

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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Deployment of Wireline Services Offering) CC Docket No. 98-147
Advanced Telecommunications Capability)
)

REPLY COMMENTS OF MACHONE COMMUNICATIONS

MachOne Communications, Inc. ("MachOne"), by its attorneys, respectfully submits these reply comments in connection with the Commission's Notice of Proposed Rulemaking ("NPRM") in the above-captioned docket.¹

INTRODUCTION

MachOne — a new, venture capital-backed company developing high-speed digital subscriber line ("DSL") technologies for use in the residential marketplace² — proposed in its opening comments that the Commission should require incumbent local exchange carriers ("LECs") to make available not only the conditioned loops and collocation space discussed in the NPRM, but also access by DSL competitors to local loops for data-only purposes. MachOne Comments at 2-5. This sort of shared loop access, pejoratively dismissed by incumbent LECs as so-called "spectrum unbundling," is not only technically feasible (as shown by the fact that SBC Communications, Inc. ("SBC") and other incumbent LECs are already using such shared loop access for their own retail DSL services), but offers this Commission a new and highly cost-ef-

¹ *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Memorandum Opinion and Order and Notice of Proposed Rulemaking, CC Docket No. 98-147, FCC 98-188 (rel. Aug. 7, 1998) ("NPRM").

² MachOne combines high-speed connectivity, simple deployment, full-automated configuration and a smart, flexible end-user platform to deliver a wide variety of advanced data services over shared POTS and data lines at a price point that competes with analog dial-up networking solutions

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fective way to spur new entry and robust price competition for the residential high-speed data services market, a market segment all but ignored by today's generation of data competitors. *Id.* at 3-5.

Despite their professed support for state commission determination of whether, and if so under what circumstances, shared loop access should be available to new DSL entrants, the incumbent LECs are talking out of both sides of their mouths. As discussed below, in state arbitration proceedings SBC and others take the position — untenable in light of the *Local Competition Report and Order*³ — that spectral loop sharing has already been prohibited by this Commission and may not be ordered by a state commission pursuant to Section 251 of the Communications Act.⁴ Here, the incumbents argue to the contrary, namely that the FCC should not promulgate a “rigid” federal rule, but rather defer decisions on spectral loop sharing to state-supervised arbitrations. This hypocrisy and gamesmanship cannot be countenanced by the Commission. At the very least, the FCC must, in this proceeding, reaffirm that the *Local Competition Report and Order* does not prohibit loop sharing or “spectrum unbundling,” and that, like any other unbundled network element (“UNE”), a state commission is permitted to go beyond the federal minimum and affirmatively require shared loop access unbundling by incumbent LECs.

This issue is of immediate legal and policy importance. Just yesterday, in what appears to be a decision of first impression, a California Public Utilities Commission (“CPUC”) arbitrator refused to decide whether shared loop access is required by Section 251 of the Act, referring the issue back to this Commission. According to the CPUC, during the pendency of this

³ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (1996) (“*Local Competition Report and Order*”), *rev'd in part, Iowa Utilities Board v. FCC*, 120 F.3d 753 (8th Cir. 1997), *cert. granted*, 118 S. Ct. 879 (1998).

⁴ 47 U.S.C. § 251.

Commission's NPRM, "telecommunications carriers, whether competitive local carriers or an incumbent local exchange carrier, should not be authorized to share a local loop. . . . In the event the FCC determines that loop sharing should be permitted, this issue may be revisited."⁵ Thus, without ever addressing whether shared loop access meets the standards for UNEs under the 1996 Act, the CPUC has declined to exercise its arbitration responsibilities required by the Act, on the tenuous ground that the *Local Competition Report and Order*, which does not even mention loop sharing or spectrum unbundling, affirmatively precludes states from ordering this sort of unbundling. Whatever its ultimate decision on the issue of nationwide federal standards for shared loop access, the Commission should act promptly to clarify that the CPUC's interpretation contravenes the *Local Competition Order* and that, as MachOne argued in its comments, Section 51.309(c) of the Commission's Rules⁶ does not preclude a state commission from requiring spectrally shared local loop access for DSL competitors.

