

APPENDIX A

List of Commenters in CC Docket No. 98-147

@link Networks Inc. (@link)
ADTRAN, Inc. (ADTRAN)
Alliance for Telecommunications Industry Solutions, Inc. (ATIS)
Ameritech
Association for Local Telecommunications Services (ALTS)
AT&T Corp. (AT&T)
Bell Atlantic Telephone Companies (Bell Atlantic)
BellSouth Corporation (BellSouth)
Burstein, David
Commercial Internet Exchange Association (CIX)
Competitive Telecommunications Association (CompTel)
Covad Communications Company (Covad)
DSL.net, Inc. (DSL.net)
General Services Administration (GSA)
GTE Service Corporation (GTE)
Independent Telephone and Telecommunications Alliance
Inline Connection Corporation (Inline)
Intermedia Communications Inc. (Intermedia)
MCI WorldCom, Inc. (MCI WorldCom)
Mitretek Systems, Inc. (Mitretek)
Network Access Solutions (NAS)
NEXTLINK Communications, Inc. (NEXTLINK)
Nortel Networks Inc. (Nortel)
Northpoint Communications, Inc. (Northpoint)
Oklahoma Corporation Commission (Oklahoma CC)
People of the State of California and
 California Public Utilities Commission (California PUC)
Primary Network Communications (PNC)
Prism Communication Services, Inc. (Prism)
Rhythms Netconnections Inc. (Rhythms)
Rural Telephone Coalition (NRTA, NTCA, Opastco) (Rural Telephone Coalition)
SBC Telecommunications, Inc. (SBC)
Sprint Corporation (Sprint)
Telecommunications Resellers Association (TRA)
Texas Public Utility Commission (Texas PUC)
United States Telephone Association (USTA)
U. S. Small Business Association, Office of Advocacy (SBA)
US West Communications, Inc. (US WEST)

List of Commenters on Spectrum Unbundling in CC Docket No. 96-98

Bell Atlantic
BellSouth
Covad
NAS
Northpoint
Ohio Public Utilities Commission (Ohio PUC)
Rhythms
SBC

APPENDIX B**Final Rules**

Part 51 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 51 -- INTERCONNECTION

1. The authority for part 51 continues to read as follows:

Authority: Sections 1-5, 7, 201-05, 207-09, 218, 225-27, 251-54, 271, 332, 48 Stat. 1070, as amended, 1077; 47 U.S.C. 151-55, 157, 201-05, 207-09, 218, 225-27, 251-54, 271, 332, unless otherwise noted.

2. In § 51.5, the following definitions are added in alphabetical order, to read as follows:

§ 51.5 Terms and definitions.

* * * * *

Binder or binder group. Copper pairs bundled together, generally in groups of 25, 50 or 100.

* * * * *

Known disturber. An advanced services technology that is prone to cause significant interference with other services deployed in the network.

* * * * *

3. In Section 51.319, paragraph (h) is added, to read as follows:

§ 51.319 Specific unbundling requirements.

* * * * *

(h) High Frequency Portion of the Loop.

- (1) The high frequency portion of the loop network element is defined as the frequency range above the voiceband on a copper loop facility that is being used to carry analog circuit-switched voiceband transmissions.
- (2) An incumbent LEC shall provide nondiscriminatory access in accordance with section 51.311 of these rules and section 251(c)(3) of the Act to the high frequency portion of a loop to any requesting telecommunications carrier for the provision of a telecommunications service conforming with section 51.230 of these rules.

- (3) An incumbent LEC shall only provide a requesting carrier with access to the high frequency portion of the loop if the incumbent LEC is providing, and continues to provide, analog circuit-switched voiceband services on the particular loop for which the requesting carrier seeks access.
- (4) Control of the Loop and Splitter Functionality. In situations where a requesting carrier is obtaining access to the high frequency portion of the loop, the incumbent LEC may maintain control over the loop and splitter equipment and functions, and shall provide to requesting carriers loop and splitter functionality that is compatible with any transmission technology that the requesting carrier seeks to deploy using the high frequency portion of the loop, as defined in this subsection, provided that such transmission technology is presumed to be deployable pursuant to section 51.230.

(5) Loop Conditioning.

(i) An incumbent LEC must condition loops to enable requesting carriers to access the high frequency portion of the loop spectrum, in accordance with sections 51.319(a)(3), and 51.319(h)(1). If the incumbent LEC seeks compensation from the requesting carrier for line conditioning, the requesting carrier has the option of refusing, in whole, or in part, to have the line conditioned, and a requesting carrier's refusal of some or all aspects of line conditioning will not diminish its right of access to the high frequency portion of the loop.

(ii) Where conditioning the loop will significantly degrade, as defined in section 51.233, the voiceband services that the incumbent LEC is currently providing over that loop, the incumbent LEC must either (A) locate another loop that has been or can be conditioned, migrate the incumbent LEC's voiceband service to that loop, and provide the requesting carrier with access to the high frequency portion of the alternative loop; or (B) make a showing to the relevant state commission that the original loop cannot be conditioned without significantly degrading voiceband services on that loop, as defined in section 51.233, and that there is no adjacent or alternative loop available that can be conditioned or to which the customer's voiceband service can be moved to enable line sharing.

(iii) If the relevant state commission concludes that a loop cannot be conditioned without significantly degrading the voiceband service, the incumbent LEC cannot then or subsequently condition that loop to provide advanced services to its own customers without first making available to any requesting carrier the high frequency portion of the newly-conditioned loop.

(6) Digital Loop Carrier Systems. Incumbent LECs must provide to requesting carriers unbundled access to the high frequency portion of the loop at the remote terminal as well as the central office, pursuant to section 51.319(a)(2) and section 51.319(h)(1).

