The BOCs also control the assignment of telephone numbers for use by radio carriers, and there has been significant controversy surrounding the assignment of these codes in the operation of their one-way and two-way services. Some RCCs have complained that the BOCs have hoarded these numbers for use by their own affiliates; others that the BOCs have made the numbers available only in inconveniently large blocks, still others that the numbers have been offered only in inconveniently small blocks.[50]

A recent FCC statement on cellular interconnection resolves numerous disputes that had developed between the LECs and non-wireline carriers, mostly in favor of the non-wirelines.[51] It requires all LECs to provide (1) Type 1 or Type 2 interconnection upon request; (2) interconnection to the non-wireline that is no less favorable than that furnished to the wireline cellular carrier; and (3) reasonable interconnection arrangements different from those used by the wireline company, if the non-wireline carrier chooses to negotiate with the telephone company.[52] In addition, the FCC prohibits the local exchange carriers from imposing recurring charges on non-wireline carriers for the use of NXX codes and telephone numbers.[53] The FCC limited such

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[50] In North Carolina, for example, the interconnection tariff filed by Southern Bell required the cellular carrier to pay a nonrecurring charge of $886.00 for the first block of twenty numbers and $14.50 for each twenty numbers thereafter. This would result in a total nonrecurring charge of $8,121.50 for the 10,000 numbers in the NXX code. This nonrecurring charge is 25 to 32 percent above Southern Bell's stated cost, which already includes a 14 to 15 percent rate of return. See Brief of Metro Mobile CTS of Charlotte, Inc., Proceeding to Consider Tariffs for Service Provided to Cellular Radio Telecommunications Companies, North Carolina Utilities Commission, Docket No. P-100, Sub 79, June 6, 1986, p. 23. Under the interconnection tariff filed by Southern Bell in North Carolina, the cellular systems can obtain numbers only in blocks of twenty at a time. Illinois Bell filed a tariff for Type 2 interconnection which required the cellular system to pay a one-time "service establishment" charge of $16,000.00 for furnishing the NXX code. Under the current Type 1 interconnection arrangement, the non-wireline had to pay a recurring monthly charge of 25 cents per number. See Protest and Request for Suspension filed by Rogers Radiocall, Inc. before the Illinois Commerce Commission, In the Matter of Illinois Bell Telephone Company's proposed Cellular Access Service, Advice No. 4487.

[51] See Memorandum Opinion and Order, The Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services, FCC 86-85, FCC Mimeo No. 36487 (rel. March 5, 1986).

[52] See FCC Policy Statement on Interconnection of Cellular Systems, Appendix B to Memorandum Opinion and Order, supra.

[53] The Commission ruled that the BOCs do not "own" the NXX codes of 10,000 numbers each, which are assigned to the landline telephone companies. They merely have the responsibility for administering these numbers. As a result, BOCs can charge only for the reasonable initial connection charge, not the right to use the numbers. See FCC Policy Statement on Interconnection of Cellular Systems, supra pars. 14.

charges only to a reasonable initial connection charge to compensate for the costs of software and other charges associated with new numbers.

Finally, the FCC has required wireline carriers to permit unrestricted resale of their cellular service.[54] This permits non-wireline carriers to enter the market as soon as wireline cellular facilities are operational, even if the non-wireline's are not yet in service. Resale rights also provide some measure of protection against price discrimination. And they largely guarantee that any operator seeking to create a national mobile network can obtain needed access wherever any wireline carrier is offering it.

Interconnection between paging operators and LECs is less complex and there have been no disputes between paging operators and LECs regarding the form of interconnection. Landline circuits are used to connect the paging terminal to the LECs' central office. Regular PBX-type trunks are usually used to connect the LEC end office to the paging office; one trunk will often suffice for several hundred paging customers because calls are obviously brief.[55]

Recent interconnection disputes between paging companies and the RBOCs have centered on the failure of the divested BOCs to renegotiate a "Memorandum of Understanding" that governed their relationship with the BOCs for many years.[56] The RCCs and most of the companies in the regions of Bell Atlantic, Pacific Northwest Bell, and Pacific Bell, have been able to reach new interconnection agreements, but many RCCs elsewhere continue to operate without such agreements.

Prices

Most mobile services remain intra-state, and the FCC has generally left to PUCs the task of overseeing the tariffs charged by LECs for carrier interconnection. The FCC thus deferred to the states to determine the permissibility of such arrangements as calling-party billing, responsibility for the costs of interconnection, and the establishment of rate centers. The FCC has nonetheless taken positions on more general aspects of RCC interconnection.

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[54] Cellular Communications Systems, supra, 86 F.C.C.2d at 510.

