Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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| In the Matter of<br><br>Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Michigan | ) | CC Docket No. 97-1 |

# Volume 2.8:
# Affidavit of Joseph A. Rogers
# on Behalf of Ameritech Michigan

**BEFORE THE**
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**WASHINGTON, D.C. 20554**

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| In-Region, InterLATA Services | ) | |
| in Michigan | ) | |

**AFFIDAVIT OF JOSEPH A. ROGERS**
**ON BEHALF OF AMERITECH MICHIGAN**

**STATE OF ILLINOIS** )
) **ss.**
**COUNTY OF COOK** )

Joseph A. Rogers, being first duly sworn upon oath, deposes and states as follows:

1. My name is Joseph A. Rogers. I am Director - Information Technology for Ameritech Industry Information Services ("AIIS"), a business unit of Ameritech Services, Inc.

2. In my current position, I am responsible for the development, installation and operation of information systems and operations support systems ("OSS") used by AIIS in connection with the provision of unbundled network elements, products and services to Ameritech affiliates and to other requesting carriers and service providers. My responsibilities include implementation of federal and state telecommunications statutes and regulations as they relate to these systems.

**Education and Professional Experience**

3. I graduated from the University of Illinois at Springfield, Illinois with a B.A. in Computer Science in 1984. I first joined Illinois Bell Telephone Company ("Illinois Bell") in 1974 as a directory assistance operator. After serving in the United States Marine Corps from 1974 to 1978, I returned to Illinois Bell and worked as a central office technician until 1982. In 1982, I became a manager in the Switching Control Center located in Springfield, Illinois, where I was responsible for central office switch translations and central office trouble resolution. In 1984, I was transferred to the Information Technology department for Illinois Bell. My responsibilities were to manage the development, implementation and maintenance of a customer control system for Centrex service. In 1986, I was transferred to Ameritech Services, Inc. to develop the same customer control system for use throughout the Ameritech region. In 1991, I became a Consulting Systems Engineer with Ameritech Services, Inc., responsible for consulting with senior management on the use of Information Technology. I assumed my current position in 1993.

**Purpose of Affidavit**

4. The purpose of my affidavit is to describe Ameritech's ability to provide requesting telecommunications carriers with unbundled, nondiscriminatory access to its OSS functions. Generally speaking, these OSS functions are the business functions supported by Ameritech's databases and information which ensure that pre-ordering, ordering, provisioning, maintenance and repair, and billing for unbundled network elements and resold telecommunications services ("resale services") are performed accurately and efficiently. In accordance with the applicable FCC requirements, and as I describe in further detail below,

Ameritech currently provides requesting carriers nondiscriminatory access to these OSS functions.

5. I will address two key elements regarding Ameritech's compliance with its OSS obligations. First, Ameritech's OSS function interfaces are already being made available to all requesting telecommunications carriers today. I refer to this element as "operational readiness." Second, there is sufficient capacity built into the OSS interfaces, and the OSS interfaces are expandable on a timely basis, so that Ameritech can rapidly respond to changes in marketplace demand. I refer to this element as "capacity readiness."

6. With respect to the operational readiness of Ameritech's OSS interfaces, as I discuss in more detail below, the interfaces and other functionalities necessary to provide electronic access to Ameritech's OSS functions are fully operational today. This is true for both unbundled network elements and resale services. Electronic interfaces for ordering unbundled loops from Ameritech are in use today by such carriers as MFS Intelnet of Illinois, Inc. and MFS Intelnet of Michigan, Inc. (collectively "MFS"), Consolidated Communications Telecom Services Inc. ("CCT"), and Brooks Fiber Communications of Michigan, Inc. ("Brooks Fiber"), and have been in full commercial use since April 1995. Electronic interfaces for resale service order entry have been ready for commercial use for months. I will describe in more detail Ameritech's operational readiness relative to the interfaces used by requesting carriers to access Ameritech's OSS functions, including the extensive testing that all of them have undergone. Because OSS system access for unbundled network elements is different in some respects from that for resale services, I will discuss them separately.

