

unbundled access to the NID because the actual equipment is cheap and available off-the-shelf,<sup>45/</sup> it is noteworthy that U S West states that it is operationally efficient to provide loop and NID together, so it would provide the NID where required to provide loop, and the NID should be included in the loop definition. U S West at 41. SBC states the NID should not be unbundled, but it would voluntarily provide it along with the loop. SBC at 33. Although the ILECs tend to be silent on intrabuilding network cable, it clearly would be even more difficult for CLECs to self-provision that loop component than to self-provision NIDs; there is no valid reason for denying CLECs access to intrabuilding network cable. As MCI WorldCom explained in its comments, there will be times when MCI WorldCom and other CLECs are able to self-provision loops from their network to the minimum point of contact at a building or campus on which a customer is located. But CLECs will need access to the intrabuilding network cable to gain access to the customer. As long as CLECs are guaranteed such access, it does not matter if the intrabuilding network cable and NID are identified as loop components or separate elements.

Two loop components define the transmission media that connect the end user to the serving wire center. Wimmer Reply Decl. ¶ 8, n.3 (Tab 13). Today, the dominant medium is a copper loop. *Id.* About 70% of all customers are connected via unloaded copper pairs. *Id.* The remaining customers are connected with substandard loaded copper loops or with newer technologies such as digital loop carrier or other multiplex over copper or fiber facilities. *Id.* As forward-looking technologies are deployed, MCI WorldCom expects about half of all loops will be served wholly or in part over multiplexed copper or fiber facilities. *Id.* MCI WorldCom urges the Commission to declare the copper-only portion of the loop and the multiplexed facility

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<sup>45/</sup> See e.g., SBC at 33; U S West at 40-41; GTE at 56-57.

as loop components. Any individual customer may be served via an all copper loop, a multiplexed loop, or a combination of the two.

The other fundamental loop component is the electronics, such as various multiplexing devices, that affect the capability of the loop. Id. ¶ 8. Loop electronics include DS-1, all variations of DSL on copper, all variations of DLC, and DS-1, DS-3, OC3, on fiber. Id. The electronics may be located on the customer premises, at a remote terminal, or in the central office. Id. There are many configurations in which technical or space considerations (or ILEC recalcitrance) will preclude CLECs from placing their electronic equipment at the most efficient location along the loop, yet in which the ILECs are able to provide such electronics. Id. ¶ 9. If CLECs are not able to access those ILEC electronics, they will be denied use of electronics needed to provide end-user service. Id. In effect, denying access to the electronics is tantamount to denying access to the loop.

Loops are just as essential — and just as much a bottleneck — for CLEC provision of advanced services as they are for voice services. The copper loop element must be capable of supporting advanced services and must be available in all circumstances. Id. ¶ 8. Loop electronics (such as DSLAMs at the central office-end of the copper segment plus high capacity multiplexed loop) are needed when the CLEC cannot viably add the electronics itself.

In the increasingly frequent situation in which loops are provisioned over IDLC,<sup>46/</sup> the DSLAM must be located at the remote terminal where the copper loop element connects to the multiplexed loop. Id. ¶ 10. At these remote terminals, there are allegedly significant space constraints. Id. Typically, according to the ILECs at most one or two DSLAMs can be

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<sup>46/</sup> Currently 20 percent of all loops are provisioned over DLC, and that proportion is projected to increase ultimately to 50 percent of urban loops and 80 percent of rural loops. Almost all of these will be IDLC. Wimmer Reply Decl. ¶ 10, n.4.

collocated there. Id. Thus, if CLECs do not have access to the ILEC DSLAM, they will not be able to serve customers whose loops are provisioned over IDLC. Id. Requiring the ILECs to replace their multiplexed loops with copper would not only be costly and likely create delays, it also would reduce the capability of the loop. Id. Although the Commission's recent collocation order will reduce this problem in the central office, when customers are served by homerun copper loops, CLECs still can have difficulty providing DSL services using their own DSLAMs at small or overcrowded ILEC central offices that lack collocation space. Id.

