

**STATE OF MICHIGAN**

**BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION**

In the matter, on the Commission's own motion, )  
to consider Ameritech Michigan's compliance )  
with the competitive checklist in Section 271 of )  
the Federal Telecommunications Act of 1996 )  
\_\_\_\_\_ )

Case No. U-12320

**SUPPLEMENTAL  
REPLY AFFIDAVIT OF  
MARK J. WELCH  
ON BEHALF OF  
AMERITECH MICHIGAN**

**DATED: AUGUST 23, 2001**

## TABLE OF CONTENTS

<b>SUBJECT</b>	<b>PARAGRAPH</b>
INTRODUCTION	1
PURPOSE	4
DEFINITION OF UNE-PLATFORM	5
LINE SPLITTING SCENARIOS	6
LINE SPLITTING “OVER UNE-P”	10
CONCLUSION	17
ATTACHMENTS	

I, Mark J. Welch, being of lawful age and duly sworn upon my oath, do hereby depose and state as follows:

**Introduction**

1. My name is Mark J. Welch. My business address is Three Bell Plaza, 308 South Akard, Room 732, Dallas, Texas 75202. I am the General Manager – Network Regulatory for SBC Communications, Inc. I am responsible for representing the network organization on regulatory issues, including development of network policies, negotiating network issues associated with interconnection agreements, providing network regulatory support for teams implementing regulatory mandates and testifying to network issues in regulatory proceedings. My area of responsibility is primarily associated with the DSL-related unbundled network elements, including DSL-capable loops, HFPL (Line Shared) loops, as well as Line splitting.
2. I have a Bachelor of Science in Industrial Engineering degree from the University of Oklahoma, Norman, Oklahoma. I have a Masters of Administrative Studies from Southeastern Oklahoma State University, Durant, Oklahoma. I have also begun pursuing a Masters of Science in Telecommunications from Oklahoma State University.
3. I obtained full-time employment from Southwestern Bell Telephone in 1992. Prior to that time, I participated in university-sponsored work-study programs with Southwestern Bell Telephone. Since 1992, I have held management positions in many different capacities. Specific assignments include: Long Range Technical Planning, Trunk Engineering and Planning, Transport System Planning, Network

Operations – Central Office Switching and Transport Equipment, Network Regulatory – Interconnection, Network Regulatory – Numbering, and my current assignment in Network Regulatory.

**Purpose**

4. The purpose of my affidavit is to respond to the affidavit filed by AT&T's affiant James F. Henson<sup>1</sup> regarding the definition of the "UNE-P", and AT&T's ability to engage in Line splitting and "Line splitting over the UNE-P". Specifically, I explain that there are many different technical architectures whereby CLECs could engage in line splitting, some of which CLECs could already be implementing without the knowledge of Ameritech Michigan (hereafter referred to as Ameritech). In addition, I address some of the technical issues associated with converting from existing scenarios to line splitting scenarios and from line splitting scenarios back to other scenarios. In addition, Mr. Silver addresses other issues related to line splitting raised by these AT&T affiants.

**Definition of the UNE-Platform (UNE-P)**

5. Before addressing specific issues related to line-splitting scenarios raised by Mr. Henson in his affidavit filed July 24, 2001, I need to address the definition of UNE-P. As Mr. Silver noted in his July 30, 2001 Reply Affidavit, UNE-P is a specific product offered by Ameritech, which consists of an unbundled loop and an unbundled switch port with shared transport that are directly cross-connected together in Ameritech's network (on Ameritech's Main Distribution Frame [MDF]) and used to provide only

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<sup>1</sup> Affidavit of James L. Henson on behalf of AT&T Communications of Michigan, Inc. and TCG Detroit, filed July 24, 2001 in MPSC Case No. U-12320 ("Henson affidavit").

circuit-switched voice service.<sup>2</sup> UNE-P, in the context of line splitting, generally refers to the more specific combination of an unbundled 2-wire analog (voice grade) loop and an unbundled switch port with shared transport, again cross-connected on Ameritech's MDF. (See Attachment A, p. 1.)

