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March 6, 1996

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

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Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554
STOP CODE: 1170

Re: Comcast Corporation's Comments on *Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket No. 95-185 (released January 11, 1996) ("Notice")

Dear Mr. Caton:

Comcast Corporation ("Comcast") submits herewith an original and nine copies, attached hereto, of an amended copy of its comments filed in the above-referenced proceeding on March 4, 1996. The amended copy in accordance with paragraph 133 of the Notice begins each new section on a new page.

The amended copy does not differ in any substantive respect from the comments Comcast filed on March 4, 1996. Please incorporate the amended copy of Comcast's comments into the record of the above-referenced proceeding.

Respectfully submitted,

COMCAST CORPORATION

Peter A. Batacan

Its Attorney

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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OFFICE OF SECRETARY

In the Matter of	)	
	)	
Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers	)	CC Docket No. 95-185
	)	
Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Service Providers	)	CC Docket No. 94-54

COMMENTS

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March 4, 1996

SUMMARY

Comcast Corporation ("Comcast") strongly supports the Commission's tentative conclusion that interim bill-and-keep interconnection between local exchange carrier ("LEC") and commercial mobile radio services ("CMRS") networks would be in the public interest. As Comcast's President, Brian L. Roberts, has stated, the Commission's proposal to adopt new rules governing interconnection of wireless and wireline networks "may be the single biggest step the FCC has taken so far to promote local telephone competition." *See* Comcast Corporation, Press Release, December 15, 1995.

Under a bill-and-keep interconnection model, LECs and CMRS providers would not charge one another for transport or terminating calls originated on one another's networks. Bill-and-keep is a critical step to fostering the competitive growth of an advanced, state-of-the-art wireless and landline public switched telephone network ("PSTN"). In contrast, the aggregate interconnection charge of $.025 per minute that Comcast currently pays to Bell Atlantic is about *1250 percent* of the average incremental cost of $.002 per minute of providing such interconnection. Continuation of the *status quo* will only stifle the emergence of robust wireless competition.

The successful realization and commercial viability of a nationwide information superhighway hinge on the establishment of low-cost interconnectivity among the nation's wireless and landline telecommunications service providers. The availability of just, reasonable and nondiscriminatory interconnection between LEC landline facilities and CMRS providers will enable consumers to benefit from integrated, efficient and value-added wireless and landline networks. Cellular and personal communications services ("PCS") enable mobile consumers to communicate transparently and efficiently among a myriad of

network architectures and far-flung geographic locations. The cellular and PCS industries have invested intensively in research and development to build robust, user-friendly wireless networks, featuring superior roaming capability and unmatched reliability. Bill-and-keep interconnection policies are essential to foster efficient interconnection between wireless networks and incumbent landline LEC ("ILEC") facilities.

Existing interconnection arrangements between landline ILECs and mobile service providers, however, have hindered the development of the wireless industry. By abusing bottleneck control over essential local switching and loop facilities, landline ILECs have been able to impose discriminatory and anticompetitive rates, terms and conditions on interconnection to hamper wireless competition. By manipulating traffic flows or shifting costs among monopoly and competitive services, landline ILECs could perpetuate their dominant market positions to the detriment of competitive wireless interconnection. Bill-and-keep interconnection would promote LEC-to-CMRS competition, in part, by restraining ILECs' marketplace abuse.

Strong federal and state support for bill-and-keep also counsel in favor of its adoption by the Commission. Both federal and state regulators have recognized the wisdom of a bill-and-keep policy for interconnection between LECs and competitors. The Telecommunications Act of 1996 ("TCA") requires mutual, reciprocal compensation for costs associated with the transport and termination of one another's traffic. The TCA requires that the terms and conditions of call termination be based on incremental cost, and also explicitly permits bill-and-keep arrangements as a proxy for reciprocal compensation. Several states, including Arizona, California, Connecticut, Oregon, Texas and Washington,

have directed ILECs to provide bill-and-keep on an interim basis in interconnection arrangements with competitive landline local carriers. These efforts to implement bill-and-keep arrangements among ILECs and potential competitors support the aims the Notice has advanced.

