

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of

Policy and Rules
Concerning Rates
for Dominant Carriers

AAD 92-47

MEMORANDUM OPINION AND ORDER

Adopted: September 17, 1993; Released: October 12, 1993

By the Acting Chief, Common Carrier Bureau:

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I. INTRODUCTION AND BACKGROUND

1. In the *LEC Price Cap Order*, the Commission concluded that incentive, or "price cap," regulation would provide the local exchange carriers (LECs) with the impetus and opportunity to create and advance a communications network that will keep the United States at the forefront of a worldwide "information economy," and will inspire new services and continuing excellence through investment incentives.¹ In that Order, the Commission also reiterated its commitment to assure the availability of high quality, innovative communications services and the development and maintenance of the telecommunications infrastructure needed to provide these services. Although it expressed certainty that incentive regulation would yield these results, the Commission also ordered the Common Carrier Bureau (Bureau) to expand its monitoring of service quality and infrastructure development. The increased monitoring would allow the Commission to observe the success of incentive regulation, or to become aware of any reduction of service quality or infrastructural investment.

2. The Commission determined that all LECs under price cap regulation would be required to file quarterly service quality reports. LECs for which price cap regulation is mandatory -- the Bell Operating companies (BOCs) and GTE -- would also be required to file semiannual service quality reports and annual infrastructure reports. The Commission delegated to the Chief, Common Carrier Bureau, authority to establish reporting requirements to capture trends in service quality and infrastructure development in the telephone industry under price cap regulation.

3. In response to the Commission's directive, the Bureau released an order setting forth service quality and infrastructure reporting requirements for LECs subject to price cap regulation.² The Bureau stressed that the development of this monitoring plan would be evolutionary, with efforts made to increase the uniformity and usefulness of the reports, as well as to respond to any derogation in service quality or infrastructure development, and to address the needs of state regulators, users, and other interested parties.³ Since the release of that Order, various waiver orders and three public notices have somewhat modified the filing requirements.⁴

¹ Second Report and Order, 5 FCC Rcd 6786, 6827 (1990) and Erratum, 5 FCC Rcd 7664 (1990) (*LEC Price Cap Order*), modified on recon., 6 FCC Rcd 2637 (1991), petitions for further recon. dismissed, 6 FCC Rcd 7482 (1991), upheld on appeal, *National Rural Telecom Association v. FCC*, Nos. 91-1300, 91-1303, 91-1304 and 91-1326, slip op. (D.C. Cir. Mar. 26, 1993), further modified on recon. 6 FCC Rcd 4524 (1991) (*ONA Part 69 Order*), petitions for recon. of *ONA Part 69 Order* pending, appeal docketed, *D.C. PSC v. FCC*, No. 9101279 (D.C. Cir. June

14, 1991).

² Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Memorandum Opinion and Order, 6 FCC Rcd 2974 (Com. Car. Bur. 1991) (*Service Quality Order*); reconsideration 6 FCC Rcd 7482 (Com. Car. Bur. 1991); application for review pending.

³ *Service Quality Order*, 6 FCC Rcd at 2995, para. 51.

⁴ Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Memorandum Opinion and Order, 6

4. One of these, the *July 1992 Public Notice*, also solicited comments on further modifications to service quality and infrastructure reporting. In this Order we consider the proposals set forth in the *Notice*, and the comments filed.⁵ In addition, we make some minor adjustments and clarifications of the existing filing instructions, to correct problems we have discovered in reviewing the filings.

II. DISCUSSION

A. Need for Modification of Reporting Requirements

5. Our *July 1992 Notice* stated our desire to improve the monitoring system immediately; it made some changes effective upon its release, and proposed and sought comment on additional changes. Nine parties oppose any revisions to the service quality and infrastructure reporting requirements at this time. All of these parties argue that revision is premature and should wait until after the LEC price cap performance review.⁶ Some parties suggest that changes in the reporting requirements will decrease our ability to monitor trends in a carrier's performance under price caps.⁷ Two parties, ARINC and TCA, support all of the proposals put forth in the *Notice*, with TCA offering additional proposals of its own.⁸

6. We will examine each proposal on its own merits and make revisions, or not, accordingly. This was our intention when we stated that development of the service quality and infrastructure monitoring program would be evolutionary. We will attempt to retain continuity of data to the extent possible, but remain convinced that improvements should be made as soon as possible, and that uniformity in the units and methods of measurement is desirable. Accordingly, the modifications established here will be effective as

soon as practicable after the release of this Order, and will be reflected in filings beginning March 31, 1994 for data from October 1, 1993 onward.⁹ These changes are shown in the Attachment appended to this Order.¹⁰

7. We would also take this opportunity to raise an issue that continues to be a source of disagreement among the commenting parties -- the issue of benchmarking.¹¹ Several non-LEC commenters, including ARINC and TCA, assert the usefulness and desirability of benchmarking, and describe it as the goal of the Bureau's emphasis on uniformity of measurement units and methodologies.¹² The LECs, on the other hand, mention benchmarking as a danger and as an inappropriate use of the ARMIS data. They cite the Bureau's discussions of the monitoring program to track each price cap LEC's performance, and state that there is not and cannot be comparability among these carriers.¹³

8. While we acknowledge that there are differences among the LECs, we also affirm that benchmarking is not only desirable but indispensable. The Commission stated, in the *LEC Price Cap Order*, that the service quality and infrastructure reports were to be as standardized as possible, and delegated to the Bureau the task of assuring this. The Commission said that "efforts to make the reports more uniform will continue," and specified that "the Bureau [is directed] to make every effort to promote uniformity among the LECs regarding classification of services, establishment of intervals, units of measurement ... and other reporting factors."¹⁴ Where differences among the carriers exist, the Commission stated, the reports "must be similar enough to permit ready benchmarking."¹⁵ We believe that benchmarking will enable us to evaluate the impact of price cap regulation on the quality of service

FCC Rcd 4819 (Com. Car. Bur. 1991) (*Four BOC Waiver*); Memorandum Opinion and Order, 6 FCC Rcd 5051 (Com. Car. Bur. 1991) (*NYNEX Waiver*); Memorandum Opinion and Order, 6 FCC Rcd 6104 (Com. Car. Bur. 1991) (*Ameritech Waiver*); Memorandum Opinion and Order, 6 FCC Rcd 7231 (Com. Car. Bur. 1991) (*Oswayo River Waiver*); Public Notice, 7 FCC Rcd 3590 (Com. Car. Bur. 1992) (*March 1992 Public Notice*); Public Notice, 7 FCC Rcd 4632 (Com. Car. Bur. 1992) (*July 1992 Public Notice*, or *Notice*); Memorandum Opinion and Order, 7 FCC Rcd 4021 (Com. Car. Bur. 1992) (*GTE-Contel Waiver*); Public Notice, 7 FCC Rcd 8795 (Com. Car. Bur. 1992) and Erratum, DA 92-1696, released December 18, 1992 (*December 1992 Public Notice*).

⁵ Comments were filed by Aeronautical Radio, Inc. (ARINC); Ameritech Operating Companies (Ameritech); American Telephone and Telegraph Company (AT&T); the Bell Atlantic telephone companies (Bell Atlantic); BellSouth Telecommunications, Inc. (BellSouth); GTE Service Corporation (GTE); MCI Communications Corporation (MCI); the NYNEX Telephone Companies (NYNEX); Pacific Bell; Rochester Telephone Corporation (Rochester); the Southern New England Telephone Company (SNET); Southwestern Bell Telephone Company (SWBT); Tele-Communications Association (TCA); the United States Telephone Association (USTA); and the United Telephone Companies (United). Reply comments were filed by Ameritech; AT&T; Bell Atlantic; Central Telephone Company (Centel); GTE; International Communications Association (ICA); MCI; NYNEX; Pacific Bell; SWBT; TCA; and USTA.

⁶ See, e.g., GTE Comments at 2-3; USTA Comments at 1-3. In the *LEC Price Cap Order* the Commission decided to undertake a comprehensive performance review of the price cap system of regulation after the end of the third year. This review will

evaluate LEC performance under price cap regulation and make adjustments to the plan as necessary. *LEC Price Cap Order*, 5 FCC Rcd at 6789, para. 20.

⁷ See, e.g., United Comments at 1-2; NYNEX Comments at 1-2. ⁸ ARINC Comments at 1-2; TCA Comments at 15 and Appendix B.

⁹ Although this prompt effectiveness shortens the implementation period we generally try to provide, the requirements set forth here have been developed in concert with the industry, through the use of a USTA working group, so carriers have had abundant notice of the changes. It is important that changes be effective as soon as possible because of the imminent conducting of the price cap performance review.

¹⁰ The Attachment is a comprehensive description of revised FCC Reports 43-05, 43-06 and 43-07, including instructions and reporting procedures for each report.

¹¹ Benchmarking, as used here, refers to the reviewing of performance data by several entities and using the 'best' performance as a paradigm. The benefit of this approach in price cap LEC monitoring is that the benchmark is as dynamic as the industry; the drawback is that the LECs and their service areas and populations are very different, and can never be directly comparable.

¹² See, e.g., ARINC Comments at 2 (supporting the *Notice's* proposed development of gathering actual performance records rather than records of a LEC's success in meeting its own internal standards).

¹³ See, e.g., Bell Atlantic Comments at 1-2; GTE Comments at 12.

¹⁴ *LEC Price Cap Order*, 5 FCC Rcd at 6828, para. 341 and n.455.

¹⁵ *Id.*

provided by the LECs and on the rate of development of technological improvements that are reflected in the LEC infrastructure reports.¹⁶

B. Disaggregated Reporting

9. We currently collect data from the price cap LECs on a study area basis. The *Notice* suggested that we might collect data on an exception basis at a more disaggregated level, such as wire center, as proposed earlier by TCA.¹⁷ Such reporting would require that those carriers having any study areas that failed to perform above a predetermined threshold, established by the Commission, report on a detailed level any entity (wire center, central office) within that study area that failed to perform at that level. Carriers performing at or above the threshold would continue to report at the study area level.

10. Nine of the commenting parties (eight LECs and USTA) are opposed to reporting at a more disaggregated level than is now required.¹⁸ They argue that such a requirement would be extremely burdensome for all concerned, and the Commission's setting of a performance threshold would lead to the creation of national standards. These parties point to our decision in the *Service Quality Order* not to disaggregate reporting to wire centers. There, we stated that this expanded reporting would be an unjustified burden on the LECs, and on the Commission's staff and facilities.¹⁹ In that Order, they note, we also concluded that national standards were not necessary at that time, and that the establishment of such standards is beyond the authority delegated to this Bureau by the Commission.²⁰

11. TCA, which has consistently argued for exception reporting, continues to believe that greater disaggregation is necessary in order to spot locations suffering from persistently inadequate service. However, TCA suggests that an alternative to such exception reporting would be to require that each LEC list those wire centers that fall within the lowest 10% of all its reporting entities in actual performance for two consecutive quarters. TCA notes that this would allow for the use of existing tables, so that no new reports would be required.²¹

12. We have reviewed the arguments presented, and have determined that our current requirement for reporting at the study area level should be retained. We note that we do disaggregate to MSA/non-MSA in some reports, and that switch downtime incidents of two minutes or more are reported and fully identified by individual switch. Our review of submitted data reveals no indications of degraded

service or of increased need for detail. Continuing high service quality means that increased disaggregation of these data would place on the filing carriers and on Commission resources a burden that could not be justified. We continue to believe, and the data collected so far confirm, that the existing high level of service quality and the LECs' responses to price cap incentives negate any need for disaggregated reporting or the establishment of national standards. We have stated, however, that if we should see any evidence of degradation in service, we will revisit this issue. We note that price cap performance review is scheduled to begin in January 1994; it is possible that we would determine at that time that some sort of exception reporting should be implemented. In light of this possibility, and to avoid any delay in such implementation, we now direct price cap LECs to retain all wire center level records underlying these reports. These records must be kept ready for on-demand perusal by Commission staff, and possibly for filing in the future.

C. Who Should Submit Service Quality and Infrastructure Reports

13. At this time, only price cap LECs file service quality and infrastructure reports. The *Notice* explored the possibility of requiring such reports from other entities, including other, non-price cap LECs, as well as interexchange carriers.²²

14. Since the Commission has recently adopted a Report and Order establishing optional incentive regulation plans for non-price cap LECs, including requirements of service quality and infrastructure reporting from those LECs, it would be inappropriate to discuss that issue here.²³ Likewise, the Commission has recently adopted a Report and Order in the AT&T price cap performance review.²⁴ In light of these circumstances, it would be inappropriate for us to address in the instant proceeding the question of extending reporting requirements to parties from whom such reporting is currently not required. We are, however, considering expansion of reporting requirements from at least some price cap carriers. We suggest here that it might be fruitful to collect Semi-annual Service Quality and Infrastructure data from elective price cap companies. We expect to release a public notice in the near future proposing this expansion and soliciting comments.

¹⁶ In the Order establishing and implementing the Automated Reporting Management and Information System (ARMIS), the Commission stated that one purpose of its automated reporting system is to provide an improved basis for oversight functions and to quantify the effects of alternative policy proposals. Benchmarking is one of many tools used to evaluate the reasonableness of past and proposed policies, including price cap regulation for LECs. Automated Reporting Requirements for Certain Class A and Tier 1 Telephone Companies (Parts 31, 43, 67 and 69 of the FCC's Rules) 2 FCC Rcd 5770 (1987); *recon.*, 3 FCC Rcd 6375 (1988); *further recon.*, 4 FCC Rcd 8240 (1989).

¹⁷ *July 1992 Notice*, 7 FCC Rcd at 4632. TCA initially suggested exception reporting in its Comments in response to our *March 1991 Public Notice*, 6 FCC Rcd 1621 (Com. Car. Bur. 1991) proposing service quality reports and soliciting comments on its suggested reports. The TCA remarks were considered and discussed by the Bureau in the *Service Quality Order*.

¹⁸ Bell Atlantic, BellSouth, Pacific Bell, NYNEX, GTE, Roch-

ester, United and SNET oppose disaggregated reporting. *See, e.g.*, GTE Comments at 3; USTA Comments at 3.

¹⁹ *Service Quality Order*, 6 FCC Rcd at 2974, para. 40.

²⁰ *Id.* at para. 44.

²¹ TCA Comments at 7-8.

²² *July 1992 Notice*, 7 FCC Rcd at 4632.

²³ Regulatory Reform for Local Exchange Carriers Subject to Rate of Return Regulation, CC Docket No. 92-135, Notice of Proposed Rulemaking, 7 FCC Rcd 5023 (Com. Car. Bur. 1992) and Erratum, 7 FCC Rcd 5501 (Com. Car. Bur. 1992); Report and Order, 8 FCC Rcd 4545 (Com. Car. Bur. 1993). Those mid-sized companies which adopt the incentive plan will file the 43-05 and 43-07 reports annually.

²⁴ Price Cap Performance Review for AT&T, CC Docket No. 92-134, Notice of Inquiry, 7 FCC Rcd 5322 (1992); Public Notice, 7 FCC Rcd 6084 (Com. Car. Bur. 1992); Report and Order, 8 FCC Rcd 5165 (1993). The Commission saw no need for major changes.

D. Quarterly Service Quality Report 43-05

1. Table I - Interexchange Access Service Installation and Repair Intervals

15. Table I of Report 43-05 gives data on LEC installation and repair performance for interexchange access service. For installations, LECs report their success rate in meeting their own standard interval commitments.²⁵ The *Notice* solicited comment on a new reporting requirement that eliminates any reference to the LEC's standard interval, and simply reports installation intervals in days. It also requested comment on whether measurements should be in calendar days, business days, or hours; and on classifications of types of service to be reported.²⁶

16. Eleven parties, ten LECs and USTA, are strongly opposed to any change in the reporting of installation intervals.²⁷ On behalf of the carriers, USTA argues that this proposal appears to be an attempt to develop an installation interval standard. It advises that this revision does not take into consideration the differences among customer choices, nor the differences in measurements among the carriers (e.g., some carriers measure circuits and some measure orders).²⁸ USTA and several LECs argue that a substantial percentage of installation intervals are customer-driven -- that is, that the customer, not the LEC, sets the installation date for new service.²⁹ Diversity of customers' needs and competition among market areas means that service objectives must be responsive to customer and market demands, according to most LECs. BellSouth suggests that, if the separate filing of installation intervals renders the 43-05 less informative, or cumbersome to use, the Bureau should require that standard intervals be noted in the 43-05 itself rather than in a separate paper filing.³⁰ USTA also states that such changes in reporting requirements are expensive, and may require extensive time and resources, because the service order systems from which the data are derived are complex. USTA fears that the proposed requirements will drive the carriers away from their own standard intervals, thus rendering determination of changes in service quality under price caps exceedingly difficult. USTA also states that this proposal is duplicative because the Regional Bell Operating Companies (RBOCs) already file quarterly installation measurements by service type in their ONA reports.³¹

17. ARINC and TCA support this proposed change. ARINC states that actual performance data will allow benchmarking among carriers, providing incentives for quality improvements.³² TCA suggests that this change would improve the usefulness of ARMIS data because it would create uniformity and comparability among carriers.³³ In their reply comments, several carriers and USTA reiterate their position that current reporting requirements accurately reflect a carrier's success at providing installations at a rate that is at least satisfactory, and that modification of these requirements will serve only to create a national standard, and to destroy the continuity of the data.³⁴

18. Pursuant to the Commission's direction to make at least units and methods of measurement uniform wherever possible, we will eliminate reference to the LEC standard interval and require the carriers to report installation intervals in actual business days in Table I.³⁵ We reject the notion that reporting the actual average interval in days can be equated to setting an installation standard. These modifications are reflected in the Attachment to this Order. Carriers currently report the number of orders or the number of circuits. We believe that it should be possible to achieve uniformity on the matter of orders or circuits, and will include this issue in a public notice to be released in the near future. Meanwhile, we will continue the current requirement, but adjust it to require a footnote to indicate orders or circuits. This change produces a mandatory footnote to row 110. Finally, we do not believe that reporting actual intervals will be burdensome because, as USTA argues, the BOCs are already collecting similar data for their ONA reports.³⁶

19. Although the *Notice* proposed no changes in the Table I reporting of repair intervals, our review of filed data reveals that some carriers report hours on a "stopped clock" while others use a "running clock." As noted, we are endeavoring to achieve uniformity at least in the units of measure. Accordingly, and after conferring with the USTA working group, we are instructing carriers to report repair intervals using a stopped clock. The required measure is now defined as, "Interval measured in clock hours, excluding only time when maintenance is delayed due to circumstances beyond the LEC's control. Typical reasons for delay include, but are not limited to, premise access

²⁵ At present, these standard intervals are not included in the automated database; instead, LECs file paper copies of their standard installation intervals for various services in the public reference room of the Accounting and Audits Division of the Common Carrier Bureau.

²⁶ *July 1992 Notice*, 7 FCC Rcd at 4633.

