

analysis when KPMG discovered a problem. (Aug. 28 Tr. at 3083-84 (VZ-MA App. B, Tab 545).) WorldCom requested that root cause analysis be performed but our request was denied.

60. KPMG's failure to identify root causes was a particular problem as the test approached its conclusion. On conference calls near the end of testing, KPMG dismissed some Observations as anomalies and remarked that it did not have the time to conduct a re-test – also underscoring why CLECs should have been able to comment on Observations. Thus, KPMG closed Observations 106 and 111 on flow-through based on Verizon explanations that its systems were unavailable in one instance or had a “rare application error” in another instance – without any retest. (Att. 4.) It similarly closed Observation 113 based on a Verizon representation. (Att. 4.) It closed Observation 81, concerning a discrepancy between due dates provided by Verizon's representatives and Verizon's SMARTS Clock, by noting only that it had reviewed Verizon's response. (Att. 4) And it closed Exception 4.8 n , concerning a mistake in the cover page of a change bulletin to correct an earlier documentation error, after concluding that the error was not that important – even though it was part of a pattern of erroneous documentation. (VZ-MA App. I, Tab 2.)

61. The KPMG test thus was not truly a military style test as was the case in New York. A true military test would correct every problem before concluding the test and would re-test the systems until it was clear that the problem had been eliminated. In Pennsylvania, the Commission ordered root cause analysis to ensure that problems discovered are fixed. In Massachusetts, KPMG closed out Observations and Exceptions without root cause analysis or retesting. As we have seen, even in the Final Report, KPMG described problems it

found for which it did not determine a cause and did not perform a retest. Without root cause analysis and virtually no commercial usage of the OSS, there is no way to determine that Verizon has fixed its problems.

c. The Scope of the KPMG Test Was Too Narrow.

62. Even setting aside the problems that KPMG did find during testing but ignored in reaching its conclusion of overall readiness, KPMG's test was insufficient to show the readiness of Verizon's OSS.

63. The KPMG test focused on LSOG 2. However, testing of LSOG 2 was largely an academic exercise. CLECs will never use LSOG 2 in significant volumes in Massachusetts. The current level of residential competition in Massachusetts is extremely low. This is largely because prices are too high rendering CLEC entry uneconomic – as discussed in a separate WorldCom declaration. If prices come down and new CLECs enter the market in significant volumes, they will not do so using LSOG 2. Indeed, even those CLECs already in the market will soon be required to stop using LSOG 2. Verizon intends to decommission LSOG 2 early next year with the introduction of LSOG 5. CLECs will enter using LSOG 4 (or LSOG 5) for other reasons as well. LSOG 4 has significant advantages over LSOG 2. Most fundamentally, LSOG 4 will vastly increase the uniformity of business rules and interfaces among Verizon states as Verizon was required to do under the Bell Atlantic-NYNEX merger conditions. (As pointed out above, approximately 20% of business rules will remain non-uniform.)

64. If and when real competition develops in Massachusetts, therefore, CLECs

will use the LSOG 4 interfaces. Those are the interfaces that Verizon must show are operationally ready. As a result of extensive collaboratives to increase uniformity as well as other changes, those interfaces are significantly different from the LSOG 2 interfaces on which KPMG focused during testing. Readiness of LSOG 2 interfaces therefore does not translate directly into readiness of LSOG 4 interfaces. Nonetheless, KPMG did not conduct a complete test of LSOG 4.

65. Although WorldCom and other CLECs requested a full test of LSOG 4, that request was denied. KPMG did conduct some limited testing of LSOG 4 for Massachusetts, but the scope of that testing remains unclear. KPMG states that the functionality tested was the “essentially the same” for LSOG 4 as for LSOG 2 but acknowledges that it did not test “as many of each scenario.” (Aug. 28 Tr. at 3155 (VZ-MA App. B, Tab 545).) Moreover, the test did not include evaluation of the capacity of Verizon’s LSOG 4 systems, something vital to ensure operational readiness at commercial volumes. Id. KPMG acknowledged that its LSOG 2 volume tests may not say anything about how well the LSOG 4 interfaces will perform at volumes. (Aug. 28 Tr. at 3232-33 (VZ-MA App. B, Tab 545).)

66. The scope of the KPMG test was limited in other important ways as well. KPMG did not test loss notifications – an ongoing source of problems in New York which we discuss below. In addition, as discussed above, KPMG did not evaluate the missing notifier problem using the performance measures developed for New York. Finally, KPMG failed to assess the integrity of the data used by Verizon in putting together performance reports. KPMG explained that Verizon does not maintain the raw data, and consequently “a data integrity

analysis was not performed on the Service Order Accuracy metrics.” Final Report at 646. (VZ-MA App. I, Tab 1.) Without such an analysis, however, it is impossible to know whether Verizon’s performance reports are accurate.

d. The Inadequacy of the KPMG Test is Demonstrated by the Results of Other Tests.

