

whether Verizon may appropriately exclude some of these trouble reports and have used carrier-specific data supplied by Verizon to argue that Verizon does not provide loops at an acceptable level of quality.<sup>450</sup>

145. We agree with the Department of Justice that Verizon's adjustments to the data are justified if an inference could reliably be made when the type of trouble reported: (1) could not occur post-acceptance, but rather must have existed at acceptance; and (2) would consistently be detected by the joint testing methods employed.<sup>451</sup> The issue of whether competing carriers can consistently detect loop quality problems is disputed by Covad, Rhythms and NAS.<sup>452</sup> Covad argues that carrier-specific data show that it experiences installation quality troubles which are

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that the performance disparity between competitive LEC and retail I-code rate was eliminated in September and substantially reduced – by 51 percent in October (from 8.2 to 4.34 percentage points); and by 74 percent in November (from 4.96 to 1.29 percentage points). Verizon contends that the “weighted average I-code rate under the new consensus rules for September through November 2000 was 4.78 for [competing carriers] and 3.3 for Verizon's retail customers.” Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 94. Verizon goes on to adjust its performance results to include troubles that could have been discovered by a properly conducted acceptance test. Under this adjustment the competitive LEC I-code rate was 3.12 percent in September 2000; 6.08 percent for October 2000, and 4.19 percent for November 2000. *See* Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 95 Attach. Z. The weighted average for this period is 4.28 percent for competitive LECs and 3.30 percent for Verizon retail. *Id.* Verizon performs a third level of analysis: after quantifying the I-code rate under the revised measure recently approved by the New York Commission, and then excluding those I-codes that could have been discovered by a properly conducted acceptance test, Verizon shows that the gap between competitive LECs and retail I-code rate in September and November 2000 is eliminated and reduced to less than one percent in October 2000. The adjusted rate is 1.43 percent for September 2000, 4.04 percent for October 2000 and 1.94 percent for November 2000 compared to the weighted average during this period of 2.36 percent for competitive LECs and 3.30 percent for Verizon. *See* Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 96 and Attach. AA.

<sup>450</sup> *See* Rhythms Massachusetts II Williams Decl. para. 26; Covad Clancy Decl. para. 10-23; *see also* USISPA Massachusetts II Reply at 8. The Department of Justice questions the validity of the performance data and contends that Verizon's exclusion methodology infers improper acceptance testing from the nature of the trouble reported. *See* Department of Justice Massachusetts II Evaluation at 10 n.39. The Massachusetts Department discounts this measure entirely and questions whether the measure accurately captures Verizon's ability to provision quality loops. Massachusetts Department Massachusetts II Evaluation at 30. We agree with the Department of Justice that the calculation of the revised measure appears to be flawed. While trouble reports from carriers that do not conduct acceptance tests are excluded from the numerator of this measure, orders from such carriers are not excluded from the denominator. The result is to inappropriately skew the trouble report rate. When these orders are excluded from the denominator, the reported trouble rate is higher for October and November 2000 under the revised measure than as reported under the original carrier-to-carrier measure. The Department of Justice has recalculated PR 6-01 to control for this anomaly. Pursuant to this recalculation, for the period September to November, competitive LECs experienced 6.99 percent troubles within 30 days. *See* Department of Justice Evaluation at 10-11, Exh. 1.

<sup>451</sup> *See* Department of Justice Massachusetts II Evaluation at 11 n.39. Verizon responds that “while it is possible for a DSL loop to break after the loop is installed, that is a rare occurrence.” Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 100.

<sup>452</sup> *See* Covad Massachusetts II Comments at 11; NAS Massachusetts II Comments at 11; Rhythms Massachusetts II Comments at 18.

over four times higher for its orders compared to Verizon retail.<sup>453</sup> Verizon responds that when an adjustment is made for Covad's failure to properly conduct acceptance testing its I-code rate falls to below retail.<sup>454</sup> Verizon forwards similar carrier-specific responses to Rhythms and NAS.<sup>455</sup>

146. We find that Verizon is making loops available at substantially the same level of quality as Verizon provides to itself. In reaching this conclusion we rely upon data that are adjusted to comply with the recently-adopted consensus revision to the troubles with 30 days measure.<sup>456</sup> During the period September through November 2000, competitive LECs experienced installation quality troubles at a rate of 7.0 percent compared to 2.3 percent for Verizon retail.<sup>457</sup> Thus, the adjusted data narrow the facial disparity between Verizon's

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<sup>453</sup> In its comments, Covad reviewed 8 trouble tickets in the month of November to refute Verizon's argument that Covad knowingly accepted non-working loops. Covad contends that these loops were accepted because: (1) the Verizon technician was not at the NID when the test was performed; (2) Verizon failed to provision the loop to the appropriate NID; or (3) the loops became non-working after Covad accepted it. *See* Covad Massachusetts II Reply at 9. On reply Covad surveyed its acceptance testing logs for all of the I-codes reported in November. This survey showed that of the 25 I-codes which Verizon excluded from its adjusted performance measure, none of the installation quality troubles could have been discovered at the time of acceptance and all of these installation quality troubles were properly addressed as maintenance and repair issues. Covad argues that in many cases its records show that loops were much shorter at the time of acceptance testing than when repaired by Verizon, demonstrating that Verizon did not test the full loop length during acceptance testing. *See* Covad Massachusetts II Reply at 10. Verizon responds to Covad's initial survey of I-codes by showing that in two cases, Covad's test equipment was not available to perform an acceptance test and in two other instances, Covad's acceptance test failed to identify the presence of a load coil and half ringer. *See* Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 91. In three other instances, Verizon states that Covad tested and accepted a loop that Verizon identified as defective; Covad's technician went to the wrong demarcation point and finally, Covad could not locate the acceptance testing data on the loop in question in its database. *See id.*

<sup>454</sup> When Verizon controls for installation quality issues that could have been discovered during acceptance testing Covad's rate is at parity for the period September through November. *Id.* at para. 83.

<sup>455</sup> Rhythms claims that it reviewed the list of I-codes excluded by Verizon for acceptance testing reasons and states that "its records did not match Verizon's." Rhythms Massachusetts II Comments at 18. Verizon states that Rhythms did not provide any information for a number of the Rhythms I-codes excluded by Verizon. Verizon shows that some of the I-codes contested by Rhythms were not excluded by Verizon, therefore no downward adjustment to the competitive LEC I-code rate was taken. Finally, of the remaining I-codes submitted by Rhythms, Verizon's records show that these loops had ringers on the lines and should have been discovered during acceptance testing; these records contain inconclusive information or contained no relevant data or finally, the I-code was not related to Rhythms' failure to properly perform acceptance testing. *See* Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 94. Verizon performed a similar analysis for NAS adjusting its I-code rate to below retail in the period September through November. *See id.* at paras. 84-85.

<sup>456</sup> We also agree with the Department of Justice that Verizon's practice of excluding trouble reports from carriers that do not conduct acceptance testing from the numerator but not the denominator is inappropriate and will result in inappropriately low trouble report rates. *See* Department of Justice Evaluation at 10. In this circumstance, where the carriers have agreed to revise a measure going forward, we believe it is reasonable to include the results of the revised measure to adjust Verizon's performance as officially reported.

<sup>457</sup> *See* Department of Justice Massachusetts II Evaluation at 10, Attach. 1.

performance to its competitors compared to itself. Moreover, we also note that recent performance shows that Verizon has improved its ability to provide competitors with xDSL-capable loops at acceptable levels of quality.<sup>458</sup> We find, therefore, that the adjusted data coupled with the improving trend in Verizon's performance are sufficient for us to conclude that Verizon is installing loops in a nondiscriminatory manner.

147. We are unable to quantify exactly the effect of Verizon and competitor adjustments to the data because of limited factual disputes.<sup>459</sup> We note however, that the Massachusetts Department has conducted a comprehensive and detailed factual reconciliation of I-codes for the month of November 2000 with the participation of Covad and Verizon.<sup>460</sup> This inquiry has yielded several process improvements that are designed to improve Verizon's installation quality results.<sup>461</sup> We welcome the Massachusetts Department's participation in

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<sup>458</sup> The individual results for competitive LECs performing acceptance testing for September, October and November were 4.13 percent, 11.18 and 8.22 percent compared to 1.93 percent, 2.09 percent and 2.81 percent for Verizon retail over the same period. *See id.* The unrevised carrier-to-carrier data confirm this positive trend. Even as volumes have remained substantial, the percent trouble within 30 days measure as originally reported moved from a high in October 2000 of 11.1 percent to 7.8 percent in November and 5.8 percent in December, reducing the disparity to approximately 3 percent in the most recent month we consider. In September, competitive LEC trouble reports within 30 days were 5.4 percent. The comparable numbers for Verizon retail were 1.93, 2.09, 2.81 and 2.79 percent in September, October, November and December respectively. *See* PR 6-01 (Provisioning, 2-Wire xDSL Services, percent Installation Troubles Reported Within 30 Days). The four month (September – December) average for competitive LEC trouble reports within 30 days, according to the unrevised carrier-to-carrier reports filed with the application, was 7.3 percent compared to 2.4 percent for Verizon.

<sup>459</sup> We note that Verizon's adjustment to the data lower the I-code rate to less than 7 percent and competitive LEC challenges to Verizon's adjustment raise the I-code rate; but in no case do competitor challenges to Verizon's adjustment raise the I-code rate above the 7 percent level presented by the revised carrier-to-carrier measure as calculated by the Department of Justice. *See* Letter from Paul Afonso, General Counsel, Massachusetts Department of Telecommunications and Energy to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-9 (filed March 21, 2001) (*Massachusetts Department Reconciliation Letter*).

<sup>460</sup> On March 15 2001, at the request of the Commission's staff, the Massachusetts Department, together with Covad and Verizon, undertook a review of the disputed Covad orders. After conducting its review, the Massachusetts Department submitted a list of process improvements developed by Verizon and Covad during this review.

<sup>461</sup> Under the auspices of the Massachusetts Department, Covad and Verizon have agreed to several modifications or additions to the existing acceptance testing process. Verizon has agreed to implement a process requirement that its technicians will "cut down" xDSL loops at the NID before the final cooperative test is performed. Additionally, Covad has agreed to insert into its acceptance testing script a question to determine whether the Verizon technician is testing through the network interface device. Second, to reduce technician confusion about where in Verizon's outside plant the cooperative test was performed, the carriers have agreed to enhance the demarcation point information procedures by establishing a three-fold process whereby the Covad technician can: (1) verify before dispatch, that the loop was located and tagged by the Verizon technician during cooperative testing; (2) access Verizon's demarcation information electronically before dispatching to the field; and (3) call Verizon from the field if the technician cannot locate the demarcation point. Third, Verizon has committed to make it clear to its technicians that they should remove all half ringers on stand-alone xDSL loops. Fourth, Covad and Verizon have agreed to implement a process for obtaining a final acceptance test when an earlier acceptance test has failed and to educate their technicians about interim loop testing versus final acceptance testing. *See* Massachusetts Department Reconciliation Letter at 8.

addressing Verizon's acceptance testing process and are encouraged by the improvements to this process.<sup>462</sup> We encourage carriers to bring issues such as these to the attention of state commissions so that factual disputes can be resolved before a BOC applicant files a section 271 application with this Commission.