[55] Virtually all RCCs want only lineside interconnection between the LECs' central office and the RCCs' paging terminal. Some of the larger RCCs may eventually want trunkside access in markets with very high traffic volumes.

[56] The MOU, as described earlier, included general provisions establishing the RCCs' status as a co-carriers rather than end users. In addition, it outlined the RCCs' right to share in interstate and intrastate toll message charges that involved their mobile radio systems and to secure seven-digit numbers for assignment to paging and mobile radio units. Further, the MOU required the BOCs to adopt a paging service plan and to allow resale of their intrastate INWATS service by RCC paging operators, to the extent permitted by state tariff requirements.

A first issue of contention has been what RCCs should pay for facilities needed to interconnect their switches to the landline network. The FCC has insisted that tariffs charged to the non-wirelines be identical to those charged to wireline carriers.[57] It has also taken the position that non-wirelines are neither end users nor interexchange carriers, and should therefore not be assessed usage-sensitive access charges. RCCs do, however, pay for interconnection trunks, under tariffs approved by state PUCs.

Table MB.4 shows the range of prices for interconnection trunks and telephone numbers charged for cellular radio and paging services. Interconnection costs are typically 10 to 20 percent of mobile carrier's operating expenses, and operating expenses are typically 30 to 40 percent of total expenses. A mobile carrier's interconnection costs thus usually run from about 3 to 8 percent of total revenues. LEC ability to impede competition by manipulating interconnection prices for mobile services is therefore very much lower than for switched, interexchange landline services, where carriers pay more than 50 percent of revenues for LEC access.

Table MB.4. MOBILE INTERCONNECTION AND TELEPHONE NUMBER CHARGES

Mobile Service	Monthly Charge	One-Time Charge
Cellular Radio[58]	$50-$300 Per Trunk	$0.10-$2.00 Per Number
Paging System[59]	$30-$100 Per Trunk	$0.10-$2.00 Per Number

For paging systems, the LECs charge RCCs for connecting circuits between the central office and a paging terminal under a variety of schemes. Some LECs charge only local exchange rates; others a flat fee as for a private line; others the rates applicable to PBX trunks. The

[57] Some RCCs have nevertheless contended that LECs have charged their own mobile affiliates less for trunks than they charged non-wireline carriers. Telocator contends, for example, that in Indianapolis, Indiana Bell charged the wireline in which it owned a partnership interest less for trunks between May and August, 1984 than it charged the non-wireline. The FCC rejected the non-wireline operator's complaint, finding that the discrepancy in interconnection rates was the result of an inadvertent administrative error. Indianapolis Telephone Company v. Indiana Bell Telephone Co. FCC File No. E-85-5 (rel. Oct. 16, 1986).

[58] A cellular radio system in the top 45 markets typically requires 50-100 trunks from the LEC, one in second tier may require 30-50.

[59] A paging system operating in a major market typically requires 10-20 trunks from the LEC; the exact number depends on traffic volumes and how many radio control facilities are connected to the mobile carrier's switch.

LECs also charge private line rates for circuits connecting transmitters to the central control facilities.

Some BOCs, it is alleged, have unilaterally filed interconnection tariffs containing significant rate increases or offered contracts for RCC acceptance under threat of discontinued service.[60] Many RCCs continue to operate without any contract agreements.[61] The FCC, however, recently declined Telocator's request that the Commission appoint an interconnection ombudsman to address these problems.[62] Other RCCs have complained that LECs have proposed tariffs that will charge the same for Type 1 and Type 2 interconnection, even though Type 2 interconnection is less costly to the BOC.[63] Telocator also maintains that LECs require several of its members to pay a nonrecurring charges for numbers that are substantially above LEC costs. Prices charged by different LECs vary widely, as do minimum and maximum sizes of number orders. See Table MB.4. Review of LEC prices for telephone numbers is conducted by state, not federal, regulators.

There is, finally, the issue of reciprocal compensation. The non-wireline carriers argue that consistent with their status as co-carriers their cellular systems should be treated in the same manner as an independent telephone company and that co-carrier principles should govern the terms by which the non-wireline and the BOC compensate each other for the carriage of each others' traffic. Based on this argument, the non-wireline carriers contend that they should be compensated by the local exchange carriers for the completion of calls on the non-wireline

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[60] For example, in Minnesota, Northwestern Bell proposed a significant increase in interconnection rates for RCCs, rates that were ultimately set aside by the PUC. The LEC was directed to submit a new tariff with new cost studies. In the Southeast, where regional negotiations appear to have collapsed, Telocator cited BellSouth's plans to seek a 225 percent increase in charges for facilities and services provided to paging or two-way mobile radio systems.

