



MPSC Case No. U-12320

**Special and UNE Circuit Repair
Coding Accuracy Plan**

April 2, 2003

Repair Coding Accuracy Plan

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1. Purpose

The purpose of this plan is to describe the actions SBC Midwest (“SBC”) proposes to take to improve accuracy and completeness¹ of closeout codes upon repair completion for Special Circuits and Unbundled Network Elements (UNEs). In Michigan, SBC originally proposed a trouble report closeout code improvement plan on October 30, 2002 (“October 30 Filing”). Pursuant to the Michigan Public Service Commission’s (“MPSC’s”) Order issued January 13, 2003 (“January 13 Order”), in Case No. U-12320 (SBC’s §271 Checklist Compliance Docket), the plan was revised and filed on February 13, 2003 as a draft. The February 13 draft further addressed the operational concerns with repair coding accuracy identified in BearingPoint’s Report, and those discussed in the technical workshop and submitted in written comments. SBC further modified this plan based on input received during the collaborative session held at the MPSC Offices in Lansing, Michigan on March 45, 2003. Additionally, SBC reviewed the changes with the MPSC Staff and collaborative participants on a conference call held on March 12, 2003. SBC has retained BearingPoint to evaluate SBC’s implementation of this plan. Final modifications were made to this plan in compliance with the MPSC’s Order issued March 26, 2003.

2. Issue Definition

BearingPoint, Inc. (f/k/a KPMG Consulting) first issued Exception 131 as part of the Third-Party Operations Support Systems (“OSS”) testing on June 27, 2002. In its report, BearingPoint stated that in reviewing trouble reports and close out code data, it determined that SBC had failed to meet a 95% accuracy benchmark for trouble ticket closure coding for Special and UNE circuits. The initial exception report for Michigan had included benchmark failures for Resale, UNE and Special circuits. In the course of resolving this issue, BearingPoint completed a retest of repair coding accuracy in August 2002 and reported that while Resale circuits had passed their test requirements, UNE and Special Circuits had not. This exception encompassed all five Midwest states. BearingPoint’s October 30, 2002 Michigan OSS Evaluation Project Report found that test criteria for TVV7-12 (p. 987) and TVV7-14 (p. 989) were “not satisfied.” The UNE coding has successfully closed in the other four SBC Midwest states and Special coding remains in retest in Illinois. Wisconsin has successfully completed Special circuit coding retesting.

In response to BearingPoint’s evaluation, SBC has identified areas for improvement and implemented a number of corrective measures, which as summarized above, have improved the performance results in those states where the retest was conducted after those corrective measures were implemented². In its final retest in Michigan, BearingPoint reported that 84.8% (56/66) of UNE closeouts and 82.1% (23/28) of Special circuits were coded correctly. Because these coding results were in parity with retail coding and SBC completed successful testing on trouble repair itself, these coding results did not result in a negative finding in regard to maintenance and repair (“M&R”) nondiscriminatory access. See MPSC Report, January 3, 2003 at p. 71.

¹ AT&T stated, “accuracy is equally important as completeness.” See, 11/15/02 Connolly Affidavit, p. 36, para 83

² The retest in Michigan was completed prior to the implementation of these initiatives.

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3. Root Cause Analysis

Trouble tickets are closed out by the repairing technician in the field or in the central office, either directly or through the Overall Control Center (“OCO”) which encompasses the Local Operations Center (“LOC”), the Special Services Center (“SSC”), and the Customer Service Bureau (“CSB”). When the repair is complete, the technician also enters the appropriate closure codes to the ticket. The closeout code faults reported by BearingPoint within this exception appeared to fall into one of the following general situations:

- 1) Situations in which a fault inserted by BearingPoint were subsequently reported as “No Trouble Found” (NTF) by SBC.
- 2) Situations in which the fault inserted by BearingPoint on the network side of the circuit were subsequently reported as being within the customer-owned portion of the circuit and for which CLEC billing was applied.
- 3) Situations the same as Item #2 above, but no CLEC billing was applied.
- 4) Situations in which the fault inserted by BearingPoint on the network side of the circuit was properly repaired, but the coding used did not accurately identify exactly where the fault had occurred.

