network."[78] In addition, it was revealed earlier this year that, during interconnection agreement negotiations, SBC had offered lower prices for competitors that would agree "to send 90% or more of [their] phone traffic to SBC's network instead of using [their] own equipment," and would "not enter similar agreements with rival phone networks."[79]

The ILECs have been emboldened by what they perceive to be a winning hand in the regulatory arena and in the courts. As the Commission knows, MCI attempted to reach commercial agreement on a UNE-P replacement product with each of the RBOCs. With the notable exception of its agreement with Qwest (reached prior to the Solicitor General's decision not to appeal the *USTA II* decision), those efforts failed. In light of recent judicial and other developments, the ILECs have little incentive to negotiate a commercially reasonable resolution at this point. Nor do they have any incentive to address the economic or operational problems that plague UNE-L today. Quite to the contrary, the ILECs continue to seek to worsen the economic conditions by proposing higher loop rates and nonrecurring charges.[80]

As circuit switches are being replaced by packet switching technology, as new competitors such as cable companies are entering the market, and as wireless becomes a substitute not just for long distance but for long distance and local, the ILECs should have incentives to work more closely with companies like MCI, to counteract the threat of stranded switching investment. The fact that the ILECs, other than Qwest, have not

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78 "SBC Seeks to Head Off Public Filing of CLEC Pacts, Fights Request from Martin," TR Daily (May 4, 2004).

79 Anne Marie Squeo, "SBC Dispute Undermines Move Toward Local Phone Competition," at A4, Wall Street Journal (May 6, 2004).

80 Huyard Decl. ¶ 11.

done so speaks volumes either about their own view of their chances of winning complete victory in the regulatory arena and in the courts or their own view about the substitutability of these other modalities with their own wireline services.[81] Verizon Chief Executive Officer Ivan Seidenberg made clear his company's lack of concern about cable telephony providers as competitors, plainly telling Wall Street earlier this year that Verizon is "not worried about cable [telephony] competing."[82]

It is against that backdrop that we take another look at the operational barriers to entry that prevent competitive LECs from providing mass market service via UNE-L in an economic fashion. It is worth noting that the *USTA II* court did not reject the FCC's finding with respect to impairment based on the manual hot cut process. Rather, the court suggested that it might have been acceptable for the FCC to make a nationwide finding of impairment based on hot cuts, provided that the FCC had considered alternatives such as rolling hot cuts.[83] The same barriers that the Commission identified in the *Triennial Review Order* persist, and unless this Commission and the state public utility commissions adopt policies that create regulatory incentives for the incumbents to fix the operational barriers to entry, they will persist into perpetuity. Specifically, MCI asks this Commission to direct state commissions to continue their hot cut proceedings

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81 *Id.* ¶ 12.

82 *See* Verizon Fourth Quarter 2003 Earnings Conference Call (Jan. 29, 2004), *available at*: <http://investor.verizon.com/news/20040129/>.

83 *USTA II*, 359 F.3d at 570-71.

and initiate other proceedings, as necessary, to address the operational barriers to entry identified below.[84]

b. Operational Barriers to UNE-L Deployment

i. Hot Cuts

(A) Batch hot cuts

Based on the record developed in the *Triennial Review Order*, the FCC concluded that the "inherent limitation in the number of manual cut overs that can be performed . . . poses a barrier to entry that is likely to make entry into a market uneconomic."[85] This conclusion remains valid today.

In an attempt to overcome this barrier, the Commission required the states to adopt "a batch cut migration process . . . that will address the costs and timeliness of the hot cut process," or, alternately, to explain why such a process is not necessary, within nine months of the effective date of the *Triennial Review Order*.[86] In response, many states undertook proceedings to examine existing incumbent LEC batch hot cut processes. A number of deficiencies with incumbent LEC processes were identified during those proceedings, including the inability of the existing processes to handle anticipated volumes of hot cuts and the lack of procedures for processing hot cut

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84 Permitting the states to investigate operational barriers to local entry is not inconsistent with *USTA II* because such proceedings would not constitute subdelegation of section 251(d)(2)'s impairment determination.

85 *Triennial Review Order* ¶ 469.

