The Ameritech Michigan measurement across all basic regulated services for September 1996 for due dates met is 96.46%. The September trouble report rate is 2.57%.

The provisioning and maintenance results for end office integration trunks and circuits are the same for similar services provided to other customers by Ameritech Michigan.

Ameritech Michigan provides unbundled network elements on the basis of technical parity. Technical parity means that Ameritech Michigan will, to the extent feasible, use the same network elements to provide unbundled network elements as when it provides bundled local exchange service. For example, the same local loop facilities are generally used whether the loop is provided to a requesting carrier as an unbundled local loop or as part of an Ameritech Michigan local service. The facility assignment systems will not discriminate against unbundled service requests in selecting facilities. In fact, the same local loops are usually re-used when end users change their dial tone provider from Ameritech Michigan to another carrier utilizing an unbundled loop provided by Ameritech Michigan. The assignment procedures are designed to re-use facilities from the "bundled" service wherever possible.

To state this another way, facilities are inventoried in various assignment systems based on their characteristics and features. If facilities are available that meet the requested service, those facilities are assigned without regard to whether the service is "bundled" or unbundled.

This technical parity applies to all service requests, regardless of whether the service is "bundled" or unbundled, and also without regard to whether the customer is an Ameritech Michigan end user, a carrier requesting a network element from Ameritech Michigan, or affiliate.

Unbundled network elements are not provided directly to end users. Operationally, an unbundled network element cannot be directly compared to services Ameritech Michigan provides to end users. For example, Ameritech Michigan's bundled exchange service connects a loop with central office equipment to provide dial tone, access to the switched network, features, as well as the ability to originate and receive calls. Operationally, an unbundled network element provides only the functions of that element. Thus, the operational characteristics of the unbundled loop network element and bundled exchange service are not the same.

However, the operational characteristics of unbundled loops and the operational characteristics of the local loops used to provide exchange services are the same, depending on the type of loop requested. For example, the voice-grade, 2-wire, analog loop that is provided on an unbundled basis would be operationally identical to the 2-wire voice grade loop facility that Ameritech Michigan uses to provide its own "bundled" exchange service. Similarly, the 2-wire ISDN basic rate loop that Ameritech Michigan provides on an unbundled basis would be operationally identical to the loop facility that Ameritech Michigan uses to provide its own "bundled" ISDN service.

Other telecommunications carriers will not experience a repair interval that differs from the intervals Ameritech Michigan provides to end users. Through Ameritech Michigan's electronic bonding process, the repair interval will be automatically quoted. The interval quoted is based on the same nondiscriminatory criteria that Ameritech Michigan's maintenance administrators quote to Ameritech Michigan end users who place calls into Ameritech Michigan's repair answering center. The electronic systems which assign, track and process the trouble reports do not treat unbundled services different than bundled services.

Installation intervals on unbundled loops will differ from the intervals experienced by Ameritech Michigan's end user customers because the provision of an unbundled loop requires several additional process steps that are not required in the provision of basic local exchange service.

For example, there will be a difference if another carrier requests coordination of the loop installation with other requests, such as the coordinated disconnection of related exchange services for the same end user, or if the carrier requests the simultaneous establishment of interim number portability at the time of the unbundled loop installation.

If another carrier requests the full or partial disconnection of existing end user services, and the conversion of all or a portion of the end user's existing facilities to unbundled service, then manual assignment processing is required to ensure that appropriate facilities are re-used. In addition, if the conversion includes interim number portability, manual procedures are used to coordinate the unbundled loop provisioning with the translations that provide the number portability routing. These coordination functions minimize any possible disruptions that end users may experience in moving their service from Ameritech Michigan to a requesting carrier.

On all requests that require physical work in the field, unbundled loops and "bundled" exchange services will be provided on the same intervals developed based on field force availability and projected workload volumes.

TABLE 6.a.1

Description of CLEC Network Architectures

	MFS	TCG	MCI-METRO	BROOKS
Route Miles of Fiber	120	200 (1)	60	287
# Sonet Rings	5	1	7 (2)	1
Speed	OC-48 & OC-72	OC-48	OC-3 & OC-48	OC-12 & OC-48
Re-route Transmission Time	50 millisec	100 millisec		
Back up Power	Yes			
Diverse Routing	Yes			
Node Sites	Downtown, Southfield, Dearborn, Royal Oak, Warren	Downtown, Hwy. 10 at 10 Mile Rd., Ann Arbor Road at Beck	Downtown, Southfield	36th St. Lincoln Park, Canal Ave. & 44th, 30th St. & Fulton
Switches	AT&T 5ESS, Ericsson ACE in Southfield	AT&T 5ESS Downtown		Nortel DMS-500
Multiplexers	Telco systems M560 ring configured; M565 termainal-configured at major POPs	Telco Systems M560 ring-configured		AT&T 2000 Series
X-Connects	Digital DACS IV; Alcatel & AT&T in smaller nodes		DACS Alcatel 3/1 & DACS DCS 1/0 digital x-connects	
Other	M13 multiplexers; M13, AT&T DDM-1000 series	M13 & 828A & M560	Can provide local dial tone and intraLATA toll to buildings w/in 20 mi of network	AT&T 2000 series

(1) Includes 50 route-miles planned for 1996.3
(2) Each ring will add 20 aerial fiber miles. Also constructing a ring from Warren to Auburn Hills
Note:
Route miles are measured by simply taking the distance between two points. Fiber miles are calculated by taking the distance between two points and multiplying that distance times the number of fiber strands in a given sheath.

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Exhibit 6.1

Take your time.

2 FREE HOURS

Introducing the Bell Atlantic® SoundSavings™ long distance calling plan.

Saving on long distance couldn't be simpler with the new Bell Atlantic® SoundSavings™ calling plan. It gives you automatic discounts off our already low rates – without having to spend a lot on long distance calls.

Save 10% when you spend as little as $5 per month.

Save 25% when you spend $25 or more per month.

You'll save 10% when you spend as little as $5 per month. And 25% when you spend $25 or more per month.* And that applies to the direct-dialed long distance calls you make to anywhere in the U.S. Even fax and computer modem calls.**

So take your time...enjoy your conversation...with Bell Atlantic you don't have to worry that you're paying too much.

Sign up today and enjoy all the benefits of Charter Membership. Call today and you'll automatically become a Charter Member with up to TWO FREE HOURS of long distance calling – that's a $15 value, based on our lowest rates.[1] After just 6 months with us, you'll receive an entire month of free weekend calls – up to $50. And after a year, we'll give you a whole month of free long distance calling – up to $75.

Your free weekends and month will be equal to usage during your sixth and twelfth months. You'll automatically receive them in the form of a certificate to be included in your long distance phone bill. So you don't have to do a thing.

Sign up for SoundSavings™ today and enjoy the low rates and superior service that set Bell Atlantic apart.