Very few of the items in Situation #1 above involved cases in which SBC clearly miscoded the actual trouble cause and repair. Most of the cases involved situations in which BearingPoint had inserted multiple faults in the same test bed area for several test circuits. While dispatched to repair the fault on one circuit, the technician noticed faults placed on several additional circuits³ and repaired them as well. The technician corrected the multiple faults but did not document the work performed on those additional circuits that needed repair, but were not listed on the trouble ticket for the test circuit. Therefore, when dispatches were made on the reported failures of the additional circuits, the dispatched technician appropriately closed the report as “NTF”.

For items that fell within Situation #2 and #3, the errors appear to have been caused by a lack of attention to, or unfamiliarity with, the meaning of each disposition code. Although such performance is unacceptable, it did not have a significant impact on either CLEC billing or repair performance reporting. Indeed in Michigan, of the 25 reported errors in coding (out of 136 total retests)⁴, only 3 would have resulted in either inappropriate billing or erroneous exclusion of data from performance results. This represents an overall billing/performance error rate of only 2.2 percent.

Similarly, the items found to fall into Situation #4 appear to be mostly due to errors by the repair technician or maintenance administrator. These types of closeout errors had no impact on overall billing/performance error rate because they incorrectly coded where in the SBC network that the fault was corrected.

Accordingly, with the exception of Situation # 1, the root cause for incorrect close out codes was repair technician error, either in the field, the central office or by the LOC Maintenance Administrators (“MAs”).

³ Usually jumpers opened and laid back on the Main Distributing Frame (MDF) in the Central Office.

⁴ See BearingPoint Exception 131 Additional Information, August 29, 2002

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4. Actions

The internal improvement plan proposed by SBC in its October 30, 2002 Filing was constructed to address the accuracy of trouble ticket closure coding for Special circuit and UNE repairs for various types of trouble conditions found including troubles noted as “No Trouble Found” (“NTF”) and Customer Premises Equipment (“CPE”). The plan included many of the steps identified in this plan.

The MPSC in its January 13 Order directed that an independent third party verify the results achieved from this plan. It also directed SBC to include evaluation criteria by which the third party could measure whether the corrective actions resulted in improved coding accuracy. In its comments, AT&T stated that the MPSC should require SBC to address this coding issue and stated that incorrect coding could lead to incorrect performance measurement results reporting. Further, AT&T was concerned that under SBC’s proposed Improvement Plan, the original source information would not be available for review.⁵ AT&T also questioned the relationship between SBC’s proposed monthly quality reviews and improved accuracy and completeness of closeout coding. SBC has addressed the requirements of the MPSC and the comments of AT&T in the following enhanced plan.

The following activities identify the steps that SBC has taken or plans to take to improve the accuracy and completeness of trouble ticket closure coding for Special circuit and UNE repairs.

Documentation Updates:

During the course of its investigation of the errors noted by BearingPoint in Exception 131, SBC has initiated a number of improvements in the documentation available to technicians and their managers on proper coding techniques and application. These improvements include:

- The SBC document that is used as a reference for Cause Codes was updated to clarify use of Cause Code 600 in late June 2002. Cause Code 600 is used to identify those situations where SBC is unable to determine what caused a particular case of trouble. This documentation gap was identified via a number of cited trouble tickets for both Special and UNE circuits. The updates to the documentation provided a clearer description of the process currently followed by SBC technicians and addressed questions raised by BearingPoint. The updated SBC document was provided to BearingPoint for review on August 1, 2002.
- Local Operations Center Job Aid JA-27B has been updated to reflect additional steps for Maintenance Administrators to take that will improve coding accuracy when a mechanized loop test (“MLT”) indicates “Open Out”⁶ following a circuit retest. MAs

⁵ See AT&T’s comments filed 11/15/02, Connolly affidavit at pp. 35-36, paras 80-83.

