

WIRELESS TELECOMMUNICATIONS IN LOCAL MARKETS: POLICIES FOR INCLUSION

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This paper is one of a series of NRRI analyses of issues in state telecommunications policy that derive from passage of the Telecommunications Act of 1996. The views and opinions expressed herein are those of the authors. They are not necessarily those of The National Regulatory Research Institute, the National Association of Regulatory Utility Commissioners (NARUC), or any NARUC member commissions.

EXECUTIVE SUMMARY

In the “telewars”¹ now being fought in the states and at the Federal Communications Commission (FCC), the weapons are logic and persuasion. Each player is certain to argue that “all players are equal” when it suits them and that “some players are more equal than other” when it would benefit employees, stockholders and their own view of public concerns.

Policy makers in this environment have the difficult task of making decisions that treat players alike or unlike as appropriate to meet ambitious, amorphous goals of the Telecommunications Act of 1996. Wireless telecommunications has been well nurtured by U.S. policy. The very success of this encouragement calls for assuring that as wireless telecommunications becomes a true alternative to wireline, wireless providers have appropriate rights and obligations.

Providers of wireless services will be powerful participants in building an intermeshed “network of networks” where all companies and technologies can compete fairly. Just like landline service through the public switched network, wireless offers voice and data communications, but with a valuable extra selling point—mobility. We are used to viewing cellular and other “commercial mobile radio services” (CMRS) as high-end services, but the trend is towards cheaper, mass market wireless. Furthermore, wireless and wireline services show signs of increasing complementarity both as business ventures and technologies.

Yet policy decisions on the regulation of wireless telecommunications have followed a different path than wireline. Section 332 of the Communications Act, passed in 1993, provides for regulatory parity within the wireless industry but distinguishes between wireless and wireline. Under section 332, states are prohibited from regulating entry, severely limited in the potential to regulate rate levels, and allowed to regulate for

¹ Thomas W. Bonnett, *Telewars in the States: Telecommunications Issues in the New Era of Competition* (Washington, D.C.: Council of Governors Policy Advisors, 1996).

purposes of universal service if use of wireless is widespread. Section 332 does permit states to regulate “other terms and conditions” of service. The Telecommunications Act, while explicitly preserving section 332, calls for similar rules for similarly situated providers, steps towards deregulation that are consistent and fair, and technological neutrality. The Act forbids state barriers to entry but permits state regulation for purposes such as universal service, service quality, and consumer welfare, as long as the state requirements are competitively neutral.

The FCC has thus far steered a careful path through somewhat overlapping statutory requirements, treating wireless providers similarly to wireline in major orders implementing the Telecommunications Act. The Commission classified CMRS as telecommunications carriers without the responsibilities of local exchange carriers (LECs). This ruling is helpful to wireless providers challenging incumbent LECs for customers, making wireless “more equal” in order to catch up. The 1996 interconnection ruling assures wireless providers will have the opportunity to interconnect with the landline network based on costs and technical efficiency, a prospect that the CMRS industry considered lacking in the past. The universal service decision gives equal treatment to wireless and other carriers, requiring wireless to help pay for programs and allowing them to provide service.

For wireless to be a full member of the network of networks means states must help assure that it is included in a transition towards full regulatory parity.

State regulators have been preoccupied with more urgent issues in implementation of the Telecommunications Act of 1996 than CMRS. The states do have a role, however. The Telecommunications Act gives the states critical responsibilities to open up markets while making sure social goals are met. For

wireless to be a full member of the network of networks means states must help assure that CMRS is included in a transition towards full regulatory parity.

Perhaps the most important thing a state might do to open doors for inclusion of wireless is to make sure there are no state barriers to CMRS competition. In fact, to

encourage competition, some states may wish to review statutes, rules, and procedures to assure that entry of CMRS providers and others is unhindered and, in fact, expedited. All states are likely to want to watch and assess competition to make sure that it is indeed developing and make appropriate adjustments if it is not. State systems to monitor competition should attend to CMRS as well as other providers, using federal information systems as much as possible.

The immediate concern of states as they foster competition is approval of interconnection agreements. CMRS providers have been somewhat later overall than other carriers in negotiating, so states can expect to renew many more wireless/landline agreements in the coming months. It is encouraging that CMRS providers are using the process provided under section 252 of the Act and appear to consider the results so far as fair. To improve the information on which CMRS/LEC conditions of interconnection are based, states may

Possible policy steps for states:

- *Make sure there are no state barriers to wireless competition*
- *Monitor the development of competition, including wireless*
- *Encourage the FCC to include wireless providers in competitive obligations (such as dialing parity) as quickly as reasonable*
- *Encourage and participate in traffic studies and modeling*
- *Include wireless providers in universal service programs*
- *Assure consumer protection*
- *Monitor and, where appropriate, participate in cases challenging state authority under section 253.*

want to conduct traffic studies and modeling efforts to more accurately estimate the intrastate/interstate origination and termination of calls. For the FCC, one thing to begin to consider is a decision rule for when a telecommunications carrier takes on the responsibility of a LEC. It would not be much of a stretch to consider CMRS as LECs now, but to reduce hurdles to the ability to compete, the current designation is adequate. As the network of networks develops, special protections for some telecommunications carriers will be unnecessary and CMRS providers as well as others can be called on to meet such obligations as dialing parity and nondiscriminatory access.

Universal service policies are squarely in the states' bailiwicks. As the states do their share to meet the goals of the Telecommunications Act for access to basic, affordable telephone service for every citizen, they are likely to want CMRS participation. This includes affirming the expectation that CMRS providers contribute to universal service and encouraging them to become ETCs. Definition of universal service areas that are feasible for wireless providers would be one part of such an effort. Particularly for rural areas, CMRS can help to solve sticky problems of bringing in relatively low-cost competitors to the incumbent LECs. Policies for inclusion of wireless providers in universal service programs is fully appropriate: it is argued in this report that CMRS even now provides essential service to a substantial portion of the U.S. population.

In the network of networks, CMRS providers, like others, will be called on to meet minimum levels of consumer service. Federal licenses do not require wireless providers to meet specific service quality standards except to build out their networks in a specified period of time. If they have not already done so, states might begin to investigate standards applicable to CMRS for availability, reliability, and consumer information, as well as requirements for handling complaints, such as consumer hotlines. NARUC might consider serving as a forum on expectations of consumer service from CMRS, in cooperation with the industry.

As CMRS and accompanying government policies evolve, the FCC and the states will need to work together to assure that all the goals of the Telecommunications Act are met for this important means of bringing new communications opportunities to customers. This will include developing consistent state and federal policy guidelines on intrastate LEC/CMRS interconnection. The FCC's efforts to reconcile section 332 with the Telecommunications Act of 1996 are commendable. It is to be hoped that the FCC will continue to ordinarily rely on the latter to resolve conflicts. Finally, the states and NARUC should monitor and, where appropriate, participate in cases before the FCC challenging state authority under section 253: reasonable state actions in support of consumer interests are not barriers to entry.

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CHAPTER 1

THE IMPORTANCE OF WIRELESS IN THE EVOLVING TELECOMMUNICATIONS INDUSTRY

In the “telewars”² now being fought in the states and at the FCC, the weapons are logic and persuasion. Interexchange carriers (IXCs), competitive local exchange carriers (LECs), incumbent LECs, and the rest of the combatants can be guaranteed to argue that “all players are equal” and should be treated the same when it suits them and that “some players are more equal than other” and should get a break when it would benefit employees, stockholders and their own view of public concerns.

Policy makers in this environment have the difficult task of making decisions that treat players alike or unlike as appropriate to meet ambitious, amorphous goals of the Telecommunications Act. Wireless

The very success of policy on wireless telecommunications calls for a look at the appropriate rights and obligations of wireless in the network of networks.

telecommunications has been well nurtured by U.S. policy that encouraged its development. The very success of this policy calls for a look at approaches to make sure that as wireless telecommunications becomes a true alternative to wireline, wireless providers have appropriate rights and obligations.

Providers of wireless services will be powerful participants in building an intermeshed “network of networks” where all companies and technologies can compete fairly.³ Yet policy decisions on the regulation of wireless telecommunications have

² Thomas W. Bonnett, *Telewars in the States: Telecommunications Issues in the New Era of Competition* (Washington, D.C.: Council of Governors Policy Advisors, 1996).

³ Phyllis W. Bernt, *Regulatory Implications of Alternative Network Models for the Provision of Telecommunications Services* (Columbus, OH: NRRI, 1994).

followed a different path than wireline regulation. State regulators have been preoccupied with more urgent issues in implementation of the Telecommunications Act of 1996 than cellular, specialized mobile radio (SMR), paging, personal communications services (PCS), and other services, which taken together are called commercial mobile radio services (CMRS).⁴ The states do have a role to play in CMRS policy, however. The Telecommunications Act gives the states critical responsibilities to open up markets while making sure social goals are met. For wireless to be a full member of the network of networks means states must help assure that CMRS is included in a transition towards full regulatory parity. It is not too soon to investigate this complex policy area and how policy on wireless alternatives to the landline network can continue to be designed to benefit customers.

The Telecommunications Act of 1996 envisions many types of providers, with no one type dominating because of institutional imperfections or economic bottlenecks.

The Telecommunications Act fosters inclusive policies overall but preserves some statutory distinctions for wireless.

Treatment of cable and telephone companies is redesigned to encourage them to compete on each other's turf. Long distance providers are allowed into local service and Bell operating companies (BOCs) into long distance.

Ultimately the inclusive policies of the new statutory framework should prevent any one type of provider from dominating. For CMRS, however, the Telecommunications Act preserves some distinctions, at least for the time being. Over the past few years,

⁴ "Mobile service" is defined as "radio communication service carried on between mobile stations or receivers and land stations, and by mobile stations communicating among themselves" 47 U.S.C. § 153; commercial mobile service, or commercial mobile radio service is "any mobile service....that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public" (47 U.S.C. § 332(d)(1) and 47 C.F.R. § 20.3). This definition includes cellular service, personal communications services (both broadband and narrowband), paging, air-ground services, specialized mobile radio services, and other services. In this paper, "CMRS" and "wireless" are used interchangeably, although this is not perfectly precise. References to PCS are to the broadband form.

regulatory oversight of CMRS has stemmed from section 332 of the Communications Act as well as from the Telecommunications Act, and been conducted primarily by the FCC rather than the states.

The FCC has already made many policy decisions on how to regulate CMRS. The Commission proposed rules on CMRS interconnection with LECs in 1995.⁵ The final rules became part of the Commission's comprehensive interconnection order issued in August 1996. The new rules rely on provisions of the Telecommunications Act rather than section 332, although the FCC said section 332 remains a basis for jurisdiction. The FCC left for later any more precise definition of the extent of its jurisdiction.

The FCC May 8 of this year issued a broad order on universal service issues stemming from implementation of the Telecommunications Act. The order opens the door to CMRS participation in both funding and providing universal service.⁶

Expected soon is a court decision on CMRS issues. The National Association of Regulatory Commissioners (NARUC), some states, and some BOCs appealed the pricing and costing provisions in the FCC's 1996 interconnection order. The 8th Circuit Court of Appeals granted a partial stay. On October 18, 1996, AirTouch asked the court to modify the stay order to validate the FCC's jurisdiction over intrastate wireless service under section 332. The court granted the modification without ruling on the applicability of section 332. The court's final decision is expected by the summer of 1997.

Each individual decision on CMRS is connected to many others, and it is an opportune time to take a broader look at where CMRS policy is headed. The state role should be examined with an eye towards the efficient and effective implementation of

⁵ FCC, *Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket No. 95-185, Notice of Proposed Rulemaking, December 15, 1995, ¶¶ 108-110.

⁶ FCC, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, May 8, 1996. (*Universal Service*).

This paper discusses some of the key issues raised in deciding the appropriate inclusive policies for common carriers providing wireless service.

law and policy at the appropriate level of government. The states for the most part never did regulate cellular companies directly, although NARUC has adopted a number of resolutions on the state role in developing pro-

competitive, pro-consumer policies for CMRS services. This paper discusses some of the key issues raised in deciding the appropriate inclusive policies for common carriers providing wireless service. The intent is to sketch out the current status of regulation of wireless communications in order to identify major areas of general consistency or inconsistency and potential policy questions as they emerge from federal law and recent federal and state rulings. We begin with background on recent growth in wireless subscribership and convergence in function of wireless and wireline technologies.

Growth of the Wireless Industry

Just like landline service through the public switched network, wireless provides voice and data communications, but with a valuable extra selling point—mobility. Cellular service and other CMRS are viewed today as high-end services, but the trend is towards cheaper, mass market wireless.

As of July 1996, the wireless industry had 38.2 million subscribers, 14.5 percent of the U.S. population.⁷ This represents an eleven-hundred fold growth over 10 years. Estimates of the number of Americans who will be using mobile telephone services

⁷ Wireless industry subscriber and average bill data gathered from Cellular Telephone Industry Association, "Wireless Growth Sets New Annual Records: 10 Million New Customers, Over \$20 Billion in Revenues, Monthly Bills Fall Below \$50," press release, 19 September 1996, Washington, D.C.

range as high as 87 million users of combined cellular, personal communications services (PCS), and SMR services by 2004.⁸

Much of the growth is expected to come from personal communications services, which are just beginning to be rolled out. One industry analyst predicted that as many as 60 million

Wireless service grew eleven-hundred fold over the 10 years between 1986 and 1996.

American households will use PCS within 10 years of full availability (although it is not clear when there will be "full availability").⁹ PCS provides wireless service at different frequencies from cellular through smaller, lighter handsets and perhaps lower prices. PCS uses digital technology that allows customers clearer transmission and greater privacy than analog.

At the same time, wireless prices are declining and contributing to greater subscribership. As of June 1996, the average monthly bill was \$48.84. This represents a \$25.72 (34.5 percent) monthly decline from 1991 levels. While still far higher than wireline bills for basic service, the potential exists for wireless to become competitive with wireline services on price.

Many companies providing wireless service today are sizable organizations. AirTouch, for example, is a worldwide cellular and broadband PCS provider with over three million customers, licensed to serve approximately 52 million people with cellular and broadband PCS, and gross revenues of \$1.6 billion in 1995.¹⁰

⁸ FCC En Banc Meeting on PCS Issues, April 11, 1994, 1-00.

⁹ Barry E. Goodstadt, "Personal Communications Service in the United States: A Survey of User Interests," *Spectrum* (Burlington, MA: Decision Resources, Inc., July 17, 1991): 27-2.

¹⁰ AirTouch Communications, Inc., Securities and Exchange Commission Form 10-K (1995), San Francisco, CA, 1996.

Convergence of Wireless and Wireline Technologies

Wireless and wireline services show signs of increasing complementarity both as business ventures and technologies. In July 1996, the FCC began a comprehensive

Wireless and wireline services show signs of increasing complementarity both as business ventures and technologies.

review of structural and nonstructural safeguards for LEC provision of CMRS, proposing to eliminate a requirement that BOCs provide wireless service through structurally separate corporations.¹¹

Technologically, what was mobile is becoming substitutable for what was fixed service and vice versa, as recognized in another recent FCC proceeding. The FCC sought comment in 1996 on proposals for expanding permitted offerings of fixed wireless service by CMRS providers, including comment on regulatory treatment for such services under section 332.¹² The FCC found strong support for allowing the provision of fixed wireless services by CMRS licensees and concluded that licensees should have maximum flexibility in the use of spectrum so that they can offer all types of fixed, mobile, and hybrid services.¹³ This would allow, for example, customers to buy a service allowing use of one portable telephone handset at home with a base station, in the automobile, on the street and at the office, a configuration that is among the many experimental applications of cellular and PCS spectrum and technologies.

¹¹ FCC, *Amendment of the Commission's Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services*, WT Docket No. 96-162, Notice of Proposed Rulemaking, July 25, 1996.

¹² FCC, *Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, First Report and Order and Further Notice of Proposed Rule Making, August 1, 1996.

¹³ *Ibid.*, ¶ 1.

In reaching its decision, the FCC noted:

In the PCS context, for example, we have consistently stated that we envisioned PCS providers offering a broad array of services, including services that could potentially extend, replace and compete with wireline local exchange service. These services, including 'wireless local loop' may be delivered using a system architecture that is mobile or fixed or that combines mobile and fixed components.¹⁴

Commenters in the docket on flexible service offerings opposed limiting the definition of permissible fixed service to wireless local loop. According to the FCC, the commenters suggested that such limitations would inhibit the development and deployment of technology, make it difficult for wireless providers to meet consumer demand, and create unnecessary confusion.¹⁵ A provider of mobile service may also sell fixed service and vice versa. The final rule permits all CMRS providers to engage in any form of service (other than broadcast) to fixed and/or mobile locations on a co-primary basis.¹⁶

¹⁴ Ibid., ¶ 6.

¹⁵ Ibid., ¶ 12.

¹⁶ Reid and Priest, "FCC Increases Competitive Choices: Authorizes Wireless Systems To Serve Fixed Stations," *Utility Telecom Advisor* (July 1996): 4-5. A co-primary use of a channel has equal rights with the primary use, in this case a traditional CMRS offering, to protect against interference. A secondary use must accept interference or negotiate an arrangement with the primary user. (Jeffrey A. Steinberg, Senior Attorney, Wireless Telecommunications Bureau, FCC. Note received May 19, 1997.)