86 *Id.* ¶ 488.

migrations involving certain services or customers, as well as a host of other operational issues involved in the end-to-end hot cut process.[87]

With the issuance of the *USTA II* mandate, however, most of the state proceedings examining batch processes were interrupted, and, to date, no incumbent has implemented a workable process. All of the incumbents' proposed batch hot cut proposals rely exclusively on manual provisioning, therefore failing to address the most critical bottleneck in the loop provisioning process. But even if batch hot cut processes were successfully implemented nationwide, they would not sufficiently address the barriers to entry presented by hot cuts, let alone the other operational barriers described below. The Commission recognized this possibility in the *Triennial Review Order*, when it concluded that even if a batch hot cut process were approved and implemented, that process might not in and of itself remove barriers to entry resulting in impairment in the absence of access to unbundled switching.[88] In fact, as became clear in the state proceedings, even a perfectly functioning batch hot cut process would not eliminate impairment, because a batch hot cut process is valuable only to transfer an existing base of customers from UNE-P to UNE-L. As discussed below, a workable process for handling garden-variety, day-to-day hot cuts between carriers – sometimes between CLEC and ILEC, sometimes between CLEC and CLEC – must be in place in order to support a dynamic multi-carrier UNE-L environment, and a batch hot cut process, no matter how smooth, cannot and does not eliminate this requirement. Therefore, as discussed below, the Commission's

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87 *See, e.g.*, MCI Michigan Hot Cut Brief; MCI Michigan Hot Cut Reply.

88 *Triennial Review Order* ¶ 487 (concluding that "a seamless, low-cost batch cut process for switching mass market customers from one carrier to another is necessary, *at a minimum*, for carriers to compete effectively in the mass market.") (emphasis added).

focus should not be solely on batch hot cut processes, which manage customer base transitions, but rather on the day-to-day non-batch hot cut processes, which will be the prevailing type of hot cut in a multi-carrier, UNE-L, post-UNE-P world.

(B) Mechanization of Individual Hot Cut Processes

The primary source of impairment in the absence of unbundled switching arises from the discrepancy between the manner in which competitive and incumbent LECs access a customer's loop: "[F]or the incumbent, connecting or disconnecting a customer is generally merely a matter of a software change. In contrast, a competitive carrier must overcome the economic and operational barriers associated with manual hot cuts."[89] The FCC thus found in the *Triennial Review Order* that the existing incumbent LEC hot cut processes create a barrier to competitive entry because, *inter alia*, such processes result in customer service disruptions and provisioning delays that prevent competitors from providing service in the same "reliable, easy-to-operate . . . and trouble-free" manner that mass market end users have come to expect.[90] In addition, the Commission found in the *Triennial Review Order* that the evidence before it demonstrated that the highly labor-intensive manual hot cut process is not designed to handle the necessary volume of hot cuts that would result if unbundled switching were not available and competitive carriers sought to use UNE loops and competitive switching to serve mass market customers.[91]

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89 *Id.* ¶ 465.

90 *Id.* ¶¶ 459, 466-467, 469.

91 *Id.* ¶ 468.

The Commission also concluded that non-recurring costs for hot cuts are prohibitively expensive.[92]

Since the *Triennial Review Order* was issued, nothing has changed to alter these findings. Throughout the United States, hot cuts continue to be processed using the same manual frame-wiring activities that were found to be inadequate in the *Triennial Review Order*.[93] As illustrated in Exhibit 2 to the Starkey/Morrison Declaration, the "worksteps" required for UNE-L continue to differ substantially, both in terms of required labor resources and expenditures, from the steps required for UNE-P and retail provisioning.[94] For instance, the total worktimes for coordinated and non-coordinated UNE-L hot cuts are 60 minutes and 45 minutes, respectively. By contrast, it takes only about 4.5 minutes to accomplish either a retail to UNE-P migration or retail to resale migration, and only 6 minutes to accomplish a retail POTS installation (connected through).[95] When a conservative labor rate of $56 per hour is applied to these worktimes, the total service cost for coordinated and non-coordinated UNE-L hot cuts is $55.31 and $41.61, respectively; by contrast, the total cost for either a retail to UNE-P or retail to resale migration is $4.20, and the total cost for retail POTS installation (connected through) is $5.69.[96] As Starkey/Morrison explains, the BOCs' approach of relying on manual hot cuts would cause competitive LECs to suffer an up-front cost disadvantage of 872% (for

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92 *Id.* ¶ 470.

93 Declaration of Michael Starkey and Sidney Morrison ¶¶ 20-21, 24, appended as Attachment C ("Starkey/Morrison Decl.").

94 *See id.* ¶ 25 & Exhibit 2.

95 *Id.* ¶ 25.

96 *Id.*

coordinated hot cuts) and 631% (for non-coordinated hot cuts) relative to the cost the BOC would incur to provision service to its retail customer.[97] Competitive LECs transitioning from UNE-P to UNE-L via the BOCs' proposed hot cut processes can expect to incur up-front provisioning costs that are between 890% and 1,216% higher than what they incur today.[98]

As the foregoing data illustrate, the lack of mechanization within provisioning processes for unbundled loops raises the greatest impediment to UNE-L competition. Mechanization, or the minimization of human intervention, is critical to improving incumbent LEC hot cut processes. In particular, as discussed more fully below, automation is essential to ensuring that incumbent LEC processes are sufficiently scalable to handle anticipated volumes of mass market orders in the absence of UNE-P. In addition to scalability, automation increases reliability, decreases provisioning intervals, and reduces resultant costs,[99] thereby addressing the bulk of the deficiencies that the Commission identified in existing hot cut processes.