67. KPMG’s failure to find all of the key problems in Verizon’s OSS is further evidenced by the inconsistency of the results of KPMG’s Massachusetts test with the results of other tests. Although Verizon’s Massachusetts OSS is different from the OSS in New York and Pennsylvania, the similarities are significant enough that we would expect to see substantial similarities in results of testing among the states. Yet in its testing in Pennsylvania, KPMG found many issues that KPMG did not find in Massachusetts. For example, by mid-July, with respect to pre-ordering for LSOG 2 alone, KPMG had uncovered the following issues in Pennsylvania that it did not find in Massachusetts: (1) Exception 17 – Verizon’s telephone number reservation function sometimes returns invalid NPA NXXs; (2) Exception 15 – failure of Verizon’s EDI pre-order interface to return available due dates; (3) Exception 30 – LSOG 3 EDI ISDN and xDSL pre-order transactions do not provide valid results for non-working service transactions; (4) Observation 37 – numerous loop qualification inquiries failed during testing, and (5) Observation 65 – absence of a response for numerous LSRs submitted to Verizon. There may be legitimate explanations for why KPMG did not find all of these issues in Massachusetts. (Att. 4.) Some of these issues may not have existed in Massachusetts. But the number of problems KPMG found in Pennsylvania but did not find in Massachusetts suggests either that

KPMG overlooked some of these issues in Massachusetts, or that the Massachusetts and Pennsylvania interfaces are even more dissimilar than we assume. Either way, this again shows that the Massachusetts test, like all tests, is not uncovering all of the problems.

68. KPMG also failed to find key deficiencies that WorldCom found in its own testing. In June, Verizon released a new version of its LSOG 4 and LSOG 2 interfaces. WorldCom tested the June 2000 release in Pennsylvania and in New York in preparation for its launch of service in Pennsylvania, and in support of its ongoing commercial operations in New York. Some of the deficiencies WorldCom found related to Verizon systems that allegedly are region-wide. For example, WorldCom discovered that Verizon's pre-order SMARTS Clock was returning times for appointments that did not match its business rules, thus causing CLECs to tell their customers that a repair person would arrive before 5:00 p.m., while Verizon believed that it had until 7:00 p.m. to send a representative. This was a major problem, because customers were likely to become irate and to leave the premises at 5:00 p.m. thinking that the service representative had failed to show up. Yet KPMG did not discover this problem in Massachusetts (or Pennsylvania) even though it almost certainly existed there as well.⁹ (Aug. 28 Tr. at 3158-59 (VZ-MA App. I, Tab 545).) The same is true with respect to numerous other problems that WorldCom discovered. (Id. at 3160-63; infra ¶ 81.)

⁹ KPMG did observe a separate problem with the SMARTS Clock in which it submitted a due date request for a single loop and received as the first available date a date twenty two days later. The Telecomm Industry Services Operations Centers ("TISOC") informed KPMG, however, that a date of six days later was available. Observation 81 (Att. 4). This is similar to a problem that WorldCom is having in practice which we describe below. On June 23, however, KPMG closed the Observation without any explanation of the underlying cause or what had been done to fix the problem.

69. The problems that WorldCom found in its June testing have now mostly been corrected. But the fact that KPMG failed to find these problems demonstrates the limits of the KPMG test. In sum, what KPMG failed to find, as well as what KPMG did find, show that the KPMG test standing alone is insufficient to show Verizon's OSS is ready. Without a much higher volume of commercial usage, Verizon does not have enough evidence that its OSS ready for prime time.

B. Verizon's OSS Contains Key Defects

70. Not only has Verizon failed to show that its OSS is ready, but it is clear that its OSS is not ready. Both KPMG's Massachusetts test and WorldCom's New York experience and own process of testing reveal the existence of significant defects in Verizon's OSS. As explained above, one of these key defects is the problem with missing notifiers. Others are described below.

i. Verizon Fails To Provide Adequate Assistance to CLECs.

71. Part of the requirement of non-discriminatory access to OSS is that the BOC must "adequately assist[] competing carriers to understand how to implement and use all of the OSS functions available to them." TX Order ¶ 96. As part of this requirement, "a BOC must provide competing carriers with the specifications necessary for carriers to design or modify their systems in a manner that will enable them to communicate with the BOC's systems and any relevant interfaces. In addition, a BOC must disclose to competing carriers any internal business rules and other formatting information necessary to ensure that a carrier's requests and orders are processed efficiently." TX Order ¶ 97. "Competing carriers need information about and

specifications for an incumbent's systems and interfaces in order to develop and modify their systems and procedures to access the incumbent's OSS functions." NY Order ¶ 102.