More than half the wire centers in the United States (10,967 out of 20,637) - - the majority in rural areas - - serve under 2,000 lines.<sup>47/</sup> In these rural areas, about half the loops are provisioned over DLC (since they exceed 12,000 feet in length), and currently cannot use DSL technology. Id. ¶ 11. Assume, optimistically, that 60 percent of the 1,000 copper-served loops in such a wire center are in households with personal computers (600) , half of which have modems (300), 25 percent of those are willing to pay for DSL (75), and a CLEC such as MCI WorldCom can expect a "win rate" of 25 percent of the potential customers (19). Id. Then, in a 2,000 line wire center, MCI WorldCom can project to win 19 DSL customers, but only if it deploys both a DSLAM (including collocation costs) and transport. Id. For the other half of lines in small wire centers (those served by IDLC), the DSLAMs cannot be placed in the wire center; they must be collocated at remotes, where according to the ILECs there is unlikely to be any space for collocation and even if there were space, given the small number of customers served, the projected customers "won" would be only two or three. Id. ¶ 12. Therefore without shared DSLAMs (and shared high cap loop transport), MCI WorldCom and other CLECs would simply be shut out of rural markets. Id. Given the limited total number of customers likely to

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<sup>47/</sup> Wimmer Reply Decl. ¶ 11, HAI Model, Release 5.0.

seek DSL service in rural remote terminals, the ILEC itself might not have the incentive to deploy DSLAMs unless it had other parties working as DSL marketing agents. Id. Leasing the DSLAMs to CLECs is the most likely way to expand the marketing effort needed to support DSLAMs in rural markets. Id. ¶¶ 12, 23.

### **C. Transport**

In their comments, the ILECs propose restricting CLEC access to ILEC transport. While some concede that such access would reduce CLEC costs, and improve CLEC network efficiency and access to loops, they argue such cost savings and efficiency benefits are not relevant.<sup>48/</sup> The ILEC transport exceptions should be rejected because they would improperly deny CLECs access to ILEC transport when such transport is needed by CLECs to provide local services efficiently.

#### Shared Transport

Ameritech claims that shared transport is not an unbundled network element within the meaning of section 251(c)(3) because it cannot be obtained without also obtaining local switching; that since switching fails to meet the “impair” test, so does shared transport. Ameritech at 94-95; see U S West 53 (arguing that shared transport cannot meet the impair test because that test must be applied to stand-alone elements, but it is impossible to use shared transport without ILEC switching). Ameritech further argues that even if local switching must be unbundled, shared transport would not meet either the necessary or the impair standards

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<sup>48/</sup> For example, Ameritech states that the fact that competitors can reduce costs with shared transport is irrelevant (Ameritech at 97-98). Ameritech also argues that whether access to ILEC interoffice facilities would improve CLECs’ ability to design efficient networks or combine their own switching functionality with unbundled loops is irrelevant. Id. at 87.

because it could not function without access to the routing tables in the ILEC switches, which are proprietary and not necessary for CLECs to compete. Ameritech at 96.

These arguments are absurd. Id. ¶ 25. No element by itself suffices to provide local telecommunications service — not a loop, not switching, not transport. Id. Moreover, the exact location of certain functionality in the network will change over time as new technologies are deployed that move intelligence to different elements. Id. The overriding question is whether, without access to an element, a CLEC will be impaired in its ability to offer local service. Id. There is no practical way for CLECs to provide ubiquitous service without access to shared transport, as explained in our comments. Id. MCI WorldCom at 62-63. The ILECs have presented no analysis that undermines that conclusion. MCI WorldCom disputes Ameritech's claim that the routing tables in the ILEC switches are proprietary. Id. But even if the necessary standard does apply, such access is necessary for CLECs to be able to provide ubiquitous service because in the absence of such access CLECs would be forced to face deploy a ubiquitous switching, signaling, and transport network. Id.

Ameritech's cavalier statement that no impairment occurs because an efficient CLEC might be able to replicate the functionality provided by ILEC shared transport within two years, Ameritech at 97, demonstrates that it does not appreciate the sort of competition Congress intended to unleash through implementation of the Act. It reflects a disregard for the Act's intent to achieve effective local competition as soon as possible and to use UNEs as an integral part of the transition from monopoly to a competitive provision services market place. Wimmer Reply Decl. ¶ 26 (Tab 13). It is not realistic to expect that CLECs, individually or collectively, could replicate the functionality provided by ILEC shared transport for thousands of end offices within two years, and Ameritech offers no credible evidence to support its contrary claim. Id.

Moreover, denying CLECs access to shared transport also places them at an artificial disadvantage with respect to ILECs when constructing their own dedicated transport facilities. Id.; See MCI WorldCom at 63.