Bill-and-keep is symmetrical, another necessary aspect of pro-competitive LEC-to-CMRS interconnection. Requiring symmetrical interconnection arrangements will prevent ILECs from disfavoring competing wireless service providers. Symmetry will also prevent ILECs from abusing market power. Today, payment of an uneconomically high interconnection rate by an ILEC-affiliated wireless service provider, as opposed to a non-affiliated wireless service provider, is offset by the ILEC parent's realization of additional revenues from the uneconomically high interconnection rate. In contrast, a non-affiliated wireless service provider would incur a non-recoverable loss from paying an uneconomically high interconnection rate to the ILEC. Furthermore, because wireless carriers and ILECs are co-carriers, or network "peers", symmetrical interconnection will enable both wireless carriers and ILECs to enjoy the benefits of one another's networks. The Commission should, therefore, establish symmetrical interconnection arrangements as a requirement.

The Notice also seeks comment on whether bill-and-keep should be available only at the ILEC end office. Availability of bill-and-keep arrangements should not be limited to a particular point in the ILEC's networks. Because varying wireless network architectures will necessitate flexible interconnection configurations, wireless service providers will require competitive bill-and-keep interconnection at the ILEC end office and the tandem

switch. The TCA, for example, requires that telecommunications carriers be able to interconnect at "any technically feasible point" on the ILEC's network. A seamless wireless-to-landline "network of networks" will depend on making bill-and-keep available at any point where a CMRS provider interconnects into the landline ILEC network.

The Notice seeks comment on three alternative jurisdictional approaches for establishing standards for LEC-to-CMRS interconnection. Only the third option, which establishes specific federal requirements for all LEC-to-CMRS interconnection arrangements, will truly promote wireless competition, and only the third option is consistent with the Omnibus Budget Reconciliation Act of 1993 (the "Budget Act") and the TCA.

The statutory framework of the Budget Act and its legislative history demonstrate that Congress vested the Commission with exclusive jurisdiction over the rates, terms and conditions of CMRS service and, necessarily, LEC-to-CMRS interconnection. With the adoption of the Budget Act of 1993 and amendments to Sections 2(b) and 332 of the Communications Act, Congress vested the Commission with exclusive jurisdiction over CMRS service, and interconnection between LECs and CMRS providers. Establishing a uniform, federal bill-and-keep and LEC-to-CMRS interconnection policy is necessarily within the grant of exclusive jurisdictional authority to the FCC under the Budget Act.

The basis of the Commission's jurisdiction over communications provided by mobile radio is different from its jurisdiction over landline communications. The Budget Act fundamentally realigned the balance of federal/state jurisdiction over CMRS. The Commission therefore has exclusive authority to adopt a uniform federal bill-and-keep

policy. Furthermore, adoption of a uniform bill-and-keep interconnection policy will promote the Commission's and Congress's compelling interest in the competitive deployment of a seamless nationwide "network of networks."

In light of the Commission's exclusive jurisdiction over LEC-to-CMRS interconnection, the Commission must reconsider its decision in the *Lousiana PSC Rate Regulation Order* that the Budget Act does not limit the states' jurisdiction over intrastate LEC-to-CMRS interconnection rates. Contrary to this conclusion, the Budget Act federalized CMRS services so that any interconnection provided by LECs to commercial mobile radio services is also subject to the Commission's exclusive federal jurisdiction. Congress having "occupied the field" of CMRS regulation, therefore, the Commission's deferral to the states on LEC-to-CMRS interconnection would flatly contradict Congress's intent in enacting the Budget Act.

The Telecommunications Act of 1996 ("TCA") does not alter the Budget Act's vesting of exclusive jurisdiction with the Commission over LEC-to-CMRS interconnection. Indeed, Congress included a "savings clause" in the interconnection provisions of the TCA expressly to preserve any existing Commission authority the Commission had upon adoption of the TCA. Thus, the Budget Act's grant of exclusive jurisdiction over LEC-to-CMRS interconnection to the Commission is not disturbed by the TCA's enactment. Therefore, the Commission must rule affirmatively that LEC-to-CMRS interconnection is subject to regulation by the Commission exclusively.

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To: The Commission

COMMENTS

Comcast Corporation ("Comcast"), by its attorneys, hereby submits its comments on the above-captioned Notice regarding interconnection between local exchange carriers ("LECs") and commercial mobile radio service ("CMRS") providers.[1/] Because of its cellular and personal communications services ("PCS") interests, Comcast has an essential interest in the price, terms and conditions charged to CMRS providers to interconnect with the public switched telephone network, and therefore, in the outcome of this proceeding.[2/]

1/ *See Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers; Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Service Providers*, Notice of Proposed Rulemaking CC Docket Nos. 95-185 & 94-54 (released January 11, 1996) ("Notice"). By order of the Commission, these comments generally follow the Commission's "recommended format." Notice, at note 171.

