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**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking  
on the Commission's Own Motion  
into Monitoring Performance of  
Operations Support Systems.

**FILED**  
**PUBLIC UTILITIES COMMISSION**  
**OCTOBER 9, 1997**  
**SAN FRANCISCO OFFICE**  
**R.97-10-016**

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**ORIGINAL**

**OPINION**

**I. Summary**

We institute this formal rulemaking proceeding and investigation<sup>1</sup> as a procedural vehicle to accomplish three goals: 1) to determine reasonable standards of performance for Pacific Bell (Pacific) and GTE California Incorporated (GTEC) in their Operations Support Systems (OSS), 2) to develop a mechanism that will allow the Commission to monitor improvements in the performance of OSS, and 3) to assess the best and fastest method of ensuring compliance if standards are not met or improvement is not shown. A subset of the third goal will be to provide appropriate compliance incentives under Section 271 of the Telecommunications Act of 1996 (TA96) which applies solely to Pacific<sup>2</sup> for the prompt achievement of OSS improvements.

<sup>1</sup> While we are opening this proceeding as a rulemaking and investigation, we believe that it is most likely that there will not be a need for hearings. If that proves to be the case, we will close the investigatory docket.

<sup>2</sup> Section 271 of the TA96 applies specifically to Pacific which is listed as one of the Bell Operating Companies (BOC).

Within the context of our obligation to verify Bell Operating Company (BOC)' Section 271 compliance, this proceeding will also provide us with performance measures which will facilitate an informed evaluation of Pacific's OSS system. In a future set of comments, parties will have the opportunity to address the need for performance measures and standards for Citizens and Roseville telephone companies.

We are concerned about the development of competition in the local exchange market in California. Our concerns encompass all forms of competition: Total service resale, use of unbundled elements, and pure facilities-based service. To some extent, those competing market entry strategies have unique concerns regarding the OSS systems deployed by Pacific and GTEC. It is our goal in this proceeding to address concerns raised by all types of local service providers.

In consolidated complaint proceedings, Case (C.) 96-12-026, C. 96-12-044, and C.97-02-021, the final decision (D.97-09-113)<sup>4</sup> noted the Commission's concern about the slow growth of competition in the local exchange market. In the consolidated complaint cases as well as in other significant California telecommunications proceedings (such as OANAD<sup>5</sup>), the Commission identified OSS deployment as one of several factors critical to the growth of competition in the local exchange market. Therefore, we intend to expedite this proceeding so that we can effectively monitor and oversee OSS processes. As a first step, we intend to adopt an interim list of performance measures as quickly as possible so that we can begin to assess key aspects of OSS performance. The draft form of this list is attached as Appendix B.

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<sup>3</sup> In order to gain authorization to provide, within its defined local exchange service area, telecommunications between a point located in a local access and transport area (LATA) and a point located outside such area (in-region interLATA services), a BOC must show compliance with certain provisions of Section 271. The state public utilities commission within the affected state shall verify that the BOC has entered into one or more binding interconnection agreements and has complied with a 14-point checklist.

<sup>4</sup> The final decision was mailed on September 25, 1997.

<sup>5</sup> Open Access and Network Architecture Development proceeding, Rulemaking 95-04-043/ Investigation 95-04-044.

## II. Introduction

In the November 1993 report entitled Enhancing California's Competitive Strength: A Strategy for Telecommunications Infrastructure, the Commission stated its intention to open all telecommunications markets to competition by January 1, 1997. The California Legislature subsequently adopted Assembly Bill 3606 (Ch. 1260, Stats. 1994), expressing similar legislative intent to open telecommunications markets to competition by January 1, 1997. Following the issuance of our 1993 report, the Commission took several steps to secure this mutual goal.

In mid-1995, we adopted rules in Rulemaking (R.) 95-04-043/Investigation (I.) 95-04-044 (the Local Competition proceeding) that apply to prospective competitive local carriers (CLCs) when they are requesting certificates of public convenience and necessity (CPCNs) to provide local exchange service. In the same decision,<sup>4</sup> we also adopted consumer protection rules for CLCs to incorporate into their tariffs, and set the timetable for the CLCs' entrance into the local exchange market. In December 1995, we opened the market for facilities-based competitors (effective January 1, 1996), certified an initial group of 31 facilities-based providers, and established procedures for negotiating interconnection arrangements with incumbent Local Exchange Carriers (ILECs).

By March 1996, 60 resellers had been certified and resale discount rates for Pacific and GTEC were adopted. In the interim, we have continued to refine our rules and to certify new market entrants.

## III. The Need for OSS Performance Standards in Order to Monitor the Progress of the Competitive Market

In February 1996, this Commission adopted rules governing relations between the ILECs and new telecommunications market entrants, including a rule relating specifically to implementation of OSS:

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<sup>4</sup> D.95-07-054, 60 CPUC2d 611 (1995).

"LECs shall put into place an automated on-line service ordering and implementation scheduling system for use by CLCs. Data pertaining to service and facility availability shall be made available to CLCs."