72. Verizon has failed to provide accurate documentation each time it has provided documentation for a new release. This is evidence of defective change management as well as defective documentation. Moreover, Verizon does not adequately assist CLECs through its help desk after CLECs have entered the market. Verizon's failure to provide adequate assistance to CLECs is likely to cause significant problems as it rolls out ExpressTrak, its new back-end billing system that will cause major changes in Verizon's OSS. It will also continue to significantly drive up CLEC costs as well as cause operational problems for CLEC customers.

a. Verizon Continues To Release Flawed Documentation.

73. During the course of its testing, KPMG found numerous Verizon documentation errors. Many of these errors persisted for a long period of time. Although the documentation errors may eventually have been corrected, Verizon has yet to show it is capable of providing accurate documentation when it is first released. The initial release of defective documentation causes significant harm to CLECs.

74. The relatively poor quality of Verizon's documentation is first demonstrated by the fact that in Exception 10, KPMG (via Hewlett Packard) found 27 inconsistencies that existed in Verizon's pre-order documentation for LSOG 2 (LSOG 3 for pre-order). (VZ-MA App. I, Tab 2.) This was so even though LSOG 2 had been released for commercial operation more than a year before KPMG evaluated that documentation. As KPMG explained, "[i]f the Pre-Order Business Rules and the Pre-Order EDI Guidelines and Generic EDI

Examples are incorrect or unclear, a CLEC cannot properly format the EDI transactions and exchange correct data with Bell Atlantic.” Exception 10 (VZ-MA App. I, Tab 2).

75. KPMG found an even higher magnitude of documentation errors for LSOG 4 than for LSOG 2. In Exception 4, issued on February 16, 2000, KPMG reported that “[a] substantial portion of the documentation in the LSOG 4 Pre-order and Order Business Rules and the EDI Pre-Order and Order Guides is incomplete, incorrect or unclear” (VZ-MA App. I, Tab 2.) (emphasis added). Indeed, Exception # 4 – describes 162 errors with business rule documentation and EDI documentation for LSOG 4. KPMG stated that these documentation problems made “it very difficult to build an interface.” (Aug. 28 Tr. at 3124 (VZ-MA App. B, Tab 545).)

76. KPMG also describes numerous other documentation errors related to LSOG 2 and LSOG 4 in its Observations. Observations 74, 75, 73 and 101 describe documentation errors with respect to business rules. (Att. 4.) Observations 9, 79, 82, and 84 describe documentation errors with respect to EDI. (Att. 4.) Observations 61, 89, and 91 describe documentation errors on Verizon’s web site. (Att. 4.) Observations 92 and 100 describe change control documentation errors. (Att. 4.) Finally, Observations 2, 3, 4, 5, 11, 13, 19, 21, 25, and 56 also describe documentation errors. (Att. 4.)

77. Partly as a result of these documentation problems, when Verizon first implemented LSOG 4 in February, the interface had substantial problems. WorldCom did not test the February release of LSOG 4 itself but understands that CLEC testing of that release showed a very high failure rate. Indeed, Verizon acknowledges that “the February release did not

go as planned.” (Verizon Supplemental Comments at 159 (VZ-MA App. B, Tab 423 at image page 174).) It adds that “it proved difficult to validate all the different test deck scenarios on a timely basis.” (DTE 99-271, Verizon OSS Affidavit ¶ 175 (VZ-MA App. B, Tab 423 at image page 889)). Verizon promised, however, that “subsequent releases will not experience the problems and delays associated with the February release.” Id. Unfortunately, this has already proven to be incorrect.

78. On June 19, Verizon released a new version of LSOG 4, version 4.3.1, to add functionality and uniformity and to clean up problems with the prior version. Verizon simultaneously released a new version of LSOG 2. Verizon confirmed the accuracy of its baseline documentation by May 16 and made the CLEC Test Environment (“CTE”) available on May 22. WorldCom designed test cases to run in the CTE and began testing LSOG 4.3.1 for both Pennsylvania and New York. Although WorldCom is not presently testing LSOG 4 for Massachusetts, most of the results of the Pennsylvania/New York test are applicable to Massachusetts because of the approximately 80% uniformity in LSOG 4 across the Verizon region.

79. WorldCom’s Pennsylvania/New York testing has shown that the June release of LSOG 4 (and new release of LSOG 2), like the February release, has been beset with documentation problems – either left over problems from the earlier version or new problems. WorldCom found almost 80 business rule and EDI documentation errors. WorldCom’s results are similar to those found in the KPMG test in Massachusetts. KPMG reports that Hewlett Packard observed 29 inconsistencies between pre-order business rules and the pre-order EDI

Guide for version 4.3.1. (Exception 12 (VZ-MA App. I, Tab 2).) Hewlett Packard also observed 18 inconsistencies between order business rules and EDI specifications. Id. This is an extremely high number of errors.