You'll like the sound of it.™

1 800 845-6807

But don't take too much time. This charter membership offer expires 10/15/96.

Visit our home page on the Internet at http://www.callbell.com

Bell Atlantic Communications

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DET

[1] Based on Bell Atlantic Communications, Inc. unified direct-dialed interstate rate.

* Until government approval is obtained, Bell Atlantic Communications, Inc. will not carry calls originating in NJ, PA, DE, VA, WV, MD, DC, NY, VT, NH, ME, MA, RI and CT or 800/888 number, private line equivalent calls terminating in these areas, where the called party selects the long distance carrier. These calls will be blocked and the caller will hear a message.

** Value based on night/weekend rate of 12¢ per minute.

*** Certificates for free weekends and month are good for 90 days, will be mailed to you in the seventh and fourteenth months, respectively, and should be included as payment for your long distance phone

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Exhibit
6.2

MCI INTRODUCES

LOCAL SERVICE

AND THE REWARDS OF HAVING

MORE THAN ONE COMPANY

COMPETE FOR YOUR BUSINESS.

INTRODUCING MCI LOCAL SERVICE FOR BUSINESS

MCI® is now providing local service in Detroit and, along with it, the sort of efficiencies and economies that businesses here could never ta advantage of before. Like the opportunity to get an array of communication products and services — local, long distance, international, da conferencing, cellular, paging and Internet — all on one bill. And all accompanied by the highly competitive volume discounts and customer servi only MCI can offer. Competition is always good for business. In this case, it's going to be particularly good for yours.

networkMCI

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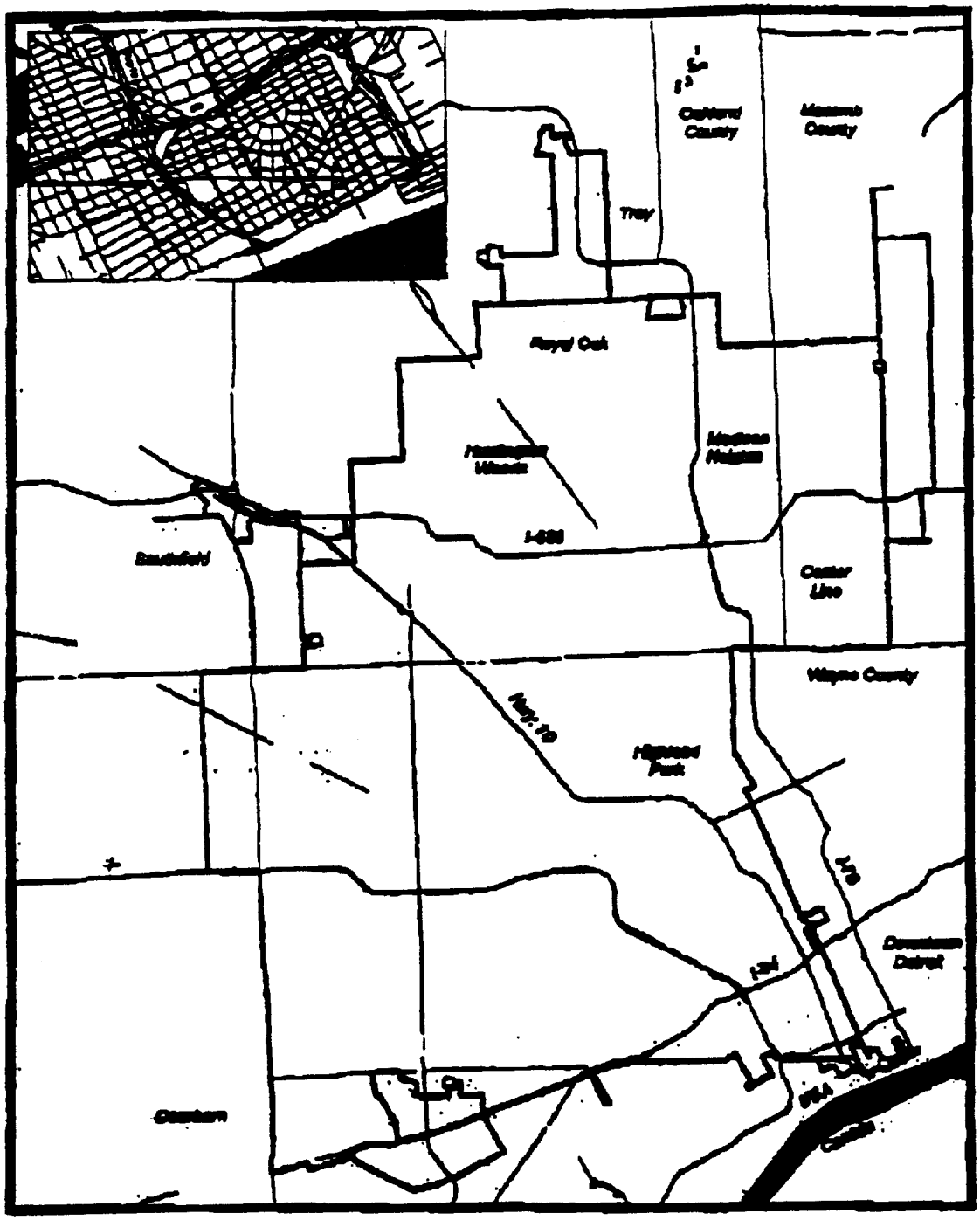
Question 6
Exhibit 6.