7. With respect to Ameritech's capacity readiness relative to these OSS functionalities, the OSS functions and interfaces have been sized so as to ensure more than sufficient capacity to meet the expected marketplace demand, as I discuss in more detail below. Among other things, I will provide specific information on the actual demand forecasts used by Ameritech to assure its OSS capacity readiness; the OSS capacity that is currently in place and planned to be installed over the next year; and Ameritech's OSS capacity tracking and planning process. In addition, I will describe how current planned capacity greatly exceeds current demand forecasts and how quickly additional capacity can be added in the event it is required.

**Operational Readiness**

8. The major OSS operational functions, as defined by the FCC in the First Report and Order, CC Docket No. 96-98, at ¶ 525, are as follows:

- Pre-ordering
- Ordering
- Provisioning
- Repair and Maintenance
- Billing

These functions are common to both unbundled network elements and resale services. I will separately discuss the operational readiness of the interfaces corresponding to each of these OSS functions. In addition, for ease of understanding, I will discuss the latter four OSS functions separately for unbundled network elements and for resale services.

9. The electronic interfaces required to provide access to Ameritech's pre-ordering functions for unbundled network elements and resale services are currently being made available by Ameritech to requesting telecommunications carriers. Within the pre-ordering function, there are five sub-functions:

- access to customer service records ("CSRs");
- access to telephone number selection (i.e., the ability to select and reserve telephone numbers while the end user is on-line);
- determination of feature availability (i.e., the features/services that are currently available in that end user's central office or for that prefix);
- due date selection (i.e., the ability to select an order due date and schedule any outside work required while the end user is on-line); and
- address validation (i.e., the ability to determine that a given address is valid and properly expressed).

These pre-ordering sub-functions are common to both unbundled network elements and resale services.

10. The electronic interfaces used to provide access to these sub-functions are Electronic Data Interchange ("EDI") and File Transfer. The first of these, EDI, may be described as computer-to-computer communication of basic business data, in standard formats, among firms that regularly conduct business with one another. EDI is used to give requesting carriers on-line access to CSRs, telephone number selection and due date selection. Ameritech's EDI formats are consistent with the Customer Service Order Guideline, Issue 5 of the Alliance for Telecommunications Industry Solutions ("ATIS") and

the Telecommunications Industry Forum. The second type of interface, File Transfer, electronically transfers entire files to the requesting carrier. The requesting carrier receives data at regular intervals, stores it, and accesses it as needed. File Transfer is used to provide access to feature availability and address validation.

11. With respect to ordering unbundled network elements from Ameritech, electronic interfaces are fully operational and currently in use by requesting carriers. These interfaces were thoroughly tested before they were placed in commercial operation. Ameritech is currently receiving orders for approximately 4,500 unbundled loops per month from requesting carriers on a region-wide basis, and orders for approximately 2,000 unbundled loops per month in Michigan. Over 20,000 unbundled loops have been processed via the electronic interface since April 1995, the vast majority of which were processed in the last six months.

12. The interfaces used for ordering unbundled network elements are EDI and Access Service Request ("ASR"). ASR is a standard interface that Ameritech has used since 1984 to exchange access orders with interexchange carriers ("IXCs"), and since April 1995 for order entry with respect to unbundled network elements. EDI is used for ordering unbundled local switching. ASR is used for the remaining unbundled network elements (e.g., loops and unbundled interoffice transmission facilities).

13. With respect to provisioning of unbundled network elements, electronic interfaces are fully operational and in use today. There are three sub-functions within the provisioning function: firm order confirmation, change in order status and order completion. An electronic interface for firm order confirmation (ASR) has been operational and

processing "live" transactions since April 1995. With respect to order status and order completion, there is no need for a mechanized interface, because most unbundled loop orders are coordinated with the requesting carrier. As a result, the requesting carrier is fully aware of both order status and time of completion.

