DE 97-171

BELL ATLANTIC

Petition for Approval of Statement of Generally Available Terms Pursuant to the Telecommunications Act of 1996

Order Granting in Part and Denying in Part

O R D E R N O. 23,738

July 6, 2001

TABLE OF CONTENTS

GLOSSARY OF ACRONYMS

ACL . . . . . Atlantic Connections, Ltd.

ADSL . . . . . Asynchronous Digital Subscriber Line

A technology to access the backbone network, ADSL provides very high capacity transmission over relatively short local loops. It is intended for applications requiring a high-speed downstream channel, ideal for one way applications like video. It supports voice, data, and video transmission at speeds of 6 Mbps downstream and 16 - 64 kbps upstream.

ARMIS . . . . . Automated Reporting Management Information System

An FCC-mandated system for collecting and making public certain financial and operational data from the largest carriers, begun in 1987. Since 1992, ARMIS reports include service quality and network infrastructure information.

AT&T . . . . . AT&T Communications of New England, Inc.

BayRing . . . . . Freedom Ring Communications, L.L.C., d/b/a BayRing

CATC . . . . . Carrier Account Team Center

One of the work centers Bell Atlantic established to deliver UNEs. The CATC personnel interact directly with CLECs' personnel.

CB . . . . . Coordination Bureau

Another one of the work centers Bell Atlantic established to deliver UNEs. This one coordinates the Bell Atlantic workers providing services to CLECs, i.e. hot cuts, etc.

.

CC/BC . . . . . Current Cost to Book Cost

A ratio used to determine forward-looking building costs per square foot for collocation purposes.

CLECs . . . . . Competitive Local Exchange Carriers

CO . . . . . Central Office

CPR . . . . . Continuing Property Records

Records carriers are required to file with the FCC and with the NHPUC pursuant to FCC Rules, PART 32, and the PUC's Chart of Accounts. CPR is compiled on the basis of original cost and includes the identity, vintage, location and cost of units of property, the ongoing transaction activity regarding such units, and other information needed to support regulatory, cost, tax, and other accounting information needs and requirements.

DCAS . . . . . Direct Customer Access System

The BA software system that provides CLECs with electronic interaction with BA's OSS.

DTE . . . . . Massachusetts Department of Telecommunications and Energy

E&A . . . . . Engineering and Administration

The term meaning the tasks BA states it must under take to E & A provide collocation.

GIGs . . . . . Gigabytes of Memory

A measurement of computer capacity.

GR-303 . . . . . (no real translation)

Digital loop carrier technology optimized for ISDN services, permitting additional electronic provisioning capability at remote terminals.

GUI . . . . . Graphical User Interface

The electronic computer software program by which the Bell Atlantic provides CLECs access to UNEs.

HAI 5.0a . . . . . Hatfield Associates Inc. 5.0a.

The acronym to denote the costing model presented by AT&T, which was developed by Hatfield Associates Inc. The iteration advocated in this docket is known as HAI 5.0a.

HDSL . . . . . High-bit-rate Digital Subscriber Loop

A technology for accessing the backbone network, a more cost effective way of providing T-1 local loop circuits than ADSL- - but slower than ADSL.

ICOs . . . . . Independent Telephone Companies

Incumbent local exchange carriers which are not Bell Operating Companies. In New Hampshire and in this docket, they include Granite State Telephone Company, Merrimack County Telephone Company, Contoocook Valley Telephone Company, Wilton Telephone Company, Hollis Telephone Company, Dunbarton Telephone Company, Northland Telephone Company, Bretton Woods Telephone Company, and Dixville Telephone Company.

IDLC . . . . . Integrated Digital Loop Carrier

Digital Loop Carrier Systems concentrate traffic from multiple digital carrier lines into T1s. Unlike Universal Digital Loop Carrier, IDLC removes the need to convert the signal from analog to digital in the CO. IDLC enables carriers to expand economically- -without upgrading COs or adding wire and equipment. IDLC uses T1 lines to free up copper wire pairs and increase the traffic capacity of the network.

ILEC . . . . . Incumbent Local Exchange Carriers

ISDN . . . . . Integrated Services Digital Network

A suite of fully digital technologies for transmission, switching, signalling and control. It offers improved bandwidth, flexibility, and reliability. However, it developed slowly and by differing standards (and at unattractive rates) and failed to secure a place in the market. ISDN-BRI and ISDN-PRI are newer forms. ISDN has much less bandwidth than ADSL and ISDN is a dial-

up service intended for periodic use, whereas ADSL is a dedicated line better for internet access. ISDN is a swtiched service so it can call and receive calls from anyone; ADSL relies on the service provider to connect named others.

MIPS . . . . . Millions of Instructions Per Second

A measurement of computer speed.

MLAC . . . . . Mechanized Loop Administration Center

One of the six work centers BA established to enable delivery of UNEs.

NECTA . . . . . New England Cable Television Association, Inc.

NID . . . . . Network Interface Device

NRCs . . . . . Non-Recurring Costs

The one time costs incurred by Bell Atlantic in order to implement service to a particular CLEC end-user by providing UNEs to a CLEC..

NYNEX or Bell Atlantic . . . . . New England Telephone & Telegraph Co.

NYPSC . . . . . New York Public Service Commission

NYT . . . . . New York Telephone

The New York State ILEC (Bell Atlantic).

OCA . . . . . New Hampshire Office of Consumer Advocate

OSS . . . . . Operational Support Systems

The electronic systems designed to carry out the functions required for interconnection between carriers, i.e. preordering ordering, provisioning, maintenance, repairs and billing.

POT . . . . . Point of Termination

A POT frame is a relay rack that houses the termination equipment used to provide the access connection between the CLEC's equipment and that of Bell Atlantic.

RBOC. . . . . .Regional Bell Operating Company

RCs . . . . . Recurring Costs

The prices Bell Atlantic charges for UNEs.

RCMAC . . . . . Recent Change Memory Administration Center

Another of the work centers established by Bell Atlantic to enable delivery of UNEs.

RT . . . . . Remote Terminals

RTU . . . . . Right to Use

SCIS . . . . . Switching Cost Information System

Bell Atlantic's software program by which it proposes to price switching RCs.

SGAT . . . . . Statement of Generally Available Terms

SMEs . . . . . Subject Matter Experts

Bell Atlantic's term for expert witnesses.

SONET . . . . . Synchronous Optical Network

The standard for fiber-optic backbone networks. A highly redundant system, it permits interconnection and interoperability, endorsed by the ITU. The optimal configuration is a dual, counter-rotating ring.

TAct . . . . . Telecommunications Act of 1996

TELRIC . . . . . Total Element Long-Run Incremental Costs

The types of costs by which the FCC determined that states could determine prices for UNEs. Subsequently appealed, and in a remand order issued by the 8th Circuit, found to be illegal under the TAct.

TOC . . . . . Task Oriented Costing

The method used by Bell Atlantic to model NRCs.

TRA . . . . . Telecommunications Resellers Association

UDLC . . . . . Universal Digital Loop Carrier

Digital Loop Carrier Systems concentrate traffic from multiple digital carrier lines into T1s. Unlike IDLC, UDLC requires electronics in the CO convert the signal from digital to analog in the CO.

UNEs . . . . . Unbundled Network Elements

Vanguard . . . . . Vanguard Cellular Financial Corporation

Vitts . . . . . Vitts Corporation

DE 97-171

BELL ATLANTIC

Petition for Approval of Statement of Generally Available Terms Pursuant to the Telecommunications Act of 1996

Order Granting in Part and Denying in Part

O R D E R N O. 23,738

July 6, 2001

APPEARANCES: Victor D. Del Vecchio, Esq. and David A. Schulz, Esq. for Bell Atlantic; Palmer & Dodge, LLP by Jeffrey Jones, Esq., Kenneth Salinger, Esq. and Matthew P. Schaefer, Esq. for AT&T Communications of New England; Swidler & Berlin by Eric Branfman, Esq. for Freedom Ring Communications, L.L.C. d/b/a BayRing; Brown, Olson & Wilson by David Shulock, Esq. for Vanguard Cellular Financial Corporation; Devine Millimet & Branch by Frederick J. Coolbroth, Esq., for Granite State Telephone Company, Merrimack County Telephone Company, Contoocook Valley Telephone Company, Wilton Telephone Company, Hollis Telephone Company, Dunbarton Telephone Company, Northland Telephone Company, Bretton Woods Telephone Company, and Dixville Telephone Company; William Homeyer for the Office of Consumer Advocate on behalf of residential ratepayers; E. Barclay Jackson, Esq. for the Staff of the Public Utilities Commission.

INTRODUCTION

The first comprehensive telecommunications legislation since 1934, the Telecommunications Act of 1996[1] (TAct), was signed into law on February 8, 1996. Fundamentally changing the basis of telecommunications regulation, the TAct seeks to utilize the discipline of the marketplace to stimulate technological innovation, efficiency, and improvements in service quality and reliability. One of the two principal goals of the telephony provisions of the TAct is to open the local exchange and exchange access markets to competition.[2] Under the provisions of §251(c), the main method the TAct provides to facilitate competition is to require Incumbent Local Exchange Carriers (ILECs) to enter into interconnection agreements with new entrants (Competitive Local Exchange Carriers [CLECs]).

Another means for enabling entry into the local exchange market is under Section 252(f) which permits an ILEC to prepare and file with a state commission a Statement of Generally Available Terms (SGAT), prescribing its general

---

[1] Telecommunications Act of 1996, Pub.L.No. 104-104, 110 Stat. 56, *codified* at 47 U.S.C. §§151 *et seq*. Hereinafter, all citations will be to the numbered sections of the TAct as first published, not as codified.

[2] Joint statement of managers, S.Conf. Rep. No. 104-230, 104th Cong. 2d Sess., at 1 (1996). The second goal is to promote innovation and investment by all participants in the telecommunications marketplace.

terms and conditions for interconnection. The instant docket was undertaken to review and establish Bell Atlantic's[3] SGAT. While the Commission derives its authority to review the SGAT from New Hampshire enabling laws, we here follow the Tact, as interpreted by FCC rules and orders and federal court orders. As further described in Section I, at page 8, as we noted in Order No. 22,692, Bell Atlantic's filed SGAT has been in effect pending the final outcome of this case. However, we are not aware of any CLEC currently taking service under the filed SGAT. In addition, numerous CLEC-specific interconnection agreements have been negotiated, and many CLECs are taking access service under their terms.

As required by the statute, the Federal Communications Commission (FCC) initiated several rulemakings to implement the various sections of the TAct. In its First Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, issued on August 8, 1996 (hereinafter, *Local Competition First Report and Order*), the FCC set out an extensive set of rules governing the ILECs'

[3] Effective in 2000, New England Telephone and Telegraph Company d/b/a Bell Atlantic merged with GTE, and it is currently named Verizon New England, Inc. d/b/a Verizon New Hampshire. For clarity, we refer to the company as Bell Atlantic because that was the name of the company when this docket was filed.

obligations to open their local networks.[4] The *Local Competition First Report and Order* adopted rules relating to the manner and degree of required network unbundling, costing and pricing methodologies, interconnection, and resale of retail services.

Following the adoption of the *Local Competition First Report and Order*, certain ILECs and state commissions filed various appeals of the rules, which were then consolidated in the Eighth Circuit of the United States Court of Appeals. The Eighth Circuit permanently stayed several provisions of the *Local Competition First Report and Order* on July 18, 1997, a decision that was later amended on rehearing, October 14, 1997, *Iowa Utilities Board v. FCC*, 120 F.3rd 753 (8th Cir.1997)(hereinafter, *Iowa I*).

The United States Supreme Court granted several parties' requests for review of *Iowa I*. On January 25, 1999, the

---

[4] *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499, 15509 (1996) (*Local Competition First Report and Order*), aff'd in part and vacated in part *sub nom*, *Competitive Telecommunications Ass'n v. FCC*, 117 F.3d 1068 (8th Cir. 1997) (*CompTel v. FCC*) and *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997) (*Iowa Utils. Bd. v FCC*), aff'd in part and remanded, *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366, 119 S. Ct. 721 (1999), vacated in part *sub nom*, *Iowa Utils. Bd. v. FCC,* No. 96-3321 (8th Cir. July 18, 2000), FCC v. Iowa Utilities Board, 121 S.Ct. 878, *cert. granted* (U.S., Jan. 22, 2001) (No. 00-587). Order on Reconsideration, 11 FCC Rcd 13042 (1996), Second Order on Reconsideration, 11 FCC Rcd 19738 (1996), Third Order on Reconsideration and Fourth Further Notice of Proposed Rulemaking, 12 FCC Rcd 12460 (1997), further recons. pending.

Supreme Court upheld much of the *Local Competition First Report and Order* in its order in *AT&T v. Iowa Utilities Bd.*, 119 S.Ct. 721 (1999) (*Iowa II*). In *Iowa II*, the Supreme Court upheld the majority of the FCC's rules implementing §251 of the TAct. Of particular relevance to this docket, *Iowa II* reversed the Eighth Circuit's holding that the FCC had no jurisdiction to design a pricing methodology. The Supreme Court remanded the case to the Eighth Circuit for review on the merits of the pricing methodology.

On remand, the Eighth Circuit considered the FCC's pricing methodology on the merits, *Iowa Utilities Board, et al. v. FCC*, 219 F.3d 744 (8th Cir. July 18, 2000)(hereinafter, *Iowa III*), using the standards set out in *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 842-43 (1984). *Iowa III* vacates 47 CFR §51.505(b)(1) which spells out the FCC's pricing methodology. It holds that the rule violated the plain meaning of the TAct by reflecting the costs of supplying a "hypothetical network."

Our analysis of the pricing proposals in this docket is premised on a forward-looking economic cost methodology, as set forth in the TAct and now interpreted in *Iowa III*. Thus, it is calculated to reflect the ILEC's actual incremental costs in the future to serve competitors with the ILEC's

network facilities, including whatever upgrades the ILEC chooses to implement.

In *Iowa II*, the Supreme Court also directed the FCC to conduct further proceedings to clarify the standards for determining the unbundling obligations of §251(c)(3). The FCC complied, issuing its Third Report and Order and Fourth Further Notice of Proposed Rulemaking, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98 (November 5, 1999) (hereinafter, *Local Competition Third Report and Order*).

It is important to note that although the positions put forth by the Parties and Staff, recounted below, reflect the state of the law at the time of briefing in February 1999, the entire body of case law discussed above informs our analysis and decision.

I. PROCEDURAL HISTORY

On July 11, 1997, New England Telephone and Telegraph Company, subsequently d/b/a Bell Atlantic and hereinafter referred to as Bell Atlantic, filed with the New Hampshire Public Utilities Commission (Commission) a Statement of Generally Available Terms, pursuant to §252(f) of the TAct. The filing was made as part of Docket No. DE 97-013, a docket the Commission opened on February 6, 1997 to investigate Bell

Atlantic's compliance with §271 of the TAct. Section 271 sets out a fourteen point checklist of conditions that Regional Bell Operating Companies like Bell Atlantic must meet in order to gain entry into the inter-LATA market.

The Commission granted limited intervenor status to Granite State Telephone Company, Merrimack County Telephone Company, Contoocook Valley Telephone Company, Wilton Telephone Company, Hollis Telephone Company, Dunbarton Telephone Company, Northland Telephone Company, Bretton Woods Telephone Company, and Dixville Telephone Company (the Independent Telephone Companies or ICOs). The Commission granted full intervenor status to AT&T Communications of New England, Inc. (AT&T), MCI Telecommunications Corporation (MCI), New England Cable Television Association, Inc. (NECTA), Vanguard Cellular Financial Corporation (Vanguard), and Vitts Corporation (Vitts), by Order No. 22,531 (March 24, 1997) and Order No. 22,692 (August 25, 1997). The Commission's Order No. 22,692 omitted the Telecommunications Resellers Association (TRA) as a full intervenor despite TRA's motion for intervention in DE 97-013 filed March 28, 1997. By letter dated September 24, 1997, the Commission acknowledged the omission and granted TRA status as a full intervenor.