A Brief Preview

In the next chapter we will turn to a review of current law and policy and discussion of their implications for competition, interconnection, and universal service.

The FCC has thus far steered a careful path through somewhat overlapping statutory requirements.

The Telecommunications Act requires similar rules for similarly situated providers, steps towards deregulation that are consistent and fair, and technological neutrality (meaning that distinctions are not made based on the types of hardware or software that underly services).

The FCC has thus far steered a careful path through somewhat overlapping statutory requirements. The Commission classified CMRS as telecommunications carriers and not LECs. Although CMRS providers are arguably LECs under the Act, this ruling is helpful to CMRS in challenging incumbent LECs for customers. The 1996 interconnection ruling assures CMRS providers will have the opportunity to interconnect with the landline network based on costs and technical efficiency, a prospect that the CMRS industry considered lacking in the past. The universal service decision requires wireless carriers to help pay for universal service programs and appears to allow them to be designated as telecommunications carriers eligible to receive federal funding.

Chapter 2 discusses the preclusion of regulation of CMRS entry, a policy supported by the states for wireless and other providers. The states actively supported elimination of barriers to entry across the board in the legislative effort that resulted in passage of the

The states have a strong role to play in review, approval and sometimes negotiation of interconnection agreements, a process that seems to be proceeding smoothly.

Telecommunications Act. Direct regulation of rates is also prohibited, except under unusual conditions that are not likely to arise in the near future, and, with luck, never,

because competition is expected to take the place of rate regulation. The states have a strong role to play in review, approval and sometimes negotiation of interconnection agreements, a process that seems to be proceeding smoothly for CMRS. Recently negotiated rates for wireless interconnection are substantially lower than previously agreed-to rates. States are just becoming acquainted with the new FCC universal service order and will no doubt be considering how wireless fits into the picture for their own jurisdictions.

The last chapter identifies and discusses particularly problematic policy issues for state regulators that result from the interlocking goals and action mandates of the Communications Act as a whole. Universal service is one area where policies flowing from the Telecommunications Act

need further examination. Wireless provides a close equivalent to basic wireline service now and is more and more capable of being a full participant in universal service programs. Applicable statutory provisions give states authority to support wireless as an alternative to

States are likely to want to consider how to include wireless providers as eligible telecommunications carriers where they offer low-cost alternatives. This may be especially important for rural areas. Quality of service is another area where state oversight of wireless providers may be needed.

the landline network for basic service. States are likely to want to consider how to bring wireless providers in as eligible telecommunications carriers (ETCs) where they offer low-cost alternatives. This may be especially important for rural areas where wireless can do the job of incumbents, bringing the benefits of competition where it would otherwise be delayed.

Quality of service is another area where state oversight of wireless providers may be needed. Where wireless offers basic telephone service, we suggest subjecting it to the same sorts of requirements for availability, reliability, privacy, and other aspects of quality as wireline.

Finally, we can expect that conflict will emerge on the applicability of sections of the Communications Act having to do with preemption of state actions. Cases are already being brought to the FCC under section 253 of the Act. State authority will be better spelled out as these cases are decided.

CHAPTER 2

THE EXISTING REGULATORY FRAMEWORK

To define the current policy framework for regulating cellular, broadband PCS and SMR common carrier service, we must look at the provisions of the Telecommunications Act of 1996, the earlier amendments to the Communications Act contained in the Budget Reconciliation Act of 1993 (section 332 of the Communications Act), and recent FCC decisions.¹⁷

Table 2-1 shows key legislative provisions and FCC decisions

affecting wireless telecommunications providers as of June 1997. The issues identified in the table arise from policy goals of developing competition and maintaining and improving universal service. Competition issues include categorization of providers, barriers to entry, pricing of retail services, BOC entry into in-region long distance, interconnection duties, and interconnection agreements. Universal service issues include funding, provision of basic service, service to schools and libraries, and service to rural areas. The table will serve as a basis of discussion for much of this chapter. Several important problems will not be addressed here. Perhaps the thorniest of these is rights-of-way, which more often concerns local zoning controversies rather than state government authority.¹⁸

To define the current policy framework for regulating wireless, we must look at the provisions of the Telecommunications Act of 1996, section 332 of the Communications Act, and recent FCC decisions.

¹⁷ The Telecommunications Act will be referred to herein as "the Act"; the 1993 Amendments as "Section 332" or "the Budget Act"; and the Communications Act of 1934 as the "Communications Act."

¹⁸ See Edwin Rosenberg and Stella Rubia, *Rights-of-Way and Other Customer-Access Facilities: Issues, Policies, and Options for Regulators* (Columbus, OH: NRRI, 1996).

TABLE 2-1
KEY LEGISLATIVE PROVISIONS AND FCC DECISIONS AFFECTING WIRELESS TELECOMMUNICATIONS PROVIDERS
(As of June 1997)

	Telecommunications Act of 1996	Section 332 of Communications Act	FCC Decisions
Categorization of providers	<ul style="list-style-type: none"> • Defines local exchange carriers as carriers providing telephone exchange service or exchange access, not including CMRS providers except to the extent decided by the FCC. (47 U.S.C. § 3(a)(44)) • Defines "telecommunications carrier" to mean any provider of telecommunications services, with the FCC to decide whether fixed or mobile satellite services are treated as common carriage. (47 U.S.C. § 3(a)(49)) • Defines "telephone exchange service" as service within a telephone exchange or comparable service. (47 U.S.C. § 3(a)(47)) 	<ul style="list-style-type: none"> • Classifies CMRS providers as, in general, common carriers. (47 U.S.C. § 332(c)(1)) • Defines CMRS as any mobile service provided for profit and that makes interconnected service available to the public. (<i>Section 332 Order</i>, ¶ 11) 	<ul style="list-style-type: none"> • Classifies CMRS providers as "telecommunications carriers." (<i>Interconnection Order</i>, ¶ 33) • Concludes that many CMRS providers provide telephone exchange service and exchange access. (<i>Interconnection Order</i>, ¶ 1012) • Allows CMRS to offer fixed wireless services, deferring issue of jurisdiction. (<i>Flexible Service Order</i>, ¶ 2)
Barriers to entry	<ul style="list-style-type: none"> • Forbids states from prohibiting or effectively prohibiting any entity from providing interstate or intrastate telecommunications service. (47 U.S.C. § 253(a)) • Affirms ability of states to impose nondiscriminatory requirements for universal service, public safety and welfare, quality of service and consumer rights. (47 U.S.C. § 253(b)) • Permits federal preemption of state requirements that violate sec. 253(a) or (b). (47 U.S.C. § 253(d)) • States that nothing in section 253 affects the application of sec. 332(c)(3) to CMRS. (47 U.S.C. § 253(e)) 	<ul style="list-style-type: none"> • Preempts state regulation of CMRS entry. (47 U.S.C. § 332(c)(3)) • Does not prohibit states from regulating other terms and conditions of CMRS. (47 U.S.C. § 332(c)(3)) 	<ul style="list-style-type: none"> • The FCC will continue to review state and local requirements on CMRS providers that constitute barriers to entry (for example, certificates of public convenience and necessity). (<i>Interconnection Order</i>, ¶¶ 1026)
Pricing of retail services	<ul style="list-style-type: none"> • Preserves section 152(b) of the Communications Act, which gives states jurisdiction over intrastate rates, except as provided in section 332. (<i>Interconnection NPRM</i>, ¶ 40) 	<ul style="list-style-type: none"> • Preempts state regulation of rates charged by CMRS providers. (47 U.S.C. § 332(c)(3)) • Allows the FCC to grant states the authority to regulate the rates for CMRS if market conditions fail to protect subscribers or market conditions fail to protect subscribers and CMRS is a replacement for land line telephone exchange service for a substantial portion of the telephone land line exchange service within the state. (47 U.S.C. § 332(c)(3)) 	<ul style="list-style-type: none"> • States may require CMRS providers to file terms and conditions for intrastate services and states may petition the FCC to regulate intrastate CMRS rates. (<i>Section 332 Order</i>, ¶ 179) • FCC has so far denied all state petitions for authority to regulate rates.

TABLE 2-1 (Continued)
KEY LEGISLATIVE PROVISIONS AND FCC DECISIONS AFFECTING WIRELESS TELECOMMUNICATIONS PROVIDERS
(As of June 1997)

	Telecommunications Act of 1996	Section 332 of Communications Act	FCC Decisions
Bell operating company entry into interLATA services	<ul style="list-style-type: none"> Requires the presence of a competitor providing telephone exchange service using its own facilities before a Bell operating company can provide in-region interLATA services. (47 U.S.C. § 271(c)(1)(A)) Exempts CMRS services from consideration as telephone exchange services for the purposes of section 271. (47 U.S.C. § 271(c)(1)(A)) 	Not addressed.	Not addressed.
Interconnection duties	<ul style="list-style-type: none"> Imposes duties on telecommunications carriers to interconnect with other telecommunications carriers and not to install features, functions or capabilities that do not comply with requirements for interconnectivity and access by people with disabilities. (47 U.S.C. § 251(a)) Imposes additional requirements on local exchange carriers: <ul style="list-style-type: none"> Prohibits LECs from forbidding resale Requires them to provide number portability and dialing parity Requires them to permit nondiscriminatory access, afford access to rights of way, and establish reciprocal compensation agreements. (47 U.S.C. § 251(b)) 	<ul style="list-style-type: none"> Requires the FCC to order a common carrier to establish physical connections pursuant to section 201, upon reasonable request of a CMRS provider. (47 U.S.C. § 332(c)(1)(B)) States that except to the extent that the FCC is required to respond to a CMRS request for physical interconnection, there is no limitation or expansion of the FCC's authority to order interconnection. (47 U.S.C. § 332(c)(1)(B)) 	<ul style="list-style-type: none"> Requires LECs to provide interconnection to CMRS providers which request it. (<i>Interconnection Order</i>, ¶¶ 1012 and 1014) Opts to proceed under sections 251 and 252, acknowledging that sections 332 and 201 are also a basis for jurisdiction over LEC-CMRS interconnection, but declining to define the precise extent of that jurisdiction for the time being. (<i>Interconnection Order</i>, ¶ 1022) Preserves the option to revisit the decision to apply sections 251 and 252 to LEC-CMRS interconnection. (<i>Interconnection Order</i>, ¶ 1024)
Interconnection agreements	<ul style="list-style-type: none"> Allows an incumbent local exchange carrier or any other party to negotiations on an interconnection agreement to petition a state commission to arbitrate any open issues (47 U.S.C. § 252(b)(1)) and the state commission to resolve them. (47 U.S.C. § 252(b)(4)(C)) Requires a state commission to ensure that resolution of issues being arbitrated meets the requirements of section 251, including FCC regulations. (47 U.S.C. § 252(c)) Requires that state determinations of just and reasonable interconnection and network element charges must be based on cost and nondiscriminatory, and may include a reasonable profit. (47 U.S.C. § 252(d)(1)) Requires that terms and conditions approved by the state commission for transport and termination of traffic provide for the mutual and reciprocal recovery by each carrier of the costs arising from calls that originate on the facilities of the other carrier. (47 U.S.C. § 252(d)(2)) 	Not addressed .	Excepts traffic to or from a CMRS network from state authority to determine what geographic areas should be considered "local areas" for purposes of applying reciprocal compensation obligations under section 251(b)(5). (<i>Interconnection Order</i> , ¶ 1034)

TABLE 2-1 (Continued)
KEY LEGISLATIVE PROVISIONS AND FCC DECISIONS AFFECTING WIRELESS TELECOMMUNICATIONS PROVIDERS
(As of June 1997)

	Telecommunications Act of 1996	Section 332 of Communications Act	FCC Decisions
Interconnection rates: Transport and termination charges	Requires LECs to establish reciprocal compensation arrangements for the transport and termination of telecommunications. (47 U.S.C. § 251(b)(5))	<ul style="list-style-type: none"> FCC does not preempt state regulation of LEC intrastate interconnection rates applicable to cellular carriers. (<i>Section 332 Order</i>, ¶ 228) FCC requires LECs to establish reasonable charges for interstate interconnection to CMRS licensees. (<i>Section 332 Order</i>, ¶ 233) 	<ul style="list-style-type: none"> FCC says it intends to enforce section 332(c)(3) where state regulation of interconnection rates might constitute regulation of CMRS entry. (<i>Interconnection Order</i>, ¶ 1025) Requires LECs to establish reciprocal compensation arrangements for the transport and termination of telecommunications traffic with all telecommunications carriers, including CMRS carriers. (<i>Interconnection Order</i>, ¶ 1040) Prohibits a LEC from charging a CMRS provider for terminating traffic originating at the LEC. (<i>Interconnection Order</i>, ¶ 1041) Requires CMRS providers not to pay interstate access charges for traffic that currently is not subject to such charges and assesses such charges for traffic that is currently subject to interstate access charges. (<i>Interconnection Order</i>, ¶1042)
Universal service funding	<ul style="list-style-type: none"> Requires every telecommunications carrier that provides interstate telecommunications service to contribute to universal service mechanisms. (47 U.S.C. § 254(d)) Allows states to adopt regulations "not inconsistent with" FCC rules on universal service. (47 U.S.C. § 254(f)) Requires every telecommunications carrier that provides intrastate telecommunications service to contribute to universal service in the manner determined by each state. (47 U.S.C. § 254(f)) Affirms the authority of states to impose requirements for universal service, public safety and welfare, quality of service and consumer rights (47 U.S.C. § 253(b)), except that this does not affect the application of sec. 332(c)(3) to CMRS. (47 U.S.C. § 253(e)) 	Does not exempt CMRS (where CMRS services are a substitute for local exchange service for a substantial portion of the communications within the state) from requirements imposed by states on all telecommunications providers that are necessary to ensure the universal availability of telecommunications service at affordable rates. (47 U.S.C. § 332(c)(3))	<ul style="list-style-type: none"> Designates common carriers, including CMRS providers, as mandatory contributors to interstate universal service support. Further, permits states to impose nondiscriminatory intrastate universal service support obligations on CMRS providers. (<i>Universal Service</i>, ¶¶ 786 and 791). Designates initial services to be included in universal service. (<i>Universal Service</i>, ¶¶ 56-107).

TABLE 2-1 (Continued)
KEY LEGISLATIVE PROVISIONS AND FCC DECISIONS AFFECTING WIRELESS TELECOMMUNICATIONS PROVIDERS
(As of June 1997)

	Telecommunications Act of 1996	Section 332 of Communications Act	FCC Decisions
Universal service provision	<ul style="list-style-type: none"> • Upon request, state commissions may designate more than one common carrier in rural areas and must designate more than one common carrier in other areas as a telecommunications carrier eligible to receive universal service support. (47 U.S.C. § 214(e)(2)) • Requires state commissions to designate a universal service provider for intrastate services in all areas where no carrier will provide service voluntarily. (47 U.S.C. § 214(e)(3)) • Defines universal service as an evolving level of telecommunications services <ul style="list-style-type: none"> - essential to education, public health or public safety; - subscribed to by a substantial majority of residential customers - being deployed by telecommunications carriers - consistent with the public interest, convenience and necessity. (47 U.S.C. § 254(c)) • Allows a common carrier designated as an eligible telecommunications carrier to receive federal universal service fund support and requires it to <ul style="list-style-type: none"> - offer the services supported by the federal universal service fund mechanism through its own facilities or a combination of its own facilities and resale - advertise the availability of those services. (47 U.S.C. § 214(e)(1)) 	See "universal service funding."	<ul style="list-style-type: none"> • Any telecommunications carrier using any technology, including wireless, that meets statutory requirements is eligible to receive universal service fund support. (<i>Universal Service</i>, ¶ 145). • Requests information from state commissions regarding unserved areas. (<i>Universal Service</i>, ¶ 196).
Service to schools and libraries	Telecommunications carriers must provide services defined under universal service to educational institutions at discounted rates. (47 U.S.C. § 254(h)(1)(B))	Not addressed.	CMRS providers participate.
Service to rural health care providers	On receipt of a bona fide request, telecommunications carriers must provide telecommunications services for health services in rural areas. (47 U.S.C. § 254(h)(1))	Not addressed.	CMRS providers participate.

Sources:

- 47 U.S.C. §§ 3-332.
- FCC, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, May 8, 1997. (*Universal Service*).
- FCC, *Implementation of Sections 3(n) and 332 of the Communications Act*, FCC 94-31, Second Report and Order, March 7, 1994. (*Section 332 Order*).
- FCC, *Implementation of the Local Competition Provisions in the Telecommunications Act and Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, FCC 96-325, First Report and Order, April 8, 1996. (*Interconnection Order*).
- FCC, *Local Competition Provisions in the Telecommunications Act*, CC Docket No. 96-98, April 19, 1996. (*Interconnection NPRM*).
- FCC, *Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, WT Docket No. 96-6, First Report and Order, August 1, 1996. (*Flexible Service Order*).

Another issue which we will bypass is the health effects of radio frequency emissions on the public and any accompanying regulations. In a recent letter, the FCC's Wireless Telecommunications Bureau told the Cellular Telecommunications Industry Association (CTIA) that a state could study the effects of radio frequency emissions on health, but could not impose regulations based on such a study's findings.¹⁹ Several other policy areas will only be touched on, the better to clarify the broad framework of CMRS regulation.