80. Largely as a result of documentation problems, a high percentage of WorldCom's test cases failed in June. A test case is successful if it passes both technical reviews and business reviews. A test case passes technical reviews if the responses returned by Verizon (acknowledgments, firm order confirmations ("FOCs"), etc.) comply with the relevant EDI documentation. A test case passes business reviews if the responses comply with relevant business rules.

81. Two weeks into WorldCom testing, on June 7, more than 75% of WorldCom's test scenarios had not yet passed. For example, for pre-order in Pennsylvania, 12 of 14 scenarios failed either technical reviews or business analysis or both, and in New York, 4 of 12 failed technical reviews or business analysis or both. Just after implementation of the release, on June 19, the failure rate remained above 40% (including testing of the new LSOG 2 release in New York as well as LSOG 4.3.1 testing). For LSOG 2, 56% of the pre-order scenarios in New York failed. For LSOG 4 testing in New York, 33% of the pre-order scenarios and 40% of the order scenarios failed. For LSOG 4 testing in Pennsylvania, 86% of the pre-order scenarios and 23% of the order scenarios failed. Even as late as July 1, more than 30% of the scenarios failed. Among the reasons that WorldCom test scenarios failed were that: (1) the address returned on the CSR contained an abbreviation for "avenue" that did not match Verizon's business rules; (2) Verizon returned information in the state field in a different location than expected from its EDI

documentation; (3) Verizon returned values in the class of service field that were not valid according to Verizon's business rules; (4) Verizon failed to provide access to its SMARTS Clock at all when WorldCom submitted EDI pre-order transactions using characters that were valid under Verizon's business rules; and (5) Verizon failed to process coordinated hot cut orders that included a disconnect.

82. Under Verizon's own analysis, Verizon issued 19 Type 1 flash announcements to correct documentation deficiencies as a result of issues identified by WorldCom on its testing logs. (DTE RR 344 (VZ-MA App. B, Tab 553).) Verizon also agreed to make additional changes when it released subsequent versions of documentation. Moreover, the high failure rate of WorldCom test scenarios revealed coding problems that Verizon had to correct. These also demonstrated the lack of readiness of those interfaces when initially released.

b. Verizon's Repeated Issuance of Defective Documentation Imposes Significant Costs on CLECs.

83. As late as its initial Draft Report KPMG expressed dissatisfaction with the level of documentation provided by Verizon:

[N]umerous documentation issues [were found] . . . during the course of LSOG 2 and LSOG 4 transaction testing reviews. These issues include discrepancies between Pre-Order and Order Business Rules and EDI Guides with respect to missing data fields and conflicting field lengths. . . . Conflicts between Business Rule and EDI Guide specifications have impeded the efficient execution of pre-order and order transaction processing.

Initial Draft Report at 93 (VZ-MA App. B, Tab 471.) According to KPMG, Verizon has now corrected the documentation errors that KPMG found during testing. Thus, although in the Final

Report KPMG refers to “missing data fields and conflicting field lengths,” “conflicting Business rule and EDI Guide specifications,” “unclear usage notes and conditions,” “contradictory mapping specifications for data elements,” and “missing/unclear usage commands,” it states that these problems have been corrected. Final Report at 144, 148-49 (POP 4-12, 4-19, 4-20, and 4-21 (VZ-MA App. I, Tab 1)). Verizon has also now corrected some, although not all, of the documentation errors found by WorldCom during testing. Nonetheless, Verizon’s failure to ensure the accuracy of documentation when it is initially released imposes significant costs on CLECs. Once KPMG is no longer evaluating the accuracy of new releases, such errors will often be caught by CLECs only after they inaccurately code their interfaces based on the erroneous documentation and suffer customer-impacting failures as a result. The cost of scrutinizing documentation to determine its accuracy and working with Verizon to correct it is itself a significant one.

84. Verizon’s failure to provide accurate documentation is likely the result of inadequate Quality Assurance testing (“QA testing”). QA testing is the process by which Verizon assesses “documentation relating to the functionality of the system and then build[s], execute[s], and verifie[s] the results of progression and regression test cases.” (DTE-WorldCom 4-2 (VZ-MA App. B, Tab 443 at image page 434-36).) If QA testing were working properly, when Verizon opened the CTE for a new release, CLECs would find relatively few documentation errors. CLECs would be able to use the CTE to test their side of the interfaces, not to find significant problems on Verizon’s side. That is why, prior to opening the CTE, Verizon is obligated to create and run a test deck – a deck of internally generated test scenarios

designed to mimic CLEC orders – successfully. It is also why Verizon is obligated to certify the test environment as stable. But Verizon’s test deck does not work as it should and its test environment is not stable.