### **Line Splitting Scenarios**

6. There are many scenarios under which CLECs could engage in Line splitting. I have attached to this affidavit some examples of such scenarios, each of which requires that the CLEC provide the splitter (as required by the FCC and MPSC), as well as be responsible for the cabling from its collocation space to Ameritech's distribution frame (both of which are installed consistent with existing collocation rules and procedures). I also explain how Ameritech does not necessarily know (and/or need to know) whether a single CLEC, or two separate CLECs working together, obtain individual UNEs from Ameritech to engage in line splitting scenarios which could involve Ameritech-provided unbundled loops and Ameritech-provided unbundled switch ports (or alternatively CLEC-provided switching), using their collocation and CLEC-owned splitters.
7. In the first line splitting scenario (Attachment A, p. 2), I have identified how a single collocated CLEC can provide both voice and data using an unbundled DSL-capable loop. In this scenario, that CLEC could individually order an unbundled DSL-capable loop and also a UNE switch port, each of which would be cross-connected on the distribution frame to the CLEC's collocation space, using its Connecting Facility Assignment (CFA), designated by the CLEC. The CFA is the termination of the

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<sup>2</sup> See e.g. Line Sharing Order at par 72 and note 161.

CLEC's collocation cabling to which Ameritech connects one end of the jumper wire cross connect, as designated by the CLEC. The CLEC could then combine those two individual UNEs into a line splitting arrangement, using its collocated splitter, without any knowledge of Ameritech. In doing so, the combination is made without any requirement of Ameritech other than to provision the two requested UNE's. In this scenario, it is also possible that the voice CLEC could provide its own circuit switching from a switch located somewhere outside of Ameritech's central office.

8. In the second line splitting scenario (Attachment A, p. 3), I have identified how two CLECs, each with their own individual collocation arrangements, can engage in line splitting. In this example, the data CLEC (DLEC) could order an unbundled DSL-capable loop cross-connected on the distribution frame to the CLEC's collocation, using a CFA. The voice CLEC could either request a UNE switch port be cross-connected to a CFA to its collocation, or alternatively, the voice CLEC could provide the voice service using its own off-site switch as described previously. This is made possible by collocation-to-collocation direct cabling, as referenced in Attachment A, page 3.
9. In the third line splitting scenario (Attachment A, p. 4), I have identified how a DLEC and CLEC could share a physical collocation arrangement. In that scenario, the DLEC could request the unbundled DSL-capable loop cross-connected on the distribution frame to its collocation arrangement, using a CFA designated by the DLEC, and the voice CLEC could order a UNE switch port cross-connected on the distribution frame to the DLEC's collocation using a CFA designated by the CLEC. Again, it is also possible for the voice CLEC to provide the voice service using its

own switch – provided the CLEC has a switch, which would be located somewhere outside Ameritech’s central office.

**Line Splitting “Over UNE-P”**

10. As explained above, line splitting involves both voice and data service to the end user using Ameritech’s unbundled loop and the unbundled switch port, both of which must be cross-connected to a collocated splitter owned by the CLEC. Therefore, before line splitting can occur for either a single CLEC, or between two CLECs, the loop and switch port combination comprising the existing UNE-P must be separated. That must happen so that the CLEC (or its partnering CLEC) can insert its collocated splitter between the loop and switch port and between the loop and the collocated DSLAM. Both the FCC and this Commission have referred to this new network arrangement as “line splitting over the UNE-P.” Although this description has caused some confusion, Ameritech understands the term “over the UNE-P” to simply mean in this new line splitting arrangement that:

- a) the voice service will still be provided over the same loop that had been used in the prior UNE-P (assuming that loop is xDSL-capable), and
- b) the switch port will be the same port that had been used in the prior UNE-P (assuming the CLEC uses Ameritech’s switching), but
- c) the CLEC has added its own splitter (and possibly a DSLAM<sup>3</sup>) in between the two.

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<sup>3</sup> Splitter functionality can be integrated into the DSLAM. See Line Sharing Order at paragraph 9; footnote 11.