### Dedicated Transport

MCI WorldCom agrees that in limited locations alternative sources of dedicated transport are available to CLECs. Wimmer Reply Decl. ¶ 27. As we stated in our comments, we can reach approximately 1,600 end offices using non-ILEC transport. MCI WorldCom at 64; Wimmer Reply Decl. ¶ 27. But no such alternatives exist for more than 10 times that many end offices, and even at those for which an alternative exists, the alternative cannot always fully meet our needs. Wimmer Reply Decl. ¶ 27 (Tab 13). The ILECs have proposed various exceptions that are intended to identify where transport alternatives exist and where they therefore would not be required to provide dedicated transport at TELRIC rates.<sup>49/</sup> The problem is that these exceptions do not fully reflect market realities, and therefore the ILEC proposals would leave CLECs without access to ILEC dedicated transport in some situations in which they do not have practical alternatives. This would be especially difficult for CLECs who planned market

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<sup>49/</sup> These exceptions include the following: Ameritech would deny access (1) in any wire center serving 40,000 or more lines with existing collocation, or (2) in any central office with collocation if competitive interoffice transmission facilities have actually been deployed to the wire center. Ameritech at 6, 88. Bell Atlantic would deny access of interoffice transport facilities anywhere at least one carrier has deployed its own network and collocated its own transmission equipment in the ILEC's wire center. Bell Atlantic at 31. BellSouth would deny access in Zones 1 or 2 (urban and suburban areas). BellSouth at 53. U S West would establish the presumption that interoffice transmission unbundling is not mandatory in wire centers that have more than 40,000 loops and at least one collocated CLEC. U S West at 51. GTE would deny access in wire centers that exceed 15,000 lines. GTE at 62-63. SBC would deny access in wire centers serving more than 40,000 loops where one or more CLEC have collocated. SBC at 49-50.

launches and then found themselves without the capability of transporting traffic in a portion of the launch area.

These varying ILEC proposals demonstrate the difficulty in setting a threshold, especially because actual CLEC deployment decisions will be based on many factors in addition to the size of the serving wire center, (e.g., the physical distribution of each CLEC's network facilities and demand and access to rights of way). Wimmer Reply Decl. ¶ 32. It is noteworthy that SBC admits in its comments that it is not clear where to draw the line. SBC at 49; Wimmer Reply Decl. ¶ 32. The fact is, if the line is drawn too stringently, competition will be harmed because some CLECs who do not have access to practical alternatives to dedicated ILEC transport will be impaired in their ability to provide service. Wimmer Reply Decl. ¶ 32. By contrast, the benefits of a uniform, administrable rule far exceed any conceivable costs. In particular, ILECs facing effective competition from alternative transport providers will be only too willing to provide transport on a common carrier basis to any customer at TELRIC rates. To understand why this is so, one need only consider all the "competitive services" proceedings that have been held in state commissions around the country over the past decade or more at the instigation of the ILECs. Id. In these proceedings, the ILECs have alleged that one or more of their services have been threatened by competition (for example, that Centrex faced competition from PBXs), and that they therefore needed flexibility to set rates as low as long run incremental cost or marginal cost (i.e., rates are substantially lower than TELRIC), in order to be maintain customers and avoid "stranded investment." It is only where the ILEC believes that there is no competition capable of

driving rates down that the ILEC will oppose having to offer dedicated transport at TELRIC rates.<sup>50/</sup>

As a result, it is far better public policy and far more consistent with the intent of the Act to place no artificial restrictions on CLEC access to unbundled dedicated transport.

#### **D. Switching**

In their comments, the ILECs present a veritable catalogue of non-ILEC switches in the United States. See UNE Fact Report at Pt. I. The ILECs claim that the existence of these switches demonstrates that there are alternative sources of switching available to CLECs, and therefore CLECs would not be impaired in their ability to offer local telecommunications services if they did not have access to ILEC switching. While the ILEC catalogue of switches demonstrates that CLECs seek to invest in their networks, it does not address the central question — are alternative sources of switching functionality practically available that can be efficiently connected to unbundled ILEC loops to allow CLECs to competitively offer local telecommunications services?

Since CLECs will need to use unbundled ILEC loops to reach the vast majority of their customers for the foreseeable future, alternate sources of switching are of use only if ILEC loops can be efficiently provisioned and connected to them. Wimmer Reply Decl. ¶ 14. The existence of stand-alone switches is meaningless if they cannot be practically connected to ILEC loops. Id. The two relevant issues relating to practical reality are: Are the costs associated with using the

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<sup>50/</sup> Wimmer Reply Decl. ¶ 32. In this vein, it is ludicrous for GTE to argue that transport is available to CLECs out of the access tariff and even though that tariff far exceeds costs CLECs would not be impaired in their ability to provide service if they had to pay that rate. First, the objective of the Act is to foster competition that will drive down rates. If new entrants must pay inflated rates for a key input, that will create an artificially high ceiling below which end-user rates will not be able to fall, thus defeating the Act's objective. See MCI WorldCom 65 n.43.

switch in the range that allows the CLEC to compete against the ILEC in the local service market and can the switch reliably be used in conjunction with ILEC loops to commercially offer local service?