On August 1, 1997, NECTA filed a Motion to Strike Bell Atlantic's SGAT filing as inappropriate in a §271 analysis. On August 16, 1997, Bell Atlantic filed a Motion in Response to the Motion to Strike. By Order No. 22,692, the Commission denied the Motion to Strike but found that the SGAT should be reviewed independently of §271 compliance issues. Accordingly, the Commission transferred all pertinent filings to this docket, DE 97-171, made all intervenors in DE 97-013 intervenors herein, and scheduled a pre-hearing conference date of September 9, 1997 for the newly opened DE 97-171. In addition, the Commission found that more time than allotted by §252(f)(3) of the TAct would be necessary for adequate review of the SGAT. Therefore, the Commission ordered that the SGAT as filed by Bell Atlantic would automatically take effect, without approval, pursuant to §252(f)(3)(B) and that Commission review would continue pursuant to §252(f)(4), thereby postponing the exercise of its authority to approve or disapprove the SGAT until its review in this docket is complete, but not delaying Bell Atlantic's introduction of an SGAT tariff.

Order No. 22,692 stated that SGAT rates which go into effect automatically pursuant to §252(f)(3)(B) were to be the equivalent of temporary rates under NH RSA 378:27, indicated

that a hearing on temporary rates would be held, and requested the parties and Staff to submit a procedural order including a date for a hearing on temporary rates. The follow-up procedural order does not address the issue of temporary rates. The procedural order submitted by Staff and certain intervenors including Bell Atlantic and AT&T did not include provision for a hearing on temporary rates and the Commission had no reason to add such a provision *sua sponte.* The Commission received no request then or subsequently to hold a hearing on temporary rates.

In response to motions, the Commission granted intervenor status to RCN Telecom Services, Inc. (October 27, 1997), Freedom Ring Communications, L.L.C. d/b/a BayRing (BayRing) (November 4, 1997), Atlantic Connections, Ltd. (ACL) (November 21, 1997), and New England Fiber Communications (March 3, 1998).

Bell Atlantic filed testimony on October 2, 1997, additional interconnection agreement terms and conditions on November 12, 1997, and a Cost Study on December 22, 1997. TRA filed an Objection to Bell Atlantic's Cost Study on January 13, 1998.

On January 15, 1998, Bell Atlantic filed a Motion for Confidential Treatment of certain data responses. By Order

No. 22,851 (February 17, 1998) the Commission granted the Motion for Confidential Treatment along with a grant of confidentiality for future similar data responses.

Between March 3, 1998 and March 10, 1998, testimony was filed by Bell Atlantic, BayRing, AT&T, ACL, and Staff. On March 24, 1998, AT&T filed a Motion for Confidentiality regarding testimony of one of its witnesses, which the Commission granted by Order 22,913 (April 30, 1998). Bell Atlantic filed rebuttal testimony on April 17, 1998; AT&T filed Surrebuttal testimony on May 14, 1998. On May 8, 1998, Staff filed its Cost Study, which was prepared by Ben Johnson Associates, Inc., a consulting firm. Bell Atlantic filed supplemental testimony regarding collocation issues on May 15, 1998, and both Bell Atlantic and BayRing filed additional testimony in November of that same year.

The Commission divided the docket into Tracks 1, 2, and 3. Track 1 addresses Operational Support Systems (OSS) and Non-Recurring Costs (NRCs). Hearings for Track 1 occurred on May 19, 20, 21, 22, and June 10, 1998. Track 2 addresses Recurring Costs; hearings for Track 2 were held on September 1, 2, 3, and 4, 1998 and October 8 and 29, 1998. Track 3 addresses Non-Cost Issues.[5] On December 3, 1998, the

[5] Another docket opened recently, DT 01-006, Carrier to Carrier Metrics, addresses non-cost issues from the perspective of measuring parity of

Commission heard evidence regarding collocation, a Track 2 issue, and one non-cost issue, reciprocal compensation. By agreement of the parties and Staff and with Commission approval, other Track 3 issues were submitted solely via written testimony and without briefs.

Briefs on Track 1 and Track 2 issues were filed by Bell Atlantic, AT&T, BayRing, the Office of Consumer Advocate (OCA), and Staff on February 10, 1999. Reply briefs were filed by Bell Atlantic, AT&T, Freedom Ring, and Staff on March 3, 1999.

Subsequent to the filing of briefs, both the OCA and AT&T submitted additional materials for the Commission's consideration. The materials consisted of orders and reports issued by the FCC, the Ninth Circuit Court of Appeals, and the state public utilities commissions of Massachusetts, Vermont, New York, Rhode Island, Kansas, and Pennsylvania, as well as copies of testimony Bell Atlantic submitted to the New York and Massachusetts commissions. We take official notice of those documents that are formal decisions of judicial and quasi-judicial bodies.

On February 1, 2000, BayRing filed a Motion for Relief, concurred in by the OCA, Sprint, and TRA, requesting that (1)

---

performance, that is, whether the service Bell Atlantic provides to CLECs is on a par with the service it provides itself.

the rates to be determined in this docket be made retroactive to the SGAT's effectiveness, and (2) competitors have the option of buying services from either Bell Atlantic's tariffs or from the SGAT. On March 6, 2000, Bell Atlantic filed a Motion in Opposition to BayRing's Request for Relief. By letter from the Executive Director, the Commission acknowledged the motions and announced that an Order of Notice would issue, subsequent to the issuance of the Commission's decision in the instant docket, for a new docket to deal with the issues raised in the motions.

On August 4, 2000, Bell Atlantic filed a new SGAT to take into account the Supreme Court's rulings in *Iowa II*, the Eighth Circuit's holdings in *Iowa III*, and the FCC's *Local Competition Third Report and Order*.

II. CONVERSANT MOTION TO INTERVENE

On March 9, 2001, Conversant Communications of New Hampshire, LLC (Conversant), filed a petition for late intervention to this docket, pursuant to N.H. Admin. Rules Chapter Puc 203.02. On March 19, 2001, Bell Atlantic objected to the motion.

Conversant, an authorized CLEC in New Hampshire since September 1998, argues that it is eligible to take service from the SGAT and therefore has an interest in the outcome.

Conversant's petition agrees that it takes the record and the procedural schedule as they are. Bell Atlantic objected to the entrance of a new intervenor when the proceeding is all but complete. Bell Atlantic points out that Conversant's petition contains information not in the record and not subject to cross-examination.

The record in this docket is closed. Accordingly, we will not consider any of the material in Conversant's petition in our deliberations on this docket. We will grant Conversant's petition for intervention by its own terms, that is, with the record complete and briefs filed before Conversant's intervention. As an intervenor, Conversant shall receive notice of any further actions in this docket.

III. DESCRIPTION OF THE TOPICS GENERATING DISPUTE

A. Operational Support Systems

Operational Support Systems (OSS) are systems designed to support the functionalities of pre-ordering, ordering, provisioning, maintenance, repair, and billing. The Federal Communications Commission concluded that, in order to comply fully with §251(c)(3) of the TAct, an incumbent local exchange carrier must provide, upon request, nondiscriminatory access to its OSS, including access to internal gateway systems. *Local Competition First Report and Order, ¶523.* To do that, Bell Atlantic developed a single mechanized interface, as requested by the CLECs, to supply them with the functionalities currently performed by Bell Atlantic customer service representatives and repair personnel. In addition, Bell Atlantic developed a Direct Customer Access System and Repair Trouble Administration System and created links from those two systems to a variety of other Bell Atlantic OSS systems. These systems, in conjunction with security measures developed to protect CLEC privacy and billing system developments, are used to provide OSS to CLECs. Bell Atlantic seeks to recover the costs of developing this system of access to OSS. At issue here is the amount that Bell Atlantic should

be permitted to recover and the method or rate design by which recovery should occur.

B. Non-Recurring Costs

Non-recurring costs (NRCs) are the one-time costs incurred by Bell Atlantic in order to implement service to a particular CLEC customer by providing various unbundled network elements (UNEs) to the CLEC. NRCs include the one-time costs associated with the process by which CLECs order specific UNEs from Bell Atlantic and the one-time costs associated with Bell Atlantic actually provisioning these unbundled network elements. Examples of activities giving rise to NRCs are: appointment availability assessment, address verification, telephone number reservation, feature availability assessment, order entering, and order status checking. Bell Atlantic submitted a Non-Recurring Cost Study on July 11, 1997 and a revised NRC Study on February 4, 1998. It analyzes the one-time costs to Bell Atlantic of providing loop and transport facilities, line- and trunk-side interconnection of the local switch, trunk-side interconnection of the tandem switch, and interconnection to the Bell Atlantic signaling network. On March 9, 1998, Staff filed testimony regarding Bell Atlantic's Non-Recurring Cost Study. AT&T submitted its own Non-Recurring Cost Study on

March 13, 1998. The issue is which cost study is most appropriate for the Commission to use in setting non-recurring costs for the SGAT.

C. Recurring Costs

Recurring costs are the monthly prices which Bell Atlantic will charge CLECs for the actual UNEs. The SGAT deals with the costs Bell Atlantic proposes for the UNEs identified in the Commission's CLEC rules, N.H. Admin. Rules Puc 1311.01, *i.e.*, network interface device (NID), interoffice transmission facilities, tandem switching, local loops, local switching, signaling systems and call-related databases, directory assistance/operator services, and access to OSS. The recurring costs must comport with §§251 and 252(d) of the TAct. Bell Atlantic, AT&T, and Staff filed Recurring Cost Studies and filed written testimony by expert witnesses in support of the differing results of their respective studies.

As a result of technical discussions, Staff and Bell Atlantic reached agreement on recurring charges for UNEs and presented evidence in support of the agreement (Stipulation) during hearings. AT&T objects to the Stipulation and presented evidence challenging the Stipulation and supporting its own Recurring Cost Study. By the time issues were joined in the briefs, all parties supported some form of loop cost de-averaging by density.

D. Collocation

Section 251(c)(6) of the TAct requires an ILEC to make both physical and virtual collocation available to requesting CLECs on just, reasonable, and non-discriminatory terms. Collocation refers generally to the placement of a CLEC's equipment in an ILEC's central office building for the purpose of interconnection and access to unbundled network elements.

In physical collocation, the ILEC leases space available in its CO building to a CLEC for placement of the necessary equipment and provides CLEC personnel access to the equipment. Physical collocation costs can be characterized as both non-recurring and recurring costs. The non-recurring costs consist of construction labor and material costs, and expenses for engineering and administration; recurring costs consist of carrying charges, annual building costs, and power costs. An alternative is virtual collocation, which permits a CLEC to place transmission equipment in relay racks in the same area where similar equipment, owned by the ILEC, is placed. The virtual collocation equipment is purchased by the CLEC and installed in a relay rack located among the ILEC's own digital circuit equipment. The CLEC transfers ownership of the equipment to the ILEC for $1 and the ILEC maintains the equipment at the direction of the CLEC.

Section 251(c)(6) requires the ILECs to make both physical and virtual collocation available to CLECs on just, reasonable, and non-discriminatory rates, terms and conditions. The parties differ on the cost of providing the various components of collocation.

E. Non-Cost Issues

Non-cost issues deal with the adequacy of the SGAT to insure that Bell Atlantic will provide the SGAT-tariffed services in a non-discriminatory manner. Section 252(f) of the TAct requires an SGAT to comply with the requirements of §251; §251(c)(2) compels Bell Atlantic to provide CLECs interconnection with the Bell Atlantic network and access to unbundled network elements that is at least equal in quality to that provided to itself or to any subsidiary, at reasonable and non-discriminatory rates. Simply put, the SGAT must not contain terms for CLECs that are unjustifiably different than the terms by which Bell Atlantic provides service to itself; the SGAT must be fair on its face, providing CLECs with non-discriminatory access to services which are on a par with the services Bell Atlantic provides itself.

Staff, AT&T and BayRing claim that Bell Atlantic's SGAT filing is insufficient to enable non-discriminatory service. They assert that additional terms are necessary, such as

provisioning intervals (time-frames within which Bell Atlantic must accomplish particular tasks), clearly-defined ordering priorities, requirements for prior notice of service discontinuance or rejection, timely provision of billing information and a billing verification process, and a dispute resolution process. AT&T argues that Bell Atlantic must demonstrate that its SGAT offerings are currently obtainable by competitors and are not mere paper promises.

IV. POSITIONS OF STAFF AND PARTIES AND COMMISSION ANALYSES

A. Operational Support Systems

1. Bell Atlantic - OSS

Bell Atlantic proposes to recover $108.2 million in expenditures it incurred to modify its OSS and to develop new systems for providing CLECs with access to the Bell Atlantic OSS that covers Bell Atlantic's footprint (New York and New England). In addition, Bell Atlantic proposes to recover $18.5 million in annual costs to maintain the CLECs' access to OSS, and $8.1 million in annual costs to maintain the Resale Service Center. The $8.1 million, which will be recovered only from resellers, is not in dispute.

The development costs of $108.2 million include costs for OSS access specifically related to the five OSS functionalities, as well as for certain operator services

capabilities (branding/unbranding, interfaces to White Pages listings and direct access to Directory Assistance), customized routing capability, and the establishment of the Resale Service Center and Carrier Account Team Center. Bell Atlantic arrived at the figure by identifying the actual expenses and capital requirements incurred in 1996 to create the necessary capabilities within the OSS and Service Management System, and adding the 1997 budgeted expense and capital amounts where work remained to be completed at the time of the Bell Atlantic OSS cost study.

The proposed annual ongoing costs, excluding the $8.1 million associated with the operations of the Resale Service Center, include the capital-related expenses for general purpose computers, the system and hardware maintenance costs, and the processing costs associated with the ongoing provision of call usage detail information and customer service record retrieval.

Bell Atlantic proposes to recover its claimed OSS costs, both development and ongoing costs, through a combination of fixed monthly charges and per-transaction charges. Bell Atlantic's proposed fixed monthly charges of $4,777 for CLECs and $2,383 for resellers were designed to collect 20% of the development costs, and would cease after five years, based on

a projection of the number of competitive carriers Bell Atlantic anticipated will enter the regional market. Bell Atlantic proposes to recover the remaining 80% of the development costs and the ongoing costs via a transaction charge. For the first seven years the transaction charge would be $1.15. Of that, 76 cents would recover development costs and 39 cents would recover ongoing costs. After seven years the development costs would have been totally recovered, based again on a projection of the number of competitive carriers Bell Atlantic anticipated would enter the regional market. Thereafter, transaction charges of 39 cents would continue to recover Bell Atlantic's annual ongoing OSS costs. In order to insure recovery of the allowed costs, no more and no less, Bell Atlantic proposed to track the revenues and to make appropriate mid-course rate adjustments so that recovery of development costs is completed during the designated recovery period.

Bell Atlantic intends to levy the monthly charge on CLECs and resellers based on their operation within the Bell Atlantic territory, not based on their operations within a particular state. Hence, a CLEC operating in all of the states in the Bell Atlantic footprint or in more than one state would pay only one monthly CLEC charge; *i.e.*, payment of

the charge grants the competitive carrier access to Bell Atlantic's OSS throughout the entire territory. In order to remove the possibility that carriers in New Hampshire might pay more or even all of the entire development costs, Bell Atlantic proposes that the Commission impose a cap, based upon New Hampshire's percentage of access lines in the region. Bell Atlantic avers that the resulting New Hampshire allocated portion of OSS development is $4.5 million.