14. With respect to repair and maintenance of unbundled network elements, Ameritech has developed and made available to requesting carriers an electronic interface that is fully tested and operational. The industry standard specification for this interface is T1M1, which refers to an OSI CMISE interface established by the Operations, Administration, Maintenance and Provisioning Committee of ATIS. Ameritech has used T1M1 for almost two years for purposes of exchanging repair and maintenance information related to access services with AT&T and MCI. Thus, there is no question that the interface is operational. However, as of today, all of the carriers currently purchasing unbundled loops are using a manual interface for repair and maintenance activities. These carriers prefer the manual interface because their volume of trouble reports has not reached a level which would warrant mechanization at their end.

15. With respect to billing interfaces for unbundled network elements, billing for unbundled loops is provided through Ameritech's Carrier Access Billing System ("CABS"). Ameritech has used the CABS system since shortly after divestiture to bill IXCs for carrier access charges, and since April 1995 to bill requesting carriers for unbundled loops.

16. All of the foregoing unbundled network element OSS interfaces have been up and running with "live" customer transactions (either competitive local exchange carrier

("CLEC") or IXC) for many months without system problems. In addition, these interfaces were thoroughly tested before they were placed in commercial operation.

17. Although Ameritech, to date, has received orders from requesting carriers only for unbundled loops and circuits for end office integration, the same OSS interfaces used for unbundled loops and circuits are available for unbundled interoffice transmission facilities and other transport-based network elements. Access to OSS functions for unbundled local switching ports is available through the same interface used for resale services (EDI).

18. The electronic interface for access to order entry systems associated with resale services, EDI, has been available for use by carriers since February 1996. The interface has been thoroughly tested and is operationally ready.

19. Until recently, requesting carriers purchasing resale services from Ameritech were using a manual ordering process for their regular operations. The carriers' use of this manual process reflected the small volume of orders which they placed each month, which tended to make the electronic interface less attractive from a cost/benefit perspective. However, Communications Buyers Group ("CBG"), Network Recovery Service and USN Communications, Inc. ("USN") recently shifted to use of the electronic interface.

20. I also should note that during the OSS carrier-to-carrier interface testing for resale services that has been performed with AT&T since August 1996, "live" customer accounts (primarily accounts of AT&T employees) have been processed over the electronic interface and converted to AT&T accounts.

21. The electronic interface for the provisioning function associated with resale services (EDI) is operational. Requesting carriers can electronically receive the necessary information relevant to firm order confirmation, order status and order completion today.

22. With respect to Ameritech's repair and maintenance interface for resale services, the situation is similar to what I described earlier for the unbundled network element repair and maintenance interface. Ameritech has developed and made available an electronic interface for repair and maintenance activities associated with resale services that is fully tested and operational (T1M1). However, at the present time, the carriers who purchase Ameritech's resale services use a manual, rather than electronic, interface for their repair and maintenance requests associated with those services.

23. Ameritech's interface for resale services billing functions has been operational since February 1996. Ameritech has been providing daily usage feeds and sending bills to carriers purchasing resale services, such as USN and MFS, since April 1996. The interface for transmitting daily usage is known as Exchange Message Record ("EMR"). EMR is based on specifications developed by the Ordering and Billing Forum Committee of ATIS, and is widely used to transmit usage data. Ameritech has been using EMR for years. The interface for resale services billing data is the Ameritech Electronic Billing System ("AEBS").

24. In terms of the resale services billing function, there is no difference between resold lines processed on a manual basis and resold lines processed on an electronic basis once the initial order has been entered. The facts that (i) service orders for approximately 11,000 resold lines have been successfully manually processed by Ameritech since March 1996, (ii) these orders are being properly billed, and (iii) the carriers are receiving the

necessary bill detail to bill their own end users, all demonstrate that the OSS interface for resale services billing functions is operationally ready.

25. The electronic resale interfaces have been the subject of extensive internal testing and carrier implementation testing with AT&T, USN, CBG and Network Recovery Services. All of these tests were successful.