The FCC previously has found that mechanization is critical to local competition for mass market customers. In particular, where the incumbent LEC provides itself with an automated process for a particular functionality, the FCC has required incumbents to provide "equivalent electronic access for competing carriers."[100] In the *Local*

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97 *Id.*

98 *Id.*

99 *Id.* ¶ 23.

100 *Application of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as amended, to Provide In-Region, InterLATA Services in Michigan*, 12 FCC Rcd 20543, ¶ 137 (1997) ("*Michigan 271 Order*"); *Application of BellSouth et al. Pursuant to Section 271 of the Communications Act of 1934, as amended,*

Competition Order, for example, the FCC made clear that "an incumbent that provisions network resources electronically does not discharge its obligation under section 251(c)(3) by offering competing providers access that involves human intervention."[101] The Commission similarly found within the context of section 271 that long-term reliance on manual processing can significantly encumber the development of competition and is generally inconsistent with the Act's requirement of nondiscriminatory access.[102]

Despite these findings, not a single incumbent LEC proposed to introduce mechanized provisioning during the state hot cut proceedings.[103] Moreover, as noted above, simply "batching" a number of hot cut orders together for purposes of migrating customers from UNE-P to UNE-L does not eliminate the overly manual nature of the hot cut process and thus would not cure the primary source of impairment for UNE-L competition.[104] Indeed, the batch hot cut process is designed to facilitate migration of customers from UNE-P to UNE-L. As carriers begin to acquire new mass market customers using UNE-L, the ability of carriers to aggregate these orders to take

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to Provide In-Region, InterLATA Services in South Carolina, 13 FCC Rcd 539, ¶ 105 (1997) (competitor orders must receive "an equivalent level of mechanized processing"); *see also id.* ¶ 107 (finding "a direct correlation between mechanized order processing and the BOC's ability to provide competing carriers with nondiscriminatory access to OSS functions") (citation omitted).

101 *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499, ¶ 523 (1996) ("*Local Competition Order*").

102 *Michigan 271 Order* ¶ 180, 196 ("Because it is virtually impossible for [competitors'] orders that are processed manually to be completed in the same time as [incumbent LECs'] orders that flow through electronically, it is difficult to see how equivalent access could exist when [the incumbent LEC] processes a significant number of orders from competing carriers manually.").

103 Starkey/Morrison Decl. ¶¶ 21, 24.

104 *Id.* ¶ 22.

advantage of the batch hot cut process is severely limited.[105] Competitors cannot delay processing of these orders in hopes that they create a "batch," but rather are dependent on the ILEC's standard, day-to-day, individual hot cut process to handle migrations.[106] Thus, even assuming that the incumbent LEC proposed batch processes were implemented nationwide, substantial manual intervention in the hot cut process would still be required, and competitors would continue to be impaired without access to unbundled switching.

Based on MCI's experience with UNE-P, ordering and provisioning processes for mass market customers must be mechanized, or they will fail.[107] Mechanization of the hot cut process is ultimately within the control of the ILECs.[108] Indeed, it is today technically feasible to incorporate additional mechanization in the loop provisioning process based on existing incumbent LEC network technology and, to the extent these fixes are implemented in a given market, cure the operational impairment associated with daily hot cuts.[109] Specifically, impairment with respect to copper loops can be mitigated via automated frame technology, which is already being used by incumbent LECs for retail purposes.[110] Verizon, for example, uses automated frames within its network to remove manual intervention in the retail provisioning process for all-copper loops and

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105 *Id.*

106 *Id.*

107 Huyard Decl. ¶ 17.

108 *Id.*

109 Starkey/Morrison Decl. ¶¶ 26-29.

110 *Id.* ¶¶ 27-28.

has done so for several years.[111] As described in the Starkey/Morrison Declaration, this technology can perform robotically or via an electronic matrix key tasks that currently require manual on-site management, *e.g.*, hot cut "lift and lay" processes.[112]

With respect to fiber-fed IDLC loops, currently available and deployed technology allows incumbent LECs to provision services to their customers in an automated fashion. IDLC was originally deployed with the Telcordia (then Bellcore) TR-008 digital switch interface. Although TR-008 IDLC is superior to universal digital loop carrier ("UDLC") for basic voice services provisioned via digital switches, Telcordia developed a new configuration that could interface with digital switches more efficiently than TR-008. This configuration, known as GR-303, moved the concentration function from the CO switch to the remote terminal, significantly improving efficiency. GR-303 enables allocation of transport bandwidth dynamically by assigning a feeder channel to a line on a call-by-call basis rather than dedicating channels to lines. IDLC along with GR-303 configuration is often referred to as Next Generation Digital Loop Carrier.[113]

This equipment is currently available and has already been widely deployed by the ILECs, as the New York Public Service Commission recently confirmed.[114] Verizon, for example, has invested heavily in Alcatel's Litespan 2000 IDLC equipment and

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111 *Id.* ¶ 28.

