cannot be required to do so.

- Each carrier may choose the POI that is most efficient for its network architecture. The competing carrier must not be required to collocate at ILEC facilities[24] or in any other fashion be required to mirror the ILEC network or the advantages to consumers from new technologies and network architectures could be dissipated.

[61-63] In contrast to MCI's policy proposals, the ILECs have followed several strategies in the states that would impose the ILEC multiple switch network architecture on competing carriers. These strategies would penalize a carrier for having a different architecture that employs longer loops, fiber ring technology, and a single switch that allows the carrier to serve its much smaller customer base more efficiently.

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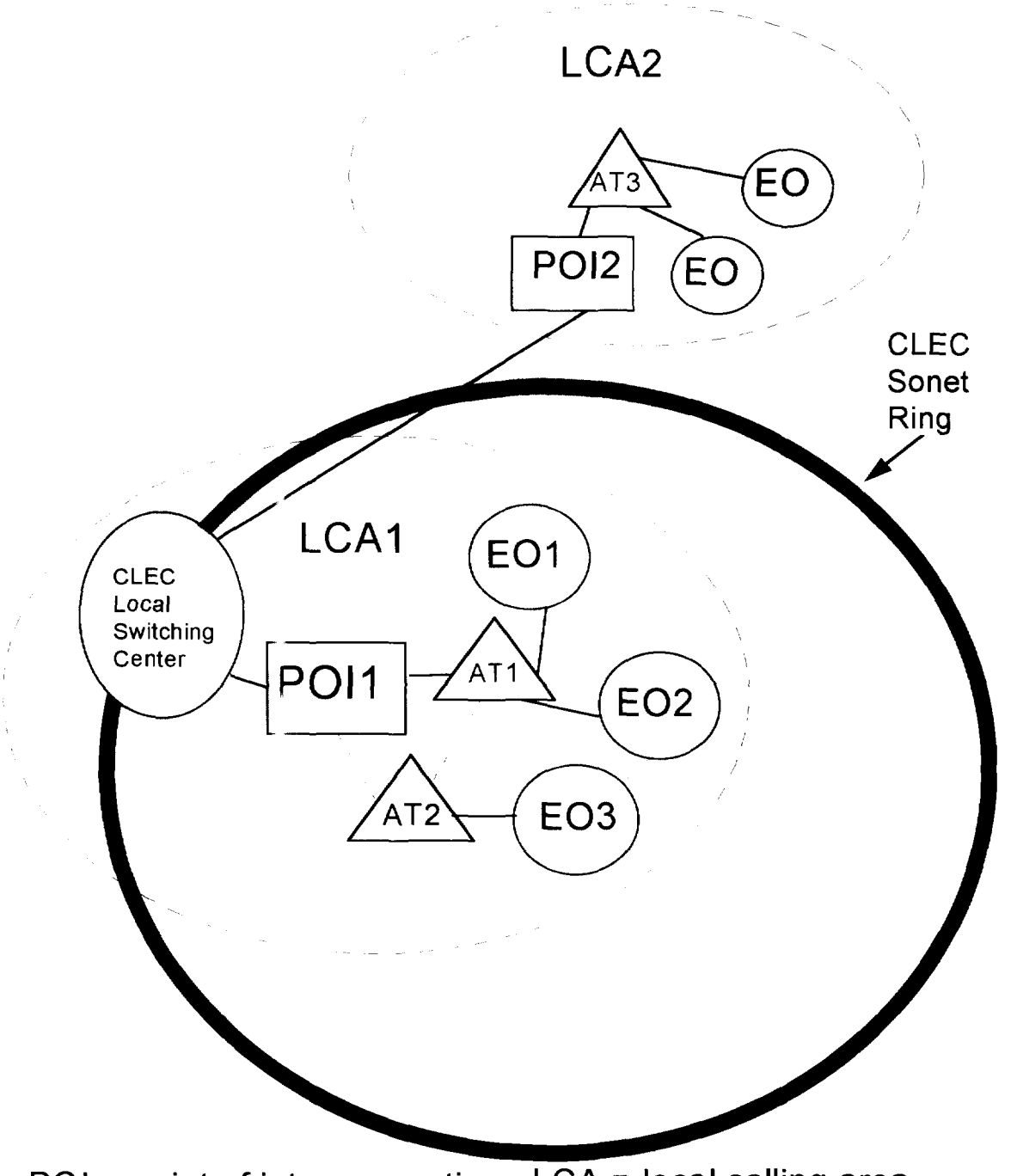
[24] In NYNEX territory, if MCI provides its own transport to the POI (as opposed to leasing transport from NYNEX), NYNEX requires MCI to collocate. There is no technical reason for this. It adds significant time and expense to interconnection. Illinois and Michigan have specifically rejected Ameritech's attempt to do the same thing.