[61] Telocator recently submitted to the FCC an Interconnection Report covering a total of forty-two states and the District of Columbia. Twenty-seven of these reported either that new interconnection agreements had been reached or that the RCCs were operating pursuant to the terms of the cancelled memorandum of understanding without any negotiations proceeding toward a new agreement. Ten additional jurisdictions reported that the terms of the cancelled MOU or interconnection contracts nevertheless continue in effect pending the outcome of hearings or negotiations. The remaining five jurisdictions report only that negotiations are under way to reach new agreements. See Memorandum Opinion and Order, The Need to Promote Competition and Efficient Use of Spectrum, F.C.C. 86-85, released March 5, 1986, para. 13.

[62] Memorandum Opinion and Order, The Need to Promote Competition and Efficient Use of Spectrum, F.C.C. 86-85, released March 5, 1986. The FCC concluded that Telocator had not demonstrated any widespread BOC disregard of the FCC's interconnection requirements, nor that any BOC was negotiating in bad faith to resolve remaining interconnection issues.

[63] For example, a complaint is pending before the Texas Public Utilities Commission contesting Southwestern Bell's proposal to that effect.

The main opportunities for cross-subsidy come from operations th are common to providing both landline and mobile services. Profiles c the various expenses incurred by paging and mobile telephone companies were developed in a 1983 study by Telocator. Table MB.5.

Table MB.5. TYPICAL PROVIDER COSTS[71]
(as a percent of annual revenues)

	Paging Companies		Mobile Tel. Companies		Cellular Companies
	W/L	NW/L	W/L	NW/L	
Operating Expenses[72]	25-28	35-40	25-28	40	30-40
Selling Expenses[73]	45[74]	11	45	10	10-15
Administrative Expenses[75]	10	28	10	30	15-25
Interest Expense	0	4	0	2	5-7
Depreciation	8	14	8	12	10-20
Before Tax Earnings	12	3	12	6	15-20

Facilities, including central control stations, transmitter and antenna equipment, and mobile units for leasing to subscribers, offer few opportunities for cross subsidy, but also account for a comparatively small fraction of total costs. Interconnection trunks between the central mobile switch and the public switched network, and between the central switch and remote antenna sites, are somewhat more problematic, although it appears to be a fairly simple regulatory matter to ensure that LECs charge their own mobile affiliates the same as they charge non-wireline carriers. Sales, administration, billing, and maintenance, and other general operating costs provide the major opportunities for cross subsidy. Telocator estimates that (including interconnection costs), some 30 to 40 percent of a mobile carrier's

[71] Source: Telocator submission. Cellular company estimates were derived through discussions with Telocator and RBOC representatives.

[72] Includes salaries of operating personnel, interconnection costs, equipment costs, maintenance, antenna lease expenses, equipment lease expenses, utilities, and related expenses.

[73] Includes advertising and related expenses.

[74] The selling expenses for wireline paging companies is significantly higher, almost 45 percent of annual revenues, because most wireline paging companies contract with agents to sell and market their paging services.

[75] Includes salaries of administrative personnel, supplies, insurance, rent, and related expenses.

cellular system. In effect, the non-wireline carriers are seeking a reduction in the flat rate fee that they pay the LECS for circuits between the MTSO and the local exchange. A few BOCs have entered into agreements that provide for reciprocal compensation; most have insisted on treating the non-wirelines as end-users, and charging them for all costs incurred by the local telephone networks in carrying calls to and from cellular subscribers.[64]

Access to Network and Customer Information

Mobile carriers are potentially susceptible to the same problems as ICs in regard to LEC provisioning and maintenance of service, and alteration of network standards.[65] A related issue concerns BOC access to customer proprietary information generated through their local exchange operations. In supplying landline access to RCC competitors, BOCs gain access to RCCs' business and growth plans, in much the same way as they gain access to landline IC plans. As discussed in the Interexchange Communications section of this report, various standard-setting procedures and FCC regulations provide some measure of protection against LEC abuses of this type.

Competitive Assessment

Head-to-head competition between LECs and non-wireline RCCs in the provision of local mobile services raises many questions about discriminatory access to the LEC exchange.[66] The FCC has addressed the interconnection issues quite comprehensively. Complaints are abundant. The radio common carriers and non-wireline cellular operators have generally fared remarkably well in the regulatory process, though as a group state regulators have been less attentive than the FCC in shaping the rules under their jurisdiction to promote competition. Nonetheless, competition in providing local mobile services appears to be both vigorous and robust.