112 *Id.* ¶ 27.

113 *Id.* ¶¶ 69-73.

114 *Proceeding on Motion of the Commission to Examine the Process and Related Costs of Performing Loop Migrations on a More Streamlined (e.g., Bulk) Basis*, Case 02-C-1425, New York PSC Order Setting Permanent Hot Cut Rates, at 58 (Aug. 25, 2004) ("NYPSC Hot Cut Order").

continues to deploy Litespan equipment in remote terminals throughout its national network, including New York. All of Alcatel's Litespan 2000 IDLC equipment is GR-303 compatible.[115] Although Verizon has chosen (at least in New York) not to deploy the software necessary to take advantage of the Litespan equipment's GR-303 capabilities, Litespan 2000 equipment is all GR-303 capable.[116]

Among other functions, GR-303 permits the customer's service to be managed and provisioned electronically via sophisticated software and workflow processes – without manual intervention.[117] Because the technology does not rely upon manual copper wire manipulation for purposes of cross-connecting the derived circuits they support, unbundled loops could be provisioned to a competitive LEC on an electronic basis, permitting the competitor to benefit from the same automated processes that UNE-P and the incumbent LEC's retail services enjoy.[118]

(C) Scalability

In the *Triennial Review Order*, the Commission expressed concern about the scalability of incumbent LEC hot cut processes, noting that:

> [H]ot cut capacity is limited by several factors, such as the labor intensiveness of the process, including substantial incumbent LEC and competitive resources devoted to coordination of the process, the need for highly trained workers to perform the hot cuts, and the practical

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115 *See Proceeding on Motion of the Commission to Examine the Process and Related Costs of Performing Loop Migrations on a More Streamlined (e.g., Bulk) Basis*, Case 02-C-1425, MCI's Initial Brief at 28 (NYPSC Feb. 6, 2004). While this equipment is also capable of supporting UDLC and TR-008, the most efficient use of the Litespan equipment is to utilize its GR-303 capabilities. *Id.*

116 *Id.*

117 Starkey/Morrison Decl. ¶ 9.

118 *Id.*

> limitations on how many hot cuts the incumbent LECs can perform without interference or disruption.[119]

Based on these and other issues, the Commission concluded that the "inherent limitation in the number of manual cut overs that can be performed . . . poses a barrier to entry that is likely to make entry into a market uneconomic."[120] On appeal, the *USTA II* court questioned why the Commission had not explored more fully the issue of scalability in light of its finding in the context of section 271 that the BOCs' hot cut performance was adequate.[121] The UNE-L hot cut volumes assessed in the section 271 proceedings were minuscule, and the BOCs' ability to handle mass market volumes was not tested in the 271 process. As demonstrated below and in the attached Starkey/Morrison Declaration, a system as labor-intensive as the incumbent LECs' hot cut processes cannot be scaled to meet the projected increase in hot cut volumes in a UNE-L environment.

Using a hot cut volume model developed during the state proceedings, Starkey/Morrison calculated that, in most instances, an incumbent LEC would be faced with a 100-fold increase in its hot cut volumes if UNE-P were no longer available.[122] Verizon, for example, currently handles approximately 3,757 UNE-L hot cuts per month in an eight-state portion of its territory, but estimates that it would face a monthly demand of 165,000 hot cuts in the same area without UNE-P (an increase of 4,292%).[123] SBC,

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119 *Triennial Review Order* ¶ 465.

120 *Id.* ¶ 469.

121 *USTA II*, 359 F.3d at 570.

122 Starkey/Morrison Decl. ¶ 33. For the most part, incumbent LECs generally perform fewer than 1,000 hot cuts per month in most states. Were UNE-P to be eliminated, continued operation of the competitive market in those states would require over 100,000 hot cuts per month – and in some states, two to three times that amount. *Id.*

123 *Id.* ¶ 39.

which today experiences an average monthly hot cut demand of 1,694, would be asked to process 137,567 hot cuts per month – an astronomical increase of over 8,000%.[124] Indeed, based on SBC's own estimates, an administrative law judge ("ALJ") at the California commission recently concluded in his proposed decision that SBC "could handle only about half of the hot cuts required if CLECs lost access to UNE switching in all of the central offices that SBC is challenging."[125] Other incumbent LECs also would face significant increases in the volume of hot cuts that would require processing absent UNE-P.[126]

Scalability also will be affected by the difference in flow-through rates for UNE-P and UNE-L ordering processes. In California, for example, SBC has a fall-out rate for UNE-L of 55% – more than twice the rate for UNE-P (25%).[127] Similarly, in BellSouth's territory, UNE-P achieves a flow-through rate of approximately 85%; in comparison, fewer than 37% of UNE-L hot cuts flow through.[128] Since 48% more UNE-L orders require manual intervention than do UNE-P orders, BellSouth's current workforce, if

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124 *Id.* ¶ 41.