The prior UNE-P that was combined and provided exclusively on Ameritech's network by Ameritech, however, would technically no longer exist. Instead, it has been separated, relocated and modified (by adding new cross connects and a new non-Ameritech owned or controlled splitter, located in a CLEC's collocation space) to facilitate line splitting, which is the provision of voice *and data* over a single loop by a CLEC. For this reason, neither the FCC nor this Commission refers to line splitting "over the prior or *existing* UNE-P." Instead, the term "over the UNE-P" more accurately refers to the combination that the CLEC makes itself, as described above, using the loop and port that may have comprised the prior UNE-P once the CLEC combines those elements with its own collocated splitter. This is a reasonable interpretation, since by definition, "line splitting over the UNE-P" can only occur "when the CLECs provide the splitter," as this Commission has now ruled.<sup>4</sup>

11. Because the existing UNE-P combination obtained by the CLEC typically utilizes a basic two-wire analog loop, it may be technically necessary for Ameritech to modify the existing loop or to provision a different or new unbundled loop for the CLEC to engage in line splitting (i.e., the loop being used in the existing UNE-P combination may not be suitable for the CLEC's line splitting scenario). This is due to the unique transmission requirements of ADSL<sup>5</sup> services, which generally require all-copper loops with a total 26-gauge equivalent loop length of less than 18,000 feet, to have no load coils, no repeaters, and no excessive bridged taps. There is no guarantee that the

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<sup>4</sup> Order in Case No U-12540, dated March 7, 2001 at page 7.

<sup>5</sup> Line Sharing and Line splitting are available on ADSL "flavors" of DSL. Other flavors of DSL are not always technically able to be provisioned using splitters because they utilize the full spectrum of the loop to operate.

existing two-wire analog loop will meet the characteristics of an ADSL-capable loop, as the existing loop may have been provisioned using digital loop carrier (DLC), load coils, excessive bridged taps, etc., which would likely impact the CLEC's ability to provide DSL services. Thus, when the CLEC (or CLECs) decide to disaggregate an existing UNE-P combination in order to assemble a line splitting arrangement, an xDSL unbundled loop should be requested. The CLEC is also required to order a DSL-capable loop to ensure that it provides Ameritech the Power Spectral Density (PSD) mask, which Ameritech inventories, as required by the FCC, to allow all CLECs to address any spectrum management issues.

12. With that clarification of the meaning of "line splitting over UNE-P", I will address Mr. Henson's specific allegations. In paragraph 18 of the Henson affidavit, he references paragraph 19 of the FCC's Third Report and Order on Reconsideration in CC Docket 98-147 ("Line Sharing Reconsideration Order"). He cites this paragraph in an effort to imply Ameritech is in some sort of violation of the MPSC's order in Case No. U-12540 regarding the provision of "line splitting over UNE-P". Mr. Henson is at the correct paragraph, but doesn't tell the *whole* story. As Mr. Silver indicated in paragraph 7 of his Reply Affidavit, it is this very paragraph in the FCC's Order that confirms that the existing UNE-P combination would need to be separated into its components, so those piece parts could be combined by the CLEC(s) using the CLEC's own collocated splitter. Specifically, the FCC said:

**"For instance, if a competing carrier is providing voice service using the UNE-platform, it can order an unbundled xDSL-capable loop terminated to a collocated splitter and DSLAM equipment and unbundled switching combined with shared transport, *to replace its existing UNE-platform arrangement with a configuration that allows provisioning of both data***

*and voice services.* As we described in the Texas 271 Order, in this situation, the incumbent must provide the loop that was part of the existing UNE-platform as the unbundled xDSL-capable loop, unless the loop that was used for the UNE-platform is not capable of providing xDSL service.” (footnotes omitted) (*emphasis added*).

13. In paragraph 19 of his affidavit, Mr. Henson inaccurately references Ameritech’s position as:

Ameritech Michigan’s position, as reflected in the June 25 Pricing Scenarios, requires the UNE-P carrier to order a *new* loop (even if it turns out to be the existing loop) and a new switch port in every case that Line splitting is sought.

Ameritech states that it is then required to 'disconnect the UNE-P and to install the connections *for each UNE (loop and port)* to the collocation to reach the splitter.' Ameritech Michigan’s pricing follows suit by charging a Loop Connection *and* Port Connection non-recurring rate in every instance that a carrier migrates a customer from UNE-P to UNE-P with Line splitting.”

Mr. Henson then goes on to claim that Ameritech’s position is at odds with the Commission’s orders that Ameritech provide Line splitting over UNE-P.