The principal interconnection challenges in the next few years do not involve access to the landline exchange, but rather interconnection between mobile carriers themselves. The ultimate goal is to offer cellular users the ability to get mobile service anywhere in North America immediately upon going off-hook. This will require rapid

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[64] The MOU provided for some reciprocal compensation by entitling RCCs to one-third of all interstate and intrastate toll message charges originating sent-paid from stations, or placed on a received-collect basis to stations, on their systems. Interconnection Between Wireline Telephone Carriers and Radio Common Carriers, 63 F.C.C.2d 87, 89 (1977).

[65] Several non-wireline carriers, for example, claim they have suffered unexplained delays in the provisioning of interconnection circuits necessary for the continued operation of their systems.

[66] The problems are undoubtedly every bit as large (in the context of this small market) as the interconnection problems encountered by landline interexchange carriers in the context of their much larger one.

...al costs are vulnerable to misallocation if shared with LEC ...rations.[76]

Market Factors

Whether intra-RHC cross-subsidy could have any significant anti-competitive impact on the provision of mobile services depends in part on other providers' ability and incentives to respond in kind. Who are the (presumptively more efficient) providers who might be driven out of the market by cross-subsidized competition from the RHCs?

In increasing numbers they are other telephone companies and RHCs, who possess similar incentives (if not quite the same abilities) to cross subsidize their mobile operations.

In ten of the top ninety cellular markets, for example, the wireline (LEC) carrier is currently competing against a non-wireline carrier in which a BOC possesses an ownership interest. This type of overlap will increase with Southwestern's pending acquisitions of parts of Metromedia, and BellSouth's joint venture with MCCA.[77] If and when these acquisitions are completed, the wireline cellular carrier will compete against a LEC-affiliated non-wireline carrier in nearly thirty of the top-ninety markets.

Most of the competition in the paging markets, on the other hand, is still between LECs and independent RCCs, though head-to-head competition between LEC-affiliated companies has been increasing here too, as a result of BOC acquisitions of out-of-region RCC operations.

Regulation

The principal regulatory protections against cross-subsidy in these markets have taken the form of separation requirements. In 1981 the FCC required wireline carriers to offer their cellular services through separate subsidiaries;[78] that requirement was extended with

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[76] Telocator emphasizes that LECs can engage in a wide variety of anticompetitive joint marketing activities combining local exchange services with paging and mobile radio products. For example, when companies place telephone service requests, they often are given sales presentations for paging and mobile services. BOCs can advertise their competitive services on the cover of local telephone books and in other sections that are not for sale to competitors. In addition, BOCs can refer general inquiries about paging service to their own paging departments.

[77] RBOCs have been establishing out-of-region cellular operations under MFJ waiver for some time, and the recent A-Beeper decision will henceforth permit them to do so without waiver. See United States v. Western Electric Co., et al., No. 86-5118 (D.C. Cir August 15, 1986).

[78] Cellular Communications Systems, supra, 86 F.C.C.2d at 491.

minor modifications, to the post-divestiture RHCs.[79] The FCC does not, however, require BOCs to provide paging and conventional mobile services through a separate subsidiary.[80] For its part, the MFJ does not require any separation of intraLATA mobile operations. But the Decree Court's waivers for interLATA RBOC cellular services were made contingent on the use of separate subsidiaries.[81] Between paging and cellular, and intraLATA and interLATA operations, there are thus four service combinations, on which two regulatory authorities (the FCC and the MFJ/Decree Court) impose three quite different separate-subsidiary requirements. Table MB.6.

Table MB.6. SEPARATE SUBSIDIARY REQUIREMENTS

	MFJ	FCC
Cellular		
IntraLATA	No	Yes
InterLATA	RBOCs Barred	Yes
Paging		
IntraLATA	No	No
InterLATA	Yes, Per Waiver	No

Competitive Assessment

In both their geographic scope and in the nature of the operations, mobile services present quite large possibilities for LEC cross-subsidy, at least when compared with other service and equipment markets. Whether market and regulatory factors permit wireline providers of mobile services to gain a significant competitive edge from cross subsidy is much less clear. Interestingly, LECs themselves--who are presumably experts on the competitive advantages of home-turf cross subsidies--remain quite willing to compete against other LECs in out-of-region provision of mobile services.

An RBOC's ability to cross-subsidize mobile operations is not seriously contained by the MFJ's LATA-boundary restrictions. Permitting

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[79] Policy and Rules Concerning the Furnishing of Customer Premises Equipment, Enhanced Services and Cellular Communications Services by the Bell Operating Companies, 95 F.C.C.2d 1117, 1120 (1983).

[80] Paging Systems, 89 F.C.C.2d 1337 (1982). The FCC also rejected proposals to require separate books for wireline paging and conventional mobile operations. Recently, however, the FCC amended its rules to permit BOCs to combine their provision of cellular services with other common carrier mobile services.[35] In response, Ameritech, NYNEX and US West have either initiated efforts or have been granted permission to consolidate their mobile service activities within their structurally separated cellular subsidiaries.