85. As KPMG observed, there were “quality issues with the LSOG 4 Test Deck” for the February 2000 release. Final Report at 527 (RMI 2-2) (VZ-MA App. I, Tab 1); Observation # 105 (Att 4); Aug. 29 Tr. at 3406 (VZ-MA App. B, Tab 547). Similarly, with respect to an LSOG 2 release, KPMG noted “the recurring changes” to the test deck which “indicate that Verizon did not strictly adhere to its documented internal quality assurance procedures.” Exception 7 (VZ-MA App. I, Tab 2). KPMG concluded that Verizon had to do better. (Aug. 29 Tr. at 3406 (VZ-MA App. B, Tab 547).) Although KPMG noted “improvements in the quality of the Test Deck results” for the June release, Final Report at 527 (VZ-MA App. I, Tab 1), the number of documentation errors remained high in June. See supra. KPMG again observed quality issues with the test deck. (Final Report at 534 (RMI 2-11); Aug. 29 Tr. at 3407 (VZ-MA App. B, Tab 547)). Moreover, KPMG described test cases in June that did not receive the expected responses. Id. at 535 (RMI 2-11) (VZ-MA App. I, Tab 545.) KPMG indicated that these issues “made the process of implementing this new release more difficult and time-consuming than it would have been had there not been those changes to the test deck. (Aug. 28 Tr. at 3143 (VZ-MA App. B, Tab 545).)

86. Indeed, in Pennsylvania, KPMG found with respect to the June release that “based upon the number of errors and inconsistencies that exist within the test deck scenarios, the current quality assurance checks performed by Bell Atlantic do not appear to be adequate to

ensure that wholesale customers have access to a complete, accurate, and stable test environment. Furthermore, KPMG Consulting was not able to obtain the same degree of success[ful] test results as published by Bell Atlantic.” Observation 110 (Att. 5). In Massachusetts, Verizon promised KPMG that it would roll out a new test deck publication process in October to fix the test-deck problems, but, as of the time of the Massachusetts hearings, KPMG had not yet received a written description of this process, much less verified that it would resolve the problems. Aug. 29 Tr. at 3407-08 (VZ-MA App. B, Tab 547).

87. Moreover, as KPMG noted in Pennsylvania, Verizon’s test environment is not stable. The documentation errors that have existed for both the February and June releases of LSOG 4 have required documentation changes during the course of testing. (Aug. 28 Tr. at 3183 (VZ-MA App. B, Tab 545).) This forces CLECs to recode their interfaces which they initially coded based on the erroneous documentation. WorldCom had to do just that during its June testing in Pennsylvania and New York.

88. Testing failures also may require recoding of Verizon’s interfaces. Thus, in WorldCom’s June testing in Pennsylvania and New York, Verizon made coding changes each week during testing. Verizon did not inform WorldCom of the scope of all of the coding changes it was making. WorldCom was therefore forced to retransmit test scenarios on multiple occasions to make sure that Verizon changes had not affected scenarios that had already been successfully tested.

89. The existence of an unstable test environment imposes significant costs on CLECs. As a result of the initial release of vague, inaccurate documentation, CLECs are forced

to ferret out the mistakes in Verizon's documentation during testing. They are also forced to spend inordinate time attempting to obtain clarification of documentation discrepancies from Verizon, as well as additional time testing the interfaces. When the documentation is corrected and CLECs are forced to re-code their side of the interface, this leads to a further waste of resources. CLECs must also re-test the interfaces after the documentation changes. This drives up the costs that CLECs must recover from their customers to stay in business, thus significantly impeding competition. Coding by reject analysis is an extremely inefficient and costly way to construct an effective interface. Indeed, WorldCom estimates that half of the time that it spent on testing in June resulted from Verizon documentation and coding errors.

90. Delays in conclusion of the testing also delay implementation of the new interfaces for the CLECs. This is particularly harmful to carriers who must use those interfaces. For CLECs who are intending to enter the market using a newly released interface, for example, finding significant problems during testing in the CTE can delay market launch. In addition, some CLECs who are currently in a market are required to switch to a new version of an interface because the version they are currently using will no longer be available. For example, if a CLEC is using LSOG 2 when LSOG 5 is introduced, the CLEC must switch to LSOG 5 because LSOG 2 will be shut down.

91. Finally, if documentation errors are not caught during the process of constructing the interfaces, they can lead to rejects or other significant operational problems. The CLECs will have constructed their interfaces with documentation that is not consistent with the way the interfaces actually operate. The likelihood of such problems will increase substantially

with future versions of Verizon's interfaces because KPMG will not be testing these future versions. Currently, KPMG, as well as CLECs, are testing the interfaces, finding documentation errors and ensuring they are corrected. As explained above, KPMG has found numerous documentation errors in LSOG 4, some of which WorldCom did not uncover independently. Conversely, KPMG did not uncover many of the errors that WorldCom uncovered. Once KPMG is not involved, CLECs will have to spend even more effort attempting to ensure the accuracy of Verizon's documentation and correcting problems with its interfaces. Even so, many errors are likely to slip by and only be found in production.