148. We find that recent carrier-to-carrier installation quality measures show that Verizon has improved significantly its ability to provide competitors with xDSL-capable loops at acceptable levels of quality.<sup>463</sup> Moreover, we find that Verizon's remedial efforts to improve the stand-alone xDSL loop provisioning and acceptance testing process, in addition to those agreed to in the context of the Massachusetts Department's reconciliation proceeding, are likely to reduce competitive LEC installation quality impairments in the future. Starting in January 2001, Verizon will tag DSL loops at both the NID and the cross-connection box with special services markers to indicate to Verizon technicians that the loop is in use for data services and should not be used to serve another customer.<sup>464</sup> Verizon is also engaged in on-site visits to competitive LEC testing centers to discover ways to improve the acceptance testing process.<sup>465</sup> Verizon has committed to providing competitive LECs with detailed information on their I-codes to diagnose acceptance testing issues and reconcile data.<sup>466</sup> Verizon has also agreed to a trial of "sync" testing to enable Verizon technicians, at the time of testing, to determine whether the competitive LEC can synchronize its DSLAM with customer premises modems.<sup>467</sup> Finally, Verizon is working with a competitive LEC to make access to its testing equipment available to Verizon through a voice response unit.<sup>468</sup> We emphasize that Verizon's installation quality performance is minimally acceptable -- even under our flexible approach of reviewing Verizon's performance in light of the totality of the circumstances.<sup>469</sup>

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<sup>462</sup> We note that the Department of Justice did not have the benefit of the Massachusetts Department's reconciliation of Verizon's I-codes. See Department of Justice Massachusetts II Evaluation at 15 n.61 (noting that the Department of Justice's evaluation is "necessarily based solely on the evidence in Verizon's application" and stating that "[r]eply comments and *ex parte* submissions undoubtedly will provide additional evidence concerning the questions that have been raised about Verizon's pre-application DSL performance.")

<sup>463</sup> We therefore rely upon the Massachusetts Department's conclusion that "the information contained in VZ-MA's supplemental application only affirms our earlier conclusion that VZ-MA provides [competing carriers] an installation quality sufficient to afford them a meaningful opportunity to compete." Massachusetts Department Massachusetts II Comments at 29-30; see also *SWBT Kansas/Oklahoma Order* at para. 191 (finding that SWBT generally met 6 percent installation quality benchmark and noting improved performance trend).

<sup>464</sup> See Verizon Massachusetts II Lacouture/Ruesterholz Decl at para. 110.

<sup>465</sup> See *id.* at para. 110.

<sup>466</sup> See *id.* at para. 109.

<sup>467</sup> See *id.* at para. 118.

<sup>468</sup> See *id.* at para. 109.

<sup>469</sup> Any future evidence of significant and sustained deterioration may result in a targeted enforcement action or carrier-initiated complaint under the Act. See also *infra* Part IX.

**(iv) Maintenance and Repair**

149. We agree with the Massachusetts Department that Verizon demonstrates that it provides maintenance and repair functions for competing carrier xDSL-capable loops in a manner sufficient to meet the requirements of checklist item 4.<sup>470</sup> In analyzing Verizon's maintenance and repair functions we continue to rely primarily upon the mean time to repair and repeat trouble rate measures identified in the *Bell Atlantic New York* and *SWBT Texas Orders*.

150. *Mean Time to Repair.* Like the Massachusetts Department, we find that Verizon offers nondiscriminatory access to maintenance and repair functions. During the period from September through December, the mean time to repair competing carrier troubles on xDSL loops was 29.4 hours while the comparable number for Verizon was 21.59 hours, an approximately 8 hour difference. Although this disparity is statistically significant, we note that, in December, Verizon repaired competitive LEC lines in 19.1 hours compared to 17.8 hours for its retail affiliate, bringing Verizon into near facial parity with its retail operation.<sup>471</sup> Accordingly, the most recent month we consider indicates that Verizon has virtually eliminated this performance disparity.<sup>472</sup> We do not find, therefore, any systematic discrimination in Verizon's maintenance and repair functions offered to competitors.<sup>473</sup>

151. Verizon contends that the data reflecting the measurement of mean time to repair for xDSL loops provide a misleading indication of its performance and thus the Commission should look behind the measures for additional evidence of nondiscrimination. Verizon claims that it is much more likely to be unable to access competing carriers customers' premises to repair xDSL loops than access to the premises of its own retail customers<sup>474</sup> and that competing

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<sup>470</sup> See Massachusetts Department Massachusetts II Comments at 31.

<sup>471</sup> Verizon's missed repair appointment performance is likewise at parity. During September through November 2000, Verizon met approximately 85 percent of repair appointments for competitive LECs compared to approximately 86 percent for retail. MR 3-01 (Maintenance and Repair, 2-wire xDSL Services, percent Missed Repair Appointment – Loop); see also Verizon Massachusetts II Lacouture/Ruesterholz Decl. Attach. EE. Verizon concludes that during September through November 2000, nearly 58 percent of troubles reported within 30 days of the installation of a DSL loop were closed with no trouble found. See *id.* at para. 105 and Attach. BB. This number is consistent with Verizon's analysis for the period May through July. See Verizon Massachusetts I Lacouture/Ruesterholz Decl. at para. 78, 104 & Attach. I (discussing the effect of failure to isolate troubles on UNE POTS repair metrics).

<sup>472</sup> Indeed, we take additional comfort in Verizon's January performance which indicates that this trend has continued. In fact, Verizon performs better for competitive LECs than for itself in January. The January mean time to repair competitive LEC xDSL loops was 20.82 hrs compared to 23.80 hrs. for Verizon. See MR 4-02 (Maintenance, 2-Wire xDSL Services, Mean Time to Repair – Loop Trouble).

<sup>473</sup> Should Verizon's future performance reverse this positive trend, Verizon risks a targeted enforcement action or carrier-initiated complaint under the Act. See *infra* Part IX.

<sup>474</sup> Verizon Massachusetts II Application at 25; Verizon Massachusetts II Lacouture/Ruesterholz Decl at para. 106. During April, May, June and July 2000, Verizon claims that competing carriers provided only "limited access" to end users for 58.9 percent of competing carrier Complex loop repair requests, compared to 3.4 percent on Verizon's Complex loop retail repair requests. *Id.* at para. 106 & Attach. N.

carriers are less willing to schedule weekend appointments than are Verizon's retail customers.<sup>475</sup> Both of these factors, Verizon claims, lengthens the time needed to repair competing carrier xDSL loops. Covad and Rhythms specifically deny that they avoid weekend repair appointments and otherwise criticize Verizon's maintenance and repair functions.<sup>476</sup>

152. We exercise our discretion to afford Verizon's adjusted mean time to repair data little weight.<sup>477</sup> Because the official carrier-to-carrier data provide sufficient evidence for the Commission to conclude that Verizon provides nondiscriminatory access to maintenance and repair functions, we need not resolve the factual dispute presented by commenters regarding refused weekend repair appointments. We recognize and encourage BOCs to conduct root cause analysis of their performance and will appropriately credit explanations of disparities in the performance measures. We believe, however, that such explanations are best used to improve processes and carrier-to-carrier reporting and that they are most useful when surfaced in state proceedings. We note that the development of performance measures is an iterative process and we encourage competitive LECs and Verizon to continue to specifically improve the mean time to repair measure to provide a more accurate indicator of performance.<sup>478</sup>

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<sup>475</sup> Verizon contends that a relatively small disparity in the mean time to repair measure exists during September, October and November and that there is some variation among competitive LECs regarding the rate at which they accept weekend repair appointments. *See* Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 119 Attach. GG. Verizon performed an analysis of the weekend repair appointment exclusion and concluded that the rejection of weekend repair appointments added approximately 4.35 hours to the average repair interval for competitive LEC loops, reducing the 9 hour difference to approximately 4-5 hours of disparity, an amount Verizon contends, that is not competitively significant; *See also* Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para 119 Attach. GG. *See also* Verizon Massachusetts I Lacouture/Ruesterholz Decl. at 73-74 & Attach. G (discussing the effect of not accepting weekend repair appointments on the UNE POTS repair metrics.)

<sup>476</sup> *See* Rhythms Massachusetts I Comments at 31-32; *See* Letter from Dhruv Khana, Executive Vice President and General Counsel, Covad to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 00-176, at 8 (filed Dec. 5, 2000); *see also* Covad Massachusetts I Comments at 20-22 (stating that Verizon adds to the "no access" problem by assigning "all day" appointment windows); Network Access Solutions Massachusetts I Comments at 3-4 (same). Rhythms Massachusetts I Comments at 32. Covad specifically notes that an apparent increase in competing carrier "no access" situations is explained by the fact that Verizon's schedules retail repair appointments in smaller windows than for competing carriers. The Massachusetts Department was unable to comment on Covad's alleged unsuccessful attempt to shorten repair windows offered by Verizon to competing carriers. *See* Massachusetts Department Massachusetts I Reply at 86. On reply, Verizon states that it will grant morning or afternoon appointments for retail customers if they have extenuating circumstances and it will do the same for competing carriers. Verizon Massachusetts I Lacouture/Ruesterholz Reply Decl. at 33 (emphasis added).

<sup>477</sup> *See* Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para 119 Attach. GG.

<sup>478</sup> The Department of Justice notes that the mean time to repair measure is likely to be disputed in the future and, if the measure is left unrevised, it may create an analysis that is biased toward finding parity. "Excluding observations involving competitive LEC refusals of weekend appointments makes Verizon's performance for competitive LECs look stronger, moving the apparent balance toward parity. Excluding observations involving refused weekday appointments – an adjustment Verizon did not make – could make Verizon's performance as to its retail unit or separate affiliate look better, moving the apparent balance away from parity." Department of Justice Massachusetts II Evaluation at 12.