26. Extensive internal testing was performed to assure that the order entry interface and all systems associated with the order entry process functioned as planned prior to putting the resale order entry interface into operation in February 1996. This internal testing consisted of two primary activities.

27. First, testing was performed on the mechanized (i.e., electronic) order subsystem. This subsystem represents the only unique piece of software needed to facilitate resale services order entry by requesting carriers. The rest of the interface consists of pre-existing interfaces with Ameritech's operating systems and the EDI mainframe computer that Ameritech has been using for years for purchasing and electronic funds transfer functions. The mechanized order subsystem was tested to assure that the resale services order entry system could accept manually created or electronically created EDI orders and in turn create Ameritech service orders or present the order to a service representative for manual intervention. Tests were also performed to assure that incomplete or inaccurate orders would not be completed. The subsystem was successfully tested in January 1996.

28. Second, an integration test was performed to assure that electronic (EDI) resale service orders could be (a) received, (b) input into the underlying Ameritech OSS, (c) provisioned and (d) properly billed. Ameritech used a testing approach that created test

cases that would mimic the range of resale orders that could be expected when the system was put into production. Thus, the test environment mirrored the production or marketplace environment. Ameritech sampled actual customer accounts to create test orders for the testing environment. These test orders were then processed against real accounts and progress was monitored as the orders progressed through the system. Of course, these test orders were identified as such within the system to ensure that no actual customer account was impacted by the test process. The overall results of the integration test were very successful. Although there were some errors, none of them revealed a design flaw and all were quickly resolved.

29. Because there have been no customers ready to make high-volume use of the electronic order entry interface for resale services, Ameritech has continued to test the electronic ordering system in parallel with the processing of manual orders. Service representatives sample actual resale orders received manually and process them on a mechanized basis for purposes of monitoring their flow through the mechanized system. That effort continues today. Furthermore, all manual orders are processed through the mechanized system for purposes of order tracking and administration. In addition, as I mentioned above, implementation testing has been performed with AT&T, USN, CBG and Network Recovery Services.

30. From Ameritech's perspective, the implementation testing performed with these requesting carriers provided further confirmation that its OSS interfaces and downstream systems for resale services operate properly. Ameritech initially encountered some minor errors that were attributable to the interface. However, they were all resolved

within days and there were no "service affecting" errors. A service affecting error is one that would adversely affect a customer's service (e.g., an error causing a material delay in the change-over of the account).

31. For illustrative purposes, it may be helpful to describe the results of the implementation testing of Ameritech's resale services OSS interface conducted with AT&T. However, I should first explain the results that one would expect to see in a test of this kind. Whenever systems from two different companies exchange data over an electronic interface for the first time, it is assumed that some minor "syntactical" errors will occur. A syntactical error occurs when the format of the message does not meet specifications. An example of such an error would be the requesting carrier putting data in the wrong field of an order. To minimize these kinds of errors, Ameritech offers to meet with requesting carriers to review their implementation of Ameritech's OSS interfaces before any data is actually sent over them.

32. In any ordering environment, some orders are processed and others are not completed. This has been Ameritech's experience with respect to orders entered by its own personnel. While it is important that any order entry system correctly processes orders that have been properly completed by the requesting carrier, it is equally important that the system does not complete orders with errors in them to ensure the integrity of downstream operations. The order entry interface is the link between Ameritech's systems that provision to and bill requesting carriers for the services that they order and the carriers' systems and databases used to bill their own end users. If Ameritech allowed errors to flow through the interface, it could adversely affect the service that Ameritech provides to a requesting

carrier's end users, the accuracy of the bill that Ameritech presents to the carrier and the carrier's ability to accurately bill the end user.

33. For example, if a requesting carrier sent Ameritech an order to add a service feature that the interface could not interpret, and that order nevertheless were processed, the carrier's end user would not get the requested service feature. Furthermore, the carrier might proceed to bill the end user for the service feature, even though the end user did not have it. The likely result would be a disgruntled end user customer and a problem between Ameritech and the requesting carrier. By identifying the error at the order entry stage and returning it to the requesting carrier, the error can be corrected before any negative consequences occur.