Telecommunications Act of 1996

The Telecommunications Act of 1996 is aimed at removing artificial regulatory barriers to competition in the multi-faceted telecommunications industry. Through

Through competition and reduced regulation, the Telecommunications Act seeks lower prices, higher quality service, and rapid deployment of new telecommunications equipment.

competition and reduced regulation, the Telecommunications Act seeks lower prices, higher quality service, and rapid deployment of new telecommunications equipment. To achieve these goals, a pro-competitive policy requires:

- Technological neutrality
- Similar obligations for similarly situated providers
- Consistent deregulatory treatment.

The Act opens up markets to competition while preserving and even enhancing commitment to equity goals, especially universal service. CMRS providers are obliged

¹⁹ Letter from Michele C. Farquhar, Chief, FCC Wireless Telecommunications Bureau to Thomas E. Wheeler, President and CEO, Cellular Telecommunications Industry Association, January 17, 1997.

under the Act to help pay for universal service, and the door is open for them to provide universal service as well. Like other carriers, CMRS providers are free to enter telecommunications markets and may negotiate interconnection rates and appeal to states to arbitrate those agreements. Unlike other telecommunications carriers, the presence of facilities-based cellular providers does not help a regional BOC gain permission from the FCC to enter in-state, interLATA markets.

1993 Budget Reconciliation Act

The Telecommunications Act does not obviate the statutory language on CMRS contained in the Budget Act but is peppered with references to Section 332 and other exceptions for CMRS. Section 332 of the

Budget Reconciliation Act of 1993 amended the Communications Act of 1934 to prohibit state regulation of CMRS entry and rates.

“Other terms and conditions” are excepted.²⁰ The House Budget Committee, in its report accompanying the Budget Act, gave what it said was an illustrative list of

Section 332 of the Budget Reconciliation Act of 1993 amended the Communications Act of 1934 to prohibit state regulation of CMRS entry and rates. “Other terms and conditions” are excepted.

“terms and conditions,” remarking that this was not meant to preclude other concerns that might be included in that category. The items listed by the Committee are: customer billing information and practices, billing disputes, other consumer protection matters, facilities siting,²¹ transfers of control, the bundling of services and equipment, the requirement that carriers make capacity available on a wholesale basis, or “such

²⁰ “No state or local government shall have any authority to regulate the entry of or the rates charged by any commercial mobile service or any private mobile service....This paragraph shall not prohibit a state from regulating the other terms and conditions of commercial mobile services.” 47 U.S.C. § 332(c)(1)(3). Appendix A contains the complete text of section 332.

²¹ Also governed by section 332(c)(7).

other matters as fall within a state's lawful authority."²² Other provisions of the 1993 amendments allow states to impose universal service requirements on mobile providers and regulate CMRS rates directly under certain conditions.

FCC Proceedings to Implement the Telecommunications Act of 1996

The FCC has steered a path aimed at reconciling the various provisions of the Communications Act that affect wireless, a tricky proposition indeed, and one that appears well-reasoned and successful thus far.

Decisions in the Commission's August 8, 1996, interconnection order that directly concern CMRS providers include their classification and requirements for

The FCC has steered a path aimed at reconciling the various provisions of the Communications Act that affect wireless, a tricky proposition indeed, and the effort appears quite successful thus far.

reciprocal compensation.²³ The FCC did not decide on the applicability of section 332 to interconnection, but reserved the right to apply that section if the interconnection portions of the Telecommunications Act of 1996 are not sufficient to ensure nondiscriminatory interconnection by CMRS providers.

In May 1997, the FCC issued rules to fulfill universal service requirements of the Telecommunications Act. Closely following the recommendations of a Federal-State Joint Board, the FCC sought a framework that "satisfies all of the statutory requirements and puts in place a universal service support system that will be sustainable in an

²² House Committee on the Budget, *Report of the Committee on the Budget to Accompany H.R. 2264, Omnibus Budget Reconciliation Act of 1993*, 103 Cong., 1st sess., H. Rept. 103-111, 261.

²³ FCC, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket 96-98, First Report and Order, April 8, 1996. (*Interconnection Order*).

increasingly competitive marketplace."²⁴ The principles guiding the Joint Board and FCC, as set forth in the statute, are quality and rates, access to advanced services, access in rural and high-cost areas, equitable and nondiscriminatory contributions, specific and predictable support mechanisms and access to advanced telecommunications services for schools, health care, and libraries.²⁵ In addition, and consistent with the Joint Board's recommendation, the FCC established competitively neutral universal service support mechanisms and rules as an additional principal guiding universal service policies.²⁶ The FCC rules include CMRS providers among contributors to both interstate and intrastate universal service funds and among potential providers of universal service.

Classification of Providers

The Budget Act regularized the classification of providers within the wireless industry to assure that providers of similar services would be treated the same. The category of CMRS (as opposed to private mobile radio services) was created and defined by the FCC to include any mobile service that is provided for profit and makes interconnected service publicly available.²⁷ The 1993 Amendments classified CMRS providers as common carriers, a designation which applies to companies that serve the general public and cannot ordinarily refuse a customer.

²⁴ FCC, *Universal Service*, ¶ 2.

²⁵ 47 U.S.C. § 254(b)(7).

²⁶ FCC, *Universal Service*, ¶¶ 46-48.

²⁷ FCC, *Implementation of Sections 3(n) and 332 of the Communications Act*, GN Docket No. 93-253, Second Report and Order, March 7, 1994, ¶ 11.

Although categorization within the wireless industry was regularized in the 1993 legislation, distinctions (perhaps somewhat artificial) have been maintained between

The 1996 Act calls for categorization of providers of telecommunications services as telecommunications carriers, local exchange carriers (LECs), or incumbent LECs. The FCC categorizes CMRS as telecommunications carriers.

wireline and wireless services. The 1996 Act calls for categorization of providers of telecommunications services as telecommunications carriers, local exchange carriers (LECs), or incumbent LECs. LECs have the responsibilities of telecommunications carriers, plus additional ones. Incumbent LECs are

assigned obligations of telecommunications carriers and LECs, plus additional requirements (see figure 2-1). The Act gave the FCC the choice of counting CMRS as LECs or not.²⁸ The FCC chose not to, although concluding that CMRS providers do provide telephone exchange service, just like LECs.²⁹ The Commission's interconnection order includes CMRS providers among "telecommunications carriers" under the 1996 Act, which means they are providers of telecommunications services and have the right to request interconnection and obtain access to unbundled elements from an incumbent LEC.³⁰ Telecommunications carriers must interconnect with other carriers, comply with requirements for interconnectivity, and comply with requirements of the Americans with Disabilities Act. Interexchange carriers are also included in this category.

²⁸ 47 U.S.C. § 3(26).

²⁹ FCC, *Interconnection Order*, ¶ 1004.

³⁰ *Ibid.*, ¶ 993.

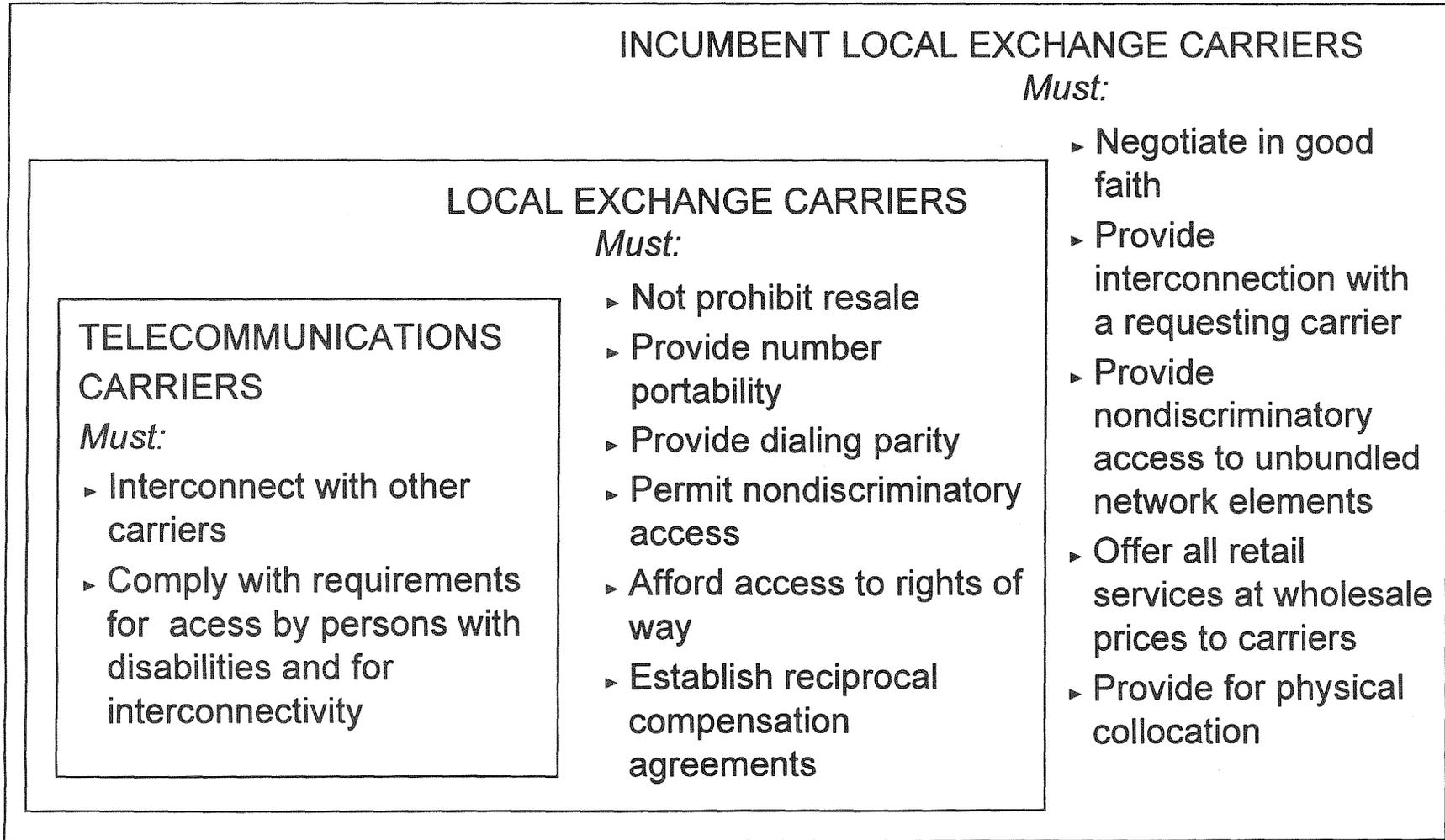


Figure 2-1. Classification of providers under the Telecommunications Act of 1996 (section 251).

LECs have further obligations under the Act. They may not forbid resale, must provide number portability, must provide dialing parity, must permit nondiscriminatory access, must afford access to rights of way, and must establish reciprocal compensation agreements.³¹ At first glance it might appear that being classified as telecommunications carriers, CMRS providers are being let off the hook as full-fledged competitors. In fact the FCC has to some extent imposed LEC-type duties on CMRS.

Resale: The FCC prohibits major types of CMRS providers from unreasonably restricting resale during a transitional period. The resale rule sunsets five years after the last group of initial licenses for broadband PCS spectrum is awarded. The Commission reasoned that once broadband PCS licensees build out their networks and are competing with cellular, explicit regulations on resale will be unnecessary.³²

Number portability: Wireless carriers are required to implement number portability, but on a different schedule from wireline providers.³³ Wireless carriers must be able to deliver calls from their networks to ported numbers anywhere in the United States by December 31, 1998; this corresponds to the date wireline carriers must provide service provider portability in the 100 largest metropolitan statistical areas (MSA's). Wireless carriers have until June 30, 1999, to provide service provider portability.

Dialing parity: Since CMRS providers are not classified as LECs, dialing parity does not apply to them.³⁴ Dialing parity permits consumers to choose different carriers without having to dial extra digits to complete a call. By reducing distinctions between

³¹ 47 U.S.C. § 251(b).

³² FCC, *Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Service*, CC Docket 94-54, First Report and Order, June 12, 1996.

³³ FCC, *Telephone Number Portability*, CC Docket 95-116, First Report and Order and Further Notice of Proposed Rulemaking, June 27, 1996, ¶¶ 141-171.

³⁴ FCC, 96-333, ¶ 29.

incumbent LECs and new market entrants, dialing parity can facilitate greater competition.

Nondiscriminatory access: Section 332(c) includes a prohibition against equal access requirements and CMRS providers are not required to provide nondiscriminatory access.³⁵ However, CMRS providers are entitled to receive nondiscriminatory access from LECs.³⁶

Access to rights-of-way: LECs must provide access to their rights of way, not vice versa.

Reciprocal compensation: In the 1996 interconnection order, the FCC concluded that CMRS providers are not obliged to provide requesting telecommunications carriers reciprocal compensation. LECs must, however, offer reciprocal compensation to CMRS providers.³⁷

In the interconnection order, the FCC noted that wireless providers of commercial services may become LECs over time but did not choose to delve into what might make this happen. Like the distinction between fixed and mobile offerings, the differing obligations of LECs and nonLECs, as applied to CMRS providers, may make it more difficult to see similarities of wireline and wireless providers in the development of a network of networks. One area where this could become a salient issue is in implementation of universal service. It is less likely to have a direct impact on competition or interconnection.

³⁵ 47 U.S.C. § 332(c)(8).

³⁶ FCC, 96-333, ¶ 29.

³⁷ FCC, *Interconnection Order*, ¶¶ 1000 and 1008, respectively.

Barriers to Entry

Section 332(c)(3) preempts state regulation of CMRS entry. Section 253 of the Telecommunications Act prohibited entry barriers for other carriers as well, with the full

Section 332(c)(3) preempts state regulation of CMRS entry. Section 253 of the Telecommunications Act prohibits entry barriers for other carriers as well, with the full support of the states.

support of the states. Section 253 has an added warning flag that federal preemption is permitted if state requirements violate the prohibition against inhibiting entry and says, "Nothing in this section shall affect the application of section 332(c) to commercial mobile

service providers."³⁸ This leaves no doubt that state barriers to entry are *verboten*, although interpretation of what constitutes such a barrier remains to be fleshed out.

At the time of the Budget Act, ten states were regulating CMRS retail services directly by requiring certificates of convenience and necessity: Arkansas, California, Louisiana, Massachusetts, Nevada, New York, North Dakota, Vermont, Virginia and West Virginia. The cellular industry in California found that state's oversight particularly onerous and was among the most active promoters of the statutory changes embodied in section 332. Industry concerns in the early 1990s about state regulation of entry must have anticipated issuance of more wireless licenses. Two facilities-based providers of cellular service were licensed in each market throughout the United States, the maximum number allowed under federal regulations. SMR licensees were also widespread. The FCC had not yet begun to issue PCS licenses through auctioning of spectrum that may net the federal treasury \$20 billion, rather a significant price to open

³⁸ Telecommunications Act, § 253(e).

a new market (although of course justified as a means of allocating spectrum).³⁹ Many states had taken positive steps towards encouraging competition in telecommunications (whether through wireline or wireless providers) even by 1993. By November 1994 thirteen states permitted competition in switched access and forty-three states permitted intraLATA toll competition or were in the process of removing entry barriers.⁴⁰ The states through NARUC lobbied for provisions of the Telecommunications Act that would remove barriers to entry for all potential competitors, whether wireline or wireless.

Where there may be conflict between the two sections of the Act is not on direct regulation of entry, which most states were never inclined to do, but on the circumstances where state intervention may be called for on behalf of consumers. Section 253 allows states to impose, on a competitively neutral basis "requirements necessary to preserve and advance universal service, protect the public safety and welfare, ensure continued quality of telecommunications service and safeguard the rights of consumers."⁴¹ Section 332 does not use these words, except for universal service, but the accompanying House report allows for state regulation of "other terms and conditions," a blanket phrase. To reconcile the two sections of the Act, those "other consumer protection matters" mentioned in the House report might be interpreted to include the responsibilities reserved to states under section 253. A key phrase in section 253 may be "competitively neutral." A state placing appropriate consumer

To reconcile sections 332 and 253, "other consumer protection matters" mentioned in the House report on section 332 might be interpreted to include the responsibilities reserved to states under section 253.

³⁹ Susan Ness, "Spectrum Management-Myths and Realities," (speech presented before the CTIA's Wireless '97, San Francisco, CA, 3 March 1997).

⁴⁰ Vivian Witkind Davis, *Breaking Away from Franchises and Rate Cases: A Perspective on the Evolution of State Telecommunications Policy* (Columbus, OH: NRR, 1995), 5.

⁴¹ 47 U.S.C. § 253(b).

protection requirements, such as quality of service standards, fairly on the backs of all providers would appear to be clearly meeting the intent of the law. State regulations that affect only wireless providers will have rougher sledding. The question of whether and when a consumer protection regulation can become a barrier to entry is a matter for the FCC and perhaps the courts to address case by case.

Pricing of Retail Services

The prohibition against rate regulation in section 332 is bolstered by the Telecommunications Act, which explicitly preserves section 152(b) of the Communications Act giving states jurisdiction over intrastate rates, except as provided under section 332.