Unfortunately, this rule provided no due date for developing an automated on-line ordering and implementation system. Moreover, it contains no monitoring requirement to ensure that the systems actually implemented by the ILECs meet CLCs' needs. As a result, at present the Commission has no way of measuring whether Pacific and GTEC are achieving parity with their retail operations.

The Federal Communications Commission (FCC) emphasized the importance of OSS functions when it included OSS in its list of elements required to be unbundled and made available to competitors: "The [FCC] concludes that incumbent LECs must provide nondiscriminatory access to operations support systems functions by January 1, 1997. The Commission concludes that access to such operations support systems is critical to affording new entrants a meaningful opportunity to compete with incumbent LECs."

In its Final Rules appended to the First Interconnection Order, the FCC points to the need for parity between the OSS systems used by the LEC (as part of its retail operations) and those put in place for competitive carriers. Section 51.311(b) states:

"... to the extent technically feasible, the quality of an unbundled network element, as well as the quality of the access to such unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall be at least equal in quality to that which the incumbent LEC provides to itself."

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<sup>2</sup> D. 96-02-072, Appendix E, Page 14.

<sup>3</sup> Federal Communications Commission, "Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers," First Report and Order, adopted August 1, 1996, ¶27 (FCC 96-98).

In summary, OSS is included on the FCC's list of network elements to be unbundled, and parity between retail and competitive OSS functions is required where technically feasible.

On December 11, 1996, MCI Telecommunications Corporation (MCI) filed a complaint with this Commission alleging that its entry into the local market was being constrained by Pacific's failure to migrate customers to MCI on a timely basis and without service interruption.<sup>7</sup> AT&T Communications of California, Inc. (AT&T) filed a similar complaint on December 23, 1996, alleging that problems with Pacific's internal record-keeping system resulted in a substantial number of customers whose service was disconnected when they attempted to switch their service to AT&T. AT&T went on to complain about the limited resources Pacific had devoted to the handling of resale orders, which restricted the number of migration orders which could be processed in a day.<sup>8</sup> Sprint Telecommunications Venture and Sprint Communications Company L.P. (collectively, Sprint) filed a complaint, with charges similar to AT&T's, in February 1997. The Commission addressed the three complaints on a consolidated basis.

The Commission decided the complaint cases in D.97-09-113. Despite the outcome of the consolidated complaint cases, the Commission still needs to take a more active role in the implementation of OSS to ensure that efforts to open markets to competition are not thwarted by inadequate OSS functions. At present, we do not have the necessary information before us to enable the Commission to take a full and active role in ensuring that OSS deployment facilitates, rather than inhibits, the growth of competition in the local market. To remedy that situation, the decision in the consolidated complaint cases directed the Telecommunications Division to prepare this investigation for the Commission's consideration (D.97-09-113, pp. 25-26).

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<sup>7</sup> C.96-12-026 filed by MCI on December 11, 1996.

<sup>8</sup> C.96-12-044 filed by AT&T on December 23, 1996.

#### IV. The Need for Monitoring Data In the 271 Proceeding

In addition to our need for information on OSS deployment, we also have the responsibility of verifying Pacific's compliance with the 14-point checklist set forth in Section 271 of TA 96.<sup>11</sup> The checklist is outlined in the Commission's Section 271 proceeding. Its purpose is to establish a record in preparation for Pacific's application for in-region interLATA authority.

Further, in Memorandum Opinion and Order FCC 97-298,<sup>12</sup> the FCC sets forth its expectations for states and BOCs regarding implementation of OSS systems. The FCC states that OSS functions must be taken into account in determining compliance with particular checklist items:

"... an examination of a BOC's OSS performance is integral to our determination whether a BOC is 'providing' all of the items contained in the competitive checklist. Without equivalent access to the BOC's operations support systems, many items required by the checklist, such as resale services, unbundled loops, unbundled local switching, and unbundled local transport, would not be practically available."<sup>13</sup>

Once again, it would be difficult for this Commission to assess the availability of checklist items without factual data on how the OSS processes associated with those elements are functioning. Further, our consolidated proceeding in anticipation of Pacific's application for in-region interLATA authority has not collected any information which would enable us to monitor the company's progress in implementing its OSS functions. We intend that the Performance Monitoring Reports,

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<sup>11</sup> The proceeding was initiated by Managing Commissioner Ruling dated August 9, 1996. The proceeding encompasses both our unbundling (R.93-04-003 and I.93-04-002) and local competition (R.95-04-043 and I.95-04-044) dockets.

<sup>12</sup> In the Matter of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services in Michigan, August 19, 1997 (the Ameritech Michigan decision).

<sup>13</sup> *Id.* at ¶132.

as outlined in Appendix B, will serve the additional function of assisting us in our evaluation of Pacific's eventual application for interLATA authority.

In the Ameritech Michigan decision, the FCC made several determinations regarding the need for parity in order to establish nondiscriminatory access to OSS functions. According to the FCC's parity requirements, access must be granted to all BOC processes, including the existing legacy systems<sup>14</sup> used by the BOCs to provide service to competitors. With these parity requirements in place, it is not surprising that access to Pacific's Service Order Retrieval and Distribution (SORD) system and other legacy systems was an issue in the consolidated complaint cases. Thus, we intend to address access to those systems and other equivalent interfaces in this rulemaking.