MFE NODE LOCATION

Greater Detroit Network

MFS TELECOM, INC.
21500 Melrose Avenue
Southfield, Michigan 48075
810-208-6200

MPSC Case No. U-[illegible] Attachment,

Question 6

Exhibit 6.1

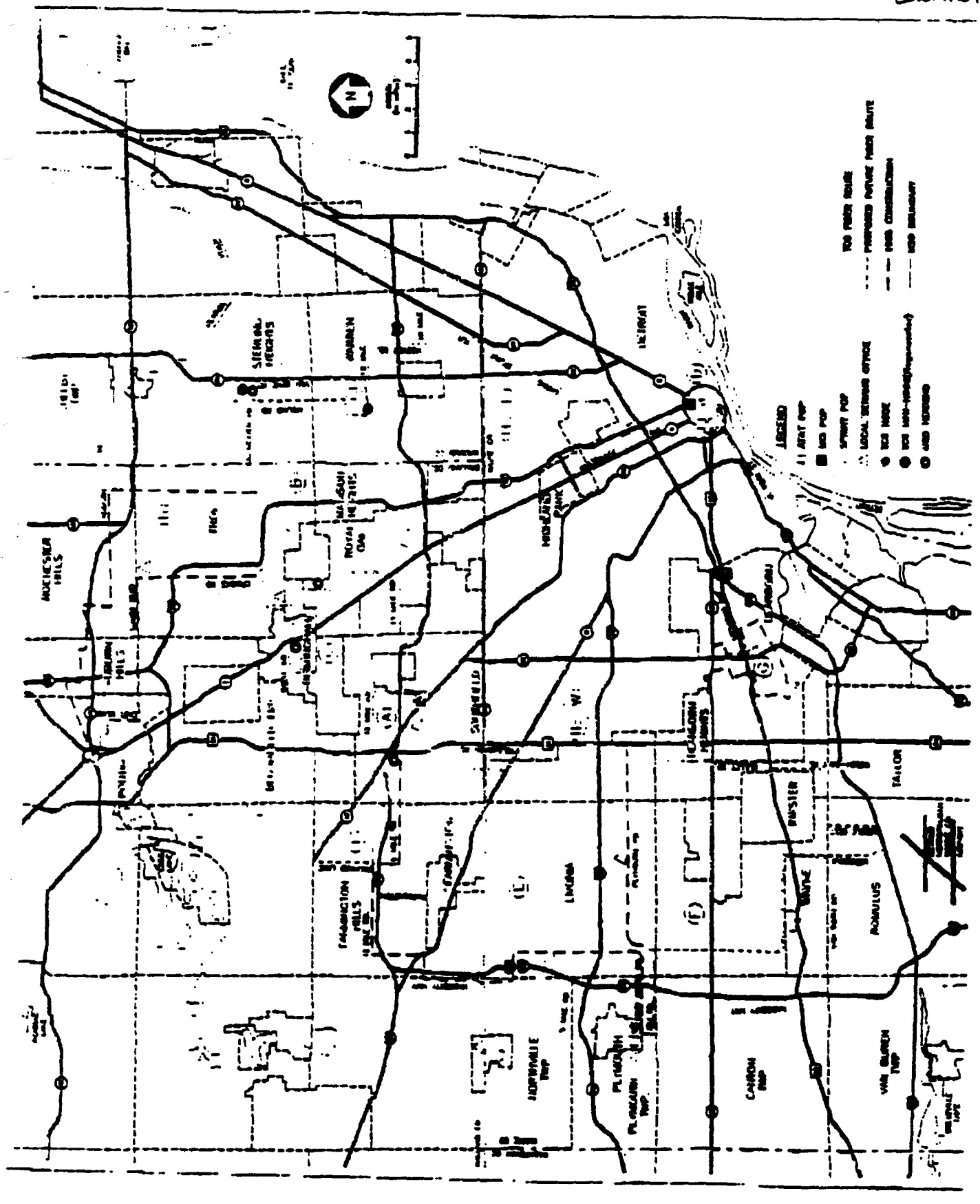


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Exhibit 6.5

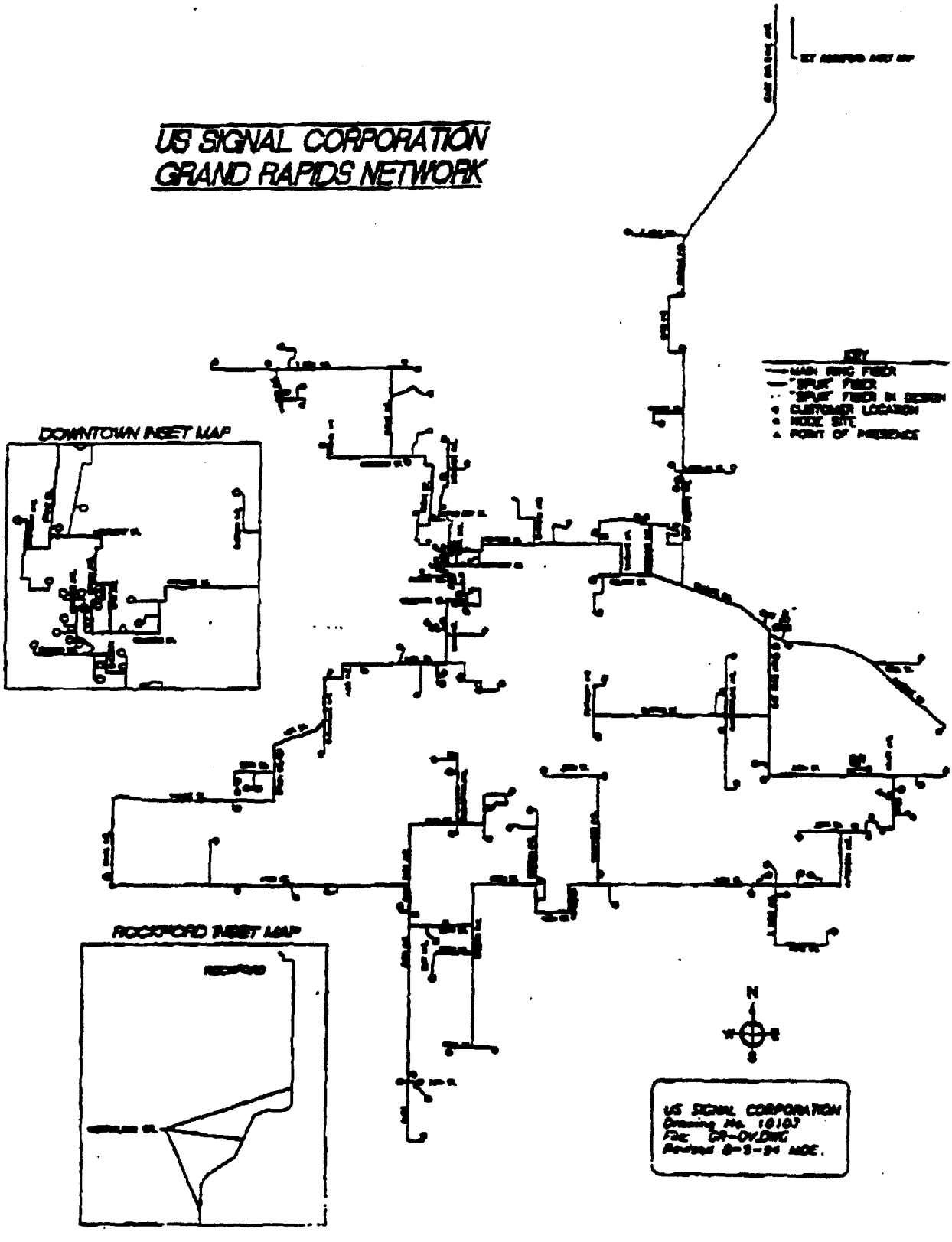

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Exhibit 6.6

Perspective

Public Network Services North America

Dataquest Predicts

Major Competitors Line Up for Local Service Prize

Abstract: *As recent telecommunications legislation has opened the local telephone markets to new entrants, major players are positioning themselves for future success through state regulatory filings, facilities construction, and strategic alignment. This document analyzes the major competitive local exchange carriers and their evolving ability to capitalize on this emerging market. (It is a companion to the Dataquest document "Local Competition Takes Center Stage," PNSR-NA-DP-9602.)*
By Eileen Healy