153. *Repeat Trouble Rate.* We conclude that Verizon provides competitors with maintenance and repair services at an acceptable level of quality. Verizon's repeat trouble report data show that competing carriers infrequently experience problems after a repair visit for a trouble on DSL loops. This measure shows that competing carriers experience fewer repeat troubles than Verizon's retail affiliate.<sup>479</sup> For the period September through December, competing carriers experienced 16.3 percent repeat trouble report rates compared to 21.5 percent for Verizon.<sup>480</sup> Thus, during the four recent months we consider, Verizon provides better service to competitors in this area than it does for its retail affiliate.<sup>481</sup>

### c. Subloops

154. We find that Verizon provides nondiscriminatory access to subloops consistent with the requirements of section 271 and the *UNE Remand Order*.<sup>482</sup> The Commission's *UNE Remand Order* requires incumbent LECs to provide competitors access to subloop elements at any technically feasible point to ensure that "requesting carriers [have] maximum flexibility to interconnect their own facilities" with those of the incumbent LEC.<sup>483</sup> Competitors take issue with Verizon's subloop offering claiming that Verizon limits subloops to "metallic distribution pairs/facilities;" restricts competitor subloop access to interconnection at the feeder distribution interface (FDI); and refuses to allow competitors to collocate equipment inside remote terminals for purposes of accessing subloops.<sup>484</sup>

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<sup>479</sup> The Percent Repeat Trouble Reports metric, MR 5-01 shows that the 4-month (September – December) average for competing carriers is 16.3 percent and 21.5 percent for Verizon. For the months of September, October, November and December, competing carrier repeat trouble rates were 19.3, 15.4, 16.1 and 13.4 percent. For the same months, Verizon repeat trouble rate was 22.7, 20.3, 22.6 and 16.5 percent. See MR 5-01 (Maintenance, 2-Wire DSL Services, percent Repeat Trouble Reports within 30 Days).

<sup>480</sup> See *id.*

<sup>481</sup> The average repeat trouble report rate for the period September through December is 16.3 for competing LECs compared to 21.5 for Verizon retail. See MR 5-01 (Maintenance, 2-Wire DSL Services, percent Repeat Trouble Reports within 30 Days). We take additional comfort in Verizon's network trouble report rates for DSL loops in Massachusetts. These results further support our conclusion that Verizon provides competing carriers with maintenance and repair service in substantially the same time and manner as Verizon's own retail operations. Competing carriers experienced a trouble report rate of 1.9 percent for the months of September through December 2000 while Verizon experienced trouble report rates at a comparable 1.3 percent rate. See MR 2-02/2-03 (Maintenance, 2-Wire xDSL Services, Network Trouble Report Rate, Loop; Network Trouble Report Rate, Central Office).

<sup>482</sup> Although nondiscriminatory access to subloops technically falls under checklist item 2, we treat subloops in this section because it is logically related to the provision of unbundled loops.

<sup>483</sup> *UNE Remand Order* at para. 206. The Commission held that technically feasible points of interconnection near a customer premises could include poles or pedestals, the NID or the minimum point of entry (MPOE), the feeder distribution interface (FDI) or a remote terminal or environmentally controlled vault. *Id.*

<sup>484</sup> Rhythms Massachusetts I Comments at 12; ALTS Massachusetts I Comments at 16-17; Covad Massachusetts I Comments at 25-28.

155. We find that, consistent with our rules, Verizon allows collocation inside remote terminals on a space-available basis.<sup>485</sup> Where space is unavailable, competitive LECs may deploy an adjacent cabinet to access subloops through an interconnecting cable.<sup>486</sup> Furthermore, Verizon does not limit competitive LEC access to subloops to only metallic distribution facilities. Rather, Verizon allows requesting carrier to obtain access to subloop facilities regardless of the transmission medium.<sup>487</sup> Finally, Verizon has demonstrated that competitive LECs may gain access to subloops at technically feasible points of interconnection other than the FDI.<sup>488</sup> For these reasons, we cannot agree with the commenters' claims that Verizon limits access to subloop unbundled network elements in violation of the requirements of section 271.

#### d. High Capacity Loop Performance

156. We find that Verizon's performance for high capacity loops does not result in a finding of noncompliance with checklist item four. We look to the totality of the circumstances in evaluating Verizon's performance in providing loops in accordance with the checklist requirements.<sup>489</sup> During the period September through November, although volumes are low, carrier-to-carrier data show that Verizon misses a comparable number of installation appointments for competitors and retail alike.<sup>490</sup> Verizon's performance data for its maintenance

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<sup>485</sup> See Verizon Massachusetts I Lacouture/Ruesterholz Reply Decl. at para. 44.

<sup>486</sup> *Id.*

<sup>487</sup> Verizon offers "feeder subloops over DS1 or DS3 transmission paths which may be either fiber or copper depending upon facilities availability." See Verizon Massachusetts I Lacouture/Ruesterholz Reply Decl. at para. 137. *Id.* at Attach. P (stating that a 'Feeder Sub-Loop' means a DS1-DS3 transmission path over a feeder facility in Verizon's network).

<sup>488</sup> Verizon specifically identifies the NID and the MPOE as possible alternative points for competing LECs to obtain access to subloops. See Verizon Massachusetts I Lacouture/Ruesterholz Reply Decl. at para. 138.

<sup>489</sup> In so doing, we do not consider Verizon's special access services performance. OnSite Access specifically criticizes Verizon's performance in provisioning high capacity "loops" in New York and Massachusetts. See also On Site Access Massachusetts I Comments at 20-21 (citing Leonard Kriss Decl. at 2-6). CompTel lodges a related complaint alleging that Verizon has not demonstrated that it can comply with the competitive checklist at the same time it meets its obligation to provision access services and operate its long distance affiliate consistent with section 272's nondiscrimination requirements. See CompTel Massachusetts II Comments at 1-3. Criticisms of Verizon's provisioning of special access service are not relevant to compliance with checklist item four. As we held in the *SWBT Texas* and *Bell Atlantic New York Orders*, we do not consider the provision of special access services pursuant to tariffs for purposes of determining checklist compliance. *SWBT Texas Order*, 15 FCC Rcd at 18504, para. 335; *Bell Atlantic New York Order*, 15 FCC Rcd at 4126-27, para. 340. Checklist item 4 does not address itself to retail services Verizon provides to competitors such as special access services.

<sup>490</sup> See PR 4-01 (UNE POTS/Special Services, percent Missed Appointments – Verizon – Total). In September and October, Verizon did not miss any installation appointments for high-capacity loops and missed 18.39 percent of its installation appointments in November. In November, the number of observations in this metric is 310 competitive LEC installations. However, this measure aggregates EEL and interoffice facilities installations. The comparable numbers over the same period for Verizon retail were 2.78, 1.90 and 1.43 percent. See *id.*

and repair functions for high capacity loops show parity.<sup>491</sup> Like other types of loops we consider, Verizon states that competing carrier behavior skews its high capacity loop performance.<sup>492</sup> We recognize that Verizon's performance on other measures with respect to provisioning high capacity loops has been poor in Massachusetts.<sup>493</sup> High capacity loops in Massachusetts represent only approximately 0.8 percent of all unbundled loops provisioned to competitors.<sup>494</sup> Verizon performs at an acceptable level for most types of unbundled local loops. Given the low volumes of orders for high capacity loops in Massachusetts we cannot find that Verizon's performance for high capacity loops results in a finding of noncompliance for all loop types.<sup>495</sup>

**e. Voice Grade Loops**

157. We agree with the Massachusetts Department that Verizon demonstrates that it provides voice grade unbundled loops in a nondiscriminatory manner.<sup>496</sup> This category includes hot cut loops and new stand-alone loops. We discuss each of these categories separately below.

**(i) Hot Cut Loop Provisioning**

158. *Hot Cut Process.* Verizon's hot cut process is designed to move a loop that is in service from Verizon's switch to a competitor's switch. Competitors can request that Verizon

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<sup>491</sup> For the period September through January, the Mean Time to Repair measure shows that Verizon troubles are resolved in 8.38 hours compared to 8.40 hours for competitive LECs during the same period. See MR 4-01 (Maintenance, UNE POTS, Special Services, Mean Time to Repair, Total).

<sup>492</sup> Verizon examined a sample of the January orders that were included in the Average Interval Offered measure (PR 1-07) and discovered that the vast majority of the orders should have been "X" coded because the competitive LEC asked for an interval longer than the standard interval. Because the orders were incorrectly "W" coded, Verizon states that they were included in the results and skewed the reported results. See Letter from Dee May, Executive Director Federal Regulatory, Verizon to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-09 (filed February 28, 2001) (*Verizon Feb. 28 Ex Parte Letter*).

<sup>493</sup> See e.g., PR 2-07 (Special Services – Provisioning, Av. Interval Completed – DS-1); PR 6-01 (Special Services – Provisioning, percent Installation Troubles reported within 30 Days).

<sup>494</sup> Verizon states that during the period September through January, observations for PR 2-07 totaled 176 loops. Verizon notes that the high-capacity loop volumes the Commission considered in the *SWBT Kansas/Oklahoma Order* was even higher over the four month period the Commission considered in that proceeding. See *Verizon Feb. 28 Ex Parte Letter*. Letter from Dee May, Executive Director Federal Regulatory, Verizon to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-09 (filed February 28, 2001). In the period July through October, SWBT received 210 orders for DS-1 loops in Oklahoma. *SWBT Kansas/Oklahoma Order* at para. 213 n.616.

<sup>495</sup> Although we recognize specific performance problems for high capacity loops, we do not find that these disparities in and of themselves are enough to render a finding of checklist noncompliance because of the small numbers of DS-1 loops requested by competing carriers. We stress, however, that we will be actively monitoring Verizon's performance in this area and we will take swift and appropriate enforcement action in the event that Verizon's provisioning performance for high capacity loops deteriorates. See *infra* Part IX.

<sup>496</sup> See Massachusetts Department Massachusetts I Comments at 279.

complete the hot cut within a specific appointment window and Verizon has committed to ensuring that the customer will not be out of service for more than five minutes during the hot cut.<sup>497</sup> Verizon's hot cut process includes a number of steps that Verizon and competitors must take during the days preceding the hot cut. These steps include pre-wiring a cross-connection from the competitor's collocation arrangement to Verizon's main distribution frame prior to the committed date and time of the hot cut, setting the appropriate Local Number Portability triggers and confirming with the competitor that the loop is to be cut over to a competitor's switch.<sup>498</sup>

159. *Hot Cut Timeliness and Quality.* We find that Verizon demonstrates that it provides hot cuts in Massachusetts in accordance with checklist item 4 because it provides hot cuts in a timely manner, at an acceptable level of quality, with minimal service disruption, and with a minimum number of troubles following installation.<sup>499</sup> Verizon reports data on the percentage of hot cut orders completed within the cut-over window specified by the requesting competing carriers on an LSR.