Bell Atlantic argues that its OSS charges are reasonable, appropriate, and compliant with the FCC's forward-looking costing methodology. According to Bell Atlantic, the FCC requires that charges for UNEs must be based upon costs derived from using the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of COs. Bell Atlantic claims that its OSS meets the FCC standard known as Total Element Long-Run Incremental Costs (TELRIC). As support for its claim, Bell Atlantic points out that no other party in the docket recommends or proposes an alternative OSS architecture and that AT&T's cost model uses the same OSS architecture as Bell Atlantic. Furthermore, the company argues, its OSS cost study presents the incremental cost difference between state-of-the-art OSS designed to provision

Bell Atlantic retail customers and state-of-the-art OSS designed to provision numerous carriers.

According to Bell Atlantic, its rate structure is fair, reasonable, and in accord with cost-causation principles. Bell Atlantic posits cost causation as the defining principle for rate design: costs should be borne by the entities that cause the costs. Resellers and UNE purchasers who will be competing against Bell Atlantic's retail marketing efforts are the sole beneficiaries and the sole cost causers of the OSS expenditures at issue in this docket, according to Bell Atlantic. In Bell Atlantic's view, neither the new OSS systems nor the modifications to existing OSS would have been made absent the TAct. Furthermore, Bell Atlantic claims that none of the OSS development efforts enhanced its existing OSS in any respect; nor will Bell Atlantic use the new systems in connection with any of its own retail operations.

Bell Atlantic contests AT&T's argument that competitive neutrality concerns should outweigh the principle of cost causation. The onset costs borne by competitive carriers cannot be considered equal to those borne by Bell Atlantic. Bell Atlantic's involuntarily-incurred costs to establish interface systems, mandated solely to enable multi-carrier access, far exceed the start-up costs incurred by competitors.

Furthermore, Bell Atlantic avers that it will neither benefit from nor use the new systems. Therefore, Bell Atlantic urges the Commission to reject rate designs that would force Bell Atlantic to bear the costs of providing OSS access to CLECs and resellers. Following cost causation principles, Bell Atlantic argues, does not rise to the level of a barrier to entry; it is merely allowing Bell Atlantic to recover the just and reasonable cost of doing business.

Bell Atlantic also urges the Commission not to base a decision about OSS costs upon a mistaken belief that the New York Public Service Commission (NYPSC) found that Bell Atlantic's costs are overstated or flawed. According to Bell Atlantic, the NYPSC only temporarily denied cost recovery to New York Telephone (NYT), based on Bell Atlantic/NYNEX merger conditions agreed to in New York.

The proposed on-going transaction costs, according to Bell Atlantic, reflect: (1) general purpose computer investment, and (2) annual system maintenance related to the development of the new systems and to system modifications, as well as the carrying costs for accessing capital investment. General purpose computer investment means equipment bought in bulk and assigned to systems as needed, especially for storage capacity and processing capacity (gigabytes of memory and

millions of instructions per second, known as GIGs and MIPS, respectively). Bell Atlantic argues that general purpose computer investment should be calculated at $3,000 per GIG and $20,000-25,000 per MIPS. Bell Atlantic argues that annual system maintenance costs should be calculated based on a factor of 15% of any initial program development cost incurred for billing and provisioning system upgrades.

Bell Atlantic admits that the NYPSC found that NYT failed to meet its burden of proof with respect to its estimate of ongoing computer costs associated with OSS access because NYT did not provide industry guidelines or descriptions of analogous situations to support the 15% factor it proposed. However, since the close of the New York record, Bell Atlantic asserts that it has identified evidence in the industry that fully supports the 15% factor.

With regard to claims made that its OSS costs should be reduced to reflect savings anticipated as a result of the Bell Atlantic/NYNEX merger or re-engineering savings, Bell Atlantic argues that any savings to be realized in the future are purely speculative and therefore should not be used to offset actual development expenses.

2. AT&T - OSS

AT&T argues that Bell Atlantic has not complied with TELRIC principles because its OSS charges are based on historic costs that are not forward-looking. AT&T states that Bell Atlantic has already recovered those costs from ratepayers but that, even if Bell Atlantic had not already been made whole, these backward-looking costs should not be imposed on competitors. Each carrier should bear its own competition onset costs, according to AT&T; these OSS costs are merely Bell Atlantic's competition onset costs. Alternatively, if Bell Atlantic is permitted an explicit mechanism for recovering these costs, AT&T declares that it must be a competitively neutral mechanism spreading the costs to all access lines regardless of carrier. Thereby, each carrier would be responsible for a portion of the costs determined by its market share. AT&T further insists that Bell Atlantic should spread the costs to access lines in the Bell Atlantic-South states as well as those in Bell Atlantic-North[6], thus reducing the total costs to be recovered in New Hampshire.

AT&T urges the Commission to reject Bell Atlantic's OSS proposal as the NYPSC did. AT&T cautions that practical

[6] When NYNEX merged with Bell Atlantic, the former NYNEX states (Maine, Vermont, New Hampshire, Rhode Island, Massachusetts, and New York) became known as Bell Atlantic - North.

problems will arise if any one state in New England were to implement the proposal. Bell Atlantic's proposal to conduct a true-up at a later date in order to allocate an unidentified portion of the OSS costs to Bell Atlantic-South is unacceptable to AT&T.

AT&T argues that a forward-looking, TELRIC-compliant cost study has to model anticipated future costs based on the most efficient available technology, rather than Bell Atlantic's existing OSS infrastructure. Relying on historic costs to set OSS rates would amount to a single-issue rate case rather than a forward-looking cost study and should be rejected. In addition, AT&T argues that Bell Atlantic should offset its OSS costs with the estimated annual expense savings of $1.8 billion that are expected as a result of the NYNEX-Bell Atlantic merger.

AT&T asserts that Bell Atlantic failed to demonstrate that the OSS costs it seeks to recover go beyond the upgrades and modifications to OSS that it ordinarily incurs annually and recovers in retail rates. Ordinary computer upgrades and development expenses are not recoverable in SGAT charges; hence, absent proof to the contrary, Bell Atlantic should not be permitted to recover these costs via the SGAT, according to AT&T. AT&T also points out that Bell Atlantic's on-going

maintenance figure is merely a percentage (15%) of the total development cost claims. The NYPSC rejected this percentage factor and instead determined that 10% is an adequate estimate of maintenance costs.

AT&T claims that contrary to Bell Atlantic's assertion, the OSS costs are not caused by potential entrants but by the Congressional mandate for local competition in the telecommunications market. The TAct requires ILECs to provide competitors with access to ILEC networks. Therefore, AT&T contends that all end-users, including Bell Atlantic end-users, are the intended beneficiaries of competition and should ultimately bear competition onset costs. AT&T further argues that Bell Atlantic itself benefits from making these OSS improvements because Bell Atlantic will gain the ability to show that it has met the prerequisite access requirements of §271 of the TAct. Thus, in addition to obtaining wholesale revenues, Bell Atlantic gains the ability to enter the long distance market. Accordingly, AT&T argues, if Bell Atlantic is permitted to recover the costs, the charges should be imposed in a competitively neutral manner on all carriers in proportion to their total number of access lines. AT&T posits that this would spread the costs among all cost causers.

As for Bell Atlantic's proposal to implement transaction charges, AT&T argues that OSS costs are one-time costs, and not traffic sensitive. One-time costs recovered as per-transaction charges will pose a barrier to entry, inhibiting carrier entry into the market and inhibiting customer movement within the market. Furthermore, according to AT&T, the severity of the barrier to entry will increase, AT&T avers, as a result of Bell Atlantic's proposal to adjust the level of onset cost charges in order to keep the recovery period constant at seven years. The initial charges will suppress entry to such an extent that there will be fewer entrants than Bell Atlantic forecasts, necessitating an increase in the charges and further discouraging entry.

AT&T suggests that the proposal to cap at $4.5 million New Hampshire's share of the total OSS development cost does not alleviate the basic problem of barrier to entry. According to AT&T, the proposal still fails to assess a fair share of the onset costs to Bell Atlantic-South and also fails to reduce the rates to correspond to the cap. Thus the barrier to entry is maintained and, moreover, by virtue of the constant time period, the barrier imposes its heaviest burden on early entrants.

Bell Atlantic's proposed ongoing charge of 39 cents per transaction for maintenance of OSS access, which is meant to apply ***ad infinitum***, cannot be justified in a forward-looking environment. According to AT&T, the only justifiable charges for OSS consist of 1.4 cents per transaction for central computer processing and 0.0104 cents per transaction for the cost of storing transaction data. AT&T recommends that the Commission decrease the 39 cent transaction charge to a 1.4104 cents per transaction charge.

3. BayRing - OSS

BayRing argues that Bell Atlantic's proposal for recovering OSS costs improperly shifts Bell Atlantic's costs of doing business to CLECs and discriminates against smaller CLECs to such an extent that smaller CLECs will be forced out of the New Hampshire market.

BayRing disputes Bell Atlantic's claim that CLECs are the sole cost causers, pointing out that the TAct requires Bell Atlantic to open its OSS to competitors. In return, Bell Atlantic, which lobbied in support of the TAct according to BayRing, obtains the opportunity to qualify under ¶271 for entry into the long-distance market from which it has been

barred under the Modified Final Judgment.[7] BayRing posits that the OSS enhancements for which Bell Atlantic seeks recovery are a prerequisite for ¶271 authority and cites to the NYPSC's ruling that 100% recovery from CLECs does not take into account the benefits accruing to Bell Atlantic as a result of compliance. As evidence of another benefit accruing to Bell Atlantic, BayRing refers to the public statement by Bell Atlantic's chairman that the company wants to be the premier provider of wholesale services in its territory.

BayRing's second argument against Bell Atlantic's proposed OSS cost recovery is based on Bell Atlantic's admission that the $108 million OSS development costs were historical expenses incurred to modify embedded OSS and that Bell Atlantic has already expensed them. Furthermore, according to BayRing, in 1996 in New Hampshire, Bell Atlantic recovered these costs at the same time it enjoyed overearnings above its allowed rate of return.

BayRing urges the Commission to reject Bell Atlantic's OSS cost recovery design because it is unfair in several ways. According to Bay Ring, the OSS cost recovery proposed: unfairly opens the possibility that one state could be

[7] Modified Final Judgment – refers to the order issued by Judge Green in the 1984 AT&T divestiture case that created the seven Regional Bell Operating Companies, who were limited to providing local and intra-LATA services and barred from providing inter-LATA.

responsible for the entire $108 million, constitutes a one issue rate case, fails to use the anticipated $1.1 billion annual merger savings to offset the OSS costs, and discriminates against small carriers in rural states. Small carriers like BayRing would, under Bell Atlantic's recovery design, pay OSS onset costs equal to those paid by a CLEC in a more populous state. Small carriers like BayRing cannot spread OSS payments across a larger market segment. Nor can BayRing, as a carrier serving only one state, spread its payments among many state operations. Therefore, BayRing argues, Bell Atlantic's OSS recovery design will impede the growth of competition in New Hampshire.

According to BayRing, the Bell Atlantic design favors CLEC entry in only the most densely populated areas of the state; it may even deter CLEC entry into New Hampshire at all. A CLEC which is both facilities-based and resale-based, under the proposed design, would pay Bell Atlantic $7,620 per month for five years for access to the DCAS. The resulting $91,440 annual payment for OSS ($457,200 over the five year recovery period) amounts to a true barrier to entry. Using itself as an example, BayRing figures that it would be forced to charge its customers $8.41 per line monthly to cover the OSS onset charges. This charge could effectively close the doors to New

Hampshire for all but the large national carriers, squeezing out small innovative CLECs like BayRing.

BayRing agrees with the concept of transaction charges. However, BayRing recommends that the Commission reject them until Bell Atlantic (1) accounts for its own causation of such costs and (2) accounts for merger savings.

4. OCA - OSS

The OCA argues that the record supports a finding that Bell Atlantic is not entitled to any further recovery of OSS development costs beyond the expensing of $108 million in 1996 and 1997. However, if the Commission determines that those costs may be recovered from consumers, the OCA recommends that recovery occur from Bell Atlantic's customers as well as those of CLECs. The OCA asserts that Bell Atlantic mis-identifies the CLECs as the cost-causers of OSS expenses. The ultimate cost-causer is the American public, the intended beneficiary from the competition created by the TAct. The OCA specifically supports Staff Witness Johnson's direct testimony that the bulk of onset costs are related to TAct-mandated changes to Bell Atlantic's legacy systems for the purpose of fostering competition and transitioning to a multi-carrier environment. Accordingly, the OCA argues that if anyone is to reimburse Bell Atlantic for OSS development expenses, every

telephone user in Bell Atlantic-North's footprint, including Bell Atlantic's customers, should do so.

With regard to the proposed 39 cent per transaction charge, the OCA recommends a reduction to reasonable levels, arguing that the appropriate charge is between 4 and 8 cents per transaction.

The OCA agrees with AT&T that Bell Atlantic's OSS development costs are historic costs, expensed in prior years, and that therefore Bell Atlantic's cost study is not in accord with TELRIC methodology. If Bell Atlantic anticipated recovering these expenses from CLECs it should have accounted for them as an asset under development or construction, rather than expensing them. The OCA argues that by expensing these costs at the time, Bell Atlantic avoided reporting overearnings of $2.45 million. Bell Atlantic's reclassification of these costs now, an action which mismatches revenues and costs, merely demonstrates, in the view of the OCA, Bell Atlantic's desire to erect a barrier to competition.

Another reason the OCA claims Bell Atlantic's OSS costs are not TELRIC compliant is that Bell Atlantic's modification of its legacy OSS systems is neither forward-looking nor efficient. A large part of the legacy OSS has been in service

for 10 to 20 years and is seriously out-dated, according to the OCA. Furthermore, the proposed on-going costs of $3000 per GIG for storage and $20,000-$25,000 per MIPS are drastically overstated, given that such costs have dropped and continue to drop sharply each year as computer science advances. The OCA cites to technical articles submitted with Bell Atlantic's rebuttal testimony as support for reducing the cost per MIPS by 400%. The OCA cites to testimony by Staff Witness Johnson and AT&T Witness Globerson as support for reducing the cost per GIG by 1000%.

According to the OCA, Bell Atlantic's OSS access fails to meet the FCC's requirement that ILECs provide non-discriminatory access to UNEs. The OCA criticizes the quality of access provided by Bell Atlantic using the Graphical User Interface (GUI) as cumbersome to use, relatively slow, and not interactive. The OCA contrasts this with the completely interactive access provided to Bell Atlantic's employees, demonstrating discriminatory treatment. In addition, the OCA notes, all data a CLEC enters into Bell Atlantic's system must also be entered into the CLEC's own in-house system. The OCA concludes that the CLEC is thus required to assume extra labor costs for lower quality access to OSS.

The OCA agrees with AT&T that Bell Atlantic has misidenti-fied the OSS cost causers. The OCA argues that Congress mandates access to OSS and other UNEs for the "general good and welfare of our national society as a whole." Therefore, every telephone user in Bell Atlantic's footprint benefits and every telephone customer, including Bell Atlantic customers, should share in the costs.

The OCA contends that Bell Atlantic ignores the substantial benefits, including profits, that it derives from providing OSS access via the modified OSS system. Using material from the proprietary portion of the record, the OCA concludes that Bell Atlantic, far from being forced to modify the OSS solely for CLECs, had a strong incentive to invest in the modifications in order to realize savings that will maximize profits. Also, estimating that the proposed transaction charge will be applied an average of four times per customer service order, the OCA argues that the charge should be offset against the return Bell Atlantic will achieve for its investment.

Again using data contained in the proprietary record to perform the offsetting calculation, the OCA arrives at a per transaction cost of 4 cents. By another calculation, based on market share, the OCA arrives at a per transaction cost of 8

cents. Therefore, the OCA recommends reducing the transaction charge to a level of no more than four to eight cents per transaction.