Ready, Set, Go—How Local Competitors Enter the Race

Come one, come all. Local services are now open to competition. Although the competitors are many, the high-level steps to become a competitive local exchange carrier (CLEC) are few. To position themselves for penetration of the former monopoly markets, potential CLECs go through a three-step process in each state:

- Certification (approval) to provide facilities-based local exchange and/or intralocal access and transport area (intra-LATA) toll and/or resold services from the state Public Utilities Commission, if required
- Build-out of facilities and negotiation or purchase of interconnection from the local exchange carrier (LEC); purchase of wholesale service or unbundled network elements for resale from the LEC; or a combination of these
- Provision and marketing of new products

Dataquest

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Product Code: PNSR-NA-DP-9603
Publication Date: April 29, 1996
Filing: Perspective
(For Cross-Technology, file in the Public and Personal Communications binder)

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Question 6
Exhibit 6.7
A

As mentioned in "Local Competition Takes Center Stage," substantial convergence is occurring in the form of equity cross-ownership, partnerships, and alliances across industry segments and across companies within those segments. Although strategic advantages inherent in each traditional industry segment, that is, competitive access providers (CAPs), LECs, and interexchange carriers (IECs), will impact the competitive ability of any company in that segment, company-specific strategies ultimately will determine any measure of success. This document analyzes the strategic advantages of major competitors by industry segment for the top local products. At the end, Tables 1 and 2 summarize the status of regulatory filings and facilities construction of those competitors in the largest geographic markets of each regional Bell operating company (RBOC) region.

Let the Games Begin—The Major Competitors

Competitive Access Providers (CAPS)

Metropolitan Fiber Systems (MFS)

With certification in 15 states to provide business service, and networks operational or planned in 39 metropolitan areas, Metropolitan Fiber Systems (MFS) is a clear leader. MFS targets large corporate and government users in first-tier markets with traditional LEC bypass, high-end data, local exchange, and long distance services. The company had $572 million in 1995 revenue, making it the largest of the CAPs. MFS provides regulatory leadership in a number of states and at the U.S. Federal Communications Commission (FCC) level. It has significant facilities (2,900 route miles of fiber) and possesses ample technical sales expertise in its targeted business markets. MFS also has the brand name, marketing expertise, and switch build-out plans to migrate large customers to additional products including switched voice, Centrex, and other switch-provisioned services.

New business customers will be presented with a comprehensive suite of voice and data products, including private lines, Asynchronous Transfer Mode (ATM), frame relay, and integrated services digital network (ISDN), as well as the opportunity to purchase bundled local and resold long distance under one product/price offering. Residential market share will be more difficult to penetrate and will take longer than other CAPs because of MFS' concentration on business customers. With active switch deployment, price discounting, product quality, and superior customer service, MFS should be able to garner a respectable share in the residential markets it serves by the turn of the century.

Teleport Communications Group (TCG)

Teleport Communications Group (TCG) is certified in 13 states and offers local exchange service in 47 markets in 20 states through owned facilities or resale of existing services. TCG's strategy is to target wholesale and retail channels equally, with retail channels addressing both residential and business customers. TCG places significant emphasis on the retail residential market, marketing itself as "The Other Local Phone Company." A majority of this residential revenue comes from its New York market. TCG is rapidly expanding facilities-based service into other first-tier markets such as Cleveland, Portland, Oregon, and Phoenix, Arizona.

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Exhibit 6.8

Compared with MFS, TCG has about 4,900 route miles of fiber and $185 million in annual revenue. TCG is a leader in establishing interconnection agreements with incumbent LECs, leading the pack in Connecticut, California, and Massachusetts. TCG is owned by a consortium of cable television (CATV) companies including Tele-Communications Inc. (TCI), Continental Cablevision, Comcast Cable Corp., and Cox Cable Communications. Future strategies include emphasis on wireless alternatives to the local loop and switching and network management as an integral part of Sprint Spectrum's plans to offer its suite of bundled services (see Sprint Spectrum).

IntelCom Group (ICG)

Targeting second- and third-tier markets, IntelCom Group's strategy is to position its products with large wholesale and retail users of telecommunications services such as large corporations, government agencies, and IECs. A key focus is to provide LEC-alternative local access and egress to long distance carriers. IntelCom now covers 35 metropolitan areas with network facilities, including 627 fiber and 545 wireless square miles, with 1995 revenue of $112 million. IntelCom is actively deploying switching facilities in its network, which will enable its entry into the local exchange and intra-LATA toll voice markets. With a focus on wholesale and large retail distribution, switch-based services, and less-competitive secondary markets, IntelCom has extensive opportunity for growth as a CLEC.

Other CAPs

Electric Lightwave Inc. (ELI), operating mainly in the Western United States (for example, Portland, Oregon, Los Angeles, Salt Lake City, and Seattle), and Brooks Fiber Properties Inc., operating in second- and third-tier markets (for example, Knoxville, Tennessee, Grand Rapids, Michigan, Providence, Rhode Island, and Tulsa, Oklahoma), are representative of a number of smaller, aggressive fiber-based CAPs entering the market. Niche market concentration will be a key success factor, as will simple, easy-to-understand approaches to product definition and pricing. Dataquest sees business customers with high-end data needs as ripe opportunities for these providers. Brooks Fiber's switch deployment will be a force in capturing residential customers that will also need simple alternatives to local incumbent LECs. An example of a CAP using different local exchange technology is LOCATE, which operates a microwave-based network offering business customers bypass, voice, data, and video in 26 states. Challenges for LOCATE are an unwieldy regulatory structure for microwave licenses and a short supply of frequency in metropolitan areas where most large business customers exist.

Interexchange Carriers (IECs)

AT&T Local Services

Not to be outdone, AT&T has filed for certification to provide local exchange and intra-LATA toll service in all 50 states. So far, AT&T has been certified or approved in 14 states. AT&T's strategy will include resale of incumbent LEC services with only gradual build-out of its own local infrastructure. The ultimate goal for AT&T Local Services in a fully competitive market is to offer a combined bundle of local, long distance, wireless, and Internet access services to its customer base under one monthly bill. AT&T's recent acquisition of McCaw Cellular Communications Inc. (now called AT&T Wireless Services) provides the carrier with almost national wireless

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coverage and with the finishing complement to its bundled offering. In markets where the incumbent RBOC/LEC has not been allowed to enter the inter-LATA market (preventing IECs from offering bundled resold local and long distance), the most likely approach will be to resell local service within an unbundled service suite of the aforementioned products. These services would not be priced or discounted together but may appear on similar monthly bills.

