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

In the Matter of)	
)	
Number Portability Query Services)	CC Docket No. 98-14
)	
Ameritech Tariff F.C.C. No. 2)	CCB/CPD 97-46
Transmittal Nos. 1123, 1130;)	
)	
Bell Atlantic Tariff F.C.C. No. 1,)	CCB/CPD 97-52
Transmittal No. 1009;)	
)	
Southwestern Bell Tariff F.C.C. No, 73,)	CCB/CPD 97-64
Transmittal No. 2680;)	
)	
Pacific Bell Tariff F.C.C. No. 128,)	CCB/CPD 97-65
Transmittal No. 1962)	

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DIRECT CASE OF AMERITECH

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I. SUMMARY AND INTRODUCTION.

Ameritech files its direct case in response to the Order Designating Issues for Investigation (“Second Investigation Order”) released on June 17, 1998. In its Second Investigation Order, the Commission designates for investigation the long-term number portability query service and tariffs (“Query Service”) of Ameritech, Bell Atlantic, Pacific Bell, and Southwestern Bell. Ameritech is concerned that it is redundant and premature to again investigate the Query Service prior to the completion of the carrier-specific cost phase of the LNP Docket.¹ Ameritech responded to the questions in the Commission’s Second Investigation Order in its initial Direct Case and Reply Comments filed in response to the Commission’s Order Designating Issues for Investigation released January 30, 1998 (“First Investigation Order”). Therefore, the remaining issues seem to

¹ Telephone Number Portability, CC Docket No 95-116 (“LNP Docket”).

relate to the impact of the Commission's LNP Cost Recovery Order² on the Query Service rates. However, these issues are also being addressed in the upcoming carrier-specific cost phase of the Commission's LNP Docket where comments are due on August 3, 1998, and final rules are not expected until much later this year.

The methodology and cost studies used by Ameritech to develop the Query Service are discussed in the Description & Justification filed with Ameritech's Tariff Transmittal. Ameritech also answered the Commission's questions in its initial Direct Case filed on February 13, 1998, and fully refuted the comments of other parties in its Reply Comments filed on February 27, 1998. For that reason, Ameritech will focus on reconciling its Query Service with the Commission's LNP Cost Recovery Order, and will not repeat verbatim its Description & Justification, initial Direct Case and Reply Comments here. Rather, Ameritech attaches them as Attachments A, B and C respectively, and incorporates them by reference.

It must be remembered that the Query Service was filed well in advance of the LNP Cost Recovery Order and, therefore, its supporting documentation was not developed to meet the requirements of that order. In preparing this Direct Case, Ameritech's efforts were severely hampered by the fact that the Second Investigation Order did not allow sufficient time (8 business days) to conduct updated studies conforming to the new requirements of the Commission's LNP Cost Recovery Order. More importantly, the details of the implementation of the LNP Cost Recovery Order will not be developed until completion of the carrier-specific cost phase of the LNP Docket, and it is premature to conduct any new cost study prior to the completion of that proceeding.

Although some of the cost or demand numbers supporting the Query Service are not

² Third Report and Order, released May 12, 1998 ("LNP Cost Recovery Order").

supported by a cost study that fully meets the Commission's latest requirements, that fact does not prove that costs do not exist. By the same token, the mere fact that Ameritech has not yet conducted new cost studies does not mean that those new studies will find that the Query Service costs are overstated. For these reasons, the Commission should leave the existing rates for the Query Service in place until it has established the applicable rules, and Ameritech has had an opportunity to file revised cost studies that conform to the Commission's requirements. To do otherwise would be a fundamental denial of administrative due process.

Subject to the above limitations, Ameritech will respond to the issues raised by the Commission in the Second Investigation Order, and will show that Ameritech meets the Commission's requirements as they existed at the time of filing of the Query Service. Moreover, where applicable, Ameritech will show that its Query Service also meets the new requirements of the LNP Cost Recovery Order, as they are currently defined.

Ameritech will demonstrate that its overhead factors are consistent with the rules applicable to pricing access services under price caps. As such, the Query Service rates should remain in effect, even if in the future Ameritech is required to conduct a specific study of the overhead costs of providing the Query Service.