160. In the instant application, Verizon demonstrates that its hot cut performance has returned to acceptable pre-strike levels which afford a competitor a meaningful opportunity to compete.<sup>500</sup> During October and November 2000, Verizon completed on average 96 percent of hot cut orders on time. During the same time period, less than 0.8 of the hot cut lines experienced installation troubles within 7 days.<sup>501</sup> The Massachusetts Department engaged in a reconciliation of various Verizon self-reported hot cut performance measurement data in the context of the state section 271 proceeding.<sup>502</sup> Relying upon the results of its carrier-specific data reconciliation, the Massachusetts Department concluded that "there is no need for further data reconciliation" and concluded that Verizon provides sufficient on-time hot cut performance to

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<sup>497</sup> See Verizon Massachusetts I Lacouture/Ruesterholz Decl. at para. 81.

<sup>498</sup> *Id.* at Attach. J.

<sup>499</sup> We evaluate the PR 9-01 (Provisioning, POTS, percent On-Time Performance – Hot Cut); PR 6-02 (Provisioning, POTS, percent Installation Troubles reported within 7 Days – Hot Cut Loop) measures in Massachusetts.

<sup>500</sup> See Verizon Massachusetts I Guerard/Canny Decl. at Attach. E; PR 9-01 (Provisioning POTS, percent On Time Performance – Hot Cuts). For May, PR 9-01 showed 98.45 percent on time performance, for June, PR 9-01 showed 99.63 percent on time performance and for July, PR 9-01 showed 99.19 percent on time performance. KPMG reviewed Verizon's hot cut performance between October 1999 and January 2000 and found that 98 percent of hot cuts were completed on-time. See Verizon Massachusetts I Lacouture/Ruesterholz Decl. at para. 83 (citing KPMG Report at 198-99 (POP-6-2-6)). The Massachusetts Department characterizes Verizon's hot cut timeliness performance as "excellent" and notes that unlike Verizon's performance in New York prior to filing its application with this Commission, Verizon bettered the 95 percent "on time" benchmark in Massachusetts every month from January through July 2000. See Massachusetts Department Comments at 284-85.

<sup>501</sup> See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 5.

<sup>502</sup> In response to criticism from one carrier, AT&T, regarding the accuracy of Verizon's hot cut data, the Massachusetts Department engaged in a reconciliation of various Verizon self-reported hot cut performance measurement data in the context of the state section 271 proceeding. Massachusetts Department Massachusetts I Comments at 288. AT&T does not criticize Verizon's hot cut performance in this proceeding.

meet the requirements of checklist item 4.<sup>503</sup> Because the Massachusetts Department performed a searching and specific data reconciliation of Verizon's hot cut performance, we accord its resolution of this issue substantial weight. We note that no commenter challenges Verizon's hot-cut conversion performance in this phase of the proceeding. We thus conclude that the record demonstrates that the hot cut performance Verizon makes available to competing carriers in Massachusetts minimizes service disruptions and affords a competitor a meaningful opportunity to compete.

**(ii) New Stand-Alone Loop Provisioning**

161. We agree with the Massachusetts Department that Verizon demonstrates that it provisions new unbundled stand-alone voice grade loops in accordance with the requirements of checklist item 4.<sup>504</sup> When Verizon does not presently service the customer on the line in question, a hot cut loop is not required. In such instances, a competing carrier obtains a new stand-alone loop from Verizon which dispatches a technician to the customer's premises to complete the installation. We find that Verizon demonstrates that it provisions and maintains new stand-alone voice grade loops for competing carriers in substantially the same time and manner that it installs new voice grade loops for its own retail operations.

162. *Provisioning Timeliness and Quality, Maintenance and Repair.* Verizon demonstrates that it delivers new voice grade loops in a timely manner and at acceptable levels of quality. Verizon also demonstrates that it provides maintenance and repair functions for such loops in a nondiscriminatory manner. No party specifically criticizes Verizon's new, stand-alone loop provisioning performance. As in previous section 271 orders, in reviewing Verizon's performance we examine the average completion interval, missed installation appointments, trouble reports within 7 days and mean time to repair measures. Specifically, Verizon's performance results for the months of September, October, November and December 2000 also demonstrate parity for the average completion interval for new loop orders of 1-5 lines measure.<sup>505</sup> During the same period, Verizon's missed installation appointment rate for new voice loops also demonstrated parity.<sup>506</sup> Furthermore, Verizon appears to be providing new voice grade loops to competitors at an acceptable level of quality. Based on the trouble report within 7 days measure, Verizon provided installation at the same level of quality for competitive LECs

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<sup>503</sup> Massachusetts Department Massachusetts I Comments at 288.

<sup>504</sup> See *id.* at 256.

<sup>505</sup> In September, Verizon completed POTS loop orders of 1-5 lines in 8.82 for Verizon retail and 8.53 for competitors. The comparable numbers for October were 5.81 for Verizon retail affiliate and 9.22 and 5.45 for Verizon retail and 4.86 for competitors in December. See PR 2-03 (Provisioning, Average Completed Interval, Dispatch 1-5 lines – Loop).

<sup>506</sup> See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at Attach. A. The September to November missed appointment rate, PR 4-04, is 8.13 percent for Verizon and 7.09 percent for [competing carriers]. The December rate was 6.96 for Verizon and 10.31 for competing LECs. See PR 4-04 (Provisioning, POTS, percent Missed Appointments, Verizon, Dispatch, Loop – New).

compared to retail during the months of September, October, November and December 2000.<sup>507</sup> Verizon's mean time to repair measures show that it is providing maintenance and repair functions for new loops to competitors in a nondiscriminatory manner.<sup>508</sup>

**f. Line Sharing**

**(i) Background**

163. On December 9, 1999 the Commission released the *Line Sharing Order* that, among other things, defined the high-frequency portion of local loops as a UNE that must be provided to requesting carriers on a nondiscriminatory basis pursuant to section 251(c)(3) of the Act and, thus, checklist items 2 and 4 of section 271.<sup>509</sup> In the *Line Sharing Order* the Commission acknowledged that it could take as long as 180 days from the release date for incumbent LECs to develop and deploy the modifications necessary to implement this new requirement. This 180 day period concluded on June 6, 2000, approximately six months before Verizon filed its Massachusetts II application. In the *SWBT Kansas/Oklahoma Order*, the Commission provided BOC-applicants guidance concerning the required section 271 line sharing showing necessary to meet a BOC's burden of proof. Specifically, the Commission stated that "a successful BOC-applicant should provide evidence that its central offices are operationally ready to handle commercial volumes of line sharing and that it provides competing carriers with nondiscriminatory access to the pre-ordering and ordering OSS functions associated with the provision of line shared loops, including access to loop qualification information and databases."<sup>510</sup> The Commission also held that "to the extent that a BOC applicant relies upon commercial data from another state to establish that it is providing nondiscriminatory access to line shared loops in a state where it requests section 271 authority, it should provide evidence that the OSS and provisioning processes are identical."<sup>511</sup> Verizon must demonstrate, therefore,

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<sup>507</sup> The percentage of installation troubles reported on voice grade loops for competitors were 1.13 percent in September, .98 percent in October, .80 percent in November and .74 in December. The comparable numbers for Verizon were 2.39 in September, 1.87 in October, 1.77 in November and 1.60 in December. See PR 6-02 (Provisioning, POTS, percent Installation Troubles reported within 7 Days – Loop).

<sup>508</sup> Results for the mean time to repair measure, Mean Time to Repair – Total, in the months of September, October, November and December show parity. Competitor troubles were repaired in 19.77 hours in September, 18.52 hours in October, 19.00 hours in November and 15.38 hrs in December. Verizon's troubles were repaired in 21.63 hours in September, 17.68 hours in October, 17.95 hours in November and 16.98 hrs in December. See MR 4-01 (Maintenance, POTS Loop, Mean Time to Repair – Total).

<sup>509</sup> See *Deployment of Wireline Services Offering Advanced Telecommunications Capabilities and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order, CC Docket No. 98-147, Fourth Report and Order, CC Docket No. 96-98, 14 FCC Rcd 20912 (1999) (*Line Sharing Order*) (pet. for rehearing pending sub nom. *USTA v. FCC*, DC Cir. No. 00-102 (filed Jan 18, 2000)).

<sup>510</sup> *SWBT Kansas/Oklahoma Order* at para. 215.

<sup>511</sup> *SWBT Kansas/Oklahoma Order* at para. 215. The Commission further stated that to "the extent its OSS provisioning processes are not identical, a BOC applicant bears the burden of showing that whatever differences are present are not material." *Id.*

that it provides nondiscriminatory access to the unbundled high-frequency portion of the loop to gain section 271 approval in Massachusetts.

164. Verizon proposes to demonstrate compliance with its line sharing obligation with evidence that it has signed nine interconnection agreements in Massachusetts with line sharing provisions. Verizon also notes that the Massachusetts Department recently approved its line sharing tariffs, with only minor amendments.<sup>512</sup> It further states that it is able to handle “considerable volumes of line sharing orders” by utilizing its successful New York provisioning methods and procedures in Massachusetts.<sup>513</sup> Finally, through the New York DSL collaborative, it has worked with competing carriers to identify and resolve various technical and operational issues associated with line sharing in Massachusetts.<sup>514</sup> Competing carriers contest Verizon’s operational readiness to offer line sharing and Verizon’s ability to offer line sharing on a nondiscriminatory basis.<sup>515</sup>

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<sup>512</sup> Verizon offers competing carriers two arrangements for line sharing pursuant to its interconnection agreements and line sharing tariff. The first arrangement provides a competing carrier with the ability to install, own and maintain the splitter in the competing carrier’s own collocation arrangement. In the second arrangement, a competitive LEC-owned splitter is located in Verizon’s central office space and is maintained by Verizon. See Verizon Massachusetts I Ruesterholz/Lacouture Decl. at para. 118. As part of its *Phase III* proceeding, the Massachusetts Department has directed Verizon to implement OSS enhancements to support line sharing by April 1, 2001. The Massachusetts Department, however, found that the fact that line sharing orders currently require manual processing does not prevent it from finding that Verizon satisfies its nondiscrimination obligation. See Massachusetts Department Massachusetts I Comments at 328. Covad contests Verizon’s showing that it offers line sharing capability over fiber-fed loops. Covad Massachusetts II Comments at 35. Verizon responds that it satisfies the Commission’s requirements through remote terminal collocation and unbundled subloop offerings. See Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at paras. 160-65. We note that the issue of line sharing over fiber-fed loops is the subject of a *Further Notice of Proposed Rulemaking* at the Commission. See Line Sharing Reconsideration Order at para. 12; see also *accompanying*, Third Further Notice of Proposed Rulemaking in CC Docket No. 98-147, Sixth Further Notice of Proposed Rulemaking in CC Docket No. 96-98.

<sup>513</sup> Verizon Massachusetts I Ruesterholz/Lacouture Decl. at para. 114. In its initial application Verizon stated that it has provisioned over 7,000 line sharing orders in New York, the majority of which were for its own data affiliate. See *id.* Verizon’s Massachusetts II application shows that Verizon has processed roughly 10 times the number of line sharing orders for its retail affiliate compared to line sharing orders processed for unaffiliated competing LECs.