Strengths for AT&T are an unmatched brand name, newly honed marketing skills from the long distance wars, ample capital resources, and the ability to offer a complete package of complementary services. In business markets, AT&T also possesses the ability to sell high-end data products using extensive technical sales skills. Challenges for AT&T include the following: a mismatch between its integrated product strategy and a complex, sometimes-uncoordinated organizational structure; its inability to bundle resold local and long distance service in emerging markets; a resale strategy that relies on favorable, margin-capable wholesale pricing from potential competitors (incumbent LECs); and a historical market dominance inviting regulatory scrutiny.

MCImetro

MCI Communications Corporation's strategy has been defined for a longer period than AT&T's strategy, and it centers around construction and maintenance of MCI's own local infrastructure, including access loops and feature-rich switches. In order to complete the package required to provide MCI-branded local services, MCI is likely to purchase unbundled network elements and interconnection from the incumbent LEC or seek CATV or CAP partners for "last-mile" access to customers. For example, MCI's alliance with Winstar Communications Inc.'s wireless 38-GHz offering for last-mile access to business customers will allow MCI to bundle facilities-based local services with its long distance services in a "one-stop" approach. In markets where quick entry is required, area-specific facilities issues persist, and/or wholesale rates provide ample room for operating margin, Dataquest expects MCI to mirror AT&T's resale strategy. In now-familiar fashion, price discounting and aggressive marketing is likely to occur. MCI may also seek partnerships and alliances in markets where economic entry barriers are high or operating margins are low. MCI has filed for certification in all 50 states and already has been approved in 18.

MCI's strengths are its sales and marketing expertise, a strong brand image, a facilities-based approach, sufficient capital resources (including British Telecommunications plc's recent partnership and subsequent cash infusion), and regulatory leadership. MCI's challenges are primarily environmental: inertia of local customers; long lead times for LEC interconnection and competitive parity (that is, equal access and number portability); and the potential for churn in a price-competitive, fully portable environment.

Sprint Spectrum

Sprint Spectrum (formerly known as Sprint Telecommunications Venture) is eyeing the ultimate yet difficult-to-manage product bundle: local and long distance voice, data, and video accessed over both wireline and wireless facilities. In combination with TCI (see section on TCI), Comcast, Cox (and its combined asset, TCG), and other smaller CATV and CAPs, Sprint Spectrum has access to cable systems with lines into one-third of American

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homes; has access to the metropolitan loops, switching facilities, and backbone connectivity of TCG (see TCG section); and has secured 29 personal communications services (PCS) Metropolitan Trading Area (MTA) licenses to offer wireless access to the product suite.

This combined wireline and wireless access, targeted toward multiple existing residential and business customer bases, offers staunch competition to any company entering the market for local exchange and intra-LATA toll. This ambitious partnership will enable supreme product bundling, joint marketing, and combined discounting and billing to entice customers into a one-stop purchase decision. Also, Sprint's brand name will create the awareness necessary to lure customers away from the incumbent LEC. Although the partnership appears to have all the strategic elements necessary for success in the local market, coordination of the effort will be a supreme task. Multiple economic interests are at stake; culture clashes, different agendas, complex organizational reporting hierarchies, and long PCS network construction timelines have the potential to stall the process and let other more nimble competitors cherry-pick the best markets.

Other IECs

Companies such as LDDS WorldCom and LCI International Inc. have announced plans to enter the race for local services, primarily on a resale basis. Depending on how quickly the market matures, they will have an edge on the competition through the ability to immediately bundle local and long distance service. They will be able to price discount substantially, giving them a leg up in the high-volume, cost-conscious business markets. Branding and marketing will be keys to success.

Local Exchange Carriers (LECs)

RBOCs

In general, the RBOCs have been very interested in providing out-of-region local services, either on their own or via partnership arrangements. Recent examples include U S WEST, which has taken ownership of several companies in BellSouth Corporation's Atlanta market (such as Southern Multimedia Communications, a CAP with 600-plus route miles, and CATV ventures Georgia Cable Television and Wometco Cable), and SBC Media Ventures, which has purchased several cable systems in Bell Atlantic Corporation's region (and has applied for local service certification in some states).

Like other potential competitors, the RBOCs must negotiate interconnection with the incumbent LEC, a process that may benefit them strategically given their intimate knowledge of the subject. Some RBOC ventures undoubtedly will use wireless alternatives to access, as is the case with SBC Mobile Systems, which has applied for local service certification outside its region in Boston, Chicago, Rochester, New York, and Washington, D.C. Capturing out-of-region local market share will require leveraging existing access and termination routes (wireless) or obtaining cost-effective access via strategic partnerships. Local termination facilities also make sense for eventual long distance customers.

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Exhibit 6.11.

CATV Operators

Time Warner Communications

Time Warner Communications, part of the largest media and entertainment company in the world, is the major local telecommunications player for Time Warner Inc. In combination with CAP equity positions in International FiberCom Inc., Kansas City Fibernet, and Indiana Digital Access, Time Warner has positioned itself to offer local services over its expanding network. Like all CATV entrants in the local voice and data marketplace, the fiber-coaxial network will have to be upgraded for two-way communications, but Time Warner is well on the way, with combination switch/network facilities in Orlando, Florida, New York City, Rochester, New York, and Raleigh, North Carolina. Major market network facilities that are operational, planned, or in construction total 39, with certification to provide local exchange service in six states.

Time Warner's strengths are its commitment to construction of local, high-bandwidth facilities, capital resources, and its established base of residential CATV customers. To capture significant market share in the residential segment, Time Warner will have to convert existing fiber-coaxial plant and home equipment to provide voice services. The company will also require switching, billing, and product expertise, possibly in conjunction with a future strategic partner. In the business segment, high-end data products will be the initial focus because of their volume and operating margins. They may be provisioned over their existing networks, but technical sales skills and marketing expertise will have to be developed in-house or achieved through partnerships or alliances.

Tele-Communications Inc. (TCI)

As previously mentioned, TCI has positioned itself across traditional industry segments through a 30 percent stake in Sprint Spectrum and a 30 percent share of TCG, among other, smaller players. A newly formed unit, TCI Telephony Services Inc., is responsible for developing and managing the company's venture with Sprint Spectrum into the local telephone market. Unlike Time Warner, TCI will leverage its residential network through its affiliation with TCG and Sprint for facilities, most likely to be marketed under the Sprint brand name. TCI will lend its existing residential customer base and financial resources to sell the residential customers on bundled local and long distance phone service, as well as Internet access through planned cable modem offerings. TCG provides business-market access through metropolitan fiber loops and Sprint provides switching and state-of-the-art fiber backbone services. Sprint and TCI probably will split branding and marketing duties.

Continental Cablevision

Continental has teamed with U S WEST, and they plan to offer local telephone service in markets where Continental and U S WEST have entrenched customers; in areas where no network exists, they plan to resell local services. Like other CATV companies, Continental will have to upgrade its network. But with U S WEST's vast infrastructure in large western states and Continental's dominance of the California market, the partnership is addressing the crucial issue of facilities ownership and interconnection. A large customer base and brand recognition will assist

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them in their efforts, but marketing expertise will have to be developed given both of their histories as sole franchise owners serving captive markets.