125 *See Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service*, Proposed Decision of ALJ Pulsifer, Opinion Regarding Hot Cut Processes and Pricing at 28 (July 28, 2004) ("California Proposed Decision").

126 Starkey/Morrison Decl. ¶ 40.

127 *Id.* ¶ 36. During the state proceeding, SBC denied that this increased fall-out rate would require it to hire new employees, despite the fact that SBC planned to deal with increased UNE-L volumes by reassigning UNE-P personnel to UNE-L duties. *Id.*

128 *Id.*

efficiently sized for existing orders, would not be able to handle the work necessary in an environment without UNE-P.[129]

Because the scalability of incumbent LEC processes relies exclusively on increasing available personnel hours – either through increased hires or overtime – it is unlikely that this anticipated increase in mass market volumes could be handled with existing manual processes.[130] Indeed, although the incumbent LECs argue that work forces can be adjusted promptly and easily to handle the anticipated increase in UNE-L orders within reasonable timeframes, those claims defy common sense. The excessive intervals proposed for batch hot cuts also contradict such claims. BellSouth, for example, has proposed a batch hot cut interval of 15-17 business days, as compared to 0.36 days for UNE-P orders without dispatch and 1.52 days for UNE-P orders with dispatch.[131] BellSouth's retail orders are provisioned in five business days – over three times faster than its proposal for competitors' batched orders.[132] These disparities virtually guarantee that the UNE-L provider will always receive its service later, at higher costs, and with a noticeably increased chance of error. As the FCC has recognized, customers will blame the competitive LEC for these excessive delays, as well as any service problems that occur.[133] It is also worth noting that these are *proposed* intervals, rather than actual intervals that the BOCs have demonstrated they can meet. Experience shows that the

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129 *Id.*

130 *Id.* ¶ 38.

131 *Id.* ¶¶ 42-43. Other BOCs also have proposed excessive batch hot cut intervals: Verizon has proposed 6-26 days; SBC, 13 business days. *Id.*

132 *Id.* ¶ 43.

133 *Triennial Review Order* ¶ 467; *see also* Starkey/Morrison Decl. ¶ 44.

BOCs often exceed proposed intervals, so that the actual intervals may well be significantly longer.

(D) Hot Cut Loop Types

In addition to garden variety ILEC-to-CLEC hot cuts for a voice-only customer, the incumbent LEC hot cut processes must at a minimum permit seamless and timely migration of orders involving: (1) loop-to-EEL hot cuts; (2) CLEC-to-CLEC hot cuts; and (3) xDSL hot cuts. In the absence of workable loop portability for these types of orders, competitive carriers are impaired without access to unbundled switching.

Loop-to-EEL hot cuts. MCI, like many other competitive LECs, is collocated in only a fraction of the incumbent LEC central offices nationwide.[134] To the extent that UNE-P becomes unavailable, MCI and others either would have to collocate in hundreds more central offices, or use EELs to serve customers via UNE-L.[135] Given the time and cost associated with collocation, it is likely that many carriers would prefer to use EELs. Today, however, incumbent LECs refuse to perform loop-to-EEL hot cuts.[136] Without the ability to hot cut customers to an EEL, competitive LECs will be unable to provide service in those central offices in which they are not collocated.[137]

CLEC-to-CLEC hot cuts. Likewise, to the extent that unbundled switching is no longer available, the volume of UNE-L customers will increase dramatically. In this type of market, an improved process for handling CLEC-to-CLEC hot cuts will become

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134 Starkey/Morrison Decl. ¶ 47.

135 *Id.*

136 *Id.* ¶ 46.

137 *Id.* ¶ 47.

increasingly critical. Absent development of such a process, customers who initially select a competitive LEC will find it difficult and time-consuming to switch to another carrier because that carrier will have to coordinate with two other parties (CLEC A and the incumbent LEC) to complete the transaction. Indeed, complications associated with three-way coordination cause the majority of the problems for CLEC-to-CLEC hot cuts.[138] In comparison, it will be much simpler and faster for the customer to switch back to the incumbent, who only needs to coordinate with the single competitive LEC. Further, at least one incumbent (SBC) has suggested that, under such circumstances, it simply provides itself a new loop connecting its network to the customer so that it need not coordinate at all with the competitive LEC.[139]

xDSL hot cuts. As data services become more popular, competitors are becoming far more likely to encounter DSL subscribers who would like to obtain either combined DSL-voice service or stand-alone voice from another provider.[140] Because either of these scenarios is likely to require a hot cut, both must be included in incumbent LEC daily hot cut processes.[141] In particular, incumbent LECs must be required to permit CLECs to use cross-connects – some incumbent LECs currently refuse to permit this.