Diagram 2: Point of Interconnection



POI = point of interconnection
AT = access tandem
LCA = local calling area
EO = end office

[61-63] One ILEC strategy has been to attempt to require the competing carrier to build out its network to multiple ILEC end offices and/or tandems (for example, to EO1 and EO2, or to AT1 and AT2, in Diagram 1), in effect requiring the competing carrier to designate multiple POIs in a local calling area.[25] Another strategy has been to allow the POI to be at an end office or tandem switch of the called party's provider, but if the competing carrier wants to interconnect at the tandem, require it to pay the ILEC for transporting the call to the end office (so that the single POI becomes multiple POIs).[26] Yet another strategy is to set higher rates for interconnection at tandems than at end offices, but always treat the competing carrier's switch as an end office switch so that the competing carrier receives only an end office termination charge (and no transport charge).[27] Each of these penalizes the competing carrier for choosing an alternative technology to the ILEC's.

[61-63] The ILECs will object that they should not have to bear the costs of modifying their networks to accommodate competitive entry, but their actions to date demonstrate why it must be their responsibility to bear those costs -- they would choose the less efficient network

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[25] For example, both Bell Atlantic and NYNEX are attempting to require competing carriers to interconnect at every tandem that may serve a calling area. In New York City, Boston, and Baltimore (and any other cities served by more than one access tandem), the ILEC requires the competing carriers to establish multiple POIs per local calling area. This is expensive and inefficient.

[26] U S West's current proposal in Portland presumes that mutual traffic exchange can only occur at end offices, and that competing carriers must pay transport to the ILEC end offices.

[27] In Maryland (Bell Atlantic), MCI's local switching centers are treated as "end offices," and therefore MCI is compensated at a lower end office rate than the RBOC receives for tandem termination of local traffic.

configuration if it impedes entry. One ILEC tactic already being used is to require the competing carrier to route traffic to a single access tandem (AT1 in Diagram 2), simultaneously claiming that the tandem's capacity is nearing exhaust. The competing carrier is then forced to choose between delaying the sign-up of new customers until the ILEC increases the capacity of the switch or paying for trunks to other ILEC tandems or end offices.[28] (See EO1 and AT2 in Diagram 2.) Another ILEC tactic is to require competing carriers to build out to every access tandem because they do not directly connect their own tandems (AT1 and AT2 in Diagram 2). While the ILECs route their own local traffic between end offices served by different access tandems through direct trunks (dotted line between EO2 and EO3 in Diagram 2), they refuse to make those direct trunks available to traffic originating on a competing carrier's network.[29] These tactics not only impose costs and delays on the competing carrier, but also provide less redundancy for the competing carrier's traffic if the one access tandem or a trunk feeding from that tandem were to go down.

3. Rate Levels Should Reflect Competitively-Neutral Reciprocal Compensation

[230-232] Sections 251(b)(5) and 252(d)should be interpreted as providing guidance for a

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[28] U S West is employing this tactic in both Seattle and Portland. In Seattle, MCI had to delay customer activations until U S West implemented a port augment. In Portland, U S West wants MCI to pay for transport to end offices as a result of a tandem port shortage.

[29] MCI has been required to build out its network to multiple Bell Atlantic tandems since Bell Atlantic does not directly connect its own tandems. Bell Atlantic indirectly connects its tandems by routing traffic through direct trunks between end offices served by different tandems, but does not make this type of routing available to parties requesting interconnection. This has been Bell Atlantic's longstanding regulatory position. The Maryland Public Service Commission has adopted it, and it is in Bell Atlantic's interconnection tariffs. If Bell Atlantic knew that it could not charge for transport to multiple tandems, it would handle the traffic flows more efficiently, and probably would commingle its traffic with MCI's traffic to better utilize trunks.

competitively-neutral Reciprocal Compensation arrangement that, in fact, has historically been used by non-competing adjacent local exchange providers, primarily in Extended Area Service situations. The general cost-based pricing standard, for all types of interconnection and unbundled elements, is enunciated in Section 252(d)(1). The specific compensation standard for interconnection of local exchange carriers that perform reciprocal functions is set out in Section 252(d)(2): compensation is limited to the recovery of additional cost imposed, can be made in-kind, and must not require a rate regulation proceeding or the maintenance of cost records. This standard is not inconsistent with Section 252(d)(1) since reciprocal compensation, including a bill and keep arrangement, also results in the recovery of efficiently incurred costs. Moreover, it explicitly rejects non-reciprocal compensation arrangements of the sort implemented in New York (sometimes known as "play-or-pay") whereby New York Telephone is allowed to charge some entrants rates that far exceeded additional costs while those new entrants were not allowed to recover any of their costs. Following this guidance and implementing the competitively-neutral Reciprocal Compensation proposed by MCI, there should be no potential for inconsistent treatment when traffic is exchanged between local exchange providers. As long as the caller is a customer of the competing carrier and the called party is a customer of the ILEC, the competing carrier should have designated a point of interconnection that would define the ILEC's responsibilities for terminating the call, and the charge would be subject to the terms of Section 252(d)(2).[30] The price to be paid for the unbundled elements is a separate issue, and is subject to