2/ Comcast is a partner in Sprint Spectrum (licensed as WirelessCo, L.P.), the licensee of 30 broadband PCS licenses in MTAs including New York, San Francisco-Oakland-San Jose, Detroit and Dallas-Ft. Worth. Comcast also is the A Block cellular licensee in the Philadelphia Metropolitan Statistical Area ("MSA") and surrounding MSAs through wholly owned subsidiaries.

I. INTRODUCTION

Comcast applauds the Commission for proposing to establish a uniform bill-and-keep mechanism for LEC-to-CMRS interconnection. Expeditious adoption of bill-and-keep interconnection between LECs and CMRS providers is vital to promote competition between landline and wireless telephone service providers. Only bill-and-keep interconnection between LECs and CMRS providers will advance the Commission's important goals of fostering competitive delivery of telecommunications services to consumers, facilitating efficient interconnection of a wireline and wireless "network of networks," and implementing effective regulatory safeguards against abuse of market power by incumbent LECs ("ILECs").

Among the jurisdictional approaches advanced in the Notice, only one satisfies both legal and policy imperatives — a federal interconnection policy over which the FCC exercises exclusive and sole jurisdiction. The amendments to the Communications Act implemented by the Omnibus Budget Reconciliation Act of 1993 (the "Budget Act") have vested the FCC with sole and exclusive jurisdiction over all aspects of interconnection between LECs and CMRS providers.

Adoption of a bill-and-keep interconnection mechanism should apply to personal communications service ("PCS"), cellular and enhanced specialized mobile radio ("ESMR") licensees. Application of pro-competitive interconnection policies to these providers will promote the rapid construction of a "network of networks."

II. THE COMMISSION MUST ADOPT BILL-AND-KEEP FOR COMPENSATION FOR INTERCONNECTED TRAFFIC BETWEEN LECS' AND CMRS PROVIDERS' NETWORKS.

The Notice seeks comment on a number of alternative interim pricing policies for LEC-to-CMRS interconnection, but tentatively concludes that a bill-and-keep arrangement for interconnected traffic between LECs' and CMRS providers' networks represents the best interim solution.[3/] Comcast urges the Commission to adopt its tentative conclusion, as modified herein.

A bill-and-keep model is necessary to restrain LECs from abusing their market power through interconnection arrangements with commercial mobile radio services. An amalgamation of existing LEC access charges, peak-load pricing or other proposals are not appropriate interim policies, and most of the alternatives do not merit consideration as long-term policies.

3/ *See* Notice, at ¶¶ 60-62.

A. Adoption of Interim Bill-and-Keep Compensation Arrangements Is in the Public Interest.

The Commission correctly concluded that bill-and-keep provides the best interim approach to LEC-to-CMRS interconnection pricing. By establishing a zero-based charge for call termination on incumbent LEC and CMRS networks, bill-and-keep restrains incumbent LEC ("ILEC")[4/] incentives and ability to manipulate interconnection prices and traffic in an anticompetitive manner. Thus, bill-and-keep should stimulate pro-competitive interconnection between ILECs and wireless competitors.

1. Existing Compensation Arrangements Demonstrate ILEC Abuse of Market Power.

Existing ILEC-to-CMRS interconnection arrangements evidence how existing Commission rules do not limit the ability of ILECs to engage in anticompetitive abuse of market power. The dominant market position of ILECs is well-documented.[5/] ILECs have demonstrated a willingness and ability, under existing rules, improperly to extend this market power into cellular telephony by means of unjust and unreasonable discriminatory interconnection rates, terms and conditions.

4/ Our discussion of ILECs, as opposed to LECs, is based on their dominant market position and unwillingness to adapt interconnection arrangements to a just, reasonable and nondiscriminatory framework. Comcast has urged that similar considerations favor bill-and-keep treatment of interconnection arrangements between LECs and competitive local exchange carriers ("CLCs").

5/ Recent studies by the FCC's Industry Analysis Division show that Tier 1 LECs control "97% of access revenues — a level roughly comparable to the Bell System's share of toll revenues in 1981." *See Common Carrier Competition; Spring 1995*, at 5 (Industry Analysis Div. released May 31, 1995); *attached to FCC Releases Common Carrier Competition Report*, News Release, Rep. No. CC 95-31 (released May 31, 1995) ("*1995 Competition Report*").