Ameritech will also show that all costs allocated to the Query Service are in fact direct costs attributable to that service. That is to say, each cost was necessary to develop, establish or provide the service, and would not have been incurred but for the obligation to offer long term number portability ("LNP") and/or Query Service. In particular, Ameritech will show that it incurred significant direct costs to modify and augment its provisioning and maintenance support systems, and SS7 network to implement LNP and to provide the Query Service.

Ameritech will next demonstrate that the joint direct costs associated with functions

shared by the Query Service and LNP were allocated between the two services based upon projected relative utilization. Ameritech will prove that this allocation of direct costs to the Query Service is supported by a demand forecast that is based upon the best information available at the time of filing of the Query Service.

Ameritech will next demonstrate that its proposal for blocking of traffic is limited to traffic that is in fact creating a risk of network impairment. Consistent with the Commission's policies, Ameritech applies its blocking provisions on a nondiscriminatory basis to all users of the Query Service, both prearranged and default.

Ameritech will finally establish that its request for forecasts of projected traffic from carriers using the Query Service is a normal and accepted part of the relationship between a local exchange carrier ("LEC") and any interconnecting carrier, including N-1 carriers. Forecasts are essential for the provision of reliable service.

II. ANSWERS TO THE COMMISSION'S QUESTIONS.

1. The Overhead Factors Are A Reasonable Estimate Of Overhead Costs.

In paragraph 6 of the Second Investigation Order, the Commission designates for investigation the issue of overhead costs. The Commission states that the carriers may not use "general overhead loading factors, but may include any incremental overhead cost that they can demonstrate they incurred specifically in the provision of long-term number portability."

Ameritech would first like to clarify that it did not use a fully distributed cost ("FDC") methodology to develop its Query Service rates. Rather, Ameritech determined the incremental forward-looking costs of providing the Query Service using its standard TSLRIC methodology, and added to those direct costs a reasonable loading factor, which simply represents an estimate

of the average overhead costs of providing switched access services. This approach is consistent with the methodology used by incumbent LECs to price access services and network elements under the TSLRIC/TELRIC methodologies. The application of an annual cost factor is also consistent with the authorized methodology used to price new switched access rates since the inception of open network architecture (“ONA”).

The Query Service is an access service and should be priced as one. For instance, it will be offered to carriers well beyond the five year recovery period specified for LNP. Yet, if the Query Service is priced as LNP then under the LNP Cost Recovery Order its costs must be amortized over five years. To avoid such absurd results, the best approach is to price the Query Service as a new access services under price caps, including the application of overhead loading factors to the direct costs in order to obtain the tariffed rates. This approach is far more efficient and cost-effective than attempting to pretend that the Query Service is LNP.

The problem is not that Ameritech did not incur overhead costs in the development and provision of LNP. Rather, Ameritech relied on the existing practice used to price new switched access services that permits the use of overhead factors as an estimate of average overhead costs. Since the issue of carrier-specific costs, including overheads, is being addressed in the carrier-specific cost phase of the LNP Docket, Ameritech will address the issue of the overhead costs in detail in its August 3rd comments filed in that docket or through a reconsideration petition. But in the meantime, the Commission should recognize that the overhead factor provides a reasonable estimate of average overhead costs until actual incremental costs are determined. As specified in Ameritech’s Description & Justification at pages 12-13, the overhead factor used for the Query Service was calculated from Automated Reporting Management Information Systems (“ARMIS”), which is based on actual booked investment of the accounts associated with the

Query Service. This calculation is discussed in detail in Ameritech's Description & Justification.

2. All Costs Recovered Through The Query Service Are Direct Costs.

In paragraph 10 of the Second Investigation Order, the Commission directs carriers to “identify each cost it proposed to be recovered, explain why it is a direct cost of providing number portability query service” The Commission in paragraph 7 of its Second Investigation Order also designates for investigation the issue of the direct costs of the Query Service, including “OSS, SS7, and switching costs.” The Commission states that “[c]arriers have generally failed to show adequately that the costs they propose to recover in their query service charges are costs directly related to providing prearranged and default query services.” The Commission explains that “[f]or example, none of the carriers distinguished the OSS costs incurred directly for the provision of portability from those incurred to support other functions” The Commission also states that “[i]t is not clear how SS7 costs were allocated between portability services and other services.”