The FCC determined that any functions that BOCs access electronically must be made available on an electronic basis to their competitors. The FCC also concluded that BOCs must ensure that operations support systems are designed to accommodate both current demand and projected demand of competing carriers for access to OSS functions.

The Ameritech Michigan decision also clarifies that several OSS functions have retail analogues, such as functions associated with pre-ordering; ordering and provisioning for resale services, and repair and maintenance for both unbundled network elements and resale services.<sup>15</sup> The existence of a retail analogue facilitates the measurement of parity between retail and competitive operations. For elements where no retail analogue exists, such as in the ordering and provisioning of unbundled network elements, the FCC has determined that the BOC must demonstrate that the access it provides meets the nondiscrimination test.

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<sup>14</sup> Legacy systems are those systems developed by the incumbent Local Exchange Carrier for its retail operations.

<sup>15</sup> FCC's Ameritech Michigan decision, at ¶140.

The FCC expressed concern with the way OSS measurements are, or may be, conducted.<sup>14</sup> With this in mind, the Commission would like to develop measurements and standards that will produce meaningful and necessary data.

The Commission used a variety of sources to develop the draft performance measures. One source was the issues raised in the consolidated complaint cases. Other sources are the Bell Atlantic/ NYNEX decision, the FCC's Ameritech Michigan decision, as well as suggestions from industry working groups (i.e. the Local Competition Users' Group, or LCUG).

Appendices A and B address many of the concerns expressed by parties. Of all the issues raised by the parties, this Commission is most concerned that Pacific's ability to process orders from competitors may be severely limited.<sup>15</sup> The Commission is concerned that the daily capacity of Pacific's Local Interconnection Service Center (LISC) may not be sufficient to allow the rapid growth of competition in California. In this proceeding, we intend to monitor both what Pacific states is the daily capacity of the LISC, as well as the average number of orders actually processed through the LISC every day. If we determine that the capacity of the LISC is not adequate to ensure the growth of robust competition, we are prepared to set a timetable for requiring improvements in its capacity. We will monitor the same information for the OSS processes implemented by GTEC.

Our goal is to ensure that the measures and standards developed as part of this rulemaking include all of those necessary for us to evaluate whether Pacific's OSS system complies with the checklist requirements, as elucidated by the FCC in its

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<sup>14</sup> In the Ameritech Michigan decision, the FCC gives the example of Ameritech measuring installations completed outside of a six-day interval. That particular measurement would not show if, for example, Ameritech accomplished its retail installations within one day and its resale installations within five days. Both measures fall within the six-day range, but the data generated from the particular measurement are not meaningful. Parity is not being achieved, but the measurement does not display that fact. [See Ameritech Michigan decision, ¶¶ 164-171.]

<sup>15</sup> In its Ameritech Michigan decision, the FCC discussed the issue of OSS capacity constraints as volumes increase.



Ameritech Michigan decision. The Commission is also concerned that GTEC's OSS not be an impediment to the growth of competition in California.

**V. Impact of this Rulemaking on Other Required OSS Measurements**

Currently, some of the interconnection agreements among the parties include performance measures which may vary from those ultimately adopted in this rulemaking. Those agreements all include clauses allowing the agreements to be amended by the parties. The parties may want to re-examine the performance measures and standards in their interconnection agreements in light of measurements adopted in this rulemaking.

In addition to performance measures in the interconnection agreements approved by this Commission, there has also been activity on OSS issues at the federal level. The FCC issued a public notice seeking comment on a petition for an expedited rulemaking on OSS requirements in the FCC's First Report and Order.<sup>14</sup>

The FCC asked parties to comment on whether the FCC should issue a rulemaking on OSS performance and technical standards. The Commission will be watching the FCC's actions closely and intends to be an active participant in any rulemaking issued. This will assure that there is no conflict between state and federal OSS rules. At the same time, we are not willing to wait to see what the FCC might do in this area. We see this issue as critical to the development of competition and in need of a prompt resolution.

**VI. Proposed Rules**

This rulemaking and investigation is intended to provide this Commission with additional information needed to allow a close monitoring of the development of local competition in California.

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<sup>14</sup>The petition was jointly filed by LCI International Telecom Corp. and the Competitive Telecommunications Association on May 30, 1997.

In an effort to promote improvements in the ILECs' OSS, Appendix A and Appendix B contain draft rules that establish performance measures, including methodologies for measurement, a generic schedule that ILECs must follow when upgrading OSS to reflect industry adopted standards, and rules governing the distribution of performance reports. These rules are based in large part upon the criteria developed by the FCC in its order approving the Bell Atlantic/NYNEX merger, and the FCC's order denying the Ameritech Michigan request for interLATA authority.