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[30] A competing carrier that is offering service through Unbundled Local Switching (ULS) elements should designate a POI at each end office for all of its traffic that is being terminated at (or through) that end office. That is, the POI is at the ILEC end office

the terms of Section 252(d)(1)

[234] The Commission should set a generic pricing methodology for the transport and termination of one local carrier's traffic by another local carrier as follows: Unless traffic is persistently out of balance (for more than two months), compensation should be in-kind using a "bill and keep" arrangement. Bill and keep avoids the inefficiencies that would be created if reciprocal compensation were based on each carrier's costs, since the latter would impose the high costs of the inefficient provider onto the low cost provider, thus neutralizing the low cost provider's efficiency. It also would avoid measurement and billing costs, which would represent a substantial portion of termination costs.[31] If traffic is persistently out of balance, such that traffic terminated on one carrier exceeds traffic terminated on the other by more than 10% (more than 50% in the absence of true local number portability, since in that situation a competing carrier's traffic may be skewed toward originating calls if businesses are loathe to lose established telephone numbers for in-coming calls), reciprocal compensation should be in the form of a flat per-minute rate applied to the net traffic flow (the imbalance) between the carriers.

[234] Regardless of which carrier receives the compensation, the level should be determined by calculating the TSLRIC incurred by the ILEC in providing the network elements necessary to terminate the local calls originating on the networks of its competitors, and

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closest to the ILEC customer at which the competing carrier has purchased a ULS element. The competing carrier therefore pays for all transport between the end offices (to get to the POI). The arrangement would minimize the ILEC's costs of terminating calls that originate on the competing carrier's network.

31/ In Washington State, U S West estimated that measurement and billing costs would more than double its reported TSLRIC cost of switching for local terminations.

converting that total cost to a flat per-minute rate. This would provide the proper market incentive -- penalizing a competing carrier that is less efficient than the ILEC and rewarding a competing carrier that is more efficient than the ILEC. It also frees competing carriers from performing cost studies. Moreover, the flat, per-minute reciprocal compensation charge, though based on the costs of the ILEC is not constructed according to the ILEC's chosen network architecture, and therefore is neutral with respect to choice of network architecture and technology.[32]

[234] A flat rate structure also allows billing efficiencies; it would not require carriers to develop complex rating, billing and audit systems. If Section 252(d)(2)(B)(ii) were to be interpreted as prohibiting "any rate regulation proceeding to establish with particularity the additional costs of transporting or terminating calls" and any requirement that carriers "maintain records with respect to the additional cost of such calls," the Commission could simply use the Hatfield II Cost Study (Attachment 1 to these Comments) to provide a presumptive cost ceiling for transport and termination of the kind described in greater detail in Part V.

4. Symmetrical Compensation Is Appropriate

[235-238] It must be recognized that the level of compensation rate established will be of crucial importance to the competing carrier, while only of minor importance to the ILEC. All but a small portion of the competing carrier's originated traffic will, at least initially, terminate on the network of the ILEC, while only a very small fraction of ILEC traffic will terminate on the

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[32] By contrast, the "tandem/end office" price structures set up in New York, Illinois, and Maryland are not sufficiently flexible to comport with the statutory requirement that interconnection can occur at any technically feasible point on the ILEC network.

networks of competing carriers. The compensation rate charged therefore will comprise a significant portion of the competing carrier's overall cost structure.

[235-238] For this reason, the ILECs have every reason to attempt to use their unequal bargaining position to overstate the costs to them of terminating competing carriers' traffic, and to set the termination rate as high as possible. While, as the Commission observes, the use of a symmetrical compensation rate might reduce the incentives for the ILECs to inflate the termination rate, the incentives are by no means eliminated, because the termination rate will comprise so small a portion of the ILECs' overall costs.

[235-238] MCI agrees with the Commission's reasoning that the ILEC could use its bargaining position to set a termination rate higher than the actual cost of terminating traffic. This potentially could permit the ILEC to impose a portion of costs unrelated to the termination of traffic on its competitors, leading to a competitive imbalance, or to the artificial inclusion in all carriers' rates of costs inefficiently incurred.

[235-238] MCI agrees that symmetrical compensation rates are easier to derive than rates based on the respective costs of each carrier, and would not require intrusive, time consuming, and complex scrutiny of the costs of non-dominant carriers -- and if based on proxy models like Hatfield II would not require any LEC-specific cost studies. While it should not be expected that the costs of all carriers will be identical, the TSLRIC costs of the ILEC can serve as a reasonable proxy for the costs of competing carriers. Moreover, symmetrical compensation rates discourage inefficient entry -- and reward efficient entry -- by setting compensation rates to recover ILEC costs.