The Commission is mistaken. Ameritech identified in its Description & Justification and its initial Direct Case, each cost that it proposed to recover through the Query Service rates, and demonstrated that every one of those costs is a direct cost of provisioning and providing LNP and the Query Service. Specifically, in Attachments 1 and 2 to its initial Direct Case, Ameritech specified each relevant change to its SS7 and OSS, and explained why it was necessary to provision, provide and bill LNP or the Query Service. Ameritech also showed that each cost would not have been incurred but for the obligation to provide LNP and the Query Service. In fact, for OSS Ameritech requested that its vendors only make those modifications necessary to implement and provide LRN-based LNP. Thus, each OSS cost that was included by Ameritech in pricing the Query Service is truly a direct cost of that service, and no allocation with any other

service or functions was performed or is appropriate.

For the most part, costs recovered through the Query Service are for equipment, software, enhancements and labor that is dedicated solely to LNP and the Query Service. The major exception is the cost of upgrading STPs, SSP-STP links, and network monitoring equipment to support LNP. In paragraph 7 of its Second Investigation Order, the Commission states that it is unclear how SS7 costs were allocated between portability services and other services. In Attachment 1 to its initial Direct Case, Ameritech identified the SS7 network components that are impacted by the provision of LNP and the Query Service. On pages 6 through 8 of its Description and Justification, Ameritech described how the costs for these network components were assigned to the Query Service. It proved that each of the SS7 costs reflected in the Query Service cost study was required to provide the Query Service and LNP and would not have been incurred, but for them.

With regard to the Service Control Point/Service Management System ("SCP/SMS") and the Link Monitoring SS7 network components, the additional capital investments needed to provision LNP and Query Service were obtained from a detailed capital budget analysis. The present value of these investments was multiplied by annual cost factors to obtain the related annual costs. These annual costs were apportioned to Query Service based on the percentage of LNP Query Service queries to total LNP queries and then divided by the LNP Query demand to arrive at a cost per query.

With regard to the STP and SS7 Link network components, the capital investments were obtained from a SS7 cost model used by Ameritech. This model develops the investments based on the capacity of the SS7 network component consumed to provide the feature or function being studied. In the SS7 network, this capacity is expressed in terms of the investment needed to

transmit one octet (8 bits) of an SS7 message. This investment is then multiplied by an estimate of the number of octets per LNP query. Costs related to this investment amount are obtained by multiplying the total octet investment by an annual cost factor.

Ameritech also addressed this issue of SS7 costs in its Reply Comments in response to a claim by MCI that because SS7 is used to provide other Ameritech services, the costs should be considered part of a “general network upgrade” and not “directly related” to LNP.³ MCI is mistaken. Rather, each of these SS7 additions and modifications was in fact necessary to provision, provide or bill the Query Service, and would not have been incurred, but for LNP and the Query Service. The fact that SS7 is also used to provide other services does not alter the fact that the costs in question were for additions and modifications that would not have been incurred, but for LNP and the Query Service.

The same is true for switching costs – each cost was for additions and modifications required to support LNP or the Query Service. Thus, here again no allocation was involved and only incremental direct switching costs were assigned to LNP and the Query Service.

3. The Allocation Of Direct Costs Between LNP and Query Service Is Based Upon A Reasonable Forecast Of Projected Usage.

The Commission at paragraph 8 of the Second Investigation Order asks the carriers to address the allocation of costs between LNP and the Query Service. The Commission acknowledges that Ameritech based its allocation upon demand forecasts and admits that “using demand forecasts might present a reasonable method of allocating costs to query service charges” However, the Commission states that it is not persuaded that the forecasts supporting the rates are “reasonable.” The Commission also recognizes that “[g]iven that there is no specific

³ MCI Comments at 5.

past experience on which to base demand for query service, carriers will need to make assumptions about future demand.” However, the Commission states that carriers have not adequately explained how their demand forecasts were developed. However, Ameritech’s demand forecasts were based upon the best information available at the time and upon Ameritech’s expert opinion.

Ameritech addressed the issue of the development of its demand forecasts in detail in its Description & Justification, and in its initial Direct Case and Reply Comments. In summary, Ameritech developed its demand forecast for the Query Service starting with its projections of non-Ameritech terminating access traffic to Ameritech’s End Offices and Tandem switches during the relevant period. This projection was based upon current call volumes times a standard projected growth rate.