14. The third scenario of the package, provided on June 25<sup>th</sup>, 2001, to the Michigan collaborative addressing line splitting addressed the scenario described by Mr. Henson; see “UNE-P to line splitting,” found on page 5 of 7 of Silver Reply Affidavit – Attachment B (filed on July 30, 2001). That document shows Ameritech would not require a “new” loop, as long as the loop used in the UNE-P combination can be reused. To this extent, Ameritech is permitting “line splitting over the UNE-P.” But in all situations, whether the existing loop can be used for line splitting or not, the CLEC must order a DSL-capable loop, advise Ameritech of the Spectrum Class

information if the proposed technology fits within a generic PSD mask,<sup>6</sup> and advise Ameritech of the appropriate CFA for the CLEC's collocation space.

15. Mr. Henson's claim that Ameritech's position is at odds with the Commission's Order in Case No. U-12540, is incorrect. As previously stated, the FCC recognized that, in order to have line splitting take place, an unbundled xDSL-capable loop and unbundled port must be ordered by the CLEC "to replace its existing UNE-platform arrangement". Upon receipt of that request from the CLEC, the existing UNE-P combination must be separated by the incumbent LEC, and then the individual elements are provided to the CLEC to be combined by the CLEC with its collocated splitter and DSLAM. Mr. Silver's Reply affidavit also showed that paragraph 20 of the FCC's *Line Sharing Reconsideration Order* recognized central office work must occur for this replacement of the existing UNE-P with a new network configuration that allows line splitting to take place. Specifically paragraph 20 said:

"Thus, an incumbent LEC must perform central office work necessary *to deliver* unbundled loops and switching *to a competing carrier's physically or virtually collocated splitter* that is part of a line splitting arrangement."  
(*emphasis added*)(footnote omitted)

As Mr. Henson indicated in paragraph 18 of his affidavit, the MPSC's Order in Case No. U-12540 was based on the FCC's ruling, thus Ameritech's position that central office work is required to disconnect the UNE-P and have the unbundled elements connected to the carrier's collocated splitter is not at odds with, but rather, is entirely consistent with the MPSC's ruling.

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<sup>6</sup> See e.g. the FCC's Line Sharing Order at par. 204

16. Once a CLEC disaggregates the UNE-P into a stand-alone UNE DSL-capable loop and a stand-alone UNE switch port, each element is cross-connected on the distribution frame to the CLEC's collocation space, using a CFA designated by the CLEC. Hence, the CLEC (or CLECs) no longer have a UNE-P combination from Ameritech, as the CLEC (or CLECs) effectively have separated that combination and have replaced it with two individual UNEs, which are cross connected to a collocation using a CFA. As I have mentioned above, Ameritech may not necessarily have any knowledge that the CLEC (or CLECs) is (are) assembling those individual UNEs into a new service arrangement involving line splitting. In addition, should the CLEC choose to combine those elements into a new service arrangement, that new service arrangement would now include the cabling associated with the CLEC's collocation, and the CLEC's splitter. Neither of these pieces of the CLEC's equipment are unbundled network elements, as they are not part of Ameritech's network. This is yet another reason why the new service arrangement would not meet the definition of a UNE platform, as they would no longer be a combination of UNEs, but instead would include CLEC equipment.

### **Conclusion**

17. This supplemental reply affidavit responds to allegations of CLEC affiants regarding their inability to engage in "line splitting over UNE-P". I have explained that there are many different technical architectures whereby CLECs have the ability, individually or in cooperation with other CLECs, to engage in line splitting, including "line splitting over the UNE-P".