5. Staff - OSS

Staff argues that Bell Atlantic's proposed OSS development costs are too high because they do not reflect TELRIC principles and do not reflect merger savings. Therefore, Staff urges the Commission to reject them entirely or reduce them significantly. Staff reaches its conclusion by comparing Bell Atlantic's method for calculating OSS against the FCC's *Local Competition First Report and Order*, in which the FCC defined TELRIC and specified its use for developing access charges. Contrary to the FCC's requirement, Staff claims, Bell Atlantic used actual expenses and capital requirements associated with providing access to its existing legacy OSS. According to Staff, Bell Atlantic's method is an embedded cost approach inconsistent with TELRIC.

Moreover, Staff points out that testimony of Bell Atlantic in a prior docket supports a finding that merger savings will amount to $850 million per year some time after the third year of the Bell Atlantic/NYNEX merger. Therefore, Staff avers that Bell Atlantic's proposed costs should be reduced by some amount to better reflect TELRIC and merger

savings, although Staff does not quantify the merger savings attributable to OSS. Staff claims that although Bell Atlantic has the best access to cost information, Bell Atlantic has not met its burden of proof to quantify the magnitude of the forward-looking costs of OSS development.

With regard to on-going OSS costs, Staff agrees with the OCA that Bell Atlantic's proposal does not demonstrate forward-looking costs by reflecting current computer technology advances. According to Staff, Bell Atlantic relies on large, centralized databases using large mainframes, which is not the most efficient current technology.

6. COMMISSION ANALYSIS - OSS

Efficient OSS pricing is critical to the introduction of effective local competition in New Hampshire. In determining the appropriateness of development costs, we first look to what the TAct requires. The Tact, at §252(d)(1)(A), requires that costs must be determined without reference to any rate-based proceeding and must be non-discriminatory. As interpreted by the FCC and in *Iowa III*, such costs are to be forward-looking and based on long-run incremental costs.[8] In

[8] *In Iowa III,* 219 F.3d at p.752, the Eighth Circuit court concluded that the term cost as used in the statute, is ambiguous, that the FCC was authorized by Congress to make rules that are a reasonable construction of the statute, and that the use of a forward-looking cost methodology was reasonable.

this case, Bell Atlantic estimated the cost of developing OSS based on its actual historic costs. By definition these historic costs are not forward-looking, and Bell Atlantic did not suggest that in the foreseeable future it would be required to incur the same level of costs again, for the same or like systems, in order to serve CLECs and their customers. Aside from the maintenance requirements for the present system (the costs of which are discussed separately), there is no evidence in the record that suggests a need for new OSS investments in order to continue provisioning service to CLECs and their customers in the future. Thus, with respect to the issue of OSS development costs, the record does not indicate that Bell Atlantic will have any such costs, when examined on an incremental, forward-looking basis.

Bell Atlantic has already expensed and recovered the New Hampshire share of the total amount it incurred in the past for OSS development. Nonetheless, Bell Atlantic argues that, as CLECs are the cost causers, they should repay Bell Atlantic. In response to questions from Commissioners Geiger and Ellsworth, Bell Atlantic suggested that any possible double recovery could be avoided by providing some form of credit to its own customers, to offset whatever amount it

receives in repayment from CLECs. Transcript, Track I, Day 2, pp. 119-120.

We are not persuaded by Bell Atlantic's argument. In 1996 and 1997, when Bell Atlantic was incurring the costs of OSS access for a multi-carrier environment, Bell Atlantic served virtually 100% of the local exchange customers in its service territory. Consequently, when Bell Atlantic expensed its OSS costs, it recovered these costs from all of its local customers. Now that competition is slowly taking hold and some Bell Atlantic customers are switching to a CLEC, they should not be charged for OSS development again. In other words, when a CLEC passes its OSS fees on to its former Bell Atlantic customers, such CLEC customers would be paying twice for the benefit of OSS access and effective competition.

Bell Atlantic's suggestion that it would avoid double recovery by crediting its remaining customers would essentially shift a disproportionate share of the burden of OSS development to customers choosing the competitive option. In addition, even though Bell Atlantic would reap no direct profit from the exercise, CLECs would face an unnecessary barrier to entry, which could inhibit the growth of local competition. Even had Bell Atlantic not expensed 100% of its OSS costs, it could be argued that some sharing of competitive

start-up costs would be warranted on account of the benefits Bell Atlantic can enjoy because of the opening of all telecommunications markets to competition under the overall scheme of the TAct.

Having found that Bell Atlantic's OSS development costs have been recovered already, we deny further recovery of those costs since allowing recovery of costs that have already been recovered from the customer base would be the very model of backward-looking regulation.

Bell Atlantic claims total on-going annual costs of approximately $26.6 million to maintain OSS access. Of those costs, $8.1 million is not in dispute here. Bell Atlantic proposes to collect the remaining $18.5 million through transaction charges to CLECs. The $18.5 million, according to Bell Atlantic, is comprised of computer capital costs and maintenance costs. The computer capital costs amount to $11,292,178 and the maintenance costs amount to $7,240,500. Bell Atlantic estimated the maintenance costs at 15 percent of the $48 million in OSS development costs incurred for billing and provisioning. To determine its transaction costs, Bell Atlantic divided each of these amounts by 47,693,385, the number of CLEC transactions anticipated annually.

Respectively, transaction charges of 24 cents and 15 cents resulted: 39 cents in total.

We find that Bell Atlantic is entitled to recover reasonable on-going OSS costs. We further find that although all customers potentially benefit from competition, CLEC customer transactions drive Bell Atlantic's maintenance costs and derive the direct and immediate benefit of OSS usage. Therefore, we agree with one of Bell Atlantic's arguments; *i.e.* that on a forward-looking basis, users of OSS should pay to maintain it. We will approve a transaction charge as the method for recovering on-going OSS costs.

The OCA recommends reducing the overstated costs by reducing Bell Atlantic's proposed per transaction cost of 39 cents, based upon the OCA's interpretation of Bell Atlantic's profits on OSS investments. However, that reasoning does not withstand close scrutiny as several of its assumptions appear flawed.

We considered AT&T's preferred approach, using an allocator and then splitting the result by the number of access lines. This method appears competitively neutral. However, the number of access lines maintained by competitors changes constantly and we are reluctant to utilize such a "snapshot in time" method.

The evidence presented convinces us that Bell Atlantic overestimated the combined projected costs of MIPS and GIGs, and thus overestimated its computer capital costs. We find particularly convincing the documents attached to the OCA brief, initially entered into evidence by Bell Atlantic, and the testimony of Staff Witness Johnson. In sum they support a recognition that technological advances have and will continue to reduce the costs of MIPS and GIGs significantly. Therefore, we find that these costs should be reduced.

Based on our review of the record, especially the above-mentioned industry articles attached to Bell Atlantic Witness Minion's testimony (Ex. 3, Att. 6-8), we will reduce the cost per MIPS and the cost per GIG to one quarter of that claimed, $2,823,044. This reduction represents neither a precise historical amount nor a hypothetical future cost; it is a reasonable projection of forward-looking costs based upon realistic assumptions. To the extent there is any ambiguity in the basis for the reduction of charges to one-quarter of Bell Atlantic's proposal, as we noted above some sharing of costs is appropriate given the opportunities for gain represented by the TAct's scheme of competitive markets.

We accept Bell Atlantic's figure of $7,240,500 annual maintenance costs. For maintenance costs, Bell Atlantic

presented testimony that 15% of the $48 million billing and provisioning development costs (out of the total of $108 million in OSS development costs) is appropriate and usual. Conflicting testimony was presented by AT&T and we note that the NYPSC Commission adopted a 10% figure. We find that neither the 15% figure nor the 10% figure is definitively supported. However, testimony from Staff agrees that 15% is not unreasonable. We therefore will not reduce the 15% figure.

We find, using $7,240,500 in maintenance costs and the revised estimate of $2,823,044 in incremental capital computer costs, the transaction costs for computer capital costs and maintenance costs are 15 cents and 6 cents respectively, or 21 cents per transaction:

$7,240,500/47,693,385 + $2,823,044/47,693,385 =
$10,063,500/47,693,385 =
$0.21/transaction.

B. Non-Recurring Costs

1. Bell Atlantic - Non-Recurring Costs

Bell Atlantic conducted a non-recurring cost (NRC) study (Bell Atlantic NRC Study) to identify the one-time costs of providing UNEs to CLECs. Bell Atlantic plans to provide the

UNEs via a delivery system comprised of six work centers: the Carrier Account Team Center (CATC), the Coordination Bureau (CB), the Recent Change Memory Administration Center (RCMAC), the Mechanized Loop Administration Center (MLAC), the Central Office Frame, and Field Installation. To determine the NRCs, Bell Atlantic identified the work functions it considered would occur in each of these work centers, then multiplied the work time required to accomplish each work function by the appropriate hourly labor rate.

To develop the work time estimates, Bell Atlantic surveyed employees in the work centers that were currently operating. In those instances where the work center was not actually operating, Bell Atlantic consulted its own chosen subject matter experts (SMEs) who provided estimates of the work time required for each work function. In both cases, the respondents were asked to estimate a minimum, a maximum and a most-likely time to complete each work function. From the three estimates provided by each survey respondent, Bell Atlantic computed a mean giving the minimum time estimate a one-sixth weighting, the “most likely” time estimate a four-sixths weighting, and the maximum time estimate a one-sixth weighting. The weighted means were then averaged to obtain a single mean for each work function. Bell Atlantic derived the

cost for interconnecting each UNE by totaling the mean costs of the work functions necessary for that UNE.

Bell Atlantic argues that its NRC Study complies with the TELRIC methodology prescribed by the FCC, citing to ¶685 of the FCC's First Report and Order which requires an ILEC to base its costs on "the most efficient technology deployed in the incumbent LEC's current wire center locations." The reason for using technology deployed in the ILECs' wire center, again according to ¶685, is to permit the cost study to utilize existing, so-called legacy, network design while at the same time basing prices on efficient, new technology that is currently compatible with the existing network design. Bell Atlantic argues that the FCC chose this approach because, as stated further in ¶685, it "most closely represents the incremental costs that incumbents actually expect to incur in making network elements available to new entrants."

Bell Atlantic argues that its NRC Study, being based on the actual costs it expects to incur on a forward-looking basis for the foreseeable future, models copper cables and Main Distribution Frame cross-connections. Bell Atlantic claims that copper cables and Main Distribution Frame cross-connections will be in use for at least 70% of its customers

over the next five years.[9] This is in distinct contrast to AT&T's model. Bell Atlantic argues that AT&T's 100% fiber feeder model assumes universal use of technology that is actually used by only 10% of Bell Atlantic's loop capacity now and that Bell Atlantic projects will be used by only 30% over the next five years.

Bell Atlantic also objects to AT&T's claim that a cost study should include 100% GR-303 Integrated Digital Loop Carrier (IDLC) technology. According to Bell Atlantic, GR-303 is currently under field trial but will require numerous modifications to OSS design and engineering before it is viable in a competitive UNE environment. Bell Atlantic does not anticipate that GR-303 will be deployed in the reasonably foreseeable future.

According to Bell Atlantic, in addition to 100% GR-303 IDLC, AT&T makes other unreasonable assumptions in performing its NRC study. For instance, AT&T assumes Local Digital Switches, Digital Cross-connect Systems, Synchronous Optical Network (SONET) rings for transport, and a low profile, punch-down block Main Distribution Frame for terminating copper loops in the CO. These assumptions lead AT&T to other erroneous assumptions, in Bell Atlantic's view, specifically,

[9] Time references in this order are taken from briefs filed in February 1999. Five years in this context would be 1999-2004.

(1) a significantly higher flow-through percentage than Bell Atlantic's study assumes: 98% as opposed to 85%, (2) no incremental cost to perform cross connections, (3) the elimination of the Coordination Bureau, and (4) a large and unrealistic reduction in work times.

Bell Atlantic, again refuting AT&T's claims, argues that the activities associated with installing and removing CO wiring are far more complex than the physical connection of wires. For instance, in order to provision both new and hot-cut links Bell Atlantic must receive the request, visit each location on the frame, and check for CLEC dial tone and cable availability. For hot-cut provisioning, many additional activities are required, entailing critical functions performed by the Coordination Bureau. Bell Atlantic argues that Staff's request for Bell Atlantic to increase the number of employees devoted to serving wholesale customers testifies to the importance of the Coordination Bureau.

With regard to cross-wiring, Bell Atlantic argues against AT&T's contention that no manual intervention is necessary following the initial construction. Bell Atlantic agrees that the use of 100% Dedicated Outside Plant would avoid the incremental cost for manual disconnect and reconnect intervention necessary as a result of "left in" cross-

connects. However Bell Atlantic asserts that 100% Dedicated Outside Plant is poor network design. The better network design, based on Bell Atlantic's experience, provides more distribution pairs than feeder pairs, avoiding the expense of dedicated feeder all the way back to the wire center. Thus, as Bell Atlantic explains it, loop feeder facilities are constructed prior to customer demand, while disconnection and reconnection of "left in" cross-connects and spare feeder occurs as demand shifts. This, according to Bell Atlantic, represents efficient use, is the proper modeling for NRCs, and is reflected in Bell Atlantic's NRC study by its treatment on an "as needed" basis.

Finally, Bell Atlantic argues against Staff's assertion that its estimated work times are subject to inaccuracy and bias. Bell Atlantic claims that its instructions to respondents and its verification process protected against bias.

2. AT&T - Non-Recurring Costs

AT&T recommends that the Commission use the AT&T NRC Model, which it claims has none of the defects of Bell Atlantic's NRC study. According to AT&T, its model is forward-looking, based on the least-cost, most efficient technology available for deployment. The AT&T model reflects

the increased efficiency and flow-through rates of those efficient technologies. AT&T asserts that, compliant with TELRIC principles, its model assumes a network using advanced OSS, 100% fiber feeder, and GR-303 technology. GR-303 is digital loop carrier technology optimized for Integrated Services Digital Network (ISDN) services and permits additional electronic provisioning capability at remote terminals. AT&T's model thus maximizes electronic provisioning and minimizes manual activities at every possible juncture.

AT&T avers that its model relies on reasonable work time estimates based on a bottom-up approach of identifying individual tasks within each of some 200 functions. In contrast to the Bell Atlantic cost study, AT&T claims, its model is completely open, logical in organization, and user-friendly.

AT&T attacks the Bell Atlantic NRC Study as the antithesis of the AT&T NRC Model. Paramount among the flaws of the Bell Atlantic study, according to AT&T, is its failure to model the provisioning of combinations of UNEs absent mandatory collocation, in direct contradiction of the Supreme

Court's decision in *Iowa II*.[10] AT&T states that Bell Atlantic seeks to charge CLECs for physically disassembling the requested combinations of UNEs, and for then physically reassembling them through a collocation facility purchased and installed at CLEC expense. AT&T argues that, by removing the need to reflect activities regarding central office wiring, coordination of activities by the Coordination Bureau, and assignment of new physical facilities by the MLAC, the Supreme Court's decision in *Iowa II* makes 98.5% of Bell Atlantic's non-recurring costs for hot-cuts avoidable.

AT&T argues that Bell Atlantic's study contains other fatal flaws. Bell Atlantic's study does not properly specify the work functions that must be performed when a CLEC asks for a UNE because Bell Atlantic assumes the use of embedded network technology and ignores time-saving technologies that should be incorporated in a forward-looking study pursuant to TELRIC principles. AT&T insists that non-recurring charges, to be TELRIC-based, must assume the most efficient technology whether or not such systems have actually been deployed by Bell Atlantic at this time. According to AT&T, Bell Atlantic's failure to make this basic assumption regarding

[10] In post-briefing submissions, AT&T also cites to the *Local Competition Third Report and Order* in support of requiring Bell Atlantic to provision UNE combinations.

efficient technology usage leads to Bell Atlantic's use of the 15% fall-out rate. AT&T argues that fall-out is generally caused by preventable errors and that, if OSS and associated databases are properly operated and maintained, the fall-out rate should not exceed 2%.