Ameritech then estimated the percent of that terminating traffic that would be unqueried. In order to calculate that percentage, Ameritech (1) sent letters to interconnected carriers requesting whether they intended to send unqueried traffic to Ameritech, and if so, at what level [Attachment 3 to Ameritech’s initial Direct Case], and (2) conducted informational meetings with other incumbent LECs to ascertain the same information. [Attachment 4 to Ameritech’s initial Direct Case.] Although Ameritech requested demand information from N-1 carriers in a good faith effort to obtain all available information it needed to meet these carrier’s needs, Ameritech did not receive any responses to its request.

Without actual carrier forecast information, Ameritech had to estimate demand based upon its knowledge of LNP and the Query Service, and the plans and capabilities of the carriers involved. For example, Ameritech considered which carriers had SS7 capability or were deploying LNP capabilities, in an effort to determine the carriers who would likely prearrange

with some other carrier to meet their N-1 responsibility.

After careful analysis, Ameritech's made the following projections:

- 1) the three largest interexchange carriers will meet their N-1 carrier responsibilities through the use of their own databases,
- 2) the next three largest interexchange carriers would likely only require that Ameritech perform queries on their traffic through the first half of 1998, and
- 3) Ameritech will perform queries on behalf of wireless carriers through 1999, when they are required to provide number portability on their own numbers.

Ameritech determined that most of the balance of the interexchange carriers would likely use Ameritech's Query Service on either a prearranged or default basis during the tariff period, and included them in its demand forecast.

Ameritech's conclusion that it will receive little or no unqueried traffic for the three largest interexchange carriers was based on:

- 1) the participation of those carriers in the Commission's LNP Field Trial in Chicago, and
- 2) these carriers' statements made in the Illinois Commerce Commission's LNP Workshops that they would install their own databases.

Ameritech's conclusion that the next three largest interexchange carriers would also likely send little or no unqueried traffic to Ameritech was based upon its understanding at the time that these interexchange carriers desired to implement LNP query capability in their networks sometime in the second half of 1998.

Ameritech's inclusion of demand from wireless carriers through 1999 was based on:

- 1) the release time frame of vendor software to implement long-term number portability for wireless carriers; and
- 2) the fact that wireless carriers are not required to implement number portability until 1999.

Further, a number of wireless carriers have publicly stated in comments and waiver petitions filed

with the Commission, that they are not yet prepared to implement LNP.

Ameritech agrees that the accuracy of its forecast could have been improved had it received forecast data from the N-1 carriers. However, those carriers refused to provide any forecasts. Demand forecasts are yet another example of why the Commission should require all N-1 carriers who intend to use the Query Service to provide forecasts. To do so would at a minimum reduce the variability of the demand forecasts of Ameritech and the other LECs.

4. Ameritech Provided Significant Detail On Its Methodology And Assumptions And It Does Not Appear The Commission Has Any Specific Questions.

In paragraph 9 of the Second Investigation Order, the Commission designates for investigation “whether the carriers’ methodologies and assumptions are reasonable.” However, the Commission does not identify any specific concerns with the methodology and assumptions used by Ameritech. In paragraph 11 of the Second Investigation Order, the Commission also asks that carriers “fully show assumptions, methodologies, allocations, and specific costs supporting their query service charges.” Ameritech has already provided (Description and Justification at pages 5-11) significant detail regarding the methodology and assumptions it used to calculate the costs used to develop the Query Service rates. In addition, it will be filing additional information and support in the carrier-specific cost phase of the LNP Docket, and in any follow-up tariff filing required by that proceeding.

5. The Blocking Provisions Of The Query Tariff Are Nondiscriminatory And Necessary To Preserve Network Reliability.

In paragraph 12 of the Second Investigation Order, the Commission asks Ameritech to address whether it should be able to block both default and prearranged traffic that is causing a “disruption on its network” and whether Ameritech’s blocking standard is consistent with the Commission’s orders. Ameritech has already demonstrated that the answer to both questions is

“yes.” As with all other services, Ameritech must have the capability to block traffic that is imperiling network reliability, regardless of the source. The long existing power to block any traffic that is in fact causing network harm, eliminates the requirement for any specific grant of authority in the Commission’s LNP orders.

In its Second Number Portability Order, the Commission authorizes LECs “to block default traffic routed calls when performing database queries. . . is likely to impair network reliability.” The Commission also requires that the blocking standard apply “to calls from all carriers on a nondiscriminatory basis.”⁴ Ameritech’s blocking provision simply implements the Commission’s requirements. The principle of first blocking the traffic that is causing the network impairment which underlies Ameritech’s tariff provision has long been established in Ameritech’s access and state tariffs [See Attachment 5 to Ameritech’s initial Direct Case].