Many non-wireline cellular operators today have only one option for interconnection to ILEC essential facilities — existing access tariffs. By force-fitting non-wireline cellular operations into the existing interconnection or access tariff regime, ILECs undercut some of the potential benefits that non-wireline cellular operations could otherwise produce. The ILECs' "take-it-or-leave-it" attitude in providing interconnection arrangements often results in unjust, unreasonable and discriminatory interconnection rates, terms and conditions.

Comcast Cellular Communications, Inc. ("Comcast Cellular"), for example, pays an aggregate interconnection charge to Bell Atlantic that is *over ten times* the average incremental cost of terminating a call on a LEC network. Comcast Cellular takes interconnection from Bell Atlantic under contract, which generally references the terms of Bell Atlantic's switched access tariffs on file with the Commission.[6/] The agreement provides Comcast Cellular with Type 2A, Feature Group D ("FGD") interconnection.[7/]

6/ Comcast Cellular does not submit the contract here, as it is proprietary. The general terms of the Bell Atlantic's access tariff upon which the contract is based may be cited, however, as they are publicly available. *See* Bell Atlantic Telephone Companies, Tariff F.C.C. No. 1, Transmittal Nos. 777, 837.

7/ Type 1 interconnection is similar to that provided by a LEC to a private branch exchange ("PBX"), involves an end office connection combining features of line-side and trunk-side connections and uses trunk-side signaling protocols. Type 2A interconnection gives a cellular carrier trunk-side connections at the access tandem in the same manner as any wireline carrier. Type 2B interconnection provides a cellular carrier with trunk-side connections at the end office in the same manner as high-usage trunks. *See Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Services*, Notice of Proposed Rulemaking and Notice of Inquiry, CC Docket No. 94-54, RM 8012, 9 FCC Rcd 5408, 5451-2 n.188 (1994) ("*CMRS Equal Access and Interconnection Notice*") (citing *The Need To Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services*, Memorandum Opinion and Order, 4 FCC Rcd 2369, 2377 n.16 (1989) ("*Cellular Interconnection Order*"), *aff'g* 2 FCC Rcd 29810 (1987)). Feature Group D

According to a recent public engineering study, the average incremental cost of terminating traffic at LEC end offices is $.002 per minute.[8/] Nevertheless, the aggregate charge Comcast Cellular pays Bell Atlantic for call termination is $.025 per minute or twelve-and-a-half (12.5) times the average incremental cost of $.002 per minute.[9/] According to the highest reported rate for Type 1 interconnection, some cellular operators are paying seventy-five (75) times the average incremental cost of interconnection at $.164 per minute.[10/]

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provides a cellular licensee with a trunk-side connection, "1+" access, and a 10XXX access code to reach a customer's carrier of choice when dialing from a telephone not presubscribed to the customer's preferred carrier. *See CMRS Equal Access and Interconnection Notice*, 9 FCC Rcd at 5443.

8/ The most comprehensive public engineering study of incremental cost of interconnection was done by the Incremental Cost Task Force with members from GTE, Pacific Bell, the California Public Utilities Commission, and the RAND Corporation. *See* Bridger Mitchell, INCREMENTAL COSTS OF TELEPHONE ACCESS AND LOCAL USE (Santa Monica, Calif: The Rand Corporation, 1990); *reprinted in* William Pollard, ed., MARGINAL COST TECHNIQUES FOR TELEPHONE SERVICES: SYMPOSIUM PROCEEDINGS, NRRI 91-6, (Columbus, Ohio: National Regulatory Research Institute, 1991) ("Incremental Cost Task Force Study"); *summarized in See* Dr. Gerald W. Brock, *Interconnection and Mutual Compensation With Partial Competition*, attached to Comments of Comcast Corporation, Appendix, *in* CC Docket No. 94-54, at 3-6. (filed September 12, 1994) ("Brock Interconnection Paper").

9/ *See* Bell Atlantic Telephone Companies, Tariff F.C.C. No. 1, Transmittal No. 777, 8th Revised Page 248.3, 51st Revised Page 254, 17th Revised Page 253.1 (effective August 1, 1995), Transmittal No. 837, 22nd Revised Page 248.1 (effective February 1, 1996). While it would arguably be more precise to make a direct comparison of Bell Atlantic's incremental cost for interconnection to the interconnection rate it charges Comcast Cellular, because Bell Atlantic's cost information is not readily available, average incremental cost figures established by the Incremental Cost Task Force Study provide the best available baseline measure.