[81] See United States v. Western Electric Co., 578 F. Supp. 643 (D.D.C. 1983).

exchange of billing information and credit authorization between carriers, in a process transparent to the subscriber. The consensus in the industry is that there are still major technical and administrative problems to overcome in realizing this objective.[67]

The MFJ's LATAs were intended to define the boundaries of what was perceived to be a natural monopoly for landline service. Mobile services are clearly competitive at all levels, both intra and interLATA. LATA boundaries are thus irrelevant to mobile network architecture or natural-monopoly economies of providing mobile service. There is no reason to believe that enforcement of LATA boundaries on RBOC-supplied mobile services promotes fairer competition in the mobile communications markets.[68] And while direct competition between BOCs and non-wireline mobile carriers does raise serious questions about discriminatory access, there is also no reason to suppose that BOC involvement in interLATA mobile services will aggravate those problems.[69] To the contrary, the BOCs and Bellcore might be well positioned to play a major role in resolving the difficult standardization issues that are currently slowing development of national mobile networks.[70]

COSTS

A separate competitive concern is that BOCs might impede competition not by discriminating in the access they provide, but by cross-subsidizing their own (by hypothesis) less efficient mobile operations.

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[67] See CTIA Panel Discusses Solutions to 'Roaming' Problems. Communications Week 31 (June 9, 1986).

[68] There is some possibility that keeping LECs out of interLATA services of every description promotes more equitable LEC treatment of landline interexchange carriers, by preventing any form of head-to-head competition between LECs and ICs. For the present, mobile services have far too little capacity to pose any serious competitive threat to landline ICs: the risk of a LEC discrimination against AT&T or MCI for the purpose of promoting interexchange services through a LEC's mobile affiliate is fanciful. That risk may become real when mobile services offer a viable alternative gateway in and out of local markets. But at that point, with two mobile carriers operating in each local market, the LEC bottleneck will have disappeared.

[69] At least one of the national paging networks, for example, is accessed through an 800 code, and LECs are not positioned to discriminate among individual 800 users. See Nationwide Paging Service Announced. Communications Week 6 (Apr. 1, 1985).

[70] As of April 1986, the Electronic Industries Association had reportedly been unable to arrive at standards that would allow handoffs among competing manufacturers' mobile switches. Estimates of when a protocol will emerge range from the end of 1986 to 1987 or 1988. See New Opportunities for System Equipment Vendors. Communications Week 23 (Apr. 21, 1986). This is a matter that the pre-divestiture Bell system would have resolved quickly, smoothly, and no doubt to the complete satisfaction of wireline (but not non-wireline) carriers.

COMPETITIVE STATUS OF THE BELL OPERATING COMPANIES

HEARING

BEFORE THE

SUBCOMMITTEE ON TELECOMMUNICATIONS, CONSUMER PROTECTION, AND FINANCE

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

SECOND SESSION

ON

H.R. 3687 and H.R. 3800

BILLS TO PERMIT THE BELL OPERATING COMPANIES TO PROVIDE INFORMATION SERVICES AND TO MANUFACTURE TELECOMMUNICATIONS EQUIPMENT SO LONG AS SUCH SERVICES AND MANUFACTURING ARE NOT SUBSIDIZED WITH THE PROCEEDS FROM THE PROVISION OF LOCAL EXCHANGE TELEPHONE SERVICE OR OTHER REGULATED TELECOMMUNICATIONS SERVICES AND REGULATION BY THE FEDERAL COMMUNICATIONS COMMISSION

MARCH 13, 1986

Serial No. 99–124

Printed for the use of the Committee on Energy and Commerce

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1986

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, DC 20402

the RBOCs to extend their mobile operations across LATA boundaries would not noticeably increase their ability to impede competition in mobile markets through cross subsidy.

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Asterisk (*) denotes systems in operation
MSA Market Number in Parenthesis

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
Akron (52)	Ohio Bell	Dick Sherwin (201/569-8811)	Type 2 request rejected	not yet established	Ohio non-wireline carriers have filed a petition asking the Ohio PUC to mediate and, if necessary, arbitrate interconnection negotiations.
Albany (66)	New York Telephone	Ken Horowitz (607/272-0380)			
Albuquerque (86)	Mountain Bell	Chris Witte (212/319-7444)	Type 2	Reciprocal based on co-carrier agreement	Contract with Mountain Bell highly favorable to cellular carrier
*Allentown (58)	Bell of Pennsylvania	Wayne Griffin (919/370-3009)	Currently Type 1; Type 2 request rejected	PBX rates under tariff	Intends to seek reciprocal compensation arrangement
Landline	Non-Wireline	Physical	Compensation Arrangement	Comments	