34. Ameritech's own internal orders are not completed in similar circumstances. However, these uncompleted internal orders are not "returned" to anyone. The system simply indicates an error and requires that the error be corrected before the order is processed.

35. The implementation testing of Ameritech's resale services OSS interface that was conducted with AT&T was separated into four phases. The first phase was connectivity testing. In that phase, the ability to send and receive orders between the two companies' OSS was tested. Once this phase was completed and orders passed between the two companies, transaction content testing was performed to assure that order content was correct. This was accomplished through the electronic exchange of test orders. Once this second phase was completed, end-to-end testing was performed to assure that AT&T resale services test orders could flow completely through the system. The first three test phases,

i.e., connectivity, transactional and end-to-end testing, were completed in early October 1996. The fourth phase of testing, production testing, began on October 7, 1996.

36. Attached as Schedule 1 to my affidavit is a summary of the resale services orders Ameritech received from AT&T between October 7, 1996, when production testing started, and November 26, 1996. During this period, AT&T sent Ameritech 157 resale services orders. Of the 157 orders, 64 were completed, 3 were pending and were subsequently completed, and 90 could not be completed. AT&T was aware of the disposition of each of these orders because it received coded messages that informed AT&T that an order had been completed or could not be completed. These coded messages also informed AT&T of the deficiencies in the orders. Of the 90 orders that could not be completed, 79 could not be completed because of AT&T's errors.

37. Turning to the issue of coordination with respect to requesting carriers' use of Ameritech's OSS interfaces, Ameritech has provided requesting carriers with the information that they need to configure their systems to operate in tandem with Ameritech's OSS. Attached as Schedule 2 to my affidavit are confidential and proprietary specifications for Ameritech's OSS interfaces which have been shared with requesting carriers and are available to others, provided that they enter into appropriate agreements protecting the confidentiality of these materials. In addition to this information, Ameritech has created training manuals and conducts training programs for requesting carriers that want to purchase its resale services or unbundled network elements. Ameritech routinely sends experienced personnel to requesting carriers' premises to explain its OSS and provides hands-on "walk-throughs" of the service order process and other processes. Ameritech has also prepared

extensive documentation that explains each of its OSS processes. This documentation is updated on a regular basis to keep it current. Every effort has been made to make the OSS interfaces and processes as simple and effective as possible.

**Capacity Readiness**

38. In October of 1996, for purposes of determining the current capacity and planned capacity expansions of its OSS functions and interfaces, Ameritech utilized actual demand forecasts from requesting carriers and its own internal projections. These projections were used as part of a three-pronged demand estimation process, as Mr. Mickens describes in his affidavit, which was used to design and size the OSS functions and interfaces.

39. Attached as Schedule 3 to my affidavit is a matrix which provides an overview of Ameritech's OSS readiness from a capacity perspective. It lists for each OSS function and sub-function:

- the electronic interfaces Ameritech will use to provide requesting carriers access to each OSS function and sub-function;
- the planned monthly capacity for those electronic interfaces for each quarter in 1997;
- the estimated demand for those electronic interfaces for each quarter in 1997;
- the time it will take to add additional electronic capacity per function and sub-function;

- the monthly capacity Ameritech has available to permit manual intervention on an electronic transaction when it is necessary to handle that particular transaction for each quarter in 1997;
- the estimated demand for those manual interventions for each quarter in 1997; and
- the time it will take to add additional manual capacity per function and sub-function.

40. An explanation of the acronyms and abbreviations used in the matrix may be helpful. The acronyms in the column labeled "Interface" refer to the interface or data format used for that particular function or sub-function. The next five columns across the matrix show the planned monthly capacity and estimated monthly demand for each of the OSS function and sub-function interfaces (in thousands) on a quarterly basis and on a cumulative basis for 1997. The figures preceded by a "C" represent capacity and the figures preceded by a "D" represent forecasted demand for the region as a whole. The difference between the "C" and "D" figures represents spare capacity that will be available in the event that actual demand outstrips forecasted demand.