²⁷ See, e.g., BellSouth Comments at 7; Pacific Bell Comments at 5-6.

²⁸ USTA Comments at 5.

²⁹ See, e.g., Ameritech Comments at 3; GTE Comments at 6; NYNEX Comments at 4-5; Pacific Bell Comments at 5; SNET Comments at 6; United Comments at 4.

³⁰ BellSouth Comments at 7. *Accord*, GTE Comments at 6; Rochester Comments at 3; Bell Atlantic Comments at 3; Ameritech Comments at 3; Southwestern Bell Comments at 2; SNET Comments at 6; Pacific Bell Comments at 5.

³¹ USTA Comments at 6. See Filing and Review of Open Network Architecture Plans, CC Docket No. 88-2, Phase I, Order on Reconsideration, 5 FCC Rcd 3084 (1990) (*BOC ONA Order on Reconsideration*) at 3096.

³² ARINC Comments at 2.

³³ TCA Comments at 5.

³⁴ See, e.g., NYNEX Comments at 3; GTE Comments at 4.

³⁵ We are aware that consumer requests can have an impact upon the average interval between order placement and actual delivery of the requested service, but this impact should be no greater when measuring actual intervals than when measuring the percentage of commitments met.

³⁶ USTA Comments at 7. Our requirements here are not duplicative of the ONA reporting requirements because the formats and levels of aggregation are different. In their ONA reports the BOCs file quarterly data on total orders, due dates missed, percent of due dates missed and average interval (in days) by service category. Use of work days or calendar days as a measure of average installation interval is left to the discretion of the reporting carrier. The BOCs may also report a second average interval that excludes customer-driven dates if they choose. See *BOC ONA Order on Reconsideration*. Also, GTE and the elective price cap LECs are not required to file ONA reports.

when a problem is isolated to the location, or absence of customer support to test facilities." This change is reflected in the Attachment to this Order.

2. Table II - Local Service Installation and Repair Intervals

20. For local service installations the LECs currently report their success rate in meeting their own standard interval commitments. As in the case of Table I, Interexchange installation, the *Notice*, by reference to the Table I proposal, suggested that reference to the LEC's standard interval be eliminated, and that the installation interval be reported in days. The commenting parties referred to their comments on the Table I proposal, or addressed interexchange and local reporting requirements for installations as one issue.³⁷ As in our revision to Interexchange Access installations in Table I, we will eliminate reference to the LEC standard interval and require the carriers to report installation intervals in actual business days in Table II. These revisions are reflected in the Attachment to this Order.

21. Currently the repair interval section of Table II does not include any time measurement. It reports only the number of trouble reports recorded by the reporting carrier during the reporting period. The *Notice* proposed that this table be modified so that the local service repair reports include a measurement of the repair interval, in hours to the nearest tenth.³⁸

22. Most of the LECs, and USTA, question the value of this additional reporting.³⁹ USTA states that its arguments against installation intervals in Table I also apply to Table II, and adds that local service monitoring is beyond the scope of price cap regulation.⁴⁰ USTA also argues that not all exchange carriers can provide data on repair intervals and that provision of such data would be extremely burdensome.⁴¹ SNET claims that the only meaningful repair interval measurement is for out-of-service troubles.⁴² BellSouth cautions that if the actual interval is measured, we must specify how it is to be measured.⁴³ BellSouth is wary of using a running clock because, although it sees its value for reviewing an individual LEC's performance over time, it fears that it would be inappropriately used for benchmarking performance among LECs.⁴⁴ Bell Atlantic argues that it already files similar information in its ONA reports.⁴⁵ Ameritech, SWBT, Pacific Bell and GTE state that they can, given enough lead time, provide these data in hours to the nearest tenth.⁴⁶

23. TCA and NYNEX support the addition of time measurement for local service repairs. TCA suggests that the data be provided by residential service, standard business service, PBX trunk and Centrex service.⁴⁷ NYNEX states that the addition of a time measurement, unlike the proposed change to the installation intervals, is a minor change which will enhance the value of the report.⁴⁸

NYNEX also proposes that such intervals be measured, based on a "running clock," from the time a trouble report is received to the time the trouble is cleared and accepted by the customer. Several LECs comment that they would be willing to provide the data.⁴⁹

24. We have reviewed the pleadings and conferred with the industry working group. We will eliminate reference to carriers' standard intervals, and require the carrier to report installation intervals in actual business days in Table II.⁵⁰ We will not, however, require that the data filed be separated into standard business service, PBX trunk and Centrex service; the current segregation of these data into residential and business categories is sufficient for our needs.

25. We will also implement our proposal and require a measurement of the repair interval in hours to the nearest tenth. We believe that reporting repair intervals requires a measurement of actual time elapsed, not just the number of troubles, if it is to provide meaningful data in our attempts to monitor carrier performance under incentive regulation. Further, we agree with commenters that out-of-service troubles are more demanding of our scrutiny, and should be monitored separately. Therefore, we are establishing two sub-classifications of 'total trouble reports' -- 'out-of-service reports' and 'all other.' These modifications are set forth in the Attachment herein. Finally, we conclude that these data are not duplicative of the ONA reports because ONA reports are not filed on a study area basis, are not required of all price cap LECs, and use an interval measure (days) that is too long for our purposes here. ONA reporting is designed to serve particular purposes in the ONA scheme, as the price cap monitoring program serves particular purposes in the price cap plan. The differences between the purposes being served explain and justify the differences between these reports.

26. We also wish to clarify the definitions of 'initial' and 'repeat' trouble reports; evaluation of the filed data has brought to our attention the fact that carriers may be defining these terms differently. An initial trouble report is the first (and in many cases the only) trouble report on a particular trouble. This 'initial' listing does not include a count of repeat troubles. A repeat trouble report is a report on a trouble within 30 days after the initial report on that trouble. It is a 'repeat' trouble whether the trouble has not been attended to, or has been attended to with unsatisfactory results. It is our understanding that some carriers record a third kind of trouble report, the 'subsequent' trouble report, defined as a trouble report on a trouble already reported but not yet addressed by the company. We believe that if this subsequent trouble report occurs within 30 days after the initial report, it is a repeat trouble report and should be recorded as such. This is a straightforward reading of the definitions included in the instructions for 43-05 Table I and Table II.

³⁷ See, e.g., GTE Comments at 7; USTA Comments at 7; TCA Comments at 5.

³⁸ July 1992 Notice, 7 FCC Rcd at 4633.

³⁹ See, e.g., Bell Atlantic Comments at 3-4; BellSouth Comments at 10-11.

⁴⁰ USTA Comments at 7.

⁴¹ *Id.* at 8.

⁴² SNET Comments at 7.

⁴³ BellSouth Comments at 10.

⁴⁴ BellSouth Comments at 10.

⁴⁵ Bell Atlantic Comments at 3.

⁴⁶ Ameritech Comments at 4; SWBT Comments at 3; GTE Comments at 7; Pacific Bell Comments at 7.

⁴⁷ TCA Comments at 6.

⁴⁸ NYNEX Comments at 5.

⁴⁹ SWBT Comments at 3; GTE Comments at 7; United Comments at 5.

⁵⁰ All parties are in agreement that these installations will be reported on the basis of number of orders, not 'orders or circuits.'

3. Table III - Trunk Blockage

27. The LECs currently report how many trunk groups they have, how many they measure, how many of those exceeded servicing thresholds for one or three months, and how many exceeded design blocking objectives for three months. In the *Notice*, we proposed to collect data on "total trunks, including high usage trunks" as well as "final, full and non-alternate route trunks," breaking these two types of trunks down into subtypes, as was done in the pre-divestiture reports.⁵¹ The *Notice* also proposed to add a table for call completion ratios.

a. Trunk Groups

28. Four LECs are opposed to providing information such as that included in the pre-divestiture reports, stating that these data are burdensome and inappropriate.⁵² No commenter asserted the need for such data.

29. We are unable to conclude, from the evidence before us, whether any modification of the trunk blocking report is needed. We therefore defer this issue for further consideration. It is our intention to convene a working group and, through discussions and further consideration, gather enough information to allow us to make a reasoned conclusion here.

30. In the meantime, however, it seems a relatively easy task to make the data we currently collect more usable. We originally required that each carrier footnote the standards it used for design blocking objectives (DBOs), when reporting the number of common trunk groups which have exceeded the equipment design blocking objectives for three or more consecutive months. After a review of carrier submissions and discussions with the industry, we now modify the reporting requirement as follows: carriers will report the number of common trunk groups that have exceeded a DBO of .5 percent for feature group D (or mixed usage trunks that include any feature group D), and that have exceeded a DBO of 1.0 percent for all other (non-FGD).⁵³ Similarly, the carriers were originally instructed to footnote their servicing thresholds. After reviewing these submissions, we will now require that carriers report numbers of trunk groups exceeding a servicing threshold of 2% for feature group D, and 3% for all other

(non-FGD). Carriers using other thresholds should footnote them. These changes are reflected in the Attachment to this Order.

b. Call Completion Ratios

31. Six LECs oppose establishment of a call completion ratios table, stating that such a requirement would be burdensome and would not reflect LEC performance.⁵⁴ BellSouth states that it can provide information showing the percentage of all call attempts which it hands off successfully to the originating interexchange carrier, and it also has information showing the percentage of all calls delivered by interexchange carriers to BellSouth in the terminating exchange which are successfully delivered to and answered by the end user.⁵⁵ BellSouth argues that this information would provide a better means of evaluating a LEC's performance than the Bureau's proposals. BellSouth, like the other LECs, states that call completion ratios do not provide a useful picture of carrier performance because end-to-end call completion can be affected by other LECs and interexchange carriers.

32. TCA endorses our proposal, stating that call completion ratios provide comprehensive indicators of overall trunk performance reliability.⁵⁶ TCA also suggests that we consider whether to require separate reporting of calls that are handled entirely by the carrier and calls in which an interexchange carrier is involved.

33. We are without adequate information to draw a firm conclusion regarding the need for call completion reporting. We defer this issue, too, to future consideration.

4. Tables IV and IV-A. - Total Switch Downtime

34. The LECs currently report switch downtime disaggregated in two ways: switches are broken into groups according to the switch size (number of lines served) and by MSA or non-MSA. The *Notice* proposed to add information on whether an outage occurs at a switch that has experienced downtime within the last month (or quarter), and on the type of switch.⁵⁷

35. All the LECs except Bell Atlantic agree to provide information on whether a switch has previously experienced downtime,⁵⁸ but oppose the second part of this proposal, providing information about the type of switch.⁵⁹

⁵¹ July 1992 *Notice*, 7 FCC Rcd at 4633.

⁵² Pacific Bell Comments at 9 (claiming that these data, categorized by subtype, are competitively sensitive because information on trunking details can disclose the extent of traffic in a geographic area, the kind of traffic being carried, and anticipated traffic growth); BellSouth Comments at 11 (the current monthly report provided by the LECs to the interexchange carriers would provide better information); NYNEX Comments at 7 (it does currently produce the number of trunk groups and trunks by category, but such data, if needed, should be collected in the Infrastructure Report). See also Ameritech Comments at 4.

⁵³ Two carriers currently use the feature group D standard of .5% for all trunks; the others use the 1.0% DBO for 'other.' Those carriers that use a DBO other than 1.0% for 'other' should footnote their DBO; carriers using the 1.0% DBO for 'other' need not footnote it.

⁵⁴ See, e.g., Pacific Bell Comments at 10 (limited call completion ratio data could be gathered, but only at significant cost); SWBT Comments at 3 (call completion ratios would be difficult to measure consistently and would not be reflective of LEC service quality); Bell Atlantic Comments at Appendix p.4 (call

completion ratios have little value in a multi-vendor environment, because any one of the carriers transmitting a call could cause blockage); accord, Ameritech Comments at 4.

⁵⁵ BellSouth Comments at 12. BellSouth does not have information showing the percentage of all call attempts originated in its serving areas that are answered by end users in other LATAs.

⁵⁶ TCA Comments at 10.

⁵⁷ July 1992 *Notice*, 7 FCC Rcd at 4633.

⁵⁸ All the LECs except Bell Atlantic are willing to list switches consecutively, if those switches had repeated outages during the quarter. See, e.g., NYNEX Comments at 8; SWBT at 4. Bell Atlantic opposes such reporting. Bell Atlantic Comments at 5 (asserting that multiple outages in one switch may be related to upgrading of the switch, and should not be noted punitively, or that multiple outages may in fact be unrelated and therefore not noteworthy).

⁵⁹ Some of the LECs are willing to report on whether those switches listed are analog or digital, but they strongly oppose reporting on the switch manufacturer, model number, age, capacity, upgrades and SS7 or equal access capabilities. See, e.g., USTA Comments at 10. NYNEX supports our proposal, but

They argue generally that these data are irrelevant and unnecessary.⁶⁰ These carriers claim that competition between manufacturers should result in quality products, and that "reporting on" the manufacturers in the context of this monitoring program would be inappropriate.⁶¹ The LECs note, further, that they provide performance reviews to the manufacturers themselves. In some cases, according to the LECs, manufacturers incorporate LEC requirements in their own manufacturing standards.⁶² TCA supports the full proposal, stating that the additional information would enable us to identify problems inherent in certain types of switches and thus result in improved switch designs.⁶³

36. Upon further consideration, we have determined that some of the additional information proposed in the *Notice* is not necessary. We suggested a requirement that LECs indicate switches experiencing more than one outage in a quarter; however, since our database allows us to pull data on switches that have experienced multiple switch outages of two minutes or more within a given period, there is no need to require the LECs to provide this information as a separate item. We also suggested reporting of additional information about switch downtime incidents in Table IV-A, incidents of two minutes or more. These listings currently include the Common Language Location Identifier (CLLI) code listing. This eleven-digit switch identification provides some of the information that the *Notice* suggested, including exact location, type of switch, and whether analog or digital.⁶⁴

37. We also suggested the possibility of our adding further data requirements in this table, including switch manufacturer, upgrades, and so on. We conclude, based on a review of the pleadings and of the data before us, that it is not necessary or appropriate to require such information, at least at this time. We believe that the information included in the CLLI code is adequate to our monitoring purposes. We also note that the ECSA working group is encouraging the sharing of pertinent information among carriers. Should we see patterns of downtime problems emerging, we would of course be free to request further, detailed information. In the meantime, we will make no change to this table.

38. There are some other minor adjustments to be made in the reporting requirements for Table IV and Table IV-A. One is that carriers suffering multiple serial outages at a single switch (on a switch that is being serviced or upgraded, for example) have reported these incidents differently -- some carriers report a single long outage, while

others report a series of short outages. This difference in reporting explains the discrepancies in data that we have noted. We now clarify that if service is restored, even momentarily, the downtime incident ends; if service is then lost again, a new downtime incident begins. The instructions are clarified to explain this: *see* Attachment. In addition, carriers are instructed to except Table IV-A data from the general instruction to provide roll-ups of all data to the company level. Roll-ups are calculated by adding the data for each individual row item for each study area in an operating telephone company. No roll-ups are to be provided for Table IV-A because the essence of Table IV-A is to provide information on individual incidents: the cumulative data for the study area and the company are provided in Table IV and the roll-up of Table IV.

5. Additions to Report 43-05

39. In the *Notice* we asked whether additional factors, such as information on transmission facilities breakdowns or signalling system breakdowns, might be useful in measuring network reliability.⁶⁵

40. There is some support in the pleadings for additional SS7 reporting in the 43-05 Report. NYNEX recommends addition of a signalling system failure report for all carriers, including interexchange carriers and competitive access providers.⁶⁶ AT&T suggests additional information concerning deployment of Service Switching Point (SSP) hardware to Channel Signalling System 7 - Network Interconnect (SS7-NI), stating that these data can be used to estimate the amount of progress the LECs have made in reducing access delay.⁶⁷ ARINC urges the Commission to collect data regarding the performance of Signalling System 7 (SS7) in order to provide information that could be used to prevent SS7 failures and the often major outages generated by these failures.⁶⁸ BellSouth, United and SNET are all opposed to additional reporting requirements for SS7 data because such additions would be inconsistent with current reporting requirements, and expensive, while providing little or no benefit.⁶⁹

41. NYNEX supports the addition of a tandem outage report.⁷⁰ No party supports the addition of facilities failure reports, and NYNEX argues that such a report would be extremely burdensome to all carriers.⁷¹ Bell Atlantic suggests that such information collection should be addressed in a separate proceeding, while SWBT states that consider-

suggests that the information be reported in Table IV.A, rather than in Table IV. NYNEX Comments at 8.

⁶⁰ *See, e.g.*, GTE Comments at 10. GTE suggests that such a requirement goes beyond the intent of the price cap monitoring program and is not needed.

⁶¹ *See, e.g.*, Pacific Bell Comments at 11. Pacific Bell asserts that provision of any but the most generic information about a switch experiencing downtime could be misleading if failure is attributed to the switch type or switch vendor. Pacific Bell also asserts that detailed data would make public information that is proprietary and competitively significant.

⁶² *See, e.g.*, SWBT Comments at 4.

⁶³ TCA Comments at 9 (that the data might show that certain switch models suffer a disproportionate number of outages).

⁶⁴ The first eight digits indicate the locality of the switch. The last three digits of the standard eleven-digit CLLI code identify the specific switching entity. Analog stored program control (SPC) switches are identified with a C; digital SPC switches are shown by a D; and remote switches, which may be analog or

digital, are identified by an R or a W within these last three digits. Electromechanical switches are also identified: step-by-step entities are designated "S" or a number from 2 to 9, and crossbar switches are shown by an M. Not all price cap LECs conform to these specifications, but companies that depart from the norm must provide information concerning the differences in their coding in a footnote to this column in Table IV-A.

⁶⁵ *July 1993 Notice*, 7 FCC Rcd at 4634.

⁶⁶ NYNEX Comments at 9.

⁶⁷ AT&T Comments at 2.

⁶⁸ ARINC Comments at 3.

⁶⁹ BellSouth Comments at 13 (retain continuity of reports, at least during initial four-year period of LEC price caps); *accord* United Comments at 6; SNET Comments at 2 (restrict any new reporting requirements to mandatory price cap LECs only). These parties oppose the addition of transmission facilities outage reporting for the same reasons.

⁷⁰ NYNEX Comments at 9.

⁷¹ *Id.*

ation of such a data collection is premature because the Network Reliability Council is currently considering reporting requirements for these kinds of outages.⁷²

42. The substantial duration and scope of SS7-related outages in the summer of 1991 persuade us that it is necessary to monitor the deployment and performance of the SS7 network carefully. We believe that history refutes Bell Atlantic's suggestion that such monitoring procedures are premature.⁷³ We also believe, however, that recent modifications in the requirements of the Switch Downtime Report⁷⁴ to include downtime causes, one of which is SS7-related, provide at least a modicum of information about this signalling network. We also note the substantial information filed by LECs in response to a recent data request by the Federal-State Joint Board regarding deployment of the SS7 network.⁷⁵ And, as noted, the Network Reliability Council has made recommendations regarding outage reporting that may affect the ARMIS collection and/or the outage reporting collection being maintained by ECSA.⁷⁶ Pending a more thorough review of those recommendations, we believe that our current reporting requirement adequately serves to indicate the overall performance of this important network component.