Section 332 does allow for state rate regulation under certain circumstances. A state can try to make a case that consumers will not receive adequate protection without rate regulation and petition the FCC for rate authority. States that were already regulating CMRS rates as of the Budget Act's passage could request by August 1994 to continue to regulate rates with termination of the authority when it was no longer needed.⁴² The FCC was to grant a petition if the state demonstrates that:

- Market conditions fail to protect subscribers adequately, or
- Such conditions exist and CMRS is a replacement for landline telephone exchange for a substantial portion of the telephone land line exchange service within the state.⁴³

The California PUC and other states did petition the FCC to continue its authority to regulate the rates of cellular companies providing service in the state, claiming that consumers were inadequately protected by market conditions, namely the cellular

⁴² 47 U.S.C. § 332(c)(3)(B).

⁴³ 47 U.S.C. § 332(c)(3)(A).

duopoly. California requested only 18 months more for regulation of cellular rates, on the grounds that this would allow additional time for market forces to begin to work. The FCC turned down every state request.

It can certainly be argued that market conditions do not adequately protect consumers when the market is a duopoly. A market with two sellers is somewhat better than a market with one, but prices can be expected to be higher than under more competitive circumstances. Under a duopoly, each service provider has considerable market power and an incentive to collude to keep prices higher than they would otherwise be. A recent analysis of retail pricing in the German cellular industry showed evidence of tacit collusion under duopoly conditions.⁴⁴ Even with entry of a third provider, operators were able to avoid general price reductions.

In the United States, the decision to issue two licenses per area was not based strictly on technical or economic exigencies—regulators can and have issued more than two licenses; in the United Kingdom there are five.⁴⁵ Limiting licensees to two was considered a good way to ensure that the U.S. cellular market would have a chance of developing, and that policy has succeeded.

However, limiting the cellular market to two licensees may have helped support higher prices than would otherwise have prevailed. Cellular service in the United States is not only a duopoly but a duopoly where one provider in most areas is an affiliate of a BOC. There is some incentive at the corporate level for Bell companies (or was in the past, before the impending threat of competition from broadband PCS) to continue to view and price cellular service as a premium service, an add-on to the original wireline telephone. And the second cellular provider in an area has an incentive not to price very differently from the Bell affiliate. This prevents either consumers or providers finding out to what extent wireless service is a premium service because of its price or a

⁴⁴ Matthias-W. Stuetz and Daniel Tewes, "Competition in the German Cellular Market?" *Telecommunication Policy* 20, no. 4 (1996): 303-310.

⁴⁵ Simon Glynn, "How Many Cellular Licences Should There Be?" *Telecommunications Policy* 18, no. 2 (March 1994): 91-96.

basic service with premium pricing, since price may be part of the reason it stays a luxury. Cellular rates were, and are in some cases, reported to be higher for urban areas than rural ones, showing evidence of cream skimming and pricing not based strictly on cost but on value of service.

The second portion of the test for justifying state rate regulation of CMRS calls for wireless services to be "a replacement" for a "substantial portion" of telephone

A state will have great difficulty in the future in successfully petitioning the FCC for rate regulation of wireless services.

services. This is a difficult case to make. The failure of the Public Service Commission in California, where many consumers were already dependent on mobile phones in the early 1990s, to argue successfully to continue regulating

cellular prices in an era of duopoly suggests that a state will have great difficulty in the future in petitioning the FCC for rate regulation of wireless services. If this avenue of regulatory relief is closed to consumers, they will be best protected if PCS and other new wireless providers begin to challenge traditional cellular quickly, so that competition may indeed begin to offer more choices. The recent lowering of cellular rates may indicate that even the anticipation of competition is having a beneficial effect.

Interconnection

Like other competitors to the incumbent landline service, wireless providers are handicapped if they cannot interconnect efficiently and fairly. To build an end to end wireless network would be prohibitively expensive for cellular, PCS or SMR companies. Wireless carriers must be able to carry calls smoothly from their customers to the landline network and vice versa, and to traverse the landline network to complete calls to wireless customers. Under the Telecommunications Act, telecommunications carriers (including CMRS providers) must interconnect with other telecommunications

carriers.⁴⁶ Section 251 sets up the interconnection obligations of different categories of carriers, with the greatest burden borne by incumbent LECs because of the inherent advantage of incumbency. Section 252 provides for state approval of interconnection agreements. Like other parties to

Section 252 provides for state approval of interconnection agreements. Interconnection and network element charges must be just, reasonable, cost-based, nondiscriminatory, symmetrical, and may include a reasonable profit.

negotiations on an interconnection agreement, CMRS providers may petition a state commission to arbitrate open issues and the commission must resolve them. Arbitration has been requested in several states. The state-approved arbitration arrangements must meet the requirements of section 251 of the Telecommunications Act. That is, interconnection and network element charges must be just, reasonable, cost-based, nondiscriminatory, symmetrical, and may include a reasonable profit.⁴⁷

Background

Cellular companies, the first wave of commercial, two-way wireless providers, found reaching agreement with the incumbent LEC on interconnection a difficult battle. The cellular industry claimed in essence that the incumbent LECs were not interested in giving them good service and that the state regulatory commissions backed the LECs. One reason for incumbent LEC indifference to cellular

Cellular companies, the first wave of commercial, two-way wireless providers, found reaching agreement with the incumbent LECs on interconnection a difficult battle.

⁴⁶ 47 U.S.C. § 251(a).

⁴⁷ FCC, *Interconnection Order*, ¶¶ 218 and 1012.

companies was the newcomers' small impact compared to other network transactions. Some 98 percent of all CMRS calls go through the LEC network, while most LEC calls are LEC to LEC.⁴⁸ It has been much more important for CMRS providers to have access to the LEC network than the other way around, so LECs could better afford a failure to reach agreement. Another reason might be that cellular affiliates to the landline companies did not drive particularly hard bargains, leaving the non-affiliated cellular companies forced to accept higher interconnection pricing than might have been available in the absence of their wireless competitors. In the early 1980s, when cellular service was just beginning, some state regulators might have viewed wireless service as a frill for high-end consumers and an add-on to the existing system of parallel networks. Nor were many state regulators then focused on the local exchange as fertile ground for competition.

Physical interconnection was one area of controversy. In the early days of cellular service, the incumbent LECs treated cellular providers as end users, giving them "Type 1" connections which link mobile station users to the public switched network through subscriber lines at a LEC class 5 office. Type 2 connections allow a CMRS provider's own mobile telephone service office (MTSO) to provide the functions of a class 5 office, so that the cellular provider is not dependent on the LEC for basic switching functions. The landline network is reached through trunk-side connection to a LEC class 4 or class 5 office.⁴⁹ From the point of view of the cellular licensees, it was an uphill struggle to achieve Type 2 interconnections.

Compensation arrangements were a second area of disagreement. Well before passage of the Telecommunications Act, the FCC mandated reciprocal compensation, but cellular companies claim the federal rules were honored more in the breach rather than the observance. All the cellular companies responding to a CTIA survey reported

⁴⁸ Interview with Michael F. Altschul, General Counsel, CTIA, February 21, 1997.

⁴⁹ Phyllis Bernt, Hans Kruse, and David Landsbergen, *The Impact of Alternative Technologies on Universal Service and Competition in the Local Loop* (Columbus, OH: NRRI, 1992), 21-23.

they had to pay the LEC for LEC-terminated calls, while only 10 percent said they received any compensation from LECs to terminate LEC-originating traffic.⁵⁰ In fact, several cellular companies reported they had to pay the LEC to terminate LEC-originating traffic. Cellular companies asserted that the average incremental cost of termination of a

Well before passage of the Telecommunications Act, the FCC mandated reciprocal compensation, but cellular companies claim the federal rules were honored more in the breach rather than the observance.

CMRS call on a LEC network is .20 cents per minute but the average LEC charge for cellular interconnection is between 2.5 cents and 3.0 cents per minute.⁵¹ Traffic between LECs and CMRS users is highly imbalanced, with some 80 percent of CMRS calls originating with the mobile phone and terminating on the LEC. There would be a net flow of revenues from termination of calls from the CMRS providers to the LECs even if the CMRS carrier and the LEC charged the same price for call termination (see figure 2-2). Informally, part of the termination charges were considered the CMRS providers' contributions to universal service. There was not much pretense that the rates were cost-based.⁵²

FCC Interconnection Order

Such was the contentious background against which the FCC considered treatment of CMRS providers in its 1996 interconnection rulemaking. On physical interconnection, the FCC order does not treat CMRS providers differently than other

⁵⁰ Steven R. Brenner and Bridger M. Mitchell, *Economic Issues in the Choice of Compensation Arrangements for Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, report prepared for the Cellular Telecommunications Industry Association (Boston, MA: Charles River Associates, 1996), 8.

⁵¹ FCC, *Interconnection Order*, ¶ 1082.

⁵² Altschul interview, February 21, 1997.

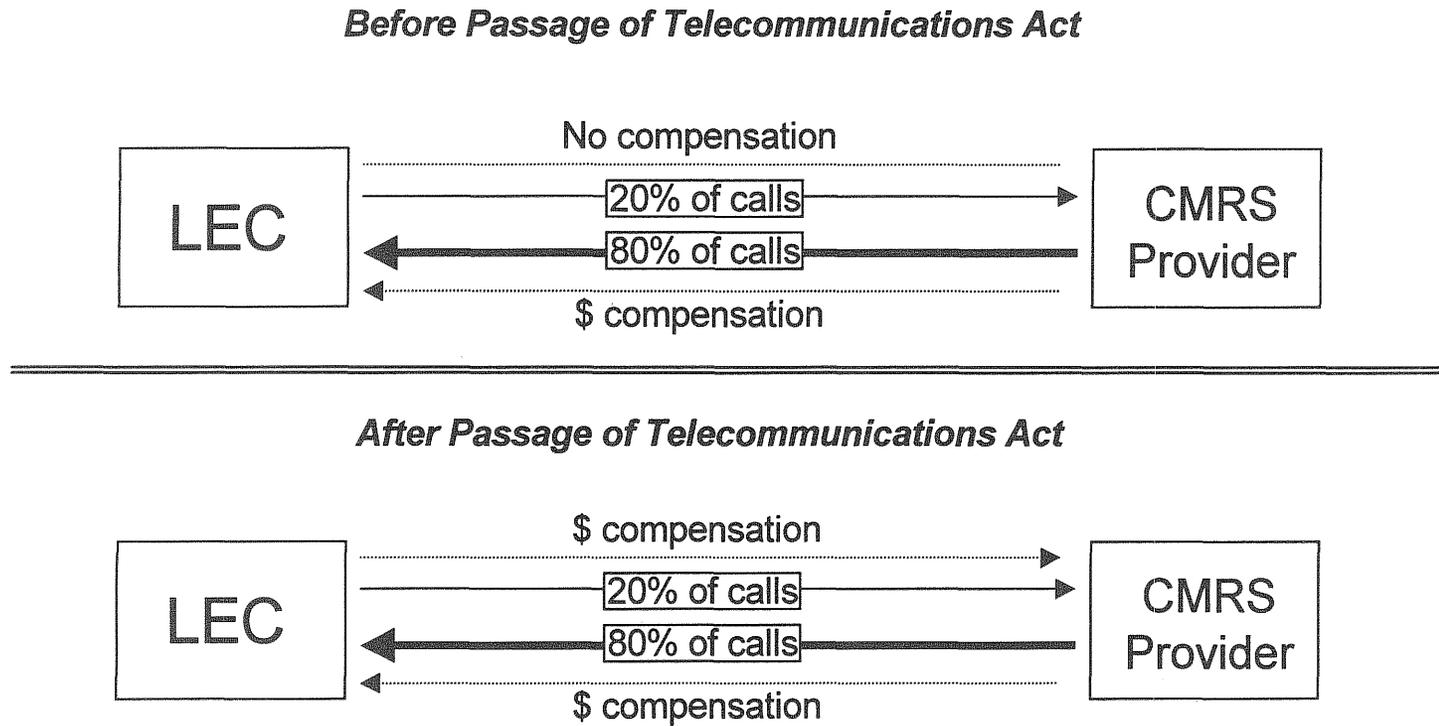


Figure 2-2. Patterns of CMRS-LEC Compensation for Traffic Termination

Source: Author's construct. See also Jeffrey Rohlfs, Harry Shooshan, Calvin Monson, *Bill-and-Keep: A Bad Solution to a Non-Problem* (Bethesda, MD: Strategic Policy Research, 1996), 6-7.

competitors. The points at which interconnection and unbundling are needed is the same for CMRS as for other carriers. CMRS providers do not need unusual access to the advanced intelligent network or to billing systems, since they already have a common channel signaling system within their own networks.

Nor did the issue of overall jurisdiction rear its head as a special problem for CMRS providers. In the interconnection order, the FCC said that sections 332 and 201 are a basis for jurisdiction over interconnection between LECs and CMRS providers but decided to rely on sections 251 and 252. The Commission said that application of the interconnection provisions of the Telecommunications Act would make for fair, consistent treatment of CMRS carriers and other carriers requesting interconnection. The Commission declined to define the precise extent of its jurisdiction for the time being, reserving the option of revisiting its decision later.⁵³

The most controversial rulings in the FCC interconnection order for CMRS providers and other carriers had to do with pricing, including reciprocal compensation principles and pricing methodologies. The Act requires LECs to establish reciprocal compensation

The most controversial rulings in the FCC interconnection order for CMRS providers and other carriers had to do with pricing, including reciprocal compensation principles and pricing methodologies.

arrangements for transport and termination, and state approved interconnection arrangements must include fair terms and conditions. Carriers must be assured mutual and reciprocal recovery by each carrier of costs that originate on the facilities of the other carrier. In the interconnection order, the FCC required the LECs to establish reciprocal compensation arrangements for transport and termination of CMRS traffic⁵⁴

⁵³ FCC, *Interconnection Order*, ¶¶ 1022-1024.

⁵⁴ *Ibid.*, ¶ 1008.

and called for LECs to price interconnection using a cost-based forward looking methodology using total element long-run incremental costs (TELRIC).⁵⁵

The FCC interconnection order prohibits a LEC from charging a CMRS provider for terminating traffic that originates on the LEC, beginning September 30, 1996, the order's effective date.⁵⁶ CMRS providers limited by pre-existing agreements with incumbent LECs that provide for nonmutual compensation may renegotiate with no penalty. The Commission said this would place wireless carriers with one-sided existing agreements on the same footing as other entrants.⁵⁷

The FCC directed the states to establish presumptive symmetrical rates based on the incumbent LEC's costs for transport and termination of traffic when arbitrating disputes under section 252(d)(2) and in reviewing BOC statements of generally available terms and conditions.⁵⁸ The FCC adopted the incumbent LEC's transport and termination prices as a proxy for other telecommunications carriers' additional costs of transport and termination, remarking that "both the incumbent LEC and the interconnection carriers usually will be providing service in the same geographic area, so the forward-looking economic costs should be similar in most cases."⁵⁹ If a competing carrier believes its costs will exceed the LEC's TELRIC, that carrier must submit a forward-looking economic cost study. The state commission can deviate from symmetrical rates only if it finds the competing carrier's efficiently configured forward-looking costs do not support symmetrical treatment.

⁵⁵ For a discussion of TELRIC methodology, see David Gabel, *Competition-Enhancing Costing and Pricing Standards for Telecommunications Interconnection* (Columbus, OH: NRRI, 1996).

⁵⁶ FCC, *Interconnection Order*, ¶¶ 1041-1042.

⁵⁷ *Ibid.*, ¶¶ 1094-1095.

⁵⁸ *Ibid.*, ¶ 1089.

⁵⁹ *Ibid.*, ¶ 1085.

In comments to the FCC in the interconnection docket, many CMRS providers supported use of bill-and-keep arrangements for termination charges as an administratively feasible method. Before passage of the Telecommunications Act, a work group of the NARUC Staff Subcommittee on Communications recommended consideration of bill-and-keep as an interim means of allocating termination costs.⁶⁰ In the LEC-CMRS interconnection notice of proposed rulemaking (NPRM), the FCC initially proposed bill-and-keep, saying that proponents have argued this “sender pays all” method is economically efficient if (1) traffic flows are balanced or (2) the per-unit cost of interconnection is *de minimis*.⁶¹ CMRS providers argued that actual incremental costs of .2 cents per minute to 1.3 cents per minute⁶² and off-peak costs of close to zero support adoption of an interim bill-and-keep model for interconnection.⁶³

The FCC did not adopt the interim bill-and-keep arrangement put forward in the LEC-CMRS interconnection NPRM.⁶⁴

The Commission said a state commission may impose bill-and-keep arrangements for CMRS-LEC traffic

when it finds that traffic is roughly

balanced and is expected to remain so. But the Commission voiced skepticism over the reliability of existing estimates of the cost of CMRS termination and said nobody had demonstrated that aggregate cost flows between interconnecting LECs and CMRS providers are in balance. In general (for all providers, not just CMRS) the FCC

The FCC said a state commission may impose bill-and-keep arrangements for CMRS-LEC traffic when it finds that traffic is roughly balanced and is expected to remain so.

⁶⁰ NARUC, Local Competition Work Group.

⁶¹ FCC, *Interconnection Order*, ¶ 1098.

⁶² *Ibid.*, ¶ 1117.