(7) Maintenance, Repair, and Testing.

(i) Incumbent LECs must provide, on a nondiscriminatory basis, physical loop test access points to requesting carriers at the splitter, through a cross-connection to the competitor's collocation space, or through a standardized interface, such as an intermediate distribution frame or a test access server, for the purposes of loop testing, maintenance, and repair activities.

(ii) An incumbent seeking to utilize an alternative physical access methodology may request approval to do so from the relevant state commission, but must show that the proposed alternative method is reasonable, nondiscriminatory, and will not disadvantage a requesting carrier's ability to perform loop or service testing, maintenance or repair.

4. New § 51.230 is added, to read as follows:

§ 51.230 Presumption of acceptability for deployment of an advanced services loop technology.

(a) An advanced services loop technology is presumed acceptable for deployment under any one of the following circumstances, where the technology:

(1) complies with existing industry standards; or

(2) is approved by an industry standards body, the Commission, or any state commission; or

(3) has been successfully deployed by any carrier without significantly degrading the performance of other services.

(b) An incumbent LEC may not deny a carrier's request to deploy a technology that is presumed acceptable for deployment unless the incumbent LEC demonstrates to the relevant state commission that deployment of the particular technology will significantly degrade the performance of other advanced services or traditional voiceband services.

(c) Where a carrier seeks to establish that deployment of a technology falls within the presumption of acceptability under paragraph (a)(3) of this section, the burden is on the requesting carrier to demonstrate to the state commission that its proposed deployment meets the threshold for a presumption of acceptability and will not, in fact, significantly degrade the performance of other advanced services or traditional voice band services. Upon a successful demonstration by the requesting carrier before a particular state commission, the deployed technology shall be presumed acceptable for deployment in other areas.

5. New § 51.231 is added, to read as follows:

§ 51.231 Provision of information on advanced services deployment.

(a) An incumbent LEC must provide to requesting carriers that seek access to a loop or

high frequency portion of the loop to provide advanced services:

(1) information with respect to the spectrum management procedures and policies that the incumbent LEC uses in determining which services can be deployed; and

(2) information with respect to the rejection of the requesting carrier's provision of advanced services, together with the specific reason for the rejection; and

(3) information with respect to the number of loops using advanced services technology within the binder and type of technology deployed on those loops.

(b) A requesting carrier that seeks access to a loop or a high frequency portion of a loop to provide advanced services must provide to the incumbent LEC information on the type of technology that the requesting carrier seeks to deploy.

(1) Where the requesting carrier asserts that the technology it seeks to deploy fits within a generic power spectral density (PSD) mask, it also must provide Spectrum Class information for the technology.

(2) Where a requesting carrier relies on a calculation-based approach to support deployment of a particular technology, it must provide the incumbent LEC with information on the speed and power at which the signal will be transmitted.

(c) The requesting carrier also must provide the information required under paragraph (b) of this section when notifying the incumbent LEC of any proposed change in advanced services technology that the carrier uses on the loop.

6. New § 51.232 is added, to read as follows:

§ 51.232 Binder group management.

(a) With the exception of loops on which a known disturber is deployed, the incumbent LEC shall be prohibited from designating, segregating or reserving particular loops or binder groups for use solely by any particular advanced services loop technology.

(b) Any party seeking designation of a technology as a known disturber should file a petition for declaratory ruling with the Commission seeking such designation, pursuant to § 1.2 of this chapter.

7. New § 51.233 is added, to read as follows:

§ 51.233 Significant degradation of services caused by deployment of advanced services.

(a) Where a carrier claims that a deployed advanced service is significantly degrading the

performance of other advanced services or traditional voiceband services, that carrier must notify the deploying carrier and allow the deploying carrier a reasonable opportunity to correct the problem. Where the carrier whose services are being degraded does not know the precise cause of the degradation, it must notify each carrier that may have caused or contributed to the degradation.