The policy of blocking the traffic that is causing the problem also makes good policy for several reasons. First, it is the most efficient and effective method of addressing network congestion. Second, it encourages carriers and customers to act responsibly and to avoid network congestion. Third, it provides an incentive for the offending carriers to remedy the situation. Fourth, it helps reduce the number of incidents of call blockage and harm to the network. Fifth, it protects innocent customers and carriers from having the quality of their services degraded.

In the Second Investigation Order, the Commission again expresses a concern about the potential blocking of calls from prearranged carriers. However, the Commission’s concern is misplaced. The same rationale that underlies the Commission’s determination that LECs should block default traffic causing congestion problems, compels the blocking of prearranged traffic that

⁴ at ¶78.

is causing network congestion or otherwise imperiling network reliability. From a network planning perspective, a grossly inadequate forecast is no better than no forecast at all, since both create a similar risk of congestion.

Thus, Ameritech believes that the Commission's policy of nondiscriminatory blocking to preserve network reliability is best accommodated by blocking any N-1 carrier traffic that is causing an overload condition.

In order to help maintain network reliability for its customers, Ameritech continuously monitors on a nondiscriminatory basis the sources and volumes of traffic delivered into its network. It specifically tracks those carriers that either have not prearranged for the delivery of unqueried traffic, or routinely exceed their forecasted demand. Ameritech also continuously monitors the overall level of LNP queries being handled by various components within its signaling network. If a network jeopardy situation arises, Ameritech notifies the carriers responsible, and requests that they temporarily suspend forwarding traffic to the extent necessary to restore reliable network performance. If a carrier refuses to comply and the overload condition persists, Ameritech will block that carrier's traffic at the point of interconnection to the extent necessary to reduce traffic volume to levels that eliminate the network risk.

6. Detailed Forecasts Are Required To Maintain Network Reliability.

In paragraph 13 of the Second Investigation Order, the Commission asks Ameritech to explain why it needs detailed forecasts of unqueried traffic by "end offices and tandem offices, including total monthly traffic, maximum busy hour volumes, and the Ameritech switch over which they intend to route this traffic." The Commission asks if a "more simple estimate" will suffice, such as "specifying in the aggregate how much unqueried traffic they will deliver to end

offices and how much to tandem offices.” The short answer is that general forecasts do not provide the data that Ameritech needs to place the capacity in specific switches and trunk signaling links needed to handle the traffic delivered to it by N-1 carriers.

It is useful to take a step back and understand why pre-arrangement is important to network planning. Prearrangement is important so Ameritech can prepare its network to handle the expected volume of traffic where it will be received. Without reliable, sufficiently detailed forecasts by switch, the objective of having adequate capacity to prevent congestion is compromised and prearrangement creates similar risks to network reliability that are posed by default traffic.

Anticipating and controlling network traffic volumes is an essential requirement for LNP network reliability. Components of Ameritech’s SS-7 signaling network have been deployed in mated pairs to help ensure uninterrupted service, even in the event of a (single) node failure. This has been accomplished by engineering each individual component to handle no more than 40% (0.4 Erlang) of its available (10HDBH) capacity. The use of mated pairs is in compliance with generally accepted industry practice, as detailed in Bellcore documentation GR 905 CORE. The 40% capacity standard is necessary so that if one component fails, its in-service mate can handle both its own load and the load of its failed partner. To do otherwise would defeat the entire purpose of having mated pairs, since each unit would not have the available capacity to back-up the other.

Thus, any volume of traffic that exceeds 80% of the capacity of one of the mated-pairs of SS7 components, immediately places the SS7 network in an unstable condition. Unless that situation is promptly remedied, it creates a high potential for spontaneous loss or delay in call processing, both at the immediate point of congestion, and in a domino-like fashion, at other

interconnecting points. For that reason, Ameritech and other SS7 network providers take all necessary steps to prevent and promptly remedy situations where they do not have sufficient capacity and a single component failure would cause network blockage.

In order to help ensure that the 80% threshold is not exceeded, Ameritech has requested that all N-1 carriers intending to direct unqueried traffic to Ameritech, identify themselves, and provide rolling three-month forecasts of the estimated traffic volume which will be directed to Ameritech's tandem or end offices. Such forecasts should be provided by monthly total and maximum busy hour counts at each office involved. This level of detail helps to answer two questions for the traffic engineers: 1) which signaling components are impacted? and 2) how much additional load will be placed upon each component?