⁶³ *Ibid.*, ¶ 1108.

⁶⁴ *Ibid.*, ¶¶ 1109-1116.

concluded that state commissions may impose bill-and-keep arrangements if neither carrier has rebutted the presumption of symmetrical rates and if the volume of terminating traffic that starts on one network and ends on another network is approximately equal to the volume of terminating traffic flowing in the opposite direction and is expected to remain so. The Commission said that in general it found that carriers incur costs in terminating traffic that are not *de minimis*. Consequently, bill-and-keep arrangements lacking any provision for compensation do not provide for recovery of costs.

Meeting the goal of fair reciprocal compensation for CMRS-LEC interconnection depends on accurate calculation of dollars owed, which in turn depends on having a

Development of better data on traffic patterns between LECs and CMRS providers will be needed to document differences in traffic flows and calculate appropriate compensation.

good understanding of where calls begin and end. Development of better data on traffic patterns between LECs and CMRS providers will be needed to document differences in traffic flows and calculate appropriate compensation. The FCC interconnection order allows carriers to

compute overall compensation amounts for transport and termination by extrapolating from traffic studies and samples, using the location of the cell site where a call begins as the determinant of the geographic location of the mobile customer (or the point of interconnection between the two carriers at the beginning of the call to determine the location of the mobile caller or called party).⁶⁵

The FCC order also gives the states a role in assessing imbalances in traffic.⁶⁶ The FCC said states may adopt specific thresholds for determining when traffic is roughly balanced and do not have to measure traffic precisely to make such a determination. Acceptable approximations can be based on samples and studies

⁶⁵ *Ibid.*, ¶ 1043.

⁶⁶ *Ibid.*, ¶¶ 1111-1113.

comparable to reports on percentages of interstate use that form the basis for access charges. Or state commissions can require that traffic flowing in the two directions be measured as accurately as possible during some defined period of time. The Commission requires all affected carriers to cooperate with the states on such studies. Regular calculation of actual CMRS traffic flows is particularly important since they are expected to change over time. With the advent of new forms of wireless service, new marketing techniques, and lower prices, traffic may begin to even out, ameliorating the asymmetry in the flow of calls.

The FCC has already applied such rules of thumb. In the interconnection order, the Commission concluded that the LEC duty to provide compensation applies to CMRS and also that section 251(b)(5) reciprocal compensation obligations should apply only to traffic that originates and

The FCC concluded that the LEC duty to provide compensation applies to CMRS and also that section 251(b)(5) reciprocal compensation obligations should apply only to traffic that originates and terminates within a local calling area.

terminates within a local calling area. Except for CMRS, states define the local calling area, the region where toll charges and access charges do not apply. Generally, states define the local calling areas based on traffic patterns. For CMRS, the FCC defines the local calling area as a major trading area (MTA). Different types of CMRS carriers can have different FCC-authorized license territories. The two most common are the basic trading area (BTA), which comprises one or more counties for which a particular city serves as the focal point for economic activity, and the MTA, which consists of two or more trading areas for which a major metropolitan area serves as the focal point for economic activity.⁶⁷ To avoid creating artificial distinctions between CMRS carriers, the FCC chose the MTA, the largest license territory, as the most appropriate definition for a CMRS calling area for reciprocal compensation purposes. While BTAs are generally

⁶⁷ Steinberg note, May 13, 1997.

within a single state, MTAs often cross state boundaries. There are 493 BTAs and 51 MTAs.⁶⁸ In general, the FCC decided that when territory in more than one state is included in a single service area, and a local call from one carrier to another crosses state lines, the applicable rate for any particular call should be that established by the state in which the call terminates—an administratively convenient rule, and termination of the call typically occurs in the same state where the terminating carrier's end office switch is located and where the cost of terminating the call is incurred."⁶⁹

California opposed the principle of mutual compensation for interconnection, reasoning that such a policy would lead to a calling party pays system, which in turn could lead to an increase in the cost of basic telephone service.⁷⁰ U S West contended that reform in CMRS interconnection charges could not come about until the local rate subsidy issue is addressed.⁷¹

Federal Court Proceeding

The FCC decisions applicable to CMRS providers quickly became embroiled in controversy about jurisdiction over the pricing of interconnection. The states protested pricing provisions of the order in federal court and the 8th Circuit Court of Appeals stayed those portions of the interconnection order dealing with pricing. AirTouch sought an exemption from the partial stay on definitional issues, claiming that the CMRS industry was losing approximately \$1 million each day that the pre-FCC order LEC-

⁶⁸ Ibid.

⁶⁹ FCC, *Interconnection Order*, ¶ 1037.

⁷⁰ Ibid., ¶ 1079.

⁷¹ Ibid., ¶ 1080.

CMRS arrangement was in place.⁷² AirTouch once again brought up section 332 in its argument. Section 332(c)(1)(B) gives the FCC a role in *interstate* interconnection of CMRS providers and common carriers.⁷³

The FCC decisions applicable to CMRS providers quickly became embroiled in controversy about state versus federal jurisdiction over the pricing of interconnection.

AirTouch argued before the 8th circuit court that states are prohibited from regulating interconnection rates as well as rates to end users under section 332. But the language of the Budget Act provision, which says states may not regulate rates charged *by* CMRS providers suggests that Congress was only considering rates to final customers. If Congress meant to exclude interconnection rates from state jurisdiction, the statutory language should have read, "No state or local government shall....regulate...the rates charged *by or to* any commercial mobile service." The court granted the exemption to the stay, but had not ruled on the case at the time this report was completed. The FCC is sticking with the decision to proceed under sections 251 and 252.

State Approval of CMRS-Incumbent LEC Interconnection Agreements

The best argument for continued reliance on sections 251 and 252 is the progress being made through state-approved interconnection agreements. For CMRS-LEC interconnection, the Telecommunications Act provides the opportunity to start with

⁷² "Sever CMRS, Interconnection Issues, AirTouch Tells Court," *Telecommunications Report* 62, no. 43 (October 28, 1996): 35.

⁷³ "Upon reasonable request of any person providing commercial mobile service, the Commission shall order a common carrier to establish physical connections with such service pursuant to the provisions of section 201 of this Act. Except to the extent that the Commission is required to respond to such request, this subparagraph shall not be construed as a limitation or expansion of the Commission's authority to order interconnection pursuant to this Act." Section 201 establishes a duty of common carriers engaged in *interstate* communication to furnish communication service.

The best argument for continued reliance on sections 251 and 252 is the progress being made through state-approved interconnection agreements. For CMRS-LEC interconnection, the Telecommunications Act provides the opportunity to start with a clean slate.

a clean slate. About two-thirds of pre-Act agreements are in the form of tariffs, many of them still with Type 1 interconnection, with no reciprocal compensation, and an imperfect grounding in costs. Although CMRS providers appear to be moving more slowly than

some other groups of competitors, many are negotiating agreements under section 252. Agreements (not necessarily final state approvals) have been reached in at least a dozen negotiations in the states of Alabama, Florida, Georgia, Hawaii, Idaho, Kentucky, Maine, Montana, New York, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, and Utah. Table 2-2 shows the status of wireless/incumbent LEC agreements as of March 1997. Despite the cellular industry's preference for national standards, a representative of CTIA said the industry is by and large pleased with the process of state approval of interconnection agreements, with the option of arbitration, and satisfied with the results.⁷⁴

The new crop of CMRS-incumbent LEC interconnection agreements appears to have been reached with little controversy. As expected, given a tandem office linkage, physical interconnection presents no special problems for state commission review in interconnection arbitrations. The issues that do arise are in the areas of reciprocal compensation—rates for interconnection, rates for transport and termination and what traffic is local and what non-local.

As expected by the cellular industry, negotiated interconnection rates are proving to be lower than the old ones. Where interconnection charges to CMRS providers had been about three cents,⁷⁵ negotiated rates are well under a cent, as shown in Table 2-2.

⁷⁴ Altschul interview, February 21, 1997.

⁷⁵ FCC, *Interconnection Order*, ¶ 1082. Citing Cox's comments in Docket No. 95-185.

TABLE 2-2

STATE WIRELESS-INCUMBENT LEC INTERCONNECTION AGREEMENTS

State	Company	Incumbent LEC	Status
Alabama	Palmer Wireless	BellSouth Telecommunications	The agreement was effective March 1, 1997. Local traffic delivery and compensation will be reciprocal and mutual. Type 1 and 2A interconnection rates are \$0.00671 and \$0.0017, respectively. (\$0.0025 of this rate constitutes LATAwide tandem.)
Florida	Palmer Wireless	BellSouth Telecommunications	The agreement was effective March 1, 1997. Local traffic delivery and compensation will be reciprocal and mutual. Type 1 and 2A interconnection rates are \$0.00622 and \$0.002, respectively. (\$0.0025 of this rate constitutes LATAwide tandem).
	Vanguard Cellular Systems	BellSouth Telecommunications	Vanguard requested arbitration regarding modifications to the parties' existing arrangement. Parties disputed the definition for local service area. Vanguard said it will accept a rate consistent with cost-based default proxies set by the FCC order. BellSouth offered Vanguard end-office switching at \$0.01428 per minute of use (MOU) and tandem switching at \$0.01456 per MOU.
	Vanguard Cellular Systems	Sprint Florida	Vanguard requested arbitration regarding modifications to the parties' existing arrangement. Sprint proposes bill and keep compensation for end-office interconnection. Vanguard proposes bill and keep compensation for both end-office and tandem interconnection.
Georgia	Palmer Wireless	BellSouth Telecommunications	The agreement was effective March 1, 1997. Local traffic delivery and compensation will be reciprocal and mutual. Type 1 and 2A interconnection rates are \$0.00648 and \$0.002, respectively. (\$0.0025 of this rate constitutes LATAwide tandem.)
Hawaii	Western Wireless	GTE Hawaiian Telephone Company	The Commission's arbitration decision establishes an interim rate of \$0.0081 per MOU for transport and termination and \$0.0015 per MOU for tandem switching. The Commission will determine the total service long-run incremental cost and allocable common costs for transport and termination in Docket 7702.

TABLE 2-2 (Continued)

STATE WIRELESS-INCUMBENT LEC INTERCONNECTION AGREEMENTS

State	Company	Incumbent LEC	Status
Idaho	Western Wireless	U S West Communications	The Commission's arbitration decision establishes mutual and reciprocal compensation rates for transport and termination—call termination \$0.004498 per MOU and call transport \$0.002545 per MOU.
Kentucky	Vanguard Cellular Systems	GTE of Kentucky	Vanguard's request for arbitration concerns modifications to the parties' existing arrangement. GTE proposes a \$0.012 per minute rate; Vanguard considers this rate unacceptable.
Maine	Vanguard Cellular Financial	Nynex	Nynex will pay Vanguard for local calls Nynex customers originate and Vanguard terminates. Vanguard will pay Nynex for local calls Vanguard customers originate and Nynex terminates. The reciprocal compensation rate for Type 1 and 2A will be \$0.008 per MOU and \$0.015 per MOU, respectively.
Montana	Western Wireless	U S West Communications	The parties voluntarily negotiated rates. Arbitrators decided that (1) call termination on Western's network should be priced at U S West's end-office termination prices and (2) Western can connect directly to some of U S West's end-offices without routing traffic through a tandem switch, thus bypassing the tandem and only paying the end-office rate for such calls.
New York	Vanguard Cellular Financial	New York Telephone Company (Nynex)	The reciprocal compensation rate for Type 1 and Type 2A will be \$0.007 per MOU and \$0.00865 per MOU, respectively. Nynex will not compensate Vanguard for calls that do not originate on Nynex's network.
Ohio	AirTouch Cellular	Ameritech Information Industry Services	For calls originated on Ameritech's network and terminated on Airtouch's network, the rate will be \$0.004698 per MOU. For calls originated on Airtouch's network and terminated on Ameritech's end-office, the rate will be \$0.006273 per MOU for Type 2A service and \$0.004698 per MOU for Type 2B Service.

TABLE 2-2 (Continued)

STATE WIRELESS-INCUMBENT LEC INTERCONNECTION AGREEMENTS

State	Company	Incumbent LEC	Status
Oregon	Western Wireless	GTE Northwest	The arbitration decision resolved reciprocal and symmetrical compensation issues. The rates for tandem switching will be \$0.00333 per MOU and the end-office terminating switching rate will be \$0.005 per MOU.
	Western Wireless	U S West Communications	The arbitration decision found the local calling area should follow the FCC definition; Western Wireless does not have to pay U S West Communications for intrastate calls. The Commission will establish rates in Docket UM 351.
Pennsylvania	Vanguard Cellular Systems	GTE North	Vanguard's request for arbitration concerns modifications to the parties' existing arrangement. GTE proposes a \$0.012 per minute rate—Vanguard considers this rate unacceptable.
	Vanguard Cellular Systems	Sprint United Telephone	Vanguard's request for arbitration concerns modifications to the parties' existing arrangement. Sprint proposes bill and keep compensation for end-office interconnection. Vanguard proposes bill and keep compensation for both end-office and tandem interconnection.
South Carolina	Palmer Wireless	BellSouth Telecommunications	The agreement was effective March 1, 1997. Local traffic delivery and compensation will be reciprocal and mutual. Type 1 and 2A interconnection rates are \$0.01586 and \$0.01323, respectively. (\$0.0025 of this rate constituting LATAwide Tandem.)
	Vanguard Cellular Systems	Horry Telephone Cooperative	Vanguard initiated process to modify the parties' existing arrangement. Vanguard sought reciprocal, symmetrical compensation from Cooperative and received no comment by the time Vanguard filed their petition.
	Vanguard Cellular Systems	BellSouth Telecommunications	Vanguard initiated the negotiation process. Vanguard will accept a rate consistent with the FCC's cost-based default proxies. BST proposed end-office switching at \$0.01428 MOU and tandem switching at \$0.01456 per MOU. The parties were still disputing definition of local service area.

TABLE 2-2 (Continued)

STATE WIRELESS-INCUMBENT LEC INTERCONNECTION AGREEMENTS

State	Company	Incumbent LEC	Status
South Carolina	Vanguard Cellular Systems	GTE South	Vanguard initiated process to modify the parties' existing arrangement. GTE proposes a \$0.012 per-minute rate—Vanguard considers this rate unacceptable.
South Dakota	Western Wireless	U S West Communications	The arbitration decision establishes mutual and reciprocal compensation rates for transport and termination—call termination \$0.003334 per MOU and tandem switched transport \$0.001676 per MOU.
Utah	Western Wireless	U S West Communications	Pending the outcome of a traffic study, an interim rate will apply toward mutual and reciprocal compensation—call termination \$0.003348 per MOU and tandem switched transport \$0.001386 per MOU.

Source: Cellular Telecommunications Industry Association, March 1997.

Although rates vary by state and type of interconnection and service, the rates are considerably below those in effect before passage of the Telecommunications Act of 1996.

Montana PSC Arbitration for Western Wireless and U S West

Most interconnection agreements between wireless and landline providers have been reached without a need for arbitration. The Western Wireless/U S West agreement in Montana concluded in 1996 was an early exception. Five issues were presented for arbitration: (1) rates for interconnection and transport and termination of traffic, (2) the applicable rate for Western's switching facilities, (3) the effective date for reciprocal compensation, (4) the percentage of U S West traffic that terminates on Western's network, and (5) the local calling area and applicable charges for nonlocal traffic.⁷⁶

U S West and Western agreed on interconnection prices before the stay of the FCC interconnection order. After the stay, U S West wanted to include recovery of embedded investment in its transport and termination rates, saying the TELRIC study used to compute initially proposed rates for call termination and transport did not allow it to make up this "depreciation reserve deficiency." U S West said the stay of FCC pricing rules by the 8th Circuit meant that it should be allowed to recover this cost. The Montana Public Service Commission concluded that U S West could not recover the depreciation reserve deficiency in transport and termination rates at least at the time of the arbitration. The Commission did not rule on U S West's TELRIC methodology or its results, but said it approved the prices originally proposed because Western accepted them and, thus, they were voluntarily negotiated already.

⁷⁶ Public Service Commission of Montana, *In the Matter of Western Wireless Corporation's Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 of the Rates, Terms and Conditions of Interconnection with U S West Communications*, Order 5949b, Dec. 27, 1996.

The Montana Commission concluded that call termination on Western's network should be priced at U S West's end-office termination prices rather than tandem prices, which are higher. The conclusion was based on testimony suggesting that Western's switch did not function as a tandem switch and that Western could connect directly to some of U S West's end-offices without routing traffic through a tandem switch.

The effective date of reciprocal compensation decided by the Commission was the date Western filed a request to renegotiate the agreement with U S West, as provided for under the FCC interconnection order in a section of the order exempted from the 8th circuit stay.

The percentage of U S West traffic that terminates on Western's network was an item of disagreement because of traffic U S West transports for another LEC. The Commission used a U S West estimate until a study could be performed with more supportable figures. The Commission said the future study and an initial traffic study should contain parameters acceptable to both parties until SS7 is fully implemented.