The Telecommunications Division attempted to balance two needs: 1) the need for timely information that would allow competitors and this Commission to determine parity with retail operations, and 2) the ILECs' concern that a monitoring program should not be unduly burdensome or costly to the ILECs. In an effort to formulate a solution, the Commission would like parties to comment on the proposed measurement concept of a two-tier reporting system. A two-tiered mechanism provides less burdensome reporting when the ILECs meet performance standards established by this Commission. In other words, when the ILECs are *in compliance* with performance standards, the ILEC would be required to file reports on the measures in Appendix B, but only on an industry-aggregate basis. When an ILEC fails to meet performance standards, it would be required to provide the reports in Appendix B on a carrier-specific and industry-aggregate basis, as directed in Appendix A. Parties should comment on both the merits of a two-tiered reporting system and the appropriate standards that ILECs must meet to qualify for the simplified filing requirements outlined above.

In responding to this rulemaking, parties should also address the following questions/issues:

- 1) Comment on the specific proposals outlined in Appendices A and B. In addition, as to Appendix B, provide comments on the appropriateness of the specific measures listed. The Commission intends to adopt an interim set of performance measures on an expedited basis. As mentioned above, the Commission is considering a two-tiered reporting system, where a more detailed disclosure will be required if a certain level of performance is not met. Please comment, for each proposed measurement, what the cut-off or

"trigger" performance standard should be. Each proposed performance minimum should be fully supported.

- 2) For the measures described in Appendix B, ILECs should indicate which measures are not currently being utilized for their retail operations and would cause significant costs to implement. Should costs be booked into the implementation cost memorandum account established in the Local Competition proceeding? If these should not be treated as implementation costs, what is the appropriate cost recovery mechanism?
- 3) Facilities-based competitors may have additional measurements to propose relating to update of 911 databases, directory assistance databases, etc. Parties are encouraged to propose additional measures, using the format in Appendix B.
- 4) For each of the performance measures listed in Appendix B, parties should provide specific target ILEC performance goals for each item measured. Each proposed performance standard must be fully supported. The Commission anticipates that it will take longer to develop and adopt appropriate performance standards than to develop the list of performance measures. Parties should explain the procedural steps the Commission should go through to develop both performance measurements and standards, e.g., additional written comments, evidentiary hearings, workshops. Be specific as to how much time would be needed for hearings or workshops, and explain which issues can best be addressed through a particular procedural vehicle.
- 5) Should the Commission mandate particular OSS interfaces? Some interface types include Electronic Data Interface (EDI), a Graphic User Interface (GUI)-based system, direct access to ILEC databases (e.g. Pacific's SORD system), Internet access, NDM or RMI 5.9, and fax. Which of those listed will now, or in the future, meet your company's needs and why? Which would you not use? Describe other interfaces not listed that your company would use.
- 6) If the CPUC mandated access to ILEC legacy systems, what are some of the issues involved? How has this worked in other states where competitors have been allowed access to legacy systems? Is there a role or need for the Commission to be involved in legacy system upgrades? Do the ILECs have any specific issues relating to access to their legacy systems?
- 7) Under TA96, GTEC is not required to comply with the 14-point checklist to be granted interLATA relief. Should the Commission hold GTEC to the same measures of performance as Pacific? Are some of the proposed measures in Appendix B specific to determining 271 compliance and therefore not

appropriate for GTEC? If so, specify which measures are not appropriate for GTEC and explain why.

- 8) The capacity of the ILECs' order processing facilities should be measured on a routine basis. We propose that competitive carriers and the Commission be given information from the ILECs on a monthly basis; this information should show the daily capacity of the ILEC's order processing system. Those monthly reports should also contain a six-month forecast of the daily capacity of the ordering/provisioning system. In addition, the Commission should receive monthly information on the number of orders actually processed each day. Parties should comment on whether there are competitive reasons why data on actual number of orders processed should not be shared with CLCs.
- 9) What penalties are appropriate for noncompliance? Waivers of nonrecurring charges (NRCs) for those elements or services ordered? Refunds of 10% (or some other percentage) of all NRCs paid by a particular carrier in a particular time frame? Should the Commission assess penalties under Public Utilities Code Section 2107? In what circumstances would it be appropriate to assess such penalties? Should the penalty be assessed each time an ILEC does not meet a particular standard or should the penalty be assessed based on a pattern, e.g., three months of not meeting a particular standard?

**IT IS ORDERED that:**

1. A rulemaking and investigation on the Commission's own motion into Monitoring Performance of Operations Support Systems are hereby instituted. We direct all prospective parties who wish to remain on the service list for this rulemaking proceeding to send a letter no later than October 20, 1997 to the Commission's Process Office. The assigned Administrative Law Judge (ALJ) will issue a ruling establishing a service list for this rulemaking proceeding.

2. Parties are directed to file comments on the proposed interim rules herein with the Commission's Docket Office, and to concurrently serve a copy of their filed comments on the service list for this rulemaking proceeding as set forth in the ALJ Ruling discussed above, and on the assigned ALJ. Filed comments with a maximum of 50 pages including appendices and attachments are due no later than November 6, 1997, with reply comments with a maximum of 25 pages due on November 20, 1997.

3. Parties shall state whether they believe evidentiary hearings will be required to resolve any issues listed in the proposed interim rules in Appendices A and B, and if further written comments or workshops will be required for specific issues.

4. Any party which believes that changes or additions to the proposed interim rules are appropriate, but that no evidentiary hearings are required, should clearly set forth in its comments any additional information it believes the Commission should consider before adopting rules. Any proposals for additional measurements must be submitted in the same format as Appendix B.