As a threshold matter, self-provisioning switching on a stand-alone basis while possible in theory is limited by real constraints. Id. ¶ 15. First, there are the physical space limitations. Providing competitive switching requires CLECs to collocate transmission equipment at the ILEC central office. As the FCC has recognized, ILECs often claim that they have run out of space in their central offices to collocate CLEC equipment.<sup>51/</sup> Whether or not such claims are true today, it will be inevitably true that collocation space will eventually become scarce. The ILECs concede that the ability of CLECs to self-provision switching is limited to the number of collocations that ILECs allow in their central offices. See e.g., SBC at 41. This will place a physical limitation on the number of competitors in local switching.

Although the Commission's recent collocation order partially addresses this problem, it cannot be totally eliminated. See Wimmer Reply Decl. ¶ 16. Many ILECs summarily deny access to collocation space based on their claims that collocation spaces in their facilities have reached capacity. If this assertion is contested by the CLEC, resolving disputes over collocation space availability take time and additional costs; in some cases, disputes have to be arbitrated by state commissions. Id. Even under the Commission's collocation rules, which expedite the resolution of collocation disputes, it still may take several months to have a final decision. In MCI WorldCom's experience, it takes between six months to a year from the date of a collocation request until the time a collocation is delivered, depending on the length and extent

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<sup>51/</sup> First Report and Order, In re Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-14, ¶ 29 (Mar. 31, 1999).

of collocation disputes. See also Herold/Stockhausen/Lathrop Decl. ¶ 5 (attached at Tab 5 to MCI WorldCom Comments).

A CLEC that is required to self-provision its own switching may be effectively barred from doing so because of the lack of available collocation space. See Wimmer Reply Decl. ¶ 17. In these situations, CLECs have no alternative except to have unbundled access to the ILECs' switches.

In addition to the physical limitations on offering competitive switching, there are substantial cost issues that impair the ability of CLECs to obtain switching from alternative sources. Id. ¶ 18. Even where collocation is available, CLECs will have to bear additional recurring and nonrecurring costs which the ILECs will not have to bear. These costs associated with collocation and other activities must be undertaken because the public switched network was not configured to handle interconnection by other carriers. Id. Those additional costs can result in it not being profitable for a CLEC to offer local services to customers using its own switch. For example, self-provisioning of switching requires CLECs to install equipment and incur other costs that ILECs do not have to incur to provide switching. Id. Under current Commission collocation rules, CLECs are prohibited from using collocation solely to install a switch in the ILEC central office. This means that CLECs have to install equipment at the collocation to transport its customer traffic to its switch at another location. This usually requires the collocation of a remote switching module, a digital loop carrier, or other transmission equipment at the ILEC central office. In addition, CLECs have to self-provide the transport back to its switch. These are all additional costs which ILECs do not have to incur to provide switching. Id. Again, in these cases CLECs will need access to ILEC switching to be able to offer local service unimpaired.

In rural areas and in some suburban areas, the cost disadvantages that CLECs face for collocation and nonrecurring charges, in addition to lost economies of scale relative to those the ILECs enjoy as dominant providers with very high market penetration, entirely rule out CLEC self-provisioning of switches. Wimmer Reply Decl. ¶ 19.

In addition to the physical collocation and cost limitations on self-provisioned switching, CLECs like MCI WorldCom must also address whether the provisioning of ILEC loops with CLEC switches can be done reliably enough to support a commercial launch of service. In order to serve the mass (residential and small business) markets, a CLEC must be able to respond quickly and reliably to demand created by its marketing campaign. To do this, it must be able to shift thousands of customers each day from the ILEC service to its service. Experience has proven, however, that ILECs are not able to provision loops in a sufficient number and manner when CLECs self-provision their own switches. ILECs can only do so if CLECs use the ILEC's entire UNE platform. Id. ¶ 20.

The ILECs' inability to provision unbundled loops when CLECs use their own switches has been documented by the third-party testing currently being performed in New York State by KPMG, under the auspices of the New York Public Service Commission. As described more fully in the declaration of Sherry Lichtenberg (Lichtenberg Decl. ¶¶ 12-13, Tab 11), the KPMG report documents myriad deficiencies in timing, quality, and reliability associated with hot cuts, manual processes, and coordination when an unbundled ILEC loop is being provisioned for use with a CLEC switch. Wimmer Reply Decl. ¶ 21. These same problems were absent when the ILEC loop is provisioned in conjunction with the ILEC own switch. Id. Therefore, MCI WorldCom has reached the business decision that the only way for it to be able to provide its

customers reliable, high quality service in a timely fashion is to lease from the ILEC both the switching and the loops. Id.