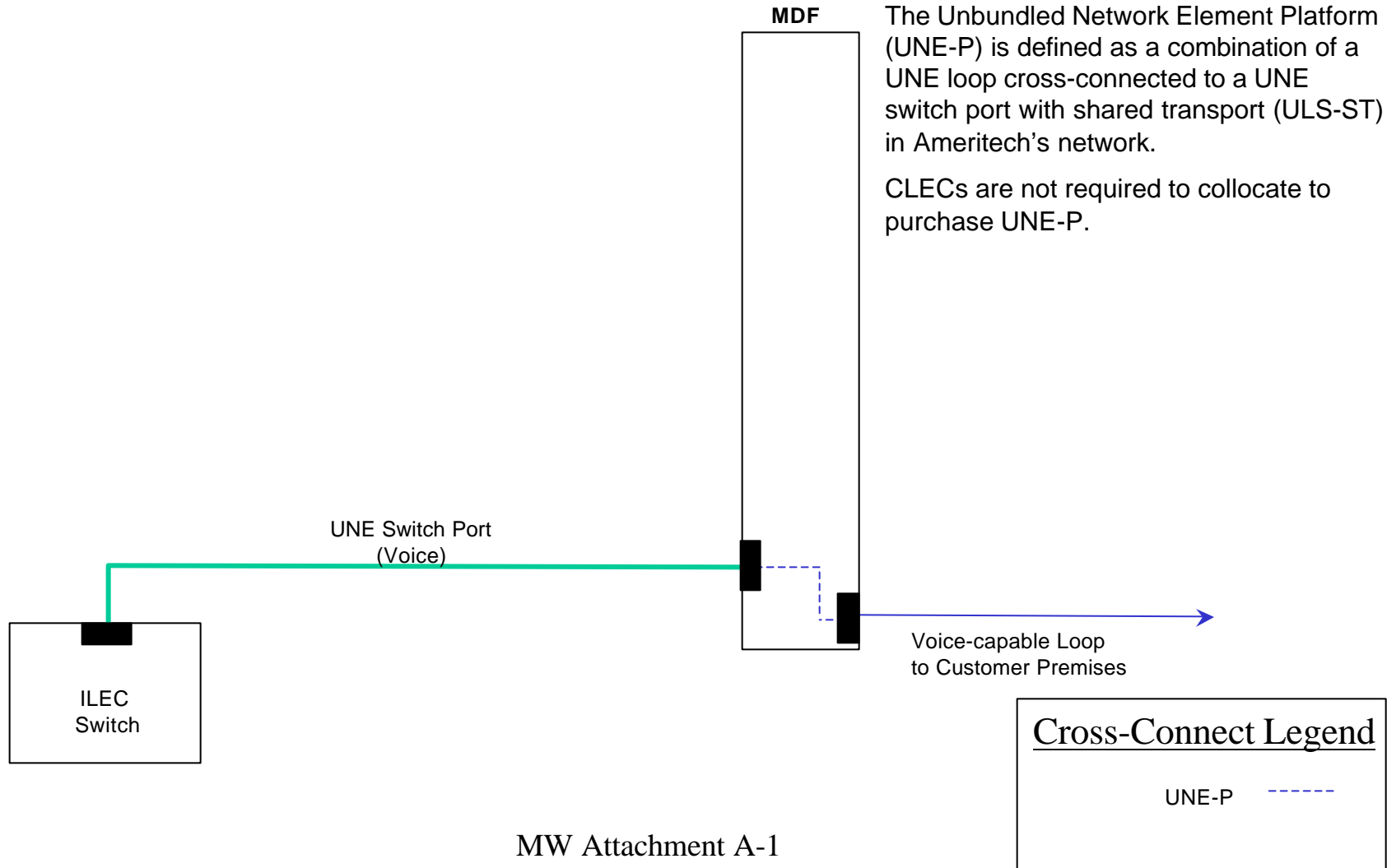
**Welch Supplemental Reply – Attachment A**