92. The failure to provide accurate documentation is a failure of the change management process. The FCC has emphasized the importance of an adequate change management process and "evidence that the BOC has adhered to this process over time." TX Order ¶ 106. As the FCC explained, without an effective change management process, "a BOC can impose substantial costs on competing carriers simply by making changes to its systems and interfaces without providing adequate testing opportunities and accurate and timely notice and documentation of changes." TX Order ¶ 107. Verizon's continual release of inaccurate documentation imposes just such costs.

93. The FCC has also explained the importance of a stable test environment. NY Order ¶ 109. As the Commission stated, "If competing carriers are not given the opportunity to test new releases in a stable environment prior to implementation, they may be unable to process orders accurately and provision new customer services without delays. Moreover, the failure to provide a testing environment that mirrors production can result in competing carriers'

transactions succeeding in the testing environment but failing in production.” TX Order ¶ 132.

Verizon must demonstrate that it can provide a stable test environment prior to obtaining section 271 approval.

c. Verizon Takes Far Too Long To Correct Documentation Errors and Makes Mistakes in Doing So.

94. As a result of documentation problems both during and after the test period, Verizon has been forced to issue numerous bulletins announcing systems and documentation changes. Thus, for example, Verizon issued 12 Type 1 change request notifications in April, 9 in May and then, during and after the June release, 35 in June, 42 in July, 19 in August and 20 in September. Type 1 changes are problems discovered in production versions of an application interface. The majority of the recent Type 1 changes have been Severity 2 and 3. These require a workaround and are considered critical to operations. CLECs are therefore forced immediately to turn their attention to evaluating the fix and, if necessary, changing their own systems.

95. Moreover, these problems are magnified because Verizon often must issue more than one version of a notification because of mistakes in the original notification itself. Thus, for example, Verizon re-sent five Type 1 Bulletins in June alone. Similarly, KPMG describes many examples of repeated corrections by Verizon. Thus, in response to KPMG exceptions, Verizon issued the following change bulletins, for example, each of which contained mistakes: (1) CR 1379 that contained a discrepancy between the EDI mapping on the cover page and in the text (Exception 4, BA Response to issue 4.8 N, May 17, 2000 at 3 (VZ-MA App. I,

Tab 2)); (2) CR 1400 that failed to correct the original error (Exception 4, BA Response to issue 4.13 Y (VZ-MA App. I, Tab 2), May 17, 2000 at 3); (3) CR 1275 that updated business rules but failed to update the corresponding information in the EDI Guide (Exception 4, BA Response to issue 4.13 E, April 3, 2000 at 2 (VZ-MA App. I, Tab 2)); and (4) CR 1216 that updated EDI Guidelines but not the corresponding example (Exception 4, BA Response to issue 4.13 F, April 3, 2000 at 2 (VZ-MA App. I, Tab 2)).

96. Tracing Verizon's response over time to one particular exception emphasizes the point. In Exception 4.3 BB12 (Feb. 16, 2000 at 8 (VZ-MA App. I, Tab 2)), KPMG reported that a particular field in Verizon's EDI Guide did not appear, as it should have, in the documented example. Subsequently, according to Verizon, it added the field to the EDI example via change control. (BA Response, Feb. 29, 2000 at 2 (VZ-MA App. I, Tab 2).) Yet KPMG found that after this addition "a discrepancy exists between the mapping in the Guidelines and the example." Verizon then responded that "[t]he Example is correct; this field should be mapped to N1/N4. The EDI Guide will be updated to reflect this, and change pages will be updated through the standard Change Management process by 3/17/2000." (BA Response, March 7, 2000 (VZ-MA App. I, Tab 2).) But Verizon did not fix the documentation this time either. As Verizon itself explains, the change request that ostensibly corrected the problem (CR 1379) itself had a discrepancy between the EDI example and EDI Guidelines. Verizon finally stated that this would be corrected through change control on approximately May 19. (BA Response of May 17, 2000, at 2 (VZ-MA App. I, Tab 2).) Such repeated incorrect notices to CLECs significantly complicate the task of maintaining a working interface.

97. In addition to issuing inaccurate corrections, Verizon frequently takes inordinately long to respond to problems and misses its time commitments for making the corrections. In Observation 19, for example, KPMG describes Verizon's failure to provide the standard test deck on its web site. (Att. 4.) Verizon then promised to post the test deck on the web site by February 16, 2000. On February 18, Verizon posted the information but not at the correct location; Verizon promised to change the location by the end of March. It did not do so until April 11, however. Similarly, in Observation 59, KPMG observed that Verizon was unable to process Directory Listing Service orders submitted via EDI. Verizon promised a manual correction by April 22, 2000 and a systems fix for May 20, 2000. (Att. 4.) On May 19, however, Verizon announced that the fix had been delayed until June 17. Even if Verizon ultimately made the fix, such lengthy response times coupled with Verizon's failure to adhere to its own schedule for doing so substantially complicates the planning of CLECs.