5. Parties which believe evidentiary hearings are warranted for specific issues are directed to present a proposed schedule for conducting discovery, preparing testimony, holding hearings and filing briefs to resolve those issues as quickly as possible.

6. If the assigned ALJ believes a workshop will further the goal of expediting development of performance measures, the workshop shall be convened during the first week of December 1997. An agenda will be provided to the service list five days prior to the workshop start date.

This order is effective today.

Dated October 9, 1997, at San Francisco, California.

P. GREGORY CONLON  
President

JESSIE J. KNIGHT, JR.

HENRY M. DUQUE

JOSIAH L. NEEPER

RICHARD A. BILAS

Commissioners

APPENDIX A

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**MONITORING OSS DEPLOYMENT**

1. Pacific Bell and GTEC (the ILECS) shall prepare and provide Performance Monitoring Reports as follows:
  - a. ILECs shall, at a minimum, develop and maintain the data necessary to complete Performance Monitoring Reports that include the performance measures set out in Appendix B.
  - b. The ILECs shall, at a minimum, provide to the California Public Utilities Commission (Commission or CPUC) and to each carrier purchasing interconnection (which for purposes of these rules includes interconnection, transport and termination, services for resale, and/or access to unbundled network elements under section 251 of the Communications Act of 1934, as amended) Performance Monitoring Reports regarding the ILECs' provision of:
    - i) services to ILEC's retail customers in the aggregate; ii) services and facilities provided to any ILEC local exchange affiliate purchasing interconnection; iii) services and facilities provided to carriers purchasing interconnection in the aggregate; and iv) services and facilities provided to individual carriers purchasing interconnection. The ILECs shall provide the Performance Monitoring Reports for an individual carrier to that carrier only.
  - c. The ILECs shall ensure that any individually identifiable carrier information contained in the Performance Monitoring Reports is disclosed only to the individual carrier. Except as provided under subsection (d) below, the ILECs shall not use any individually identifiable carrier information for any purpose other than providing and reporting on its provision of services and unbundled network elements to the individual carrier.
  - d. The ILECs shall provide Performance Monitoring Reports to carriers purchasing interconnection from the ILECs beginning 90 days after Commission approval of this order and no less than monthly thereafter, except that data for certain measures may not be available by the time of the first report, in which case the measure shall be included in the second and subsequent reports. The ILECs shall make the Performance Monitoring Reports available to the Commission at the same time that those reports are available to individual carriers, and shall permit carriers receiving such reports to make the reports available to the Commission.
  - e. The ILECs shall maintain files of each monthly Performance Monitoring Report for a period of three years from the time when the reports are made available to individual carriers and the Commission.

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The ILECs shall provide access to the available data and information necessary for a carrier receiving Performance Monitoring Reports to verify the accuracy of such reports.

- g. The Commission retains the authority to audit the accuracy of the data in the Performance Monitoring Reports.
2. The ILECs shall provide uniform interfaces for use by carriers purchasing interconnection to obtain access to operations support systems as follows:
- a. The ILECs shall undertake all commercially reasonable efforts to implement each industry-adopted standard or guideline established by the Alliance for Telecommunications Industry Solutions (ATIS) for interfaces used by carriers purchasing interconnection to obtain access to operations support systems (OSS) as soon as reasonably possible, and in any event no later than 180 days after final adoption by ATIS. For those standards or guidelines that have been adopted prior to the issuance of this order, the ILECs shall fully implement such standards or guidelines as soon as reasonably possible, and in any event no later than 180 days after final approval of the standards or within 150 days from Commission approval of this order, whichever is later.
  - b. For those functions for which ATIS has not adopted industry standards, the ILECs initially shall undertake all commercially reasonable efforts to offer to all carriers purchasing interconnection uniform interfaces (including both a Graphic User Interface (GUI)-based or other comparable interface and an EDI-based or comparable application-to-application interface) as soon as reasonably possible and in any event within 120 days following Commission approval of this order. Similarly, the ILECs shall initially offer to all carriers purchasing interconnection uniform interfaces (including offering an EDI-based or comparable application-to-application ordering interface and making available, upon request, PC-based software comparable to a GUI-type interface) as soon as reasonably possible and in any event within 120 days following Commission approval of this order.
  - c. Throughout this period, the ILECs shall continue to make available to carriers purchasing interconnection any existing interfaces that the ILECs have agreed to provide in any interconnection agreements previously entered into with such carriers (unless such carriers agree otherwise).
  - d. The ILECs shall provide drafts of detailed specifications involving implementation of standards or guidelines established by ATIS within 90 days after final approval of the standards. Those draft specifications will be the subject

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of discussions and agreement by the parties prior to system testing or setting implementation schedules. If no agreement is reached by the parties within 30 days of receipt of the specifications, either party may employ the Expedited Dispute Resolution process discussed below.