While some ILECs argue that switching should not be unbundled nationwide, see, e.g., USTA at 34, others argue that regional rules or office-by-office determinations should be made. Beyond the fact that such regional or office-by-office determinations would be administratively unwieldy and enormously expensive for a nationwide CLEC, such rules would have the effect of cutting off millions of customers from having access to competitive providers. For example, one of the proposed ILEC exceptions is that a single collocation in a central office would excuse an ILEC from unbundling the switching functionality of that office. However, a single collocation in a central office is a poor indicator of whether switching is competitive at that central office. A CLEC may be collocated at a central office in order to provide data services from that location. A collocated CLEC may have a business strategy which excludes residential customers. By the ILEC proposal, the existence of the single collocated CLEC would place all other CLECs at the mercy of the business strategy of that particular CLEC at that location. If the single collocated CLEC, for whatever business reason, did not offer switched voice and data services, the ILEC would have effectively no competition at that central office.

#### **E. Signaling and Call-related Databases**

As MCI WorldCom explained in its opening comments, MCI WorldCom at 58-62, CLECs' ability to compete effectively in local telecommunications markets would be impaired unless if they have unbundled access to the ILECs' signaling networks and call-related databases, including the Advanced Intelligent Network ("AIN") architecture and service management systems. Ku Reply Decl. ¶ 2 (attached hereto as Tab 14).

The need for unbundled access to an ILEC's signaling network and databases, including the ILEC's AIN triggers, is most pressing where a CLEC utilizes the ILEC's switch. Id. ¶ 3. An ILEC's switching element works in tandem with the ILEC's signaling network and databases. Id. Thus, as most of the ILECs conceded in their initial comments, see e.g., Ameritech at 114; SBC at 43, unbundled ILEC switching is simply inoperable without access to the ILEC's corresponding signaling networks and databases. Id. It is impossible for CLECs to use their own signaling in connection with the ILEC's switching element, because the ILEC's switches cannot interoperate with multiple signaling networks except through their own signaling networks' mediation. Ku Reply Decl. ¶ 3 (Tab 14). It is virtually indisputable, then, that ILECs must unbundle their signaling and call-related databases where the ILECs unbundle switching.

Even where CLECs provide their own switches, it is imperative that ILECs unbundle their SS7 signaling networks and call-related databases. Id. ¶ 4. At present, ILECs have the benefit of ubiquitous signaling networks throughout their regions. If a CLEC wishes to offer ubiquitous, high-quality local service, it must, as a practical matter, tap into the ILECs' signaling networks and databases. Id. ¶ 4. Notwithstanding the ILECs' assertions, third-party signaling networks are wholly inadequate substitutes for the ILECs' networks. Id. ¶ 5. No third party vendor owns a signaling network in every Local Access Transport Area ("LATA"), nor do they provide direct connectivity with the ILECs' switches. Id. Consequently, if a CLEC is forced to obtain signaling from a third party -- rather than from the ILEC -- the CLEC will suffer diminished performance because the third party will have to reroute the traffic to a distant Signal Transfer Point ("STP"), rather than using the ILEC's nearby STP. Id. This might generate, for example, longer call set-up time for the CLEC's customers, thereby impairing the CLEC's ability to compete effectively. Id. Because, at this time, third party vendors only have geographically

dispersed (i.e., not local) STPs typically used by smaller long distance networks, they cannot provide CLECs with signaling comparable to those of the ILECs. Id.

Likewise, it is not competitively viable for CLECs to self-provision call-related databases or to obtain them from third party vendors, even where the CLEC uses its own switch. Id. ¶ 6. Some of the information contained in the ILEC databases to which CLECs need access simply is not independently replicable by a CLEC or third party vendor. Id. The ILECs' Toll Free Number Database, for example, contains joint and common information about terminating customers in a given local switched environment, although it is the originating customers that dial numbers which must be translated in toll free (800 and 888) calls. Id. The CLECs therefore, cannot perform the number translations without obtaining the required translation information for the 800/888 customers of every other carrier. Id. Without access to the ILEC's Toll Free Number Database, then, a CLEC's or third party's Toll Free Database will be useless. Id. Similarly, the ILEC's Line Information Database ("LIDB") contains line and billing information for all lines belonging to a group of LECs, and so a CLEC or third party vendor cannot develop its own LIDB without access to the ILECs' LIDB. Id. Furthermore, if a self-provided or third party database comprises information that is controlled and updated by the ILEC, the database will be more difficult and more costly to maintain. If the updates are not performed in a timely manner, the CLEC's call-related database will be more prone to error in the completion of certain services (e.g., Caller ID). Id. ¶ 6.

In addition to signaling and database, CLEC access to ILECs' Service Management Systems ("SMS") is crucial to competitive entry, even for those CLECs that do not use the ILECs' switches. Id. ¶ 7. Without access to an ILECs' SMS, a CLEC could not populate, modify, and update information in call-related databases. Id. Similarly, CLECs must have

access to the ILECs' Service Creation Environment ("SCE"), which is necessary to test new and innovative AIN services. Competitive entry by the CLECs will be impossible without unbundled access to the ILECs' AIN platform and software. Id. The CLECs should have access to all of the ILECs' AIN capabilities, including the AIN databases, SCE, and SMS, to be able to bring competitive new services into the marketplace and to maintain seamless routing and completion of traffic. Id. ¶ 7.