The final unresolved issue for arbitration was the definition of the local calling area and applicable charges for nonlocal traffic. The Commission agreed with Western

The federal court proceeding has not stopped state commissions from approving interconnection agreements with interim pricing provisions. States are undertaking generic proceedings to determine permanent prices for CMRS-LEC interconnection.

that the MTA should define its local calling area, and that Western to U S West calls that originate and terminate in the same MTA (in this case, the whole state) should be subject to local transport and termination rates, not access charges, as required by the FCC's interconnection rules. Access charges

do not apply to CMRS providers. The Commission noted that it was not clear that either U S West or Western would know a customer's specific location relative to an MTA boundary at the start of all calls. The Montana Commission called for either a study to estimate the percentage of Western-U S West calls that are subject to access

charges or development by the companies of the technical means to actually keep track of that information.

Thus, the federal court proceeding has not stopped state commissions from approving interconnection agreements with interim pricing provisions. States are also undertaking generic proceedings to determine permanent prices for CMRS-LEC interconnection.

Universal Service

The Telecommunications Act requires every telecommunications carrier that provides interstate telecommunications service to contribute to universal service mechanisms and allows states to adopt regulations "not inconsistent with" FCC rules on universal service.⁷⁷ Section 332 does not exempt CMRS providers from universal service requirements imposed by the states on all telecommunications providers. It does include language similar to some that we have seen earlier in the discussion of federal preemption of state regulation of rates and entry, where states are banned from regulation unless CMRS is a "replacement" for landline service. On universal service, section 332 calls for state requirements to apply where mobile services are a "substitute" for landline service for a substantial portion of the communications within a state.⁷⁸

Section 332 does not exempt CMRS providers from universal service requirements imposed by the states on all telecommunications providers.

⁷⁷ The phrase "not inconsistent with" is not defined in the Act nor discussed in the legislative history. Nor does it appear with those exact words in federal case law on utility regulation. The closest reference for the phrase appears in *Louisiana Public Service Commission v. FCC*, 476 U.S. 355, 106 S. Ct. 1890, 90 L.E.D. 2d 369 (1986). In that decision, Justice Brennan wrote the FCC could preempt "inconsistent state regulation" under certain circumstances, which he listed.

⁷⁸ "Nothing in this paragraph shall exempt providers of commercial mobile services (where such services are a substitute for land line telephone exchange service for a substantial portion of the

Contributions to Universal Service

Viewing responsibilities for contributions to universal service funding in the context of the Act's overall policy goals, the FCC agreed with the Joint Board's recommendation and adopted a broad construction of the Telecommunications Act requirement for all carriers to contribute to support mechanisms.⁷⁹ The FCC said a broad base would ensure that competing firms contribute in an equitable and nondiscriminatory manner and that no entity would receive an unfair competitive advantage. The FCC found no reason to exempt CMRS providers from contributing to universal service fund support. The definition of "interstate telecommunications" selected by the FCC explicitly encompasses cellular telephone and paging service, mobile radio service, and PCS.⁸⁰ A few commenters in the proceeding had argued somewhat inconsistently that CMRS providers should not contribute to support mechanisms because they already contribute through interconnection payments to LECs.

Nor did the FCC exempt CMRS providers from contributions to intrastate funds. The FCC said section 332(c)(3) does not preclude such contributions and section 254(f) of the 1996 Act explicitly requires that all contributions to state support mechanisms be equitable and nondiscriminatory.⁸¹ Several wireless providers claimed they should be exempt from state support programs pursuant to section 332, interpreting the provision to prohibit such contributions from CMRS providers unless the services are a substitute for landline service. Commenters raised the possibility that intrastate support might

communications within such state) from requirements imposed by a state commission on all providers of telecommunications services necessary to ensure the universal availability of telecommunications service at affordable rates." Communications Act, sec. 332(c)(3).

⁷⁹ FCC, *Universal Service*, ¶¶ 772-780.

⁸⁰ *Ibid.*, ¶ 780.

⁸¹ *Ibid.*, ¶ 791.

constitute a barrier to entry and that CMRS providers do not provide intrastate telecommunications services at all, using the notion that wireless services are "inherently interstate."⁸² Several state commissions argued that their universal service programs would be disrupted if wireless was exempted. In California, for example, CMRS providers already contribute to universal service funding.

Thus, CMRS providers like other telecommunications carriers must contribute to the interstate universal service fund and to intrastate funds as well if state requirements are applied fairly to all telecommunications providers consistently with federal rules. One company has challenged the requirement to contribute to universal service and called for state preemption. Pittencrieff, in a case under review at the FCC, is claiming the requirement is a barrier to entry.⁸³

In a somewhat contentious jurisdictional decision, the FCC agreed with the Joint Board that it has jurisdiction to use both intrastate and interstate revenues to fund universal service,⁸⁴ one reason that a CMRS argument that the industry is unable to tell intrastate revenues from interstate falls flat in terms of funding the federal universal service fund. According to the FCC, funding universal service with both intrastate and interstate revenues will help ensure that support mechanisms are "specific, predictable, and sufficient" and that rates are "just, reasonable, and affordable."⁸⁵ If interstate revenues must be distinguished from intrastate, CMRS providers may dispute methodology and calculations, necessitating agreement on how to assess contributions

⁸² FCC, *Federal-State Joint Board on Universal Service*, CC Docket 96-45, Recommended Decision, Nov. 8, 1996, ¶ 783.

⁸³ Petition for Declaratory Ruling Regarding Preemption of the Texas Public Utility Regulatory Act of 1995, WTB Pol 96-2 (filed Jan. 11, 1996).

⁸⁴ FCC, *Universal Service*, ¶ 813.

⁸⁵ *Ibid.*, ¶ 816.

on the federal level as well as for states. For the time being, this will not pose a problem as the FCC chose to initially fund the universal service programs entirely with interstate revenues.⁸⁶

Providing Universal Service

The door is open for CMRS providers to offer universal service as well as fund it. In defining carriers eligible for universal service funds, the FCC simply adopted the

The door is open for CMRS providers to offer universal service as well as fund it.

statutory criteria for receipt of universal service fund support, and said “any telecommunications carrier using any technology, including wireless technology” that meets the criteria is eligible.⁸⁷ The 1996

Act says that a telecommunications carrier is eligible for universal service fund support if it is a common carrier and, throughout the designated service area, the carrier (1) offers all the services that are supported by the federal universal service support mechanism, (2) offers the services using its own facilities or a combination of facilities based or resale, and (3) advertises the availability and charges for the services in media of general distribution.⁸⁸ State commissions designate ETCs and define the service areas in which that role must be fulfilled.

⁸⁶ Ibid., ¶ 837.

⁸⁷ Ibid., ¶ 145.

⁸⁸ 47 U.S.C. § 214(e)(1).

The “core” or “designated” services initially supported by the universal service support mechanism include:

- Voice grade access to the public switched network, including, at a minimum, some usage
- Dual-tone multi frequency (DTMF) signaling or its equivalent (Touchtone™)
- Single-party service
- Access to emergency services, including access to 911, where available
- Access to operator services
- Access to interexchange services
- Access to directory assistance
- Toll limitation services for qualifying low-income consumers.⁸⁹

Cellular and PCS appear to provide these “core” or “designated” services. Some CMRS providers may not offer touchtone. There are important unresolved issues on access to E911 services for mobile customers. But, in general, basic CMRS is highly similar to the same services provided on the landline network, with the advantage of mobility. If something stops wireless providers from being designated as ETCs, it doesn’t seem to be the nature of their services.

CMRS providers are also included in the program of discounts for schools and libraries for advanced telecommunications services under the Act.⁹⁰ This program provides eligible schools and libraries with discounts of between 20 and 90 percent on all telecommunications services, Internet access, and internal connections, subject to a

⁸⁹ FCC, *Universal Service*, ¶ 61.

⁹⁰ *Ibid.*, ¶¶ 585 and 786.

\$2.25 billion annual cap.⁹¹ Economically disadvantaged schools and libraries, as well as those located in high-cost areas, will receive the largest discounts. The wireless industry is already serving this market. Some schools already use wireless for their Internet connections. Should wireless technologies prove cost-effective for schools and libraries, the industry's participation in this program will continue to expand.

Conclusion

This chapter identified major features of regulatory policy for wireless telecommunications and how they are being implemented. For the most part the process is going well, despite the complexity of applicable statutes and rules. In the next and last chapter we will discuss further work to be done to make sure that wireless telecommunications helps achieve economic and social goals in the network of networks.

⁹¹ *Ibid.*, ¶ 425.

CHAPTER 3

INCLUSIVE POLICIES FOR WIRELESS TELECOMMUNICATIONS

New policies on competition, interconnection and universal service are helping wireless come into the network of networks as a player with the same opportunities and responsibilities as the others. Further implementation efforts will be needed as the impact of the Telecommunications Act unfolds. State regulators will be thinking through how universal service principles and other areas of state responsibility apply to wireless telecommunications. The development of inclusive policies for wireless telecommunications calls for a careful look at the role of CMRS in universal service and needs for consumer safeguards, as well as their role as purveyors of new choices for citizens/customers. When all is said and done "regulatory parity" will apply both for the marketplace and the larger community.

State regulators will be thinking through how universal service principles and other areas of state responsibility apply to wireless telecommunications.

Wireless Participation in Universal Service

Universal service is one area where state regulators may have difficulty sorting out just how "equal" wireless and wireline can be. Today state regulators are unlikely to see CMRS providers as likely designees for ETC status, largely because CMRS prices have not yet matched, let alone undercut, those of landline telephone companies. It may be argued, however, that the relatively high prices of existing wireless service are artifacts of the particular path taken by technological development and policy decisions

Today state regulators are unlikely to see CMRS providers as likely designees for ETC status, largely because CMRS prices have not yet matched, let alone undercut, those of landline telephone companies.

affecting the telecommunications industry over the past century. Section 332(c)(3) implicitly appeals to the order of technology deployment as a justification for policy distinctions. Recall from Chapter 2 that states are given the possibility of regulating CMRS rates if CMRS service is a “replacement” for

landline telephone exchange service. The words “replacement” and “substitute” both mean “to take the place of.” But replacement has the stronger sense, suggesting full, adequate substitution. A substitute teacher comes in for a day while the regular teacher is sick. A replacement is hired to fill a position being permanently vacated. “Replacement” also connotes a situation where the person or thing to be substituted for is worn out, broken down, or in some way is an inferior way of doing the job.⁹² Computer keyboards have largely replaced typewriters, for example, because computers do word processing better.

What replaces what depends on where you begin. The landline public switched network was built first in this country, and AT&T and its successors assumed the obligation to keep local rates low as the network continued to be deployed and updated. Cellular telephony, when it began to be available in the 1980s, could not immediately compete directly against the entrenched public switched network and was marketed as a high-end service and an add-on to the wireline network.

In many developing countries around the world today, wireless is the dominant technology because it is less costly to deploy from scratch. Developing countries are being encouraged to leapfrog old technologies and go directly to cellular, satellite and PCS telephony. Of course, in areas of the world where wireless is being promoted for universal service goals, it does not take the place of landline service. A wired

⁹² Webster's New Twentieth Century Dictionary, unabridged, 2nd edition, s.v. “replacement.”

infrastructure, if one ever comes, will be the replacement. Viewed this way, section 332 favors a particular pattern of deployment, and thus is not technologically neutral.

Nobody is about to reopen the argument today that states should directly dictate wireless rates. What is interesting to note is that section 332 uses "substitute" rather than "replacement" in referring to state authority for universal service. Use of the weaker word suggests that the authors of section 332 did not mean wireless communications has to replace wireline fully for states to regulate them for universal service purposes. A straightforward interpretation is that the universal service provision does not require a customer to disconnect wireline service when he or she subscribes to wireless service in order for wireless to be a substitute, just as people continued to use the postal system after they installed telephones. Telephone conversations have not fully replaced letters; American homes are equipped with mailboxes. But the telephone (and now e-mail) are often availed of as alternatives.

It may be argued that wireless and wireline are not substitute services, but complements. Two products or services complement each other in an economic sense if an increase in consumption of A enhances customers' marginal willingness to pay for B. The two are substitutes if customers' marginal willingness to pay for A falls as willingness to pay for B rises. Stated in the abstract, time does not play an obvious role. Once again, defining wireless service as a complement to wireline shows the influence of earlier business decisions and public policies. Cellular service did begin as a complement to landline service. People more dependent on the wired telephone have also been the ones most likely to add a wireless connection without using the tethered telephone appreciably less, and perhaps they used it more. This was a marketing decision as well as one based on costs of new technology. The beginnings of wireless in the United States as a premium service may have helped keep prices high, postponing the day when it could begin to penetrate the mass market. What if lightly regulated duopolies were able to inflate prices for cellular service for longer than they might have if there were more licensed cellular companies (or more rate

Wireless and wireline service are capable of substituting for each other. Which came first does not matter objectively, but may cast a shadow on policy decisions if we misperceive them as complements when that time is past.

regulation)? If so, cellular would have kept looking like a premium (and complementary) service because of market power rather than underlying costs. Wireless and wireline service are capable of substituting for each other. Which came first does not matter objectively, but may cast a shadow on

policy decisions if we misperceive them as complements when that time is past.

The distinction between complements and substitutes is not purely semantic nor important only for implementation of section 332. Products or services compete with each other when they are substitutes, not complements. To think of wireless as complementary to wireline service neglects their potential for being full competitors under the Telecommunications Act. To the extent that past policy decisions may have had the effect of deferring competition, active effort is called for to redress the decisions' impact.

Section 332 requires deciding whether wireless and wireline are in fact competing, with wireless being used as "a substitute for a substantial portion of the communications" within the state. The test suggests that the first consideration is not *whether* people use cellphones or other wireless service but *how much* they use it compared to wireline. This fits with the interpretation that a customer need not disconnect wireline service for wireless to be a substitute. It is sufficient that the customer uses wireless for many calls. This is a vague notion, however, particularly since the word "communications" is not defined. (Perhaps it means all the forms of communication covered by the Communications Act.) In a 1996 Connecticut case, the superior court held that the Budget Act preempts states from assessing a cellular

company for payments to state universal service and lifeline programs.⁹³ The court said “Congress left no ambiguity that cellular providers in states in which cellular is not a substitute for landline service fall under the umbrella of federal preemption.” The court provided no reasoning or discussion of the basis for a finding that wireless is not a substitute for wireline service in Connecticut; it simply did not address the issue. The court did note that the FCC had not yet adopted rules on universal service.

To see what “a substantial portion of communications” means in practice necessitates delineation of the applicability of the phrase in the context of universal service. In measuring the extent of universal service we do not count up communications, whatever they are, but determine penetration rates.

A U.S. cellular penetration rate of 14 percent of the people in the nation is higher than the overall telephone penetration rates of many countries and the world average of approximately 13 percent. Viewed in a global context, U.S. use of cellphones is already substantial.

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Analysis of the demographic groups or circumstances in which usage is or will be particularly high helps to understand the role that wireless is already playing in universal service and the role it can be expected to play in the future. As broadband PCS comes on line, penetration rates are expected to be relatively significant for particular demographic subgroups, and not just for higher income groups. For many single people wireless service may even be a replacement for location-based wireline

⁹³ *Metro Mobile CTS v. Connecticut Department of Public Utility Control*, CV-95-0051275 S and CV-95-0550096 S (Conn. Super. Ct., Dec. 9, 1996).

⁹⁴ World Bank, *Performance Indicators for the Telecommunications Sector* (Washington, D.C.: World Bank, 1995), Annex D. See also “Hooked on Cell Phones,” *The Washington Post*, 25 January 1996, A14.

(meaning they will not maintain wireline service but give it up entirely). Others might be offered fixed local service by wireless local loop. Section 332 does not address situations in which a high percentage of a particular subgroup (whether by age, occupation, geographical area or other classification) substitutes wireless telecommunications services for those based on a landline system. If a particular segment of the population, such as single elderly people, did so, a state would have additional ammunition for arguing that wireless is a substantial portion of communications for the purposes of assuring universal service.

Geography also can be a determining factor for state universal service interests. Wireless does not have a traditional pattern of geographical diffusion. PCS will be deployed early in both large and small urban areas. The underlying cost structure of cellular telephony suggests that cellular service may be a cost-effective alternative to landline service in rural areas. Cellular infrastructure is already built out along major highways and it would not be dauntingly expensive to extend service back from the

Wireless offers promise of helping to solve vexing problems of universal service in rural areas.

roads into areas currently unserved by wireless providers.⁹⁵ With deaveraging of urban and rural rates and reduction of access charges and other subsidies for wireline local telephones, wireline prices

could go up, making wireless more competitive. Wireless offers promise of helping to solve vexing problems of universal service where population is sparse.

If you look at how wireless is being relied on today, usage is not only substantial but often essential. Cellular and other wireless services have been considered nonessential and this, of course, is a reason why most states never regulated cellular rates. For a long time it has been perceived as a luxury that the well-off can put in their

⁹⁵ David Gabel and D. Mark Kennet, "The Effect of Cellular Service on the Cost Structure of a Land-Based Telephone Network," *NRRI Quarterly Bulletin* 17, No. 4 (1996): 561.