10/ A national survey of LEC-to-cellular interconnection rates jointly conducted by D.C.-based Malarkey-Taylor Associates, Inc. and Economic and Management Consultants International, Inc., reveals the following: (i) for Type 1 LEC-to-cellular interconnection, the maximum rate was $.164 per minute, the minimum was $.019 per minute, and the average was $.051 per minute; (ii) for Type 2A LEC-to-cellular

There is evidence that ILECs also have engaged in anticompetitive discrimination in interconnection tariffs at the state level. The California Public Utility Commission's ("California PUC") *Local Competition Order* requires that ILECs make just, reasonable and nondiscriminatory rates, terms and conditions available in their interconnection tariffs to competitive local exchange carriers ("CLCs").[11/] Pacific Bell has introduced terms into its CLC interconnection tariff, however, that would exclude all wireless carriers.[12/] According to AT&T Wireless, while CLCs will receive "one type of interconnection under the local interconnection tariff, at one set of rates and under one set of terms and conditions, [] other companies offering similar local exchange-like telecommunications services (such as cellular services) will have to interconnect under different terms and at different rates."[13/]

Comcast Cellular has also documented, moreover, that ILECs have discriminated in favor of their cellular affiliates. Comcast Cellular recently demonstrated, for example, that the merger of the cellular operations of Bell Atlantic Mobile Systems, Inc. ("BAMS") and

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interconnection, the maximum rate was $.076 per minute, the minimum was $.014 per minute, and the average was $.029 per minute; and (iii) for Type 2B LEC-to-cellular interconnection the maximum rate was $.076 per minute, the minimum was $.008 per minute, and the average was $.025 per minute. *See Interconnection Compensation Perspective, reprinted in* Proceedings of the PCIA Leg/Reg/WINC Meeting, at 9 (February 8, 1996).

11/ *See Order Instituting Rulemaking and Investigation on the Commission's Own Motion Into Competition for Local Exchange Service*, R.95-04-043, I.95-04-044, Decision 95-07-054 (released July 25, 1995) ("*California PUC Local Competition Order*").

12/ *See* Motion of AT&T Wireless Services, Inc. for Clarification or Modification of Pacific Bell's Proposed Interconnection Tariff, *filed in California PUC Local Competition* proceeding on December 18, 1995 ("AT&T Wireless Motion"); Response by Los Angeles Cellular Telephone Company to AT&T Wireless Motion, filed on January 2, 1996.

13/ *See* AT&T Wireless Motion, at 2.

NYNEX Mobile Communications Co. ("NYNEX Mobile") into the "Cellco" partnership would enable these BOCs to engage in discriminatory roaming practices throughout the Northeast in favor of their cellular affiliates over Comcast's competing cellular operations.[14/] Although the Wireless Telecommunications Bureau's Order acknowledged that the concentration in the Cellco entity of non-wireline cellular licenses in markets adjacent to wireline cellular licenses would "enable BAMS to disrupt cooperation among [non-wireline] carriers", existing Commission orders and requirements have not prevented such concentration from taking place.[15/] Ironically, one of the first acts of Cellco as an officially merged entity has been to announce deep cuts in its roaming rates targeted to customers of Cellco's competitors.[16/]

14/ *See* Comcast Cellular Communications, Inc., Application For Review of *Bell Atlantic Mobile Systems, Inc. and NYNEX Mobile Communications Co.; Application for Transfer of Control of Eighty-Two Cellular Radio Licenses to Cellco Partnership*, File Nos. 00762-CL-AL-1-95 *et al.*, filed on June 19, 1995 ("Comcast Application for Review").

15/ *See Bell Atlantic Mobile Systems, Inc. and NYNEX Mobile Communications Co.; Application for Transfer of Control of Eighty-Two Cellular Radio Licenses to Cellco Partnership*, File Nos. 00762-CL-AL-1-95 *et al.*, DA 95-1129 (Wireless Tel. Bur. released May 19, 1995) ("*Cellco Order*").

16/ *See Newly Emerged Carrier Makes Affordable Roaming First Order of Business*, Mobile Phone News, July 17, 1995, at 3 (Cellco announces implementation of 59-cent standardized roaming rate, a 40-percent reduction in most areas, in "radio spots [that] are more likely to get the attention of existing customers of competing carriers who can compare the roaming charges they are paying to the [Cellco] offer").