98. KPMG did not track the average interval for correction of documentation problems but indicated that it believed the February documentation problems were resolved with the June release. (Aug. 28 Tr. at 3125 (VZ-MA App. B, Tab 545).) KPMG implicitly acknowledged that this was far too long, however, stating "generically" that "three months to correct documentation problems would not meet our standards." (Aug. 28 Tr. at 3126 (VZ-MA App. B, Tab 545).) KPMG should therefore have concluded that Verizon's process for correcting documentation was flawed.

99. In addition to taking inordinately long to correct documentation, Verizon also continues to release initial documentation in a belated fashion. Between October 1999 and

April 2000, Verizon failed to provide timely distribution of documentation of Type 4 (Verizon initiated) changes 40% of the time. Final Report at 507 (VZ-MA App. I, Tab 1). This measurement does not include fourteen flow-through items on which Verizon missed the interval. Id. at 511. Although KPMG reports that Verizon significantly improved timeliness for the June release (Id. at 506 (RMI 1-8)), compliance with respect to one release does not demonstrate that Verizon has established a solution for consistent, long-term compliance – especially since the documentation that was released was often inaccurate.

100. Thus, Verizon continues to release inaccurate documentation, to issue frequent bulletins to correct that documentation, to make mistakes in issuing those corrections, and to issue those corrections late. This significantly increases CLEC costs and also leads to operational difficulties. The FCC has accurately characterized the importance of timely documentation that is also complete and accurate: “It is critical that a BOC provide timely, complete, and accurate notice of alterations to its systems and processes. Indeed, without timely notification and documentation, competing carriers are unable to modify their existing systems and procedures or develop new systems to maintain access to a BOC’s OSS.” TX Order ¶ 126. See also NY Order ¶ 113.

101. In short, Verizon consistently releases inaccurate documentation, and its test environment is not stable. Verizon promised KPMG that it would put in place new procedures to ensure future software releases are not riddled with documentation errors. (Aug. 29 Tr. at 3295 (VZ-MA App. B, Tab 547).) But KPMG has “been unable to validate that

promise.” Id. Until Verizon shows that it can consistently provide accurate documentation, it should be denied section 271 approval.

d. Verizon Is Not Adequately Assisting With the Roll Out of ExpressTrak.

102. The difficulties Verizon has had in rolling out significant interface and systems changes are likely to cause even more substantial problems in the coming months. Over the next months, Verizon is rolling out a new back-end billing system for retail customers as well as CLECs throughout its region. This system is called ExpressTrak. It will replace Verizon’s CRIS system and its service order processors. Verizon intends to begin implementing ExpressTrak for retail customers in Massachusetts in late 2000. (DTE WorldCom 4-7 (VZ-MA App. B, Tab 443 at 649-50).) But Verizon is already bungling the process of rolling out ExpressTrak, reinforcing the conclusion that its change management process is not working as it should.

103. The ExpressTrak system will standardize ordering and billing formats and account structures throughout the Verizon region. Verizon originally told WorldCom that the billing account structure would change in Verizon North to match the structure in the South. Instead of one billing account number per central office by class of service, there would be one billing account number per state. Recently, however, Verizon informed WorldCom that the final billing account structure is still under review.

104. The ExpressTrak system will have a major impact not only on billing, but also on pre-ordering and ordering. Indeed, ExpressTrak will impact multiple pre-order functions.

The CSR, for example, will be maintained in ExpressTrak rather than CRIS, and the CSR will contain different data. ExpressTrak will also use a new set of Universal Service Order Codes which will substantially impact ordering and provisioning data.

105. ExpressTrak has some significant potential advantages for CLECs as well as for Verizon's retail customers. However, migration to ExpressTrak is a major undertaking both for Verizon and for CLECs, with the potential to cause extremely significant problems.¹⁰ Converting to ExpressTrak will require a huge effort simply because of the number of systems that are affected and the interaction of changes among these systems. Adopting their systems to new USOC codes and FIDs alone will require significant effort on the part of CLECs. In addition, the new systems must operate properly on Verizon's side – and the recent experience with missing notifiers demonstrates the potential impact of flawed software.