In answer to the Commission's question if simply providing aggregate unqueried traffic volumes without identifying the delivery point, (specific end office or tandem) is sufficient; the answer is "no." Aggregate data is of very limited value for network planning, since it does not tell the engineer which facilities might be affected. Ameritech presently uses four pairs of LNP databases. Each Ameritech end office or tandem switch sends queries to only one mated-pair of LNP databases. If Ameritech does not know which office will receive unqueried traffic, Ameritech cannot tell which LNP database may receive the additional queries. Depending on the volume of additional unqueried traffic Ameritech receives at specific end offices or tandems, this could cause an overload at one mated-pair of LNP databases, even though spare capacity exists in other LNP databases.⁵

When queries exceed capacity at one of the LNP databases, it can mean that calls will fail,

⁵ A tandem switch must perform queries on 100% of unqueried, terminating traffic, while an end office only queries unqueried, terminating traffic directed to numbers ported out of that end office. As a result, the lack of detailed forecasts is a particular problem for tandem switches in a multi-tandem LATA environment.

or that Ameritech may deliver unqueried traffic to other carriers (causing inefficient routing of traffic and N-1 default query charges to Ameritech). Calls to non-ported numbers will complete even during periods when a mated-pair databases is overloaded, but even these calls may experience additional delays of up to three or more seconds. Thus, excessive unqueried traffic can adversely impact service for all users of Ameritech's public switched network, and not just the carrier causing the problem.

If Ameritech has reliable, detailed forecasts from the N-1 carriers, then it can also better "balance" the assignment of its end offices and tandem switches among the different pairs of LNP databases, minimizing the possibility of database overloads. Detailed forecasts also help Ameritech plan for and test additional signaling links, databases and Signal Transfer Points (STPs) before a blocking problem arises. Advanced notice of increases of unqueried traffic is particularly critical in this area, since it can take six to twelve months to install additional capacity.

Detailed forecasts further help Ameritech provide sufficient signaling links to the appropriate LNP databases. As pointed out, each Ameritech office is associated with a specific mated-pair of LNP databases. Without detailed forecasts, it is possible that the mated-pair of databases serving the specific switch has sufficient processor capacity to handle additional LNP queries, but that the signaling links to the LNP database do not have the capacity to support the additional queries.

Each Ameritech end office and tandem switch is engineered to handle the expected level of traffic, plus a reasonable margin. This includes engineering a number of signaling links to handle the signaling needs of the office, including LNP queries. An unexpected volume of LNP queries from an end office or tandem switch can overload the signaling links, interfering with completing LNP queries. When signaling links become overloaded, and signaling cannot get

through, that fact can affect completion of calls that do not need LNP queries, including calls that have received LNP queries by another carrier. Overloaded signaling links can also interfere with "800" calls, CLASS services, and Calling Name Delivery service. Without adequate forecasts, Ameritech cannot properly augment its signaling links to prepare for the additional traffic volumes, which may be imposed by unexpected traffic requiring LNP queries.

At this time, Ameritech has installed its LNP databases with the maximum amount of signaling links supported by the hardware. However, such may not always be the case as Ameritech adds further LNP databases or as LNP database platforms (and signaling link technology) evolve. In the future, adding signaling link capacity to all (or many) offices on the possibility that additional LNP queries may be needed in a few unidentified offices would be an expensive alternative to forecasts and a wasteful use of capital.

Some Ameritech offices may not have the processor capacity to handle any significantly greater and unexpected number of LNP queries. In these switches, unexpected amounts of traffic requiring LNP queries can have impacts on almost any call, regardless of whether the call requires SS7 signaling. In this case, the processor(s) in the switch might not be able to handle all the demand, with the result that some requests cannot be met. This can mean slow or no dial tone for some customers, or failed calls, or inoperative services until the processor overload abates.

Ameritech continuously monitors, forecasts and evaluates its own traffic to help ensure its network can meet anticipated customer demand. This is a normal part of being a telecommunications carrier. In fact, forecasts are an integral part of the provisions of access services and end office integration, where forecasts are routinely provided on a nondiscriminatory basis under non-disclosure agreements. Ameritech is not in a position to perform this function for other carriers, since it has no knowledge of their plans. The N-1 carriers themselves are the only

parties in a position to forecast how much traffic they will be generating and where they will deliver it. No carrier should be expected to size, at its own cost, its network to handle any possible amount of spontaneous or non-forecasted traffic from another carrier.