2. General Pricing Principles

[This section left intentionally blank. *See* subsection II(A)(3)(b) *infra.*]

3. The Commission Must Adopt Bill-and-Keep on an Interim Basis To Speed the Development of Wireless Competition in the Local Telephone Market.

Comcast strongly supports the Commission's tentative conclusion that adoption of a bill-and-keep model provides the best interim approach to LEC-to-CMRS interconnection. A bill-and-keep model recognizes reciprocal benefits that wireless carriers and LECs bring to an interconnection arrangement. In stimulating CMRS competition, bill-and-keep also benefits incumbent LECs by expanding network usage and, thus, making it more efficient. Alternative approaches to LEC-to-CMRS interconnection identified in the Notice, such as applying peak-load pricing or a subset of access charges, would require complex inquiries that will unduly retard the emergence of competitive commercial mobile radio services and unnecessarily drain administrative and industry resources.

Bill-and-keep must be made available at any technically feasible point on the incumbent LEC's network at which a CMRS provider chooses to interconnect. The Notice suggests that bill-and-keep would be available only at LEC end offices. The success of bill-and-keep depends on ensuring it is available for interconnection at tandem switches as well.

a. Bill-and-Keep Provides the Optimal Interim Solution.

Mutual compensation arrangements must not act as a barrier to the introduction of facilities-based competition, wireless or wireline.[17/] Accordingly, the terms and conditions

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17/ *See* Brock Incremental Cost Paper.

for termination of one another's traffic must recognize the reciprocal nature, and benefits, of the call termination function.

Adoption of a "bill-and-keep" model of mutual compensation for interconnection, at least on an interim basis, will ensure the greatest efficiency and competitive gains. Under a bill-and-keep model of interconnection pricing, new entrants and incumbents would not charge each other for terminating one another's traffic.[18/] A bill-and-keep model is economically efficient if: (i) traffic flow is roughly balanced in either direction;[19/] *or* (ii) actual costs of terminating traffic are low in relation to the transaction costs of measuring and charging for terminating traffic.[20/]

A zero charge for call termination would produce the same result as balanced traffic flows. Even if traffic flow is not balanced, bill-and-keep interconnection charges still make economic sense if the actual costs of terminating traffic are low in relation to the costs of measuring and charging for terminating traffic. In this regard, studies show that the average incremental cost of terminating traffic at LEC end offices is $.002 per minute.[21/] It

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18/ *See* Dr. Gerald W. Brock, *Interconnection and Mutual Compensation With Partial Competition*, attached to Comments of Comcast Corporation, Appendix, *in* CC Docket No. 94-54, at 24 (filed September 12, 1994) ("Brock Interconnection Paper").

19/ While traffic flows currently may be imbalanced in favor of the ILEC, this is most likely due to the uneconomically high interconnection rates charged to wireless interconnectors. In any event, because condition (ii) obtains, bill-and-keep with a zero interconnection charge is consistent with the public interest.

20/ *See* Brock Incremental Cost Paper, at 2; Brock Interconnection Paper, at 24.

21/ *See* Incremental Cost Task Force Study, at note 8 *supra*. At $.025 per minute, the rate that Bell Atlantic charges Comcast Cellular for cellular interconnection is one thousand two hundred and fifty percent (1250%) of the average incremental cost of $.002 per minute of providing the service. *See* discussion at notes 8-9 *supra*. By no stretch of the

thus has been asserted that a zero charge for call termination is economically efficient because the actual cost of terminating traffic expressed on a per minute basis — $.002 per minute — is low in relation to the administrative and transactional costs associated with measuring and charging for the actual cost of terminating traffic.[22/]

Federal and state regulatory authorities are also recognizing the competitive benefits and administrative efficiencies to be gained by adoption of a bill-and-keep policy for interconnection of incumbent LECs and competitors. The TCA requires that interconnection arrangements between ILECs and other telecommunications carriers ensure mutual, reciprocal compensation for costs associated with the transport and termination of one another's traffic.[23/] The TCA requires that the terms and conditions of call termination be based on incremental cost, and also explicitly permits bill-and-keep arrangements as a proxy for reciprocal compensation.[24/] Congress thus recognizes that interconnection arrangements between incumbent LECs and competing service providers for origination and termination of one another's traffic should not be viewed as ordinary sales of services to customers, but rather, as mutual exchanges of traffic among co-carriers.