Contrary to the ILECs' claims, the AIN architecture is not proprietary and has always been meant to open the network interface. In fact, AIN was developed and standardized to give carriers the capability to open and customize new services quickly and to provide seamless interconnectivity between networks. Id. ¶ 8. In any event, even if an ILECs' customized AIN services are deemed to be proprietary, see, e.g., Ameritech at 127; BellSouth at 80, the AIN deployment -- that is, the exchange of trigger and database information required to process an AIN call -- should never be considered proprietary. Id. The AIN architecture was standardized by the International Telecommunications Union ("ITU") and modified by the American National Standards Institute ("ANSI") precisely to facilitate the development and provision of new and innovative telecommunications services. Without access to the ILECs' AIN systems and databases, CLECs would be unable to gain access to crucial information that cannot be duplicated outside the ILECs' AIN architecture. Ku Reply Decl. ¶ 8.

Ameritech has suggested that, because CLECs have not sought access to its AIN platform and services, these elements are not critical to entry. Ameritech at 126. However, it is the ILECs' dilatory tactics -- and not the alleged unimportance of the AIN architecture -- that have prevented the CLECs from moving forward in these areas. The ILECs have employed numerous tools -- appeals of arbitrations, refusal to do combining of unbundled elements normally

combined within their networks, poor or non-existent interfaces into their OSS, and more -- to make it difficult for CLECs to utilize unbundled switching. Id. ¶ 9. As a result, MCI WorldCom is currently using unbundled switch ports as an entry vehicle in only one state: New York and even this took some time to obtain. Id. Because the CLECs' use of unbundled switching has to date focused on such mundane matters as keeping customers from losing dial tone and assuring that features ordered are provisioned on the customers' lines, CLECs have not yet begun to explore the more advanced capabilities of switching that would be possible, at least theoretically, via the use of SS7 signaling and call-related databases. Id. Were CLECs permitted to make full, effective use of unbundled switching, they surely would need access to these advanced capabilities to compete in the local markets.

As previously demonstrated, MCI WorldCom at 61-62, the Commission should reinstate the unbundling obligations for signaling and call-related databases imposed on ILECs in the Local Competition Order.<sup>52/</sup> Local Competition Order ¶¶ 452-500.

**F. Operator Services and Directory Assistance**

The ILECs' comments on operator services ("OS") and directory assistance ("DA") demonstrate that there is one point of common ground among the parties -- that MCI WorldCom would like to provide operator services and directory assistance services in the local market using its own facilities and platforms. See, e.g., Bell Atlantic at 33; Declaration of Stuart H. Miller ("Miller Decl.") (attached as Tab 8 to MCI WorldCom's opening comments) ¶ 4. There is also general agreement that CLECs can self-provide directory assistance and operator services, but only if they can obtain all the necessary inputs at prices and a level of quality that afford a CLEC

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<sup>52/</sup> In addition, as MCI WorldCom noted, the Commission should add the Customer Name Database and related databases to the list of databases to which CLECs should have access. MCI WorldCom at 61-62.

a meaningful opportunity to compete.<sup>53/</sup> The problem is that CLECs do not have a meaningful opportunity to compete, and therefore remain reliant on ILEC OS/DA services, because CLECs have largely been denied access to these inputs on competitive terms. Specifically, even the most efficient CLEC cannot compete on equal terms unless it can obtain accurate and complete directory assistance listings in bulk format<sup>54/</sup> from the ILECs. Moreover, as long as CLECs remain dependent on ILEC switching, an efficient CLEC has no opportunity to compete using its own OS/DA platforms because ILECs will not provide customized routing of OS/DA calls to CLEC platforms using the protocol used by the CLECs. See Miller Decl. ¶¶ 14-17 (Tab 8 to MCI WorldCom's opening comments).

Thus, the flaw in the ILECs' position is that they assume a CLEC is not impaired if it can obtain inputs for OS/DA from alternative suppliers regardless of the quality of those inputs and regardless of the ILECs' use of their market power to substantially raise the cost of CLEC self-provisioning. MCI WorldCom demonstrated in detail why directory listings from the wholesalers cited in the ILECs' comments<sup>55/</sup> do not match the accuracy of the ILECs' listings, and why an efficient CLEC effectively cannot compete without bulk access to those listings. See Miller Decl. ¶¶ 10-13. MCI WorldCom is unaware of any ILEC that disputes the fact that ILEC

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<sup>53/</sup> See generally SBC at 64, Bell Atlantic at 35.