<sup>514</sup> Verizon Massachusetts I Ruesterholz/Lacouture Decl. at para. 115. For example, Verizon asked competing carriers to identify their priority wire centers throughout Massachusetts by March 13, 2000 so that Verizon could prioritize the central office wiring work necessary to accommodate line sharing requests. *Id.* at 127.

<sup>515</sup> See Covad Massachusetts II Comments at 7-8; Rhythms Massachusetts II Comments at 6; CIX Massachusetts II Comments at 7; USISPA Massachusetts II Reply at 9; AT&T Massachusetts II Reply at 25; Covad Massachusetts I Comments at 28; WorldCom Massachusetts I Comments at 62; Rhythms Massachusetts I Reply at 18; ALTS Massachusetts I Reply at 36. On March 14, 2001, Verizon filed an *ex parte* letter in this proceeding stating that Verizon has “taken steps to address the outstanding issues” between Rhythms and Verizon and accordingly, Rhythms “no longer opposes Verizon’s Application for section 271 authority in Massachusetts.” Letter from Kimberly A. Scardino, Assistant General Counsel, Rhythms to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-9 (filed March 14, 2001). Rhythms had argued that where Verizon completed pre-wiring collocation work, in some instances it was wired incorrectly or the cable and pair assignment were not entered into Verizon’s inventory system. See Rhythms Massachusetts II Comments, Williams Decl. at para. 39. Covad claims that Verizon cannot “provision a single line shared order in a central office while at (continued....)

**(ii) Discussion**

165. We find that Verizon demonstrates that it provides nondiscriminatory access to the high-frequency portion of the loop. Specifically, the most probative evidence that Verizon submits to support this point is actual commercial usage.<sup>516</sup> The Commission stated in the *SWBT Kansas/Oklahoma Order* that “a successful BOC applicant could provide evidence of BOC-caused missed installation due dates, average installation intervals, trouble reports within 30 days of installation, mean time to repair, trouble report rates and repeat trouble report rates.”<sup>517</sup> Our approach in this case is to rely primarily on the limited commercial data Verizon has submitted from its Massachusetts operations. Because line sharing volumes in Massachusetts have escalated only recently, however, we look to Verizon’s line sharing performance in New York as well, where line sharing volumes are larger for additional evidence that Verizon is providing nondiscriminatory access to line sharing.<sup>518</sup> As discussed above, we conclude that Verizon’s line sharing OSS in New York and Massachusetts uses the same systems and offers the same functionality.<sup>519</sup> Accordingly, we shall consider Verizon’s commercial line sharing performance  
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the same time Verizon was shutting off line-sharing ready central offices for its own retail service because orders are flowing through beyond capacity.” Letter from Jason D. Oxman, Senior Government Affairs Counsel, Covad to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 00-176 at 1 (filed Feb. 21, 2000); *see also* Letter from Jason D. Oxman, Senior Government Affairs Counsel, Covad to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 00-176 at 1 (filed Nov. 28, 2000) (arguing that walkthroughs of Verizon central offices showed incomplete splitter installations as of the week of November 20, 2000). Verizon responds that Covad and Rhythms are the only competing carriers that submitted their line sharing plans to Verizon’s project management plan and that installation of splitters was performed on a timely basis. Verizon Massachusetts I Lacouture/Ruesterholz Decl. at paras. 112-13. The Massachusetts Department found that whatever delays resulted from splitter installation were attributable to competing carriers, specifically Covad. Massachusetts Department Massachusetts I Comments at 327.

<sup>516</sup> *See supra* Part II.A.

<sup>517</sup> *See SWBT Kansas/Oklahoma Order* at para. 215.

<sup>518</sup> From September 2000 through January 2001, Verizon has provided a total of approximately 51,000 line shared loops in Massachusetts including those for VADI. During December and January, Verizon completed nearly 500 line shared loops for competitors in Massachusetts. *See* Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 103. In New York, Verizon has processed 110,000 line shared orders including those provided to VADI. *See id* at para. 28.

<sup>519</sup> *See supra* Part IV.A.2.b. The Massachusetts Department concluded that the “systems and processes in Massachusetts are comparable to, indeed the very same as, those found in New York.” Massachusetts Department Massachusetts II Comments at 35; *see also* Verizon Massachusetts II Sapienza/Mulcahy Decl. App. A, Attach. B. PwC also investigated whether VADI has the same interface options as unaffiliated competitive LECs and whether Verizon treats transactions it receives from VADI the same as transactions it receives from unaffiliated competitive LECs. PwC confirmed that VADI offers DSL service using line sharing purchased from Verizon using the same interfaces that are available to other unaffiliated competitive LECs. VADI generally uses CORBA for pre-ordering, EDI for ordering and the Web GUI for maintenance and repair. In addition, PwC confirmed that once Verizon receives the orders over the interface, it provisions a VADI order using the same systems and processes as it uses to provision an order for any other competitive LEC. Likewise, PwC reports that VADI’s maintenance and repair requests are handled by Verizon in the same manner as a request from an unaffiliated competitive LEC. *See* Verizon Massachusetts II Lacouture/Ruesterholz Decl at para. 143. Verizon does, however, reveal that a “small percentage” of VADI’s New York line sharing orders are distributed by a team leader in the Boston xDSL/Line (continued....)

in New York as a supplement to Verizon's limited commercial line sharing performance in Massachusetts.

166. *Operational Readiness.* Competitive LECs take issue with Verizon's ability to wire adequately central offices to offer line sharing.<sup>520</sup> Covad specifically contests Verizon's representation that it was operationally ready to provision line sharing for all splitter collocation arrangements in place as of December 1, 2000.<sup>521</sup> In response, Verizon states that it recognized central office wiring problems that delayed the readiness of certain offices and committed to reinspections of all line-sharing related central office work beginning in December 2000.<sup>522</sup> The Department of Justice recognizes that "Verizon is making efforts to resolve its line sharing implementation difficulties" and the Massachusetts Department urges us to find that Verizon provides nondiscriminatory access to the high frequency portion of the loop.<sup>523</sup>

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Sharing Center to a group of approximately 35 temporary service order representatives located in New York. Verizon contends that it retained these temporary representatives to clear a backlog of retail DSL orders in New York that existed before VADI was operational. Verizon Massachusetts II Lacouture/Ruesterholz Supp. Decl. at para. 154. This slight difference in OSS functionality does not alter our conclusion that the OSS in New York and Massachusetts are identical for purposes of the Commission's consideration of New York line sharing commercial data.

<sup>520</sup> See Covad Massachusetts II Comments at 6; Rhythms Massachusetts II Comments at 8. Rhythms contends that Verizon's explanation of defective splitter installation could not apply to it because Rhythms has elected to place splitter in Rhythms collocation spaces and the only remaining central office wiring work to be done is the re-termination of existing 200 cable and pair, a process that Rhythms claims is simple and accomplished quickly. Rhythms Massachusetts II Comments at 8.

<sup>521</sup> Covad argues that it requested that 55 central offices in Massachusetts offer line sharing capability. As of February 21, 2000, Covad has successfully provisioned line sharing in 44 of those 55 offices and it has provided the CLLI codes for those offices where Covad has pending orders. See Covad Massachusetts II Reply at 19; see also Rhythms Massachusetts II Comments at 8. Verizon responds that only two of the offices Covad initially complained of are in Massachusetts and of these two, it has provisioned Covad orders in a number of the central offices which are relevant to this application. See Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 131. As to the status of contested offices in New York, Verizon responds that Covad's claim that its "Failed Dispatch Report" shows discrimination is misplaced because joint investigations at these central offices show that the orders have failed due to operational and other problems on Covad's part. *Id.* at 133-35. Covad concedes that for some of its collocation arrangements, it is possible that "Covad has not yet installed DSLAM cards in a particular office to support line sharing capability" to conserve scarce resources but nonetheless argues that regardless of whether such equipment is installed, Verizon has an obligation to ensure that the office is line-sharing ready. Covad Massachusetts II Reply at 20 n.35. Verizon offers a similar response to Rhythm's allegations that several Massachusetts central offices are not line sharing ready. Verizon contends that the central offices in question have been re-examined and it has not found any wiring problems. Verizon further responds that its records show that of the LSRs submitted by Rhythms only a small proportion of the central offices in Massachusetts are at issue. Of these offices, Verizon claims that it has completed line sharing orders for Rhythms in nearly all of the central offices at issue in Massachusetts. See Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at paras. 143-145.

<sup>522</sup> Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 138.

<sup>523</sup> Massachusetts Department Massachusetts II Comments at 36-38; Department of Justice Massachusetts II Evaluation at 14.

167. Verizon has now completed all the quality inspections and has “taken the necessary corrective action for all of the line sharing-related collocation arrangements that were in place as of December 1, 2000 . . . in both Massachusetts and New York.”<sup>524</sup> Verizon has also agreed to implement the elements of its quality inspection process into the normal collocation inspection process and thus, new line sharing-related collocation arrangements will be subject to this inspection process as well.<sup>525</sup> It therefore appears that Verizon instituted its quality inspection process and completed any necessary corrective action as it became aware of central office wiring issues described by competitive LECs.<sup>526</sup>

168. *Line Sharing Performance Data.* Verizon has supplied a limited amount of Massachusetts commercial data for the period September through November 2000 in support of its line sharing showing.<sup>527</sup> To show that the data are reliable, Verizon engaged PwC to replicate its carrier-to-carrier results and 34 line sharing measures for the period September through November, the results of which, according to PwC, largely confirm the results presented by Verizon.<sup>528</sup> We recognize the Department of Justice’s concerns that some of the line sharing completion interval data may be inaccurate.<sup>529</sup> Like the Massachusetts Department, however, we

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<sup>524</sup> See Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para 126; see also Letter from Dee May, Executive Director Federal Regulatory, Verizon, to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-9 (filed February 23, 2001). Covad represents that it submitted “every single one of its linesharing collocation applications in Massachusetts in April 2000.” Covad Massachusetts II Reply at 22.

<sup>525</sup> See Letter from Dee May, Executive Director Federal Regulatory, Verizon to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-9 (filed February 22, 2001). Rhythms argues that Verizon did not institute its quality inspection audit process soon enough. See Rhythms Massachusetts II Comments at 8. Verizon responds that its “implemented the inspection process as soon as it became aware of the start-up issues.” Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 37.

<sup>526</sup> See Verizon Massachusetts II Lacouture/Ruesterholz. Reply Decl. at para. 137. Verizon has continued to address these issues, particularly with Covad. Recent reports suggest that Verizon has largely, if not completely, resolved central office wiring issues that have affected the deployment of line-shared services by competing carriers. See Letter from Jason Oxman, Senior Counsel, Covad to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-9, (filed April 6, 2001) (stating that “Covad verified, in Massachusetts, that Verizon honored its commitment to clear all infrastructure related troubles, throughout the former Bell Atlantic footprint, by February 15, 2001”).