41. Using resale order entry as an example, the estimated monthly resale (i.e., EDI) demand for the first quarter of 1997 is 34,000 orders. The planned capacity, however, would accommodate 100,000 orders per month, leaving spare capacity for an additional 66,000 orders. This means that Ameritech's forecasts would have to be off by more than 300 percent for resale order entry capacity to exhaust during the first quarter of 1997.

42. In determining how much spare capacity to install, Ameritech's approach was to size its OSS functions and interfaces using at least a six-month lead time. In other words, Ameritech has installed enough capacity as of January 1, 1997 to more than meet expected demand six months later (i.e., on July 1, 1997). Similarly, the July 1, 1997 capacity will be sized to more than satisfy anticipated end-of-year demand (i.e., on December 31, 1997).

43. Ameritech incorporated specific forecasts from requesting carriers, to the extent that such forecasts were provided to Ameritech, into the demand estimation process that it used to size its OSS interfaces. Ameritech asked all of the carriers that could be expected to use these interfaces in 1997 to provide both a "rolling" six-month demand forecast and monthly updates. MFS and USN provided such forecasts. AT&T provided some estimates of annual resale demand during Section 251 negotiations with Ameritech based on hypothetical wholesale pricing scenarios. Other carriers, in particular MCI and Sprint, provided no demand information whatsoever. I discuss below the specific capacity planning assumptions for each OSS function used to develop the capacity figures on Schedule 3.

44. Pre-Ordering. Capacity planning for customer service records ("CSR") was based on Ameritech's current average of 1.75 telephone lines per customer order. When a CSR request is made, all lines on the account are provided. Capacity planning for telephone number requests was based on Ameritech's current average that 15% of all customer orders require a telephone number. Using this factor is conservative, since many resale orders are likely to be assumptions of existing Ameritech accounts and, therefore, will not require a new telephone number. Capacity planning for due date assignment was based on

Ameritech's current average that 25% of all customer orders require a premises visit. This includes installation of new and additional lines, and inside wire work. Electronic capacity for feature availability and address validation was assumed to be unlimited, because this data is provided to the requesting carrier by electronic file transfer and subsequent accessibility is under the sole control and capacity of the requesting carrier's system.

45. Order Entry. Ameritech's "Cumulative 1997" demand forecast assumes 724,438 resale service orders on a regional basis. This demand forecast vastly exceeds the forecasts provided by MFS and USN, in order to allow for the potential demand of other large carriers. The planned capacity for 1997, however, will handle 1,650,000 orders. This capacity should be more than sufficient to accommodate potential demand.

46. The failure of AT&T, MCI and Sprint to provide current, detailed monthly demand forecasts obviously makes more specific analysis difficult. An alternative is to consider AT&T's public statement that it expects to capture approximately one-third of the local exchange services market segment within five years, and use that assertion as an assumption for a demand estimate. If one were to: (1) multiply the number of access lines in the Ameritech region (19 million) by a market share figure of 33 percent (19 million x .33 = 6.3 million); (2) spread that number of lines equally over a five-year period; and (3) assume that all of the demand is for resale services, then AT&T would generate a maximum of 1.26 million "EDI" service orders per year (6.3 million access lines ÷ 5 = 1.26 million). Ameritech's 1997 EDI interface planned capacity of 1.65 million resale service orders is more than sufficient to handle that demand. Adding actual forecasted demand for USN and MFS and an estimate for MCI might increase the total demand by another 400,000 orders,

which still would not appreciably exceed Ameritech's planned capacity of 1.65 million resale service orders. Furthermore, as I explain below, planned capacity for resale order entry has been conservatively estimated, and, if necessary, can be expanded without difficulty.