E. Semi-Annual Service Quality Report 43-06

1. Table I - Customer Satisfaction

43. Table I of Report 43-06, which reflects the results of customer satisfaction surveys conducted by individual carriers and is not standardized, is currently collected on paper but not in an automated format under ARMIS. The Notice requested comment on standardized customer categories, overall quality measurements that customers can be asked about, and some common measure of satisfaction.⁷⁷

44. TCA suggests a survey that it has devised for dissemination among ratepayers.⁷⁸ The LECs are all opposed to a standardized survey because, they state, it would cause customer confusion and be a burden on them and on the public.⁷⁹ The LECs argue strongly that effective customer surveys are carefully designed and administered to reflect the company, its service area and population, so that the survey and its data collection and analysis must be tailored to the demographics of each individual market.⁸⁰ GTE argues that customer satisfaction reports have no place in price cap reporting because those reports are uniquely designed by each LEC to help it identify and meet the needs of its customers.⁸¹ USTA is concerned that creation

of a valid standardized survey would be time-consuming and expensive; it doubts that such a survey could be implemented in less than eighteen months.⁸² Bell Atlantic and BellSouth express willingness to explore the possibility of developing a standard means of reporting the results of the LECs' customer satisfaction surveys.⁸³

45. It has never been our intention to create, and impose upon the LECs, a standardized customer satisfaction survey. We are aware that customer satisfaction surveys are not only idiosyncratic to each LEC, but are an essential means of a company's ascertaining its own areas of strength and weakness, and underlie planning and administration. We know, too, that the design and use of these surveys are periodically changed. Each carrier designs surveys to suit its needs and the needs of its customers and service areas. Our monitoring system, designed to draw from data the carriers collect, and use for their own purposes rather than to impose new data collection obligations, should not create or impose a survey structure that is otherwise useless to the LECs. Instead, our intention is to draw from existing customer satisfaction surveys such "common denominator" groupings, of both respondents and areas of concern, as can be seen as pertaining to all carriers and all customers. It is important, however, not to make these groupings so general as to be meaningless.

46. In service of this goal, we have established general reporting terms which set three categories of customer respondents -- residential, small business, and large business. We recognize that these terms are used and defined differently by different LECs, and that some LECs have additional categories. However, the similarities among the classifications are more substantial than the differences, and we will therefore accept the LECs' current definitions of these categories for purposes of reporting the results of their customer satisfaction surveys.

47. All LECs currently report residential customers based on their own definition of residential, and they should continue to do so; we believe that little or no differences will be found from one carrier to the next in this definition. With regard to categories of business users, some variations exist, but we find them to be acceptable for our purposes here. Current data indicate that business customer satisfaction is extremely high and is not a factor that demands increased Commission scrutiny, especially since competition is most prevalent in these areas. All LECs should therefore continue to use their own definitions of small business.⁸⁴ And, although 'large business' may mean

⁷² Bell Atlantic, Appendix to Comments at 6; SWBT Comments at 5.

⁷³ We also reject AT&T's suggestion that additional SS7 reporting is needed in the Report 43-05 Table IV and IV-A outage reports to measure the LECs' success in decreasing access time by deploying SS7. AT&T should refer to the 43-07 Infrastructure Reports, Tables I, II, and III, for such data.

⁷⁴ March 1992 Notice, 7 FCC Rcd at 3590.

⁷⁵ See March 26, 1993, letter from Kenneth P. Moran to the BOCs, United and GTE requesting data regarding cost and usage characteristics of packet switching networks and certain general support facilities. Data submissions were filed in June 1993 and are presently under review.

⁷⁶ Network Reliability: A Report to the Nation. A Compendium of Technical Papers, June 1992, Presented by the FCC's Network Reliability Council, Sections B and C. This study recommends that carriers and suppliers improve their own data collection on switch failures, and that the industry improve its

information sharing among all segments. It also recommends that carriers identify the root causes of procedural errors and reduce the number of scheduled outages, and that the reliability of software and hardware be improved.

⁷⁷ July 1992 Notice, 7 FCC Rcd at 4634.

⁷⁸ TCA Comments at 12.

⁷⁹ See, e.g., Bell Atlantic Comments, Appendix at 7; BellSouth Comments at 13.

⁸⁰ See, e.g., Pacific Bell Comments at 13-14; Bell Atlantic Comments, Appendix at 6.

⁸¹ GTE Comments at 10.

⁸² USTA Comments at 12.

⁸³ Bell Atlantic Comments, Appendix at 7; BellSouth Comments at 14.

⁸⁴ While a LEC serving primarily urban areas may well have "small business" customers that a LEC serving rural areas would call "large business" customers, for example, each LEC has determined, in its own customer population, what the

different things to different LECs, that category will always include the LECs' larger business customers, and the various definitions are thus similar enough to meet our monitoring purposes.⁸⁵

48. We have also developed four general areas of concern to be reported by each LEC -- overall, installations, repairs, and business office. We believe that whatever customer categories an individual LEC may use, and whatever areas of concerns may be identified by a survey, it should be possible to draw from the specific surveys and survey data to provide information in these general areas. "Overall" should be a measure of overall satisfaction with the telephone company; installations and repairs are self-evident, and we believe these general categories to be in use by all LECs. "Business office" means any contact with the telephone company business office, for example for questions involving a bill, information regarding the availability of new services, or participation in a neighborhood association.

49. Further, we are requiring LECs to report the number of customers surveyed, and the percent dissatisfied. Although the LECs have historically reported 'percent satisfied,' this change to 'percent dissatisfied' is necessitated by the differences not only among the LECs, but also between traditional surveys (measuring 'satisfaction') and newer surveys (measuring 'meeting or exceeding expectations.'). The result is that an "approval" rating is very hard to define. About half the price cap LECs have developed new, more stringent survey measures in the course of the last two years.⁸⁶ Some survey responses include two possibilities (satisfied or not), others include five or six, ranging from very satisfied (or far exceeded expectations) to very dissatisfied (or totally failed to meet expectations). Further, some LECs using the same range (one to five, for example) count three as satisfied, while others do not. Our "dissatisfied" or "negative" count assumes that all LECs' measures can be divided between those that voice dissatisfaction and those that do not (whether they voice satisfaction *per se* or not). We believe that this measure will generally reflect traditional satisfaction measures, but will also provide an adequate representation of the newer, more stringent surveys. It should also provide substantial continuity with previously-filed data, through measuring the inverse of those reports. In the interests of this continuity, we are requiring all LECs to double-file Table I when they first use our new electronic filing; they should file the electronic and paper copies of this new format, along with paper copies of their traditional format, the first time they use the new table. The new Table I is set forth in the Attachment herein.

boundaries of "small business" are, and we believe those determinations should be maintained. If a LEC defines as a 'small business customer' one who is more than 10 percent the size of its largest 'large customer,' that LEC should footnote the 'small business' category and explain its definition.

⁸⁵ We are aware that some LECs have a category beyond 'large business,' of 'super business' or 'super-large business.' LECs using such categories are instructed to include these largest customers in the general large business category we establish here.

⁸⁶ For example, in the fall of 1991 Bell Atlantic changed from its traditional "percent satisfied" survey to a new survey that measured customer expectations and the company's success in meeting them. Bell Atlantic's filing of fourth quarter 1991 data shows both the old and the new surveys, and reflects a drop of

2. Table II

a. Dial Tone Response

50. Table II displays measurements of the provision of dial tone for an originating call attempt within a specified period of time; it relies on the industry standard of three seconds. The results of the measurements are shown as a percentage of offices which meet the LEC's standard for providing dial tone within three seconds of lifting the telephone "off-hook." The measured performance is derived from call attempt samples taken during the central office busy hours; carriers vary in the number of offices they test, the number of samples they take, and the standard they establish for an end office (the percentage of the sample calls that must achieve the 3-second standard. An office is considered to pass the performance test if a specified percentage of test calls receive dial tone within the three second criterion). The *Notice* proposed to change this table to measure actual dial tone, in seconds to the nearest hundredth, for a number of test calls based on a percentage of total calls.⁸⁷

51. All the LECs oppose the proposed reporting, stating that such a requirement would be unreasonable and burdensome.⁸⁸ USTA explains that changing this measurement as proposed would necessitate the development of new software by equipment vendors, and nationwide generic updates.⁸⁹ TCA supports our proposal, stating that reports based on actual time will permit meaningful benchmarking of the carriers, assuming that tested end offices are selected on a representative basis.⁹⁰ The LECs respond to TCA's proposal by stating that reports based on actual time would be expensive, meaningless and inappropriate. They assert that "benchmarking" is not the purpose of the Service Quality reports.⁹¹ As noted at para. 8, *infra*, we believe that uniformity is much to be desired, and that benchmarking is a foreseeable and acceptable outcome of this.

52. We have reviewed the pleadings here, and have surveyed what we know of the relevant technology. We find that we are not in possession of adequate information to conclude whether this report should be modified, and if so, how. We accordingly defer consideration of this issue to a future time.

about 2% in each category reported. NYNEX, Ameritech, and SWBT have made similar changes.

⁸⁷ July 1992 *Notice*, 7 FCC Rcd at 4634.

⁸⁸ See, e.g., BellSouth Comments at 14 (stating that measurement of actual dial tone response time would be extremely costly with no appreciable customer benefit); NYNEX Comments at 10 (suggesting that we eliminate Table II because there is virtually no dial tone delay exceeding the current three second standard measurement).

⁸⁹ USTA Comments at 13 (requesting that any costs involved in this change be treated as exogenous).

⁹⁰ TCA Comments at 12-13.

⁹¹ See, e.g., Ameritech Reply Comments at 6; USTA Reply Comments at 8-9.

b. Table II - Transmission Quality

53. Table II, Transmission Quality, shows the percent of offices and the percent of trunks meeting the carrier's own standards for each of five measures of analog transmission quality: loss, noise, balance, gain/slope and C-notch. The *Notice* proposed that transmission quality be measured in terms of actual performance for each of these, rather than of meeting the carriers' self-imposed objectives.⁹²

54. All the LECs oppose this proposal as burdensome and of limited value.⁹³ The carriers question the usefulness of increasing reporting requirements for analog transmission quality in an increasingly digital network.⁹⁴ Two carriers state that it is possible for them to provide these data as proposed, but that to do so would be time consuming and that the value of the resulting data is questionable.⁹⁵ TCA strongly supports our proposal, saying that the current requirements do not allow for benchmarking or informed analysis of individual carrier data.⁹⁶

55. Again, we find that the information available to us, and our ability to review it, are inadequate to allow us to require modification of the reporting requirements for analog transmission quality, or to draw any conclusions about the practicability or desirability of instituting a digital transmission quality reporting requirement. Accordingly, we defer this issue for future consideration.

3. Additions to Report 43-06

56. The *Notice* sought comment on whether bit error rate and availability measures -- both measures used on lines providing high-speed data access -- should be included in this monitoring plan. The *Notice* expressed a willingness to revisit this issue because rapid technological development may have increased the LECs' ability to provide such data.⁹⁷

57. Most of the LECs assert that this is not the case. USTA claims that even though the technology to provide these measurements does exist, it is not generally available because of its prohibitively high cost.⁹⁸ Bell Atlantic states that non-intrusive testing is under development, but says that it has no plans to deploy such systems because of the high cost involved.⁹⁹ BellSouth and USTA note that the Exchange Carrier Standards Association T1Q1.4 Committee is currently addressing actual performance limits for the defined digital transmission quality parameters, and that it is therefore premature for us to address this issue.¹⁰⁰ USTA points out that measurements for digital trunk transmission quality are not yet available for general use in the telephone network. Pacific Bell suggests that a better indicator

would be to measure Errored Seconds (ES) and Severely Errored Seconds (SES), since Bit Error Rate (BER) for high speed digital services in the modern network can be measured only in an out-of-service condition, whereas ES and SES can be accurately measured in-service based on modern framing techniques (the ES and SES performance parameters are derived from data based on the customer's actual signal), according to Pacific Bell.¹⁰¹

58. We have seen other documentation, however, such as manufacturers' specifications, indicating that the technology currently exists to allow non-intrusive, reasonably-priced on-line measurement of digital transmission quality.¹⁰² This conflicts with the LECs' statements that non-intrusive measurement is not yet possible.

59. The technical aspects of this issue, like the other transmission quality measurement issues, are deferred for future discussion and consideration. We note, however, that we continue to believe that high speed data transmission is generally a service provided on special access lines to large, sophisticated customers, and is usually among the first of a LEC's services to face competition. The purpose of our monitoring plan is to assure that incentive regulation is not provoking a degradation of the network or a falling off of infrastructure investment. When we consider this issue further, we will seek to determine whether digital transmission quality is a proper concern of this price cap LEC monitoring plan, and then the extent to which such measurement is possible and desirable.

F. Infrastructure Report (43-07)

1. Table I - Switching Equipment

60. Table I collects data regarding switch deployment and capabilities. The *Notice* explored the possibility of adding data to this table to reflect the deployment of Switched Multi-Megabit Data Service (SMDS) and Frame Relay service.¹⁰³

61. The LECs are opposed to disclosing detailed data on SMDS and Frame Relay, claiming that such data are highly sensitive because these services are often related to nonregulated activities, and reporting these data could therefore give their competitors an unfair advantage.¹⁰⁴ BellSouth states that it would not object to reporting at the study area level (but not more disaggregated) for metropolitan areas where deployment of SMDS or Frame Relay has already taken place.¹⁰⁵ Pacific Bell suggests that we collect data on the number of ports equipped for SMDS and Frame Relay.¹⁰⁶

⁹² July 1992 *Notice*, 7 FCC Rcd at 4634.

⁹³ See, e.g., USTA Comments at 13; SWBT Comments at 7.

⁹⁴ See, e.g., NYNEX Comments at 11 (stating that analog tests should be replaced by other, yet-to-be defined digital standards); Pacific Bell Comments at 17 (questioning the applicability of analog measurements to an evolving digital network).

⁹⁵ Pacific Bell Comments at 17; NYNEX Comments at 10-11.

⁹⁶ TCA Comments at 13.

⁹⁷ July 1992 *Notice*, 7 FCC Rcd at 4634.

⁹⁸ USTA Comments at 15.

⁹⁹ Bell Atlantic Comments, Appendix at 8; See also GTE Comments at 13 (stating that the cost of deploying digital performance monitoring and testing systems is prohibitive.); Pacific Bell Comments at 18 (pointing out that the additional equipment [to provide continuous performance monitoring] is very expensive and not suitable for universal deployment.)

¹⁰⁰ BellSouth Comments at 15; USTA Comments at 14.

¹⁰¹ Pacific Bell Comments at 18.

¹⁰² See, e.g., 3M Product Bulletin describing 1150 Test Platform for digital and analog circuit testing. Present applications are listed as including ROTL and 105 far-end testlines, 56/64 Kbit bit error rate testing to 108 testlines, and voice band data testing at V.32 and FAX rates. Planned future applications are listed as including ISDN testing, SS7 verification and testing, DS0, DS1 and DS3 performance monitoring, and CCITT compatibility.

¹⁰³ July 1992 *Notice*, 7 FCC Rcd at 4634.

¹⁰⁴ See, e.g., SWBT Comments at 8; GTE Comments at 14.

¹⁰⁵ BellSouth Comments at 16.

¹⁰⁶ Pacific Bell Comments at 19 (cautioning that the switching nodes are deployed in the same manner as access tandems, so reporting of MSA/non-MSA would not be possible).

62. In its Reply Comments, TCA asserts that the LECs' argument that certain data are competitively sensitive is without merit because there is currently no competition at the local level. TCA also states that the LECs have offered no evidence to indicate that reporting these data would inhibit their competitive ability.¹⁰⁷

63. We believe that infrastructure reporting should be designed to allow the Commission and the public to monitor the speed and effectiveness with which reporting carriers make new technologies and services of use to and available to the public. We reject TCA's assertion that there is no competition in local telephone services; in fact, it is precisely in the provision of services like frame relay that competition is most intense, and we acknowledge the sensitivity of the LECs' position as they face increasing competition, especially regarding these services that are likely to be related to nonregulated and highly competitive services. We find, however, that the information we have before us is inadequate to allow for a determination of the form that SMDS and Frame Relay reporting should take. We accordingly defer such determination to a future time.

2. Table III - LEC Call Set-Up Time

64. Table III reflects the LEC portion of post-dial delay -- that is, LEC call set-up time, the interval that begins when the caller completes dialing and ends when the call is delivered to the interexchange carrier's point of presence (POP). Our survey of filed data indicates that this table is often being reported in a way that makes the data of little interest or usefulness -- that the LECs' compliance with the reporting requirements is not producing a useful indication of the LEC's average or typical call set-up time. The *Notice* requested comments on modifications to this table that would make it more informative and useful, without imposing undue burdens on the reporting carriers.¹⁰⁸

65. All of the LECs except Pacific Bell are opposed to any modification of Table III.¹⁰⁹ Pacific Bell recommends that the Commission require actual call set-up data from the Service Evaluation System (SES) for those companies that have this technology in place.¹¹⁰ Bell Atlantic argues that provision of actual measured data is impossible at this time.¹¹¹ Southwestern Bell recommends that we eliminate Table III.¹¹² USTA comments that without knowing the specific concerns of the interested parties expressing dissatisfaction with this table, it is difficult to comment on any modification.¹¹³ NYNEX comments that while Bellcore has updated the 'theoretical' call set-up time for certain switches, inclusion of this updated information would make it difficult to evaluate whether call set-up time has improved under price caps as older technologies are replaced and SS7 is deployed.¹¹⁴ The remaining carriers claim that reporting actual call set-up time would impose

an expensive and unjustified burden.¹¹⁵ USTA states that the costs outweighed the benefits in 1991 and that there has been no change since then.¹¹⁶

66. LEC Call Set-Up Time is an essential measure of the LEC's provision of quality service. We would require actual measurements if we thought the LECs could provide them, but it is our understanding from the record in the service quality proceeding that only one company can do so. We do not intend to impose a reporting requirement that would require deployment of additional equipment or systems for the sole purpose of meeting our filing requirement. Still, we are convinced that the LEC Call Set-Up Time Table, currently of little use, can, with minor modification, provide needed information. We believe that it is shortcomings in the instructions for filing, rather than in LEC compliance, that have resulted in the decreased usefulness of these data. The Bureau's intention was that standard measures would show the approximate set-up time for a call made on a particular kind of switch, and routed via one of a number of routes. The LECs would provide these standard times, and would calculate the percentage of their traffic that fit each combination of switch and route. In this way, each LEC would effectively record its total-network average call set-up time.