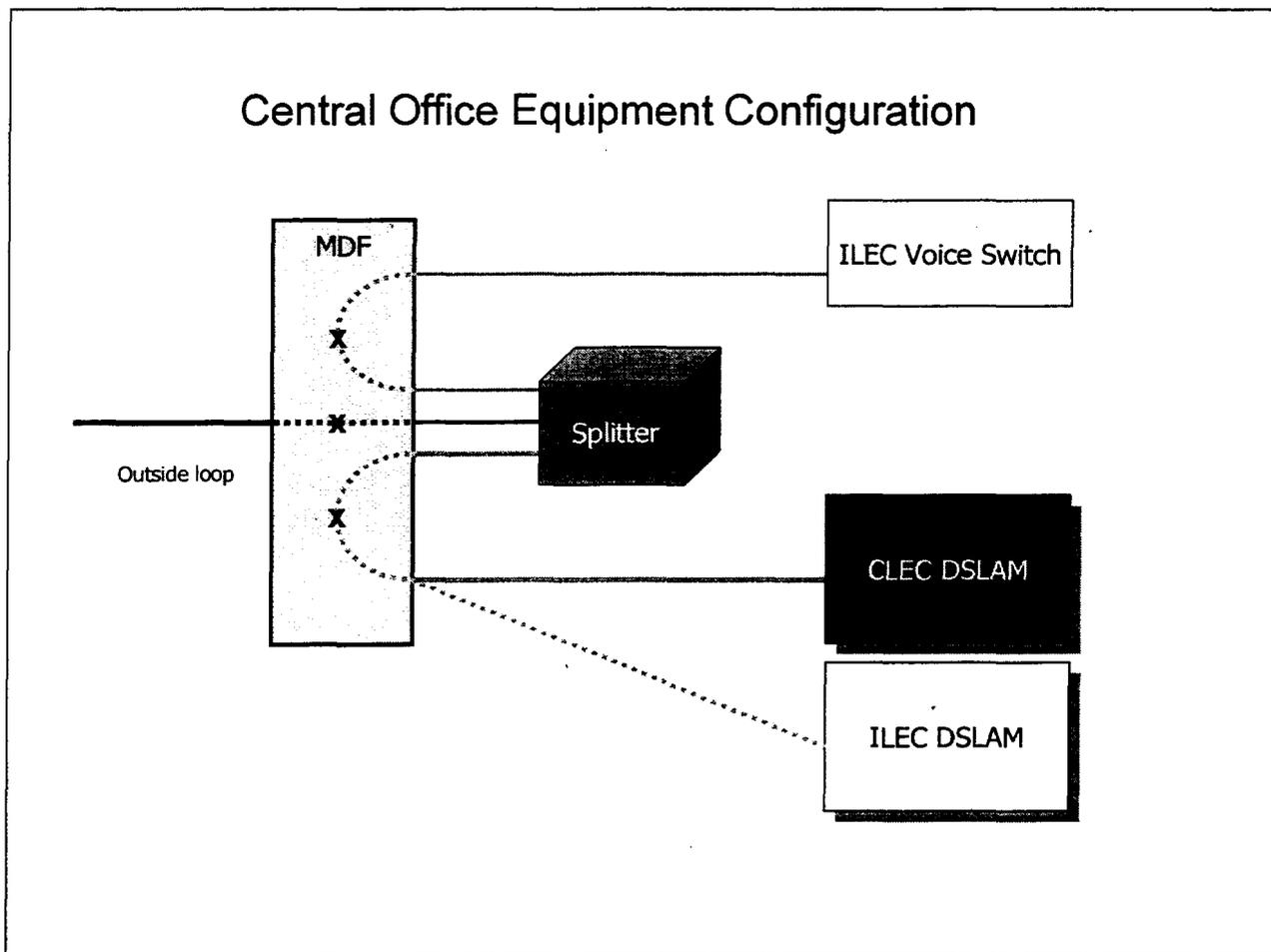
(b) Where the degradation asserted under paragraph (a) of this section remains unresolved by the deploying carrier(s) after a reasonable opportunity to correct the problem, the carrier whose services are being degraded must establish before the relevant state commission that a particular technology deployment is causing the significant degradation.

(c) Any claims of network harm presented to the deploying carrier(s) or, if subsequently necessary, the relevant state commission, must be supported with specific and verifiable information.

(d) Where a carrier demonstrates that a deployed technology is significantly degrading the performance of other advanced services or traditional voice band services, the carrier deploying the technology shall discontinue deployment of that technology and migrate its customers to technologies that will not significantly degrade the performance of other such services.

(e) Where the only degraded service itself is a known disturber, and the newly deployed technology satisfies at least one of the criteria for a presumption that it is acceptable for deployment under section 51.230, the degraded service shall not prevail against the newly-deployed technology.

APPENDIX C



APPENDIX D

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Advanced Services First Report and Order and FNPRM*.² The Commission sought written public comment on the proposals in the *Advanced Services First Report and Order and FNPRM*, including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

I. Need for and Objectives of this Third Report and Order and the Rules Adopted Herein.

2. In this Third Report and Order (Order) we take additional, important steps toward implementing Congress' goals for deployment of advanced services by requiring incumbent LECs to unbundle the high frequency portion of the loop, and establishing spectrum compatibility and management policies.

3. First, we amend our unbundling rules to require incumbent LECs to provide unbundled access to a network element, the high frequency portion of the loop. This will enable competitive LECs to provide xDSL service through telephone lines that they share with incumbent LECs, which is frequently called "line sharing." In order to ensure that line sharing does not significantly degrade analog voice service, incumbents must provide unbundled access to the high frequency portion of the loop only to carriers seeking to provide xDSL services that meet one of the Commission's criteria regarding the presumption of acceptability for deployment on the same loop as analog voice service.

4. We also set out specific parameters for line sharing deployment in order to ensure that the analog voiceband is preserved from significant degradation. Incumbents are not required to provide unbundled access to the high frequency portion of the loop if they are not currently providing analog voice service to the customer. Moreover, incumbent carriers must provide unbundled access to the high frequency portion of the loop to only a single requesting carrier, for use at the same customer address as the analog voice service provided by the incumbent. In addition, subject to certain obligations, incumbent LECs may maintain control over the loop and splitter equipment and functions.

5. We also set forth pricing methodologies for the states to use as guidelines when setting the price of this new unbundled network element. Based on the record, we find that there

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

² *Advanced Services First Report Order and FNPRM*, 14 FCC Rcd at 4826.

³ See 5 U.S.C. § 604.

are five types of direct costs that an incumbent LEC potentially could incur to provide access to line sharing : (1) loops; (2) OSS; (3) cross connects; (4) splitters; and (5) line conditioning.

6. In addition to line sharing requirements, we adopt rules in this Order that apply to spectrum compatibility and management. These rules will significantly benefit the rapid and efficient deployment of xDSL technologies. Specifically, we seek to encourage the voluntary development of industry standards while limiting the ability of any one class of carriers to impose unilateral and potentially anti-competitive spectrum management or compatibility rules on other xDSL providers. We believe that spectrum policies we adopt in this Order will ensure the compatibility of technologies and minimize the risk of harmful spectrum interference among transmission services. As such, these policies will ensure that American consumers will not face undue delay in receiving the benefits of technological innovation.