## Unbundled Network Element Platform (UNE-P)

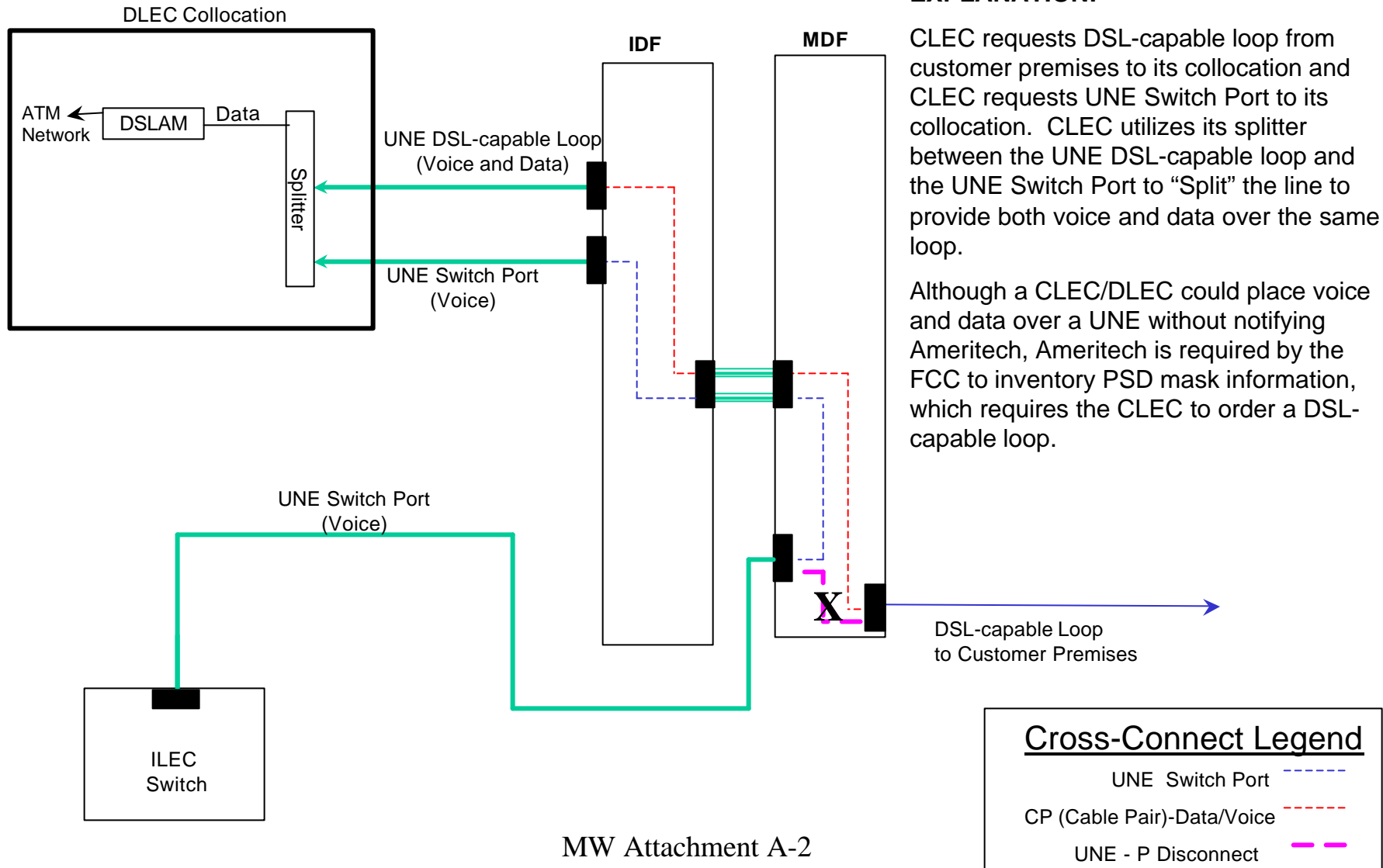
### EXPLANATION:

The Unbundled Network Element Platform (UNE-P) is defined as a combination of a UNE loop cross-connected to a UNE switch port with shared transport (ULS-ST) in Ameritech's network.

CLECs are not required to collocate to purchase UNE-P.