AT&T further argues that Bell Atlantic improperly models the embedded mix of copper and fiber feeder in its NRC study. By assuming a higher percentage of copper, AT&T states, Bell Atlantic imposes additional costs for unnecessary manual interventions. According to AT&T, Bell Atlantic should use the same mix of fiber and copper used in the Staff model, which Bell Atlantic adopted for the recurring costs Stipulation.

AT&T also argues that Bell Atlantic improperly includes disconnect fees as part of non-recurring costs for provisioning UNEs. So long as a particular CLEC continues to lease UNEs from Bell Atlantic, the CLEC will not be disconnected no matter how many end-user customers succeed one another at a service location. Therefore, no disconnect charges can be assumed; the industry practice of charging retail customers for disconnection costs within connection fees cannot be transported to the UNE market.

Finally, AT&T argues that Bell Atlantic failed to prove its work time estimates are credible. AT&T charges that Bell Atlantic's estimates emanate in part from a biased and statistically unreliable survey. Furthermore, the results of the survey were then incorrectly weighted. AT&T advises the Commission to learn from the NYPSC's findings that Bell Atlantic's work time estimates are unacceptable and to adopt the AT&T NRC Model. AT&T's NRC Model produces a non-recurring cost of $5.17 for providing an unbundled loop, as shown on Exhibit 33. AT&T arrives at that figure by listing all the steps AT&T identifies as necessary, applying Bell Atlantic labor rates, and applying a probability factor and an overhead factor for each step. AT&T's $5.17 cost figure compares with Bell Atlantic's non-recurring cost figure of $124.89.

3. BayRing - Non-Recurring Costs

BayRing supports AT&T's NRC Model, arguing that Bell Atlantic's NRC study is virtually identical to the one it filed in New York that was subsequently rejected by the NYPSC in its Opinion 97-19, issued December 22, 1997 (*Phase 2 Decision*).[11] The Task Oriented Costing (TOC) method used by Bell Atlantic was rejected in New York and has now been

[11] Public Service Commission of NY Opinion and Order in Phase 2, Order No. 97-19, WL 839976, NYPSC (Docket Nos. 95-C-0657, 94-C-0095, and 91-C-1174) (Dec. 22, 1997).

abandoned by Bell Atlantic there, according to BayRing. BayRing agrees with Staff and AT&T that Bell Atlantic's study is flawed in multiple ways and argues that AT&T's model is TELRIC-compliant. If the Commission chooses to adopt the Bell Atlantic model, BayRing urges that it require Bell Atlantic to discount the outcomes substantially, using the approach recommended by Staff.

4. OCA - Non-Recurring Costs

The OCA agrees with BayRing that Bell Atlantic's TOC studies are unreliable and contain the same flaws identified by the NYPSC's *Phase 2 Decision*. The NYPSC's *Phase 2 Decision* uses the structure of the Bell Atlantic Model but substitutes, wherever a range of costs is available, the lowest possible figure. The NYPSC *Phase 2 Decision* also adjusts downward the work times used for Bell Atlantic's calculations, to approximately 16% of the company's estimates for Central Office work times and to about 57% for all other work times the company estimated.

As Attachment 10 to its brief, the OCA presented a comparison worksheet for new and hot-cut Analog Loops and new and hot-cut Digital Loops. Attachment 10 displays four costs: those produced by the Bell Atlantic NRC Model, by the Johnson Associates Telecom Model, by the NYPSC's *Phase 2 Decision*, and

by averaging the Bell Atlantic-South costs determined by state commissions in New Jersey, Delaware, Washington D.C., Virginia, West Virginia, and Pennsylvania.

Concluding that both the NYPSC cost methodology and the Telecom Model recommended by Staff produce a more reasonable measurement of Bell Atlantic's forward-looking costs than the Bell Atlantic cost model, the OCA recommends that the Commission adopt the NYPSC *Decision* regarding New York Telephone's study with two specific modifications. The OCA's proposed modifications to the NYPSC method would (1) remove the charges associated with the "Manual Surcharge," and (2) reduce the costs of provisioning multiple lines. The Manual Surcharge should be removed, the OCA argues, as a matter of fundamental fairness. No CLEC could ever obtain service on a completely flow-through basis, according to the OCA. Therefore, Bell Atlantic, which can obtain automatic provisioning and is thus exempt from any Manual Surcharge, necessarily experiences a competitive advantage. Stated differently, the OCA claims that the Manual Surcharge is a discriminatory charge applied only to CLECs.

According to the OCA, reducing the costs of provisioning multiple lines, its second proposed modification to the NYPSC decision, will accurately reflect the efficiencies Bell

Atlantic experiences when handling the assignment and provisioning of multiple loops in a single service order. The OCA argues that these efficiencies were recognized by Bell Atlantic-South when costs per line were reduced by more than 56%, as demonstrated by Attachment 10. Accordingly, the OCA recommends that costs related to provisioning multiple lines in a single order should be reduced by cutting the installation, Coordination Bureau, RCMAC, and MLAC costs by at least 50%.

5. Staff - Non-Recurring Costs

Staff argues that Bell Atlantic's NRC Study overstates the estimate of non-recurring costs. Staff criticizes Bell Atlantic's work time estimates, arguing that they rely too heavily on the subjective opinion of a small sample of employees (five or fewer), and are subject to upward bias because of inexact instructions and failure to account for the unfamiliarity of the studied activities. Furthermore, the estimates reflect inefficient methods of operation. Bell Atlantic itself, Staff points out, testified that it was unable to perform any statistical analysis of its data and that its validation studies were in the nature of "eyeballing" the results.

To buttress its conclusions, Staff points to the non-recurring costs proposed in Bell Atlantic-South states, offered as Proprietary Exhibit 35. As a general pattern, Staff asserts, the costs in Bell Atlantic-South states are substantially lower than those proposed by Bell Atlantic in this case. For a basic loop, for instance, Bell Atlantic proposes rates in New Hampshire that are 48% to 212% higher than rates in Bell Atlantic-South. Staff argues that the work estimates in Bell Atlantic's study cannot be corrected by analogizing to current Bell Atlantic functions.

Staff does not support the AT&T NRC model, arguing that AT&T's work time estimates are no more reliable than Bell Atlantic's but are not as verifiable or susceptible to correction. Staff also argues that the AT&T NRC Model projects a network that is too unrealistically "high tech" to be a credible source for costs, assuming as it does 100% fiber, 100% staffed Central Offices, and a 98% flow-through rate. Staff points to the extreme differences between the AT&T and Bell Atlantic cost models' cost for an unbundled loop, Exhibit 33, as an indication of the parties' extreme positions: $5.17 versus $124.89.

Staff concludes that the Commission should use Bell Atlantic's NRC study, but should adjust the work time

estimates provided by survey respondents and those provided by the subject matter experts (SMEs). Staff recommends adjusting the survey estimates by giving 85% weight to the minimum estimates, 10% weight to the so-called most-likely estimates, and 5% to the maximum estimates, arguing that the 85-10-5 approach to weighting mitigates the bias it ascribes to Bell Atlantic's survey and produces the highest reasonable and rational approach. In further support of this approach, Staff argues that the NYPSC *Phase 2 Decision* urged by the OCA and BayRing adopted an even greater downward weighting of 100-0-0 but that the 85-10-5 weighting more properly accounts for outliers.

Staff further recommends adjusting Bell Atlantic's SME time estimates by 50% in order to account for built-in bias. Finally, Staff recommends reducing the Coordination Bureau work time estimates by 50% to account for a steadily diminishing need for the bureau's intervention as competition progresses and all carriers become more familiar with the process of UNE provisioning.

6. COMMISSION ANALYSIS - NON-RECURRING COSTS

We first address AT&T's contention that Bell Atlantic's NRC study must be rejected *in toto* because it presents costs for individual UNEs rather than combinations of UNEs. As a

result of *Iowa II*, Bell Atlantic is precluded from insisting upon providing UNEs one by one to CLECs when the UNEs are already combined. However, in all probability, CLECs will utilize UNEs in varying degrees of combination. We therefore decide that non-recurring costs should be established in an SGAT for all tasks individually, and for those provided in combination as well. Accordingly, we do not reject Bell Atlantic's NRC Study on this basis.

While *Iowa II* and *Iowa III* brought clarity to a number of important issues, they did not resolve all the ambiguities that reside in the complex and dynamic field of interconnection pricing. That is demonstrated by the fact that on January 22, 2001, the Supreme Court granted *certiorari* for review of portions of *Iowa III*. We consider Bell Atlantic's, AT&T's, and Staff's cost studies, each in light of the TAct and the body of case law surrounding the TAct.

In support of their respective cost studies, the parties and Staff direct our attention to ¶685 of the FCC's *Local Competition First Report and Order*, which describes the FCC's preferred approach to costing interconnection and access to UNEs. As stated in ¶685:

> "...prices for interconnection and access to unbundled elements would be developed from a forward-looking economic cost methodology based on the most efficient

> technology deployed in the incumbent LEC's current wire center locations. This approach mitigates incumbent LECs' concerns that a forward-looking pricing methodology ignores existing network design, while basing prices on efficient, new technology that is compatible with the existing infrastructure. This benchmark of forward-looking cost and existing network design most closely represents the incremental costs that incumbents actually expect to incur in making network elements available to new entrants. Moreover, this approach encourages facilities-based competition to the extent that new entrants, by designing more efficient network configurations, are able to provide the service at a lower cost than the incumbent LEC. We, therefore, conclude that the forward-looking pricing methodology for interconnection and unbundled network elements should be based on costs that assume that wire centers will be placed at the incumbent LEC's current wire center locations, but that the reconstructed local network will employ the most efficient technology for reasonably foreseeable capacity requirements."

The Parties and Staff argued vigorously for different interpretations of this paragraph. Bell Atlantic cited it in support of its belief that the FCC intended costs to reflect those actually incurred by ILECs. AT&T cited it in support of its belief that the FCC intended costs to reflect the most efficient technology possible.

We find that the paragraph is susceptible to different interpretations. Accordingly, were it not for the Eighth Circuit's order in *Iowa III* we could look only to the goal expressed in §252(d)(1) of the TAct for direction. However, the Eighth Circuit specifically rejects ¶685 as contrary to

the plain language of the TAct. *Iowa III,* 219 F.3d at 750. According to the Eighth Circuit:

> "The reality is that Congress knew it was requiring the existing ILECs to share their existing facilities and equipment with new competitors as one of its chosen methods to bring competition to local telephone service, and it expressly said that the ILECs' costs of providing those facilities and that equipment were to be recoverable by just and reasonable rates. Congress did not expect a new competitor to pay rates for a 'reconstructed local network.'" *Id*. (emphasis in original)

Consequently the Eighth Circuit determined that competitors must pay for the cost to the ILEC of providing its existing facilities and equipment either through interconnection or by furnishing the specifically requested existing network elements. The Eighth Circuit firmly opined that Congress did not intend to compensate the ILECs for "some state of the art presently available technology ideally configured but neither deployed by the ILEC nor to be used by the competitor." *Id*. at 751.

Thus, *Iowa III* clearly rejects the "hypothetical network" interpretation of TELRIC, which is that espoused by AT&T. However, *Iowa III* just as clearly supports a forward-looking cost approach, directing that "...costs can be calculated to reflect what it will cost the ILEC in the future to furnish those portions or capacities of facilities that the competitor will use." *Id*. It also supports an incremental costing

approach, meaning the incremental cost to the ILEC of carrying the extra burden of the competitor's traffic. *Id.* Hence, it would seem that the TELRIC methodology is not rejected outright, only the FCC's use within that methodology of what the Eighth Circuit terms a hypothetical network. The Eighth Circuit stated that forward-looking costs have been recognized as promoting a competitive environment, one of the goals of the TAct, and concluded that "...a forward-looking cost calculation methodology that is based on the incremental costs that an ILEC actually incurs or will incur in providing the interconnection to its network or the unbundled access to its specific network elements requested by a competitor will produce rates that comply with the statutory requirement of §252(d)(1) that an ILEC recover its 'cost' of providing the shared items." *Id. at 751.* Further, *Iowa III* firmly rejected historical costs as the "costs" intended by §252(d)(1). *Id.* at 752.

With the reasoning of the *Iowa III* in mind, we are convinced by Staff and Bell Atlantic arguments regarding the interpretation of ¶685 that AT&T's figures unrealistically reflect a network technology that is not yet possible. At the same time, we are convinced that Bell Atlantic's NRC figures are too high because its survey samples are very small and

subject to upward bias. We therefore consider an approach to NRC costing that takes advantage of the somewhat more realistic Bell Atlantic approach, adjusted in a number of ways to remove the upward bias and dependence on historic costs for technology.

The NYPSC utilized such an approach to adjust Bell Atlantic's work-time figures in the 1997 order cited by Staff, the OCA, BayRing, and AT&T. The NYPSC accepted Bell Atlantic's survey method but adjusted the time estimates; the NYPSC used only the minimum time estimates produced and eliminated both the average and maximum estimates, thus giving a weighting of 100-0-0. The NYPSC's adjustment resulted in a 57% reduction of Bell Atlantic's survey estimates. The NYPSC then extended the 57% reduction of Bell Atlantic's survey results by reducing the non-survey, SME estimates by an equal 57%.

While we understand the approach taken by the NYPSC to the survey results, we believe the method proposed by Staff provides a more balanced approach, giving some weight to the average and the maximum time estimates when calculating costs. We will adopt Staff's recommendation to subject Bell Atlantic's survey time estimates to a weighting of 85-10-5. We will require Bell Atlantic to determine the reduction on a

percentage basis. We are satisfied that this weighting will produce reasonable results. We will order this same percentage reduction to the non-survey SME numbers and, similarly, to the time estimates associated with the Coordination Bureau, pursuant to Staff's recommendation.

In order to ensure a forward-looking cost model that takes into account the existing and reasonably foreseeable state of technology, we will change several of the network assumptions made by Bell Atlantic:

(a) Central Office Use of GR 303 - In its Brief filed on February 10, 1999, Bell Atlantic argued that its TR-008 systems represent the most forward-looking DLC technology currently in place. Accordingly, Bell Atlantic concluded that TR-008 technology comports with the FCC's TELRIC methodology. On the other hand, AT&T argued that 100% GR-303 IDLC should be the technology modeled in a TELRIC study. More specifically, AT&T argues that GR-303 eliminates the need for cross connects at the feeder distribution interface, is the most forward-looking technology, and should be used in the cost model whether or not it is currently "available." *Iowa III* makes clear that AT&T's argument is untenable. In addition, in our own analysis of the *Local Competition First Report and Order*, we note that in ¶683 the FCC itself rejected any purely

hypothetical network because it could discourage competitors from building facilities for the following reason: new entrants would be able to use the ILEC's existing network at the lower, hypothetical least-cost, most efficient network prices.[12]

Based on the record, we find that GR-303 has not been deployed in the New Hampshire network nor proven to work in a multi-carrier environment. Therefore, we find that GR-303 IDLC should not be included as a portion of the technology in a TELRIC NRC model.