7. We also adopt rules that will govern when a loop technology is presumed acceptable for deployment. The circumstances include when the technology: (1) complies with existing industry standards; (2) has been approved by an industry standards body, the Commission, or any state commission; or (3) has been successfully deployed by any carrier without significantly degrading the performance of other services.

8. We affirm our conclusions from the *Advanced Services First Report and Order* regarding resolution of interference disputes. In the event that a LEC demonstrates to the relevant state commission that a deployed technology is significantly degrading the performance of other advanced services or traditional voice band services, the carrier deploying the technology shall discontinue deployment of that technology and migrate its customers to technologies that will not significantly degrade the performance of other services. We now adopt an exception to this rule: where the only service experiencing interference is itself a known disturber, that service shall not prevail against the newly developed technology. We conclude that analog T1 service is a known disturber.

9. The only permissible forms of binder management⁴ are the segregation of known disturbers and the use of the spectrum compatibility (interference protection) techniques described above. The states may select one or more of several approaches towards disposition of known disturbers, including segregation or sunseting of known disturbers.

II. Summary of Significant Issues Raised by Public Comments in Response to the IRFA.

10. In the IRFA, we stated that any rule changes would impose minimum burdens on small entities, and solicited comment on alternatives to our proposed rules that would minimize the impact they might have on small entities. The Office of Advocacy, United States Small Business Administration (SBA), commented on the issues raised in the First Report and Order and Further Notice of Proposed Rulemaking. SBA argued that the Commission should consider all comments received in response to the FNPRM, but also issue a second Further Notice along

⁴ See *supra* Section VI.B.4.

with a revised IRFA that more accurately identifies all small businesses impacted and details the compliance burdens. Moreover, SBA is concerned that the Commission did not provide adequate notice regarding cost allocation and operational issues.

11. First, SBA argues that the *Advanced Services FNPRM* does not adequately identify all small entities affected by the line sharing and spectrum management proposals because the Commission did not identify small incumbent LECs as small entities.⁵ In fact, the Commission does include small incumbents in its RFA. While in the IRFA, the Commission stated that “[a]lthough some affected incumbent LECs may have 1,500 or fewer employees, we do not believe that such entities should be considered small entities within the meaning of the RFA because they are either dominant in their field of operations or are not independently owned and operated, and therefore by definition not ‘small entities’ or ‘small business concerns’ under the RFA,”⁶ the Commission goes on to state that “[o]ut of an abundance of caution, however, for regulatory flexibility analysis purposes, we will separately consider small incumbent LECs within this analysis and use the term ‘small incumbent LECs’ to refer to any incumbent LECs that arguably might be defined by the SBA as ‘small business concerns.’”⁷ Moreover, as SBA is aware, the Commission continues formally to include small incumbent LECs in the RFA analysis of recent Commission items.⁸

12. SBA also argues that the IRFA does not describe the possible reporting, recordkeeping, and other compliance requirements stemming from the proposals in the *Advanced Services FNPRM*.⁹ The Commission determined in the *Advanced Services FNPRM* that line sharing is technically feasible and requested comments on the operation issues relating to sharing a single line between two service providers. In addition, the Commission sought comment on additional measures the Commission could take to ensure that spectrum compatibility and management concerns are resolved in a fair and expeditious manner. The Commission sought comment on these two issues, and specifically identified issues such as the economic, pricing, and cost allocation implications of the line sharing proposals, as well as the burdens on the industry created by our spectrum policy proposals. As stated in the IRFA, we sought “comments on whether the Commission should establish rules for deployment of central office equipment similar to those set forth in Part 68 of our rules. We also ask[ed] commenters to address whether the Commission should be involved with the actual testing and compliance procedures or whether the industry is better suited to serve this function through the use of independent and accredited labs.”¹⁰ The commenters in this proceeding addressed these specific issues in a detailed manner, including any reporting, recordkeeping, and other compliance requirements

⁵ SBA Reply Comments at 4-5.

⁶ See *Advanced Services First Report and Order and FNPRM*, 14 FCC Rcd at 4853, Appendix C, para. 8.

⁷ See *id.*

⁸ See, e.g., *Advanced Services Second Report and Order*, at Appendix C, para. 7.

⁹ SBA Reply Comments at 5.

¹⁰ See *Advanced Services First Report and Order and FNPRM*, 14 FCC Rcd at 4836, Appendix C, para. 11.

associated with the proposals, suggesting that the Commission proposals were neither vague nor insufficient as alleged by SBA.

13. Third, SBA contends that the Commission's IRFA did not discuss any alternatives to the proposals made in the *Advanced Services FNPRM*, and that the Commission's claim that the proposals placed a minimum burden on small entities is unsupported by any analysis of the burdens.¹¹ In the IRFA, the Commission sought "to develop a record sufficient enough to adequately address issues related to developing long-term standards and practices for spectrum compatibility and management, and to the sharing of loops by multiple providers." In addressing these issues, the Commission sought to ensure that competing carriers, including small entity carriers, obtain access to inputs necessary to the provision of advanced services. We also tentatively concluded that our proposals in the *FNPRM* would impose minimal burdens on small entities. Moreover, we sought comment on these proposals and the impact they may have on small entities."¹²

14. Although the Commission did not describe explicitly each of the alternatives that we considered and rejected, as the proposals in the *Advanced Services FNPRM* make clear, the Commission is not considering proposals that would require small entities to engage in activities in which they are not already required to engage. These activities might require operational, accounting, billing, and legal skills that the small carriers already have. Moreover, certain proposals in the *Advanced Services FNPRM* clearly would benefit all carriers, including small carriers, by ensuring that all carriers have economic incentives to innovate and invest in new technologies. We note that in the text of the *Advanced Services FNPRM*, we did, in many instances, raise questions regarding alternatives to our proposals.¹³ These alternatives have the potential to benefit small entities. While we did not reiterate each of these questions in the IRFA, we did describe our actions in the IRFA, which was attached as an Appendix to the *Advanced Services FNPRM*, and as such, we provided sufficient notice for small entities.