DISCUSSION

There can be no real question that, regardless of whether the Commission ultimately requires in this docket that incumbent LECs unbundle shared loop access, such a step can and may be taken by state commissions under Section 251 of the Act. As MachOne explained, "the Commission's Rules, including the definition of network elements, already contemplate shared loop access by competitive LECs." MachOne Comments at 7-8. Contrary to the CPUC arbitrator's decision, the Commission has squarely held that the UNEs required by the *Local Competi-*

⁵ Draft Arbitrator's Report, *Petition of PDO Communications, Inc. for Arbitration Pursuant to Section 252 of the Federal Telecommunications Act of 1996 to Establish an Interconnection Agreement with Pacific Bell*, A.98-06-052, at 10-12 (CPUC October 15, 1998) ("CPUC Arbitrator's Report"). PDO Communications, Inc. is MachOne's affiliated telecommunications carrier. See MachOne Comments at 3.

⁶ 47 C.F.R. § 51.309(c).

tion Report and Order “represent a minimum set of elements that must be unbundled by incumbent local exchange carriers. State commissions . . . are free to prescribe additional elements.”⁷

The policy behind this decision, which was affirmed on appellate review by the Eighth Circuit, is that requiring a uniform federal rule for UNEs would straight-jacket interconnection and access to network elements in light of the rapid pace of technological change in the telecommunications industry. The Commission explained that:

We reject the alternative option of developing an exhaustive list of required unbundled elements, to which states could not add additional elements, on the grounds that such a list would not necessarily accommodate changes in technology, and it would not provide states with the flexibility they need to deal with local conditions.

Local Competition Report and Order ¶ 243. Thus, as MachOne emphasized, addressing DSL interconnection only in terms of the use of an entire loop, for both voice and data services (or as a stand-alone data service loop), is based on “a view of DSL technology as implemented today, not as it could exist if deployed freely by ILEC competitors.” MachOne Comments at 1.

Many of the commenters agree that state commissions have the authority (and responsibility) to require spectral loop sharing. For instance, Bell Atlantic concurs that the Commission “should continue to allow states to address subloop unbundling issues on a case-by-case basis [because] they are closer to the local issues and are better equipped to address the numerous technical and operational issues.” Bell Atlantic Comments at 53. Likewise, SBC argues passionately that this Commission should defer to states on adding any additional UNEs required for access to advanced telecommunications services.

In reading the NRPM, SBC is struck by the fact that there are few references to State commission decisions. In the over two years since the 1996 Act became effective, the issues being raised by carriers with the FCC are matters that could have been, should have been, and SBC believes have been subject to arbitrations before State commissions. . . . The Commis-

⁷ *Local Competition Report and Order* ¶ 366.

sion should not lightly decide to disturb these decisions with a generally applicable rule . . . [w]here such necessity exists, the Commission should recognize that a “one size, fits all” approach will not always be appropriate, and permit relief from its rules by an appropriate showing to a State commission.

SBC Comments at 14-15 (emphasis supplied).

The problem is that the incumbent LECs , and SBC in particular, are playing fast and loose with the facts. It is true that the loop conditioning, collocation and spectral line sharing issues raised in the NPRM are being addressed in state commission arbitrations. But it is not true that incumbent LECs are willing to allow state commissions to exercise their 1996 Act responsibilities and decide these issues. In the MachOne/Pacific Bell arbitration, for instance, SBC argued that states are legally prohibited from addressing the very UNE issues it urges this Commission to leave for state commission proceedings. Before the CPUC, SBC claimed that because of “[t]he FCC’s refusal to unbundle the spectrum and mandate that a carrier using a loop gets exclusive use of that loop as [the CPUC] sits here as an arbitrator under Section 252, it can not . . . order such unbundling of loop spectrum.”⁸ Thus, despite SBC’s acknowledgement that states can add additional UNEs,⁹ it has contradicted itself on this fundamental question, and in the process has managed to coerce the CPUC arbitrator into refusing to decide the very issues that it contends, as a policy matter, “could have been, should have been, and have been” litigated in state PUC arbitration proceedings. SBC and the other incumbent LECs cannot have it both ways.