3. The ILECs shall conduct operational testing of the interfaces used by carriers purchasing interconnection to obtain access to operations support systems as follows:
  - a. The ILECs shall conduct carrier-to-carrier testing of their interfaces for obtaining access to OSS with carriers that request to engage in such testing. The ILECs shall be ready to begin such testing as soon as reasonably possible after receiving a request and in any event no later than 45 days after a request for such testing has been received. This carrier-to-carrier testing shall be conducted using noncommercial orders to ensure compatibility between the two carriers' systems. The two carriers shall determine the appropriate time period for the duration of such a test. If the two carriers cannot determine the appropriate time period for the duration of such test, they should employ the Expedited Dispute Resolution process discussed below. The ILECs shall not limit the opportunity for carrier-to-carrier testing to any individual carrier.
  - b. Each ILEC shall provide evidence to the Commission, by no later than six months following Commission approval of this order, to demonstrate that its interfaces for obtaining access to OSS are capable of handling the reasonably expected demands for pre-ordering, ordering, provisioning, billing, repair and maintenance with respect to resold services, unbundled network elements, and combinations of unbundled elements. This evidence shall include, among other things, the operation of such interfaces at actual commercial volumes, the results of testing conducted in conjunction with independent third parties, the results of carrier-to-carrier testing, and the results of internal testing.
4. Since issues relating to OSS could impede competition, the Commission wants those disputes to be resolved quickly. The ILECs and parties requesting interconnection shall use the following Expedited Dispute Resolution process to resolve disputes relating to any of the requirements outlined in Appendix A:
  - a. Before bringing the dispute to the Commission, the parties must escalate the dispute within each company through the Vice President level in an effort to achieve resolution.
  - b. If the issue cannot be resolved at the Vice President level, either party may by FAX or telephone, raise the specific complaint to the Director, Telecommunications Division (TD), or his designee.



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- c. The other party must receive notification at the same time, or within one hour, of the transmission of the substance of the complaint to TD.
- d. Once a dispute has been brought to the TD for mediation, neither party can take action on the issue for one week.
- e. TD will convene the affected parties, either in person or via telephone conference call, within one working day of receipt of the complaint to mediate the dispute and attempt to resolve the disputed issues.
- f. TD will issue its advisory opinion within one week of receipt.
- g. If either party is aggrieved by the outcome of the mediation process, that party can file a formal complaint with the Commission and ask for an injunction.
- h. The ALJ Division will rule upon any request for an injunction within one week of the request.

**(END OF APPENDIX A)**

APPENDIX B

OSS PERFORMANCE MEASURES AND STANDARDS

PRE-ORDERING

Function	Objective	Methodology	Report Level
Response time, OSS interface.	Average response time per transaction for a query for appointment scheduling, service & feature availability, address verification, request for Telephone Numbers (TNs) and Customer Service Records (CSRs). The query interval starts with the request message leaving the CLEC and ends with the response message arriving at the CLEC.	Measurement: Mean Cycle Time	<ul style="list-style-type: none"> <li>• Not carrier specific.</li> <li>• Not product/service specific.</li> </ul>
OSS Interface Availability	Percent of times OSS interface is actually available compared to scheduled availability.	Measurement: Percentage	<ul style="list-style-type: none"> <li>• Not carrier specific.</li> <li>• Not product/service specific.</li> </ul>

## ORDERING

Function	Objective	Methodology	Report Level
Order Confirmation Timeliness	Average response time from receipt of service order request to distribution of order confirmation.	<ul style="list-style-type: none"> <li>Flow-through orders: OSS to provide data on a carrier specific basis.</li> <li>Manual input orders: Manual tracking - 100% sample by carrier for Trunks and UNE.</li> <li>Resale - valid statistical sample for reporting month</li> </ul>	See footnote 1.
Reject Timeliness	Average reject time from receipt of service order request to distribution of rejection.	<ul style="list-style-type: none"> <li>Flow-through orders: OSS to provide data on a carrier specific basis.</li> <li>Manual input orders: Manual tracking - 100% sample by carrier for Trunks and UNE.</li> <li>Resale - current statistical sample.</li> </ul>	See footnote 1.
Percent Rejects	Percent of total orders received rejected due to error or omission.	<ul style="list-style-type: none"> <li>Manual tracking for non-flow through orders.</li> <li>Mechanized tracking for flow-through.</li> <li>Separate percentages for CLEC vs. ILEC errors.</li> </ul>	See footnote 1.

1 Carrier specific. Reported on a per order basis as follows:

- Feature changes and disconnects.
- Interconnection Trunks - average response time, percent less than 10 days.
- UNE (FOIS) - less than 10 lines/ circuits and 10 lines/ circuits or more, mechanized orders and non-mechanized orders.
- UNE (Specials) - less than 10 lines/ circuits and 10 lines/ circuits or more, mechanized orders and non-mechanized orders.
- Resale (FOIS) - less than 10 lines/ circuits and 10 lines/ circuits or more, mechanized orders and non-mechanized orders.
- Resale (Specials) - less than 10 lines/ circuits and 10 lines/ circuits or more, mechanized orders and non-mechanized orders.