III. Description and Estimate of the Number of Small Entities Affected by the Third Report and Order.

15. In the RFA to the Commission's Advanced Services Order and FNPRM, we adopted the analysis and definitions set forth in determining the small entities affected by this order for purposes of this FRFA. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that will be affected by rules.¹⁴ The

¹¹ SBA Reply Comments at 5-6.

¹² *Advanced Services First Report and Order and FNPRM*, 14 FCC Rcd at 4836, Appendix C, para. 12.

¹³ See, e.g., *Advanced Services First Report and Order and FNPRM*, 11 FCC Rcd at 4801-4805, paras. 80-91 and 4811-12, paras. 104-107 (noting specifically the impact that our spectrum policies will have on all segments of the industry, including small entities, and requesting comment on the effect our line sharing proposals will have on incumbent and competitive carriers alike, including small entities).

¹⁴ *Advanced Services First Report and Order and FNPRM*, 14 FCC Rcd at 4826.

RFA generally defines "small entity" as having the same meaning as the term "small business," "small organization," and "small governmental jurisdiction."¹⁵ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act, unless the Commission has developed one or more definitions that are appropriate to its activities.¹⁶ Under the Small Business Act, a "small business concern" is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) meets any additional criteria established by the Small Business Administration (SBA).¹⁷ The SBA has defined a small business for Standard Industrial Classification (SIC) categories 4812 (Radiotelephone Communications) and 4813 (Telephone Communications, Except Radiotelephone) to be small entities when they have no more than 1,500 employees.¹⁸ We first discuss the number of small telephone companies falling within these SIC categories, then attempt to refine further those estimates to correspond with the categories of telephone companies that are commonly used under our rules.

16. The most reliable source of information regarding the total numbers of common carrier and related providers nationwide, as well as the numbers of commercial wireless entities, appears to be data the Commission publishes annually in its *Carrier Locator* report, derived from filings made in connection with the Telecommunications Relay Service (TRS).¹⁹ According to data in the most recent report, there are 3,604 interstate carriers.²⁰ These carriers include, *inter alia*, local exchange carriers, wireline carriers and service providers, interexchange carriers, competitive access providers, operator service providers, pay telephone operators, providers of telephone toll service, providers of telephone exchange service, and resellers.

17. We have included small incumbent LECs in the present RFA analysis. As noted above, a "small business" under the RFA is one that, *inter alia*, meets the pertinent small business size standard (*e.g.*, a telephone communications business having 1,500 or fewer employees), and "is not dominant in its field of operation."²¹ The SBA's Office of Advocacy

¹⁵ 5 U.S.C. § 601(6).

¹⁶ 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 5 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition in the Federal Register."

¹⁷ 15 U.S.C. § 632. *See, e.g., Brown Transport Truckload, Inc. v. Southern Wipers, Inc.*, 176 B.R. 82 (N.D. Ga. 1994).

¹⁸ 13 C.F.R. § 121.201.

¹⁹ FCC, *Carrier Locator: Interstate Service Providers*, Figure 1 (Jan. 1999) (*Carrier Locator*). *See also* 47 C.F.R. § 64.601 *et seq.*

²⁰ *Carrier Locator* at Fig. 1.

²¹ 5 U.S.C. § 601(3).

contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not "national" in scope.²² We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on FCC analyses and determinations in other, non-RFA contexts.

18. *Total Number of Telephone Companies Affected.* The United States Bureau of the Census ("the Census Bureau") reports that, at the end of 1992, there were 3,497 firms engaged in providing telephone services, as defined therein, for at least one year.²³ This number contains a variety of different categories of carriers, including local exchange carriers, interexchange carriers, competitive access providers, cellular carriers, mobile service carriers, operator service providers, pay telephone operators, PCS providers, covered SMR providers, and resellers. It seems certain that some of those 3,497 telephone service firms may not qualify as small entities or small incumbent LECs because they are not "independently owned and operated."²⁴ For example, a PCS provider that is affiliated with an interexchange carrier having more than 1,500 employees would not meet the definition of a small business. It seems reasonable to conclude, therefore, that fewer than 3,497 telephone service firms are small entity telephone service firms or small incumbent LECs that may be affected by the decisions and rules proposed in the Notice.

19. *Wireline Carriers and Service Providers.* SBA has developed a definition of small entities for telephone communications companies other than radiotelephone companies. The Census Bureau reports that, there were 2,321 such telephone companies in operation for at least one year at the end of 1992.²⁵ According to SBA's definition, a small business telephone company other than a radiotelephone company is one employing no more than 1,500 persons.²⁶ All but 26 of the 2,321 non-radiotelephone companies listed by the Census Bureau were reported to have fewer than 1,000 employees. Thus, even if all 26 of those companies had more than 1,500 employees, there would still be 2,295 non-radiotelephone companies that might qualify as small entities or small incumbent LECs. Although it seems certain that some of these carriers are not independently owned and operated, we are unable at this time to estimate with greater precision the number of wireline carriers and service providers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than

²² Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (filed May 27, 1999). The Small Business Act contains a definition of "small business concern," which the RFA incorporates into its own definition of "small business." See U.S.C. § 632(a) (Small Business Act); 5 U.S.C. § 601(3) (RFA). SBA regulations interpret "small business concern" to include the concept of dominance on a national basis. 13 C.F.R. § 121.102(b). Since 1996, out of an abundance of caution, the Commission has included small incumbent LECs in its regulatory flexibility analyses. See, e.g., *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket 96-98, First Report and Order, 11 FCC Rcd 15499, 16144-45 (1996).