Bell Atlantic indicates that currently 10 percent of its loop capacity is designed using TR-008 IDLC technology. Bell Atlantic projects a 30% use of TR-008 IDLC technology within the next five years. In a forward-looking cost model, we find

[12] ¶683 reads: "Forward-looking cost methodologies, like TELRIC, are intended to consider the costs that a carrier would incur in the future. Thus, a question arises whether costs should be computed based on the least-cost, most efficient network configuration and technology currently available, or whether forward-looking cost should be computed based on incumbent LECs' existing network infrastructures, taking into account changes in depreciation and inflation. The record indicates three general approaches to this issue. Under the first approach, the forward-looking economic cost for interconnection and unbundled elements would be based on the most efficient network architecture, sizing, technology, and operating decisions that are operationally feasible and currently available to the industry. Prices based on the least-cost, most efficient network design and technology replicate conditions in a highly competitive marketplace by not basing prices on existing network design and investments unless they represent the least-cost systems available for purchase. This approach, however, may discourage facilities-based competition by new entrants because new entrants can use the incumbent LEC's existing network based on the cost of a hypothetical least-cost, most efficient network."

it reasonable to assume that Bell Atlantic will continue to deploy TR-008 IDLC in the growth of its loop capacity. We therefore find it reasonable to assume 50% use of TR-008 IDLC in a forward looking model.

(b) Copper/Fiber Feeder Mix - AT&T argues that the NRC model should assume 100 percent fiber feeder, in conjunction with GR-303 IDLC. Additionally, AT&T points out that Bell Atlantic recommends inconsistent assumptions on how much fiber is used in feeder plant in the non-recurring and recurring cost models, the effect of which is to create higher non-recurring charges. Bell Atlantic avers that since only 20 percent of its existing loop plant is currently served by fiber feeder, the NRC model should assume 100 percent copper feeder. The stipulated recurring cost model assumes that fiber feeder is placed in loops that are greater than 15,000 feet long while copper feeder is placed in loops that are less than 15,000 feet long.

We agree with AT&T that this assumption should be consistent. However, as discussed in the recurring costs section below, we believe the copper/fiber breakpoint is more appropriately established at 12,000 feet. There is no evidence in the record that quantifies the percentage of fiber feeder that would exist if one assumes loops greater than

12,000 feet are fed by fiber. We will require, accordingly, that such a percentage be calculated and used as an assumption in the non-recurring cost model.

c) Manual Cross Connects - We agree with Bell Atlantic that manual cross connections are necessary in modeling a network and should be accounted for in non-recurring, rather than recurring, costs. Requiring 100% dedicated line in order to avoid such manual cross-connections would be irrational and inefficient. That consideration outweighs AT&T's argument that the CLEC may bear a larger share of the Field Installation charge than ultimately proves necessary over time. Placing a cross-wire at the feeder distribution interface is the logical business decision and allows use of less feeder cable from the CO. We will therefore approve Bell Atlantic's use of manual cross connections in the model.

(d) Disconnect Fees, Manual Surcharges, Multiple Loop Installation - We will also adjust Bell Atlantic's model to disallow Bell Atlantic's up-front charge for future disconnect costs. This charge is inappropriate in the context of provisioning a CLEC. Unlike the retail customer from whom a disconnect fee may be difficult to collect, CLECs will not disappear simply because a particular customer ceases subscribing to its services. We agree with AT&T that CLECs

remain in a business relationship with Bell Atlantic even after a CLEC customer terminates service. Bell Atlantic should collect the disconnect fee at the time it actually incurs the cost and not before.

We will not follow the OCA's recommendation to remove all manual surcharges. These charges apply at the CLEC's discretion, as long as there are no barriers to using the Direct Customer Access System (DCAS). Therefore, the CLEC controls whether or not the charges apply; they are not *per se* unfair. Nor will we follow the OCA's recommendation to reduce charges further when multiple loops are provisioned simultaneously. Our decision to utilize the weighting of work times proposed by Staff already accounts for the efficiencies Bell Atlantic achieves when provisioning multiple loops.

(e) UNE Combinations - AT&T claims that an NRC study must be based on UNE combinations, obviating the need for incurring many expenses. In *Iowa II*, the Supreme Court reinstated the FCC's rule 47 C.F.R. §315(b), which prohibits an ILEC from separating UNEs that are already combined before leasing them to CLECs. As an example, the FCC found that:

> [T]o the extent an unbundled loop is in fact connected to unbundled dedicated transport, the statute and our rule 51.31(b)require the incumbent to provide such elements to requesting carriers in combined form. *Local Competition Third Report and Order* at ¶480.

Hence, Bell Atlantic must refrain from separating requested network elements that are already combined and must provide for our review of SGAT tariffs and costing support for those combined elements. We determined above that identifying the costs of separate UNEs in an SGAT is appropriate; we now determine that Bell Atlantic prepare and file revised SGAT tariffs for the provision of currently combined UNEs using the cost methodology decided in this order.

On August 4, 2000, Bell Atlantic did file a revised SGAT to take into account the Supreme Court's rulings, including requirements for additional UNEs and line-sharing services pursuant to the FCC's orders in the *Local Competition* docket, CC Docket No. 96-98 and the *Advanced Services* docket, CC Docket No. 98-147. Ideally, the instant docket would continue until all UNEs needed by CLECs are available with prices supported by accurate and approved costs. However, we are concerned about the length of time for which this docket has been pending. We believe that the development of local exchange competition in New Hampshire will best be served by completing this Order and requiring Bell Atlantic (now Verizon) to file a compliance tariff for the original list of UNEs. We will open a docket to review the cost support for the additional UNEs and UNE combinations required by the

Supreme Court, with participation of the parties to this docket, for which Verizon shall file new tariffs in compliance with this Order.

The Supreme Court did not address the FCC rules requiring ILECs to combine elements not currently combined in the ILEC's network, 47 C.F.R. §315 (c)-(f). In *Iowa III* when the Eighth Circuit revisited its decision pursuant to Supreme Court direction, it re-affirmed its decision to vacate §§ 315(c)-(f). The Eighth Circuit declared that its rationale in vacating §315(b) concerned who is required to combine elements, not whether the elements can be combined at all. *Id.* at p.24. Pursuant to the Eighth Circuit interpretation of §251(c)(3), Bell Atlantic is not required to combine unbundled network elements that are not already combined; that task belongs to the requesting carriers. The Eighth Circuit's conclusion that §§315(c)-(f) violate the plain meaning of the statute stems from the words of §251(c)(3), which states, in part, "An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunication services." (Emphasis added.) In light of the Eighth Circuit reaffirmation and the fact that the Supreme

Court did not address the issue, we will not require the combination of UNEs that are not already combined.

The mandate of the TAct as it applies to this docket is easily stated as a requirement to produce forward-looking long-run incremental costs. It is not as easily translated into concrete terms. For non-recurring costs in this section, we have taken advantage of the best data available and applied rational adjustments to produce forward-looking costs based on the incremental costs that Bell Atlantic will incur in providing interconnection. This approach meets the requirements of §252(d).

C. Recurring Costs

1. Bell Atlantic - Recurring Costs

(a) Overview

Bell Atlantic and Staff reached a negotiated agreement (the Stipulation) as to what cost study to use to determine the recurring costs of interconnection. The Stipulation actually calls for using two cost models. For determining the charges for unbundled network loops, including network interface devices, the Stipulation uses the Telecom Model proffered by Ben Johnson Associates on behalf of Staff, subject to certain cost input modifications. For determining the port and usage charges for end office and tandem

switching, the Stipulation uses Bell Atlantic's Switching Cost Information System (SCIS), subject to certain cost input modifications. The Stipulation adds a common cost factor of 15% to both the SCIS and Telecom Model results, thus reducing the amount of joint and common costs contained in Bell Atlantic's original filing by half.

Under the terms of the Stipulation, the recurring rate for a 4-wire analog loop cannot exceed twice the Telecom Model's recurring rate for a 2-wire analog loop. Furthermore, Bell Atlantic must make available to requesting competitive carriers 4-wire HDSL-compatible, 2-wire HDSL-compatible and 2-wire ADSL-compatible unbundled local loops, at a date no later than that on which Bell Atlantic makes such loops commercially available to any customer or carrier in New Hampshire or, alternatively, no later than the date Bell Atlantic places HDSL or ADSL services into use in its own network. At that time, per the Stipulation, Bell Atlantic will file for approval by the Commission a cost study establishing the cost of providing those unbundled HDSL and ADSL-compatible loops.[13] The Stipulation requires Bell Atlantic to keep the Commission informed of the status of implementing HDSL and ADSL services.

[13] Bell Atlantic (now Verizon) apparently now has ADSL-compatible loops which are available now to CLECs but has not filed the relevant cost study. We will order the filing made.

Pursuant to the Stipulation, recurring costs for interoffice trunking facilities shall be determined using Bell Atlantic's SCIS, revised to reflect a utilization factor of 65% and common costs of 15%. With the exception of collocation charges, Bell Atlantic and Staff agreed that recurring charges for other elements not specifically referenced in the Stipulation should be those proposed in Bell Atlantic's originally filed cost study in this proceeding.

Bell Atlantic argues that the record demonstrates that the recurring costs set out in the Stipulation are reasonable, cost-based recurring costs which should be approved by the Commission. According to Bell Atlantic, AT&T's objections to the switching cost and loop cost provisions of the Stipulation are not supported by the record or by TELRIC principles. The Stipulation achieves the primary goal of an SGAT pricing construct, that of facilitating competition and insuring that Bell Atlantic itself can recover the costs it incurs in providing network elements, producing forward-looking and TELRIC compliant prices.

According to Bell Atlantic, the TELRIC standard requires the use of the most efficient technology deployed in the ILEC's current wire center locations in order to closely represent incremental costs that ILECs actually expect to

incur. Whether the stipulated costs are higher or lower than historic embedded costs is not a litmus test of whether they are TELRIC compliant, Bell Atlantic avers, citing ¶705 of the *Local Competition First Report and Order*. In that paragraph, the FCC

> ". . .decline[d] to adopt embedded costs as the appropriate basis of setting prices for interconnection and access to unbundled elements. Rather, [it] reiterate[d] that the prices for the interconnection and network elements critical to the development of a competitive local exchange should be based on the pro-competition, forward-looking, economic costs of those elements, which may be higher or lower than historical embedded costs...."

Bell Atlantic also asserts, in concert with Staff Witness Johnson, that TELRIC is not a synonym for lowest cost. Citing ¶685 of the *Local Competition First Report and Order* in further support of this argument, Bell Atlantic stresses that the most reasonable costs are those that incumbents actually expect to incur. What is critical for TELRIC compliance, according to both Bell Atlantic and Staff, is that costs must be actually achievable. Bell Atlantic agrees that technical innovations have lowered some costs of telecommunications services, but argues that labor, materials, and construction costs, inflation and some one-time costs are factors which may cause some costs to increase over time.

The proper way to develop recurring costs for UNEs, according to Bell Atlantic, is to first engineer and construct the unbundled element components using efficient, currently available and deployed technology. 47 C.F.R. §51.505(b)(1). The components must be consistent with the most efficient current practices used for most growth and replacement projects, that is, sized to meet current demand and growth for 10 years ahead. Recurring per-unit costs should then be derived by dividing the total cost by a reasonable projection of the actual total usage of the element. The per-unit investment costs can then be converted to annual costs.

Annual capital costs (depreciation, return on investment and income taxes) were agreed on by Staff and Bell Atlantic prior to the filing of testimony on recurring costs. The agreed upon capital costs have not been challenged in this docket.

(b) Loop Costs

Bell Atlantic defers to Staff's explanation and support for the Telecom-Model-derived loop costs portion of the Stipulation, that is detailed in Section III.C.5 below. Bell Atlantic draws the Commission's attention to the fact that Staff supported the Telecom Model as superior to AT&T's HAI

Model Release 5.0a (HAI 5.0a) even before entering the Stipulation.

(c) Switching Costs

After significant modifications to the cost inputs to the SCIS, the Stipulation results in a proposed total recurring cost of $325 per line (for switch investment) for all local switching network element features that are currently available in the switch generics. This result is significantly lower than the $684 Bell Atlantic originally filed, and is reasonable, according to Bell Atlantic. The cost components were reduced from Bell Atlantic's original filing by applying the discounts available for new and growth switches respectively, assuming a weighting of 80% to 20% new to growth switches. Right-to-use fees (RTUs) were reduced from approximately $54 million to $30 million.

Bell Atlantic argues that a cost study must always take into account historical references in projecting long-run forward-looking costs. Any further reduction of the switching costs, such as those based on AT&T's insistence on the use of historical switching data, is unreasonable and unjustifiable. According to Bell Atlantic, AT&T's support of the use of historical data here, when it has objected to any such use at every other instance in this docket, is illogical and a

demonstration of AT&T's mere self-interest rather than principled analysis.

Bell Atlantic challenges the validity of AT&T's other objections to the Stipulation's switching costs. Reference to the Gabel Study (Exhibit 75) is unsuitable for New Hampshire, Bell Atlantic argues, because New Hampshire switches are smaller and higher cost and the Gabel study excluded certain costs relevant to New Hampshire. AT&T's evidence of recent dial-with-dial conversions in New Hampshire (Exhibit 76) did not include power plant and main distribution frame upgrades and replacements, and did not include building costs. Moreover, Exhibit 76, as correctly adjusted during the hearing, provided confirmation that in fact the switch investment costs are within the zone of reasonableness.

Bell Atlantic avers that Staff Witness Johnson's Direct Testimony, on which AT&T relied for support, did not include all costs associated with switching. Furthermore, the Stipulation's 80-20 weighted discount easily withstands the AT&T criticism because the AT&T witness also testified she did not understand how it was used. The same witness criticized the switch installation factor of 1.5 but could not provide evidence that Bell Atlantic's installation technicians are inefficient; to the contrary, she asserted that Bell

Atlantic's switching installation is reasonably efficient and cost-effective.

In addition to the above points, Bell Atlantic directs the Commission's attention to AT&T's admissions that the SCIS model can be used to produce forward-looking switch costs and that inputs should reflect forward-looking prices that Bell Atlantic can expect to incur. Further, Bell Atlantic raises a number of other points questioning the expertise of AT&T's switching witness.

2. AT&T - Recurring Costs

(a) Loop Costs

AT&T claims that the recurring loop costs resulting from the Stipulation are incorrect, too high on a state-wide average basis, and higher than the state-wide average costs Bell Atlantic requested for in its original filing. The stipulated loop costs are driven too high, according to AT&T, by the flawed Telecom Model. In AT&T's view, the Telecom Model designs an inefficient outside plant layout containing more feeder than is necessary and assumes the use of outmoded and expensive equipment. AT&T claims that adopting the stipulated loop costs will provide Bell Atlantic with an unjustified windfall.

According to AT&T, the Telecom Model creates a model which is not least-cost by (1) failing to utilize a pine tree design and (2) failing to cluster customers correctly. The result of these failings is to require more feeder cable[14] and more electronics than necessary, thus inflating costs. AT&T also objects to the Telecom Model's estimate of the overall distribution cable[15] needed, arguing that the estimating algorithm is unexplained.

AT&T claims that many of the loop inputs to the Telecom Model are inefficient and undocumented. For example, the Telecom Model places the copper-fiber breakpoint for feeder at 15,000 feet because the model assumes the use of Universal Digital Loop Carrier (UDLC). AT&T argues that a 12,000 foot copper-fiber breakpoint is less costly and is achieved by assuming the use of Integrated Digital Loop Carrier (IDLC), a more advanced technology. IDLC removes the need for electronics to convert digital to analog signal at the CO. By failing to use the least cost technology at every point in the design, AT&T claims, the Telecom Model violates a basic TELRIC principle.

---

[14] Feeder cable is the portion of the outside plant cable that runs from switches at a CO to a distribution area interface.

[15] Distribution cable is the portion of the outside plant cable that runs from the interface to the customer location.

The Telecom Model also violates TELRIC, AT&T claims, by assuming 50% sharing of aerial structures between Bell Atlantic and other entities. The percentage of sharing is understated, according to AT&T, and should be changed to 33% or 25% Bell Atlantic use, to reflect the actual amount of sharing with other entities occurring. These examples demonstrate what AT&T argues is a general lack of backup documentation for the Telecom Model inputs.