<sup>54/</sup> CLECs do not have a meaningful opportunity to compete if they are limited to "dip by dip" access, as opposed to bulk format. Without access to bulk listings, CLECs would be forced to (1) spend tens of millions of dollars to develop or purchase DA systems compatible with different ILEC systems; (2) keep up with each systems change made by each ILEC (allowing ILECs to raise CLECs' costs at will); (3) share competitive information with ILECs; and (4) forego the ability to offer an innovative, differentiated product. Miller Decl. ¶¶ 7-8.

<sup>55/</sup> See, e.g., Bell Atlantic at 34; GTE at 50; BellSouth at 78-79.

listings are far more accurate than databases available from third parties,<sup>56/</sup> as substantiated by MCI WorldCom's studies and usage of the third parties' products. Miller Decl. ¶¶ 10-13.<sup>57/</sup> If, as all parties agree, MCI WorldCom has a strong desire to self-provision local DA services, and alternative listings are available on the open market, why would MCI WorldCom decline to use them for local DA services? The answer is simple, as Mr. Miller explained: the alternative sources do not, and cannot possibly, match the accuracy of the ILEC listings for a local DA product. Miller Decl. ¶ 13.<sup>58/</sup>

Even in the selected states where ILECs have been ordered to provide bulk access to their listings at cost-based rates,<sup>59/</sup> MCI WorldCom cannot self-provide OS/DA unless it also uses its own switches. This occurs because where MCI WorldCom uses ILEC switching, customized

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<sup>56/</sup> Some ILECs claim that some wholesale providers update their listings on a daily basis. In addition to the fact that MCI WorldCom has discovered otherwise when actually attempting to use these products, Miller Decl. ¶ 10, it is important to note that the ILECs do not even contend that wholesalers obtain updated data from the ILECs on a daily basis. Updates, however frequent, are only as good as their source.

<sup>57/</sup> In addition to the problem that third-party databases contain inaccuracies, CLECs are further impaired where independents refuse to share their listings, or charge exorbitant rates to CLECs for listings they provide at no charge to ILECs. And alternative sources do not provide the same protection for unlisted numbers as do the ILECs databases. Miller Decl. ¶¶ 12-13.

<sup>58/</sup> The ILECs point to MCI WorldCom's national DA product, and the availability of listings from wholesalers such as Teltrust, as supposed proof that CLECs can self-provide local DA services. See, e.g., Ameritech at 108; BellSouth at 78; SBC at 60. But the only reason MCI WorldCom has been able to launch a competitive national DA product is that it has at times succeeded in forcing ILECs to share their listings. MCI WorldCom's national DA product uses third-party sources such as Teltrust to supplement listings obtained directly from ILECs.

<sup>59/</sup> SBC disingenuously argues that access to its OS/DA services is unnecessary because the Commission requires ILECs to share directory listings. SBC at 61-62. But SBC has been an industry leader in steadfastly resisting providing bulk access to its DA listings as an unbundled element subject to the pricing requirements of section 251, both in negotiations and in protracted litigation. SBC was ordered to provide such access in Texas, over its appeal, but continues to refuse to provide bulk access to DA listings as an unbundled element in other states in its region.

routing is necessary to send CLECs' customers' traffic from the ILEC switches to MCI WorldCom's OS/DA platforms. Some ILECs claim to offer customized routing to bring OS/DA traffic to CLEC platforms, but they neglect to mention that they use a protocol the CLEC platforms cannot handle. Id. ¶ 16. The ILECs' refusal to use the Feature Group D protocol -- which they already use for other purposes -- to route OS/DA traffic to CLECs prevents CLECs from self-providing these services. Id. ¶¶ 16-17. CLECs would have to incur substantial expenditures to convert OS/DA platforms to interface with the protocol used by the ILECs, precluding them from offering a competitive product. Id. ¶ 16. For this reason as well, CLECs are impaired unless ILECs are required to provide OS/DA services as unbundled elements.

**G. Operations Support Systems**

The ILECs generally concede that operations support systems ("OSS") must be unbundled on a reasonable, nondiscriminatory basis if CLECs are to offer competitive service using unbundled network elements or resale. Reply Declaration of John Sivori ("Sivori Reply Decl.") ¶ 4 (attached hereto as Tab 15.) Two of the BOCs, Ameritech and Bell Atlantic, do not address OSS in their comments at all, and the three remaining BOCs expressly acknowledge CLECs' need for nondiscriminatory access to OSS. See BellSouth at 31; SBC at 56; U S West at 41. MCI WorldCom urges the Commission to hold the ILECs to this acknowledgment by adopting rules that ensure not merely access to OSS, but access that is truly nondiscriminatory. To do so, the Commission's rules should require that OSS interfaces be uniform nationwide, that all OSS be subjected to comprehensive testing, and that all ILECs implement adequate change management controls. These requirements are set forth in more detail in the Reply Declaration of John Sivori.