BMW's. But the time Americans spend in the car has certainly increased since the first promise of universal availability and affordability was made in the 1930s. Until the advent of cellular communications, telephone service was not available to commuters and other drivers. For the portion of their days that they were in the car, when they were more isolated than at most other times, they did not have ready access to basic telephone service. Cellular telecommunications increased the availability of basic service but at a relatively high price. Consumers have responded by subscribing to cellular service for use in urgent situations, one reason that there are more outgoing cellular calls than incoming ones: In other words, many people today use their cellular phones as an essential service and only as an essential service. Where huge numbers of citizens spend enormous numbers of hours in automobiles, access to the outside world through cellphones is even more needed than elsewhere. It is their only feasible replacement for the landline network for a significant part of their waking hours. It fully replaces the telephone on the kitchen wall in those situations, and substitutes outside the home for a payphone. This is true not only for vehicular use but elsewhere, such as hiking trails or stadiums.

Many people today use their cellular phones as an essential service and only as an essential service. It is their only feasible replacement for the landline network for a large part of their waking hours.

Thus wireless telephony even now provides basic service to a substantial portion of communications in the United States as a substitute for the landline public switched network. It is also getting closer to ubiquitous availability. Prices, which might have been lower earlier with more active state regulation, are coming down. AT&T has announced tests of wireless local service that partially bypasses the local loop.⁹⁶ Wireless is one way of providing a necessity of modern life.

⁹⁶ Jason Meyers, "A Plot to Rule the World?," *Telephony* (March 3, 1997): 6.

For policy makers, wireless telecommunications must be viewed as a technology supporting universal service in the United States, including provision of advanced

Wireless telephony even now provides basic service to a substantial portion of communications in the United States as a substitute for the landline public switched network. For state regulators, this means being open to the idea that wireless providers are part of the universal service picture and may be appropriately designated as ETCs.

telecommunication services to schools, libraries, and rural health carriers. For state regulators, this means being open to the idea that wireless providers are part of the universal service picture, including new programs for institutions that serve the public, and most importantly, may be appropriately designated as ETCs.⁹⁷ In fact,

states may want to encourage wireless providers to serve in that capacity. The 1996 Act requires that states designate more than one ETC upon carrier request in nonrural areas. PCS and other wireless carriers may well be able to offer pricing and service packages that make them competitive in urban areas as a second or third provider of universal service. This would be a matter of extending service into urban enclaves or border areas within their licensed service territories. In rural areas as well they may be alternatives to the incumbent LEC. In unserved areas they offer the hope of extending telephone service availability where it was not cost-effective before. States may want to consider setting boundaries for ETC provision in ways that increase the chances of CMRS participation.

⁹⁷ Phyllis Bernt, *Eligible Telecommunications Carriers* (Columbus, OH: NRRI, 1996), 16.

Intrastate and Local Commercial Mobile Radio Services

If some CMRS providers become ETCs, it will be difficult for them to argue that they are not also local exchange carriers, at least for the purpose of fulfilling the ETC role. But CMRS providers have long argued that they are not local and certainly not intrastate. They claim to be “inherently interstate.”⁹⁸ The notion that CMRS is something vaguely ethereal and nomadic, because wireless customers are untethered and the transmission medium invisible, is appealing and perhaps slightly romantic, but factually incorrect. Because CMRS users can

The notion that CMRS is something vaguely ethereal and nomadic, because wireless customers are untethered and the transmission medium invisible, is appealing and perhaps slightly romantic, but factually incorrect.

be “anywhere” doesn’t mean they are nowhere. Most CMRS is local, certainly in terms of distance or from the customer’s point of view. “Roaming” charges are ordinarily a small proportion of the cellular bill and are based on marketing decisions, not customer mobility. Technical difficulties still inhibit exact specification of where any single CMRS call originates or terminates. When asked, however, to help solve a murder or find a lost driver, CMRS providers, according to news reports, seem to be able to hone in on location. When deployment of SS7 is completed CMRS providers will be able to pinpoint customer location precisely (although they will not know which side of a state border customers are on in real time). SS7 will allow better estimation of traffic location with respect to MTA, BTA, and state boundaries.

Of course, in telecommunications what is considered “local” is not determined strictly by distance nor by what a consumer considers the routine sphere of his or her calls. CMRS providers are licensed to serve various market areas, such as MTAs or

⁹⁸ Consolidated Opposition of the Cellular Telecommunications Industry Association to the Motions for Stay and Expedited Review at 7, *Iowa Utilities Board v. Federal Communications Commission*. No. 96-3321 and consolidated cases (8th Cir.).

BTAs for PCS. Traditional wireline service is bounded by local calling areas, often with "extended area service."⁹⁹ The problem of determining service territory is not limited to wireless. States are continually faced with controversy over determining communities of interest for calling areas. For both landline and wireless telecommunications, the underlying community of interest may coincide better with trading areas than with any political boundaries.

It is interesting to note that the FCC called in its interconnection order for studies of traffic patterns between LEC and CMRS providers. States are to oversee and evaluate traffic studies and the FCC to order carriers to cooperate.¹⁰⁰ Traffic studies and agreed-upon assumptions could also help to give better approximations to call origination and termination in bordering states. With agreed-upon rules of thumb, call locations could be demarcated by state.

If CMRS provides local exchange service, how has the FCC managed not to define it as a LEC? Apparently much of the idea is to support an infant industry, particularly today the PCS component. Mobility has been used to distinguish between LECs and non-LECs, and NARUC has used the distinction between fixed and mobile

The line between fixed and mobile services is eroding, and it would be contrary to the goals of the Act to distinguish between technologies providing the same function. Debate on what is fixed and what is mobile diverts attention from other policy issues.

as a way of clarifying jurisdiction. But the line between fixed and mobile services is eroding, and it would be contrary to the goals of the Act to distinguish between technologies providing the same function. As far as crafting a serviceable regulatory framework grounded in cooperative federalism goes, the distinction

⁹⁹ See Kerry Stroup, *Competition and the Consideration of Expanded Local Calling Scope: Emergent Issues* (Columbus, OH: NRRI, 1997).

¹⁰⁰ FCC, *Interconnection Order*, ¶¶ 1111-1113, and see discussion above.

between mobile and fixed services is a blind alley. Debate on what is fixed and what is mobile diverts attention from other policy issues.

What Should We Make of Section 332?

The 1993 amendments recognized the increasing importance of wireless alternatives to wireline telephone service, precluded states from what was perceived as interference in the growth of wireless, and provided regulatory parity among wireless providers serving the public.¹⁰¹

Section 332 eliminated inconsistent regulatory treatment within wireless services but created the potential for conflicting treatment with landline carriers. In the fast-moving world of telecommunications, section 332 has largely been superceded as a vehicle for policy. Many states were already fostering competition in the early

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1990s. By 1996 many more states had passed laws or issued regulations specifically aimed at opening new markets to competition whether through wireline or wireless providers. The states through NARUC strongly supported removal of entry barriers as a key provision of the Telecommunications Act.

Congress affirmed in the 1996 Act that section 332 is still to be given deference. It is quite clear that states cannot regulate entry or rates. But, since states are supporting competition, the prohibition against such regulation is largely moot. The Telecommunications Act addresses the very issues the 1993 amendments were

¹⁰¹ "Regulatory parity" is the term that CMRS providers themselves used as a desirable outcome of the legislation in comments on personal communications services in 1993. In that proceeding the reference was to parity in treatment of different wireless services.

concerned with, but without special treatment for one class of telecommunications carriers. Certainly from the perspective of crafting sound public policy, a rider to an annual budget bill that had little public input and focused on one industry segment should not be given the same weight as the comprehensive remaking of telecommunications law to make sure that every provider is given a fair chance to compete. Section 332 should be construed narrowly and given recognition only within the context of the Telecommunications Act. The FCC took a major step in

When faced with the inevitable claims under section 253 that states have created barriers to entry, the FCC should give the same consideration to CMRS claimants as to any other group. If unresolvable contradictions between sections 253 and 332 do arise, normal rules of statutory construction apply.

this direction in deciding that the interconnection provisions of the 1996 Act provide adequate tools for making sure that wireless providers can compete fairly. When faced with the inevitable claims under section 253 that states have created barriers to entry, the FCC should give the same consideration to CMRS claimants as to any other group. This will be a case-by-case effort, but each case should be decided in a way that assures progress towards a network of networks.

The first cases to be decided under section 253 did not cut close to the bone for state commissions. In the *Classic* case a new entrant wanted to compete and was certified by the Kansas Corporation Commission but denied a franchise by two Kansas towns. The towns said they were too small to support another provider. The FCC found the towns' actions violated section 253.¹⁰² In a Connecticut decision the FCC found that the state violated section 253 through a flat barrier to entry for independent payphone providers.

¹⁰² *Classic Telephone Inc.*, 11 FCC Rcd. 13082 (1996).

A recent case decided by a federal appeals court deals directly with section 332.¹⁰³ Cellnet, a reseller of cellular service, complained to the Public Utilities Commission of Ohio (PUCO) that GTE Mobilnet and New Par, a reseller, charged it higher rates than they did each other and were in several other ways being discriminatory and anti-competitive. A district court found that section 332(c)(3) preempted PUCO from considering the complaint because Cellnet was asking the Commission to regulate rates. The appeals court reversed the decision, saying the PUCO should be allowed to resolve the issue and that there would be adequate opportunity to raise the preemption issues before the state commission. The court said Ohio law prohibits discriminatory and anti-competitive conduct, so the state has an interest in determining whether affiliated and unaffiliated resellers are being charged *the same rates*. The *level* of rates is not in question. The court found the preemptive reach of section 332 is limited, noting that states are specifically allowed to regulate “other terms and conditions” of service.

Cases before the FCC now for decisions under section 253 include the Pittencrieff case mentioned in Chapter 2 on participating in universal service funding and a wide ranging case brought by Cellular Communications of Puerto Rico.¹⁰⁴ The company asked the FCC to declare a new Puerto Rico telecommunications law preempted by sections 251, 253, and 332. The company claims the law subjects CMRS providers to rate and entry requirements both directly and indirectly, and excuses the incumbent Puerto Rico Telephone Company from federal requirements.

The FCC must attempt to interpret section 332 consistently with the comprehensive provisions of the Telecommunications Act of 1996. Section 253(e) specifically preserves section 332(c)(3). If unresolvable contradictions do arise, normal

¹⁰³ GTE Mobilnet of Ohio, *New Par et al. v. PUCO and Westside Cellular (Cellnet)*, electronic citation: 1997 FED App. 0137P (6th Cir.) downloaded from www.law.emory.edu/6circuti/apr97/97a0137p.06.html.

¹⁰⁴ Cellular Communications of Puerto Rico, *Petition for Declaratory Ruling*, 15 November 1996.

rules of statutory construction apply. First, as just suggested, without explicit repeal, courts will attempt to interpret both statutes in a manner so that they are not contradictory. If inconsistency, that is, a direct contradiction, is unavoidable, courts will tend to treat the most recent federal law, here, the Telecommunications Act of 1996, as controlling.

Regulatory Parity in the Marketplace

True regulatory parity calls for wireless to have every opportunity to be a full contender in telecommunications markets. As this report is being written, it may be the best hope for serious, early challenge to the hegemony of the incumbent telephone companies. The authors of the Telecommunications Act counted on cable being the first out of the box to take on the incumbent LECs. This did not materialize. Nor have IXC's entered local exchange markets as quickly as was hoped. Wireless, meanwhile, is already a presence in local markets, with both infrastructure and customers.

CMRS offers particular hope for competition in rural areas. One scenario for the development of competition sees it spreading from urban to rural areas, so that rural customers have a choice of telephone providers later than urban ones. The Telecommunications Act encourages this by giving special protection from competition to small and rural telephone companies. Rural companies are exempt from interconnection requirements until they receive a bona fide request for interconnection.¹⁰⁵ In small towns or rural areas, telephone companies are allowed to acquire cable systems, reducing the possibility that competition will come from cable in rural areas. Yet there is a tantalizing possibility that wireless services could be cheaper than wireline in some less populated locations.

Safeguards against anticompetitive affiliate transactions are an area of concern in assuring regulatory parity for CMRS providers. The FCC has already allowed BOC

¹⁰⁵ 47 U.S.C. § 251.

cellular affiliates to provide service outside their service areas without using a separate subsidiary. The Commission also proposed eliminating a requirement that BOCs must provide cellular service within their areas through a structurally separate corporation. The FCC proposed a uniform set of streamlined competitive service safeguards for the in-region provision of PCS and other CMRS by tier 1 LECs.¹⁰⁶ It is costly for LECs to have to set up new affiliates, and to the customer's benefit to have a choice of integrated landline and wireless services. On the other hand, regulators will need to be alert to anticompetitive cross subsidies or "loss leadership" sorts of behavior by companies selling CMRS and wireline services as a package.

To determine whether competition is actually developing in the telecommunications industry requires adequate monitoring. The FCC now issues annual reports required under section 332 on the status of competition in the wireless segment of the industry. The latest report, issued in March 1997, said CMRS users included about 44 million cellular subscribers, 34 million paging subscribers and 2.3 million specialized mobile radio users.¹⁰⁷ The report said PCS services are now operating in 29

States must assess the growth of wireless competition to get an accurate picture of the total number and type of competitors in their jurisdictions and the degree to which competitors are eroding the market power of the incumbent telephone companies.

MTAs. The FCC report uses the federally defined market areas, not state boundaries. States tracking competition will need to modify the federal information or develop their own information systems. It is important that states assess the growth of wireless competition to get an accurate picture of the total number and type of competitors in

¹⁰⁶ Federal Communications Commission, *Amendment of the Commission's Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services*, WT Docket 96-162, ¶¶ 3-7.

¹⁰⁷ "FCC Competition Report Shows Burgeoning Wireless Industry," *Telecommunications Reports*, March 31, 1997, 37.

their jurisdictions and the degree to which competitors are eroding the market power of the incumbent telephone companies. Decisions on continuing price caps for incumbent LECs, for example, depend in part on accurate information on the availability of services that compete with those of the incumbent.

Regulatory Parity and Service Quality

The concept of regulatory parity suggests inclusion of CMRS in obligations for quality of service. Both the Telecommunications Act and Section 332 call for state oversight of consumer matters for CMRS.

The FCC does not collect information on service quality for CMRS providers and has no special rules governing quality of service, save that quality of service will be a

A recent Peter D. Hart Research Associates market study found that only 60 percent of wireless service subscribers are satisfied with the service they currently receive.

consideration in reviewing providers' licenses when they come up for renewal (usually after five years). However, a recent Peter D. Hart Research Associates market study found that only 60 percent of wireless service subscribers are satisfied with the service they currently receive.¹⁰⁸ By way of

comparison, 97.0 percent of Ohio residential customers and 98.3 percent of Ohio business customers give their local telephone company an overall service quality grade of C or better.¹⁰⁹ States will need to investigate the degree to which requirements for availability, reliability and other consumer service goals are achieved for CMRS

¹⁰⁸ "On the Cusp of Competition, Wireless Industry Faces Marketing and Regulatory Challenges," *Telecommunications Reports* 63, no. 10 (1997): 2.

¹⁰⁹ See Raymond Lawton, *Survey and Analysis of the Telecommunications Quality-of-Service Preferences and Experiences of Customers of Ohio Local Telephone Companies* (Columbus, OH: NRRI, 1996), 75.

providers as well as other entrants. Table 3-1 shows seven dimensions of quality that apply to any telecommunications service, provisions of the "Consumer Bill of Rights" developed by the Colorado PUC, and how the provisions of the bill of rights apply to CMRS customers.

Availability of service is, broadly speaking, a universal service issue, and more narrowly a question of how quickly service is installed after it is requested, or the length of time a customer is without service because of various kinds of outages. In unserved or underserved areas, CMRS may be the most cost effective way to extend universal service. At the level of day-to-day availability, installation and repairs should be subject to the same sorts of requirements that incumbent LECs must meet to the extent that CMRS providers can be considered to be giving basic service. Listing of telephone numbers in one central directory is a service that landline customers expect but that may become more difficult when there are competing providers of telephone service. CMRS subscribers should also be able to be listed in central telephone directories. But with current pricing arrangements, many CMRS customers do not want incoming calls. So nonlisted and nonpublished numbers are an important right for CMRS subscribers.

Access to emergency services is a critical issue facing CMRS providers. At this time, the ability to contact 911 from a mobile phone is by no means widespread. This is an area of opportunity for customer-based quality of service in telecommunications. CMRS providers should work with incumbent LECs and emergency services providers to assure that CMRS users in trouble can reach 911 and can be located so that help can be sent.

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**TABLE 3-1
APPLICATION OF CONSUMER BILL OF RIGHTS TO CMRS CUSTOMERS***

Quality Dimension	Customer rights	Application to CMRS
Availability (access to the public switched network)	<ul style="list-style-type: none"> • Equal opportunity to access basic and advanced services within reasonable time frames • Access to 911 • Numbers listed in a central directory, at consumers' preference. 	<ul style="list-style-type: none"> • In unserved areas, may be the most cost effective way to assure availability • Access to 911 poses technical difficulties • CMRS customers may not want listed numbers.
Reliability (dependability)	No reduction in transmission quality if different providers used.	Quality will improve with digital transmission.
Security (confidentiality of customer information; protection against fraud; privacy)	<ul style="list-style-type: none"> • Confidential conversations and transmitted data • Protection from unauthorized use of equipment, records and/or payment history. 	<ul style="list-style-type: none"> • Digital CMRS improves security • Security of equipment, numbers is a greater problem than for landline.
Flexibility/choice (ability to offer, adopt, or customize a function to meet individual needs)	<ul style="list-style-type: none"> • Increased choice of telecommunications providers and services within reasonable time frames • Better quality services at prices comparable to today's price or less. 	Availability of wireless alternatives meets this goal.
Simplicity (ease of understanding or performing a communications function)	<ul style="list-style-type: none"> • Network appears seamless to the consumer • Consumer able to make and receive calls using any provider without dialing extra codes • Consumers able to keep their telephone numbers when they change providers. 	<ul style="list-style-type: none"> • Interconnection agreements should work to this end • Dialing parity should be applied to CMRS • Number portability will facilitate customer choice.
Assurance (competence and credibility)	<ul style="list-style-type: none"> • Ability to contact a consumer hotline • Access to consumer information on choices of telecommunications providers and their service quality. 	Need to establish consumer hotlines and other means of providing consumer information.

