unreasonable to expect other telecommunications carriers or information services providers to be able to react immediately to network changes that the incumbent LEC may have spent months or more planning and implementing; accordingly we reject requests to permit incumbent LECs to implement changes immediately on disclosure. In order to clarify incumbent LECs' obligations to disclose these changes a "reasonable time in advance of implementation," we adopt a disclosure timetable based on that developed in the *Computer III* proceeding. Under this timetable, incumbent LECs will be required to disclose planned changes, subject to the section 251(c)(5) disclosure requirements, at the "make/buy" point,[484] but a minimum of twelve months before implementation. If the planned changes can be implemented within twelve months of the make/buy point, then public notice must be given at the make/buy point, but at least six months before implementation.

215. With respect to changes that can be implemented within six months of the make/buy point, incumbent LECs may wish to provide less than six months notice. In such a case, the incumbent LEC's certification or public notice filed with the Commission, as applicable, must also include a certificate of service: (1) certifying that a copy of the incumbent LEC's public notice was served on each provider of telephone exchange service that interconnects directly with the incumbent LEC's network a minimum of five business days in advance of the filing; and (2) providing the name and address of all such providers of local exchange service upon which the notice was served. The Commission will issue public notice of such short-term filings. Such short term notices will be deemed final on the tenth business day after the release of the Commission's public notice unless a provider of information services or telecommunications services that directly interconnects with the incumbent LEC's network files an objection to the change with the Commission and serves it on the incumbent LEC no later than the ninth business day following the release of the Commission's public notice. If such an objection is filed, the incumbent LEC will have the opportunity to respond within an additional five business days and the Common Carrier

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[482] GTE reply at 7-8 and comments cited at 7 n.15.

[483] *See, e.g.,* Time Warner comments at 8; NCTA reply at 12; Ohio Consumer's Council reply at 5-6.

[484] The definition of the "make/buy" point for section 251(c)(5) purposes is discussed *infra* at paras. 216-217.

Bureau, Network Services Division, will issue, if necessary, an order determining the reasonable public notice period.

i. The Section 251(c)(5) Timetable

216. Without adequate notice of changes to an incumbent LEC's network that affect the "information necessary for the transmission and routing" of traffic, a competing service provider may be unable to maintain an adequately high level of interoperability between its network and that of the incumbent LEC. This inability could degrade the quality of transmission between the two networks or, in a worse case, could interrupt service between the two service providers.[485] Under the rules we adopt today, incumbent LECs must disclose changes subject to section 251(c)(5) at the "make/buy" point, *i.e.*, the time at which the incumbent LEC decides to make for itself, or procure from another entity, any product the design of which affects or relies on a new or changed network interface,[486] but at least twelve months in advance of implementation of a network change. In *Computer III*, the Commission defined "product" in the enhanced services context to be "any hardware or software for use in the network that might affect the compatibility of enhanced services with the existing telephone network, or with any new basic services or capabilities."[487] We believe that this definition can be used to craft a definition of "product" for purposes of section 251(c)(5). Accordingly, for purposes of network disclosure under section 251(c)(5), we define "product" to be "any hardware or software for use in an incumbent LEC's network or in conjunction with an incumbent LEC's facilities that, when installed, could affect the compatibility of the network, facilities or services of an interconnected provider of telecommunications or information services with the incumbent LEC's network, facilities or services."

217. We recognize that some network changes that affect interconnection, *e.g.*, some location changes, may not require an incumbent LEC to make or buy any products. Disclosure of such changes, however, may be required under section 251(c)(5). For purposes of section 251(c)(5), therefore, we clarify that the "make/buy" point includes the point at which the incumbent LEC makes a definite decision to implement a network change in order to begin offering a new service or change the way in which it provides an existing service. Such a "definite decision" requires the incumbent LEC to move beyond exploration of the

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[485] Because the incumbent LECs control the vast majority of both facilities and customers in most markets, the impact of such difficulties, at least at present, would be felt most acutely by a competing service provider.

[486] *BOC Safeguards Order*, 6 FCC Rcd at 7603. The Commission has stated that, "make/buy applies not only to a carrier's decision to make or buy products to implement a change in the network, but also to any decision to make or buy products that would rely on such changes." *Phase II Order*, 2 FCC Rcd at 3087. The precise definition of the "make/buy" point has been clarified in some detail. *See, e.g., id.*; *Phase I Order*, 104 F.C.C.2d at 1080-86; *Computer and Business Equip. Mfrs. Assoc. Petition for Declaratory Ruling Regarding Section 64.702(d)(2) of the Commission's Rules and the Policies of the Second Computer Inquiry,* Report and Order ("*CBEMA Order*"), 93 F.C.C.2d 1226, 1243-44 (1983).

[487] *Phase I Order*, 104 F.C.C.2d at 1084.