²³ United States Department of Commerce, Bureau of the Census, *1992 Census of Transportation, Communications, and Utilities: Establishment and Firm Size*, at Firm Size 1-123 (1995) ("1992 Census").

²⁴ 15 U.S.C. § 632(a)(1).

²⁵ 1992 Census, *supra*, at Firm Size 1-123.

²⁶ 13 C.F.R. § 121.201, SIC Code 4813.

2,295 small entity telephone communications companies other than radiotelephone companies that may be affected by the decisions and rules proposed in the Notice.

20. *Local Exchange Carriers.* Neither the Commission nor SBA has developed a definition of small local exchange carriers (LECs) or competitive local exchange carriers (CLECs). The closest applicable definition for these carrier-types under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies.²⁷ The most reliable source of information regarding the number of these carriers nationwide of which we are aware appears to be the data that we collect annually in connection with the Telecommunications Relay Service (TRS).²⁸ According to our most recent data, there are 1,410 LECs, 129 CLECs,²⁹ and 351 resellers.³⁰

21. Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of these carriers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 1,410 small entity LECs, 129 CLECs,³¹ and 351 resellers that may be affected by the decisions and rules adopted in the *Order*.

IV. Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.

A. Line Sharing

22. We set forth guidelines that states may use in pricing the higher frequencies of their local loops, which will be made available as an unbundled network element. We determine that complying with these guidelines may require use of operational, accounting, billing, and legal skills. These are skills that the carriers already have. We believe, however, that incumbent LECs will already have these skills. The burden of compliance is minimal because they use the higher frequencies of their local loops already to provide the service that will be offered to others pursuant to the unbundled network element.

23. In this *Order*, we identify the high frequency portion of the loop as an additional network element that incumbent LECs are obligated to offer to requesting carriers on an unbundled basis nationwide. We believe that incumbent LECs already have the skills necessary to accomplish this with little or no additional resources because incumbents will not have to hire

²⁷ 13 C.F.R. § 121.210, SIC Code 4813.

²⁸ See 47 C.F.R. § 64.601 *et seq.*; *Carrier Locator* at Fig. 1.

²⁹ The total for CLECs includes both CLECs and competitive access providers (CAPs).

³⁰ *Carrier Locator* at Fig. 1. The total for resellers includes both toll resellers and local resellers.

³¹ This TRS category also includes Competitive Access Providers (CAPs).

new staff, or provide additional training to current staff. We note that, pursuant to section 251(c) and (d) of the 1996 Act, incumbent LECs, including those that qualify as small entities, are required to provide nondiscriminatory access to unbundled network elements. The only exception to this rule apply to those carriers that qualify for and have obtained an exemption, suspension, or modification pursuant to section 251(f) of the Act.³²

B. Spectrum Policy

24. We require competitive LECs to provide to incumbent LECs information on the type of technology they seek to deploy, including Spectrum Class information where a competitive LEC asserts that the technology it seeks to deploy fits within a generic power spectral density (PSD) mask. Where a competitive LEC relies on a calculation-based approach to support deployment of a particular technology, it must furnish the incumbent LEC with information on the speed and power at which the technology will be transmitted. Competitive LECs must provide this information in notifying the incumbent LEC of any proposed change in advanced services technology that the carrier uses on the loop, so that the incumbent LEC can correct its records and anticipate the effect that the change may have on other services in the same or adjacent binder groups. The provision of such information is integral to a competitive LEC's claim that the technology it seeks to deploy is presumed acceptable for deployment. We determine that complying with these rules may require use of engineering, technical, operational, and legal skills

V. Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.

A. Line Sharing

25. The high frequency portion of the loop meets the statutory definition of a network element and must be unbundled pursuant to sections 251(d) and (c)(3). Our unbundling analysis benefits competitive carriers, including small entities, by enabling the carriers to have access to shared loops in order to serve customers who, heretofore, it has been uneconomical to serve. In order to ensure that line sharing does not significantly degrade analog voice service, incumbents must provide unbundled access to the high frequency portion of the loop only to carriers seeking to provide xDSL-based service that meets one of the Commission's criteria regarding the presumption of acceptability for deployment on the same loop as analog voice service. Incumbent carriers must provide unbundled access to the high frequency portion of the loop only to a single requesting carrier, for use at the same customer address as the analog voice service provided by the incumbent. Incumbents are not required to provide unbundled access to the high frequency portion of the loop if they are not currently providing analog voice service to the customer. Subject to certain obligations, incumbent LECs may maintain control over the loop and splitter equipment and functions. The specific parameters pursuant to which incumbent LECs have to provide access to shared lines benefit small entities, both incumbent and

³² 47 U.S.C. § 251(f).

competitive carriers, by ensuring that carriers do not have to devote scarce resources to address line sharing arrangements, such as multiple carriers and multiple customers on the same loop, in which it is unlikely carriers seek to engage.

26. Moreover, the record shows that incumbents should be able to resolve operational issues associated with implementation of line sharing, including modifications to operations support systems, within six months. The record shows that incumbents have a number of process alternatives available and we will allow them the flexibility to choose the best and most economically feasible of them. The 180-day implementation period will benefit small incumbents who might not have the resources to make immediate changes to their OSSs.