<sup>527</sup> See Verizon Massachusetts II Sapienza/Mulcahy Decl. at para. 13.

<sup>528</sup> See *id.* (finding that for the majority of the line sharing measurements, PwC’s numbers matched Verizon’s and that for the remaining measurements, the number of observations was consistent and Verizon’s reported performance was within one percent).

<sup>529</sup> While PwC confirmed that Verizon accurately calculated the missed appointment rates under the terms of the new consensus measurements, the reported results may overstate Verizon’s performance. Verizon’s technicians may have marked some competitive LEC orders as completed after they had tested the line and received a working dialtone, even though the splitter to enable DSL serve on that line may not initially have been installed correctly. Verizon however has committed to adopt additional testing procedures to ensure that line sharing orders are not marked completed unless working splitters are in place. See Verizon Massachusetts II Application at 30 n.25. The Department of Justice states that this problem “affected those performance measures calculated using the provisioning completion date: PR-2 (average interval completed); PR 3-10 (percent completed within x days); and PR-4 (missed appointments).” Department of Justice Massachusetts II Evaluation at 13 n.54. Competing carriers (continued....)

conclude that the data adequately show that Verizon has met its line sharing obligation.<sup>530</sup> The New York Commission only recently directed Verizon to capture its xDSL performance in disaggregated line sharing measures. In this case, we decline to hold isolated inaccuracies against Verizon where the method of reporting and collecting data is new and the underlying cause of the distortion has been addressed by Verizon.<sup>531</sup> In this context, we believe it is appropriate to credit Verizon's submission of Massachusetts commercial line sharing data, supplemented by data from New York, when making our determination that Verizon provides nondiscriminatory access to the high-frequency portion of the loop. Specifically, we are convinced that the flawed timeliness measures provide evidence of the time it takes Verizon to provision line shared loops.

169. *Provisioning Timeliness.* Overall, Verizon adequately demonstrates that it provisions line sharing to competitors in substantially the same time as it does for itself. We note at the outset that we give no decisional weight to Verizon's missed appointment data for line sharing in New York and Massachusetts. Although the data on their face show that Verizon meets the parity standard<sup>532</sup> we agree with the Department of Justice, the Massachusetts Department and even Verizon itself, that the measure may be flawed.<sup>533</sup> Specifically, Verizon states that this measure may not have captured those instances where a Verizon technician performed the central office work typically required for xDSL loops but failed to confirm that a splitter was functioning on the line.<sup>534</sup> Parties criticizing the completion measures appear to argue  
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also contest Verizon's line sharing showing and argue that the current record is insufficient to support a finding of nondiscrimination. See Covad Massachusetts II Comments at 8; Rhythms Massachusetts II Comments at 6; CIX Massachusetts II Comments at 24.

<sup>530</sup> The Massachusetts Department notes that Verizon states that for the percent missed appointments – dispatch measure, PR 4-05, “Verizon may not have included those instances where Verizon's technician performed the central office work typically required for xDSL loops but failed to confirm that a splitter . . . was functioning on the line.” Massachusetts Department Massachusetts II Comments at 37. The Massachusetts Department found that Verizon's manual processing of line sharing orders “will be short-lived and, even absent complete line sharing order flow-through” Verizon can meet foreseeable demand for line sharing. Massachusetts Department Massachusetts I Comments at 327.

<sup>531</sup> Verizon now performs a “splitter signature test” which is used “to determine whether the splitter, which is necessary for line sharing, is functioning on the line.” Verizon Massachusetts II Reply at 23.

<sup>532</sup> In September, October, and November in Massachusetts, Verizon did not miss any competitive LEC line sharing appointments. In December, Verizon missed approximately one percent of competitive LEC appointments. Verizon has supplied provisioning information for its separate data affiliate, VADI, only for the month of November. In November, these results demonstrate parity. See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at Attach. JJ.

<sup>533</sup> Verizon Massachusetts II Application at 30 n.25. The Massachusetts Department believes that the measure is sufficiently flawed to merit exclusion of this information as evidence that Verizon is providing nondiscriminatory access to line sharing. Massachusetts Department Massachusetts II Comments at 37. The Department of Justice agrees and characterizes the measure as “substantially undermined” by the inaccuracies captured in the measure. *Id.* at 13.

<sup>534</sup> Verizon Massachusetts II Brief at 30 n.25. Without such testing, even though technicians have confirmed dial-tone to and from the splitter, Verizon is unable to confirm that a splitter is properly functioning on a line.

that because a Verizon technician did not test for a functioning splitter, the quality – rather than the timeliness – of Verizon’s installation work is unacceptable.<sup>535</sup> While we recognize that performing the additional work required to test whether a splitter was functioning on the line could have an impact on the completion measures, we find that the data provided by Verizon are probative of the time it takes Verizon’s technicians to install line-shared service.<sup>536</sup> We are therefore not prepared to dismiss all of the evidence of commercial usage as USISPA suggests because the inaccuracies appear to be limited to the completion measures and are not so pervasive as to render Verizon’s line sharing data completely untrustworthy.<sup>537</sup> Furthermore, as Verizon became aware of this problem, it addressed this data integrity issue by properly instructing its installation personnel to code orders as complete after properly functioning splitters are working on a given line, implementing its quality inspections for line sharing-related collocation work and performing a splitter signature test to ensure that the quality of its installation work was acceptable. Indeed, the record shows that during the period of time not affected by the distortion, Verizon’s timeliness performance demonstrates parity.<sup>538</sup>

170. The average completion interval data for line sharing show parity.<sup>539</sup> While Verizon has supplied no retail information as a basis for comparison during the months of September and October for Massachusetts data, the average completion interval measure in November shows that Verizon required slightly more than six days to provision line-shared loops to competitors compared to over seven days for itself.<sup>540</sup> In New York, for the months of

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<sup>535</sup> See Covad Massachusetts II Comments at 8; see also Department of Justice Massachusetts II Evaluation at 13.

<sup>536</sup> Even with the miscoding, the measures describe accurately the amount of time Verizon technicians required to install line-shared service without the added task of performing a splitter signature test. Because failure to install a functioning splitter on a line could prevent line-shared service, the lack of a splitter test suggests that the quality of the work, rather than its timeliness, was affected.

<sup>537</sup> We disagree with USISPA that the line sharing “measurements simply do not exist.” USISPA Massachusetts II Reply at 6.

<sup>538</sup> Verizon remedied this miscoding problem by December 15, 2000. In Massachusetts, the missed appointment measure in January shows that Verizon missed only one percent of competitive LEC line sharing installation appointments. Verizon argues that the January results show that “the impact on the performance measures caused by the lack of the splitter signature test was minimal.” Letter from Dee May, Executive Director Federal Regulatory, Verizon to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-9 (filed March 19, 2001). The December results also show that Verizon misses less than one percent of installation appointments for competing carrier line sharing orders. See *id.*

<sup>539</sup> We acknowledge that the failure of Verizon’s technicians to test whether a splitter was functioning on the line may also have affected the average completion interval. As discussed above, Verizon has addressed this data integrity issue going forward and has instituted a quality inspection program to ensure that competitive LECs receive acceptable installation quality performance.

<sup>540</sup> The Massachusetts average completion interval in November was 6.37 days for competitive LECs compared to 7.53 days for VADI. In September, Verizon completed competitive LEC line sharing orders in 6.47 days and 6.29 days in October. See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 159 & Attach. NN. Verizon has also presented data for another interval measure, the percent completed within 6 days measure. In New York, from September through November, Verizon completed 74.87 percent of competitive LEC orders and 71.60 percent of VADI orders within six days, where a six day interval was requested. See Verizon Massachusetts II (continued...)

September and November, performance for competitive LECs is superior to that provided to VADI.<sup>541</sup> Although these data show that Verizon is performing at parity we note that Verizon's performance is generally above the 5-day interval established by the Massachusetts Department even as the current interval is scheduled to be reduced to four days in the near future.<sup>542</sup> It is encouraging that Verizon is moving toward meeting this state-approved provisioning interval while it gains additional experience provisioning commercial volumes of line shared orders.

171. *Installation Quality & Maintenance and Repair.* Based on the commercial data presented in Massachusetts, Verizon appears to be providing line shared loops at acceptable levels of quality. Although VADI did not submit any trouble reports within thirty days of installation in the month of November, the competitive LEC rate was 1 percent and in September and October 2000, competitive LECs did not report any troubles on line-shared loops captured by the measures.<sup>543</sup> In New York, from September through November, the weighted average of installation troubles for competitive LECs was 1.70 percent compared to less than one percent for VADI.<sup>544</sup>

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Lacouture/Ruesterholz Decl. at para. 159 & Attach. OO. Verizon contends that a majority of the competitive LEC orders not completed within six days are completed within seven days. In Massachusetts, over 93 percent of the competitive LEC line sharing orders in the period September through November were completed within seven days. *See id.*

<sup>541</sup> For the months of September, October and November, the average completion interval for competitive LECs in New York was 5.59, 6.4, and 6.42 days compared to 9.15, 6.2, 6.02 days for VADI. *See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at 159, Attach. MM.*

<sup>542</sup> Verizon has introduced flow through capability for line-shared ADSL orders and will accomplish line sharing provisioning for most orders without the time necessary to dispatch a technician to install service. Given the fact that line sharing provisioning is largely accomplished without manual intervention, the Massachusetts Department ordered Verizon to reduce its line sharing interval from 6 days to five days effective November 27, 2000. Massachusetts Department Massachusetts I Comments at 36 n.110; *see also* CIX Massachusetts I Comments at 25. Verizon states that its 5-day interval tariff for line sharing orders of 1-9 lines went into effect on November 27, 2000 and Verizon "is now complying with the new interval." *See D.T.E. Tariff No. 17, Part A, Section 3.2.10.* Additionally, Verizon has committed to file, as required by the Massachusetts Department, a tariff reducing the provisioning interval by an additional business day after the April 1<sup>st</sup> deadline for fully implementing certain OSS upgrades. *See Verizon Massachusetts I Lacouture/Ruesterholz Decl. at para. 164.*

<sup>543</sup> Massachusetts Department Massachusetts II Comments at 36. We are mindful that, because Verizon has committed to resolving line sharing troubles through a coordinated process, it addresses some number of line sharing troubles "without the receipt of a trouble ticket" and concedes that the "small number of maintenance and repair requests reported is likely attributable to that interim process." *See Verizon Massachusetts II Lacouture/Ruesterholz Supp. Decl. at para. 156.*

<sup>544</sup> Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 166 & Attach. SS. Covad argues that Verizon's line sharing I-code data are skewed because Verizon classifies troubles associated with splitter wiring as "CPE troubles" which show up in the performance measure as competitive LEC-caused troubles. Covad Massachusetts II Reply at 15. Verizon responds that Covad mistakenly assumes that Verizon's trouble designation codes are designed to assign blame for a trouble ticket to Verizon or a competitive LEC. *See Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 119.* The codes at issue are designed to indicate whether the trouble is caused by an item in the Verizon or competitive LEC network. Because splitters are not part of Verizon's network Verizon codes splitter troubles accordingly.