The ability to use cross-connections to the incumbent LEC main distribution frame ("MDF") is a key issue for xDSL hot cuts. Although BellSouth and Qwest have agreed to permit competitors to use cross-connects, some incumbent LECs (most notably, SBC) have proposed to address such migrations by terminating line-split loops at the

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138 *Id.* ¶ 51.

139 *Id.* Coordination would still be required for telephone number portability. *Id.*

140 *Id.* ¶ 49.

141 *Id.*

collocation arrangement of the *voice* provider.[142] In order to reconnect the DSL portion of the service, however, the loop must be connected to a splitter located in the collocation space of the *data* provider.[143] Without cross-connects, competitors would have to establish cage-to-cage cabling arrangements to avoid an extended outage for the DSL portion of the service.[144] As explained in the Starkey/Morrison Declaration, cage-to-cage cabling is unworkable: it is complex, costly and inefficient because, among other reasons, each competitor would have to deploy cabling to every other competitive and data LEC with which it does business.[145]

Accordingly, to the extent that the Commission finds that competitors are not impaired without unbundled switching in any wire center, it must adopt rules requiring that incumbent LECs modify their processes to ensure prompt, seamless migrations for loop-to-EEL, CLEC-to-CLEC, and xDSL migrations (including line splitting arrangements using cross-connects at the MDF).

(E) Rates and Rate Structure

As the Commission recognized in the *Triennial Review Order*, "non-recurring costs associated with cutting over large volumes of loops would likely be prohibitively expensive for a competitive carrier seeking to provide service without the use of

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142 *Id.*

143 *Id.*

144 *Id.*

145 *Id.* ¶¶ 49-50. An ALJ at the California commission recently concluded in his proposed decision that use of cross-connects rather than cage-to-cage cabling is more efficient and economical. California Proposed Decision at 68.

unbundled local circuit switching."[146] Non-recurring costs ("NRCs") for UNE-L hot cuts continue to be prohibitively expensive, uneconomic, and far exceed non-recurring costs for UNE-P.

Hot Cut Rates. Although the hot cut rate is an NRC, that charge must be recovered over the expected life of the customer.[147] Given the high churn rate spurred by healthy competition, excessive loop cut over rates are a significant barrier in many states.[148] Hot cut rates vary across the states but generally are far too high to support UNE-L competition.[149] Today, the BOCs' average price for a hot cut of a basic two-wire loop ranges from $30 to $60.[150] New York, for example – an important state for MCI – recently established a hot cut NRC of more than $42 per loop – seven dollars more than

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146 *Triennial Review Order* ¶ 470.

147 Huyard Decl. ¶ 16.

148 *Id.*

149 *Id.*

150 Current average hot cut rates are: $58.16 for BellSouth; $41.02 for Qwest; $36.81 for Verizon; and $31.05 for SBC. Starkey/Morrison Decl. ¶¶ 53-55 & n.26. This discussion describes average hot cut rates as a way of highlighting the difference between costs associated with UNE-L and UNE-P. When MCI decides whether to serve customers in a particular wire center, it considers the actual hot cut rates for that wire center. These various hot cut rates are incorporated into the MiCRA model, discussed below, which shows that competitors are economically impaired across the entire range of variation in state hot cut NRCs. *See infra* Section III.A.4.

The *USTA II* court suggested that variation in hot cut costs would undercut a finding of national impairment. *USTA II*, 359 F.3d at 569. As explained above, however, competitors are impaired due to an overly manual hot cut process that does not vary nationwide.

what had been in place previously on an interim basis.[151] Where IDLC loops are present, competitive LECs face even higher economic barriers.[152]

In comparison, non-recurring charges for UNE-P are, in some states, less than one dollar. In the former Ameritech states, for example, SBC's non-recurring charges for connecting UNE-P range from a low of $0.06 in Wisconsin, to a high of $4.43 in Illinois.[153] Unless the exorbitant non-recurring charges for hot cuts are reduced to economic levels competitive carriers will not be able to profitably use UNE-L to serve the residential market.[154] Moreover, the absence of long-term contracts and the high churn rate in the mass market make it difficult for competitors to recoup the up-front costs associated with acquiring customers because there will be no guarantee that the customer will provide revenue streams for any defined period.[155]

Winback. Competitors are further disadvantaged in the marketplace because incumbent LECs are regularly able to waive non-recurring charges for their mass market retail customers in "winback" situations, in large part because of the automated, low-cost

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151 Huyard Decl. ¶ 16; NYPSC Hot Cut Order at 3.

152 Starkey/Morrison Decl. ¶ 64. For instance, SBC proposed hot cut prices for IDLC-served loops that are about $88 per loop – between two to three times higher than SBC's hot cut rates for non-IDLC loop. *Id.*

153 *Id.* ¶ 57.