[235-238] To base the termination rate for each carrier on that carrier's cost of terminating traffic originating on other carriers' networks would have the effect of rewarding inefficient carriers and penalizing more efficient carriers. Carriers that are more efficient would transfer their greater efficiency to less efficient carriers through the compensation mechanism, while at the same time less efficient carriers would transfer some portion of their inefficient costs to more efficient carriers. This occurs because, under this scenario, the cost to all carriers of calls that originate on one network and terminate on another is the same. The more efficient carrier incurs a relatively low cost for its portion of the call, but must pay the less efficient carrier a rate based on its higher, less efficient costs. At the same time, the less efficient carrier incurs a relatively high cost for its portion of the call, but pays a rate lower than its own costs for terminating the call on the more efficient carriers' network. The compensation mechanism thus has the effect of leveling the cost differences between the carriers. The competitive market, which depends upon the ability of companies to reflect cost differences in retail prices, cannot function properly under this regime.

5. Bill and Keep Is the Preferred Method of Reciprocal Compensation

[239-243] At a minimum, therefore, a symmetrical termination rate is a necessity if competition is to develop in the local exchange market, and separate rates should not be established based on each carrier's costs. If, however, the traffic exchanged between carriers is in balance, then the need for any form of compensation is eliminated. In this instance, the interconnecting carrier would render to the ILEC a bill for traffic termination identical to the bill rendered by the ILEC to the interconnecting carrier. The charges would "wash" and there would be no need to actually exchange money.

[239-243] This result argues strongly in favor of a system of Mutual Traffic Exchange, or "bill and keep." Under a bill and keep arrangement, each carrier is compensated for terminating another carrier's traffic on an "in kind" basis. A bill and keep arrangement has the distinct advantage of not requiring the examination of any carrier's costs in order to establish a rate. In addition, a bill and keep arrangement does not require the establishment of methods to measure and bill for traffic exchanged between carriers, and thus avoids significant costs to all carriers.

[243] A bill and keep arrangement is in every way equivalent to the establishment of a symmetrical termination rate, so long as traffic is roughly in balance. The balance of traffic between carriers is important in determining the reasonableness of a bill and keep arrangement. If one carrier persistently terminates more traffic to another carrier than it receives from that carrier, then an explicit termination rate is required if the net receiver of traffic is to be adequately compensated for its costs. But where traffic is in balance, the question of the cost of termination is irrelevant. Costs are incurred as traffic flows in both directions. It makes no difference to the final outcome if identical bills are exchanged or if traffic is terminated on a bill and keep basis -- in each case, each carrier is fully compensated for its costs, whether through the exchange of money or in kind. Under this view, the Act should be read to permit the Commission to require that, absent a showing that traffic between carriers is persistently and significantly out of balance, traffic be exchanged between carriers on a bill and keep basis. A bill and keep arrangement meets the requirement of Section 251(d)(2)(A)(i) that each carrier recover, on a "mutual and reciprocal" basis, its costs of terminating traffic for other carriers, and avoids significant costs in measuring and billing for the traffic exchanged between carriers.

[242] No compensation mechanism will remove all incentives for carriers to attempt to "game" the process by seeking customers with certain calling characteristics. If any positive charge is permitted for terminating traffic of other carriers, for example, then carriers may have an incentive to seek out customers who receive large volumes of traffic. While a bill and keep arrangement does not completely eliminate such incentives, it minimizes them.

E. Existing Collocation Rules Must Be Recast To Promote Competition in Local Telecommunications Markets

[71] MCI agrees with the Commission's tentative conclusion that collocation is mandated in any ILEC premises used for network facilities. MCI also advocates the following:

- [71-73] The Commission cannot re-adopt its former physical collocation rules without modification because those rules are limited in scope and do not comply with the 1996 Act. Collocators should be able to collocate any equipment at a physical collocation site (including concentrator equipment), and should be able to cross-connect to another collocator's space.

- [66, 71] Interconnecting carriers should have the right to choose between physical and virtual collocation. Competitors that are currently utilizing virtual collocation should not be required to pay nonrecurring charges to change to physical collocation arrangements.

- [71, 72] Rules must prohibit an ILEC from denying collocation based on the ILEC's allegations that it might use currently available space in the future, unless the ILEC can demonstrate that it had specific plans to utilize that space before the interconnector requested collocation.

- [73] A collocation, either physical or virtual, may be served exclusively via leased transport or through a combination of transport leased from the ILEC and interconnected carrier provided transport.

- [71,73] Rules must focus on minimizing collocation costs -- the ILECs should not be given free rein to "gold-plate" collocation arrangements.

- [71] Collocation service intervals should be either tariffed or incorporated in agreements.

[73] Collocation allows an interconnecting carrier to include ILEC wire centers in its network, and represents one means of interconnecting with the ILEC.[33] While the number of collocation arrangements established in recent years has been substantial, existing collocation terms and conditions are unfavorable to further competition because they were developed specifically for the competitive access providers -- to foster the build-out of entrance facilities between IXCs and ILEC wire centers. In order for competition to develop in all telecommunications markets, carriers will need the option of collocating wherever technically feasible. Consequently, existing collocation rules, terms, and conditions, must be significantly recast if collocation is to be of value for competitive local interconnection generally or for access to unbundled ILEC network elements.