⁸ Concurrent Brief of Pacific Bell, *Petition of PDO Communications, Inc. for Arbitration Pursuant to Section 252 of the Federal Telecommunications Act of 1996 to Establish an Interconnection Agreement with Pacific Bell*, A.98-06-052, at 10-12 (CPUC filed October 5, 1998)(emphasis supplied).

⁹ *Id.* at 12. SBC’s theory is apparently that by affirming the Commission’s conclusion that state commission’s must follow the FCC’s interpretation of Section 251 in arbitrations, the Eighth Circuit has precluded states from requiring shared loop access because the *Local Competition Order* “refuse[d] to unbundle the spectrum.” *Id.*

The incumbent LEC arguments on the merits fare no better. First, SBC maintains that spectral loop sharing is not technically feasible, SBC Comments at 36, but that “the Commission should not prohibit spectrum unbundling by any carrier.” SBC Comments at 42. Of course, this position is internally inconsistent, since (a) a carrier cannot voluntarily implement spectrum unbundling if it is technically infeasible, and (b) SBC claims that the Paragraph 385 of the *Local Competition Report and Order* already prohibits spectrum unbundling. Id. at 36. Second, GTE argues that under the 1996 Act, separate spectrum “channels” may not be subject to unbundling, on the ground that the Act defines a network element as “a facility or equipment used in the provision of a telecommunications service.” GTE Comments at 87, *citing* 47 U.S.C. § 153(29). However, both the Act and the Commission’s Rules include the “features, functions, and capabilities that are provided by means of [loop] facilities” in the definition of “network element.” Id.; 47 C.F.R. § 51.5. Thus, the capability of sharing a voice loop for the provision of DSL data services is plainly a network element that must be unbundled by incumbent LECs. MachOne Comments at 6.

The incumbent LEC complaints about technical infeasibility are both overstated and wrong. Before this Commission, the incumbents have trotted out the usual “harm to the network” objections to allowing new entrants to acquire rights to the data channels inherent in the copper local loop while declining to purchase the voice elements of the loop.¹⁰ Those more restrained incumbent LECs (specifically US West) concede that the issue is not the technical feasibility of actually sharing the loop between voice and data services, but instead only operational support system (“OSS”) related to their own ability to “manage” shared loops in terms of “as-

¹⁰ Ameritech Comments at 21-22; GTE Comments at 86-90; US West Comments at 47-48; SBC Comments at 36-42; BellSouth Comments at 51-53.

signment, maintenance, billing and repair systems.”¹¹ In any event, shared loop access is feasible, as demonstrated conclusively by the fact that incumbent LECs are today offering DSL services using the same spectrum sharing approach proposed by MachOne, both for themselves and for third-party competitors. For instance, Pacific Bell allows some companies (but not MachOne) to “take the data traffic” while Pacific Bell continues to handle the voice traffic, exactly as MachOne is proposing to do. First, Pacific is partnering with Pacific Bell Internet, a separate affiliate, to provide spectrum sharing for DSL. As Pacific’s own marketing materials boast:

DSL works over existing wiring at a high bandwidth, and because data and voice transmission operate at different frequencies, you can use your phone or fax simultaneous while you’re on the Internet. Your phone service will never be compromised whether your DSL modem is switched on or off.¹²

More significantly, Pacific Bell is also permitting an unaffiliated company, Concentric Networks, to provide simultaneous voice and data over existing loops used simultaneously to provision incumbent LEC voice services. Concentric Networks boasts in its marketing material, as documented during the CPUC arbitration, that:¹³

If PacBell is the LEC, the standard phone service charge for the phone line used as the DSL circuit is not included. [Pacific apparently bills separately.] However, an existing phone line may be used, and a splitter will be installed to enable your existing phone line to carry both your data and voice traffic. Our other DSL LECs

¹¹ US West Comments at 47 & Attach. D ¶ 12. The remaining technical issues are associated with “the lack of spectrum and transmission power standards.” *Id.* ¶ 7. However, spectrum interference and “spectrum management” present no different issues for shared loops than they do for DSL services in general. Thus, the spectrum interference objections to spectrum unbundling do not present any independent ground for finding that loop sharing is technically infeasible. The Commission’s determinations in this proceeding on spectrum interference standards will apply to shared loops as well as “conditioned” DSL-capable loops purchased on an unbundled, stand-alone basis.