67. We do not suggest that the data presently provided are of no interest; it is clear that deployment of new technologies substantially reduces set-up time, for example. Deployment records of digital switches and of SS7 provide clear examples of the benefits to call set-up time of new technologies. Nonetheless, we believe the information in this table will be even more useful if we make modifications to effect the kind of calculation we originally envisioned, and we state now our intention to do so in a timely way, beginning with publication of a public notice soliciting comments, so that 43-07 Reports filed in June 1994 may reflect these changes.

G. Other Matters

68. In Report 43-07, Table IV, we currently collect data concerning access lines in service, access line gain, and total gross capital expenditures. The *Notice* proposed no changes to this table. In its comments, however, BellSouth suggests that this table be eliminated because, it argues, the table is "redundant to information reported elsewhere."¹¹⁷

69. We reject BellSouth's suggestion. Although the amount on row 0540, Total Gross Capital Expenditures, is reported on row 260, column (ac) of the 43-02 USOA Report, we consider it necessary to include this amount in the Infrastructure Report, for purposes of intra-Report reference. We do not see that this inclusion can be much of a burden to provide, since the same number is already reported in the USOA Report, Row 0531, Access Line Gain,

still the case today).

¹¹² SWBT Comments at 9 (since the LECs cannot measure actual time using live traffic, the data that are reported are of limited value).

¹¹³ USTA Comments at 15; see also GTE Comments at 14.

¹¹⁴ NYNEX Comments at 12; see also BellSouth Comments at 17.

¹¹⁵ See, e.g., GTE Comments at 15 (arguing that the exchange carriers cannot measure call set-up time without expensive and time-consuming procedures).

¹¹⁶ USTA Comments at 15-16.

¹¹⁷ BellSouth Comments at 17-18.

¹⁰⁷ TCA Reply Comments at 5-6.

¹⁰⁸ July 1992 Notice, 7 FCC Rcd at 4635.

¹⁰⁹ See, e.g., BellSouth Comments at 17 (arguing that post-dial delay is not a measure of service quality provided by the LECs because it can result from terminal equipment deployed by the customer or from the network design of the interexchange carriers); GTE Comments at 15 (stating that measurement of post-dial delay places an unjustified burden on the reporting carriers and that the current report is satisfactory and meets the need for which it is intended).

¹¹⁰ Pacific Bell Comments at 20.

¹¹¹ Bell Atlantic Comments Appendix at 9 (arguing that the LECs were unable to provide these data last year and that this is

is not reported elsewhere. Although Total Access Lines in Service are collected both in row 140 of 43-05 and row 120 of 43-07, we will retain 43-07. Table IV in its current format.¹¹⁸

70. We note, too, the requests of several parties that the Bureau provide some analysis and published tables drawn from the monitoring program data. ARINC suggests that we provide data analyses;¹¹⁹ TCA suggests that we graph all relevant data to provide published "report card" reports, and that we "rank" price cap LECs on each item of measurement.¹²⁰ It is our intention to provide regular summary and analytical publications regarding the service quality and infrastructure data filed in the ARMIS Reports 43-05, 43-06, and 43-07. At the time of their publication, parties will be free to comment on their contents and to suggest additional reports or analyses.

III. CONCLUSION

71. In the *Service Quality Order*, we stated:

The Bureau, and the Commission, may find it necessary to revisit these matters periodically, for example to modify reporting requirements as technology and the industry change. We will also be intent on evaluating these reporting requirements as they are put into practice, and as the ARMIS database is developed. Finally, as noted herein, the Bureau and the Commission stand ready to revisit the issues of geographic and service disaggregation, LEC call set-up time, trunk blockage reports, fiber deployment, and other reporting requirements, if reevaluation is warranted.¹²¹

In this Order we are modifying the service quality and infrastructure filing requirements in service of improving the data collection's reflection of a constantly-changing network, and to increase the uniformity and quality of the information available to the Commission, state regulators, users, and other interested parties. We are deferring to future proceedings consideration of several other related matters.

IV. PAPERWORK REDUCTION ACT

72. On July 20, 1989, the Office of Management and Budget (OMB) approved the Commission's proposed information collection requirements contained in the *Second Further Notice* on price cap regulation. Subsequent implementation and modification of these requirements have been duly submitted to OMB for approval.¹²² The action contained herein has been analyzed with respect to the Paperwork Reduction Act of 1980 and found to impose a modified information collection requirement on the public. Application for approval of these modifications has been made to OMB as prescribed by that Act.

VI. ORDERING CLAUSE

73. Accordingly, IT IS ORDERED, pursuant to Sections 4(i), 4(j), 201-205, 215, 219 and 220 of the Communications Act of 1934, as amended, 47 U.S.C. §§154(i), 154(j), 201-205, 215, 218, 219 and 220, and Section 0.291 of the Commission's Rules, 47 C.F.R. §0.291, that the ARMIS Quarterly Service Quality Report (FCC Report 43-05), ARMIS Semiannual Service Quality Report (FCC Report 43-06), and ARMIS Annual Infrastructure Report (FCC Report 43-07) ARE REVISED as set forth above and in the attached Appendix A, effective for filings due on March 31, 1994, according to the terms set forth in paragraph six herein.

FEDERAL COMMUNICATIONS COMMISSION

Kathleen B. Levitz

Acting Chief, Common Carrier Bureau

¹¹⁸ "Total Access Lines" are reported elsewhere in ARMIS, in the 43-01 Quarterly Report and the 43-04 Access Report. These reports are of billable access lines, however.

¹¹⁹ ARINC Comments at 2.

¹²⁰ TCA Comments at 15-16.

¹²¹ *Service Quality Order*, 6 FCC Rcd at 2995, para. 51.

¹²² The Office of Management and Budget has approved the current collection of this information requirement. The OMB control number for this collection of information requirement is 3060-0395.

ATTACHMENT

FCC Report 43-05 - Instructions

August 1993

Page 1 of 1

This document provides the instructions for FCC Report 43-05, the ARMIS Service Quality Report, which was adopted by the Commission in CC Docket No. 87-313. The instructions consist of the following sections, which are attached.

1. Reporting Procedures - details on the specific procedures to be followed when submitting this report to the Commission.
2. Report Definition - an illustration of the rows and columns to be reported and their definitions.

A. Introduction

This document contains details on the specific procedures to be followed when submitting FCC Report 43-05, the ARMIS Service Quality Report, to the Commission.

B. General Information

1. FCC Report 43-05 was adopted by the Commission in the LEC Price Cap Order, Policy and Rules Concerning Rates for Dominant Carriers, Second Report and Order, CC Docket No. 87-313, 5 FCC Rcd 6786, 6827-30 (1990). This report is prescribed for every local exchange carrier for which price cap regulation is mandatory and for every local exchange carrier that elects to be covered by the price cap rules.
2. Affected carriers shall file by March 31, June 30, September 30, and December 31 of each year the report for the previous calendar quarter.
3. The report shall be filed on a study area (Jurisdiction) basis.
4. Each report and diskette must be clearly labeled to include the report number, company, study area, period, COSA code, version and submission number. The report number is 43-05, which identifies the filing as the ARMIS Quarterly Service Quality Report. The period identifies the year and quarter covered by the data. See the attached COSA Code Table (CO = Company, SA = Study Area) for a list of companies and their respective COSAs. The version refers to whether the filing is confidential, Public or unrestricted; the Commission has determined that no confidential treatment shall be granted for Report 43-05 filings. The submission number is defined as follows: Submission 0 is for test data purposes only. Submission 1 is the first submission of a quarter's data. Higher numbers (2, 3, etc.) must be used when filing successive revisions to correct that quarter's submission. All corrective submissions must be filed in both paper and diskette with the Accounting and Audits Division, the Industry Analysis Division and International Transcription Services (ITS).
5. All correspondence and pleadings shall identify the proceeding as CC Docket No. 87-313.

C. Where to file

1. Carriers submitting FCC Report 43-05 should consult the schedule below which details the number of copies required and the location to which those copies should be delivered.
2. Carriers are reminded that they must serve a copy of both the paper report and the automated report (diskette) on the FCC's contractor for public records duplication, ITS, at 2100 M Street, N.W., Suite

140, Washington, D.C. 20037 or Room 246 at FCC Headquarters, 1919 M Street., N.W., Washington, D.C. 20036.

NUMBER OF COPIES

	Trans- mittal Letter	Paper Report	Automated Report (diskette)
FCC Secretary Room 222 1919 M Street, N.W. Washington, D.C. 20554	1	-	-
FCC Common Carrier Bureau Accounting & Audits Division Room 812 2000 L Street, N.W. Washington D.C., 20554	1	1	1
FCC Common Carrier Bureau Industry Analysis Division Room 538 1919 M Street, N.W. Washington, D.C. 20554	1	1	1
International Transcription Services Inc., (ITS) Room 246 1919 M Street, N.W. Washington, D.C. 20036	1	1	1

D. Footnotes

1. If any data for the current period differs materially from that for the previous period or the corresponding period of the preceding year and the difference is not self-explanatory but was caused by unusual circumstances, the filing carrier must include footnote text to explain the specific circumstances fully. Certain items require accompanying footnotes and those items are specified in the appropriate section of the instructions for filing the 43-05. Such footnotes are mandatory and must be entered in the Footnote Text Records and Footnote Table.

EXAMPLE:

Table 1, row 110 requires the reporting carrier to specify whether it is reporting number of orders or number of circuits in that row.

2. Footnotes must contain full explanations.

EXAMPLE:

Do not say, "Data are compiled using a more inclusive process than in previous filings."

Do say, "Data are compiled using a process that includes xxx, which was not included in previous filings. The impact of including xxx in this row inflates this number by x% over the previous reporting period."

3. If the reporting carrier does not follow the procedures described in the row and column instructions of the attached Report Definition, it must fully explain any deviations from those procedures.

EXAMPLE:

Do not say, "This value was not calculated pursuant to the instructions."

Do say, "This value was calculated using the xxx method rather than the method described in the instructions because...."

4. Fully explain means the footnote will provide enough information for the data user to understand the circumstances.

EXAMPLES:

a. Do not say, "Corrected Data."

Do say, "\$xxxx is changed to \$xxxx because"

b. Do not say, "Waiver" or "Waiver Granted."

Do say, "Waiver of Part xx.xxx was granted in CC Docket No. xx-xxx, X FCC Rcd, xxxx (1992) to allow AnyCompany to because"

5. Do not include explanatory footnotes in the transmittal letter. The footnote text must be included in the Footnote Text Records and the Footnote Table as specified in the Automated Report Specifications.

E. Errata

1. Carriers are under a legal obligation to correct any erroneous data discovered in FCC Report 43-05. Submissions containing corrected data must include references to indicate which data items were corrected since the previous submission and why those corrections were made.
2. Those references must be included in the Erratum Records and the Erratum Table as specified in the Automated Report Specifications.

F. Certification

1. Carriers must certify the accuracy of the data submitted in FCC Report 43-05 by including a certification statement, signed by a corporate officer, as the last page of the paper report.
2. The text of the certification statement is included on page 20 of 20 in the attached report definition

G. Waivers

1. If a carrier determines that it will be unable to provide data required by FCC Report 43-05, it must file a petition for waiver with the Commission following established Commission procedures. All such requests from a carrier should be included in a single petition. The petition must demonstrate good cause for reporting a different or lower level of detail, must establish the duration of the waiver request, and must indicate how these deficiencies will be corrected.
2. Omission of individual data items or entries, without request for waiver, is unacceptable.

H. Public Information

1. The paper reports filed as Report 43-05 may be examined by the public from 9:00 to 11:00 a.m. and from 2:00 to 4:00 p.m., Monday through Friday, in Room 812, 2000 L Street, N.W., Washington, D.C.
2. Copies of the paper or automated reports filed as Report 43-05 may be obtained from the FCC's contractor for public records duplication, ITS, at (202) 857-3824.

For further information regarding these procedures, contact:

Barbara Van Hagen
FCC Common Carrier Bureau
Accounting & Audits Division
(202) 634-1861

Approved by OMB¹

3060-0395

Expires 05/31/9X

Estimated Burden Hours Per Response: 833 hours

SUMMARY

This document provides the Report Definition for FCC Report 43-05, the ARMIS Service Quality Report which must be provided quarterly by study area. It contains the following:

	<u>PAGE</u>
Table I - Interexchange Access Installation and Repair Intervals Table	3
Table II - Local Service Installation and Repair Intervals Table	4
Table III - Trunk Blockage Table	5
Table IV - Total Switch Downtime Table	6
Table IV-A - Switch Downtime Occurrences of Two Minutes or More Table	7
Table V - Service Quality Complaints Table	8
Table I - Row Instructions	9
Table II - Row Instructions	10
Table III - Row Instructions	11
Table IV - Row Instructions	12
Table IV-A - Row Instructions	13
Table V - Row Instructions	13
Table I - Column Descriptions	15
Table II - Column Descriptions	15
Table III - Column Descriptions	16
Table IV - Column Descriptions	16
Table IV-A - Column Descriptions	17
Table V - Column Descriptions	18
Certification	20

All percentage amounts must be entered in percent and rounded to 2 decimal places. All minutes, days and hours must be rounded to the nearest tenth. Number of Access Lines must be rounded to the nearest thousand, with the exception of Table IV-A, which must be entered in whole numbers. All number of orders, circuits, trouble reports, no trouble found, trunk groups, switches, complaints, and incidents must be entered in whole numbers. All other amounts must be rounded to the nearest thousand.

All fields must be populated. If a data measure equals the quantity zero, enter zero in that field. This is the only proper use of zero in this report. If a filing carrier has a waiver applicable to a certain field, treat the data in that field as "Irretrievable" and footnote the reason for that entry (including a cite to the waiver, and a note as to its duration). Enter N/A in only those fields which are designated as such on the hard copy sample or in the instructions. Do not enter N/A in any other field. See Data Entry Convention, No. 5, in the Automated Report Specifications

¹ This revision has been submitted to OMB for review.

Do not include explanatory footnotes in the transmittal letter; such notes must be included in the Footnotes section of the filing. REMEMBER: Footnotes are mandatory in Table I, row 110 and in Table IV-A, column (t) for those rows in which the code 15 is entered. Footnotes are also mandatory whenever an "Irretrievable" designation is entered in any table.

NOTICE: The ARMIS Service Quality Report collects data designed to capture trends in service quality under price cap regulation and improves and standardizes existing reporting requirements for this purpose. The ARMIS Service Quality Report specifies information requirements in a consistent format and is essential to the FCC to monitor service quality under price cap regulation. Your response is mandatory.

Public reporting burden for this collection of information is estimated to average 833 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Federal Communications Commission, Office of Managing Director, Washington, D.C. 20554, and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington, D.C. 20503.

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxx VERSION

STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxxxxxx

SUBMISSION x

PERIOD: From mmmm yyyy To mmmm yyyy

TABLE I

COSA: xxxx

TABLE I - INSTALLATION AND REPAIR INTERVALS
(Interexchange Access)

Row	Classification	Column		
		Switched Access	High Speed	All Special
			Special Access	Access
		(a)	(b)	(c)

INSTALLATION INTERVALS:

0110	Total Number of Orders or Circuits		N/A	
0112	% Commitments Met		N/A	
0114	Average Interval (in days)		N/A	

REPAIR INTERVALS:

0120	Total Trouble Reports			
0121	Average Interval (in hours)			

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxx VERSION

STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxx

SUBMISSION x

PERIOD: From mmmn yyyy To mmmn yyyy

TABLE II

COSA: #kxx

TABLE II - INSTALLATION AND REPAIR INTERVALS
(Local Service)

Row	Classification	Column						
		Residence			Business			
		MSA	Non-MSA	Total	MSA	Non-MSA	Total	Total
		(d)	(e)	(f)	(g)	(h)	(i)	(j)

INSTALLATION INTERVALS:

0130	Installation Orders							
0132	% Commitments Met							
0134	Average Interval							

REPAIR INTERVALS:

0140	Total Access Lines							
------	--------------------	--	--	--	--	--	--	--

INITIAL TROUBLE REPORTS:

0141	Init Trouble Reports							
0144	Out-of-Svc Trbl Rpts							
0145	Out-of Svc Rpr Intvl							
0146	All Other Trbl Rpts							
0147	All Other Rpr Intvl							

REPEAT TROUBLE REPORTS:

0142	Rep Trouble Reports							
0148	Out-of-Svc Trbl Rpts							
0149	Out-of Svc Rpr Intvl							
0150	All Other Trbl Rpts							
0151	All Other Rpr Intvl							

NO TROUBLE FOUND:

0143	Tot No Trouble Found							
------	----------------------	--	--	--	--	--	--	--

ARMIS QUARTERLY SERVICE QUALITY REPORT

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxx VERSION

STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxxxxxx

SUBMISSION x

PERIOD: From mmmn yyyy To mmmn yyyy

TABLE III

TABLE III - TRUNK BLOCKAGE

Row	Classification	Column		
		Month 1	Month 2	Month 3
		(k)	(l)	(m)
0180	Total Trunk Groups			
0181	Groups Measured			
0185	FGD Groups Exceed Thold 3Mos			
0186	Other Groups Exceed Thold 3Mo			
0187	FGD Groups Exceed Thold 1 Mo			
0188	Groups Exceed Threshold 1 Mo			
0189	FGD Groups Exceed DBO 3 Mos			
0190	Other Groups Exceed DBO 3 Mos			

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxx VERSION

STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxx

SUBMISSION x

PERIOD: From mmmmm yyyy To mmmmm yyyy

TABLE IV

COSA: xxxxx

TABLE IV - TOTAL SWITCH DOWNTIME

Row	Classification	Column					
		Total Number Switches (n)	No Switch Downtime (o)	Total Switch Downtime (p)	Incidents Under 2 (q)	Number Unscheduled (r)	Percent Unscheduled (s)
0200	MSA						
0201	Non-MSA						
0210	Switches Under 1000 Lines						
0211	Switches 1000-4999 Lines						
0212	Switches 5000-9999 Lines						
0213	Switches 10000-19999 Lines						
0214	Switches Over 20,000 Lines						

ARMIS QUARTERLY SERVICE QUALITY REPORT

3060-0395

Expires 05/31/9X

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxx VERSION

STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxx

SUBMISSION x

PERIOD: From xxxx yyyy To xxxx yyyy

TABLE IV.A

COSA: xxxx

TABLE IV-A - OCCURRENCES OF TWO MINUTES OR MORE DURATION DOWNTIME

Row	Cause	CLLI Code	Access Lines	MSA	Duration	Date	Time
	(t)	(u)	(v)	(w)	(x)	(y)	(z)

0220							
------	--	--	--	--	--	--	--

0500							
------	--	--	--	--	--	--	--

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxx
 PERIOD: From mmm yyyy To mmm yyyy
 COSA: xxxx

TABLE V - SERVICE QUALITY COMPLAINTS

Row	Classification	Column		
		Total	MSA	Non-MSA
		(aa)	(bb)	(cc)
0320	No Business Access Lines			
0321	Fed Complaints Bus Users			
0322	State Complaints Bus Users			
0330	No Residential Access Line			
0331	Fed Complaints Res Users			
0332	State Complaints Res Users			

Quarterly Service Quality Report

General Instructions

For the purposes of this report, the terms switch, switching entity and entity are used interchangeably. The terms access lines, lines and lines in service are also used interchangeably. Switch counts are updated quarterly and access line counts are updated annually, representing year-end counts.