Dataquest Perspective

The battle for local exchange customers lies at the very heart of today's highly competitive, rapidly changing telecommunications markets. Competitors that capture this essential "link" to the information infrastructure have a very large foot in the door for providing other communications-related products, including all voice, data, and video for entertainment, information, and communications between those customers and their outside world.

Critical success factors in the local service market will include capital resources for facility build-out, brand identity, marketing and customer service skills, as well as the ability to offer attractive packages of bundled services. Dataquest believes that these factors give an edge to the leading IECs. But the race is just beginning. In the end, the leading runners in the local service marketplce most likely will be the eventual winners in the race to shape the information revolution.

Tables 1 and 2 show the status of state regulatory filings and facilities construction for the major competitors.

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EXHIBIT 6.13

Table 1
Status of Regulatory Filings of the Major Competitors—Top Markets by RBOC Region

	CAPs						IXCs			CATV	
	MFS	TCG	IntelCom	Brooks Fiber	GST	Intermedia	ELI	AT&T	MCI	Continental	Time Warner
Ameritech Region											
Chicago, Illinois	P	C	NF	NF	NF	NF	NF	C	C	NF	NF
Cleveland, Ohio	C	P	P	NF	NF	NF	NF	P	C	NF	C
Cincinnati, Ohio	C	NF	NF	NF	NF	C	NF	P	C	NF	C
Detroit, Michigan	P	C	NF	NF	NF	NF	NF	C	C	NF	NF
Milwaukee, Wisconsin	NF	C	NF	NF	NF	NF	NF	C	C	NF	P
Indianapolis, Indiana	NF	C	NF	NF	NF	NF	NF	P	C	NF	P
Bell Atlantic Region											
Baltimore, Maryland	C	C	NF	NF	NF	NF	NF	C	C	NF	NF
Washington, D.C.	P	P	NF	NF	NF	NF	NF	P	P	NF	NF
Richmond, Virginia	P	NF	NF	NF	NF	NF	NF	P	P	P	NF
Charlotte, North Carolina	NF	NF	P	NF	NF	NF	NF	P	P	NF	P
Pittsburgh, Pennsylvania	C	C	NF	NF	NF	NF	C	P	C	NF	NF
Philadelphia, Pennsylvania	C	C	NF	NF	NF	NF	C	P	C	NF	NF
BellSouth Region											
Atlanta, Georgia	C	NF	NF	NF	NF	NF	NF	C	C	NF	NF
Birmingham, Alabama	NF	NF	P	NF	NF	NF	NF	P	NF	NF	P
Tampa, Florida	C	C	C	NF	NF	C	NF	C	C	NF	C
Miami, Florida	C	C	C	NF	NF	C	NF	C	C	NF	C
Nashville, Tennessee	P	NF	P	C	NF	NF	NF	C	C	NF	C
NYNEX Region											
Boston, Massachusetts	C	C	NF	NF	NF	NF	NF	P	C	NF	P
New York City, New York	C	C	NF	NF	NF	NF	NF	C	C	NF	C
Hartford, Connecticut	C	C	NF	C	NF	NF	NF	C	C	NF	NF
Providence, Rhode Island	P	C	NF	C	NF	NF	NF	P	NF	NF	NF

(Continued)

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EXHIBIT 6.14

Table 1 (Continued)
Status of Regulatory Filings of the Major Competitors—Top Markets by RBOC Region

	CAPs						IXCs			CATV	
	MFS	TCG	IntelCom	Brooks Fiber	GST	Intermedia	ELI	AT&T	MCI	Continental	Time Warner
SBC Region											
L.A. Area, California	C	C	C	C	C	NF	NF	C	C	C	C
S.F. Bay Area, California	C	C	C	C	C	NF	NF	C	C	C	NF
Sacramento, California	C	NF	C	C	NF	NF	NF	C	C	C	NF
St. Louis, Missouri	P	P	NF	P	NF	P	NF	P	P	NF	NF
Dallas, Texas	C	C	NF	NF	NF	NF	NF	C	C	NF	P
Houston, Texas	C	C	NF	NF	NF	NF	NF	C	C	NF	P
U S WEST Region											
Portland, Oregon	P	P	NF	NF	NF	NF	C	P	C	NF	P
Minneapolis, Minnesota	P	NF	NF	NF	NF	NF	NF	P	NF	NF	NF
Salt Lake City, Utah	NF	P	NF	NF	NF	NF	C	P	NF	NF	NF
Phoenix, Arizona	P	P	P	NF	P	NF	C	C	NF	NF	NF
Denver, Colorado	P	P	P	NF	NF	NF	NF	P	NF	NF	NF
Seattle, Washington	C	C	NF	NF	P	NF	C	P	C	NF	NF

PUC Status: C = Certified; P = Pending; NF = No Filing
Source: Dataquest (April 1996)

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EXHIBIT 6.15

Table 2
Status of Facilities Construction of the Major Competitors—Top Markets by RBOC Region

	CAPs						IXCs			CATV	
	MFS	TCG	IntelCom	Brooks Fiber	GST	Intermedia	ELI	AT&T	MCI	Continental	Time Warner
Ameritech Region											
Chicago, Illinois	O, S	O, S	NF	NF	NF	NF	NF	P	O, S	NF	NF
Cleveland, Ohio	O	P	O, S	NF	NF	NF	NF	NF	O	NF	P
Cincinnati, Ohio	P	NF	NF	NF	NF	O	NF	NF	NF	NF	O
Detroit, Michigan	P	O, S	NF	NF	NF	NF	NF	NF	O, S	NF	NF
Milwaukee, Wisconsin	P	O, S	NF	NF	NF	NF	NF	NF	P	NF	O
Indianapolis, Indiana	P	O, S	NF	NF	NF	NF	NF	NF	P	NF	O
Bell Atlantic Region											
Baltimore, Maryland	O	O	NF	NF	NF	NF	NF	NF	O, S	NF	NF
Washington, D.C.	O	P	NF	NF	NF	NF	NF	NF	O	NF	NF
Richmond, Virginia	O	NF	NF	NF	NF	NF	NF	NF	P	O, S	NF
Charlotte, North Carolina	NF	NF	O, S	NF	NF	NF	NF	NF	NF	NF	O
Pittsburgh, Pennsylvania	O	O	NF	NF	NF	NF	NF	NF	P, SP	NF	NF
Philadelphia, Pennsylvania	O	NF	NF	NF	NF	NF	O, S	NF	O, S	NF	NF
BellSouth Region											
Atlanta, Georgia	O, S	NF	NF	NF	NF	NF	NF	NF	O	NF	NF
Birmingham, Alabama	NF	NF	O, S	NF	NF	NF	NF	NF	NF	NF	P
Tampa, Florida	O	NF	NF	NF	NF	O	NF	NF	P	NF	P
Miami, Florida	P, SP	O	NF	NF	NF	O, S	NF	NF	NF	NF	NF
Nashville, Tennessee	P	NF	O, S	NF	NF	NF	NF	NF	P	NF	P
NYNEX Region											
Boston, Massachussets	O, S	O, S	NF	NF	NF	NF	NF	NF	NF	NF	P
New York City, New York	O	O, S	NF	NF	NF	NF	NF	NF	O, S	NF	O, S
Hartford, Connecticut	O	O	NF	O, S	NF	NF	NF	NF	P	NF	NF
Providence, Rhode Island	P	O	NF	O	NF	NF	NF	NF	NF	NF	NF