## Line Splitting: Single CLEC/DLEC ("CLEC") Collocated

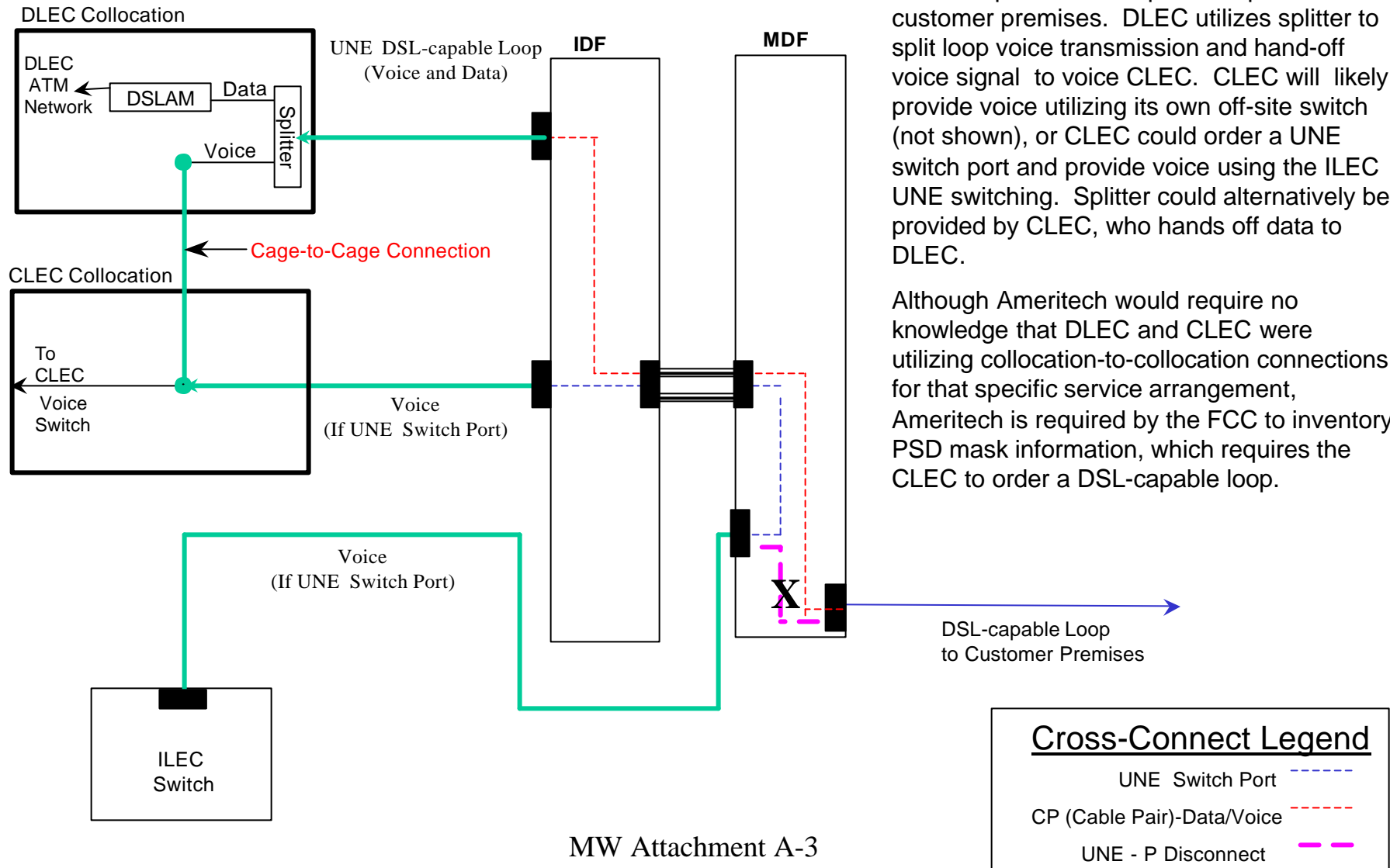


### EXPLANATION:

CLEC requests DSL-capable loop from customer premises to its collocation and CLEC requests UNE Switch Port to its collocation. CLEC utilizes its splitter between the UNE DSL-capable loop and the UNE Switch Port to “Split” the line to provide both voice and data over the same loop.

Although a CLEC/DLEC could place voice and data over a UNE without notifying Ameritech, Ameritech is required by the FCC to inventory PSD mask information, which requires the CLEC to order a DSL-capable loop.