Row Instructions

Table I

Row 0110 - Total Number of Orders or Circuits - Enter the total number of installation orders or circuits from Interexchange carriers/customers for the current reporting period on this row. This amount excludes installation orders not completed by the commitment date because the customer was not prepared to receive service on that date. Enter in whole numbers. The reporting carrier must include a footnote to indicate whether it is counting orders or circuits. This footnote is mandatory and must be entered in the Footnote Table.

Row 0112 - % Commitments Met - Enter the percentage of commitments met during the current reporting period on this row. This amount is calculated by dividing the number of installation orders or circuits from Interexchange carriers/customers completed by commitment date by the total number of installation orders or circuits (row 0110). NOTE: The commitment dates for various kinds of installations are published by the LECs and must be kept on file with the Commission. Commitment dates may be extended at the customer's request. Enter in percent, rounded to 2 decimal places.

Row 0114 - Average Interval - Enter the average interval, expressed in business days, between the day the service or order for Interexchange carriers/customers was placed and the day the service was completed, for orders placed during the current reporting period. This amount excludes orders having commitment dates set by customers. Round to the nearest tenth.

Row 0120 - Total Trouble Reports - Enter the total number of circuit-specific trouble reports referred to the LEC by interexchange carriers/customers during the current reporting period. Enter in whole numbers.

Row 0121 - Average Interval - Enter the average interval, in hours to the nearest tenth based on a stopped clock, from the time of the reporting carrier's receipt of the trouble report to the time of acceptance by the complaining interexchange carrier/customer. This interval is defined as "Interval measured in clock hours, excluding only time when maintenance is delayed due to circumstances beyond the LEC's control. Typical reasons for delay include, but are not limited

¹ This revision has been submitted to OMB for review.

to, premise access when a problem is isolated to the location or to absence of customer support to test facilities".

Table II

Row 0130 - Installation Orders - Enter the total number of installation orders for local service customers for the current reporting period. This amount excludes installation orders not completed by the commitment date because the customer was not prepared to receive service on that date. Enter in whole numbers.

Row 0132 - % Commitments Met - Enter the percentage of commitments met during the current reporting period on this row. This amount is calculated by dividing the number of installation orders completed by commitment date by the total number of installation orders (row 0130). Enter in percent, rounded to 2 decimal places.

Row 0134 - Average Interval - Enter the average interval, expressed in business days, between the date the order was placed and the day the service or order was completed, for all orders placed during the current reporting period. This amount excludes all orders having commitment dates set by customers. Round to the nearest tenth.

Row 0140 - Total Access Lines - Access lines include all classifications of local exchange telephone service including, but not limited to, individual lines, party line access, PBX access, Centrex access, Coin access, Foreign Exchange access and WATS access. Access lines, as defined herein, is a more inclusive term than billable access lines as defined in ARMIS 43-01 and 43-04 reports. See row instructions for rows 2090 through 2140 of the ARMIS 43-01 Report and row 9010 of the ARMIS 43-04 Report for the definition of billable access lines. Round to the nearest thousand.

Initial Trouble Reports - These are complaints concerning service quality made by customers or end users to LECs. Such complaints concern problems that have not been reported to the LEC within the previous thirty day period.

Row 0141 - Total Initial Trouble Reports - Enter the number of total initial trouble reports. This amount equals the total of rows 0144 and 0146. Enter in whole numbers.

Row 0144 - Out-of-Service Initial Trouble Reports - Enter the number of initial out-of-service trouble reports received by the reporting carrier during the current reporting period. Out-of-service means that the trouble reported causes the customer to be totally without telephone service. Enter in whole numbers.

Row 0145 - Out-of-Service Average Repair Interval - Enter the average interval, expressed in hours to the nearest tenth measured on a running clock, between the time a trouble report entered in row 0144 is received by the LEC, and the time the trouble report is cleared. This interval is defined as "the total time from receipt of the customer trouble to clearing the trouble. Clear represents

the final disposition of the report, either repairing the problem or closing the report to another category, such as a no trouble found category."

Row 0146 - All Other Initial Trouble Reports - Enter the number of all other initial trouble reports (complaints concerning static, interrupted calls, etc.) received by the reporting carrier during the current reporting period. Enter in whole numbers.

Row 0147 - All Other Average Repair Interval - Enter the average interval, expressed in hours measured on a running clock, between the time a trouble report entered in row 0146 is received by the LEC, and the time the trouble report is cleared. Round to the nearest tenth.

Repeat Trouble Reports - These are complaints concerning service quality problems that recur, or remain unresolved, within thirty days of the initial trouble report.

Row 0142 - Total Repeat Trouble Reports - Enter the number of total repeat trouble reports. This amount equals the total of rows 148 and 150. Enter in whole numbers.

Row 0148 - Out-of-Service Repeat Trouble Reports - Enter the number of out-of-service repeat trouble reports received by the reporting carrier during the current reporting period. Enter in whole numbers.

Row 0149 - Out-of-Service Average Repair Interval - Enter the average interval, expressed in hours measured on a running clock, between the time a trouble report entered in row 0148 is received by the LEC, and the time the trouble report is cleared. Round to the nearest tenth.

Row 0150 - Other Repeat Trouble Reports - Enter the number of other repeat trouble reports received by the reporting carrier during the current reporting period. Enter in whole numbers.

Row 0151 - Other Average Repair interval - Enter the average interval, expressed in hours measured on a running clock, between the time a trouble report entered in row 0150 is received by the LEC and the time the trouble report is cleared. Round to the nearest tenth.

Row 0143 - No Trouble Found - No trouble found refers to a trouble report investigation which finds no discernible problem. Enter the number of investigations which found no problem during the current reporting period. Enter in whole numbers.

Table III

Row 0180 - Total Trunk Groups - Enter the total number of common trunk groups for which the reporting carrier is responsible. Common trunk groups are trunk groups between the LEC end office and the LEC access tandem that carry Feature Group B, C and D access traffic. IntraLATA traffic may also be carried on these groups. Enter in whole numbers.

Row 0181 - Groups Measured - Enter the number of common trunk groups measured during the current reporting period in this row. Enter in whole numbers.

Row 0185 - Feature Group D Groups Exceeding Servicing Threshold for Three Months - Enter the number of Feature Group D common trunk groups which have exceeded a servicing threshold of 2% for three consecutive months. Carriers using other thresholds must footnote them. Enter in whole numbers.

Row 0186 - Other Groups Exceeding Servicing Threshold for Three Months - Enter the number of all other common trunk groups which have exceeded a servicing threshold of 3% for three consecutive months. Carriers using other thresholds must footnote them. Enter in whole numbers.

Row 0187 - FGD Groups Exceeding Servicing Threshold for One Month - Enter the number of direct access trunk groups which have exceeded the interstate access tariff measured blocking threshold of 2% for one month. Enter in whole numbers.

Row 0188 - Other Groups Exceeding Servicing Threshold for One Month - Enter the number of all other trunk groups which have exceeded the interstate access tariff measured blocking threshold of 3% for one month. Enter in whole numbers.

Row 0189 - Feature Group D Groups Exceeding Design Blocking Objectives for Three Consecutive Months - Enter the number of Feature Group D common trunk groups, or mixed usage trunks that include any Feature Group D, which have exceeded an equipment design blocking objective of 0.5% for three or more consecutive months. Enter in whole numbers.

Row 0190 - Other Groups Exceeding Design Blocking Objectives for Three Consecutive Months - Enter the number of all other common trunk groups which have exceeded an equipment design blocking objective of 1.0% for three consecutive months. Carriers using a different DBO must footnote it. Enter in whole numbers.

Table IV

Row 0200 - MSA - This row represents all MSAs served within the study area. MSAs, or Metropolitan Statistical Areas, are designated by the Office of Management and Budget in a list released following each decennial census. An MSA includes at least one city with a minimum population of 50,000, or a Census Bureau defined urbanized area of at least 50,000 population located in one or more counties that qualify and whose population is at least 100,000. See 55 Fed. Reg. 12154 (March 30, 1990). Use the rounding conventions specified in the column instructions when entering these data.

Row 0201 - Non-MSA - This row represents all areas in the study area which lie outside of any MSA. Use the rounding conventions specified in the column instructions when entering these data.

Row 0210 - Switches Under 1,000 Lines - Enter the number of switches, and associated data, serving fewer than 1,000 access lines. Use the rounding conventions specified in the column instructions when entering these data.

Row 0211 - Switches with 1,000 to 4,999 Lines - Enter the number of switches, and associated data, serving 1,000 to 4,999 access lines. Use the rounding conventions specified in the column instructions when entering these data.

Row 0212 - Switches with 5,000 to 9,999 Lines - Enter the number of switches, and associated data, serving 5,000 to 9,999 access lines. Use the rounding conventions specified in the column instructions when entering these data.

Row 0213 - Switches with 10,000 to 19,999 Lines - Enter the number of switches, and associated data, serving 10,000 to 19,999 access lines. Use the rounding conventions specified in the column instructions when entering these data.

Row 0214 - Switches with 20,000 or more Lines - Enter the number of switches, and associated data, serving 20,000 or more access lines. Use the rounding conventions specified in the column instructions when entering these data.

NOTE: The sum of rows 0200 and 0201 equals the sum of rows 0210 through 0214.

Table IV-A

Rows 220 through 500 - Each of these rows, with the exception of rows 320 through 340 which are in Table V, is provided for entry of one occurrence of switch downtime of two or more minutes in duration. For each occurrence use one row, entering the appropriate data in the columns provided. Include only those rows with data to be reported, but complete every item in those rows. Use the rounding conventions specified in the column instructions when entering these data.

Table V

Service Quality Complaints - Service quality complaints are complaints pertaining to service quality filed with state or federal regulatory authorities. This term does not include complaints relating to billing, operator service providers, 900 or 976 services.

Row 0320 - Number of Business Access Lines - Enter the total number of business access lines as of December 31 of the previous calendar year (in thousands) in the study area on this row.

Row 0321 - Federal Complaints from Business Users - Federal complaints are complaints filed with this Commission. Enter the number of federal complaints filed by business users on this row. Enter in whole numbers.

Row 0322 - State Complaints from Business Users - State complaints are complaints filed with state regulatory agencies. Enter the number of state complaints filed by business users on this row. Enter in whole numbers.

Row 0330 - Number of Residential Access Lines - Enter the total number of residential access lines as of December 1 of the previous calendar year (in thousands) in the study area on this row.

Row 0331 - Federal Complaints from Residential Users - Enter the number of federal complaints filed by residential users on this row. Enter in whole numbers.

Row 0332 - State Complaints from Residential Users - Enter the number of state complaints filed by residential users on this row. Enter in whole numbers.

Service Quality Report

Column Descriptions

Table I

Interexchange - This table represents interexchange carrier customers placing installation orders or reporting trouble to the local exchange carrier during the current reporting period.

Column (a) - Switched Access - Circuit from the local exchange carrier (LEC) office to the interexchange carrier/customer Point of Presence (POP) for Feature Group B, C or D interstate service.

Special Access - Circuit from the LEC facilities to the interexchange carrier POP or customer premises for voice grade service, WATS/800, metallic and telegraph services, audio or video program services, wideband services, DDS, high capacity, DS1, DS3, and switched Feature Group A services.

Column (b) - High Speed Special Access - Circuit from the LEC facilities to the interexchange carrier POP or customer premises for DS1, DS2, DS3 and other similar digital services.

Column (c) - All Special Access - Enter all special access data, including those entered in column (b), in this column .

Table II

Residence - Columns (d), (e) and (f) represent residential customers placing installation orders or reporting trouble to the local exchange carrier during the current reporting period.

Column (d) - MSA - MSAs, or Metropolitan Statistical Areas, are designated by the Office of Management and Budget in a list following each decennial census. An MSA includes at least one city with a minimum population of 50,000 and its surrounding area, or a Census Bureau defined urbanized area of at least 50,000 population located in one or more counties that qualify and whose population is at least 100,000. See 55 Fed. Reg. 12154 (March 30, 1990). This amount represents all residential customers located within MSAs in the study area served by the reporting carrier.

Column (e) - Non-MSA - This amount represents all residential customers located outside of all MSAs in the study area served by the reporting carrier.

Column (f) - Total - This amount represents all residential customers in the study area served by the reporting carrier (the sum of columns (d) and (e)).

Business - Columns (g), (h) and (i) represent local service business customers placing installation orders or reporting trouble to the local exchange carrier during the current reporting period.

Column (g) - MSA - See column (d) for the definition of MSA. This amount represents all local service business customers located within MSAs in the study area served by the reporting carrier.

Column (h) - Non-MSA - This amount represents all local service business customers located outside of all MSAs in the study area served by the reporting carrier.

Column (i) - Total - This amount represents all business customers in the study area served by the reporting carrier (the sum of columns (g) and (h)).

Column (j) - Total - Enter the sum of columns (f) and (i) in this column.

Table III

Column (k) - Month 1 - The first month of the current reporting quarter.

Column (l) - Month 2 - The second month of the current reporting quarter.

Column (m) - Month 3 - The third months of the current reporting quarter.

Table IV

Switch Downtime - Switch downtime occurs when call processing capability for an end office is lost. Multiple serial outages at a single switch are to be counted as multiple individual outages if service is restored, even momentarily, between them.

Column (n) - Total Number of Switches - Switching entities (switches) are assemblies of equipment designed to establish connections between lines and trunks. Switching entities include local, class 5 switching machines and any associated remotes; e.g., a host end office and its three associated remotes will be reported as four switching entities. Switching entities designed exclusively for access tandem, class 4, or operator services are not reported here. There may be more than one switching entity per central office or wire center. Enter in whole numbers.

Column (o) - Number of Switches Having Downtime - This column represents the number of switches that experienced downtime during the current reporting period. Enter in whole numbers.

Column (p) - Total Switch Downtime - Switch downtime occurs when call processing capability for an end office is lost. Report all downtime, in cumulative minutes to the nearest tenth, in this column.

Column (q) - Incidents Under Two Minutes - This amount represents the number of incidents of downtime under two minutes in duration. Enter in whole numbers.

Column (r) - Number Unscheduled - This amount represents the number of incidents of switch downtime under two minutes in duration that were not scheduled for routine maintenance or network upgrades. Scheduled downtime refers to those times when a switch is taken down at a predetermined time so that it may be

upgraded or serviced. Such downtimes usually occur during non-busy hours. All other downtime incidents are unscheduled. Enter in whole numbers.

Column (s) - Percent Unscheduled - This amount represents the percent of downtime incidents under two minutes that are not scheduled for routine maintenance or network upgrades. (The ratio of column (r) to column (q), in percent). Enter in percent, rounded to 2 decimal places.

Table IV-A

Column (t) - Cause - This column is two spaces wide. Each condition that causes downtime is entered here as one of the following two-digit codes:

01 - scheduled - includes outages, restarts, phases, etc. resulting from scheduled or planned manual initializations. This includes such activities as parameter loads, software/firmware changes, and other OA&M activities.

02 - procedural errors - telco - installation or maintenance related

03 - procedural errors - telco - non installation or maintenance related (deviation from established procedures, or human error within established procedures; includes failure to respond)

04 - procedural errors - system vendors - includes errors in documentation/instruction

05 - procedural errors - other vendors - e.g., contractor, independent installation vendor

06 - software design - faulty or ineffective design, including faulty patches or software overrides provided by vendor

07 - hardware design - design deficiency or error. Does not include Product Change Notice (PCN) inappropriately delayed by vendor (=procedural error vendor) or telco (=procedural error telco), or PCN waived by telco (=procedural error telco)

08 - hardware failure - random hardware failure not related to design but due to inherent unreliability of system components

09 - acts of God - weather, natural disaster (including lightning, but not if lightning's effect due to bonding or grounding violations; then = procedural error vendor or telco)

10 - traffic overload - traffic load exceeds engineered capacity of system due to unforeseen external condition; not if due to system trouble, inadequate engineering, inadequate network management, system design deficiency

11 - environmental - contamination, leaks, temperature, etc.

12 - external power failure - use of this classification is rare because of existence of battery and other backup systems; does not include failures of converters, inverters internal to telco

13 - massive line outage - cable cut, other

14 - remote - loss of facilities between host and remote (if due to activities internal to host or remote; if external, assign other cause as appropriate -- e.g., cable dig-up = procedural telco or procedural other vendor)

15 - other/unknown - must be footnoted; if unknown, so state in footnote.

Thus a carrier noting an unscheduled outage due to an external power failure would report simply "12". Footnotes should be used to give further details when necessary. If a code other than the standard 11-digit code is used, it must be footnoted.

Column (u) - CLLI Code - Enter the eleven-digit CLLI (Common Language Location Identifier) code which identifies the switch that experienced downtime of two minutes or more in duration. Enter data for only one switch's outage incident on a row.

Column (v) - Access Lines - The number of working network access lines served by the switch. Enter in whole numbers.

Column (w) - MSA - See Table II, column (d) for the definition of MSA. Enter Y if the incident involved a switch that lies within an MSA in the study area served. Enter N if the incident involved a switch outside of all MSAs in the study area served.

Column (x) - Duration - Enter the duration of the outage in minutes, to the nearest tenth, in this column.

Column (y) - Date - Enter the date of the outage in this column using the format mmddy.

Column (z) - Time - Enter the time of the outage in this column using format hhmm for a 24 hour clock (e.g., 11:00 p.m. = 2300; noontime = 1200; 6:30 p.m. = 1830, etc.)

Table V

Column (aa) - Total - Enter the total number of access lines in the study area for rows 0520 and 0530 in this column; enter the total number of complaints in the study area for rows 0521, 0522, 0531 and 0532 in this column. The amount in this column equals the sum of columns (ee) and (ff).

Column (bb) - MSA - See Table II, column (d) for the definition of MSA. Enter the appropriate MSA amounts for rows 0520, 0521, 0522, 0530, 0531 and 0532 in this column.

Column (cc) - Non-MSA - Enter the appropriate non-MSA amounts for rows 0520, 0521, 0522, 0530, 0531 and 0532 in this column.

CERTIFICATION

I certify that I am an officer of _____:
that I have examined the foregoing report and that to the best of my knowledge,
information, and belief, all statements of fact contained in this report are
true and that said report is an accurate statement of the affairs of the above
named respondent in respect to the data set forth herein for the period from
_____ to _____.

PRINTED NAME _____

POSITION _____

SIGNATURE _____

DATE _____

(Persons making willful false statements in this report form can be punished by
fine or imprisonment under the Communications Act, 47 U.S.C. 220(e).)