154 *Id.*

155 *See* Huyard Decl. ¶ 16; *see also Triennial Review Order* ¶ 237 n.716 ("mass market customers typically purchase services offered over voice-grade loops on a month-to-month basis at relatively low prices"); Pelcovits Decl. ¶ 48 (noting the need for low per-line customer acquisition and service costs given the very low profit margins that are characteristic of residential customers).

manner in which loop provisioning is accomplished for retail customers.[156] Although the incumbent LEC generally has to dispatch a technician to migrate a UNE-L "winback," there is no need for coordination with another carrier regarding service cutover time or the LNP trigger. As a result, the process entails fewer steps, is faster, and has less chance of error. In contrast, the highly manual loop provisioning processes that the incumbent LECs have imposed on their competitors (and the existing and proposed hot cut rates that reflect this manual provisioning) make it difficult, if not prohibitive, for competitive LECs to provide similar, competitive offerings.[157] Competitors cannot absorb the UNE-L non-recurring charges proposed by the incumbent LECs in order to remain competitive with the incumbents' "winback" offers, unless and until those charges approach the charges incurred via UNE-P.[158] To ensure that competitors have a reasonable opportunity to compete, and to provide incumbent LECs the proper incentives to mechanize their hot cut processes, the Commission should require non-recurring charges for UNE-L hot cuts to be established based upon automated, not manual, systems, as the Wireline Competition Bureau did when, standing in the shoes of the Virginia State Corporation Commission, it rejected Verizon's pricing model because it was based on embedded existing processes, and adopted the MCI model, which was forward-looking

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156 Starkey/Morrison Decl. ¶ 56 (explaining that SBC Illinois, for instance, recently filed a promotion that waives the non-recurring installation charges for residential "winback" customers, and provides a monthly credit of $2.00 to $5.00, depending on access area).

157 *Id.*

158 *Id.*

and assumed ubiquitous IDLC and therefore no manual intervention in the provisioning process, resulting in a hot cut NRC in Virginia of $5.01.[159]

Batch Hot Cut Rates. Although the Commission attempted to mitigate this entry barrier by requiring batch hot cut processes that would result in a more efficient process with lower per-line fees,[160] in fact, many of the batch rates proposed by the incumbent LECs during the state proceedings were actually *higher* than their average current hot cut rates, or otherwise resulted only in meager reductions.[161] Verizon, for example, proposed a batch hot cut rate of $73.77 for an initial line in Rhode Island – almost 80% higher than the current hot cut rate of $41.46.[162] The unreasonableness of such rates is confirmed by the fact that in many instances they are higher than the rates the FCC cited in the *Triennial Review Order* as leading to impairment.[163]

ii. IDLC

In the *Triennial Review Order*, the Commission acknowledged that "providing unbundled access to hybrid loops served by a particular type of DLC system, *e.g.*, Integrated DLC systems, may require incumbent LECs to implement policies, practices, and procedures different from those used to provide access to loops served by Universal

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159 *Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration*, 19 FCC Rcd 1259, Appendix A at 24 (WCB 2004).

160 *Triennial Review Order* ¶ 460.

161 Starkey/Morrison Decl. ¶¶ 53-55.

162 *Id.* Exhibit 3 (Verizon hot cut data); *see also id.*, Exhibit 4 (Qwest hot cut data), Exhibit 5 (SBC hot cut data), Exhibit 6 (BellSouth hot cut data).

163 *See Triennial Review Order* ¶ 470.

DLC systems."[164] Although the FCC recognized in the *Triennial Review Order* that it is technically feasible to unbundle IDLC loops,[165] incumbent LECs have thus far not implemented those procedures necessary to make such unbundling a reality.

Remote unbundling of IDLC loops clearly can be accomplished today. In a recent order, the New York PSC concluded that the incumbent LECs' equipment is capable of supporting IDLC unbundling, confirming a finding that it had first made five years earlier.[166] The PSC also found that the sole obstacle to the provision of unbundled IDLC by Verizon is the "implement[ation], within Verizon itself, [of] the software, OSS, procedures and protocols to use the technology to perform loop migration among carriers."[167] The ability to unbundle IDLC loops has similarly been confirmed in other state proceedings. BellSouth and Qwest, for example, have acknowledged that use of a "side-door port" (or "hair-pinning" capability) would permit individual competitors to gain access to IDLC loops.[168] Incumbent LECs, however, have no incentive to develop the procedures necessary to support IDLC unbundling.[169]

Instead, incumbent LECs offer to "unbundle" these loops by rolling them off the IDLC systems onto inferior and anachronistic "universal digital loop carrier" systems

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164 *Id.* ¶ 297.

165 *Id.* ¶ 297 n.855.

166 NYPSC Hot Cut Order at 58 ("the electronics which allow rearrangement of IDLC loops at the remote terminal are currently available and widely deployed").