[71,73] The prior physical collocation rules need to be amended in the following ways: (1) rates must be established utilizing a cost principle that is identical to that used for interconnection generally and unbundled network elements; (2) there must be no limitation on the types of equipment that interconnectors place in their cages, subject to the requirement that the equipment will not degrade the network; (3) interconnectors must be able to cross-connect to another interconnector's cage; and (4) carriers collocating at any particular facility must be able to lease transport from the collocation facility to any other point

[72-73] Current rules, terms, and conditions that only allow the placement of basic transmission equipment (such as channel banks and multiplexors) in the collocation facility must

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[33] Under the 1996 Act, collocation is no longer limited to Tier 1 carriers.

be expanded to allow the placement of any equipment[34] (such as concentrating equipment). This is necessary to allow interconnectors to transport traffic efficiently from the unbundled loops to their switching locations.

[72-73] In addition, collocators must be allowed to lease transport from the collocation facility to any other point on the ILEC network. Current tariffs only permit collocation if new facilities are constructed by the collocator from its point of presence to the ILEC central office.[35] This is an inefficient use of existing resources and puts an unnecessary and unlawful burden on the collocator to construct networks to access ubiquitously unbundled network elements. Pursuant to Section 251 (c)(3) of the Act, collocators are entitled to purchase transport capacity as an unbundled network element.

[73] An interconnector should be able to cross-connect between its facility and any other interconnector's facility at the collocated space. It is inefficient to require new entrants, collocated several feet from each other, to backhaul traffic to facilities outside the ILEC premises. There is no technical reason why the ILEC should not permit interconnectors from connecting directly to each other at a collocated space. However, under many of the ILECs' current tariffs, collocator-to-collocator interconnection at an ILEC collocation arrangement is prohibited. The 1996 Act does not grant the ILECs authority to impose restrictions requiring new entrants to interconnect their facilities only to those of the ILEC. Further, no technical reason exists why

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[34] The expanded interconnection rate elements that are currently in effect, are based on the ILECs' embedded cost structure. ILECs must be required to derive new rates for physical and virtual collocation set at TSLRIC.

[35] See Bell Atlantic, Tariff F.C.C. #1, Section 19.3(J).

collocator-to-collocator interconnection arrangements should not be permitted.

[72] Interconnectors also have the right to select virtual or physical collocation, or both, and have the right to switch from one arrangement to another subject only to the actual costs imposed by such a change.[36] Interconnectors that elect to convert their existing virtual collocation arrangements to physical collocation arrangements should only be charged minimal nonrecurring charges by the ILEC. In both physical and virtual collocation, interconnection electronics are connected to the ILEC main distribution frame, which in turn, connects to ILEC-owned interconnection services. The only difference between physical and virtual collocation is the ownership demarcation point. Everything else is the same. The only costs that the ILECs should be permitted to recover in converting virtual collocation arrangements to physical collocation arrangements are de minimis costs associated with the transfer of the equipment ownership. In fact, since most virtual collocation arrangements are currently provided pursuant to "$1 leaseback" options, the nonrecurring cost associated with converting a virtual collocation arrangement to a physical collocation arrangement should be $1.

[71-72] Experience during the prior implementation of physical interconnection has proven that space is not a scarce resource in the majority of ILEC premises,[37] primarily because

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[36] The only difference between a physical collocation arrangement and a virtual collocation arrangement is the point of interconnection. The same equipment is used by the ILEC to receive or deliver traffic, whether traffic is handed off from a "cage" inside the central office, or at a manhole outside the central office.

[37] ILECs have been granted a waiver of the Commission's rules requiring physical collocation because of insufficient space in less than one percent of their end offices. See e.g., In the Matter of Expanded Interconnection with Local Telephone Company Facilities GTE Service Corporation, Petition for Exemption from Physical Collocation Requirement,

equipment continues to become smaller and more efficient. In instances where ILECs claim that all available space is needed for future use, the standard should be "space currently available or that can be made available." Rules must prohibit an ILEC from denying collocation based on the ILEC's allegation that it might use currently available space in the future, unless the ILEC can demonstrate that it had specific plans to utilize that space before the interconnector requested collocation. In the few locations where an ILEC has demonstrated that space is scarce, it should be required routinely to file publicly-available reports with the Commission on the status and planned increase and use of space. This will allow regulators to ensure efficient space utilization, and permit interconnectors to plan accordingly.

[73] Interconnectors generally prefer physical collocation over virtual collocation because the interconnector maintains greater control over its network and its costs. Under current physical collocation tariffs, however, ILECs are permitted to saddle interconnectors with extraneous costs such as 24 hour security, separate hallways, and air conditioning and power upgrades purportedly required for such building modifications. ILECs must not be permitted to impose unnecessary costs on interconnectors. First, ILECs should be required to offer

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CC Docket No. 91-141, 9 FCC Rcd 133 (1993); In the Matter of Expanded Interconnection with Local Telephone Company Facilities Physical Collocation Requirements for Central Offices Located in Maryland, CC Docket No. 91-141, 8 FCC Rcd 5542 (1993); In the Matter of Expanded Interconnection with Local Telephone Company Facilities BellSouth Telecommunications, Inc., Carolina Telephone and Telegraph Company, and GTE Service Corporation, Petitions for Exemption from Physical Collocation Requirement, CC Docket No. 91-141, 8 FCC Rcd 4871 (1993); In the Matter of Expanded Interconnection with Local Telephone Company Facilities Petitions for Exemption from Physical Collocation Requirement, CC Docket No. 91-141, 8 FCC Rcd 4568 (199).

interconnectors the "$1 leaseback" option. Second, special security arrangements, such as cages, alarms, etc., should only be installed at the request of the interconnector, and any charges for such construction should be limited to economic costs. Finally, interconnector-competitors should be permitted to use non-ILEC personnel to install, maintain and repair collocation equipment at their option.