B. Spectrum Policies

27. Although we reiterate our general belief that industry standards bodies should create acceptable standards for deployment of advanced services, we remain convinced, however, that the Commission is compelled to play a role in fostering timely, fair, and open development of standards for current and future technologies. We conclude that the standards setting process must include the involvement of a third party to advise the Commission on spectrum compatibility standards and spectrum management practices. Specifically, the charter of an existing Federal Advisory Committee (FAC), the Network Reliability Interoperability Council (NRIC), will be amended to charge NRIC with such advisory function.

28. Because NRIC will make recommendations to the Commission based on input and submissions from T1E1.4 and other industry standards bodies, that balanced representation within the NRIC should be able to recommend against any issues that are unduly weighted towards any one particular industry segment, we expect that NRICs involvement in these issues will help in several ways to alleviate small business concerns about incumbent LEC domination of T1E1.4, and will help safeguard competitive neutrality in, and the timeliness of xDSL standards setting for network interoperability generally.

29. Should we find that certain industry standards bodies are adopting spectrum compatibility standards or spectrum management practices that continue to fail, in their underlying processes, in safeguarding principles of competitive neutrality and promoting innovation, we will look to other industry standards bodies that uphold these principles or we will exercise our authority to assume that standards-setting function ourselves.

30. We find the criterion for acceptability for deployment outlined above – successful deployment of a technology elsewhere without significantly degrading the performance of other services – to be particularly useful for assisting the deployment of new technologies without subjecting them to delays often encountered with industry standards-setting fora. As a method to achieve a presumption of acceptability for deployment that does not rely upon industry standards bodies, the successful deployment criterion provides a further antidote against concerns regarding the competitive neutrality of the industry standards-setting process. This criterion should benefit small LECs because it relieves the LEC from having to meet the potentially burdensome requirements of the industry standards setting process.

31. The LEC also will be able to rebut the presumption of acceptability before a state commission if the technology proposed for deployment poses a real interference threat in a certain area. We are confident that this represents a sufficient safeguard for network reliability. Indeed, because the power to rebut the presumption of acceptability for deployment of a technology before a state commission is an important safeguard for LECs, we decline to make the presumptions that are based on technology's standardization or other approval by an industry standards body or this Commission irrefutable. This rebuttable presumption benefits small LECs because it gives them a vehicle to protect the network and their deployed services. Small LECs particularly benefit by the fact that we allow carriers to rebut the presumption of acceptability for deployment before the relevant state commission.

32. We confirm that an incumbent LEC need not act as the initial point of contact in all service degradation disputes. This relieves small incumbent LECs from the potential responsibility for fielding all complaints; a task which could create an administrative burden and a resource drain on small incumbents.

33. We reaffirm and codify the policy that we enunciated in the *Advanced Services First Report and Order* to guide states in the resolution of interference disputes.³³ Specifically, where a LEC demonstrates that a deployed technology is significantly degrading the performance of other advanced services or traditional voice band services, "the carrier deploying the technology shall discontinue deployment of that technology and migrate its customers to technologies that will not significantly degrade the performance of other such services. We now add an exception to this rule that we believe will further safeguard competitive neutrality and deployment of new technologies. Specifically, where the only interfered-with service itself is a known disturber, as designated by this Commission, that service shall not prevail against the newly developed technology. This exception prevents the undue protection of noisier technologies that are at or near the end of their useful life cycle, at the same time preventing the undue preclusion of new, more efficient and spectrally compatible technologies. This rule benefits incumbents, including small incumbents, by protecting the deployment of innovative services. The deployment of known disturbers is not at risk of being displaced by new technologies that do not meet the presumption of acceptability for deployment.

34. Such an approach would designate automatic winners in the event of interference disputes. Chief among these concerns is that the guarded services approach is blatantly discriminatory, protecting technologies favored by competitive LECs. We emphasize that any

³³ For this reason, we also reject the request that Sprint poses in comments on the *Advanced Services First Report and Order* and *FNPRM*, that we allow the incumbent LEC unilaterally to suspend service from the carrier causing interference, because this would be tantamount to allowing incumbent LECs to suspend all service deployment suspected of causing or contributing to degradation of other service. See Sprint Comments at 7. While the incumbent LEC experiencing service degradation searches to ascertain the proper culprit(s), several carriers may be forced to suspend deployment in question, and may lose customers or be forced to undergo costly remedial measures which may prove subsequently to have been unnecessary. Therefore, we reiterate that incumbent LECs must comply with the processes that we set out, rather than taking action against allegedly interfering competitive LEC data services.

criteria that favor incumbent LEC services in a manner that automatically trumps, without further consideration, innovative services offered by new entrants is neither consistent with section 706 of the 1996 Act nor with the Commission's goals as set out in the *Advanced Services First Report and Order*. The policies that we reiterate and adopt here as rules with respect to interference dispute resolution protect new technologies often deployed by small carriers against otherwise guarded technologies that tend to be deployed by incumbents who are generally larger than competitive carriers that do not favor the guarded services approach having carte blanche to be deployed after-the-fact and cause interference. These policies also provide guidance at the national level, in accordance with our finding in the *Advanced Services First Report and Order* that "uniform spectrum management procedures are essential to the success of advanced services deployment" where they are possible, precisely to avoid requiring competitive LECs to conform to different specifications in each state. These policies, therefore, benefit small carriers by making it administratively more efficient to deploy advanced services nationwide.