Ameritech can understand that N-1 carriers may desire to “offload” this planning function. However, in considering the validity of these claims, it should be recognized that many of the N-1 carriers are only “new” to local service business; they have a number of years of experience in generating forecasts for their existing telecommunications networks. Further, any carrier that does not perform traffic forecasting will not provide reliable service and is not likely to be successful in the long term. As a result, it is not an undue burden on any carrier to provide relatively accurate forecasts of traffic they will deliver to another carrier. In the absence of such forecasts, Ameritech will be forced to speculate on the plans of other carriers. If its speculations are inaccurate, then the results, at best, are stranded resources and costly overbuilds, and at worst, impaired service.

7. **Variation In The Proposed Rates Is To Be Expected.**

The Commission in paragraph 9 of the Second Investigation Order asks carriers to explain the differences in rates between them for the Query Service. Ameritech is not knowledgeable of the circumstances and methodologies used by the other carriers and cannot say whether or not their rates are correct. However, it can say that its Query Service rates are based upon accepted cost methodologies and properly reflect its direct costs based upon its circumstances. Moreover, each carrier is confronted with differing circumstances, networks, service configurations and projected demand. As a result, these differences should naturally be expected to drive differences in rate levels between carriers.

Perhaps differences in the demand forecasts of each carrier have the greatest impact on the

rate levels of each carrier. This concern over rate inconsistency could be assuaged if the Commission required that the N-1 carriers provide forecasts of projected demand forecasts that the incumbent LECs can use to price the Query Service. By requiring the N-1 Carriers to provide demand data, the LEC would receive consistent data across all regions.

III. CONCLUSION.

For the reasons described above, Ameritech's Query Service should be allowed to remain in effect, as filed. However, the Query Service should be subject to later revision and possible refunds as required to comply with the Commission's upcoming order in the carrier-specific cost phase of the LNP Docket. As a result of that proceeding, Ameritech plans to file updated cost studies for both LNP and the Query Service that meet any new requirements arising out of the Commission's LNP Cost-Recovery Order. Any adjustments to the Query Tariff should be based upon those revised studies.

Respectfully submitted,



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Description and Justification

Introduction

Ameritech proposed to introduce a new access service, Number Portability (LNP) Query Service through Transmittal Nos. 1123 and 1130 which were filed on September 16, 1997 and October 31, 1997 respectively. On March 30, 1998 the Commission issued an Order rejecting Ameritech's LNP Query Service filings. With this filing, Ameritech responds to the Commission's LNP Query Service concerns outlined in their March 30th Order FCC 98-50 and introduces Local Number Portability (LNP) Query Service as a new service in Tariff F.C.C. No. 2. This filing is in compliance with the Commission's *First Report and Order*¹, *Order on Reconsideration*², and *Second Report and Order*³.

Supporting material as required under Section 61.49 of the Commission's Rules is, to the extent necessary, included with this filing. Transmittal No. 1149 is scheduled to become effective on April 15, 1998.

Description

All Local Exchange Carriers (LECs) are required to implement Local Number Portability per Section 251(b)(2) of the Act. The Commission was required by the Act to issue regulations pursuant to Section 251 to require number portability. It adopted the *First Report and Order* and subsequently adopted the *Order on Reconsideration* and the *Second Report and Order*. These orders require both incumbent and competitive Local Exchange Carriers (LECs) to implement local number portability. In particular, the *Order on Reconsideration* requires LECs operating in the 100 largest MSAs to offer long-term service provider portability commencing on October 1,

¹ Telephone Number Portability, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rod 8352 (1996)(First Report and Order)

² Telephone Number Portability, First Memorandum Opinion and Order on Reconsideration, CC Docket 95-116, FCC 97-74, released March 11, 1997 (Order on Reconsideration)

³ Telephone Number Portability, Second Report and Order, CC Docket 95-116, FCC 97-289, released August 18, 1997 (Second Report and Order)

1997 and concluding by December 31, 1998. The schedule for deployment was developed and published in this order. The *Second Report and Order*, adopted the recommendations of the North American Numbering Council (NANC), foremost of which is the requirement that all carriers immediately preceding the terminating LEC (N-1 carrier) be responsible for ensuring that number portability databases are queried. Additionally, the *Second Report and Order* permits LECs to block calls that have not been queried by the N-1 Carrier when the N-1 Carrier has not prearranged with the LEC to perform queries on their behalf and the processing of these queries may impair network reliability.