[71] Finally, Section 251(c) requires ILECs to provide interconnection that "is at least equal in quality to that provided by the local exchange carrier to itself."[38] There can be no question that this requirement includes installation, provisioning, and repair intervals. As has been seen by the ILECs' previous disregard of this requirement, absent specific enforcement mechanisms, the ILECs have no incentive to comply with this standard.[39] Consequently, ILECs should be required to either tariff, or incorporate in agreements, specific installation, provisioning, and repair intervals.[40] In instances where ILECs fail to comply with the tariffed service intervals, ILECs should be subject to civil penalties for each instance in which they failed to comply with the tariffed intervals.

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[38] ILECs should be required to implement new collocations within 90 days. Similarly, transition from current access facilities to expanded interconnect facilities must be completed without a new installation order, and requires only the portion of the circuit within the Central Office to be rearranged.

[39] While the installation and provisioning process should only take one or two weeks, there have been many instances where ILECs have taken two to three months to install and provision new circuits for MCImetro.

[40] All telecommunications carriers interconnecting to the public network should be held to the same technical standards to ensure network reliability. ILECs and interconnectors should only be permitted to interconnect equipment to the public network that has met industry standards, or its equivalent.

V. Interconnection and Unbundling Prices Must Be Set at Economic Cost

A. Commission Has Legal Authority to Set Pricing Principles

MCI agrees with the tentative conclusion that:

- [117-120] The broad rulemaking authority in Section 252(d)(1) empowers, and the need for consistent national standards requires, the Commission to establish uniform pricing principles for interconnection, unbundled elements, and resale.

In addition, MCI requests the Commission conclude that:

- A specific methodology for the pricing of network elements is established: the forward-looking direct economic cost, or Total Service Long Run Incremental Cost (TSLRIC), as explained and applied in the current Hatfield model.
- The Commission should include in its Section 251(d)(1) regulations presumptive rate ceilings with density zones on a state-by-state basis based on the current Hatfield analysis.

[122] A central purpose of the Act is to eliminate uneconomic distortions caused by the existing regulatory scheme. Prices for telecommunications services should reflect the economic costs of those services, as they would in a competitive market. As an economic matter, the cost to an ILEC of providing access or interconnection is independent of the use to which they will be employed. Therefore, the interconnection and unbundling rates charged by an ILEC to a requesting telecommunications carrier should be based on the same costing methodology and pricing principles regardless of whether that other carrier will use that access to provide competing local exchange service or interexchange service (intrastate or interstate). It should make no difference whether the requesting carrier is acting in the capacity of a local carrier or a

long distance carrier, or plans to provide intrastate or interstate services.

[125] To ensure that local competition can develop quickly and that delaying tactics by the ILECs will not succeed, the Commission should include in its Section 251(d)(1) regulations presumptive rate ceilings with density zones on a state-by-state basis based on the current Hatfield analysis. These presumptive rate ceilings represent a conservative application of the TSLRIC methodology, yielding results that are more favorable to the ILECs than is strictly required by the TSLRIC method. Parties would be free to negotiate different rates (subject to the standard in Section 252(e)(2)(A), and state commissions could establish lower rates).

[125] The Commission's regulations should provide that rates lower than the Hatfield analysis are presumptively consistent with the standard in Section 252(d)(1) and that higher rates are presumptively inconsistent. In the context of a Section 252 proceeding, a state commission could establish a different rate based on a showing that the Hatfield model does not accurately determine the forward-looking direct economic cost of the network element. For example, an ILEC could attempt to demonstrate that the Hatfield model underestimates this cost. This approach establishes a consistent national benchmark and facilitates judicial review of rates established by state commissions to ensure that they are consistent with the statute and with the methodology established by the Commission.

[125] Section 251(d)(1) empowers the Commission to implement the provisions of Section 251(c), including the requirement that rates for unbundled elements are just, reasonable, and consistent with the pricing standard in Section 252(d)(1). Moreover, any state legal requirement that established a rate higher than the forward-looking direct economic cost would

effectively prohibit the ability of carriers to provide interstate and intrastate service, and the Commission is expressly authorized to preempt any such state requirement.