⁶ “Open out” condition on a MLT means a circuit trouble is testing beyond the SBC Central Office.

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and managing supervisors responsible for the accurate coding of closed trouble tickets in the LOC were covered on this process enhancement between August 1 and August 9, 2002.

- SBC updated internal Methods and Procedures (“M&P”) documentation (SBC 660-169-013) used to define accurate disposition coding of trouble tickets to include new disposition codes and clarify the use of existing disposition codes. Updates to the M&P were completed on August 16, 2002. These updates also generated the following outputs:
 - Installation and Repair (I&R) internal Job Aid (JA 170 - August 20) was updated to reflect the M&P changes/clarifications.
 - Awareness sessions were conducted 8/23/02 through 11/05/02 to review updated procedures.
 - A LOC “Flash” (02RC49) was issued 8/26/02 to reflect the new disposition codes.
 - The CSB Handbook was updated 8/26/02 to reflect the new disposition codes.
 - Issued a CSB “Flash” to notify CSB personnel of updated handbook procedures.
- December 16, 2002 Central Office Technician method and procedure documentation (SBC 002-216-298) was issued for documenting corrective maintenance trouble tickets in central offices (COs). A requirement for performing quality checks on coding has also been incorporated into the frame management document SBC 002-531-045 (“CO Managers Frame Reference Guide – AIT Region”).

Training Review Sessions:

SBC has conducted comprehensive awareness and training sessions with personnel in each of the four work groups involved in trouble ticket closures. In those states where BearingPoint testing continued beyond the date(s) when such sessions were completed, test results indicated marked improvement in coding performance. These sessions included:

- SBC conducted training review sessions (a/k/a awareness sessions) to reinforce current procedures used for the close out of Cable Multiple tickets when wholesale account trouble tickets are attached to the lead cable trouble ticket number. Sessions covering all I&R Operations Center personnel were completed by August 13, 2002. A “Cable Multiple” ticket number is assigned to a damaged cable or cable failure that potentially impacts service to multiple subscribers served by the same cable. Individual subscriber (or CLEC) reports of service interruptions having individually assigned trouble ticket numbers may become attached to the lead or Multiple Cable Trouble Ticket Number (“CTTN”). SBC was made aware that in at least two audited instances, individual wholesale trouble reports attached to a Cable Trouble Ticket Number were closed as the CTTN closed and were not “detached” and tested to confirm restoration of the reported trouble. Reinforcement of current procedures to detach individual case trouble tickets from the CTTN and retest with the CLEC was completed for I & R Operations Center
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employees through Awareness Sessions conducted between August 8 and August 15, 2002.

- SBC conducted awareness sessions to reinforce current procedures used for the disposition coding of trouble reports closed when multiple faults are found on the same telephone line.
 - Sessions covering Installation and Repair field technicians in all manager groups were completed by August 12, 2002.
 - Additional training sessions with I&R personnel were conducted in November 2002.
- Additional review sessions for LOC personnel were conducted to reinforce accurate trouble closure procedures were completed by November 10, 2002.
- Review training sessions were conducted with Special Service Center personnel to reinforce correct trouble ticket coding procedures. These review sessions were completed by November 25, 2002.
- Review sessions were conducted through January 31, 2003 with SBC Midwest Central Office technicians in Michigan, Ohio, Indiana and Illinois⁷ manager groups to review the newly created Methods and Procedures for documenting trouble tickets and established procedures for proper trouble ticket coding.
- On February 10, 2003, the LOC began conducting workshops to review closure codes and appropriate usage of these codes. These workshops will continue until the desired level of accuracy is achieved.
- On February 3, 2003, LOC associates were provided visual aids to identify commonly made coding errors and the recommended corrective actions.
- A coding refresher review session will be conducted within each of the four work groups (i.e., LOC, I&R, Special Services Center and Central Office) within one year of the training sessions described above.
- Training packages for new technicians in all four work centers already contain trouble disposition and coding and will continue to be part of the training program.