The *Second Report and Order* specified that LECs performing either prearranged or default queries on behalf of any N-1 telecommunications carrier may charge for the query. Ameritech proposes LNP Query Service as a new access service tariff so it can perform queries in compliance with the aforementioned orders as they relate to assessing charges for queries on behalf of the N-1 carrier and proposes a query based rate structure for the recovery of an appropriate portion of its significant costs for the deployment of local number portability. This filing does not address the jurisdictional allocation of the original costs of local number portability nor the recovery of these costs which would be allocated to the interstate jurisdiction.

The current telecommunications network is based on the assumption that an NXX is assigned to a specific switch and LEC. This NXX is used for routing the calls appropriately for call completion. In addition, the majority of Ameritech's network elements also rely on the NXX for routing, rate provisioning and call administration. With number portability, different directory numbers (DNs) within the same NXX could be served by different LECs and/or switches. Thus, the development of a new method of identifying the correct serving switch was required to implement number portability. The new method chosen by the Commission and the telephone industry for call routing support is Location Routing Number (LRN). LRN associates a ten digit number (i.e., NPA-NXX-XXXX) with each central office switch that serves ported lines.

Ameritech's LNP Query Service is a capability that utilizes Advanced Intelligent Network (AIN) technology to query a data base to secure network routing instructions before completion of a call. The database contains information about end users which have ported their service from

the donor switch. At a minimum, the database contains the LRN which identifies the Local Service Providers (LSPs) with serving each ported end user. This information is used for directing the call to the correct network switching element for completion. Where more than one network is involved in completing the call, the N-1 Network, the network just before the terminating network, is responsible for querying a LNP data base to secure the LRN. Ameritech will assess a charge for performing these queries on behalf of the N-1 carrier on a prearranged or default basis.

LNP Query Service is a new access service that Ameritech will provide to N-1 carriers when Ameritech is porting or has ported a number within an NXX. It is a new service because it has not previously been provided by Ameritech and is an access service because Ameritech is providing in on behalf of the N-1 carrier.

This capability will initially be activated in Ameritech's 14 largest Metropolitan Statistical Areas (MSAs) on a switch specific basis as specified in the National Exchange Carrier Association, Inc. Tariff F.C.C. No. 4. LNP Query Service will be activated in the remaining Telephone Company end office switches based on a Bona Fide request where facilities permit.

Rate Structure

LNP Query Service has four specific usage sensitive rate elements as follows:

1. **Prearranged End Office LNP Query** - applies to wireless and wireline N-1 telecommunications carriers who terminate traffic into Ameritech's network without the appropriate LRN routing information, but have prearranged with Ameritech to make LNP queries from Ameritech end offices on their behalf to secure the LRN for directory numbers ("DNs") in NXX codes that are portable.
2. **Prearranged Tandem LNP Query** - applies to wireless and wireline N-1 telecommunications carriers who terminate traffic into Ameritech's network without the appropriate LRN routing information, but have prearranged with Ameritech to make LNP

queries from Ameritech tandem offices on their behalf to secure the LRN for DNs in NXX codes that are portable.

3. **Default End Office LNP Query** - applies to wireless and wireline N-1 telecommunications carriers who terminate traffic into Ameritech's network without the appropriate LRN routing information, but have not prearranged with Ameritech to make LNP queries from Ameritech end offices on their behalf to secure the LRN for DNs in NXX codes that are portable.
4. **Default Tandem LNP Query** - applies to wireless and wireline N-1 telecommunications carriers who terminate traffic into Ameritech's network without the appropriate LRN routing information, but have not prearranged with Ameritech to make LNP queries from Ameritech tandem offices on their behalf to secure the LRN for DNs in NXX codes that are portable.

Demand

Demand was developed using current terminating traffic as the basis and assumes (1) that the top three IXC's will assume their N-1 responsibilities and not require the Telephone Company to perform queries, (2) the next top three IXC's will require queries through the first half of 1998, and (3) the telephone company will perform queries on behalf of wireless carriers through 1999. This information was garnered from internal, as well as external customer contacts and surveys.