CONTACT PERSON _____

TELEPHONE NUMBER _____

This document provides the instructions for FCC Report 43-06, the ARMIS Semi-Annual Service Quality Report, which was adopted in CC Docket No. 87-313. The instructions consist of the following sections, which are attached.

1. Reporting Procedures - details on the specific procedures to be followed when submitting this report to the Commission.
2. Report Definition - an illustration of the rows and columns to be reported and their definitions.

A. Introduction

This document contains details on the specific procedures to be followed when submitting FCC Report 43-06, the ARMIS Semi-Annual Service Quality Report, to the Commission.

B. General Information

1. FCC Report 43-06 was adopted by the Commission in the LEC Price Cap Order, Policy and Rules Concerning Rates for Dominant Carriers, Second Report and Order, CC Docket No. 87-313, 5 FCC Rcd 6786, 6827-30 (1990). This report is prescribed for every local exchange carrier for which price cap regulation is mandatory.
2. Affected carriers shall file by March 31 and September 30 of each year, the report for the previous calendar half.
3. The report shall be filed on a study area (Jurisdiction) basis.
4. Each report and diskette must be clearly labeled to include the report number, company, study area, period, COSA code, version and submission number. The report number is 43-06, which identifies the filing as the ARMIS SemiAnnual Service Quality Report. The period identifies the year and quarter covered by the data. See the attached COSA Code Table (CO = Company, SA = Study Area) for a list of companies and their respective COSAs. The version refers to whether the filing is confidential, Public or unrestricted. The submission number is defined as follows: Submission 0 is for test data purposes only. Submission 1 is the first submission of a quarter's data. Higher numbers (2, 3, etc.) must be used when filing successive revisions to correct that quarter's submission. All corrective submissions must be filed in both paper and diskette with the Accounting and Audits Division, the Industry Analysis Division and International Transcription Services (ITS).
5. All correspondence and pleadings shall identify the proceeding as CC Docket No. 87-313.

C. Where to file

1. Carriers submitting FCC Report 43-06 should consult the schedule below which details the number of copies required and the location to which those copies should be delivered.
2. Carriers are reminded that they must serve a copy of both the paper report and the automated report (diskette) on the FCC's contractor for public records duplication, ITS, at 2100 M Street, N.W., Suite 140, Washington, D.C. 20037 or Room 246 at FCC Headquarters, 1919 M Street., N.W., Washington, D.C. 20036.

NUMBER OF COPIES

	Trans- mittal Letter	Paper Report	Automated Report (diskette)
FCC Secretary Room 222 1919 M Street, N.W. Washington, D.C. 20554	1	-	-
FCC Common Carrier Bureau Accounting & Audits Division Room 812 2000 L Street, N.W. Washington D.C., 20554	1	1	1
FCC Common Carrier Bureau Industry Analysis Division Room 538 1919 M Street, N.W. Washington, D.C. 20554	1	1	1
International Transcription Services Inc., (ITS) Room 246 1919 M Street, N.W. Washington, D.C. 20036	1	1	1

D. Footnotes

1. If any data for the current period differs materially from that for the previous period or the corresponding period of the preceding year and the difference is not self-explanatory but was caused by unusual circumstances, the filing carrier must include footnote text to explain the specific circumstances fully.

EXAMPLE:

If there were a dramatic decrease in the number of offices tested for dial tone speed in row 210, a footnote to explain the change would be necessary.

2. Footnotes must contain full explanations.

EXAMPLE:

Do not say, "Data are compiled using a more inclusive process than in previous filings."

Do say, "Data are compiled using a process that includes xxx, which was not included in previous filings. The impact of including xxx

in this row inflates this number by x% over the previous reporting period."

3. If the reporting carrier does not follow the procedures described in the row and column instructions of the attached Report Definition, it must fully explain any deviations from those procedures.

EXAMPLE:

Do not say, "This value was not calculated pursuant to the instructions."

Do say, "This value was calculated using the xxx method rather than the method described in the instructions because...."

4. Fully explain means the footnote will provide enough information for the data user to understand the circumstances.

EXAMPLES:

a. Do not say, "Corrected Data."

Do say, "\$xxx is changed to \$xxx because"

b. Do not say, "Waiver" or "Waiver Granted."

Do say, "Waiver of Part xx.xxx was granted in CC Docket No. xx-xxx, X FCC Rcd, xxx (1992) to allow AnyCompany to because"

5. Do not include explanatory footnotes in the transmittal letter. The footnote text must be included in the Footnote Text Records and the Footnote Table as specified in the Automated Report Specifications.

E. Errata

1. Carriers are under a legal obligation to correct any erroneous data discovered in FCC Report 43-06. Submissions containing corrected data must include references to indicate which data items were corrected since the previous submission and why those corrections were made.
2. Those reference must be included in the Erratum Records and the Erratum Table as specified in the Automated Report Specifications.

F. Certification

1. Carriers must certify the accuracy of the data submitted in FCC Report 43-06 by including a certification statement, signed by a corporate officer, as the last page of the paper report.
2. The text of the certification statement is included on page 7 of 7 in the attached report definition.

G. Waivers

1. If a carrier determines that it will be unable to provide data required by FCC Report 43-06, it must file a petition for waiver with the Commission following established Commission procedures. All such requests from a carrier should be included in a single petition. The petition must demonstrate good cause for reporting a different or lower level of detail, must establish the duration of the waiver requested, and must indicate how these deficiencies will be corrected.
2. Omission of individual data items or entries, without request for waiver, is unacceptable.

H. Public Information

1. The paper reports filed as Report 43-06 may be examined by the public from 9:00 to 11:00 a.m. and from 2:00 to 4:00 p.m., Monday through Friday, in Room 812, 2000 L Street, N.W., Washington, D.C.
2. Copies of the paper or automated reports filed as Report 43-06 may be obtained from the FCC's contractor for public records duplication, ITS, at (202) 857-3824.

For further information regarding these procedures, contact:

Barbara Van Hagen
FCC Common Carrier Bureau
Accounting & Audits Division
(202) 634-1861

SUMMARY

This document provides the Report Definition for FCC Report 43-06, the ARMIS Semi-Annual Service Quality Report which must be provided semi-annually by study area. It contains the following:

	<u>PAGE</u>
Table I - Summary Customer Satisfaction Survey	2
Table II - Dial Tone Response and Transmission Quality	3
Table I - Row Instructions	4
Table II - Row Instructions	4
Table I - Column Instructions	6
Table II - Column Instructions	6
Certification	7

All percentage amounts must be entered in percent and rounded to 2 decimal places.

All monetary figures must be rounded to the nearest thousand dollars. All number of offices and customers must be entered in whole numbers.

All fields must be populated. If a data measure equals the quantity zero, enter zero in that field. This is the only proper use of zero in this report. If a filing carrier has a waiver applicable to a certain field, it must treat the data for that field as "Irretrievable" and footnote the reason for that entry (including a cite to the waiver, and a note as to its duration). Enter N/A in only those fields which are designated as such on the hard copy sample or in the instructions. Do not enter N/A in any other field. See Data Entry Convention, No. 5, in the Automated Report Specifications.

Do not include explanatory footnotes in the transmittal letter; such notes must be included in the Footnotes section of the filing. REMEMBER: Footnotes are mandatory for all "Irretrievable" entries.

NOTICE: The ARMIS Semi-Annual Service Quality Report collects data designed to capture trends in service quality under price cap regulation and improves and standardizes existing reporting requirements for this purpose. The ARMIS Semi-Annual Service Quality Report specifies information requirements in a consistent format and is essential to the FCC to monitor service quality under price cap regulation.

This report is prescribed for every mandatory price cap local exchange carrier and is not subject to the clearance procedures of 44 USC 3507 pursuant to the less than ten rule. Send comments regarding any aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Office of Managing Director, Washington, D.C. 30554, and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington, D.C., 20503.

FCC Report 43-06

ARMIS SEMIANNUAL SERVICE QUALITY REPORT

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxxxxxx
 PERIOD: From mmmn yyyy To mmmn yyyy
 COSA: xxxx

xxxxxxxxxxx VERSION
 SUBMISSION x
 TABLE I

TABLE I - SUMMARY CUSTOMER SATISFACTION SURVEY

Row	Classification	Columns					
		Residential		Small Business		Large Business	
		Number	Percent	Number	Percent	Number	Percent
		Surveyed	Dissatisfd	Surveyed	Dissatisfd	Surveyed	Dissatisfd
		(b)	(c)	(d)	(e)	(f)	(g)
0020	Overall						
0040	Installations						
0060	Repairs						
0080	Business Office						

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxxxxxx
 PERIOD: From mmmn yyyy To mmmn yyyy
 COSA: xxxx

xxxxxxxxxxx VERSION
 SUBMISSION x
 TABLE II

TABLE II - DIAL TONE RESPONSE AND TRANSMISSION QUALITY

ROW	COLUMN
	TOTAL STUDY AREA
	(a)

PERCENT OF OFFICES PERFORMING AT OR ABOVE DIAL TONE SPEED OBJECTIVE LEVEL:

0200	Percent of Offices at or Above Objective	
0210	Number of Offices Measured	

PERCENT OF OFFICES MEETING ALL TRANSMISSION OBJECTIVES:

0240	Percent of Offices Meeting Loss Objectives	
0241	Percent Offices Meeting C-Message Objectives	
0242	Percent of Offices Meeting Balance Objectives	
0243	Percent Offices Meeting Gain Slope Objectives	
0244	Percent of Offices Meeting C-Notch Objectives	

PERCENT OF TRUNKS MEETING ALL TRANSMISSION OBJECTIVES:

0250	Percent of Trunks Meeting Loss Objectives	
0251	Percent of Trunks Meeting Noise Objectives	
0252	Percent of Trunks Meeting Balance Objectives	
0253	Percent Trunks Meeting Gain Slope Objectives	
0254	Percent of Trunks Meeting C-Notch Objectives	

Semi-Annual Service Quality Report

Row Instructions

Table I

Table I is a summary report of the results of the responding carriers' customer satisfaction surveys consisting of generic categories into which the disaggregated categories used by the carriers may be summarized. We chose generic categories in order to maintain the integrity of the individual customer satisfaction surveys, designed by each of the carriers, to suit each carrier's unique circumstances. Use the rounding conventions specified in the column instructions when entering these data.

Row 0020 - Overall - In this row enter the number of customers surveyed and the percent dissatisfied with the overall performance of the reporting carrier.

Row 0040 - Installations - In this row enter the number of customers surveyed and the percent dissatisfied with the reporting carrier's installation services and procedures.

Row 0060 - Repairs - In this row enter the number of customers surveyed and the percent dissatisfied with the reporting carrier's repair services and procedures.

Row 0080 - Business Office - In this row enter the number of customers surveyed and the percent dissatisfied with the reporting carrier's business office services and procedures.

Table II

Row 0200 through 0230 measure the ability of the switching equipment to provide dial tone for an originating call attempt within a specified period of time. The results of the test measurement are reflected in these rows as the percentage of dial tone offices which give dial tone within three seconds of lifting the telephone instrument. The measured performance is derived from call attempt samples taken during the central office busy hours. An office is considered to pass the performance test if a specified number of test calls receive dial tone within the three second criterion.

Row 0200 - Percent Sample at Objective Level - Enter the number of offices passing the measurement standard divided by the number of offices measured. Enter in percent rounded to 2 decimal places.

0210 - Number of Offices Measure - Enter the number of offices tested for dial tone speed. Enter in whole numbers.

Row 0240 - Percent of Offices Meeting Loss Objectives - Enter the percentage of offices passing tests for signal attenuation or loss. Enter in percent rounded to 2 decimal places.

Row 0241 - Percent of Offices Meeting C-Message Objectives - Enter the percentage of offices passing tests for noise over the audible spectrum weighted in a manner consistent with human hearing. Enter in percent rounded to 2 decimal places.

Row 0242 - Percent of Offices Meeting Balance Objectives - Enter the percentage of offices passing tests for balance which determines the amount of echo heard by the subscriber. Enter in percent rounded to 2 decimal places.

Row 0243 - Percent of Offices Passing Gain Slope Objectives - Enter the percentage of offices passing tests for gain slope which is a measure of distortion. Enter in percent rounded to 2 decimal places.

Row 0244 - Percent of Offices Meeting C-Notch Objectives - Enter the percentage of offices passing tests for noise in specified portions of the signal bandwidth. Enter in percent rounded to 2 decimal places.

Row 0250 - Percent of Trunks Meeting Loss Objectives - Enter the percentage of trunks which must pass the loss test and the technical requirement for an office to pass (maintenance limit). Enter in percent rounded to 2 decimal places.

Row 0251 - Percent of Trunks Meeting Noise Objectives - Enter the percentage of trunks which must pass the noise test and the technical requirement for an office to pass (maintenance limit). Enter in percent rounded to 2 decimal places.

Row 0252 - Percent of Trunks Meeting Balance Objectives - Enter the percentage of trunks which must pass the balance test and the technical requirement for an office to pass (maintenance limit). Enter in percent rounded to 2 decimal places.

Row 0253 - Percent of Trunks Meeting Gain Slope Objective - Enter the percentage of trunks which must pass the gain slope test and the technical requirement for an office to pass (maintenance limit). Enter in percent rounded to 2 decimal places.

Row 0254 - Percent of Trunks Meeting C-Notch Objectives - Enter the percentage of trunks which must pass the C-notch test and the technical requirement for an office to pass (maintenance limit). Enter in percent rounded to 2 decimal places.

Semi-Annual Service Quality Report

Column Descriptions

Table I

Column (b) - Number of Residential Customers Surveyed - This column represents the number of residential customers surveyed. Enter in whole numbers.

Column (c) - Percent of Residential Customers Dissatisfied - This column represents the percentage of residential customers surveyed who registered a dissatisfied response. Enter this amount in percent, rounded to two places.

Column (d) - Small Business Customers Surveyed - This column represents the number of small business customers surveyed. "Small business customer" is defined by the filing LEC. Enter in whole numbers.

Column (e) - Percent of Small Business Customers Dissatisfied - This column represents the percentage of small business customers surveyed who registered a dissatisfied response. Enter this amount in percent, rounded to two places.

Column (f) - Number of Large Business Customers Surveyed - This column represents the number of large business customers surveyed. "Large business customer" is defined by the filing LEC. Enter in whole numbers.

Column (g) - Percent of Large Business Customers Surveyed - This column represents the percentage of large business customers surveyed who registered a dissatisfied response. Enter this amount in percent, rounded to two places.

Table II

Column (a) - Total Study Area - This column represents the total study area. A study area usually consists of a telephone company's service territory in a given state, although telephone companies occasionally have more than one study area in a particular state.

CERTIFICATION

I certify that I am an officer of _____:
that I have examined the foregoing report and that to the best of my knowledge,
information, and belief, all statements of fact contained in this report are
true and that said report is an accurate statement of the affairs of the above
named respondent in respect to the data set forth herein for the period from
_____ to _____.

PRINTED NAME _____

POSITION _____

SIGNATURE _____

DATE _____

(Persons making willful false statements in this report form can be punished by
fine or imprisonment under the Communications Act, 47 U.S.C. 220(e).)

CONTACT PERSON _____

TELEPHONE NUMBER _____

This document provides the instructions for FCC Report 43-07, the ARMIS Infrastructure Report, which was adopted by the Commission in CC Docket No. 87-313. The instructions consist of the following sections, which are attached.

1. Reporting Procedures - details on the specific procedures to be followed when submitting this report to the Commission.
2. Report Definition - an illustration of the rows and columns to be reported and their definitions.

A. Introduction

This document contains details on the specific procedures to be followed when submitting FCC Report 43-07, the ARMIS Infrastructure Report, to the Commission.

B. General Information

1. FCC Report 43-07 was adopted by the Commission in the LEC Price Cap Order, Policy and Rules Concerning Rates for Dominant Carriers, Second Report and Order, CC Docket No. 87-313, 5 FCC Rcd 6786, 6827-30 (1990). This report is prescribed for every mandatory price cap local exchange carrier. This report is not subject to the clearance procedures of 44 USC 3507 because there are less than ten respondents.
2. Affected carriers shall file by June 30 of each year for the previous calendar year.
3. The report shall be filed on a study area (Jurisdiction) basis.
4. Each report and diskette must be clearly labeled to include the report number, company, study area, period, COSA code, version and submission number. The report number is 43-07, which identifies the filing as the ARMIS Annual Infrastructure Report. The period identifies the year covered by the data. See the attached COSA Code Table (CO = Company, SA = Study Area) for a list of companies and their respective COSAs. The version refers to whether the filing is confidential, public or unrestricted. The submission number is defined as follows: Submission 0 is for test data purposes only. Submission 1 is the first submission of a quarter's data. Higher numbers (2, 3, etc. must be used when filing successive revision to correct that quarter's submission. All corrective submissions must be filed, in both paper and diskette, with the Accounting and Audits Division, the Industry Analysis Division, and International Transcription Services (ITS).
5. All correspondence and pleadings shall identify the proceeding as CC Docket No. 87-313.

C. Where to file

1. Carriers submitting FCC Report 43-07 should consult the schedule below which details the number of copies required and the location to which those copies should be delivered.
2. Carriers are reminded that they must serve a copy of both the paper report and the automated report (diskette) on the FCC's contractor for public records duplication, ITS, at 2100 M Street, N.W., Suite 140, Washington, D.C. 20037 or delivered to ITS in Room 246 at FCC Headquarters, 1919 M Street, N.W., Washington, D.C. 20036.

NUMBER OF COPIES

	Trans- mittal Letter	Paper Report	Automated Report (diskette)
FCC Secretary Room 222 1919 M Street, N.W. Washington, D.C. 20554	1	-	-
FCC Common Carrier Bureau Accounting & Audits Division Room 812 2000 L Street, N.W. Washington D.C., 20554	1	1	1
FCC Common Carrier Bureau Industry Analysis Division Room 538 1919 M Street, N.W. Washington, D.C. 20554	1	1	1
Internal Transcription Services, Inc. (ITS) Room 246 1919 M Street, N.W. Washington, D.C. 20036	1	1	1

D. Footnotes

1. If any data for the current period differs materially from that for the previous period or the corresponding period of the preceding year and the difference is not self-explanatory but was caused by unusual circumstances, the filing carrier must include footnote text to explain the specific circumstances fully. Certain items require accompanying footnotes and those items are specified in the appropriate section of the instructions for filing the 43-07. Such footnotes are mandatory and must be entered in the Footnote Text Records and Footnote Table.

EXAMPLE:

Table II, Row 410 requires the reporting carrier to specify the data entered as "Other" in a footnote.

2. Footnotes must contain full explanations.

EXAMPLE:

Do not say, "Data are compiled using a more inclusive process than in previous filings."

Do say, "Data are compiled using a process that includes xxx, which were not included in previous filings. The impact of including xxx in this row inflates this number by x% over the previous reporting period".