172. With respect to maintenance and repair, Verizon repairs loops for competitors in less time than it takes to repair retail line-shared loops. In November, the only month for which Verizon provided such data in Massachusetts, Verizon repaired competing carrier line-shared loops in just over three hours.<sup>545</sup> Verizon represents that it took significantly longer to repair loops for VADI – over 25 hours.<sup>546</sup> In New York, Verizon shows that the mean time to repair is comparable to stand-alone xDSL loop repair times and offers competitors nondiscriminatory access to maintenance and repair functions.<sup>547</sup> Verizon also shows that its repair services are performed at acceptable levels of quality.<sup>548</sup> Thus we find that the data suggest that Verizon is providing line-shared loops at an acceptable level of quality and repairing these facilities in a nondiscriminatory manner.

173. Although we have some concerns with the accuracy of Verizon's performance results and the limited volume of competitive LEC orders captured by the measures, we base our decision on measures not affected by such inaccuracies, the replication of other measures by PwC and Verizon's efforts in addressing the central office wiring issues that have impaired the ability of competitive LECs to submit commercial volumes of line sharing orders. Recent efforts by Verizon have substantially, if not completely, addressed the initial central office wiring implementation issues experienced by competitive LECs in Massachusetts.<sup>549</sup> Furthermore, we also note that Verizon has designed a process to address line sharing implementation difficulties going forward.<sup>550</sup>

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<sup>545</sup> See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 71.

<sup>546</sup> *Id.*

<sup>547</sup> During September through November, the mean time to repair for competitive LECs was 16 hours compared to slightly longer than 10 hours for VADI. Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 172. In New York, from September through November, Verizon met more than 92 percent of the repair appointments that did not require a dispatch for both VADI and competitors. Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 170 & Attach. TT.

<sup>548</sup> Verizon also provided the percentage of repeat trouble reports for both competitors and VADI. These data demonstrate that Verizon provides superior service to competitors compared to itself. See MR 5-01 (Line Sharing, percent Repeat Troubles w/30 Days).

<sup>549</sup> See Letter from Kimberly A. Scardino, Rhythms to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-09 (filed March 2, 2001).

<sup>550</sup> Verizon has designated a single point of contact for each competitive LEC to address line sharing ordering or provisioning processes regardless of whether they arise in Verizon's TISOC, CLPC or RCMC. Verizon is participating in the Commission's "Line Sharing Summit" and is engaged in a dialogue with competitive LECs to further improve the line sharing process. Verizon has also introduced flow through capability on line sharing orders for connections requiring less than three lines. Verizon has also accompanied Covad on site visits of several Massachusetts central offices to address what it terms are several "minor collocation-related issues." See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at para. 139.

**g. Line Splitting**

**(i) Background**

174. In the *Line Sharing Order on Reconsideration*, the Commission made clear that line splitting is an existing legal obligation and that incumbent LECs must allow competitors to order line splitting immediately, whether or not a fully electronic interface is in place.<sup>551</sup> The Commission further stated that “we expect Bell Operating Companies to demonstrate, in the context of section 271 applications, that they permit line splitting, by providing access to network elements necessary for competing carriers to provide line-split services.”<sup>552</sup> We discuss below the steps Verizon has taken to offer line splitting capabilities consistent with the *Line Sharing Order on Reconsideration*.<sup>553</sup>

175. Verizon states that it currently offers the unbundled network elements that would allow line-split services.<sup>554</sup> On February 14, 2001, Verizon issued a statement of policy to accommodate line splitting.<sup>555</sup> Additionally, Verizon has incorporated line splitting contract language reflecting this policy into its Model Interconnection Agreement which it will make immediately available to any carrier who wishes to offer line-split services.<sup>556</sup> Verizon has also demonstrated that it offers competitors nondiscriminatory access to the individual network elements necessary to provide line-split services and that nothing prevent competitors from offering voice and data services over a single unbundled loop.<sup>557</sup> Several competitors contest the

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<sup>551</sup> Third Report and Order and Order on Reconsideration, CC Docket No. 98-147; Fourth Report and Order on Reconsideration, CC Docket No. 96-98; Third Further Notice of Proposed Rulemaking; CC Docket No. 98-147; Sixth Further Notice of Proposed Rulemaking; CC Docket No. 96-98 (rel. Jan. 19, 2001) at para. 20 n.36.

<sup>552</sup> *Id.*

<sup>553</sup> The Massachusetts Department recognizes that Verizon is required to offer line splitting but requests that the Commission “take into account the recent nature of both its and the Department’s clarifying Orders on line splitting when reviewing” Verizon’s section 271 application. Massachusetts Department Massachusetts II Comments at 41.

<sup>554</sup> *See* Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at 149.

<sup>555</sup> Verizon issued its statement of policy on February 14, 2001, approximately three weeks after this Commission issued the *Line Sharing Reconsideration Order*. *See* Verizon Massachusetts II Lacouture/Ruesterholz Reply. Decl. at 154. AT&T argues that Verizon must at least demonstrate it has a nondiscriminatory process in place to support line-split services. AT&T Massachusetts II Reply at 24; *see also* USISPA Massachusetts II Reply at 5; CompTel Massachusetts II Comments at 3-5.

<sup>556</sup> In its line splitting amendment, Verizon commits to offer line splitting consistent with the Commission’s *Line Sharing Reconsideration Order* by utilizing Verizon’s OSS to order the unbundled network elements necessary to provide line-split services. With regard to migrations of UNE-P customers to line splitting, Verizon commits to follow the implementation schedules, terms, conditions and guidelines established in the ongoing DSL collaborative at the New York Public Service Commission. Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at 154, Attach. Q.

<sup>557</sup> *See* Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 149-58. Verizon further argues that the Commission has already held that Verizon can provide unbundled network elements in combination, and line splitting can be achieved through the combination of unbundled network elements. *See id.* at para. 158.

adequacy of this language and argue that Verizon is currently not in compliance with the Commission's line sharing and line splitting requirements.<sup>558</sup> These carriers further contend that Verizon has engaged in a pattern of recalcitrant behavior with regard to implementing line sharing and line splitting requirements and the Commission should not credit its promises of future compliance.<sup>559</sup>

**(ii) Discussion**

176. Verizon demonstrates that it makes it possible for competing carriers to provide voice and data service over a single loop – *i.e.*, to engage in “line splitting.”<sup>560</sup> Specifically, Verizon demonstrates that it has concrete and specific legal obligation to provide line splitting through rates, terms and conditions in interconnection agreements. As a result, a competing carrier may, for instance, provide voice service using UNE-P and, either alone or in conjunction with another carrier, provide xDSL service on that same line.

177. Our recent *Line Sharing Reconsideration Order* is clear: Verizon must permit competing LECs to offer both voice and data services over a single unbundled loop in a line splitting configuration.<sup>561</sup> The Commission also stated that incumbents must make necessary network modifications including access to OSS necessary for the “pre-ordering, ordering, provisioning, maintenance and repair and billing for loops used in line splitting arrangements.”<sup>562</sup> As carriers identify operational issues associated with line splitting, the Commission recognized that state collaboratives and change management processes could be used by “incumbent LECs and competing carriers to work together to develop processes and systems to support competing carrier ordering and provisioning of unbundled loops and switching necessary for line splitting.”<sup>563</sup>

178. We disagree with WorldCom's contention that Verizon's line-splitting interconnection agreement language limits line splitting to carriers who are collocated in Verizon central offices or that Verizon is taking the position that the UNE-P providers may not line split unless they are collocated.<sup>564</sup> Verizon's contract language, which includes a reference to

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<sup>558</sup> See AT&T Massachusetts II Reply 24; WorldCom Massachusetts II Reply at 12-13; Covad Massachusetts II Reply at 5-6.

<sup>559</sup> AT&T Massachusetts II Reply 24; WorldCom Massachusetts II Reply at 12-13; Covad Massachusetts II Reply at 5-6.

<sup>560</sup> *Line Sharing Reconsideration Order* at para. 14-25; *SWBT Texas Order*, 15 FCC Rcd at 18515-17, paras. 323-329 (describing line splitting); 47 C.F.R. § 51.703(c) (requiring that incumbent LECs provide competing carriers with access to unbundled loops in a manner that allows competing carriers “to provide any telecommunications service that can be offered by means of that network element”).

<sup>561</sup> *Line Sharing Reconsideration Order* at para. 18.

<sup>562</sup> *Id.* at paras. 18-20.

<sup>563</sup> *Id.* at para. 21.

<sup>564</sup> See WorldCom Massachusetts II Reply at 13.

“collocator to collocator” connections, does not require UNE-P providers to be collocated in Verizon central offices to offer line split services.<sup>565</sup> Rather, UNE-P providers need not obtain collocation in Verizon central offices to offer the voice component of line-split services.

179. Verizon’s interconnection agreement amendment is also consistent with our *Line Sharing Reconsideration Order*, which requires that incumbent LECs minimize service disruptions to existing voice customers undergoing a transition to line-splitting.<sup>566</sup> For example, where competitive LECs provide data service to existing end user customers and Verizon provides voice service to that customer there is no need to “rearrange” network facilities to provide line-split services.<sup>567</sup> Because no central office wiring changes are necessary in such a conversion from line sharing to line splitting, Verizon is required under our *Line Sharing Reconsideration Order* to develop a streamlined ordering processes for formerly line sharing competitive LECs to enable migrations between line sharing and line splitting that avoid voice and data service disruption and make use of the existing xDSL-capable loop.<sup>568</sup> Such a transition from line sharing to line splitting should occur subject only to charges consistent with the Commission’s cost methodology as articulated in the *Local Competition First Report and Order*.<sup>569</sup>

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<sup>565</sup> See Letter from Dee May, Executive Director Federal Regulatory, Verizon, to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 01-9 (filed March 23, 2001) (clarifying that voice providers in line splitting arrangements are not required to be collocated). We note that where a competitive LEC purchases an unbundled xDSL-capable loop terminated to its collocation arrangement to provide data service, it may partner with another competitive LEC to provide voice service. In this situation, the data provider may require a connection to the voice provider’s collocation arrangement.