¹² “Work at Home Resources,” Pacific Bell (Attached as Exhibit A).

¹³ Pacific Bell Response to PDO Third Set of Data Responses, Response No. 78, *Petition of PDO Communications, Inc. for Arbitration Pursuant to Section 252 of the Federal Telecommunications Act of 1996 to Establish an Interconnection Agreement with Pacific Bell*, A.98-06-052 (Sept. 22, 1998)(emphasis supplied).

require a new phone line be installed and the phone service fee is included.

Finally, MachOne has engaged in extensive testing and field trials of shared loop access based DSL services with Citizens Communications, another California incumbent LEC. See Exhibit B. As Citizens reports, these field trials have confirmed that loop sharing for DSL is not only feasible, but causes no interference or any other technical problems with incumbent-LEC voice services offered over the same copper loop.¹⁴

This is hardly surprising. The fact is that the technology for shared voice/data services using DSL over a single copper loop has been around for some time. Nearly “all existing DSLAMs and end user modems already permit the provision of . . . voice and data over the same loop.” xDSL Networks Comments at 9. This was apparent at the time of the Commission’s adoption of its *Local Competition Order*, and at this point, well over two years later, it has now risen to the level of a truism. Yet incumbent LECs continue to hold forth Paragraph 385 as something of a holy grail justifying their continuing frustration of the competitive LECs’ DSL network build-out. The *Local Competition Order* does not prohibit shared loop access; it merely declined to require a competitive LEC to take something less than “exclusive” use of the loop, in order to prevent discrimination. MachOne Comments at 4-5. Now that incumbent LECs are provisioning their own DSL services using this very same “spectrum unbundling” approach, the non-discrimination requirements of the 1996 Act plainly require that DSL competitors also be permitted shared loop access.

The Commission now has the opportunity to cut the proverbial Gordian knot. The incumbents’ restrictive view of the *Local Competition Report and Order* is unquestionably out of

¹⁴ “[S]haring the copper . . . has not interfered with POTS service, with our automated line testing, or with Citizens’ network in any way.” Exhibit B at 1.

date technically.¹⁵ Shared loop technologies are pervasive throughout the network and are a cost-effective means of delivering broadband services in furtherance of Section 706 of the 1996 Act. As such, “spectrum unbundling” is both pro-competitive and pro-consumer. As MachOne explained, spectrally shared loop access:

makes it possible for entrants to offer DSL services over the same line that a consumer uses for POTS service without having to take over responsibility for providing the POTS service. Shared loop access allows competitors to focus solely on the DSL market without having to acquire the resources or the expertise to provide other types of telecommunications services. It also removes the cost disadvantage that a DSL-only provider would face if it had to provide DSL service over a stand-alone line. Thus, more providers should be able to enter the DSL market, and they should be able to do so in a manner that enables them to incur no greater costs than Pacific or its affiliate will incur. Easier entry means a greater chance of effective competition for DSL services, and consequently greater access to advanced telecommunications services for all Americans, including residential end users.

MachOne Comments at 5. Consequently, as a matter of public policy, the Commission should affirmatively mandate so-called “spectrum unbundling” in order to jump-start competition for advanced telecommunications services for residential end users, thus meeting the Section 706 mandate to ensure that “all Americans” have access to advanced services.