ATTACHMENT B

CELLULAR TELECOMMUNICATIONS DIVISION
INTERCONNECTION INFORMATION PACKET

Telocator Network of America
2000 M Street, NW, Suite 230
Washington, D.C. 20036
(202) 467-4770

	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
[illegible]	[illegible] New England Telephone	Chris Witzel (212/319-7444)	Type 2 will be made available	Telco has proposed a PBX-type compensation relationship	Currently in negotiations. Telco asserts that it does not want to take the lead in recognizing mutuality principle
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Buffalo (25) [illegible]	N.Y. Telephone Co. [illegible]	Curtiss Spangler (716/854-5076) [illegible]	Type 1 [illegible]	Calling-party billing trial. Landline subscriber paying cellular air time rates to N.Y. Telephone	Only market in country with such a calling-party billing system
[illegible] (87)	Ohio Bell	Sally Bloomfield (614/227-2168)	Ohio Bell has instituted a Type 2 arrangement	Ohio Bell has not acknowledged any reciprocal compensation obligation	Participant in Ohio P.U.C. proceeding (See Akron)
Charleston (98)	Southern Bell	Chris Witze (212/319-7444)	Southern Bell is considering making Type 2 available	Southern Bell preparing to file PBX-type tariff	Southern Bell position similar to its position in Florida and North Carolina
Charlotte (67)	Southern Bell	Chris Witzel (212/319-7444)	Type 2 will probably be provided	Southern Bell filed a PBX-type tariff, currently being challenged in state regulatory proceeding	North Carolina PUC should decide the case shortly

Albuquerque (86)	Mountain Bell	Chris Witze (212/319-7444)	Type 2	Reciprocal based on co-carrier agreement	Contract with Mountain Bell highly favorable to cellular carrier
*Allentown (58)	Bell of Pennsylvania	Haynes Griffin (919/370-9809)	Currently Type 1; Type 2 request rejected	PBX rates under tariff	Intends to seek reciprocal compensation arrangement

Carrier	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
[illegible]	Southern Bell	Fran Hopkins (214/960-1977)			
Austin (75)	Southwestern Bell	Kurt Maass (206/451-9217)	Type 2 will be provided	Currently in negotiation. SWB attempting to impose PBX-type charges, refusing to accept mutuality principle	Region-wide negotiations with SWB have so far been unsuccessful
*Baltimore (14)	C&P	Kathryn Condelle (301/984-6033)	Type 1		
Baton Rouge (80)	South Central Bell	Larry Garvey (504/837-8330)	Type 1; SCB appeared willing to grant Type 2, if requested	Contract provides for flat rate payment only from cellular carrier to telco	Compensation arrangement extremely favorable for non-wireline carrier
Birmingham (41)	South Central Bell	Chuck Cooper (305/422-5670)			
*Boston (6)	New England Telephone	Paul Tobin (617/890-1555)	Currently Type 1. Type 2 requested, will purportedly be made available sometime in 1986	PBX-type tariff currently operative	

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
[illegible] (9)	Southwestern Bell	Dan Yost (214/991-9866)	Type 2	PBX-type arrangement proposed by Southwestern Bell, currently under regionwide negotiation	Southwestern Bell has persistently refused to acknowledge reciprocity obligation in compensation
[illegible] (25)	Ohio Bell	Sally Bloomfield (614/227-2368)	Has requested Type 2 and expects to receive from Ohio Bell	PBX-type arrangement proposed by Ohio Bell	Participant in pending PUC proceeding (see Akron)
Denver (19)	Mountain Bell	Burt Means (206/451-9217)	Type 2	Negotiations just underway. Initial Mountain Bell proposal encouraging, not strictly PBX-type arrangement	
Detroit (5)	Michigan Bell	Jim Blake (313/423-8200)	Type 1; expect Type 2 to be provided	PBX-type tariff; Michigan Bell refuses reciprocal compensation arrangement	Carrier may file a petition to the Michigan PUC
El Paso (81)	Southwestern Bell	Chris Witze (212/319-7444)	Currently negotiating Type 2 compensation arrangement	SWB proposing PBX-type compensation arrangement, currently in negotiation	SWB regionally refuses to recognize reciprocity obligation

[illegible]	Southern Bell	Chris Witze (213/319-7444)	2 arrangement Southern Bell is considering making Type 2 available	acknowledged any reciprocal compensation obligation Southern Bell preparing to [illegible] PBX-type tariff	P.U.C. proceeding (see Akron) Southern Bell position similar to its position in Florida and North Carolina
[illegible]	[illegible]	[illegible]	Type 2 will [illegible]	Southern Bell filed a PBX-type tariff, currently being challenged [illegible] regular [illegible] proceeding	North Carolina PUC should decide the case shortly