* Based on Colorado PUC's *Consumer Bill of Rights* and Davis et al., *Telecommunications Service Quality* (Columbus, OH: NRR/ 97-13, 182).

Can a CMRS customer reach a customer on another network? Will the connection be clear? Can customers of landline providers reach CMRS customers and be assured of transmission quality? These and other reliability issues for CMRS and other providers may largely be addressed under interconnection agreements.

Although not areas where state regulators have a role, privacy and security are particularly problematic for CMRS. Conversations transmitted over analog cellular are not secure. Digital transmission will better ensure privacy, although a recent report suggests that one method of doing so is not foolproof.¹¹⁰ Another hazard facing CMRS customers is the ease with which cellphones or, more importantly, their numbers can be stolen. The latter problem is presumably easier to solve than the former.

The ability to choose among providers and technologies is one of the potential benefits of the Telecommunications Act and the competition it is expected to spawn. Wireless alternatives not only give a choice of how to receive basic telephone service but offer mobility, which many customers will view as a qualitative improvement over wireline service. If the price of wireless drops, as many expect, customers will be receiving higher quality from wireless for about the same price, or just a little more, than wireline.

Simplicity is another aspect of quality that consumers look to, consciously or not, in assessing product or service quality. For telecommunications, whether the service is wired or not, the network

Whether the service is wired or not, the network should appear seamless to the consumer.

should appear seamless to the consumer. He or she should be blissfully unaware of the hardware and software linking phone dialer and recipient of the call.

Interconnection agreements and requirements for interoperability help meet this objective. Dialing parity, which is not yet required of CMRS, is also essential, and at

¹¹⁰ Jason Meyers, "No More Secrets: Researchers Find Digital Wireless Technology Is Not Secure," *Telephony* 232, no. 12 (1997): 8.

some point either the FCC or the states under their authority to rule on consumer protection issues will need to assure dialing parity for wireless. Similarly, number portability, which the FCC has delayed for CMRS providers, will be needed if consumers are to switch easily from one provider to another. Lack of number portability may already have reduced customer incentives to switch from one cellular provider to another.

Consumers need information on both wireless and wireline providers. The Colorado bill of rights suggests the ability to contact a consumer hotline staffed by each provider and affording the opportunity to solve problems should be required. Access to

Access to information on price and quality will help to assure that customers can weigh their choices of service providers, whether wired or wireless.

information on price and quality will help to assure that customers can weigh their choices of service providers. States should consider requirements for informing the public on prices, service areas, and other quality factors for CMRS as well as other providers.

Steps Towards Continued Development of Policies for Inclusion

Wireless services offer opportunities for qualitative improvements in telecommunications at prices comparable to the landline network. States and the FCC support achieving that promise through procompetitive policies and most immediately through interconnection agreements that are fair both to LECs and CMRS providers. For wireless to be a full member of the network of networks also requires their participation in social goals like universal service and acceptable service quality.

Perhaps the most important thing a state might do to open doors for inclusion of wireless is to make sure there are no state barriers to CMRS competition. In fact, states may wish to review statutes, rules, and procedures to assure that entry of CMRS providers and others is unhindered and expedited. All states are likely to want to watch

and assess the development of competition to make sure that it is indeed happening and make appropriate adjustments if it is not. State systems to monitor competition should attend to CMRS as well as other providers, augmenting state data with federal information.

The immediate concern of states as they foster competition is approval of interconnection agreements. CMRS providers have been somewhat later overall than others in negotiating, so states can expect to renew many more wireless/landline agreements in the coming months. It is encouraging that CMRS providers are using the process provided under section 253 and appear to consider the results fair so far. To improve the information on which CMRS/LEC conditions of

Possible policy steps for states:

- *Make sure there are no state barriers to wireless competition*
- *Monitor the development of competition, including wireless*
- *Encourage the FCC to include wireless providers in competitive obligations as quickly as reasonable*
- *Encourage and participate in traffic studies and modeling*
- *Include wireless providers in universal service programs*
- *Assure consumer protection*
- *Monitor and, where appropriate, participate in FCC cases challenging state authority under section 253.*

interconnection are based, states may want to conduct traffic studies and modeling efforts to more accurately estimate the intrastate/interstate origination and termination of calls. For the FCC, one thing to begin to consider is a decision rule for when a telecommunications carrier takes on the responsibility of a LEC. It would not be much of a stretch to consider CMRS as LECs now, but for purposes of reducing hurdles to the ability to compete, the current designation is adequate. As the network of networks develops, special protections for some telecommunications carriers will become unnecessary and CMRS providers as well as others can be called on to meet such obligations as dialing parity and nondiscriminatory access.

Universal service policies are squarely in states' bailiwicks. As the states do their share to meet the goals of the Telecommunications Act for access to basic, affordable telephone service for every citizen, they are likely to want CMRS

participation. This includes affirming the expectation that CMRS providers contribute to universal service and encouraging them to become ETCs. Definition of universal service areas that are feasible for wireless providers would be one part of such an effort. Particularly for rural areas, CMRS can help solve sticky problems of bringing in relatively low-cost competitors to the incumbent LECs.

In the network of networks, wireless providers, like others, will be called on to meet minimum levels of consumer service. If they have not already done so, states might begin to investigate standards applicable to CMRS for availability, reliability, and consumer information, as well as requirements for handling complaints, such as consumer hotlines. NARUC might consider being involved in developing expectations of consumer service from CMRS, in cooperation with the industry.

The Telecommunications Act does not speak to the contribution of new forms of telecommunications to state economic development. Many states have recognized the importance of telecommunications as a tool for economic growth. The competition encouraged by the Act is expected to result in increased investment in advanced telecommunications services and possibly more jobs. Participation of wireless in universal service programs (including advanced services for schools, libraries, and rural health) is an important avenue for wireless contributions to investments in people.

As wireless telecommunications and accompanying government policies evolve, the FCC and the states will need to work together to assure that all the goals of the Telecommunications Act are met for this important means of bringing new communications opportunities to customers. This will include developing consistent state and federal policy guidelines on intrastate LEC/CMRS interconnection. The FCC's efforts to reconcile section 332 with the Telecommunications Act of 1996 are commendable. It is to be hoped that the FCC will continue to ordinarily rely on the latter to resolve conflicts. Finally, the states and NARUC should monitor and, where appropriate, participate in cases before the FCC challenging state authority under section 253: reasonable state actions in support of consumer interests are not barriers to entry.

APPENDIX
SECTION 332
COMMUNICATIONS ACT OF 1934

SEC. 332. [47 U.S.C. 332] MOBILE SERVICES.

(a) In taking actions to manage the spectrum to be made available for use by the private mobile services, the Commission shall consider, consistent with section 1 of this Act, whether such actions will—

- (1) promote the safety of life and property;
- (2) improve the efficiency of spectrum use and reduce the regulatory burden upon spectrum users, based upon sound engineering principles, user operational requirements, and marketplace demands;
- (3) encourage competition and provide services to the largest feasible number of users; or
- (4) increase interservice sharing opportunities between private mobile services and other services.

(b)(1) The Commission, in coordinating the assignment of frequencies to stations in the private mobile services and in the fixed services (as defined by the Commission by rule), shall have authority to utilize assistance furnished by advisory coordinating committees consisting of individuals who are not officers or employees of the Federal Government.

(2) The authority of the Commission established in this subsection shall not be subject to or affected by the provisions of part III of title 5, United States Code, or section 3679(b) of the Revised Statutes (31 U.S.C. 665(b)).

(3) Any person who provides assistance to the Commission under this subsection shall not be considered, by reason of having provided such assistance, a Federal employee.

(4) Any advisory coordinating committee which furnishes assistance to the Commission under this subsection shall not be subject to the provisions of the Federal Advisory Committee Act.

(c) REGULATORY TREATMENT OF MOBILE SERVICES.—

(1) COMMON CARRIER TREATMENT OF COMMERCIAL MOBILE SERVICES.—(A) A person engaged in the provision of a service that is a commercial mobile service shall, insofar as such person is so engaged, be treated as a common carrier for purposes of this Act, except for such provisions of title II as the Commission may specify by regulation as inapplicable to that service or person. In prescribing or amending any such regulation, the Commission may not specify any provision of section 201, 202, or 208, and may specify any other provision only if the Commission determines that—

- (i) enforcement of such provision is not necessary in order to ensure that the charges, practices, classifications, or regulations for or in connection with that service are just and reasonable and are not unjustly or unreasonably discriminatory;
- (ii) enforcement of such provision is not necessary for the protection of consumers; and
- (iii) specifying such provision is consistent with the public interest.

(B) Upon reasonable request of any person providing commercial mobile service, the Commission shall order a common carrier to establish physical connections with such service pursuant to the provisions of section 201 of this Act. Except to the extent that the Commission is required to respond to such a request, this subparagraph shall not be construed as a limitation or expansion of the Commission's authority to order interconnection pursuant to this Act.

(C) The Commission shall review competitive market conditions with respect to commercial mobile services and shall include in its annual report an analysis of those conditions. Such analysis shall include an identification of the number of competitors in various commercial mobile services, an analysis of whether or not there is effective competition, an analysis of whether any of such competitors have a dominant share of the market for such services, and a statement of whether additional providers or classes of providers in those services would be likely to enhance competition. As a part of making a determination with respect to the public interest under subparagraph (A)(iii), the Commission shall consider whether the proposed regulation (or amendment thereof) will promote competitive market conditions, including the extent to which such regulation (or amendment) will enhance competition among providers of commercial mobile services. If the Commission determines that such regulation (or amendment) will promote competition among providers of commercial mobile services, such determination may be the basis for a Commission finding that such regulation (or amendment) is in the public interest.

(D) The Commission shall, not later than 180 days after the date of enactment of this subparagraph, complete a rulemaking required to implement this paragraph with respect to the licensing of personal communications services, including making any determinations required by subparagraph (C).

(2) NON-COMMON CARRIER TREATMENT OF PRIVATE MOBILE SERVICES.—A person engaged in the provision of a service that is a private mobile service shall not, insofar as such person is so engaged, be treated as a common carrier for any purpose under this Act. A common carrier (other than a person that was treated as a provider of a private land mobile service prior to the enactment of the Omnibus Budget Reconciliation Act of 1993) shall not provide any dispatch service on any frequency allocated for common carrier service, except to the extent such dispatch service is provided on stations licensed in the domestic public land mobile radio service before January 1, 1982. The Commission may by regulation terminate, in whole or in part, the prohibition contained in the preceding sentence if the Commission determines that such termination will serve the public interest.

(3) STATE PREEMPTION. —(A) Notwithstanding sections 2(b) and 221(b), no State or local government shall have any authority to regulate the entry of or the rates charged by any commercial mobile service or any private mobile service, except that this paragraph shall not prohibit a State from regulating the other terms and conditions of commercial mobile services. Nothing

in this subparagraph shall exempt providers of commercial mobile services (where such services are a substitute for land line telephone exchange service for a substantial portion of the communications within such State) from requirements imposed by a State commission on all providers of telecommunications services necessary to ensure the universal availability of telecommunications service at affordable rates. Notwithstanding the first sentence of this subparagraph, a State may petition the Commission for authority to regulate the rates for any commercial mobile service and the Commission shall grant such petition if such State demonstrates that—

(i) market conditions with respect to such services fail to protect subscribers adequately from unjust and unreasonable rates or rates that are unjustly or unreasonably discriminatory; or

(ii) such market conditions exist and such service is a replacement for land line telephone exchange service for a substantial portion of the telephone land line exchange service within such State.

The Commission shall provide reasonable opportunity for public comment in response to such petition, and shall, within 9 months after the date of its submission, grant or deny such petition. If the Commission grants such petition, the Commission shall authorize the State to exercise under State law such authority over rates, for such periods of time, as the Commission deems necessary to ensure that such rates are just and reasonable and not unjustly or unreasonably discriminatory.

(B) If a State has in effect on June 1, 1993, any regulation concerning the rates for any commercial mobile service offered in such State on such date, such State may, no later than 1 year after the date of enactment of the Omnibus Budget Reconciliation Act of 1993, petition the Commission requesting that the State be authorized to continue exercising authority over such rates. If a State files such a petition, the State's existing regulation shall, notwithstanding subparagraph (A), remain in effect until the Commission completes all action (including any reconsideration) on such petition. The Commission shall review such petition in accordance with the procedures established in such subparagraph, shall complete all action (including any reconsideration) within 12 months after such petition is filed, and shall grant such petition if the State satisfies the showing required under subparagraph (A)(i) or (A)(ii). If the Commission grants such petition, the Commission shall authorize the State to exercise under State law such authority over rates, for such period of time, as the Commission deems necessary to ensure that such rates are just and reasonable and not unjustly or unreasonably discriminatory. After a reasonable period of time, as determined by the Commission, has elapsed from the issuance of an order under subparagraph (A) or this subparagraph, any interested party may petition the Commission for an order that the exercise of authority by a State pursuant to such subparagraph is no longer necessary to ensure that the rates for commercial mobile services are just and reasonable

and not unjustly or unreasonably discriminatory. The Commission shall provide reasonable opportunity for public comment in response to such petition, and shall, within 9 months after the date of its submission, grant or deny such petition in whole or in part.

(4) REGULATORY TREATMENT OF COMMUNICATIONS SATELLITE CORPORATION.—Nothing in this subsection shall be construed to alter or affect the regulatory treatment required by title IV of the Communications Satellite Act of 1962 of the corporation authorized by title III of such Act.

(5) SPACE SEGMENT CAPACITY.—Nothing in this section shall prohibit the Commission from continuing to determine whether the provision of space segment capacity by satellite systems to providers of commercial mobile services shall be treated as common carriage.

(6) FOREIGN OWNERSHIP.—The Commission, upon a petition for waiver filed within 6 months after the date of enactment of the Omnibus Budget Reconciliation Act of 1993, may waive the application of section 310(b) to any foreign ownership that lawfully existed before May 24, 1993, of any provider of a private land mobile service that will be treated as a common carrier as a result of the enactment of the Omnibus Budget Reconciliation Act of 1993, but only upon the following conditions:

(A) The extent of foreign ownership interest shall not be increased above the extent which existed on May 24, 1993.

(B) Such waiver shall not permit the subsequent transfer of ownership to any other person in violation of section 310(b).

(7) PRESERVATION OF LOCAL ZONING AUTHORITY.—

(A) GENERAL AUTHORITY.—Except as provided in this paragraph, nothing in this Act shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.

(B) LIMITATIONS.—

(i) The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof—

(I) shall not unreasonably discriminate among providers of functionally equivalent services; and

(II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services.

(ii) A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request.

(iii) Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.

(iv) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions.

(v) Any person adversely affected by any final action or failure to act by a State or local government or any instrumentality thereof that is inconsistent with this subparagraph may, within 30 days after such action or failure to act, commence an action in any court of competent jurisdiction. The court shall hear and decide such action on an expedited basis. Any person adversely affected by an act or failure to act by a State or local government or any instrumentality thereof that is inconsistent with clause (iv) may petition the Commission for relief.

(C) DEFINITIONS.—For purposes of this paragraph—

(i) the term "personal wireless services" means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;

(ii) the term "personal wireless service facilities" means facilities for the provision of personal wireless services; and

(iii) the term "unlicensed wireless service" means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services (as defined in section 303(v)).

(8) MOBILE SERVICES ACCESS.—A person engaged in the provision of commercial mobile services, insofar as such person is so engaged, shall not be required to provide equal access to common carriers for the provision of telephone toll services. If the Commission determines that subscribers to such services are denied access to the provider of telephone toll services of the subscribers' choice, and that such denial is contrary to the public interest, convenience, and necessity, then the Commission shall prescribe regulations to

afford subscribers unblocked access to the provider of telephone toll services of the subscribers' choice through the use of a carrier identification code assigned to such provider or other mechanism. The requirements for unblocking shall not apply to mobile satellite services unless the Commission finds it to be in the public interest to apply such requirements to such services.

(d) DEFINITIONS.—For purposes of this section—

(1) the term "commercial mobile service" means any mobile service (as defined in section 3) that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public, as specified by regulation by the Commission;

(2) the term "interconnected service" means service that is interconnected with the public switched network (as such terms are defined by regulation by the Commission) or service for which a request for interconnection is pending pursuant to subsection (c)(1)(B); and

(3) the term "private mobile service" means any mobile service (as defined in section 3) that is not a commercial mobile service or the functional equivalent of a commercial mobile service, as specified by regulation by the Commission.