(b) Switch

AT&T argues that the $325 switch investment utilized in the Bell Atlantic-Staff Stipulation is excessive, as shown by the fact that other ILECs have actually obtained uninstalled switch prices of $68 to $140. Furthermore, AT&T points to the Gabel Study's showing of a per-line switch investment cost of around $120 to $130 (Exhibit 75).

AT&T objects to the Stipulation's application of a weighted price discount within the SCIS to arrive at the switch price. The SCIS, according to AT&T, can only estimate the costs of placing a new switch and, therefore, introducing the growth switch discount is inappropriate. Only the new switch price discount should be used in the model, according to AT&T.

In addition to starting with an excessive amount for switch investment, the Stipulation incorrectly applies an exorbitant installation factor. According to AT&T, Bell Atlantic's installation factor of 52.11% reflects embedded costs more than twice those of Bell Atlantic South. The Stipulation also

(1) includes Bell Atlantic's right-to-use fees that are already accounted for in the joint and common cost factor applied to all investment accounts; (2) improperly collects fixed switch costs through traffic sensitive charges, (3) inappropriately applies a common cost factor for switches (15%) that is higher than originally proposed by Staff for switches, and (4) improperly applies an even higher common cost factor for all other elements (33.4%).

AT&T recommends that the Commission adopt the HAI Model, Release 5.0a (HAI 5.0a), rather than the Stipulation. According to AT&T, the HAI 5.0a is TELRIC compliant and has been refined over time by efforts of the FCC, other state commissions, and ILECs nation-wide. The HAI 5.0a is well-documented and explained and can be used as a universal service support model. It uses the pine-tree design and clustering techniques to model outside plant using a number of input values specific to New Hampshire, including population

data, access line counts, ARMIS expense, Investment and Revenue data, and Wire Center and Tandem locations. Furthermore, AT&T asserts, it can be re-run using specified alternative inputs should the Commission require. According to AT&T, only the HAI 5.0a produces the forward-looking economic costs required by the TAct.

3. BayRing - Recurring Costs

BayRing supports AT&T's arguments in favor of using the HAI 5.0a and argues against the Stipulation as not being TELRIC compliant. BayRing argues that the ability of CLECs to obtain loops is the linchpin to local exchange competition and that the Stipulation fails to enable CLECs to obtain that ability.

The unbundled loop, BayRing asserts, is the bottleneck facility. The fact that the state-wide average loop rate proposed in the Stipulation is higher than the state-wide average rate Bell Atlantic initially sought shows that it does not comport with the public interest and should not be approved. In particular, BayRing objects to the common cost factor of 15% applied in the Stipulation because that common cost factor is not adequately supported on the record.

4. OCA - Recurring Costs

The OCA generally supports the structure of the Stipulation but recommends two changes in order to avoid using historic costs rather than forward-looking costs. First, in order to better reflect the volume of business that CLECs will bring to Bell Atlantic, the OCA suggests that all factors used in the Stipulation should be made equivalent to those Bell Atlantic offers to its largest special contract retail customers. The OCA points out that, in the Stipulation, Bell Atlantic applies a 52.11% switch installation factor and a 13.54% power factor to its investment cost, both of which factors are higher than those Bell Atlantic uses to compute special contract costs for large retail customers. The OCA recommends adoption of the installation factor achieved by Bell Atlantic South, a factor of 20%.

Second, in the OCA's view Bell Atlantic has overstated the value of its assets and the Commission should correct the overstatement by reducing the asset value by the percent it has depreciated. The OCA recommends that Bell Atlantic's asset value be reduced by removing altogether any fully depreciated asset and allowing only a pro rata share of other assets. In the OCA proposal, an asset that has been depreciated to 91-100% of net book cost will be given an SGAT

value of 95%, an asset which has been depreciated to 81-90% of net book cost will be given an SGAT value of 90%, and so on, in 5% decrements for each decile by which net book value has been reduced. By making these overall changes, the OCA believes the Stipulation would represent forward-looking TELRIC costs.

5. Staff - Recurring Costs

Staff supports the Stipulation as a non-discriminatory and TELRIC-compliant method for determining recurring costs, one which is superior to the HAI 5.0a Model proposed by AT&T and superior to either the Bell Atlantic Model alone or the Telecom Model alone. The Stipulation, according to Staff, combines the strength of the Telecom Model regarding loop analysis and the strength of Bell Atlantic's switching data which, when the SCIS input deficiencies are corrected by the Stipulation, produces forward-looking, least-cost, reasonable, non-discriminatory prices. Staff defers to the Bell Atlantic arguments regarding the switch costing methodology (Section III.C.1.(c) above), concentrating on the Telecom Model's loop costing methodology.

Staff avers that the Telecom Model's loop costing methodology uses superior customer location data, and separates wire center service areas into two user-specified

cost zones for greater data granularity. According to Staff, the Telecom Model sorts through many potential configurations, segment by segment and node by node, taking into account all relevant variables, to identify the least-cost solution. The Telecom Model obtains greater accuracy than the other models by use of the Geographic Information System (GIS) to identify customer locations, feeder segments, and distribution areas. The Telecom Model's accuracy is demonstrated by the maps it produces of particular wire-center networks, which reflect the actual topography of New Hampshire.

In contrast to AT&T's HAI 5.0a which distributes all difficult to locate customers along the edges of census blocks, the Telecom Model allocates customers on the basis of relative population within each census block. Therefore, empty census blocks receive none of the listings while densely populated blocks receive the most listings. This distribution method, according to Staff, insures that average rather than short- or least-length feeder lengths are modeled. The result produces a cost for an achievable system rather than an unattainable least-cost system.

Rather than develop a state-wide average, the Telecom Model de-averages rates into three customer group prices. This de-averaging, Staff argues, conforms with the

Commission's conclusion in Order No. 22,433, DE 96-262, that average prices fail to encourage development of facilities-based competition.

Staff does not support the HAI 5.0a. The HAI 5.0a assumes even distribution of customers and discards geographical detail via an "aspect ratio" simplification process. The effect of the process, in Staff's opinion, is to understate the amount of distribution cable necessary to reach actual customer locations. Staff introduced an FCC Staff analysis of a Nevada Public Service Commission report finding that the model under-estimated the length of the star network configuration by an average of 15.4% and the length of the Minimum Spanning Tree network configuration by an average of 41.5%. Staff asserts that the HAI 5.0a is an unreliable tool for Commission use. Staff claims that using actual customer location is the key to accuracy and thus recommends the Telecom Model.

Staff also questions the input choices made by AT&T experts. The choices were made in AT&T meetings for which no notes or other documents were adduced at hearing. AT&T produced a nation-wide rather than a state-specific model. According to Staff, the HAI 5.0a cannot be adjusted to account for all New Hampshire specifics. As an example of the model's

inaccuracy, Staff presented an exhibit in which the HAI 5.0a, as filed, produced maps which include service areas in Massachusetts, 11 miles beyond the state boundary.

6. COMMISSION ANALYSIS - RECURRING COSTS

We were presented initially with three cost studies on recurring costs in this docket: the Bell Atlantic Model, AT&T's HAI 5.0a Model, and the Staff-sponsored Telecom Model. The respective proponents all claim that their model is TELRIC-compliant, although each model employs different methods and different inputs for forecasting the forward-looking recurring costs of switches, loops, interoffice trunk facilities, and miscellaneous other recurring charges such as Signaling System 7, customized routing of operator services, and both branded and unbranded operator services.

Staff and Bell Atlantic entered into a Stipulation which combines the Telecom Model loop outputs and the Bell Atlantic Model switch outputs, both somewhat modified from their original forms. Therefore, we here consider first the propriety and internal integrity of a recurring cost rate that is derived from a hybrid of two models, using one model to determine switching costs and another to determine loop costs. The question is whether a combination of two models in some way compromises the results.

We conclude that a model composed of parts of two different models is valid as long as the definitions of the different components are not over- or under-inclusive. An analogy can be made to combining two different geographic representations of France and Germany. Using the map of France from one atlas and the map of Germany from another is acceptable as long as they both agree on the same boundary and scale. In this case the boundary between the loop component and the switching component must be the same so as not to include a particular cost item in both. With regard to the proposed Stipulation, we find that in one instance the boundaries do not coincide. Using as an example the Telecom Model report of the loop cost results for Milford, New Hampshire, we observe that the feeder includes 25% of building and land costs, both of which are fully included in Bell Atlantic's switching costs. As to scale, the two models must also have the same basis for analysis. Here, both the Bell Atlantic and the Telecom Model are describing a scorched node approach, developing a new network but using the existing COs; they use the same cost of capital, capital structure, and depreciation.

Therefore, we will accept the Stipulation as valid for analysis with an understanding that a correction is required to remove the building and land costs from feeder costs. We

find that the Stipulation's use of the Bell Atlantic and Telecom Model outputs, for switch and loops respectively, does not compromise the resulting costs. We therefore proceed to consider the recurring cost analyses put forward by the AT&T HAI 5.0a on the one hand and the Stipulation on the other.

(a) Loop Costs

Outside Plant Model: We find that the outside plant modeled by the Telecom Model is a better representation of the reality of customer location while the HAI 5.0a is more of an abstraction. While an abstract can provide a useful construct for some purposes, for purposes of pricing unbundled network elements in New Hampshire we require more precision if it is reasonably available. The evidence shows that the HAI 5.0a produces a network that is too far removed from the current network configuration to be useful during the next decade. The HAI 5.0a assumes perfect efficiencies and thereby fails a reality test that we believe the TAct requires, a belief which is confirmed by *Iowa III*. *Iowa III*, as discussed *supra* at 58, rejects the "hypothetical network" basis for TELRIC-compliant costing. We find that the Telecom Model passes that reality test, as shown by the fact that it produces results for line counts and loop lengths that better reflect the New Hampshire reality.

Pursuant to Section 252(d), we must determine "just and reasonable" rates for network elements. In addition, ¶685 of the FCC's *Local Competition First Report and Order* anticipates costs based on the most efficient technology deployed in the ILEC's current wire center locations. As supported by the 8th Circuit's decision in *Iowa III,* we interpret this to mean that the necessary reasonableness required by the TAct must be judged by reference to the incremental costs that ILECs actually expect to incur.[16]

AT&T's HAI 5.0a is based upon incorrect assumptions for New Hampshire and thereby produces unreasonable results which we cannot approve. The HAI 5.0a designs and builds an entirely new, full-grown instant network, ignoring the actual methods by which any carrier would produce a network. For instance, it assumes that all outside plant structure will be shared immediately, that aerial cable will not need poles to support it in the densely populated areas of New Hampshire, and that cable is buried where New Hampshire's granite topography will not permit buried cable. We agree with Staff that the geocoding relied upon by the HAI 5.0a does not

[16] We note that the U.S. Supreme Court will consider *Iowa III* again, having granted certiorari in response to separate petitions by the FCC, AT&T, WorldCom Inc., Verizon Communications and General Communications. FCC v. Iowa Utilities Board, 121 S.Ct. 878, *cert. granted* (U.S., Jan. 22, 2001) (No. 00-587).

produce realistic customer locations and is further abrogated by “rectangularizing” New Hampshire’s anything but rectangular terrain for purposes of estimating amounts of distribution cable. We also find convincing the fact that the Nevada Public Service Commission reported to the FCC and the FCC agreed that the HAI Model underbuilds the network by failing to use actual customer locations.

Our decision to reject the HAI 5.0a for costing UNEs is not lightly taken. We note that the FCC endorsed the use of geocoded data for national universal services purposes. Fifth Report & Order, *Federal State Joint Board on Universal Service*, 13 F.C.C.R. 21323, released October 28, 1998. However, the FCC rejected the use of geocoded data for determining with precision the actual UNE costs likely to be incurred at specific locations. The FCC specifically rejected AT&T’s surrogate methodology for locating customers who cannot be geocoded and rejected the HAI algorithm for clustering customer locations, as well as its polygonal distribution cable estimation technique. Various versions of the HAI Model, including version 5.0a, have been found unreliable by some other state commissions, including California, South

Carolina, Washington and Massachusetts.[17] Most recently, *Iowa III* rejects AT&T's basic assumption that a TELRIC-compliant model must utilize the most advanced technology in existence.[18]

The Telecom Model, in contrast to the HAI 5.0a, produces outputs that represent a substantially operative New Hampshire network. The outputs withstand comparisons to the existing network, such as pole counts and customer locations. Thus, we are satisfied that the Telecom Model is serviceable for the purpose of costing UNEs in New Hampshire.

UDLC v. IDLC: As in our analysis in Section III.B.6 above regarding the network assumptions proper for a NRC model, we find that the forward-looking network consists of a blend of equipment. Therefore, balancing the need to encourage competition and to avoid confiscation, we cannot adopt AT&T's proposal that a total GR-303 IDLC network should be presumed. As in the NRC analysis, we conclude that it is reasonable to assume 50% TR-008 IDLC for a recurring cost model.

---

[17] California Public Utilities Commission, Rulemaking R93-04-003, Decision 98-02-106 (Feb. 19, 1998); South Carolina Public Service Commission, Order No. 98-322, May 6, 1998; Washington Utilities and Transportation Commission, Docket UT-960369, Eighth Supplemental Order, April 16, 1998; Massachusetts Dep't of Public Utilities, D.P.U. 96-73/74, *et al*., Phase 4, Order (Dec. 4, 1996);

[18] *Iowa III* agreed with the ILEC petitioners that a cost methodology must determine the cost of providing actual facilities and equipment, not a state of the art network which uses available technology ideally configured but neither deployed by the ILEC nor used by the competitor.

Copper/Fiber Feeder Mix: AT&T's model assumes the most cost effective point to place fiber feeder is for loops greater than 9,000 feet while the Telecom Model assumes fiber feeder will be placed in loops greater than 15,000 feet. In its brief, AT&T acknowledges most outside plant engineers use a 12,000 foot breakpoint in models which purport to be TELRIC compliant. We find 12,000 feet to be a more reasonable assumption than the 15,000 feet used in the Telecom Model. According to the record in DR 89-010, of which we take administrative notice, in particular in an incremental cost study filed by Bell Atlantic (then d/b/a New England Telephone and Telegraph Company), fiber is placed in New Hampshire in loops that are greater than 12,000 feet. The Telecom Model should be recomputed using 12,000 feet as the copper/fiber breakpoint.

(b) Switch Costs

Our above analysis of the merits of the HAI 5.0a holds true with regard to switching costs. Accordingly, we reject the HAI 5.0a model for New Hampshire and consider the switching costs put forward in the Stipulation.

According to AT&T and the OCA, the stipulated switching cost is entirely arbitrary. Seeing that the $325 figure is the product of an equation based upon a number of individual

components, we look to the basis of the individual components to determine if they are rationally based or arbitrary. The individual components of the equation are:

1 - SCIS documented switching investment amount
2 - Umbilicals amount
3 - Installation Factor
4 - Power Factor
5 - Right to Use Fees

We consider the SCIS amount, the installation factor, and the right to use fees, as no party contested the umbilicals amount or the power factor here.

AT&T objects to the SCIS amount as excessive because, as revised per the Stipulation, it used an 80-20 weighting to include the vendor discounts for both new and growth switch purchases to calculate the input price of a switch. AT&T claims that only new switch discounts are pertinent and that SCIS can be used to estimate new switch purchases only. We are not convinced of those points. As we have determined above, a reasonable approach to modeling a forward-looking network requires some relationship to the reality of the current network world. Bell Atlantic's initial use of an all-growth discount is unacceptable; AT&T's use of all-new switch discount is equally unacceptable. The Stipulation's weighted discount is a reasonable approach in these circumstances. We do not agree with the OCA's post-hearing suggestion that the

SCIS results, as revised and presented in Exhibit 62, need to be reduced further. Therefore, we accept the SCIS results as revised and presented in Exhibit 62.