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
Chattanooga (88)	South Central Bell	Kent Nakamura (202/783-1500)			
Chicago (3)	Illinois Bell	Brian McTernan (312/828-7000)	Type 1	PBX-type arrangement	
Cincinnati (23)	Cincinnati Bell	Sally Bloomfield (614/227-2360)	Cincinnati Bell has refused Type 2 request	Cincinnati Bell refuses to recognize reciprocity or to make a dedicated NXX available	Participant in pending PUC proceeding (see Akron)
Cleveland (16)	Ohio Bell	Sally Bloomfield (614/227-2360)	Type 1; has requested Type 2 and expects it may be made available	Currently PBX-type tariff; pursuing and expects to receive reciprocal compensation arrangement	
Columbus (31)	Ohio Bell	Sally Bloomfield (614/227-2360)	Has requested Type 2 from Ohio Bell	PBX-type arrangement proposed by Ohio Bell	Participant in pending PUC proceeding (see Akron)

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
*Harrisburg (84)	Bell of Pennsylvania	Haynes Griffin (919/370-9089)	Type 1; Bell of PA refused Type 2 request	PBX-type arrangement	Carrier expects to request compensation reciprocity
Hartford (32)	Southern New England Telephone	Chris Witze (212/319-7444)	Anticipate Type 2 will be provided	PBX-type arrangement proposed by telco	SNET's position is that they don't want to take the lead in acknowledging reciprocity
Honolulu (50)	Hawaii Bell	Glen Amatsu (808/528-4288)	Currently negotiating for Type 2	Compensation arrangement under negotiation	
Houston (18)	Southwestern Bell	Richard Wirth (713/558-4551)	Type 2	SWB has proposed a PBX-type arrangement. Parties currently negotiating	SWB regionally refuses to acknowledge reciprocity
*Indianapolis (28)	Indiana Bell	Dick Barnaby (317/253-3308)	Type 2 to be provided pursuant to settlement of FCC complaint by cellular carrier	PBX-type tariff proposed by Indiana Bell, challenged by cellular carrier in state regulatory proceeding. Indiana PUC to resolve shortly	Indiana Bell has steadfastly refused to acknowledge reciprocity obligation in compensation

Partial	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
Flint (66)	Michigan Bell	Jim Blake (303/623-8200)	Type 1; expect Type 2 to be provided upon request	PBX-type tariff; Michigan Bell refuses reciprocal compensation arrangement	Carrier may file a petition to the Michigan PUC
[illegible]	Bell [illegible]	[illegible]	[illegible]	[illegible]	
Fresno (74)	Pacific Bell	Kurt Maass (206/451-9217)			No interconnection activity to date
[illegible] Gary (54)	Indiana Bell	Brian McTernan (312/828-7000)			
[illegible] Pontiac (64)	Michigan Bell	Jim Blake (303/623-8200)	Anticipate type 2 will be provided	Michigan Bell has proposed a PBX-type arrangement	See Detroit, above
Greensboro (67)	Southern Bell	Bill Boyce (919/668-3600)			Proceeding regarding cellular compensation currently pending before N.C. PUC
[illegible] Greenville (67)	Southern Bell	Chris Mitse (212/319-7440)	Anticipate SB will provide Type 2	SB has filed a PBX-type tariff for cellular	Expect lengthy regulatory proceeding on compensation issues

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
Long Branch (70)	New Jersey Bell	Michael Schwartzman (609/348-1688)	Type 2 will be provided pursuant to contract	Carrier agreement reached on compensation	
Los Angeles (2)	Pacific Bell	John Bourg (213/271-1266)	Pacific Bell has refused Type 2 request	PBX-type arrangement proposed, currently in negotiations	Pacific Bell has stated that it views the cellular carrier as a hybrid, between an interexchange carrier and local exchange carrier
Louisville (37)	South Central Bell	Larry Anderson (502/267-2355)			
Memphis (36)	South Central Bell	Chuck Cooper (305/422-5678)			
Miami (12)	Southern Bell	Bill Ford (305/792-2355)	Southern Bell has agreed to provide Type 2 when the Technical Advisory regarding the feasibility of such interconnection is issued by Bellcore	Currently PBX-type tariff; Type 2 compensation arrangement to be determined	SB has adamantly rejected the concept of reciprocity; current status pursuant to settlement agreement signed by carrier to avoid possible higher charges imposed by Florida PUC