3. If the reporting carrier does not follow the procedures described in the row and column instructions of the attached Report Definition, it must explain any deviations from those procedures

EXAMPLE:

Do not say, "This value was not calculated pursuant to the instructions."

Do say, "This value was calculated using the xxx method rather than the method described in the instructions because...."

4. Fully explain means the footnote will provide enough information for the data user to understanding the circumstances.

EXAMPLES:

Do not say, "Corrected data."

Do say, "\$xxx is changed to \$xxx because...."

Do not say, "Waiver" or "Waiver granted."

Do say, "Waiver of Part xx.xxx was granted in CC Docket No. xx-xxx, X FCC Rcd, xxxx (1992) to allow AnyCompany to because"

5. Do not include explanatory footnotes in the transmittal letter. The footnote text must be included in the Footnote Text Records and the Footnote Table as specified in the Automated Report Specifications.

E. Errata

1. Carriers are under a legal obligation to correct any erroneous data discovered in FCC Report 43-07. Submissions containing corrected data must include references to indicate which data items were corrected since the previous submission and why those corrections were made.
2. Those references must be included in the Erratum Records and the Erratum Table as specified in the Automated Report Specifications.

F. Certification

1. Carriers must certify the accuracy of the data submitted in FCC Report 43-07 by including a certification statement, signed by a corporate officer, as the last page of the paper report.
2. The text of the certification statement is included on page 22 of 22 in the attached report definition.

G. Waivers

1. If a carrier determines that it will be unable to provide data required by FCC Report 43-07, it must file a petition for waiver with the Commission following established Commission procedures. All such requests from a carrier should be included in a single petition. The petition must demonstrate good cause for reporting a different or lower level or detail, must establish the duration of the waiver requested, and must indicate how these deficiencies will be corrected.
2. Omission of individual data items or entries, without request for waiver, is unacceptable.

H. Public Information

1. The paper reports filed as Report 43-07 may be examined by the public from 9:00 to 11:00 a.m. and from 2:00 to 4:00 p.m., Monday through Friday, in Room 812, 2000 L Street, N.W., Washington, D.C.
2. Copies of the paper or automated reports filed as Report 43-07 may be obtained from the FCC's contractor for public records duplication, ITS at (202) 857-3824.

For further information regarding these procedures, contact:

Barbara Van Hagen
FCC Common Carrier Bureau
Accounting and Audits Division
(202) 634-1861

Approved by OMB¹

3060-0395

Expires 05/31/9X

Estimated Burden Hours Per Response: 550 hours

SUMMARY

This document provides the Report Definition for FCC Report 43-07, the ARMIS Annual Infrastructure Report which must be provided annually by study area. It contains the following:

	<u>PAGE</u>
Table I - Switching Equipment Table	3
Table II - Transmission Facilities Table	5
Table III - LEC Call Set-Up Time Table	7
Table IV - Additions and Book Costs Table	8
Table I - Row Instructions	9
Table II - Row Instructions	15
Table III - Row Instructions	18
Table IV - Row Instructions	19
Table I - Column Descriptions	20
Table II - Column Descriptions	20
Table III - Column Descriptions	20
Table IV - Column Descriptions	21
Certification	22

All percentage amounts must be entered in percent and rounded to 2 decimal places. All kilometers must be rounded to 1 decimal place. All monetary figures must be rounded to the nearest thousand dollars. All access lines must be rounded to the nearest thousand with the exception of access line gain which must be entered in whole numbers. All switches, tandems, host remotes, interfaces, circuit lines, carrier links, terminations, channels, copper pairs, and fiber strands must be entered in whole numbers.

All fields must be populated. If a data measure equals the quantity zero, enter zero in that field. This is the only proper use of zero in this report. If a filing carrier has a waiver applicable to a certain field, it must treat the data for that field as "Irretrievable" and footnote the reason for that entry (including a cite to the waiver, and a note as to its duration). Enter N/A in only those fields which are designated as such on the hard copy sample or in the instructions. Do not enter N/A in any other field. See Data Entry Convention, No. 5, in the Automated Report Specifications.

Do not include explanatory footnotes in the transmittal letter; such notes must be included in the Footnotes section of the filing. REMEMBER: Footnotes are mandatory for rows 410 and 460. Footnotes are mandatory for all "Irretrievable" entries.

¹ This request has been submitted to OMB for review.

NOTICE: The ARMIS Infrastructure Report collects data designed to capture trends in telephone industry infrastructure development under price cap regulation and improves and standardizes existing reporting requirements for this purpose. The ARMIS Infrastructure Report specifies information requirements in a consistent format and is essential to the FCC to monitor service quality under price cap regulation. Your response is mandatory.

This report is prescribed for every mandatory price cap local exchange carrier and local exchange carriers electing the incentive regulation plan. Public reporting burden for this collection of information is estimated to average 550 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Federal Communications Commission, Office of Managing Director, Washington, D.C. 20554, and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington, D.C. 20503.

FCC Report 43-07

Approved by OMB

ARMIS INFRASTRUCTURE REPORT

3060-0395

COMPANY: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxx
 PERIOD: From mmmn yyyy To mmmn yyyy
 COSA: xxxx

Expires 05/31/9X
 xxxxxxxxxxxx VERSION
 SUBMISSION X
 TABLE I

TABLE 1 - SWITCHING EQUIPMENT

Row	COLUMN		
	TOTAL STUDY AREA	WITHIN MSA	NON-MSA
	(a)	(b)	(c)

SWITCHING ENTITIES/LINES IN SERVICE:

0110	Total Switching Entities	N/A	N/A
0111	Local Switches		
0112	Tandems	N/A	N/A
0113	Hosts		
0114	Remotes (Stand Alone Only)		
0120	Total Number Access Lines in Service		

TYPE OF SWITCH:

0130	Total E/M Switches	N/A	N/A
0131	Percent Total Switches	N/A	N/A
0132	E/M Local Switches		
0133	Percent Local Switches		
0134	E/M Tandems	N/A	N/A
0135	Percent Total Tandems	N/A	N/A

0140	E/M Lines Served		
0141	Percent Total Lines		

0150	Total ASPC Switches	N/A	N/A
0151	Percent Total Switches	N/A	N/A
0152	ASPC Local Switches		
0153	Percent Local Switches		
0154	ASPC Tandems	N/A	N/A
0155	Percent Total Tandems	N/A	N/A

0160	ASPC Lines Served		
0161	Percent Total Lines		

0170	Total DSPC Switches	N/A	N/A
0171	Percent Total Switches	N/A	N/A
0172	DSPC Local Switches		
0173	Percent Local Switches		
0174	DSPC Tandems	N/A	N/A
0175	Percent Total Tandems	N/A	N/A

0180	DSPC Lines Served		
0181	Percent Total Lines		

SWITCHING CAPABILITY:

0190	Switches Equipped for Equal Access	N/A	N/A
0191	Percent Total Switches	N/A	N/A

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ARMIS INFRASTRUCTURE REPORT

3060-0395

Expires 05/31/9X

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 STUDY AREA: xxxxxxxxxxxxxxxxxxxxxxxx
 PERIOD: From mmm yyyy To mmm yyyy
 COSA: xxxx

xxxxxxxxxxxxx VERSION
 SUBMISSION X
 TABLE I

TABLE I - SWITCHING EQUIPMENT

Row	COLUMN		
	TOTAL STUDY AREA	WITHIN MSA	NON-MSA
	(a)	(b)	(c)
0200	Access Lines with Equal Access		
0201	Percent Total Lines		
0210	Touch-Tone Capable Switches		
0211	Percent Total Switches		
0220	Access Lines with Touch-Tone Capability		
0221	Percent Total Lines		
0230	Total Switches Equipped with SS7-394	N/A	N/A
0231	Percent Total Switches	N/A	N/A
0232	Lines with Access to SS7-394		
0233	Percent Total Access Lines		
0234	Total Switches Equipped with SS7-317	N/A	N/A
0235	Percent Total Switches	N/A	N/A
0236	Lines with Access to SS7-317		
0237	Percent Total Access Lines		
0240	Local Switches Equipped with SS7-394		
0241	Percent Total Local Switches		
0246	Local Switches Equipped with SS7-317		
0247	Percent Total Local Switches		
0250	Tandems Equipped with SS7-394	N/A	N/A
0251	Percent Total Tandems	N/A	N/A
0256	Tandems Equipped with SS7-317	N/A	N/A
0257	Percent Total Tandems	N/A	N/A
0270	Total Switches Equipped with ISDN	N/A	N/A
0271	Percent Total Switches	N/A	N/A
0280	Local Switches Equipped with ISDN		
0281	Percent Total Local Switches		
0290	Tandems Equipped with ISDN	N/A	N/A
0291	Percent Total Tandems	N/A	N/A
0300	Lines with Access to ISDN		
0301	Percent Total Lines		
0311	Basic Rate ISDN (BRI) Interfaces Equipped		
0312	Primary Rate ISDN (PRI) Interfaces Equipped		

COMPANY: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

STUDY AREA: XXXXXXXXXXXXXXXXXXXXXXXX

PERIOD: From mmmn yyyy To mmmn yyyy

COSA: XXXX

TABLE II - TRANSMISSION FACILITIES

Row	COLUMN
	TOTAL STUDY AREA
	(d)

SHEATH KILOMETERS:

0320	Total Sheath Kilometers	
0321	Copper	
0322	Fiber	
0323	Other	

INTEROFFICE WORKING FACILITIES:

0330	Total Circuit Links	
0331	Baseband	
0332	Analog CXR	
0333	Digital CXR	
0350	Analog Carrier Links	
0351	Copper	
0352	Radio	
0360	Digital Carrier Links	
0361	Copper	
0362	Radio	
0363	Fiber	

LOOP PLANT - CENTRAL OFFICE TERMINATIONS:

0370	Total Working Channels	
0380	Copper	
0381	Baseband	
0382	Analog CXR	
0383	Digital CXR	
0390	Fiber Digital CXR	
0410	Other	

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Expires 05/31/9X
 xxxxxxxxxxxx VERSION
 SUBMISSION X
 TABLE II

TABLE II - TRANSMISSION FACILITIES

Row	COLUMN
	TOTAL STUDY AREA
	(d)
0420	Total Equipped Channels
0430	Copper
0431	Baseband
0432	Analog CXR
0433	Digital CXR
0440	Fiber Digital CXR
0460	Other
OTHER TRANSMISSION FACILITY DATA:	
0470	Copper Prs Term Main Frame (Loop Plant Only)
0480	Fiber Strands Term in the CO (Loop Plnt Only)
0481	Fiber Term at Customer Premises DSO Rate
0482	Fiber Term at Customer Premises DS1 Rate
0483	Fiber Term at Customer Premises DS2 Rate
0484	Fiber Term at Cust Prem DS3 Rate and higher

Approved by OMB
 3060-0395
 Expires 05/31/9X
 XXXXXXXXXXXX VERSION
 SUBMISSION X
 TABLE III

COMPANY: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
 STUDY AREA: XXXXXXXXXXXXXXXXXXXXXXXX
 PERIOD: From mmmm yyyy To mmmm yyyy
 COSA: XXXX

TABLE III - LEC CALL SET-UP TIME

Row	Classification	Column					
		Average Call Set-Up Time					
		Direct			Via Access Tandem		
		End Offices	SS7-394	MF	SS7-394	MF	Mixed
(e)	(f)	(g)	(h)	(i)	(j)		

TIME:

00510	Total						
0511	End Offices/EMs						
0512	End Offices/SPC Analogs						
0513	End Offices/Digitals						

PERCENT:

0520	Total Access Lines						
0521	Access Lines/EMs						
0522	Access Lines SPC/Analog						
0523	Access Lines/Digitals						

COMPANY: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
STUDY AREA: XXXXXXXXXXXXXXXXXXXXXXXX
PERIOD: From mmmm yyyy To mmmm yyyy
COBA: XXXX

TABLE IV - ADDITIONS AND BOOK COSTS

Row	COLUMN
	TOTAL STUDY AREA
	(k)
0530	Total Access Lines in Service
0531	Access Line Gain
0540	Total Gross Capital Expenditures

Infrastructure Report

General Instructions

For the purposes of this report, the terms switch, switching entity and entity are used interchangeably. The terms access lines, lines and lines in service are also used interchangeably.

Row Instructions

Table I

Switching Entities - Switching entities are assemblies of equipment designed to establish connections between lines and trunks. Switching entities include access tandems, local, class 5 switching machines and any associated remotes; e.g., a host end office and its three associated remotes will be reported as four switching entities. There may be more than one switching entity per central office or wire center. Switching entities designed exclusively for operator services are not reported here.

Lines in Service - Access lines include all classifications of local exchange telephone service including, but not limited to, individual lines, party line access, PBX access, Centrex access, Coin access, Foreign Exchange access and WATS access. Access lines, as defined herein, is a more inclusive term than billable access lines, as defined in the ARMIS 43-01 and 43-04 reports. See row instructions for rows 2090 through 2140 of the ARMIS 43-01 report and for 9010 of the ARMIS 43-04 report for the definition of billable access lines.

Row 0110 - Total Switching Entities - Enter the total number of local and access tandem switching entities on this row. Remotes to be included in the total switching entities count are those described in the general definition of remote.² A remote switching entity can generally be described as a switching entity that has no connection to the facilities network except through one other (host) switching entity that shares the processing capabilities of another switching system for certain control functions under the direction of the host central processor, and that can be controlled remotely by the host over a pair of dedicated data links. This amount is equal to the sum of rows 0130, 0150 and 0170. Tandem switching entities are used to connect local switching entities with local switching entities in other central offices. This report includes those tandems that are designed exclusively to establish connections between trunks. Since some switches are used for both local and access tandem switching, the sum of rows 0110 and 0112 may be greater than the amounts entered on this

¹ This request has been submitted to OMB for review.

² See 7 FCC Rcd 3590 (Com.Car.Bur. 1992).

row. For example, if there are 6 local switches, 4 tandem switches and 5 switches that are used for both local and tandem switching, row 0111 would equal 11 local switches, row 0112 would equal 9 switches, and row 0110 would equal 14 switches. In this case, the sum of rows 0111 and 0112 (20) would be greater than the amount of total switching entities (15). Since we are asking only for the number of remotes with stand-alone capability, the total of rows 0113 and 0114 will be less than the total of the amounts entered on this row. For example, if there are 16 total switching entities, and there are 3 hosts and 7 remotes that have stand-alone capability, the sum of rows 0113 and 0114 (10) would be less than the amount of total switching entities (16). Enter in whole numbers.

Row 0111 - Local Switches - Enter the total number of switches used as local switches on this row. This amount is equal to the sum of rows 132, 152 and 172. Enter in whole numbers.

Row 0112 - Access Tandems - Enter the total number of switches with access tandem capability on this row. This amount is equal to the sum of rows 134, 154 and 174. Enter in whole numbers.

Row 0113 - Hosts - A host is a switch serving one or more remotes. Enter in whole numbers.

Row 0114 - Remotes (Stand-Alone Only) - A remote switching entity can generally be described as a switching entity that has no connection to the facilities network except through one other (host) switching entity, that shares the processing capabilities of another switching system for certain control functions under the direction of the host central processor, and that can be controlled remotely by the host over a pair of dedicated data links. All types of remote switches are included with the switching entity counts in row 110. However, row 0114 excludes remotes that are incapable of providing stand-alone operation when the host switch fails. Only those remote switching entities that are equipped to operate in a stand-alone fashion (*i.e.*, able to operate when the host fails, or the data links to the host fail) to be able to provide more limited service, are to be reported on row 0114. Remote entities that are not within this description should not be included on this row. Enter in whole numbers.

Row 0120 - Total Number Access Lines In Service - Enter the total number of access lines in service on this row. This amount is equal to the sum of rows 0140, 0160 and 0180. Round to the nearest thousand.

Type of Switch - Types of switches include Electro-Mechanical (E/M), *e.g.*, Step-by-Step and Crossbar; Analog Stored Program Controlled (ASPC); and Digital Stored Program Controlled (DSPC).

Row 0130 - Total E/M Switches - Enter the total number of local and tandem Electro-Mechanical switches on this row. Since some switches are used for both local and tandem switching, the sum of rows 132 and 134 may be greater than the amounts entered on this row (see example, row 0110). Enter in whole numbers.

Row 0131 - Percent Total Switches - Enter the ratio of Electro-Mechanical switches to total switches, in percent (row 130 divided by row 110). Round to 2 decimal places.

Row 0132 - E/M Local Switches - Enter the total number of Electro-Mechanical switches used as local switches on this row.. Enter in whole numbers.

Row 0133 - Percent Local Switches - Enter the ratio of Electro-Mechanical local switches to total local switches, in percent (row 0132 divided by row 0111). Round to 2 decimal places.

Row 0134 - E/M Tandems - Enter the total number of Electro-Mechanical switches with tandem capability on this row. Enter in whole numbers.

Row 0135 - Percent Total Tandems - Enter the ratio of Electro-Mechanical tandems to total tandems, in percent (row 0134 divided by 0112). Round to 2 decimal places.

Row 140 - E/M Lines Served - Enter the number of lines served by Electro-Mechanical switches. Round to the nearest thousand.

Row 0141 - Percent Total Lines - Enter the ratio of lines served by Electro-Mechanical switches to total lines in service, in percent (row 0140 divided by row 0120). Round to 2 decimal places.

Row 0150 - Total ASPC Switches - Enter the total number of local and tandem Analog Stored Program Controlled switches. Since some switches are used for both local and tandem switching, the sum of rows 152 and 154 may be greater than the amounts entered on this row (see example, row 0110). Enter in whole numbers.

Row 0151 - Percent Total Switches - Enter the ratio of Analog Stored Program Controlled switches to total switches, in percent (row 0150 divided by row 0110). Round to 2 decimal places.

Row 0152 - ASPC Local Switches - Enter the total number of Analog Stored Program Controlled switches used as local switches on this row. Enter in whole numbers.

Row 0153 - Percent Local Switches - Enter the ratio of Analog Stored Program Controlled switches to total local switches, in percent (row 0152 divided by row 0111). Round to 2 decimal places.

Row 0154 - ASPC Tandems - Enter the total number of Analog Stored Program Controlled switches with tandem capability on this row. Enter in whole numbers.

Row 0155 - Percent Total Tandems - Enter the ratio of Analog Stored Program Controlled tandems to total tandems, in percent (row 0154 divided by row 0112). Round to 2 decimal places.

Row 0160 - ASPC Lines Served - Enter the number of lines served by Analog Stored Program Controlled switches. Round to the nearest thousand.