At the very least, the unfortunate actions of the CPUC require that the Commission clarify the basic principles of the *Local Competition Report and Order*, namely (1) that states are free to add additional network elements, such as spectrum unbundling, to the menu of UNEs that incumbent LECs are required to offer under Section 251, and (2) that Paragraph 385 of the *Order* does not establish a federal prohibition on shared loop access where “exclusive” use of the loop is not desired by the competitive LEC. If the incumbent LEC arguments that spectral sharing

¹⁵ Indeed, in the CPUC arbitration, the ALJ found that “[t]he record indicates that the cross-connects proposed by [MachOne] may well prove to be technically feasible and may, in proper circumstances, present a valuable tool to provide multiple telecommunications services on a single loop.” CPUC Arbitrator’s Report at 14. Nonetheless, the arbitrator felt concluded that the CPUC is constrained by “the regulatory status of loop sharing at the FCC” to reject the arbitration petition on purely legal grounds. *Id.* at 15.

and other DSL issues can be decided in state arbitrations have any truth, they must accept the fact that states can mandate spectrum unbundling consistent with the 1996 Act and the *Local Competition Report and Order*. And if this Commission truly desires to spur competitive access to advanced telecommunications services, it is imperative that this clarification come sooner, not later, or else the CPUC's refusal to decide the permissibility of shared loop access will have a domino effect in other state PUC arbitrations, dooming residential DSL competition before it can even begin.

CONCLUSION

As part of its efforts to ensure access to advanced telecommunications services for all Americans, the Commission should clarify that shared access to local loops is an unbundled network element for purposes of Section 251 of the Act and that, pending the Commission's ultimate decision in this proceeding, state commissions remain free to require unbundling of spectrally shared loop access capabilities pursuant to the 1996 Act.