47. The "planned" capacity for resale order entry using the EDI interface, as shown on Schedule 3, was based on a number of conservative assumptions. First, Ameritech assumed an average of one access line per resale service order. In Ameritech's actual experience, however, there are an average of 1.75 access lines per resale service order (because of multi-line business customers and two-line residence customers). Therefore, the capacity figures on Schedule 3 understate—by approximately 40 percent—how many access lines would actually be processed if Ameritech received the stated number of resale orders for 1997.

48. Second, Ameritech assumed that orders would be processed during normal business hours (7 a.m. to 7 p.m., Monday through Friday). This results in a conservative capacity estimate since Ameritech's computer systems are designed to operate 24 hours a day, 365 days per year. Therefore if demand required longer hours of operation, including a "7 x 24" operation, capacity could almost triple, from 60 hours per week (12 hours x 5 days) up to 168 hours per week (24 hours x 7 days).

49. In addition, the "planned" capacity figure used in Schedule 3 is significantly lower than either designed capacity or potential peak capacity. For example, for the first six months of 1997, we assumed a system capacity of 400 orders per hour, rather than the 600 orders per hour for which the system was designed, or the current peak capacity (as measured by volume testing) of at least 900 orders per hour. During the remaining six

months of 1997, based on forecasted demand, we plan to add another computer server, which will almost double system capacity. Again, however, in estimating capacity for planning purposes, we assumed a sustainable volume of 700 orders per hour, rather than the designed capacity of approximately 1,100 orders per hour. Planned capacity for 1997 was calculated as follows:

| First 6 Months of 1997 (400 orders per hour x 12 hours per day x 21 days per month x 6 months) | Planned Capacity 600,000 |
|---|---|
| Second 6 Months of 1997 (700 orders per hour x 12 hours per day x 21 days per month x 6 months) | 1,050,000 |
| Total Orders | 1,650,000 |

50. Changing any one of our conservative assumptions would substantially increase these figures. For example, if we continue to assume one line per order (rather than 1.75) and only 12 hours per day (rather than 24), but use designed system capacity (i.e., 600 orders per hour and 1,100 orders per hour), then cumulative capacity for 1997 increases from 1,650,000 orders to approximately 2,570,000 orders:

| First 6 Months of 1997 (600 orders per hour x 12 hours per day x 21 days per month x 6 months) | Designed Capacity 907,200 |
|---|---|
| Second 6 Months of 1997 (1,100 orders per hour x 12 hours per day x 21 days per month x 6 months) | 1,663,200 |
| Total Orders | 2,570,400 |

This "designed" capacity could, again, be almost tripled if hours and days of operation were maximized.

51. Ameritech also has built substantial spare capacity into its order entry interfaces for unbundled network elements. For example, Ameritech is forecasting "Cumulative 1997" regional demand of 136,343 unbundled network element (i.e., ASR) orders. The end-of-year planned capacity of the ASR interface is 360,000 unbundled network element orders.

52. In addition, as shown on Schedule 3, Ameritech has developed a substantial amount of spare capacity for electronic transactions that require manual intervention. Certain types of electronic orders necessarily require manual intervention because of their content or complexity. For example, if a carrier takes over only a subset of a customer's lines, then the customer account has to be split and a new account established for the lines remaining with Ameritech. Orders involving Centrex service, private lines and listing changes also typically require manual intervention because of downstream system complexities. Some orders may also require manual handling for due date assignment, facility assignment or other reasons.

53. Provisioning. There are three provisioning sub-functions. First, a firm order commitment is provided for each order entered. Electronic capacity for firm order commitment is the same as for order entry discussed above. Second, an electronic change in status sub-function provides an electronic report for orders in jeopardy, three times daily. Capacity planning was based on Ameritech's current average of 3% of all orders being in jeopardy daily. The average rate of 3% is applied to a cumulative count of all orders over a three day period. Finally, an order completion notice is sent for each order entered. Electronic capacity for this sub-function is equal to electronic order entry capacity.