(Continued)

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Exhibit 6.17

Perspective

Public Network Services North America

Technology Analysis

Local Competition Takes Center Stage

Abstract: *With passage of sweeping telecommunications legislation opening local telephone markets to new entrants, Dataquest analyzes strategic implications for major industry segments, including local exchange carriers, interexchange carriers, competitive access providers, cable TV companies and resellers.*
By Eileen Healy

Changing the Rules—Regulatory Reform

Yesterday's boring local phone service is today's hot, new market. Local exchange carriers (LECs) recently saw the Telecommunications Act of 1996 become law, and with it their $90 billion in former monopoly revenue was once and for all thrown up for grabs. The Act mandates that the state regulatory commissions administer a process by which LECs must open their markets to competition.

The markets in question? They are Local Exchange Service (basic dial tone and intraexchange service) and IntraLATA Toll Service (between exchanges in the LEC's former monopoly area). From a strategic standpoint, competition in the local loop is of paramount importance because of the fact that most single-vendor, bundled-purchase decisions will be made in favor of those that can provide local service, or the "link" to information resources.

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Table 2 (Continued)
Status of Facilities Construction of the Major Competitors—Top Markets by RBOC Region

	CAPs						IXCs			CATV	
	MFS	TCG	IntelCom	Brooks Fiber	CST	Intermedia	ELI	AT&T	MCI	Continental	Time Warner
BBC Region											
L.A. Area, California	O, S	O, S	O, S	NF	O	NF	NF	NF	O	P	P
S.F. Bay Area, California	O, S	O, S	O, S	O, S	O	NF	NF	NF	O	NF	NF
Sacramento, California	O	NF	O, S	O, S	NF	NF	NF	NF	NF	NF	NF
St. Louis, Missouri	O, S	O	NF	O, S	NF	P	NF	NF	NF	NF	NF
Dallas, Texas	O, S	O, S	NF	NF	NF	NF	NF	NF	O	NF	P
Houston, Texas	O	O, S	NF	NF	NF	NF	NF	NF	O	NF	O
U S WEST Region											
Portland, Oregon	P	P	NF	NF	NF	NF	O, S	NF	O	NF	P
Minneapolis, Minnesota	O	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Salt Lake City, Utah	NF	NF	NF	NF	NF	NF	O, S	NF	NF	NF	NF
Phoenix, Arizona	P	O	O, S	NF	O	NF	O, S	NF	NF	NF	NF
Denver, Colorado	O	NF	O, S	NF	NF	NF	NF	NF	NF	NF	NF
Seattle, Washington	O, S	O, S	NF	NF	P	NF	O, S	NF	O, S	NF	NF

Facilities Status: O = Operational; OP = Operational Planned; NF = No Facilities; S = Switch; SP = Switch Planned
Source: Datapoint (April 1996)

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The New Rules of Local Competition

A pillar of the 1996 Act was providing competitive local exchange carriers (CLECs) with an opportunity to connect to all customers on the public switched telephone network (PSTN) via the LEC's facilities. This creates a level playing field by allowing CLEC customers to connect with any other party on the PSTN and vice versa. As a part of this process, incumbent LECs are required to provide equal "interconnection" terms to any facilities-based CLEC (those that have constructed local loops and installed switches), as well as provide nonfacilities-based CLECs (resellers) the ability to purchase wholesale services. Regional Bell operating companies (RBOCs) and independent LECs are required to negotiate private interconnection and resale agreements during a 135-day period, culminating in boiler-plate contracts to be applied to any other company seeking to provide local service.

The combination of interconnection arrangements and the availability of wholesale local exchange services reduces barriers to entry for potential competitors and gives CLECs an opportunity to design their cost structure via a mix-and-match approach between constructing their own, or purchasing for resale, local loops and switching facilities.

States Are Leading the Charge

While many states had already embarked on the path of competitive local exchange and intraLATA toll, the federal legislation eliminated differences and timing among the states and added a sense of urgency to the process. This will require states to make the rules by which LECs will offer for purchase unbundled local loops and switching facilities; provide for cross-compensation arrangements for the origination and termination of competitors' traffic; arrange local number portability; furnish a method by which there is dialing parity (equal access); and offer, for resale, bundled wholesale local exchange and intraLATA toll service.

The Federal Communications Commission's final rules on interconnection and resale, including guidelines for pricing, are due in August 1996. Until then, states are likely to continue on their individual paths toward competition, but some have changed their positions to mirror the federal legislation. Those states that had initiated local exchange and intraLATA toll competition have the most competitive markets and provide a fish-tank view of events to come on a broader, national level. Table 1 provides a summary view of the current status of state regulation of local exchange and intraLATA toll service markets by RBOC region.

Table 1
Status of State Regulation of Local Competition

RBOC/State	Local Exchange Service		IntraLATA Toll		
	Resale OK?	Competition OK?	Resale OK?	Competition OK?	Equal Access
Ameritech					
Illinois	Yes[1]	Yes[1,7]	Yes[1]	Yes[1]	4/96
Indiana	No	Yes[1,4,7]	Yes	Yes[1,7]	7/95
Michigan	1/92	Yes[7]	10/87	Yes[7]	1/96

(Continued)

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Table 1 (Continued)
Status of State Regulation of Local Competition