The three BOCs that concede that OSS must be unbundled propose a single qualification: that the OSS unbundling obligation should extend only to OSS that supports network elements that are themselves required to be unbundled (or services that must be provided for resale). See BellSouth at 31; SBC at 56; U S West at 41. This qualification adds nothing: CLECs will not request OSS they do not need. But the ILECs would improperly use this qualification to refuse access to critical OSS related to elements that CLEC's self-provide or obtain from third parties, and it therefore should be rejected. See Sivori Reply Decl. ¶¶ 2-3. To avoid impairment, of CLECs' ability to offer innovative services using elements that they self-provide or that are provided by third parties, the Commission's rules should require ILECs to provide nondiscriminatory access to all OSS that is needed for the CLEC to make full and effective use of unbundled network elements.

## **CONCLUSION**

For the reasons described above, MCI WorldCom respectfully requests that the Commission adopt the tentative conclusions endorsed by MCI WorldCom and further supplement its rules by adopting the additional requirements we request.

Respectfully submitted,



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**CERTIFICATE OF SERVICE**

I, Jeffrey I. Ryen, hereby certify that I have this 10th day of June, 1999, caused a true copy of Reply Comments of MCI WORLDCOM, Inc. to be served on the parties listed below by hand-delivery:

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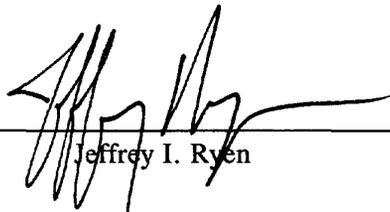
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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

<b>In the Matter of:</b>	)	
	)	
<b>Implementation of the Local Competition Provisions in the Telecommunications Act of 1996</b>	)	<b>CC Docket No. 96-98</b>
	)	
	)	
<b>Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers</b>	)	<b>CC Docket No. 95-185</b>
	)	

**REPLY DECLARATION OF JOHN E. KWOKA, JR.  
on Behalf of MCI WORLDCOM, Inc.**

1. My name is John E. Kwoka, Jr. I am Professor of Economics and Columbian School Distinguished Professor at George Washington University. I received an A.B. from Brown University and a Ph.D. in Economics from the University of Pennsylvania. I have previously held permanent or visiting positions on the economics faculties of the University of North Carolina at Chapel Hill, Northwestern University, and most recently Harvard University. I teach and conduct research in the areas of antitrust and regulation, and have devoted considerable attention to telecommunications matters in both.

2. In addition to these academic positions, I have served in both federal antitrust agencies--in the Bureau of Economics of the Federal Trade Commission and in the Economic Analysis Group of the Antitrust Division of the Department of Justice. I have also served as a Special Assistant to the Chief of the Common Carrier Bureau of the Federal Communications Commission. I continue to consult on a variety of regulatory and antitrust matters for and before these agencies, as well as for international agencies and private companies. My complete curriculum vitae is attached to this Reply Declaration.

3. In their written submissions in this matter, the United States Telephone Association (“USTA”), the incumbent LECs (“ILECs”), and their declarants have articulated a vision of the competitive future for the local exchange, together with a roadmap for getting to that destination, that prompt these further comments. Specifically, the “competition” that these parties argue would be sufficient is speculative, incomplete, distant in time, and disadvantaged in the market. In pursuit of this objective, USTA advocates reliance upon antitrust criteria applicable to essential facilities, encumbered by yet additional conditions. This approach would have the predictable effect of virtually negating ILEC obligations to offer UNEs, certainly on any widespread basis, thereby preserving ILEC market position and profitability.

4. The Telecommunications Act of 1996 (“the Act”) is designed to hasten the advent of viable and effective nationwide competition in the local exchange. The Act looks to a future in which bona fide alternatives are available to consumers and consequently the ILECs’ market power is constrained. The Act’s purposes are manifestly broader than identifying “essential facilities” in the sense used in antitrust proceedings under the Sherman Act. Rather, the Act creates a regulatory framework for the transition from monopoly to competitive provision of local service, and CLEC access to UNEs is a fundamental part of that framework.

I. The Competitive Future

5. The Telecom Act reflects the public policy importance of bringing competition to the local exchange as swiftly as possible. To consumers, such competition promises direct benefits in the form of lower prices and more innovative services, and indirect benefits in the form of reduced regulatory burden. To CLECs, competition-fostering policy entails the opportunity to offer services that attract traditional and new customers, and if successful in that