35. We conclude that only permissible forms of binder group management are the segregation of known disturbers and the use of interference protection techniques. We believe that the interference that known disturbers in particular are likely to cause in a multi-service environment renders it worthwhile for us to allow incumbent LECs to decide whether to segregate such disturbers as a further measure to protect against interference. This conclusion helps small incumbent LECs to the extent that they are likely to have some deployment of known disturbers (analog T1), because segregation is much less burdensome on small incumbents than forced replacement. This rule also helps small competitive carriers by prohibiting segregation of services in a discriminatory manner.

36. Numerous competitive LECs, which are often small businesses, continue to express concern that if we vest in incumbent LECs right to manage binder groups unfettered, we will provide ample opportunity for incumbent LECs to discriminate against introduction of new technologies and/or to institute binder configurations which significantly favor their own deployed technologies. We are persuaded that we must limit segregation practices to known disturbers, because only the interference risks of mixing known disturbers with other technologies outweigh the risks of anticompetitive segregation practices. Because we currently do not determine ADSL to be a known disturber, we find that SBC may not implement SFS, and we do order that SBC dismantle any currently existing SFS implementation. We further stress that carriers cannot use binder group management to preclude the deployment of new technologies that are otherwise presumed to be acceptable for deployment.

37. We find leaving disposition of known interfering technologies to the states preferable to establishing a national sunset period for known disturbers in this proceeding. We are concerned that a blanket sunset period may lead to unnecessary replacement of analog T1 or other otherwise known disturbers, which could lead further to unnecessary network disruption and could force carriers to undertake exorbitant replacement expenditures. In addition, as we acknowledged in the *Advanced Services First Report and Order and FNPRM*, carriers that have a substantial base of analog T1 in deployment, and in some areas it provides the only feasible high-speed transmission capability. We also recognize that transitioning customers to less interfering technologies may disrupt service for subscribers. This rule benefits incumbents, including small incumbents, by not imposing an automatic sunset period for known disturbers. Such a sunset

could be expensive and have unnecessary detrimental effects on small carriers. At the same time, states are better equipped than incumbent LECs to take an objective view of the disposition of known disturbers, because of the vested interest that incumbent LECs have in their own substantial base of known disturbers such as analog T1.

VI. Report to Congress

38. The Commission will send a copy of the *Third Report and Order*, including this *FRFA*, in a report to be sent to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996.³⁴ In addition, the Commission will send a copy of the *Third Report and Order*, including the *FRFA*, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the *Third Report and Order* and *FRFA* (or summaries thereof) will also be published in the Federal Register.³⁵

³⁴ See 5 U.S.C. § 801(a)(1)(A).

³⁵ See 5 U.S.C. § 604(b).

SEPARATE STATEMENT OF COMMISSIONER HAROLD FURCHTGOTT-ROTH

Re: Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147.

I concur in the Commission's decision to require incumbent local exchange carriers to unbundle the high frequency portion of local loops on which an incumbent carrier provides voice service. There are some customers, including some but not all small business and residential customers, who do not need the speed and capacity of the types of advanced services that are offered over a separate line, such as SDSL and HDSL services. These customers prefer the less costly alternative of an advanced services technology that can be provided over a single line, such as ADSL service. If a competitive data carrier must purchase a separate line to deploy advanced services to this segment of the advanced services market, it is placed at a significant disadvantage vis à vis the incumbent carrier, which can serve those customers more cost effectively by offering both voice and data services as a single-loop package. Consequently, I believe that requiring incumbent carriers to unbundle the high frequency portion of those loops on which the incumbent provides voice service is consistent with the requirements of sections 251(c)(3) and 251(d)(2).

At the same time, however, I believe that we should acknowledge the full consequences of our decision. Specifically, a spectrum unbundling requirement that is based on the needs of a narrow class of customers means that the network element will be available, without limit, to *all* classes of customers. Data carriers certainly do not need unbundled spectrum to provide service to *all* customers. Indeed, today they are offering profitable services to thousands of customers without this benefit. However, because of section 251(c)(3)'s nondiscrimination principles, I do not believe that the Commission can restrict a carrier's use of an unbundled element to services provided to a narrow class of customers. I would nevertheless have preferred a more candid assessment of the limited need for this new network element and a review of alternatives that might limit the availability of line sharing to those situations in which lack of access to unbundled spectrum actually impairs a competitor's ability to provide service.

I also believe that it is important to acknowledge the following inescapable predicament to which the Commission's new unbundling rules lead: Reducing the impairment of the ability of one category of competing carriers to provide a certain service (in this case, the data carriers) inevitably increases the impairment of a different class of carriers to provide a different service (here, the competing voice carriers). This outcome is not inconsistent with the statute, but it does put the Commission in the awkward position of favoring one class of telecommunications companies over another.

In addition, I wish to emphasize that I do not support the Commission's decision to address this question in an order separate from *Third Report & Order* that was released less

than two weeks ago. See Third Report & Order, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket 96-98 (rel. Nov. 5, 1999). I believe that it would have been more appropriate for the Commission to have implemented section 251's unbundling requirements in a single proceeding, so that incumbent and competing local exchange carriers are given clear guidelines regarding their obligations and rights under the 1996 Act. Given the Commission's long delay in releasing the *Third Report & Order* (which it adopted on September 15, 1999), I see no reason why these issues could not have been resolved simultaneously.

Finally, I dissent from the Commission's decision to reexamine whether line sharing should remain on the list of network elements only after three years have passed. I believe that this decision is inconsistent with section 11's requirement that, "in *every* even-numbered year," the Commission is required to "review *all* regulations issued under this Act in effect at the time of the review that apply to the operations or activities of any provider of telecommunications service" in order to determine whether those regulations continue to serve the public interest. 47 U.S.C. § 161(a) (emphasis added). The Commission has no authority to ignore this requirement, even if it thinks such review is unneeded.