- Row 0161 - Percent Total Lines - Enter the ratio of lines served by Analog Stored Program Controlled switches to total lines in service, in percent (row 160 divided by row 0120). Round to 2 decimal places.
- Row 0170 - Total DSPC Switches - Enter the total number of local and tandem Digital Stored Program Controlled switches. Since some switches are used for both local and tandem switching, the sum of rows 172 and 174 may be greater than the amounts entered on this row (see example, row 0110). Enter in whole numbers.
- Row 0171 - Percent Total Switches - Enter the ratio of Digital Stored Program Controlled switches to total switches, in percent (row 0170 divided by row 0110). Round to 2 decimal places.
- Row 0172 - DSPC Local Switches - Enter the total number of Digital Stored Program Controlled switches used as local switches on this row. Enter in whole numbers.
- Row 0173 - Percent Local Switches - Enter the ratio of Digital Stored Program Controlled local switches to total local switches, in percent (row 0172 divided by row 0111). Round to 2 decimal places.
- Row 0174 - DSPC Tandems - Enter the total number of Digital Stored Program Controlled switches with tandem capability on this row. Enter in whole numbers.
- Row 175 - Percent Total Tandems - Enter the ratio of Digital Stored Program Controlled tandems total tandems, in percent (row 0174 divided by row 0112). Round to 2 decimal places.
- Row 0180 - DSPC Lines Served - Enter the number of lines served by Digital Stored Program Controlled switches. Round to the nearest thousand.
- Row 0181 - Percent Total Lines - Enter the ratio of lines served by Digital Stored Program Controlled switches to total lines in service, in percent (row 0180 divided by row 0120). Round to 2 decimal places.
- Row 0190 - Switches Equipped for Equal Access - Enter the number of switching entities equipped for equal access, Feature Group D service. Enter in whole numbers.
- Row 0191 - Percent Total Switches - Enter the ratio of switches equipped for equal access to total switches, in percent (row 0190 divided by row 0110). Round to 2 decimal places.
- Row 0200 - Access Lines with Equal Access - Enter the number of access lines served by switches equipped for equal access. Round to the nearest thousand.
- Row 0201 - Percent Total Lines - Enter the ratio of lines served by switches equipped for equal access to total lines in service, in percent (row 0200 divided by row 0120). Round to 2 decimal places.
- Row 0210 - Touch-Tone Capable Switches - Enter the number of switching entities equipped for Touch-Tone. Enter in whole numbers.

- Row 0211 - Percent Total Switches - Enter the ratio of switches equipped for Touch-Tone to total switches, in percent (row 0210 divided by row 0111). Round to 2 decimal places.
- Row 0220 - Access Lines with Touch-Tone Capability - Enter the number of access lines served by switches equipped for Touch-Tone. Round to the nearest thousand.
- Row 0221 - Percent Total Lines - Enter the ratio of access lines served by switches equipped for Touch-Tone to total access lines, in percent (row 0220 divided by row 0120). Round to 2 decimal places.
- Row 0230 - Total Switches Equipped with SS7-394 - Enter the total number of local and tandem switches equipped with SS7-394. Enter in whole numbers.
- Row 0231 - Percent Total Switches - Enter the ratio of switches equipped with SS7-394 to total switches, in percent (row 0230 divided by row 0110). Round to 2 decimal places.
- Row 0232 - Lines with Access to SS7-304 - Enter the number of lines in service that are served by switches equipped with SS7-394. Round to the nearest thousand.
- Row 0233 - Percent Total Access Lines - Enter the ratio of lines served by switches equipped with SS7-394 to total access lines, in percent (row 0232 divided by row 0120). Round to 2 decimal places.
- Row 0234 - Total Switches Equipped with SS7-317 - Enter the total number of switches equipped with SS7-317 on this row. Enter in whole numbers.
- Row 0235 - Percent Total Switches - Enter the ratio of switches equipped with SS7-317 to total switches, in percent (row 0234 divided by row 0110). Round to 2 decimal places.
- Row 0236 - Lines with Access to SS7-317 - Enter the number of lines served by switches equipped with SS7-317. Round to the nearest thousand.
- Row 0237 - Percent Total Access Lines - Enter the ratio of access lines served by switches equipped with SS7-317 to total access lines, in percent (row 0236 divided by row 0120). Round to 2 decimal places.
- Row 0240 - Local Switches Equipped with SS7-394 - Enter the number of switches used as local switches that are equipped with SS7-394. Enter in whole numbers.
- Row 0241 - Percent Total Local Switches - Enter the ratio of local switches equipped with SS7-394 to total local switches, in percent (row 0240 divided by row 0111). Round to 2 decimal places.
- Row 0246 - Local Switches with SS7-317 - Enter the total number of local switches equipped with SS7-317. Enter in whole numbers.

Row 0247 - Percent Total Local Switches - Enter the ratio of local switches equipped with SS7-317 to total local switches, in percent (row 0246 divided by row 0111). Round to 2 decimal places.

Row 0250 - Tandems Equipped with SS7-394 - Enter the total number of switches with tandem capability that are equipped with SS7-394. Enter in whole numbers.

Row 0251 - Percent Total Tandems - Enter the ratio of tandem switches equipped with SS7-394 to total tandems, in percent (row 0250 divided by row 0112). Round to 2 decimal places.

Row 0256 - Tandems Equipped with SS7-317 - Enter the total number of switches with tandem capability that are equipped with SS7-317. Enter in whole numbers.

Row 0257 - Percent Total Tandems - Enter the ratio of tandem switches equipped with SS7-317 to total tandems, in percent (row 0256 divided by row 0112). Round to 2 decimal places.

Row 0270 - Total Switches Equipped with ISDN - Enter the total number of local and tandem switches that are equipped with ISDN. Since some switches are used for both local and tandem switching, the sum of rows 0280 and 0290 may be greater than the amounts entered on this row (see example, row 0110). Enter in whole numbers.

Row 0271 - Percent Total Switches - Enter the ratio of switches equipped with ISDN to total switches, in percent (row 0270 divided by row 0110). Round to 2 decimal places.

Row 0280 - Local Switches Equipped with ISDN - Enter the number of switches used as local switches that are equipped with ISDN. Enter in whole numbers.

Row 0281 - Percent Total Local Switches - Enter the ratio of local switches equipped with ISDN to total local switches, in percent (row 0280 divided by row 0111). Round to 2 decimal places.

Row 0290 - Tandems Equipped with ISDN - Enter the number of switches with tandem capability that are equipped with ISDN. Enter in whole numbers.

Row 0291 - Percent Total Tandems - Enter the ratio of tandems equipped with ISDN to total tandems, in percent (row 0290 divided by row 0112). Round to 2 decimal places.

Row 0300 - Lines with Access to ISDN - Enter the number of lines served by switches equipped with ISDN. Round to the nearest thousand. Do not include in this count lines that could be connected to switches equipped with ISDN.

Row 0301 - Percent Total Lines - Enter the ratio of lines served by switches equipped with ISDN to total lines in service, in percent (row 0300 divided by row 0120). Round to 2 decimal places. Do not include in this count lines that could be connected to switches equipped with ISDN.

Row 0311 - Basic Rate ISDN (BRI) Interfaces Equipped - Basic rate ISDN consists of two Bearer Channels at 64 Kilobits/second and one Delta Channel at 16 kilobits/second. Quantities reflected are the number of (2B+D) BRI interfaces equipped. This amount represents actual interfaces equipped with ISDN. Enter in whole numbers.

Row 0312 - Primary Rate ISDN (PRI) Interfaces Equipped - Equivalent primary rate ISDN interfaces are generally configured as 23 Bearer Channels and one Delta Channel all at 64 kilobits/second. Quantities reflected are the number of equivalent PRI (23B+D) ISDN interfaces equipped, excluding interoffice PRI ISDN interfaces. This amount represents actual interfaces equipped with ISDN. Enter in whole numbers.

Table II

Row 0320 - Total Sheath Kilometers - Sheath kilometers include loop, interoffice and toll sheath kilometers; a sheath kilometer may include multiple lines and circuits. Round to 1 decimal place.

Row 0321 - Copper - Enter the number of sheath kilometers of twisted pair copper cable on this row. Round to 1 decimal place.

Row 0322 - Fiber - Enter the number of sheath kilometers of fiber on this row. Round to 1 decimal place.

Row 0323 - Other - Enter the number of sheath kilometers of aluminum, coaxial, and all other sheath kilometers not included in rows 0321 or 0322, on this row. Round to 1 decimal place.

Row 0330 - Total Circuit Links - A circuit link is that link that exists between points A and B where voice frequency/DSO cross-connects and/or analog/digital conversion (collectively referenced here as conversion) occurs. Circuit links are counted as follows: If there is a circuit between A and B with no intermediate conversions, count one circuit link for each voice frequency equivalent channel. If there is a circuit between A and B with one intermediate conversion, count two circuit links for each voice frequency equivalent channel. Similarly, two intermediate conversions between A and B would result in three circuit links per voice equivalent channel. Enter in whole numbers.

Row 0331 - Baseband - Enter the number of baseband circuit links on this row. Enter in whole numbers.

Row 0332 - Analog CXR - Enter the number of analog CXR circuit links, converted to voice frequency equivalents, on this row. Enter in whole numbers.

Row 0333 - Digital CXR - Enter the number of digital CXR circuit links, converted to voice grade equivalents, on this row. Enter in whole numbers.

Carrier Links - A Carrier Technology Segment (carrier link) is defined as a segment of the interoffice network disaggregated by technology (i.e., analog, digital); and by medium (i.e., copper, fiber, or radio). Each segment between central offices or other interoffice network nodes is defined as a unique carrier technology segment. For these purposes, a central office is an inter-office network node. Other interoffice network nodes are defined as any points in the interoffice network where a cross-connect occurs, or where a change in technology or medium occurs. Counts are on an analog group or DS1 equivalent basis.

Row 0350 - Analog Carrier Links - Enter the number of analog carrier links on this row. This amount equals the sum of rows 0351 and 0352. Enter in whole numbers.

Row 0351 - Copper - Enter the number of copper analog carrier links on this row. Enter in whole numbers.

Row 0352 - Radio - Enter the number of radio analog carrier links on this row. Enter in whole numbers.

Row 0360 - Digital Carrier Links - Enter the number of digital carrier links on this row. This amount equals the sum of rows 0361, 0362 and 0363. Enter in whole numbers.

Row 0361 - Copper - Enter the number of copper digital carrier links on this row. Enter in whole numbers.

Row 0362 - Radio - Enter the number of radio digital carrier links on this row. Enter in whole numbers.

Row 0363 - Fiber - Enter the number of fiber digital carrier links on this row. Enter in whole numbers.

LOOP PLANT - CENTRAL OFFICE TERMINATIONS - These facilities are from the central office to the end users. Local loop includes analog type services only. It excludes ISDN.

Row 0370 - Total Working Channels - Working Channels are on a 4 kHz bandwidth (single voice channel) basis. Working channels originating from a remote switch are treated the same as if the channels originated in the host central office. All reports of working channels are counted on this 4 kHz basis for purposes of this report. This amount equals the sum of rows 0380, 0390 and 0410. Enter in whole numbers.

Row 0380 - Total Copper - Enter the number of copper working channels on this row. This amount equals the sum of rows 0381, 0382 and 0383. Enter in whole numbers.

Row 0381 - Baseband - Enter the number of baseband copper working channels, converted to voice frequency equivalents, on this row. Enter in whole numbers.

Row 0382 - Analog - Enter the number of analog copper working channels, converted to voice frequency equivalents, on this row. Enter in whole numbers.

Row 0383 - Digital - Enter the number of digital copper working channels, converted to voice frequency equivalents, on this row. Enter in whole numbers.

Row 390 - Fiber Digital CXR - Enter the number of fiber digital CXR working channels, converted to voice frequency equivalents, on this row. Enter in whole numbers.

Row 0410 - Other - Enter the number of other working channels on this row. Explain the data entered here in a footnote. Enter in whole numbers.

Row 0420 - Total Equipped Channels - Equipped channels are on a 4 kHz bandwidth (single voice channel) basis. Equipped channels originating from a remote switch are treated the same as if the channels originated in the host central office. This amount equals the sum of rows 0430, 0440 and 0460. Enter in whole numbers.

Row 0430 - Copper - Enter the number of copper equipped channels on this row. This amount equals the sum of rows 0431, 0432 and 0433. Enter in whole numbers.

Row 0431 - Baseband - Enter the number of baseband copper equipped channels in whole numbers on this row.

Row 0432 - Analog CXR - Enter the number of analog CXR copper equipped channels in whole numbers on this row.

Row 0433 - Digital CXR - Enter the number of digital CXR copper equipped channels in whole numbers on this row.

Row 0440 - Fiber Digital CXR - Enter the number of fiber digital CXR equipped channels in whole numbers on this row.

Row 0460 - Other - Enter the number of other equipped channels in whole numbers on this row. Explain the data entered here in a footnote.

Row 0470 - Copper Pairs Terminated at the Main Frame (Loop Plant Only) - Enter the number of copper pairs terminated at the main frame in whole numbers.

Row 0480 - Fiber Strands Terminated in the Central Office (Loop Plant Only) - Enter the number of individual fiber strands terminated in central offices in whole numbers on this row.

Row 0481 - Fiber Terminated at Customer's Premises at the DSO Rate - Enter the number of individual customer services provided over fiber strands terminated at the customer's premises, other than trials, at the DSO rate on this row. Enter in whole numbers.

Row 0482 - Fiber Terminated at Customer's Premises at the DS1 Rate - Enter the number of individual customer services provided over fiber strands terminated at the customer's premises, other than trials, at the DS1 rate on this row. Enter in whole numbers.

Row 0483 - Fiber Terminated at Customer's Premises at the DS2 Rate - Enter the number of individual customer services provided over fiber strands terminated at the customer's premises, other than trials, at the DS2 rate on this row. Enter in whole numbers.

Row 0484 - Fiber Terminated at the Customer's Premises at the DS3 Rate or Higher - Enter the number of individual customer services provided over fiber strands terminated at the customer's premises, other than trials, at the DS3 rate or higher on this row. Footnote the number of individual services provided over fiber strands terminated at the customer's premises at a higher than DS3 rate, if any. Enter in whole numbers.

Table III

Row 0510 - Total - Enter the data for the total number of end offices in the appropriate columns on this row. Enter in whole numbers in column (e), End Offices. Round columns (f) through (j) to 2 decimal places.

Row 0511 - End Offices Electro-Mechanical Switches - Enter the data for the total number of end offices equipped with electro-mechanical switches in the appropriate columns on this row. Enter in whole numbers in column (e), End Offices. Round columns (f) through (j) to 2 decimal places.

Row 0512 - End Office SPC Analog Switches - Enter the data for the total number of end offices equipped with SPC analog switches in the appropriate columns in this row. Enter in whole numbers in column (e), End Offices. Round columns (f) through (j) to 2 decimal places.

Row 0513 - End Office Digital Switches - Enter the data for the total number of end offices equipped with Digital Switches in the appropriate columns on this row. Enter in whole numbers in column (e), End Offices. (Round columns (f) through (j) to 2 decimal places.

Row 0520 - Total Access Lines - Enter the percent of the network represented by the total number of access lines in the appropriate columns in this row. Round to 2 decimal places.

Row 0521 - Access Lines Electro-Mechanical Switches - Enter the percent of the network represented by the total number of access lines equipped with electro-mechanical switches in the appropriate columns on this row. Round to 2 decimal places.

Row 0522 - Access Lines SPC Analog Switches - Enter the percent of the network represented by the total number of access lines equipped with SPC analog switches in the appropriate columns on this row. Round to 2 decimal places.

Row 0523 - Access Lines Digital Switches - Enter the percent of the network represented by the total number of access lines equipped with Digital Switches in the appropriate columns on this row. Round to 2 decimal places.

Table IV

Row 0530 - Total Access Lines in Service - Enter the number of all access lines in service on this row. Round to the nearest thousand.

Row 0531 - Access Line Gain - This amount is calculated by subtracting outward movement from inward movement. Enter in whole numbers.

Row 0540 - Total Gross Capital Expenditures - Enter the dollar amount of gross additions to accounts 2110, 2210, 2220, 2230, 2310, 2410, 2680 and 2690 during the current reporting period. See also ARMIS Report. 43-02, row 260, column (ac). Gross capital expenditures are consistent with Form M and ARMIS. Round to the nearest thousand.

Infrastructure Report

Column Descriptions

Table I

Column (a) - Total Study Area - This column represents the total study area. A study area usually consists of a telephone company's service territory in a given state, although telephone companies occasionally have more than one study area in a particular state. Enter the facilities in the total study area in this column. This amount should equal column (b) plus column (c).

Column (b) - within MSA - This column represents all MSAs served within the study area. MSAs, or Metropolitan Statistical Areas, are designated by the Office of Management and Budget in a list following each decennial census. An MSA includes at least one city with a minimum population of 50,000 and its surrounding area, or a Census Bureau defined urbanized area of at least 50,000 population located in one or more counties that qualify and whose population is at least 100,000. See 55 Fed. Reg. 12154 (March 30, 1990). Enter the facilities within any MSA in the Study Area in this column.

Column (c) - non-MSA - This column represents all areas which lie outside of any MSA. Enter the facilities in the Study Area which are located outside of any MSA.

Table II

Column (d) - Total Study Area - See description for Table I, column (a).

Table III

Call Set-Up Time - For the purposes of infrastructure reporting, call set-up time is defined as "the time between dialing the last digit and the response or acknowledgement 'winkback', or the acknowledgement of signal receipt from the interexchange carrier."

Column (e) - End Offices - Enter the total number of end offices appropriate for each row, in this column. The access line counts in this column should be consistent with the access line data provided in Table I of the Infrastructure Report. Footnote the number of end offices used in the Bellcore studies that developed the underlying data.

Average Call Set-Up Time - Average call set-up time is the average amount of call set-up time for all end office types.

Direct - Direct access from the end office to the interexchange carrier POP.

Column (f) - SS7-394 - Enter the average call set-up time, or the percent of network represented, as appropriate, for direct access from end offices using SS7-394.

Column (g) - MF - Enter average call set-up time, or the percent of the network represented, as appropriate, for direct access from end offices using multifrequency signaling.

Via Access Tandem - End Offices routing calls through a switch having tandem capability.

Column (h) - SS7-394 - Enter the average call set-up time, or the percent of the network represented, as appropriate, for end office routing calls through tandem switches using SS7-394.

Column (i) - MF - Enter the average call set-up time, or percent of the network represented, as appropriate, for end offices routing calls through tandem switches using multifrequency signaling.

Column (j) - Mixed - Enter the average call set-up time, or percent of the network represented, as appropriate, for end offices using multifrequency signaling, routing calls through an access tandem switch using SS7-394 signaling.

Table IV

Column (k) - Total Study Area - See description for Table I, column (a).

CERTIFICATION

I certify that I am an officer of _____:
that I have examined the foregoing report and that to the best of my knowledge,
information, and belief, all statements of fact contained in this report are
true and that said report is an accurate statement of the affairs of the above
named respondent in respect to the data set forth herein for the period from
_____ to _____.

PRINTED NAME _____

POSITION _____

SIGNATURE _____

DATE _____

(Persons making willful false statements in this report form can be punished by
fine or imprisonment under the Communications Act, 47 U.S.C. 220(e).)

CONTACT PERSON _____

TELEPHONE NUMBER _____