167 *Id.*; *see also* Starkey/Morrison Decl. ¶¶ 69-74 (describing establishment of separate Interface Groups and "side-door ports").

168 Starkey/Morrison Decl. ¶ 76. Alaska Communications Systems, the largest incumbent LEC in Alaska, also has indicated that it can implement such multi-hosting arrangements where GR-303 IDLC systems have been deployed. *Id.* ¶ 75.

169 *See* NYPSC Hot Cut Order at 23.

(UDLC) or by providing a substitute copper loop, assuming that such alternatives are available. Providing substitute loops causes a number of problems.

First, CLEC orders for unbundled loops served by IDLC require direct manual intervention for purposes of scheduling the assignment of a new facility and a dispatch to the remote terminal.[170] This can cause substantial delay in the provisioning process.[171]

Second, if no alternative facilities are available, which occurs in as many as 15% of all UNE loop orders for some carriers, the entire UNE order may be rejected.[172] In this case, the incumbent LEC oftentimes will perform a "line and station transfer," or LST, by moving an existing customer served by a copper or UDLC loop to an IDLC facility, thus freeing up the copper or UDLC loop for use by the competitor.[173] While this may reduce the likelihood of a "no facilities" notice, LSTs usually entail additional provisioning time and require a technician dispatch to the remote terminal, thereby increasing the likelihood of service disruption and nearly guaranteeing that the competitor will incur additional fees.[174]

Third, even where alternative UDLC or copper facilities are available, such facilities are generally of poorer quality than the existing fiber-fed IDLC loops. For example, switching from IDLC to UDLC may result in (1) increased dial tone delay; (2) degradation of on-hook transmission services, such as caller ID; (3) degradation of signal quality as a result of multiple analog/digital and digital/analog conversions; and

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170 Starkey/Morrison Decl. ¶ 59.

171 *Id.*

172 *Id.* ¶¶ 59-60.

173 *Id.* ¶ 60.

174 *Id.*

(4) reduced analog modem operation speeds due to the number of analog/digital conversions.[175] As a result, the quality or type of service available over the substitute loop facility may be inferior to or different from that experienced by the end user when served by the IDLC loop.[176] In addition, alternate facilities may need to be modified in some manner to provide voice-grade service, thus imposing additional charges.[177]

Such processes result in longer provisioning intervals, further impairing a competitor's ability to provide service to end users. To the extent that these problems arise, the risk of customer dissatisfaction increases,[178] and the likelihood that the competitor will be able to recoup its non-recurring costs and profitably serve such customers dramatically declines. These problems are further exacerbated by the fact that incumbent LECs today are deploying IDLC technology with increasing frequency, especially in the suburbs and rural areas where mass market customers are concentrated.[179] Although the concentration of IDLC lines statewide may be relatively low, a far higher percentage of mass market customers are often affected.[180] The concentration of IDLC in Qwest's network in New Mexico, for example, is 15% statewide, but individual wire centers in the state have concentration ratios as high as

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175 *Id.* ¶ 62.

176 For example, because UDLC connections require a minimum of three conversions between analog and digital signals, a customer that previously received dial-up speeds of 56 kilobits per second via an IDLC loop may have its dial-up connection speed drop below 33.6 kilobits per second – a reduction of over 40%. *Id.* ¶ 63 & n.40.

177 *Id.* ¶ 59.

178 *Id.* ¶ 63.

179 *Id.* ¶¶ 66, 68.

180 *Id.* ¶ 66.

74%.[181] Similarly, Arizona, Montana, and Colorado have statewide IDLC concentrations of 17%, 17%, and 15%, respectively, but have individual wire centers with IDLC concentrations as high as 68%, 52%, and 65%, respectively.[182] Moreover, it is likely that the number of customers served by IDLC will continue to increase as carriers like SBC and Verizon deploy next-generation DLC platforms (which support both voice and DSL functionality) as part of their much-touted network upgrades.[183] The concentration of IDLC loops varies widely from wire center to wire center. In order to aid the Commission in its granular assessment of the operational barriers posed by IDLC loops, Exhibit 7 to the Starkey/Morrison Declaration provides a wire center-specific summary for Qwest's territory, because those are the states for which there is publicly available data. To the extent that data for other states becomes available, MCI is prepared to provide similar analyses for those states.

These issues do not arise in a UNE-P environment. Because UNE-P uses both the loop and switch facility, the connection between the incumbent LEC's loop and switch need not be broken to provide a working circuit. For this reason, the myriad issues that arise with respect to unbundling IDLC are unique to a UNE-L strategy. In the meantime, until suitable alternatives to IDLC loops are available and less manual (and less expensive) loop cutover processes are implemented, competitors are impaired without access to unbundled switching for customers served via IDLC loops.

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181 *Id.* ¶ 68.

182 *Id.*

183 *Id.*