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imagination can earnings well over 1000 percent above average incremental cost be called just and reasonable. *See* 47 U.S.C. § 201(b).

22/ *See Ex Parte* Letter from J.G. Harrington, Counsel for Cox Enterprises, Inc., to William F.Caton, Secretary, Federal Communications Commission, filed in CC Docket No. 94-54 on October 19, 1995.

23/ *See* 47 U.S.C. §§ 251(b)(5), 251(c)(2)-(3), TCA, § 101.

24/ *See* 47 U.S.C. § 252(d)(1)-(2), TCA, § 101.

In sum, Congress has found that bill-and-keep constitutes an appropriate form of reciprocal compensation among competing telecommunications service providers.

Several states, including Arizona, California, Connecticut, Oregon, Texas and Washington, have directed LECs to provide bill-and-keep on an interim basis in interconnection arrangements with competitive landline local carriers.[25/] These states have acknowledged that a zero-based charge for termination of traffic between the incumbent LEC and competitor networks will promote local exchange competition and reflects the value of a mutual exchange of traffic between competitors, rather than an ordinary service provided by a carrier to customers.

b. Alternative LEC-to-CMRS Interconnection Proposals Do Not Allow Immediate Efficient LEC-to-CMRS Interconnection.

The Notice reviews a number of alternative interim LEC-to-CMRS interconnection models. None of these alternatives approaches the administrative simplicity of bill-and-

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25/ *See Rules for Telecommunications Interconnection and Unbundling*, Docket No. R-0000-96-001, Decision No. 59438 (Arizona Corporation Comm'n, January 11, 1996) ("*Arizona Interconnection Order*"); *California PUC Local Competition Order*, at 38-9; *DPUC Investigation into the Unbundling of the Southern New England Tel. Co's Local Telecommunications Network*, Docket No. 94-10-02 (Conn. Dep't of Pub. Util. Control, September 22, 1995) ("*Connecticut DPUC Bill-and-Keep Order*"); *Applications of Electric Lightwave, Inc., et al for Certificates of Authority to Provide Telecommunications Services in Oregon and Classification as Competitive Telecommunications Providers*, CP 1, CP 14, CP 15, Order (Oregon Pub. Util. Comm'n, January 12, 1996) ("*Oregon PUC Order*"); Texas (HB-2128); *Washington Util. & Transportation Comm'n v. U S West Communications, Inc., et al.*, Fourth Supplemental Order Rejecting Tariff Filings and Ordering Refiling; Granting Complaints, In Part, Docket Nos. UT-941464, UT-941465, UT-950146, and UT-950265 (Washington Util. & Transp. Comm'n, adopted October 31, 1995) ("*Washington UTC Order*"), *aff'd sub nom., U S West Communications, Inc. v. Washington Util. & Transportation Comm'n*, Case No. 96-2-00177-5 SEA (Wash. Sup.Ct. King County, adopted January 23, 1996) ("*Washington Superior Court Order*").

keep. In addition, any of the proposed alternative rate levels and rate structures that may have any merit will involve complex economic analysis and invite extensive administrative delay. The proposal to employ peak-load pricing, for example, would entail protracted inquiries that will only serve to delay the introduction of competitive wireless services.

Under the theory discussed in the Notice, network capacity costs for LEC-to-CMRS interconnection should be recovered through traffic-sensitive rates for peak-period traffic, with lower rates for off-peak usage, because "the cost of [network] capacity is a function of the volume of traffic [carried on network] facilities."[26/] The Notice alternatively proposes that bill-and-keep be limited only to "off-peak" LEC-to-CMRS interconnection traffic, with usage-based charges for "peak" LEC-to-CMRS interconnection traffic.[27/] The Notice's analysis of the viability of peak-load pricing in a LEC-to-CMRS interconnection context, as well as its tentative proposal to limit bill-and-keep to "off-peak" traffic, as discussed below, contradicts existing Commission precedent and, if ultimately adopted, would hamper the rapid deployment of CMRS networks to consumers.[28/]

26/ *See* Notice, at ¶¶ 44-5.

27/ *See* Notice, at ¶ 61.