54. Maintenance and Repair. Through the T1M1 interface, Ameritech enables requesting telecommunications carriers to electronically transmit Ameritech a trouble report and receive an initial status, based on preliminary testing, and an appointment commitment. Ameritech also provides to requesting telecommunications carriers an update to the trouble report status each time that status is updated by Ameritech personnel, including a completion report. Capacity planning for the repair sub-function was based on Ameritech's current average monthly failure rate of 3.5% on the cumulative line base. Capacity planning for the modify trouble report sub-function was based on Ameritech's current average that 15% of all trouble reports are modified during the duration they are open.

55. Billing Information. Capacity planning for daily usage information assumed the ability to store three months of daily usage files for the specified number of lines. Capacity is stated in lines.

56. OSS Manual Capacity Assumptions. Manual ordering capacity planning is based on service representatives processing 50 orders per day or 1000 orders per month. The pre-ordering function of due date selection and telephone number selection are included in the 1000 orders per month capacity. CSRs are processed by clerical positions with a capacity of 2,300 per month. Maintenance capacities are based on the ability of a maintenance technician to process 256 trouble reports per month. Manual capacities are based on an eight hour work day and a five day work week.

57. Ameritech tracks actual demand levels for the OSS function interfaces supporting resale and unbundled network elements on a monthly basis, comparing actual demand to forecasted demand. In the event that actual demand exceeds forecasted demand,

Ameritech will immediately revise its capacity plans to ensure that capacity remains sized to handle demand six months in advance. If this requires additions to capacity not already planned, or advancement of planned additions to capacity, such changes will be made.

58. There are two dimensions to expanding OSS function and interface capacity: (1) the "front end" systems that must be augmented to permit processing of more transactions; and (2) the additional network and transmission facilities which may have to be installed to connect the front end systems to Ameritech's "back room" internal network operations support systems. The front end systems consist primarily of hardware (i.e., mid-range computers or "servers"), although the requirements for expanding the Company's ability to process electronic orders that require manual intervention is largely workforce-related.

59. With respect to the time intervals that are required to expand capacity for the OSS functions and interfaces, the last column on my Schedule 3, labeled "Time to Add Capacity," reflects the time intervals for each of the OSS functions and sub-functions, both electronic and manual. I will use order entry as an example. The hardware used at the front end of the order entry process consists essentially of mid-range computers that are readily available in the marketplace. Normal order, delivery and installation intervals for such products run approximately 90 days, as indicated in my Schedule 3. Management of these computer systems is currently out-sourced to IBM, which has unsurpassed access to computer hardware.

60. As is true of hardware, the workforce component of expanding order entry capacity is readily manageable. Basic training on these order entry systems can be

accomplished in about two days if the employee is familiar with Ameritech's business operations. It takes about 30 days before an employee is assumed to function at a fully efficient level, but orders would be processed during that entire period. Ameritech can also shift existing employee resources between functions (e.g., if resale demand is higher than expected and unbundled loop demand is lower than expected, service representatives can be shifted from loops to resale). Finally, existing employees can and do work whatever overtime hours are necessary to ensure that service orders are processed on a timely basis.

61. Similarly, facilities involved in the transmission and networking capabilities required to connect the front end systems to the downstream systems are part of Ameritech's own internal network and can be readily expanded within the 90-day interval applicable to the computer facilities at the front end.

62. Manual processing also can provide a solution to any electronic interface capacity problems. As I indicated previously, the Company has built substantial spare capacity into its manual processing capabilities. The speed of manual processing compares favorably with the speed of electronic processing. Manual orders which are received by 3:00 p.m. on a given business day are processed that business day. Manual orders received after 3:00 p.m. are processed the next business day. Regardless of whether an order is electronically processed or manually processed, the service order interval (i.e., the time in which the service order actually would be completed) would be the same.

63. Manual order handling capacity generally can be expanded within a 6-week time frame. The principal exception is repair and maintenance, which for planning purposes