Management Review Activities

To verify that the improvements to documentation and the training/awareness sessions have had the desired affect (i.e., improvement in coding performance), SBC is conducting its own internal reviews of trouble ticket closures in each of the four work groups involved. These reviews, which will be conducted over the next three years, focus both on closeout coding in general, as well as specific problems brought to the attention of SBC by individual CLECs (e.g., NTFs). These reviews include:

⁷ Since Wisconsin passed, trouble ticket coding these review sessions were not conducted.

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1) LOC:

- On October 30, 2002, LOC management had initiated monthly quality reviews of coding accuracy on employee trouble tickets closures.
- In December 2002, LOC management had also initiated bimonthly random reviews of trouble ticket closures. The results of these reviews are tracked and reported via an internal shared-access tracking mechanism.
- On February 10, 2003, LOC management initiated a "Ticket Closure Approval Team" for Resale/UNE-P trouble tickets. LOC MAs will be required to receive approval prior to closing a trouble ticket until an individual 95% accuracy rate is achieved.
- On February 10, 2003 LOC management also initiated a daily review of the prior day's UNE-Loop trouble ticket closures to validate correct trouble ticket and analysis codes. Individual MA errors are provided to the involved employee as well as the LOC staff, both as a method to improve the individual accuracy, as well as identify common misinterpretations.

2) Special Services Center

- To monitor the accuracy and completeness of trouble ticket coding, the trouble ticket coding review has been incorporated into the regularly scheduled quality control measures utilized by the Special Services management. This effort began December 2002.

3) I&R Centers

- The I&R management will incorporate coding accuracy into the current auditing processes to review the efficacy of the above-cited measures and identify corrective action when required to improve trouble ticket coding accuracy for Special and UNE circuit trouble reports.

4) Central Office

- Beginning in March 2003, a monthly sample of closed CLEC trouble tickets in Michigan will be reviewed for narrative and coding accuracy.

In addition to these targeted coding review sessions SBC has incorporated trouble ticket coding into its internal ISO audits which are conducted approximately every three months within the various work centers. If significant ticket coding problems are identified during these ongoing audits, SBC will initiate new training/awareness sessions with the groups involved.

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SBC acknowledges that the “original source information” as noted by AT&T⁸ is not available in the above-cited improvement measures. However, SBC believes that these measures will improve the accuracy of trouble ticket coding based on the types of errors noted by BearingPoint in the test. This improvement will be demonstrated through the Third Party evaluation.

The following provides the timelines and current status of each of the items contained in the actions noted above:

Task	Begin	End	Status
1. Update documentation for Cause Code 600	6/01//02	06/30/02	Complete
2. Update LOC Job Aid JA-27B	07/31/02	08/01/02	Complete
A. Conduct Job Aid Training	08/01/02	08/09/02	Complete
3. Develop “awareness” training and conduct sessions with Installation & Repair Operations Center personnel to review procedures for “Cable Multiple” trouble tickets	08/01/02	08/08/02	Complete
A. Conduct “Awareness” sessions	08/08/02	08/15/02	Complete
4. Develop awareness training for I&R personnel to reinforce coding of trouble tickets when multiple faults are on the same line	8/10/02	08/11/02	Complete
A. Conduct awareness sessions	08/11/02	08/12/02	Complete
5. Update Methods and Procedures to include two new disposition codes and clarifications of existing codes.			
A. I&R internal job aids were updated to reflect M&P changes/clarification	08/20/02	08/30/02	Complete
B. Conduct I&R awareness sessions to review updated job aids	08/23/02	11/5/02	Complete
C. Issue LOC “Flash” to advise of new disposition codes	08/26/02	08/26/02	Complete
E. Issue CSB “Flash” to advise of handbook updates with new disposition codes	08/26/02	08/26/02	Complete
6. LOC management initiates “Ticket Closure Approval Team” for Resale/UNE-P	02/10/03	Ongoing	Ongoing
7. LOC management initiates “Trouble Closure Review” of UNE-Loop tickets closed by LOC	2/10/03	Ongoing	Ongoing
8. LOC will initiate ongoing workshops to review proper coding procedures as needed	2/10/03	Ongoing	Ongoing
9. Conduct LOC monthly reviews on employee trouble ticket closures	10/30/02	04/01/06	Ongoing