## Line Splitting: CLEC and DLEC Both Collocated (Separate)

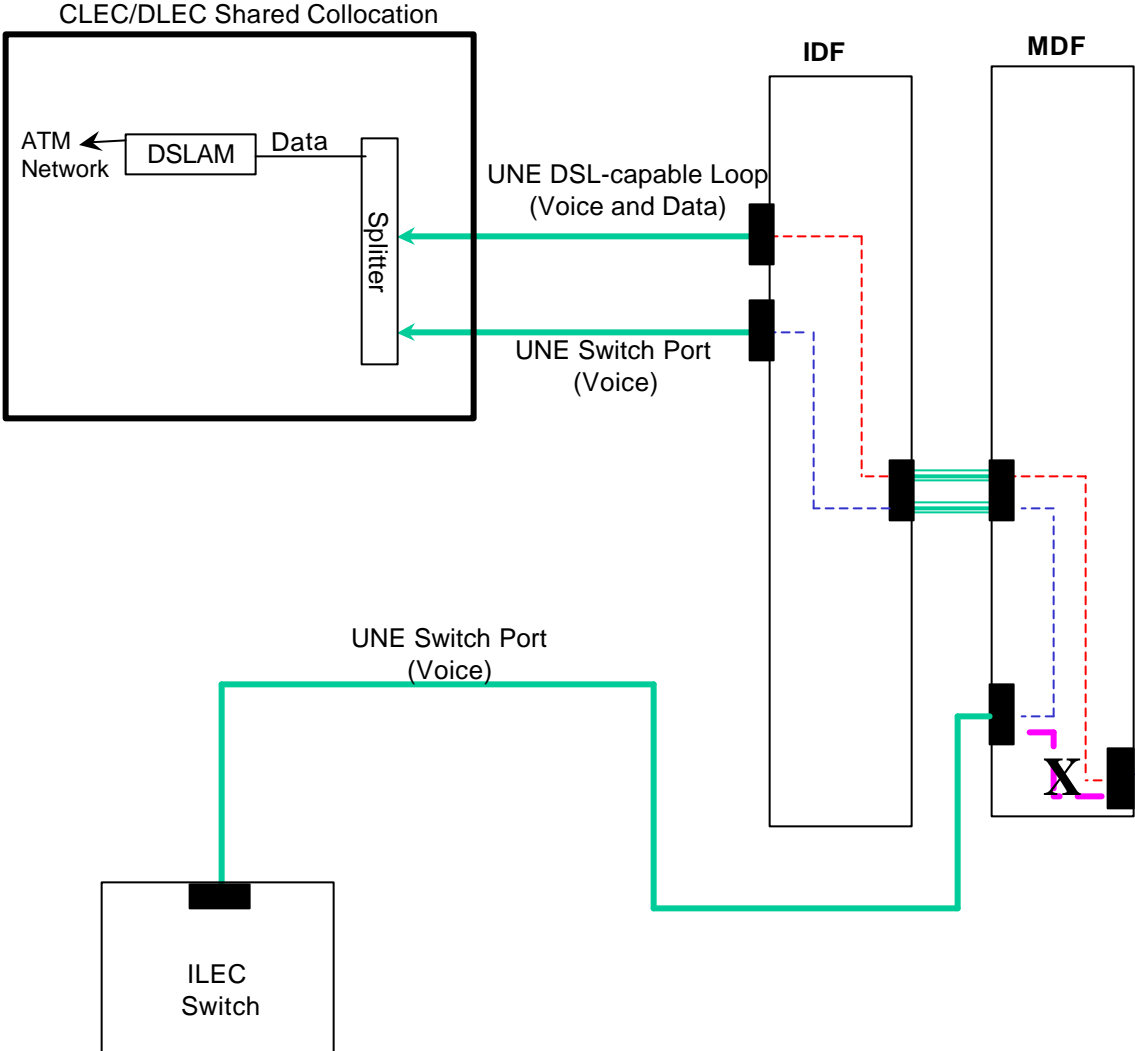


### EXPLANATION:

DLEC requests DSL-capable loop to customer premises. DLEC utilizes splitter to split loop voice transmission and hand-off voice signal to voice CLEC. CLEC will likely provide voice utilizing its own off-site switch (not shown), or CLEC could order a UNE switch port and provide voice using the ILEC UNE switching. Splitter could alternatively be provided by CLEC, who hands off data to DLEC.

Although Ameritech would require no knowledge that DLEC and CLEC were utilizing collocation-to-collocation connections for that specific service arrangement, Ameritech is required by the FCC to inventory PSD mask information, which requires the CLEC to order a DSL-capable loop.

# Line Splitting: CLEC and DLEC Collocated (“Shared”)



### EXPLANATION:

DLEC requests DSL-capable loop from customer premises to its collocation. Voice CLEC (or DLEC on voice CLEC’s behalf) requests UNE Switch Port to DLEC’s collocation. CLEC/DLEC utilizes the splitter to combine the UNE DSL-capable loop and the UNE Switch Port to “Split” the line to provide both voice and data over the same loop.

Although a CLEC/DLEC could place voice and data over a UNE without notifying Ameritech, Ameritech is required by the FCC to inventory PSD mask information, which requires the CLEC to order a DSL-capable loop.