<sup>566</sup> Verizon’s line splitting amendment refers to “existing supporting OSS to order and combine” unbundled network elements necessary for line-split services. *Line Sharing Reconsideration Order* at para. 22. WorldCom likewise asserts that Verizon’s contract language suggests that it intends to charge a series of non-recurring charges associated with each unbundled network element to its line-splitting customers that it does not charge to its UNE-P customers. See WorldCom Massachusetts II Reply at 13.

<sup>567</sup> In the *Line Sharing Reconsideration Order*, the Commission held that “no central office wiring changes are necessary in a conversion from line sharing to line splitting.” *Line Sharing Reconsideration Order* at para. 22. Verizon suggests that when competitive LEC serve customers with existing voice service, they may order new unbundled xDSL-capable loops and UNE-P arrangements and then issue a disconnect of the existing voice service to provide line split services. See Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 157. Disconnecting a customer’s currently-established voice service to enable the transition from line sharing to line splitting would require some disruption of dial tone and may require a change in the voice customers telephone number, a result that is inconsistent with our *Line Sharing Reconsideration Order*. See *Line Sharing Reconsideration Order* at para. 22.

<sup>568</sup> *Line Sharing Reconsideration Order* at para. 22.

<sup>569</sup> See *Local Competition First Report and Order*, 11 FCC Rcd at 15814-84, paras. 625-771. For example, we would expect Verizon to demonstrate why non-recurring charges in addition to those assessed when a competitive LEC orders a UNE-P arrangement are necessary. We cannot agree with Verizon when it states that “if Covad wants to engage in a line splitting arrangement with a voice [competing carrier], it may do so by working with the voice [competing carrier] to order the individual network elements” if such a process would impose unnecessary charges that are not cost-based or would otherwise require disruption of an end user’s voice service in the context of a (continued....)

180. We disagree with WorldCom's claim that Verizon's OSS does not comply with our *Line Sharing Reconsideration Order* in other respects.<sup>570</sup> The *Line Sharing Reconsideration Order* does not require Verizon to have implemented an electronic OSS functionality to permit line splitting. Rather, the Commission's *Line Sharing Reconsideration Order* recognizes that a state-sponsored xDSL collaborative is the appropriate place for Verizon to evaluate how best to develop this functionality.<sup>571</sup> For example, Verizon has represented that it is actively working on developing the OSS upgrades necessary to provide for electronic ordering of line-split services in the context of the New York Commission's xDSL collaborative.<sup>572</sup> We recognize that Verizon has not, to date, implemented the OSS upgrades necessary to electronically process line-splitting orders in a manner that is minimally disruptive to existing voice customers; but that such functionality may require significant software upgrades and testing. It is undisputed that the parties in the New York DSL collaborative commenced discussion of line splitting over a year ago; that in April 2000 Verizon formally posed numerous questions to competitors concerning their business rules for line splitting; and that in August 2000, competitive LECs submitted their initial detailed business rules to Verizon.<sup>573</sup> Thus it appears that Verizon has the necessary information to implement the necessary OSS upgrades. Verizon has been able to provide its customers line-shared DSL service for approximately two years. Our *Line Sharing Reconsideration Order* is fulfilled by Verizon's adoption of an implementation schedule for line splitting as directed by the New York Commission that will afford competitors the same opportunities.

181. We note that in response to WorldCom's concerns, Verizon has agreed upon an implementation schedule to offer line splitting-specific OSS capabilities under the supervision of the New York Commission.<sup>574</sup> In June of this year we expect that Verizon will conduct a preliminary OSS implementation in New York using new OSS functionality to add data service to an existing UNE-P customer. In October, Verizon has committed to implement, in the Verizon East territory including Massachusetts, the new OSS capability necessary to support migrations from line sharing to line splitting arrangements consistent with the business processes defined in the New York DSL collaborative.<sup>575</sup> Consistent with their plans and with the guidance

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migration from line sharing to line splitting. Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 159.

<sup>570</sup> WorldCom Massachusetts II Comments at 27.

<sup>571</sup> *Line Sharing Reconsideration Order* at para. 22 n.41 ("We also encourage participants in state collaboratives and change management processes to develop specific ordering procedures associated with a variety" of line splitting scenarios.)

<sup>572</sup> Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at para. 157.

<sup>573</sup> See New York PSC, Order Granting Clarification, Granting Reconsideration in Part and Denying Reconsideration in Part and Adopting Schedule, Case 00-C-0127 (Issued and Effective January 29, 2001).

<sup>574</sup> See Verizon Massachusetts II Reply at 30.

<sup>575</sup> See Verizon Massachusetts II Lacouture/Ruesterholz Reply Decl. at paras. 157.

of the New York DSL collaborative, Verizon plans to offer OSS capability necessary to support UNE-P migrations to line splitting by October 2001.

## V. OTHER CHECKLIST ITEMS

### A. Checklist Item 1 – Interconnection

182. We conclude, as described below, that Verizon demonstrates that it provides equal-in-quality interconnection on terms and conditions that are just, reasonable, and nondiscriminatory in accordance with the requirements of sections 251(c)(2) and as specified in section 271 and applied in the Commission's prior orders.<sup>576</sup> We further find that Verizon proves that it designs its interconnection facilities to meet “the same technical criteria and service standards’ that are used for the interoffice trunks within [its own] network.”<sup>577</sup> We also find that Verizon makes interconnection available at any technically feasible point, including the option to interconnect at only one technically feasible point within a LATA,<sup>578</sup> and that it is providing collocation in Massachusetts in accordance with the Commission's rules.<sup>579</sup> We note that the Massachusetts Department found that Verizon has satisfied all aspects of this checklist item.<sup>580</sup>

#### 1. Interconnection Trunking

183. Based on our review of the record, we are persuaded that Verizon provides competing carriers with interconnection trunking in Massachusetts that is equal in quality to the interconnection Verizon provides to its own retail operations, and on terms and conditions that are just, reasonable, and nondiscriminatory.<sup>581</sup> Verizon makes interconnection available in Massachusetts through interconnection agreements and through its state approved wholesale

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<sup>576</sup> See *SWBT Texas Order*, 15 FCC Rcd at 18379-81, paras. 61-64; *Bell Atlantic New York Order*, 15 FCC Rcd at 3977-86, paras. 63-76.

<sup>577</sup> *SWBT Texas Order*, 15 FCC Rcd at 18380, para. 62 (quoting *Local Competition First Report and Order*, 11 FCC Rcd at 15613-15, paras. 221-25).

<sup>578</sup> See *SWBT Texas Order*, 15 FCC Rcd at 18390, para. 78.

<sup>579</sup> See generally *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Order on Reconsideration and Second Further Notice of Proposed Rulemaking in CC Docket No. 98-147 and Fifth Further Notice of Proposed Rulemaking in CC Docket No. 96-98, 15 FCC Rcd 17806 (2000), *recon. pending (Collocation Reconsideration Order)*.

<sup>580</sup> See Massachusetts Department Massachusetts I Comments at 19-41; Massachusetts Department Massachusetts II Comments at 1.

<sup>581</sup> In the *Local Competition First Report and Order*, the Commission identified trunk group blockage and transmission standards as indicators of an incumbent LEC's technical criteria and service standards. See *Local Competition First Report and Order*, 11 FCC Rcd at 15614-15, paras. 224-25. In prior section 271 applications, the Commission concluded that disparities in trunk group blockage may indicate a failure to provide interconnection to competing carriers equal in quality to the interconnection the BOC provided to its own retail operations. See *SWBT Texas Order*, 15 FCC Rcd at 18380, para. 62.

tariff.<sup>582</sup> Verizon receives orders for interconnection trunks through the Access Service Request (ASR) process, and accepts ASRs through an electronic application-to-application interface, its GUI and manual orders.<sup>583</sup> Verizon provides affidavit evidence to demonstrate compliance with checklist item 1 in Massachusetts, as well as performance data to measure the quality of interconnection service provided to competing carriers.<sup>584</sup> Several commenting parties raise concerns about interconnection trunking, and we address these issues below.

184. *Interconnection Quality.* We conclude that Verizon provides interconnection trunking to competitive LECs that is equal in quality to the interconnection Verizon provides to its own retail operations. Although the performance metric that we analyze to evaluate interconnection quality, Percent Final Trunk Group Blockage,<sup>585</sup> demonstrates facial disparity between Verizon's performance for competitive LECs as compared to its own retail operations,<sup>586</sup> we find, based on the totality of the circumstances, that such a disparity is not competitively significant.<sup>587</sup>

185. We reach this conclusion based on the following factors. First, the extent of call blocking for all trunks, including competitive LEC trunks, is low in absolute terms. The blocking standard employed by the carrier-to-carrier guidelines permits only one out of two hundred calls to be blocked during the busy hour, and the percentage of competitive LEC trunk

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<sup>582</sup> See Massachusetts Department Massachusetts I Comments at 20; D.T.E. Tariff No. 17.

<sup>583</sup> See Verizon Massachusetts I Lacouture/Ruesterholz Decl. at para. 8; see also Verizon Massachusetts II Application App. B, Vol. 1, Tab 1A at 18; CLEC Handbook, VOL. III, § 4.2.3.2.

<sup>584</sup> See Verizon Massachusetts II Lacouture/Ruesterholz Decl. at paras. 37-38, 187; Verizon Massachusetts II Application App. B, Vol. 1, Tab 2. Verizon has implemented a number of performance measures relating to interconnection, including measures that compare blockage on Verizon common trunk groups with blockage on dedicated trunk groups serving competitive LECs (NP 1-01); measures that capture missed appointments for trunk installations (PR 4-01); and measures that provide data on average installation intervals (PR 2-09), and percent troubles within 30 days of installation (PR 6-01).

<sup>585</sup> The metric NP 1-01, Percent Final Trunk Group Blockage, compares the proportion of dedicated final trunk groups carrying traffic from the Verizon access tandem to a competitive LEC that exceed the blocking design threshold (generally B.005) with the proportion of Verizon common final trunk groups carrying Verizon local traffic between offices that exceed this blocking threshold. See Verizon Massachusetts II Sapienza/Mulcahy Decl. Attach. A.

<sup>586</sup> See NP 1-01 (Percent Final Trunk Groups Exceeding Blocking Standard). The percent of competitive LEC trunk groups exceeding the blocking standard was 1.43 percent, 2.14 percent, 4.21 percent (2.11 percent with adjustment), and 2.06 percent for September through December, respectively. See *infra* n.588. The portion of Verizon trunk groups exceeding the standard was 0.30 percent, 0.30 percent, 0.00 percent, and 0.60 percent for these months, respectively.

<sup>587</sup> This review standard is consistent with the Commission's approach in previous section 271 orders. See, e.g., *Bell Atlantic New York Order*, 15 FCC Rcd at 3976, paras. 59-60 ("Finally, in some instances, we may find that statistically significant differences in measured performance may exist, but that such differences have little or no competitive significance in the marketplace. As such, we may deem such differences non-cognizable under the statutory standard.").