<p><b>Order Accuracy</b></p>	<p>Measures the accuracy and completeness of the I.I.C provisioning or disconnecting service by comparing what was ordered and what was completed.</p>	<ul style="list-style-type: none"> <li>• Statistically valid sample.</li> <li>• Percentage.</li> <li>• Flow-through orders: OSS to provide data on a carrier specific basis.</li> <li>• Manual input orders: Manual tracking - 100% sample by carrier for Trunks and UNE.</li> <li>• Resale - valid statistical sample.</li> </ul>	<p>See footnote 1.</p>
<p><b>Order Status</b></p>	<p>Measures the response time for: Firm Order Confirmations (C-FOCs and D-FOCs), jeopardize/ revised due date, rejects, completions from the time an order is sent to the I.I.C until a status is received, and number of held orders.</p> <p>*C-FOC: accepted, no change. D-FOC: accepted, does not match due date.</p>	<p>Measurements:</p> <p><u>Mean Time to Return FOC</u>  <math>(\# \text{ of FOCs returned} \div (\text{Total} \# \text{ of Orders Sent}) - \text{Rejects Returned}) \times 100</math></p> <p><u>Mean Time to Return D-FOCS</u>  <math>(\# \text{ of D\_FOCs returned in } \leq X \text{ hours} \div (\text{Total} \# \text{ of Orders sent} - \text{Rejects Returned})) \times 100</math></p> <p><u>Mean Time to Return Rejects</u>  <math>(\# \text{ of Rejects returned in } \leq X \text{ seconds}) \div (\text{Total} \# \text{ of Rejects Returned}) \times 100</math></p> <p><u>Mean Time to Return Completion</u>  <math>\text{Jeopardies returned within X\% of allotted order time} \div \text{Total} \# \text{ Jeopardies Returned}</math></p> <p><math>(\# \text{ of Completions returned in } \leq X \text{ minutes}) \div (\text{Total} \# \text{ Completed Orders}) \times 100</math></p> <p><u>Jeopardies</u>  <math>(\text{Total C-FOCS} - \text{Total Rejects})</math></p>	<p>See footnote 1.</p>
<p><b>Percent flow-through orders</b></p>	<p>Measures percentage of orders that utilize the I.I.Cs' OSS without manual (human) intervention.</p>	<p><math>(\# \text{ of orders handled through flow-through}) \div (\text{total orders})</math></p>	<p>See footnote 1.</p>

**PROVISIONING**

Function	Definition/ Measurement Objective	Methodology	Report Level
Average Offered Interval	Average time from receipt of (accepted) service request to due date provided on order confirmation. Excludes orders where customer requested Due Date is beyond offered interval.	Mechanized metric from ordering system.	See footnote 2.
Average Completed Interval	Average time from receipt of (confirmed) service request to actual order completion date. Excludes order where customer requested dates are beyond offered interval.	Mechanized metric from ordering system.	See footnote 2.
Percent Completed Within Five Days	Measure of orders completed within five days of receipt of confirmed service request for POTS services. Excludes orders where customer requested dates are beyond offered interval.	Mechanized metric from ordering system.	See footnote 2, but interconnection trunks may be omitted.

2 Reported by Carrier on a per order basis as follows:

- UNE (POTS): by groups of lines on single order. Separately tracked for dispatch and no dispatch, as follows:
  - 5 lines/ circuits or less.
  - 6-9 lines/ circuits.
  - 10 lines/ circuits or more.
- UNE (Specials): by groups of lines on single order similar to UNE (POTS) described above.
- Resale (POTS): by groups of lines on single order similar to UNE (POTS) described above.
- Resale (Specials): by groups of lines on single order similar to UNE (POTS) described above.
- Interconnection Trunks
- Feature changes and disconnects

Percent Missed Installation Appointments	Percent of orders where completions are not done by due date on order confirmation. Misses due to competing carrier or end user causes should be aggregated out and indicated.	Mechanized metric from ordering system. If mechanical is not available, a statistically valid sample should be used instead.	See footnote 3
Facility Missed Orders	Percent of ordered with missed committed due dates due to lack of facilities.	Mechanized metric from ordering system. If mechanical is not available, then a statistically valid sample should be used.	See footnote 3.
Percent Installation Troubles within 30 days	Troubles received on lines within 30 days of service order activity as a percent of lines ordered in 30 days.	Mechanized metric trouble reports captured in maintenance data, lines ordered from ordering system. If mechanical is not available, then a statistically valid sample should be used.	See footnote 3.

3 Carrier specific. Reported on a per line basis as follows:

- Interconnection Trunks
- UNE POTS – dispatch and no dispatch.
- UNE Specials
- Resale POTS – dispatch and no dispatch.