B. The Cost Standard That Best Fits the Statute's Purpose Is Total Service Long Run Incremental Cost (TSLRIC)

MCI agrees with the tentative conclusions in the Notice that:

- [122] There is no reason for the Commission to establish different pricing principles for interconnection and unbundled network elements, including collocation.
- [123] Congress intended to preclude ". . . states from setting rates by use of traditional cost-of-service regulation, with its detailed examination of historical carrier costs and rate bases."
- [124] Rates set at long run incremental cost (LRIC) will ". . . give appropriate signals to producers and consumers and ensure efficient entry and utilization of the telecommunications infrastructure."
- [130] Recovery of overhead or other shared costs through Ramsey pricing is inappropriate for a market evolving from monopoly to competition.

In addition, MCI suggests the Commission conclude that:

- The pricing standard that best implements the statutory command for prices based on the cost of providing the interconnection or network element, is total service long-run incremental cost ("TSLRIC").
- The Hatfield Model properly applies the appropriate method for estimating the TSLRIC costs of unbundled network elements.

[128] The pricing standard that best implements the statutory command for prices based on the cost of providing the interconnection or network element is total service long-run incremental cost ("TSLRIC"). A pricing standard based on incremental cost is consistent not only with the procompetitive goals of the Act, but also with its terms. Under Section 252(d)(1)(B), cost-based prices "may include a reasonable profit;" because TSLRIC

includes a reasonable return on capital, it is consistent with the statutory standard. Indeed, the statutory requirement that cost-based rates may include a reasonable profit is inconsistent with any notion that ILECs can try to recover a profit on anything other than their economic costs, or that rates should provide for recovery of other expenses unrelated to the cost of providing the service. Congress' intent to reject outdated regulatory models, including those based on historical costs and guaranteed rates of return, is reflected in its explicit instruction to determine costs "without reference to a rate-of return or other rate-based proceeding." The only practical and defensible alternative to costing methodologies rooted in discredited rate-based proceedings is pricing based on direct economic cost -- the cost that can be recovered in a competitive market.

[122]The requirement of Section 252(d)(2)(A)(ii) that charges for termination of calls be set at "a reasonable approximation of the additional costs of terminating such calls" further confirms that a cost standard for access charges based on <u>incremental</u> cost is required. As explained above, termination of calls by one LEC from another LEC involves a form of interconnection, and the price charged for termination should be the same regardless of the label placed on the arrangement, because the cost is the same regardless of the label. Therefore, the express incremental cost standard in Section 252(d)(2) demonstrates that Section 252(d)(1) also incorporates an incremental cost standard. There is no reason for the Commission to establish different pricing principles for interconnection and unbundled network elements, including collocation. Collocation is simply one method of interconnecting with, and obtaining access to, ILEC networks.

[123] The Commission's tentative conclusion that Congress intended to preclude ". . .

states from setting rates by use of traditional cost-of-service regulation, with its detailed examination of historical carrier costs and rate bases" is consistent with the pro-consumer and pro-competition objectives of the legislation. As discussed below, and in the accompanying Hatfield Associates Report, rates based on historical costs are excessive.[41] Significant problems are created if incumbent carriers are allowed to charge captive customers for these inflated historical costs. Most significantly, one of the primary goals of the 1996 Act -- consumer price reductions -- would be thwarted. In addition, excessive access and unbundled network element rates will harm competition in both local and long distance markets.

[124] Table 4 provides definitions of cost concepts requested by the Commission in the Notice. It is important to note that although some cost concepts are not explicitly defined as forward-looking costs (e.g., joint costs, common costs, shared costs), only the portion of those costs that are forward-looking will be recovered in a competitive market. For present purposes, it will be useful to use the term "shared costs" to apply to common costs unique to a subset of the firm's services. Overhead costs can then be thought of as common costs incurred for the benefit of all of the firm's services.

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[41] See Attachment 1, Hatfield Associates, Inc., The Cost of Basic Network Elements: Theory, Modeling and Policy Implications, March, 1996. ("Hatfield Report")

TABLE 4

Long Run Incremental Cost	The additional forward-looking cost of some increment of output when all inputs can be varied.
Total Service Long Run Incremental Cost	The forward-looking incremental cost of the entire service. This is the difference between the forward-looking cost to a firm that provides the particular service along with its other services, compared to the forward-looking cost when it does not provide that service, but still provides the same level of its other services.
Forward-Looking Costs	Costs using the most efficient currently available technology.
Joint Costs	Non-service specific cost incurred in the production of two or more services when the services are produced in fixed proportions.
Common Costs	Non-service specific cost incurred for the benefit of all the firm's services.
Shared Costs	Costs incurred for the benefit of a subset of the firm's services.
Stand-Alone Costs	The forward-looking cost of a service if the firm offers no other services.
Embedded Costs	Historical accounting costs, including capital and operating costs.
Fully Distributed Cost	An allocation of shared costs to individual services on the basis of some external measure such as relative direct costs, output, etc.
Overheads	Costs shared by all services, not just by a subset of services. The cost of the administrative functions of the firm are an example.
Contribution	A rate of return concept consisting of the markup over economic (TSLRIC) costs needed to fully recover the regulated company's revenue requirement; the concept is entirely inconsistent with the 1996 Act.
Residual Costs	Embedded costs remaining after taking into account the TSLRIC of all services; the concept is entirely inconsistent with the 1996 Act.
Economic Costs	Costs that a firm operating in a competitive market would recover.