⁸ See AT&T’s comments filed 11/15/02, Connolly affidavit at pp. 35-36, paras 80-83

⁹ BearingPoint may elect to affirm SBC’s documentation improvements and internal reviews prior to this date.

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Task	Begin	End	Status
10. LOC management will conduct bimonthly random reviews of trouble ticket closures	12/16/02	On-going	Complete
11. Update Central Office M&P for trouble ticket closure			
A. Conduct review sessions with Central Office technicians	12/17/02	01/31/03	Complete
B. Initiate internal reviews of closed CLEC trouble tickets	03/01/03	04/01/06	Ongoing
12. Conduct review training sessions with Special Service Center personnel	11/20/02	11/25/02	Complete
13. Incorporate quality reviews of trouble tickets into current Special Service Center quality control measures	12/01/02	04/01/06	Ongoing
14. Incorporate quality reviews of trouble tickets into current I&R quality control measures	12/01/02	04/01/06	Ongoing
15. Expected start of BearingPoint testing ⁹	07/01/03		
16. Conduct refresher review session with all work centers	08/01/03	12/01/03	
17. New technician training for all four work groups includes repair coding accuracy and will be part of training program on-going	Ongoing	Ongoing	Ongoing

5. Third Party Examination Approach

This plan will be evaluated by a third party. While the third party selected, BearingPoint, will design its own work program and parameters, SBC anticipates that the third party evaluation will address and include a process evaluation and a review of actual commercial transactions as follows:

- The third party will evaluate SBC's implementations of the actions described in the "Actions" section of this plan by reviewing documents, conducting interviews, and performing site visits, as deemed necessary by the third party. This evaluation will include a review of SBC's quality review results. SBC expects this process evaluation to begin shortly after the MPSC approves this plan with a final report pursuant to BearingPoint's project plan.
- The third party will report on coding accuracy and completeness by comparing the trouble ticket coding applied to actual troubles found for UNE and Special Circuits to the narrative contained in the trouble report using a nonbiased sample from commercial production in the SBC Midwest region. The sample design and the evaluation methodology for this transaction analysis will be reviewed with

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SBC and the MPSC staff prior to its implementation. In addition, BearingPoint may supplement its analysis using “ride-alongs” with repair technicians, consistent with its standard evaluation practices for UNE trouble reports in Michigan. SBC expects BearingPoint will begin its analysis of commercial production transactions no later than July 1, 2003 with a final report pursuant to BearingPoint’s project plan. The accuracy and completeness of closure codes for Special Circuit and UNE repairs is expected to improve when compared to BearingPoint’s test results of 82.1% for Special Circuits and 84.8% for UNE¹⁰. SBC’s target is 95% accuracy for UNE trouble ticket coding and 90 % for Special Circuit trouble ticket coding. If the third party evaluation does not show the target has been achieved, any further required actions will be determined by the MPSC.

- SBC will file bimonthly third party reports beginning with April-May 2003 period, to be filed by June 15th, until final process and transactions reports are completed. These reports will be filed with the MPSC by the 15th of the following month and served on the parties of record for MPSC Case No. U-12320.

6. Additional Reporting

SBC will provide quarterly reports for three years to the MPSC of the results of ongoing management activities, along with its assessment of whether the results indicate that further refresher training is appropriate or has been conducted. For each of the four work centers involved, the reports will include the following information:

- 1) the quantity of tickets reviewed;
- 2) percent or quantity found accurate;
- 3) follow-up activities taken (if needed).

¹⁰ See BearingPoint Exception 131, Disposition Report, December 20, 2002