**MAINTENANCE**

Function	Objective	Methodology	Report Level
Customer Trouble Report Rate	Initial customer direct or referred troubles reported within a calendar month where cause is in the network (not customer premises equipment, inside wire, or carrier equipment) per 100 lines/ circuits in service.	Mechanized metric trouble reports and lines in service captured in maintenance data base.	See footnote. <sup>1</sup>
Missed Repair Appointments	Percent of trouble reports not cleared by date and time committed. Appointment intervals vary with force availability in the FOTS environments. Specials and Trunk intervals are standard interval appointments of no greater than 24 hours.	Mechanized metric from maintenance data base(s).	Carrier specific. Reported on a per line basis. Reported as follows: <ul style="list-style-type: none"> <li>• UNE FOTS - Dispatched, Not Dispatched, and misses where the competing carrier or end user causes the missed appointment.</li> <li>• Resale FOTS - All misses, as well as misses where the competing carrier or end user causes the missed appointment.</li> <li>• Interconnection Trunks-Dispatched, Not dispatched</li> <li>• UNE Specials-Dispatched, Not Dispatched</li> <li>• Resale Specials-Dispatched, Not Dispatched</li> </ul>

<p><b>Mean Time to Repair</b></p>	<p>Average duration time from receipt of trouble report to clearing of trouble report. Stop Clock (for specials and trunks). Stop clock refers to the time from trouble clearance to validation of trouble closure by carrier (administrative time).</p>	<p>Mechanized metric from maintenance data base(s).</p>	<p>See footnote 3.</p>
<p><b>Out of Service More Than 24 Hours</b></p>	<p>For Out of Service Troubles (no dial tone, cannot be called or cannot call out). The percent of troubles cleared in excess of 24 hours.</p>	<p>Mechanized metric from maintenance data base(s).</p>	<p>See footnote 3.</p>
<p><b>Total and Percent Repeat Trouble Reports within 30 Days</b></p>	<p>Trouble reports on the same line/ circuit as a previous trouble report within the last 30 calendar days as a percent of total troubles reported.</p>	<p>Mechanized metric from maintenance data bases.</p>	<p>See footnote 3.</p>



**NETWORK PERFORMANCE**

Function	Objective	Methodology	Report Level
Percent Common Trunk Blocking	Measures number of trunk groups above .005 standard during busy hour on a monthly basis. Standard blocking report for trunk groups for local traffic from all end office to tandems. Engineering design blocking standard = P. 005.		Not carrier specific.
Percent Dedicated Final Trunk Blocking	Measures number of final trunk groups above .01 standard during busy hour on a monthly basis. Engineering design blocking standard = P.01.		Carrier specific metric for dedicated trunks.
Center Responsiveness	Measures time for the ILEC representative to answer business office calls in provisioning and trouble report centers.	Mean time to answer calls without IVR; if IVR, then mean time to answer calls after the end of IVR.	

**BILLING**

Function	Objective	Methodology	Report Level
<b>Timeliness of Daily Usage Feed</b>	Measures the number of business days from message creation date to date message information is available to CLEC on daily usage feed (DUF).	Measurement: <ul style="list-style-type: none"> <li>• Percent in 3 business days</li> <li>• Percent in 4 business days</li> <li>• Percent in 5 business days</li> <li>• Percent in 8 business days</li> </ul>	Carrier specific.
<b>Accuracy</b>	Measures the percentage and mean time of billing records delivered to CLEC in the agreed-upon format and with the complete agreed-upon content (includes time and material and other non-recurring charges).	Measurement: <ul style="list-style-type: none"> <li>• Percentage</li> <li>• Mean time</li> </ul>	Carrier specific.

**OPERATOR SERVICES AND DIRECTORY ASSISTANCE (DA)**

Function	Objective	Methodology	Report Level
Average Speed to Answer	Measures the percent and mean time a call is answered by an OS or DA operator in a predefined timeframe.	<p>DA-1  <math display="block">\frac{\# \text{ Calls Answered Within 12 seconds} \times 100}{\text{Total DA Calls}}</math></p> <p>DA-2  <i>DA Mean Time To Answer</i></p> <p>OS-1  <math display="block">\frac{\# \text{ Calls Answered Within 10 seconds} \times 100}{\text{Total OS Calls}}</math>                     where "x" equals 2 or 10 seconds</p> <p>OS-2  <i>OS Mean Time To Answer</i></p>	<ul style="list-style-type: none"> <li>• Reported in the aggregate.</li> <li>• Not carrier specific.</li> </ul>

INTERCONNECT / UNBUNDLED ELEMENTS AND COMBOS (IUE)

Function	Objective	Methodology	Report Level
Availability of Network Elements	Measures the availability of network elements.	<p>IUE-1  <math display="block">\frac{\# \text{ minutes Loop unavailable} \times 100}{\text{Total \# minutes}}</math></p> <p>IUE-2  <math display="block">\frac{\# \text{ minutes A-link available during "x" years}}{\text{"x" years}}</math></p> <p>IUE-3  <math display="block">\frac{\# \text{ seconds D-link unavailable during "x" year}}{\text{"x" year}}</math></p> <p>Where <math>x \leq</math> or <math>\geq</math> year. After year, monthly reporting should be for a rolling year.</p> <p>IUE-4  <math display="block">\frac{\# \text{ Database Records Correctly Updated} \times 100}{\text{Total \# Update Requests Received by ILEC}}</math></p> <p>IUE-5  <math display="block">\frac{(\# \text{ Database Records Updated within 24 hours of Update Request Receipt})}{(\text{Total \# Database Update Requests Received})} \times 100</math></p>	<ul style="list-style-type: none"> <li>• Reported in the aggregate.</li> <li>• Not carrier specific.</li> </ul>

(END OF APPENDIX B)