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
Jacksonville (51)	Southern Bell	Chuck Cooper (305/422-5678)	No activity to date	SB entered into settlement with RCCs and Miami non-wireline carrier based on PBX-type arrangement; anticipate it will seek similar arrangement here	
Johnson City (85)	Southwestern Bell	Chuck Cooper (305/422-5678)			
Kansas City (24)	Southwestern Bell	Burt Mann (206/451-9217)	Type 2	SWB has proposed PBX-type arrangement, currently in negotiations	
Knoxville (79)	South Central Bell	Chuck Cooper (305/422-5678)			
Lansing (78)	Michigan Bell	Jim Blake (303/621-8208)	Anticipate Type 2 will be provided	Michigan Bell has proposed a PBX type arrangement	See Detroit

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
New Haven (69)	Southern New England Telephone	Chris Witse (212/319-7444)	Type 2 will be made available	Telco has proposed a PBX-type compensation relationship	Currently in negotiations. Telco asserts that it does not want to take the lead in recognizing mutuality principle
New Orleans (29)	South Central Bell	Larry Garvey (504/837-8130)	Type 1; SCB appeared agreeable to Type 2, if requested	Not yet resolved, currently under contract	Cellular carrier presently satisfied with compensation arrangement
New York (1)	New York Telephone; New Jersey Bell	Ron Olsen (215/666-9850)	Type 1; Type 2 request rejected by New York Telephone	PBX-type arrangement	New Jersey Bell side of New York MSA more reasonable -- New Jersey Bell provides Type 2 physical connections and acknowledges reciprocity in compensation
Norfolk (63)	C&P	Warren Vande Stadt (804/473-9688)	Type 1; Type 2 request rejected	One-way arrangement proposed by C&P - no reciprocity	Bell Atlantic claims to be considering "policy decision" on Type 2 request

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
(37)	Bell	(502/267-2355)			
Memphis (36)	South Central Bell	Chuck Cooper (305/422-5678)			
Miami (12)	Southern Bell	Bill Ford (305/792-2355)	Southern Bell has agreed to provide Type 2 when the Technical Advisory regarding the feasibility of such interconnection is issued by Bellcore	Currently PBX-type tariff; Type 2 compensation arrangement to be determined	SB has adamantly rejected the concept of reciprocity; current status pursuant to settlement agreement signed by carrier to avoid possible higher charges imposed by Florida PUC
(43) Milwaukee (21)	Wisconsin Bell	Dick Winters (414/783-8000)	Type 1	PBX-type arrangement	
*Minneapolis (15)	Northwestern Bell	Burt Mease (206/451-9217)	Type 2	Minnesota PUC proceeding ongoing since mid-1981 concerning NWB proposed PBX-type tariff	NWB now also proposing to charge recurring charge for dedicated NXX
Mobile (83)	South Central Bell	Mike Caffarel (201/875-5000)			
Nashville (46)	South Central Bell	Chuck Cooper (305/422-5678)			
New Bedford (76)	New England Telephone	Chris Mitse (212/319-7444)	New England Telephone has indicated resistance to Type 2 in initial stages of contact		
New Brunswick (62)	New Jersey Bell	Michael Schwartz (609/340-1400)	Type 2 will be provided pursuant to contract	Co-carrier agreement reached on compensation	

New York (1)	New York Telephone; New Jersey Bell	Ron Olsen (215/665-9850)	Type 1; Type 2 request rejected by New York Telephone	PBX-type arrangement	New Jersey Bell side of New York MSA more reasonable -- New Jersey Bell provides Type 2 physical connections and acknowledges reciprocity in compensation
Norfolk (63)		Warren Vande Stadt (804/673-9600)	Type 1; Type 2 request rejected	PBX-type arrangement proposed by C&P - no reciprocity	Bell Atlantic claims to be considering "policy decision" on Type 2 request

Market	Landline Telephone Co.	Non-Wireline Contact	Physical Interconnection	Compensation Arrangement	Comments
N.E. Pennsylvania (86)	Bell of Pennsylvania	Gregory Farrell (717/825-2355)	Anticipates receiving Type 2	PBX-type arrangement	Carrier may seek reciprocity on compensation
Oklahoma City (45)	Southwestern Bell	Kurt Meese (206/451-9217)	SWB resisting Type 2 request	Currently in negotiation, SWB rejecting reciprocity concept	SWB attempting to impose feature Group B
Omaha (65)	Northwestern Bell	Dennis Finnerman (212/607-0055)	Type 1; interested in Type 2 but uncertain about NWB position	No activity to date	Carrier intends to seek Type 2 and reciprocal compensation arrangement
Orlando (60)	Southern Bell	Chuck Cooper (305/421-5678)			
Oxnard (73)	Pacific Bell	Stanley Harris (805/526-3773)			