Note: Where the term "service" is used in this table, the term "element" may be substituted.

[127-129] TSLRIC provides for recovery of all the costs that should be recovered when an ILEC provides interconnection and unbundled elements to other carriers. It includes all service and element-specific costs and almost all of what is commonly thought of as shared costs and overhead. The remaining common costs should not be recovered through charges to other

carriers either because they are not forward looking or because they represent the minute portion of a telecommunication carrier s costs needed to pay for the corporate shell, which is a cost the other carriers will have to incu and fully recover on their own from retail sales. Therefore, TSLRIC is the economic costing standard the Commission should adopt. As the Commission notes, a number of states have adopted TSLRIC as the basis for setting interconnection rates.[42]

[131] The growing consensus on the use of TSLRIC for measuring cost and setting rates can be explained by comparing TSLRIC results to the alternatives. As noted in Table 4, TSLRIC measures all of the costs associated with adding an entire service (or functional element) to the firm's existing array of offerings. Prices set at TSLRIC will recover all of these costs. Prices based on simple LRIC may no recover all the costs the firm incurs as a result of providing the service or element. Prices higher than TSLRIC (for example, prices based on embedded or stand-alone costs) will recover more cost than the firm incurs as a result of providing the service or element. In addition to the allocative distortion created by high prices, entry and expansion by efficient firms who need the services or elements as inputs will be thwarted. Thus, prices set at TSLRIC are "just right" -- they are not so high that monopoly profits are being earned and competition retarded, and they are not so low that other services are providing a subsidy. TSLRIC pricing also reduces the possibility of predatory or strategic pricing.

[130] The TSLRIC of an individual service does not include costs that are shared by two or more services but not by any other service (e.g., the development of software used for multiple CLASS services, but not used for any other services). The TSLRIC of an individual service also

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[42] See, e.g., Section 352 of the Michigan Telecommunications Act of 1995.

excludes overhead costs (costs such as the president's desk) that would be borne even if only one service were offered. The shared costs, however, should be recovered from markups over the TSLRIC on the particular services that share the cost, since they are part of the TSLRIC of that group of services. These shared costs should not be recovered from other services. Historical or embedded shared costs should not be added to the TSLRIC of individual services. These non-economic costs would not be recovered in a competitive market.

[130] Shared and common costs are not a high proportion of the total economic costs of providing interconnection or network elements. The perception that these costs are high is based on two incorrect assumptions: (1) that loop costs are shared among a variety of services; and (2) that all non-service specific embedded or historical ILEC costs are economic shared or common costs. If the loop costs are recovered from basic service rates and universal service support (where necessary), the economic shared costs of the ILEC are small in comparison to TSLRIC costs. In general, shared costs are minimized when costs are examined on a network function basis. Moreover, costs that cannot be attributed directly to the efficient provision of individual services are not necessarily economic shared costs.[43]

[130] There are sound public policy reasons for not recovering such unattributable overhead costs from unbundled network elements or interconnection regardless of how small these true overhead costs are. First, imposition of overhead costs on input services sold to other carriers sets a floor below which prices cannot fall for all services that use that input. Second,

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43/ True overhead is a small proportion of total economic costs, consisting primarily of the cost of operating the corporate shell, such as executive and treasury functions. These common costs are likely to be quite small in relation to service-specific economic costs.

requiring competitors to bear some of the ILEC's overhead costs places them at a competitive disadvantage because they will face the burden of recovering from their retail services not just their own overhead costs, but also some of the ILEC's overhead costs; the ILEC, for its part, would not have to recover all of its overhead costs in competitive retail markets.

[130] Any means of recovery of these costs from input services are arbitrary, or worse, overtly anticompetitive. The Commission correctly notes that recovery of shared and common costs through Ramsey pricing is inappropriate for a market evolving from monopoly to competition. Ramsey pricing will load excessive costs on services that are not as susceptible to competition.

[131] TSLRIC includes a reasonable profit. The profit level selected must be consistent with a competitive return.[44] That is, the cost of capital may be based on the risk-adjusted return shareholders of competitive firms in the economy are expected to earn, just as the cost of switches or loops may be estimated by reference to what a new entrant would pay to install and operate them in a competitive market. The Act prevents the use of embedded costs based on traditional rate of return principles for establishing prices. However, a reasonable profit level (i.e., return on capital) can be estimated using standard financial tools such as discounted cash flow analysis.

[132] The Hatfield Model properly applies the appropriate methodology for determining the TSLRIC costs of unbundled network elements. Therefore, there is no reason to adopt

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[44] MCI has recently provided the Commission an estimate of the current cost of capital. See MCI Comments, In the Matter of Preliminary Rate of Return Inquiry, AAD 96-28 and AAD 95-172, filed March 11, 1996.