RBOC/State	Local Exchange Service		IntraLATA Toll		
	Resale OK?	Competition OK?	Resale OK?	Competition OK?	Equal Access
Ohio	Yes[2]	Yes[7]	Yes	Yes[1,7]	1/96
Wisconsin	Yes[3]	9/94[1,2,7]	Yes	Yes[1,7]	7/96
Bell Atlantic					
Delaware	Yes[1,4]	Yes[2,4,7]	6/91	Yes[1,7]	No[9]
Maryland	11/85[5]	4/94[1,7]	8/83[1]	Yes	No
New Jersey	Yes[5]	Yes[7,8]	Yes	7/94	No[9]
Pennsylvania	No[6]	Yes[1,4,7]	Yes[1]	Yes[1]	1/97
Virginia	No[6]	1/96	Yes	10/95[1,7]	No
West Virginia	No	Yes[4]	Yes	1/89[1,7]	1/97
Washington, D.C.	Yes[1]	No[9]	NA	NA	NA
BellSouth					
Alabama	9/95	9/95	Yes[1]	Yes[1,7]	No[9]
Florida	No	1/96[1]	Yes	Yes[1,7]	1/98
Georgia	Yes[1]	7/95[1]	Yes[1]	3/92[1,7]	1/97
Kentucky	No	No	Yes	5/91[1,7]	7/98
Louisiana	No	No[9]	Yes	10/91[1,7]	No
Mississippi	No	No	Yes[7]	Yes	No
North Carolina	No[1,6]	7/96[1,7]	Yes	7/94[1,7]	No
South Carolina	No	No[9]	Yes[1]	8/93	No
Tennessee	No	6/95[1,7]	Yes[7]	Yes[1,7]	No
NYNEX					
Connecticut (SNET)	7/94	7/94[1,7]	7/94	7/94	12/96
Maine	No	No	Yes[1]	Yes	No
Massachusetts	Yes[1,4]	Yes[7]	12/-86	12/86[7]	No[9]
New Hampshire	No	12/96[1,7]	Yes	1/91	No
New York	Yes[1,5]	Yes[1,7]	Yes[1]	Yes[1,7]	3/96
Rhode Island	Yes	Yes[1,7,8]	Yes	2/92[1,7]	No
Vermont	No	Yes[1,4,7]	Yes[1]	Yes[1]	No
Pacific Telesis					
California	3/96[1]	1/96[1,7]	Yes[1]	1/95[1,7]	No[9]
Nevada	5/95[1]	5/95[1,2]	5/95[1]	5/95[1]	No
SBC Communications					
Arkansas	No	No	Yes	Yes[1,2,7]	No
Kansas	No	Yes[1,4]	Yes	Yes[1,7]	No
Missouri	Yes[2]	Yes[2,4,8]	Yes	8/86[1,7]	No
Oklahoma	No	No[9]	7/95[1]	7/94[1,7]	7/98
Texas	9/95[1]	9/95[1]	9/95[1]	Yes[1]	No[9]
U S WEST					
Arizona	Yes[1]	7/95[1,7]	Yes[1]	Yes[1,7]	4/96
Colorado	7/96	7/96[1]	7/96	Yes[1,7]	No

(Continued)

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Table 1 (Continued)
Status of State Regulation of Local Competition

RBOC/State	Local Exchange Service		IntraLATA Toll		
	Resale OK?	Competition OK?	Resale OK?	Competition OK?	Equal Access
Idaho	7/88[7]	No	7/88	Yes[7]	No[9]
Iowa	Yes[7]	3/95[1,7]	Yes[7]	Yes[7]	No
Minnesota	Yes[1,3]	8/95[1]	Yes	Yes[1,7]	1/97
Montana	Yes	Yes[1]	Yes	Yes	No[9]
Nebraska	No	Yes[7]	Yes[1,7]	1/87[1,7]	No
New Mexico	No	No	Yes[1]	Yes[1,7]	No
North Dakota	Yes	No	Yes[1]	Yes[1,7]	8/99
Oregon	Yes[1]	7/93	Yes	Yes[1]	No
South Dakota	No	No	Yes[1]	Yes	No[9]
Utah	Yes	Yes[1]	Yes	Yes[1]	1/98
Washington	Yes	Yes[1,7]	Yes	Yes[1,7]	No
Wyoming	3/95[1]	Yes[1,2,4,7]	Yes[1]	Yes	1/98
Others					
Alaska	No	No	5/91	5/91[1,7]	6/91
Hawaii	Yes[2]	1/96	Yes[1]	Yes[2]	No

[1] = Must be certified or registered
[2] = With restrictions
[3] = Centrex only
[4] = Nonswitched only
[5] = Business service only
[6] = Local exchange needs as Shared Tenant Service (STS) only
[7] = Must be tariffed
[8] = Centrex and >T1 private lines
[9] = PSC/PUC decision pending
Source: National Association of Regulatory Utilities Commissioners, Dataquest (April 1996)

The Local Competitors

While convergence across industry segments is happening and will likely continue, each of today's competitors for local service has advantages or disadvantages based on their traditional industry group. Table 2 presents a matrix of the major industry segments vying for a piece of the local service pie and how well they meet our criteria for success, as follows: *

- Capital resources—Facilities expansion, purchase of wholesale services, and so on
- Existing facilities— Strategic advantage for providing local service and so on
- Brand name—Customer awareness, confidence and so on
- Local/long distance bundling—"One-stop shopping," potentially a lower price, and so on
- Marketing expertise —Customer awareness, incentive to purchase services, and so on
- Technical sales skills—Sales of data solutions/products to business markets and so on

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Table 2
Top Industry Segments and Competitive Strengths
(0 = Not Attained; 1 = Parity Attained; 2 = Fully Attained)

Top Segments	Capital Resources	Existing Facilities	Brand Name	Local/LD Bundling	Marketing Expertise	Technical Sales Skills
Business Markets						
CAPs	1	2	1	2	1	2
IECs	2	1[1]	2	0	2	2
LECs	2	2	2	0	1	1
Cable TV	2	0	1	2	0	0
Resellers	0	0	1	2	1	1
Residential Markets						
CAPs	1	1	0	2	0	NA
IECs	2	1[1]	2	0	2	NA
LECs	2	2	2	0	1	NA
Cable TV	2	2[2]	2	2	1	NA
Resellers	0	0	0	2	0	NA

[1]Depending on the provider
[2]Will require investment for network upgrade
NA = Not available
Source: Dataquest (April 1996)

As mentioned earlier, while convergence is lessening the meaning of traditional industry groupings, there are strategic implications for companies operating within segmented lines of business. Those implications provide a basis for future success or warn of required retooling to ensure that threats are converted into opportunities. Dataquest now analyzes strategic issues associated with each major industry segment seeking local telecommunications market share acquisition.

Competitive Access Providers

Competitive access providers (CAPs) have been offering "LEC bypass" access to interexchange carrier networks, as well as selected nonswitched, local service, to business customers over the last 10 or so years. They hold perhaps the best position for capturing local business services market share for several reasons. First, they can offer services over state-of-the-art fiber loops (as opposed to copper-based LEC loops) that require fewer switches per mile. This gives them a cost/price advantage and product superiority. These loops can also be deployed in strategically positioned areas that cater to high-margin business customers. Second, given that RBOCs must prove that a facilities-based competitor exists in their region before they can offer long distance services, CAPs have been some of the first to reach interconnection agreements with the RBOCs, and as a result have been able to negotiate advantageous terms. Third, CAPs have been offering quality service to business customers in large metropolitan markets for years, hence they have good brand recognition and customer loyalty with these customers who are more likely to seek alternatives to the incumbent LEC. Fourth, CAPs have the regulatory freedom to bundle local and long distance service, unlike other potential entrants that have regulatory restrictions on bundling (See specific examples concerning LECs and IECs). Last, CAPs