Respectfully submitted,

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Dated: October 16, 1998

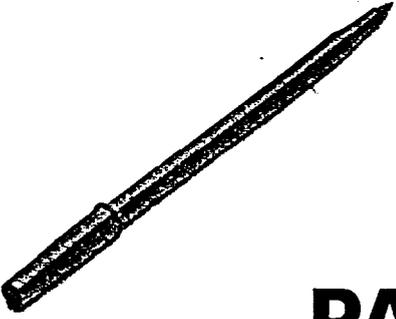
EXHIBIT A

Work *at Home* **Resources**

THE LATEST
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SEE PAGE 22

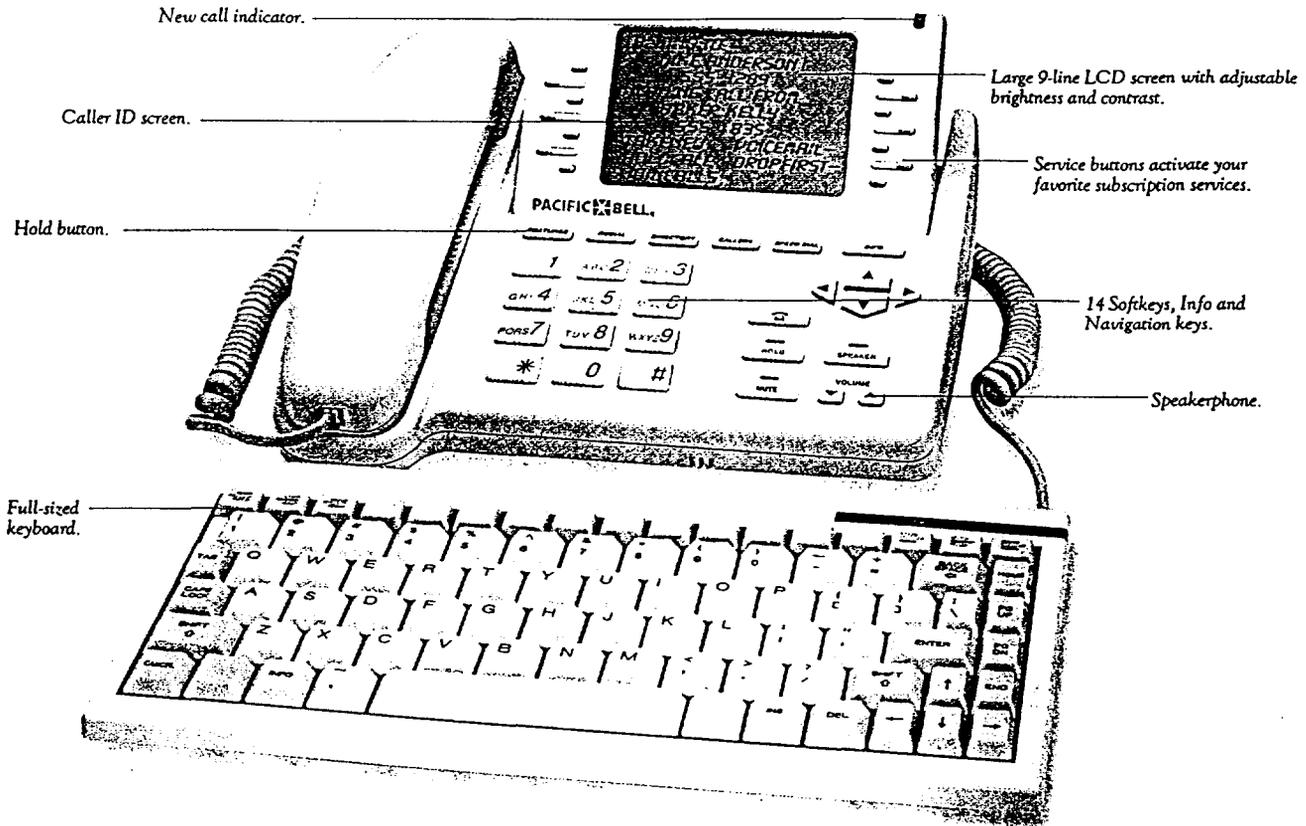


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EXHIBIT B

10/08/98 13:14

CITIZENS TELECOM

002

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(214) 365-3000



October 8, 1998

Douglas Cheline
Project Manager
MachOne Communications, Inc.
992 De Anza Boulevard
San Jose, CA 95129

Re: MachOne/Citizens Joint Field Trial

Dear Douglas:

This letter is to document progress toward the technical milestones for the joint field trial of the MachOne system at Citizens Communications in Elk Grove, California. As you are aware, Citizens and PDO have entered into a letter of intent which, among other things, sets forth our agreement to deploy a trial of MachOne's temporal line sharing and automated configuration technology to Citizens end users out of the central office located in Elk Grove.

To date, we have successfully installed in a live central office test environment the splitter/isolator and DSLAM equipment in Elk Grove. Since August we have been running data over voice utilizing MachOne's "temporal sharing" framework to deliver data when a POTS line is "on hook."

We have successfully demonstrated sharing the copper between MachOne's data equipment and our Nortel DMS-100 by cross connecting from the switch, through the MachOne splitter/isolator to a POTS line. In August, using that POTS line, we conducted extensive testing on the data/voice equipment cross connects between the DSLAM, the DMS-100 and POTS, including successful testing of our mechanized loop test with all the data equipment configured and sharing the POTS line as we expect to configure the service during deployment from the central office. MachOne's equipment properly disconnects from the line when a voice signal is present and has not interfered with POTS service, with our automated line testing, or with Citizen's network in any way.

Based on those successful tests, we expect to deploy the shared line DSL service to multiple Elk Grove end users during the next few weeks and we expect to have deployed the service to 40 end users by the end of October.

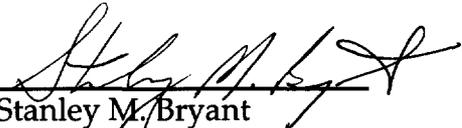
Sincerely,

A handwritten signature in black ink that reads "Robert D. Ingram". The signature is written in a cursive style.

Robert D. Ingram
Director of Network Development
Citizens Communications

CERTIFICATE OF SERVICE

I, Stanley M. Bryant, do hereby certify that the foregoing document was served this 16th day of October, 1998, by mailing true copies thereof, postage prepaid, to the following parties listed below:


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