28/ The Brock Interconnection Paper identifies the competitive harm from interconnection arrangements that employ usage-based pricing during peak periods and bill-and-keep for off-peak periods. Addressing the NYNEX-Teleport agreement, the Brock Interconnection Paper concludes that:

> [w]hile the structure of the NYNEX-Teleport agreement is beneficial for equating termination charges to cost during the off-peak period, it does not in itself solve the problem of increasing market power through high charges . . . . If the established price for a channel of given capacity is set far above cost, then the company with market power could engage in [traffic] manipulation. For example, with a very high priced channel, NYNEX could choose to not terminate traffic

It is not possible to develop a methodology to separate LEC-to-CMRS interconnection traffic into peak and off-peak categories in a short period of time. Indeed, the Commission acknowledged in establishing peak and off-peak categories for AT&T's WATS rates that "it may be *very difficult and time consuming* for AT&T and this Commission to develop a near-optimal peak/off-peak pricing structure using time-of-day sensitive rates and other devices."[29/] Peak-load pricing would involve the Commission and the wireless industry in protracted inquiries and administrative proceedings of dubious merit that neither can afford.

Even assuming that a peak-load pricing inquiry could be concluded quickly, it is far from certain whether a "peak" is definable for LEC-to-CMRS interconnection traffic. The *1980 Peak-Load Pricing Order* addressed the problems in defining a "peak", stating:

> There are . . . many different "peaks" which occur within the telephone network (*e.g.*, "fixed busy hour"; "bouncing busy hour") and the proper

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> through Teleport during the peak hour while Teleport would have little choice but to terminate traffic through NYNEX. That could cause Teleport to pay rates for termination that were high enough to reduce the benefits of competition.

Brock Interconnection Paper, at 26-7.

29/ *See American Tel. & Tel. Company; Revisions to Tariff FCC No. 259, Wide Area Telecommunications Service (WATS)*, Memorandum Opinion and Order, CC Docket No. 80-765, Transmittal No. 13555, 84 F.C.C.2d 158, 177-8 (1980) (emphasis added) ("*1980 Peak-Load Pricing Order*"). Even then, the Commission identified a "number of theoretical difficulties" regarding peak-load pricing, including "the relationship between accounting and economic costs, and general uncertainty as to the consumer decision-making process." *See* 84 F.C.C.2d at 178 n.43 (citing Electric Utility Rate Design Study, *Ratemaking: Topic 5 and Illustrative Rates for Five Utilities* (Palo Alto, Calif., EPRI, June 6, 1977)).

> definition of peak for determinations of . . . quality of service in terms of blocked calls is, in large part, a matter of judgment.[30/]

Identifying a peak calling period even for voice-only wireless services, including cellular, personal communications services ("PCS"), and enhanced specialized mobile radio ("ESMR"), may encompass such a wide variety of "peaks" as to make the entire concept of peak-load pricing untenable.

Peak-load pricing is particularly cumbersome to the extent that the widely varying technologies encompassed by LEC-to-CMRS interconnection traffic may each have different demand "peaks". As the Commission stated in the *1980 Peak-Load Pricing Order*:

> [among] a considerable range of telecommunications technologies . . . . [e]ach may have different marginal costs at peak, and some may only be used at peak.[] Many facilities, such as switches, are used in tandem. Each of these may be used in common with other services and customers and may have a different time-of-day demand profile. In other words, peak demand for one unit of plant may not correspond to peak demand for another.[31/]

Identifying busy hours for interconnection of wireless traffic to the wireline network would require an industry-wide survey of all forms of interconnection of CMRS providers, ranging from PCS and cellular carriers to ESMRs, SMRs and two-way paging operators. In

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30/ *See* 84 F.C.C.2d at 174 n.30 (citing *Engineering and Operations in the Bell System*, at 475, Bell Telephone Laboratories (Indiana: Indiana Publication Center 1980)).

31/ *See 1980 Peak-Load Pricing Order*, 84 F.C.C.2d at 177 (footnote omitted). The Commission subsequently found that "individual items of equipment such as switches, multiplexers, or trunks, which may involve relatively large capital expenditures, frequently have differing time-of-day demand profiles." *See American Tel. & Tel. Co. Revisions to Tariff F.C.C. No. 259, Wide Area and Telecommunications Service (WATS) and Regulatory Policies Concerning Resale and Shared Use of Common Carrier Domestic Public Switched Network Services*, Memorandum Opinion and Order, CC Docket No. 80-765, Transmittal No. 13555, CC Docket No. 80-54, RM 3453, 86 F.C.C.2d 820, 832 (1981) ("*1981 Peak-Load Pricing Order*").