106. The risk of problems is magnified by the need for CLECs to cut-over their systems in a flash cut. Until two weeks ago, Verizon had stated that if CLECs did not migrate their customers to ExpressTrak simultaneously with Verizon's migration of its retail customers to ExpressTrak, all CLEC orders would then drop to manual. No orders would flow through. If this occurred, it would almost certainly lead to vast delays and errors in the processing of orders

¹⁰ In addition to the likely substantial problems with conversion with ExpressTrak, Verizon informed CLECs that the ExpressTrak CSR will not include complex directory listing information. This is a significant reduction in functionality as compared to the existing CSR. When CLECs access a CSR and attempt to obtain the directory listing information on a complex order, they will be directed to transmit a second inquiry to a different database (ATLAS) to pull the listing. This will add significantly to the effort required to construct an integrated interface that includes directory listings.

as Verizon's work force was overwhelmed by the increased manual load. Two weeks ago Verizon said that it had now designed a fix to prevent the need for all orders to be manually processed during conversion to ExpressTrak, but there has been no test to see if this is true.

107. Given the scope of the change to ExpressTrak, it is particularly important that Verizon follow the change management process for Type 4 (Verizon originated requests) changes. Yet Verizon does not appear to be doing so. Under Verizon's change management plan, Verizon's timeline identifies 17 steps to decommission outdated functionality and implement new functionality. That process requires that Verizon solicit CLEC feedback, prioritize changes, and then provide specifications and an implementation date. As was agreed on November 18, 1999, Verizon is supposed to provide draft business rule specifications 73 days prior to a release and draft EDI specifications 66 days prior to the release. Verizon is also supposed to provide CLECs 15 days to comment on the specifications, hold a meeting to discuss final specifications, and provided final specifications at least 45 days prior to implementation. It is then supposed to provide for a test environment four weeks prior to implementation.

108. Under that timeline, it is already far past the time when Verizon should have provided the necessary documentation. Verizon has not provided a conversion timeline for the Verizon region as WorldCom has requested. This makes it impossible to plan conversions to correspond with Verizon's conversions and thus may lead to the loss of flow through for CLEC orders. Nonetheless, while the exact roll out schedule is unclear, it is clear that Verizon is violating the change management process. Verizon has already started converting CLEC customers to ExpressTrak in Maryland, West Virginia, Virginia and the District of Columbia.

(Aug. 22 Tr. at 2966 (VZ-MA App B, Tab 538).) As a result, Verizon should already have provided detailed draft specifications to CLECs, held meetings to prioritize the change, provided a CLEC comment period, provided revised final specifications and had a test period.

109. Yet Verizon still has not provided CLECs with detailed documentation and explanation of the functionality of ExpressTrak, its impact on other systems, and the process by which customers will be migrated to ExpressTrak. While Verizon has hosted two CLEC workshops regarding ExpressTrak on May 2 and June 26, 2000, those workshops have not been well prepared, planned or documented to address all of the changes that impact CLECs. Moreover, the documentation distributed at the June workshop was still labeled Draft and was incomplete. It does not, for example, explained the differences between parsed CSRs maintained in Verizon's current CRIS system and parsed CSRs as they will be maintained in ExpressTrak.

110. Verizon also for months failed to provide a complete list of the new USOCs and FIDs to CLECs. On September 27, 2000, Verizon finally provided a list of USOCs. Based on a preliminary review, it appears that the list still is not complete, that the relationship of USOCs to FIDs has not been explained, and that the process of updating the list remains inadequate. Verizon also provided WorldCom a password into the USOC database, but that database is not at all user friendly and WorldCom is currently attempting to see whether it can use it.

111. In addition, Verizon has not explained how ExpressTrak will be tested. It has not provided a regression test deck to the CLEC community to demonstrate that there are no bugs and the code is functioning properly. It also has not explained how ExpressTrak will be

incorporated into the CTE for CLECs to test prior to converting their wholesale systems to ExpressTrak.

112. Moreover, Verizon has failed to provide a detailed description of the process of conversion itself. It appears, for example, that CLECs will not be able to cut over to ExpressTrak simultaneously for all customers throughout a state. This may mean that orders in those areas of the state that do not yet have ExpressTrak will all drop to manual processing.

113. WorldCom and the CLEC community cannot plan or implement system changes without accurate and complete documentation, a CLEC test environment with test schedules, a clear rollout schedule, and a conversion project plan. All of these are required to ascertain the impacts and level of effort necessary to support ExpressTrak conversion.

114. Given the lack of planning and documentation, the conversion to ExpressTrak is likely to cause substantial problems for competitors already in a market. Moreover, there is no reason to believe that these problems will be short term problems. The magnitude of the systems changes will make it more difficult to correct problems after the fact.

115. Because Verizon's change management process is not working smoothly in general and appears not to be working at all with respect to ExpressTrak, and because of the magnitude of the change with respect to ExpressTrak, the Commission should await successful implementation of ExpressTrak before granting Verizon section 271 approval. To do otherwise poses a severe risk that systems that may appear acceptable today will not be acceptable within the next several months.