We find convincing the arguments put forth by AT&T regarding Bell Atlantic's installation factor of 52.11 percent. The installation factor is too high, reflecting embedded costs entirely. We will not, however, merely import from the Bell Atlantic South area a 20 percent factor AT&T argues is forward looking. As in several other areas of conflict between AT&T and the incumbent, we find neither proposal entirely convincing. We will therefore order the use of an installation factor which we believe is reasonable and justifiable: 36%.

After considering all the arguments regarding right-to-use fees (RTUs), we find that Bell Atlantic's RTU fees were not expensed but, rather, they were capitalized. Therefore, the RTU fees are not being double-counted in this model.

Economic cost modeling is an imprecise art that aspires to establish a zone of reasonableness rather than a single correct answer. With regard to loop costs, we measured reasonableness by comparison to verifiable external sources. Similarly, we consider whether the proposed switching costs are within the zone of reasonableness in light of external

sources. Exhibit 76 provided a list of 25 dial-with-dial switch conversions in New Hampshire. Exhibit 87 updated that list to include additional conversion costs. Exhibit 87 provides the external measurement by which we find that the switching costs, as slightly modified by a decreased installation factor, represent forward-looking costs acceptable for use in this docket. The switching cost per line accordingly becomes $294.61.

AT&T's objection to the inclusion of switching costs in the recurring cost portion of the SGAT is not credible. Just as loop costs "recur," as that term is used in UNE cost modeling, so too do switch costs. The forward-looking nature of these studies includes the concept that neither loop nor switch costs occur as one-time costs.

Common Cost Factor: Bell Atlantic's cost model applied a common cost ratio to various investments in the model, based on the relationship between the company's historical expenses and historical investments. Bell Atlantic advocated a ratio of historical expenses to historical investments, which in effect amounted to a common cost factor of 33% for all recurring costs. AT&T advocated a 10.4% common cost factor. The Stipulation supported by Staff and Bell Atlantic contains a 15% common cost factor for switching costs and Bell

Atlantic's higher common cost factor for all other recurring costs.

Although we have decided that the Stipulation's use of two different cost studies for recurring costs does not compromise the TELRIC outcome of this Track of the proceeding, we cannot approve different common cost factors within one recurring cost study without more support for the variation. To judge that the cost study's results are reasonable, we must find that the common cost factor is reasonable. On the record before us the reasonable approach utilizes one common cost factor for every portion of the model. On the basis of credibility, we find that a 15% common cost factor is reasonable for all relevant recurring costs.

D. Collocation

1. Physical Collocation Costs in General

Physical collocation costs are incurred by Bell Atlantic to prepare suitable building sites, to construct the collocation cage area, extend the CLEC's cables to the collocation area, provide cable within the building and provide DC power. Bell Atlantic initially filed cost studies in support of proposed costs for 300 and 100 square foot physical collocation cages. Later, Bell Atlantic added proposed costs for a 25 square foot mini-cage. The cost

studies used cost figures from Bell Atlantic's actual experience of providing collocation in Massachusetts because projects had not been completed in New Hampshire at the time of filing.

Bell Atlantic estimated costs for physical collocation in three categories: non-recurring, recurring, and time and materials (T&M) charges. The category of non-recurring costs has three components: 1) construction and installation of cage facilities, 2) provision of the Point of Termination (POT) frame,[19] and 3) provision of engineering and administration (E&A) tasks. The recurring costs category also has three components: 1) carrying charge factors for the POT frame, 2) building costs per square foot, and 3) power investment per amp[20]. The T&M costs category includes time and materials charges for pulling and splicing cable to the cage from a manhole; the T&M charges are uncontested in this docket. Bell Atlantic proposes to recover its non-recurring costs through a one-time payment, made up-front by the collocating CLEC; it proposes to recover its recurring costs through monthly charges.

---

[19] A POT frame is a relay rack that houses the termination equipment used to provide access between the CLEC's equipment and that of Bell Atlantic.

[20] Amp is the abbreviation of ampere. An ampere is a unit of electric current equivalent to the flow of current produced by one volt applied across a resistance of one ohm.

2. Non-Recurring Costs for Physical Collocation

a) Bell Atlantic - Non-Recurring Costs for Physical Collocation

Cage Construction and Installation

For its New Hampshire cage construction cost study, Bell Atlantic used the average labor and material prices of contractors who actually installed ten collocation projects in Massachusetts. In response to a record request during the hearings, Bell Atlantic reviewed the results of 10 New Hampshire collocation projects. The New Hampshire projects averaged about $9000 more than the Massachusetts projects. The cost difference, according to Bell Atlantic, resulted from the use in New Hampshire of card readers for security entrances, wire mesh ceilings on collocation cages, and the need for more conditioning of common areas. According to Bell Atlantic, Massachusetts has now adopted these additional security practices.

Bell Atlantic stressed that its non-recurring cage cost is an average cost, that no project can be considered “typical,” and that because Bell Atlantic has no way of projecting how many or what size cages will be requested by CLECs, cages cannot be mass-produced. For non-recurring collocation, Bell Atlantic claims $18,948 as the statewide average cost for a 300 square foot cage and $16,717 for the

100 square foot cage. Hence, the proposed cost is neither an "individual case basis" nor the lowest possible price.

Bell Atlantic says it incurs both fixed and variable non-recurring construction costs for 300 and 100 square foot cages. The fixed costs remain the same for both sizes of cages. They are the site preparation costs, including electric service, cable slot or core hole installation, daily site clean-up, floor repair, protection of working equipment during construction, and miscellaneous hardware. The variable costs are for the cage material itself, which varies by cage size.

Bell Atlantic also developed non-recurring costs for its 25 square foot mini-cage. According to Bell Atlantic, only the variable costs for the mini-cage differ from the larger collocation cage costs. They are derivative of the larger cage non-recurring costs: Bell Atlantic calculated 50% of the variable non-recurring costs of the 100 square-foot cage and added that to the fixed costs.

Bell Atlantic contends that all its collocation costs are conservative and reasonable calculations of forward looking costs that will actually be incurred. Bell Atlantic refutes criticisms of its proposal for cage construction by claiming:

- without forecasts of the number and sizes of cages CLECs will require, it cannot mass produce the cages to obtain efficiencies;
- construction costs will not decrease over time as a result of experience because cage elements are not expected to experience any technological breakthroughs;
- Bell Atlantic conducts a bid process for construction which clearly sets vendor requirements; and
- Bell Atlantic's hourly rates are reasonable and not inflated.

POT Frames

Bell Atlantic based the cost of the POT frame, the structure that houses the termination equipment used to provide interconnection between the CLEC equipment and Bell Atlantic facilities, on recent vendor material prices for POT frames and the associated installation hardware. Bell Atlantic then determined an installation cost by multiplying the POT frame material costs by an installation factor.

POT frame costs for the 25 square foot mini-cage, Bell Atlantic avers, will be the same as those for the larger cages because the procedures and activities of Bell Atlantic personnel are not diminished as a result of cage size.

In support of its POT installation charges Bell Atlantic argues that adequate information has been presented to show that its POT installation costs are conservative. Bell Atlantic also contends that placement of a POT frame requires

engineering and administration efforts, separate and apart from the Engineering and Administrative (E&A) expenses dealt with in c) below. Therefore, Bell Atlantic adds an E&A expense to the POT frame charges.

Engineering and Administration

Bell Atlantic's E&A costs arise in three areas: collocation application and site-survey processes, CO engineering, and real estate analysis. E&A costs were calculated by determining the average time Bell Atlantic employees estimated they spend on the specified tasks, and multiplying that figure by the appropriate labor rate. The CO engineering costs vary according to whether the request is the first or a subsequent application for collocation in a CO: Bell Atlantic calculates that the subsequent applications take 28.5 hours to process as opposed to 40 hours for the initial application. Bell Atlantic developed costs by a weighting formula, assuming four cage applications per CO and using the higher number of hours once and the lower number 3 times.

E&A costs for the 25 square foot mini-cage, Bell Atlantic avers, will be the same as those for the 100 and 300 square foot cages because the procedures and activities of Bell Atlantic personnel are not diminished as a result of cage size.

In support of its E&A charges, Bell Atlantic enumerated all the hours, associated activities, and the titles of the individual performing the work. Collocation E&A includes coordination of and activity by interoffice facility engineers, equipment engineers, common systems engineers, real estate managers, and security staff. Bell Atlantic indicates that efficiencies were factored into the work times and clear instructions were given to the personnel who estimated the time spent. As a result, Bell Atlantic argues, its proposed E&A costs represent a fair average that can reasonably be used in the SGAT tariff.

b) AT&T - Non-Recurring Costs for Physical Collocation

AT&T argues that Bell Atlantic has not met its burden of proving that its proposed non-recurring collocation costs are reasonable. AT&T asserts that Bell Atlantic's collocation cost studies are not TELRIC-compliant because they rely on historic construction costs, based on the cost of six cages built in Massachusetts by two contractors. AT&T also points out that the sample size is very small and asserts it is therefore statistically unreliable. The broad range of prices charged for the collocation prices demonstrates, according to AT&T, Bell Atlantic's inefficient method of awarding contracts on a cost-plus basis rather than competitive bidding. Bell

Atlantic's cost-plus approach encourages less-than-efficient planning and engineering practices, AT&T claims. In sum, the Bell Atlantic cost studies for construction do not produce a forward-looking result and should be rejected by the Commission.

AT&T also objects to the labor charges Bell Atlantic proposed for E&A and for installation for both physical and virtual collocation. According to AT&T, E&A charges amount to approximately 25% of the costs of a large cage based on bald assertions of the time necessary for Bell Atlantic staff to complete certain tasks. Bell Atlantic's time estimates are unsubstantiated, AT&T argues, and should be rejected.

Even if the collocation costs were not unreasonable, AT&T argues, compelling CLECs to pay large fees in advance of commencing business will discourage competition and unfairly burden competitors. In order to encourage competition, AT&T asserts that non-recurring collocation costs should be amortized over a multi-year period.

c) BayRing - Non-Recurring Costs for Physical Collocation

BayRing argues that Bell Atlantic's collocation costs must be rejected because they are not TELRIC compliant. BayRing contends that the Bell Atlantic cost study is based on historical data about out-of-state construction projects which

were contracted on a cost-plus basis rather than a competitive bid. Further, according to BayRing, the study uses too few projects to be statistically significant, includes unreasonably high labor rates, and has not been validated by New Hampshire projects. BayRing urges the Commission to heed the NYPSC's observation about Bell Atlantic's collocation cost analysis in its *Phase 3 Opinion and Order*, Case 95-C-0657, *et al*. at 32 (February 22, 1999). The NYPSC said in that order,

> ...[T]he purposes of a TELRIC analysis include overcoming the need to rely on any one company's processes and associated costs--unless that company has persuasively shown them to be forward-looking best practices, something New York Telephone has not done.

If the Commission does accept some form of Bell Atlantic costs, BayRing argues, the Commission should develop a refund mechanism in order to remove any possibility that Bell Atlantic could over-recover for collocation. The NYPSC directed that New York Telephone's compliance filing include a "carefully defined and suitably limited mechanism for dealing with significant over- or under-recovery." *Id.,* at 67-68.

BayRing further urges the Commission to order Bell Atlantic to pay a proportionate share of collocation costs in the event Bell Atlantic needs to use some of the prepared collocation space for its own purposes in the future. Finally, BayRing agrees with AT&T that Bell Atlantic should

allow CLECs to amortize collocation payments over time, rather than requiring a large up-front payment. The amortization provision will encourage competition and will assist Bell Atlantic in meeting its merger commitments to the Commission.

d) OCA - Non-Recurring Costs for Physical Collocation

The OCA objects to Bell Atlantic's non-recurring cost levels as excessive in general, pointing out that other areas of Bell Atlantic's cost studies have doubled the costs which could be considered reasonable. The OCA agrees with the arguments presented by other parties as to why the costs are excessive.

e) Staff - Non-Recurring Costs for Physical Collocation

Staff agrees with AT&T, BayRing, and the OCA that Bell Atlantic's proposed non-recurring construction costs are exorbitant. In Staff's opinion, the $18,948 charge for building a 300 square foot wire mesh cage is not a long-run forward-looking incremental cost. Bell Atlantic's cost-plus methodology produces a high average cost that would be reduced by a bidding process. Bell Atlantic has presented no evidence, according to Staff, to validate its historic costs as forward-looking. Furthermore, Staff contends that Bell Atlantic's labor costs are much inflated, even when allowances

are made for unexpected events that would lengthen the building process. Staff also objects to Bell Atlantic's inclusion of site preparation work in its collocation costs, contending that site preparation is analogous to retrofitting a house with wiring rather than installing the wiring at the time of initial construction. A forward-looking cost study should reflect initial construction cost, according to Staff, not retrofitting costs.

Bell Atlantic's E&A costs, according to Staff, provide no credible support for the work time estimates. Using the example of the 77 hours Bell Atlantic claims are necessary in total to process each CLEC application, Staff argues that no surveys were undertaken; rather, Bell Atlantic held individual conversations with various employees. No subject matter experts validated the times, and no efficiencies were factored into the estimates. Staff argues that these flaws in the E&A charges apply throughout Bell Atlantic's collocation cost studies, whether for physical or virtual collocation.

Staff objects to the 1.3477 installation factor for POT frames because it is based on unverifiable embedded cost data. The source information for the factor is Bell Atlantic's Continuing Property Records (CPR). Staff pointed out that the validity of Bell Atlantic's CPR had been challenged at the

FCC[21] because audits of a number of ILECs, including Bell Atlantic, uncovered CPR entries for equipment that could not be found, thus suggesting that the assets were not used in accordance with FCC rules and could improperly inflate costs. As a result, Staff argues, the Commission cannot determine whether it is accurate.[22]

f) COMMISSION ANALYSIS - NON-RECURRING COSTS FOR PHYSICAL COLLOCATION

Non-recurring Costs In General

The TAct provides that Bell Atlantic must make space available in central office buildings to CLECs for placement of the equipment necessary for interconnection and access to UNEs. Section 251(c)(6) of the TAct requires Bell Atlantic to make both physical and virtual collocation arrangements available to requesting carriers on rates, terms, and

---

[21] 1998 Biennial Regulatory Review-Review of Depreciation Requirements for Incumbent Local Exchange Carriers, CC Docket No. 98-137, Ameritech Corporation Telephone Operating Companies' Continuing Property Records Audit, *et al.*, CC Docket No. 99-117 GTE Telephone Operating Companies Release of Information Obtained During Joint Audit, AAD file No. 97-26, *Further Notice of Proposed Rulemaking*, FCC 00-119, 15 FCC Rcd 6588 (*rel*. April 3, 2000).

[22] The FCC's investigation of Bell Atlantic's CPR has ended. By Order 00-396, *In the Matter of 1998 Biennial Regulatory Review,* CC Docket No. 98-137, CC Docket No. 99-117, AAD File No. 98-26, (released November 7, 2000), the FCC decided not to pursue its investigation of the audits with regard to improperly purchased or utilized assets because of its recently adopted interstate access charge reforms, changes in the interstate rate structure, and the age of the CPR audits. However, the FCC "remain[ed] concerned about the RBOC's poor record keeping that these audits revealed" and directed the Common Carrier Bureau to work with the RBOCs to improve the accuracy of their property records and accounts. *Id.* at ¶13.

conditions that are just, reasonable, and non-discriminatory. In "physical" collocation, Bell Atlantic provides CLEC personnel access to the CLEC's equipment which has been placed in Bell Atlantic's CO. In "virtual" collocation the CLEC transfers ownership of its equipment to Bell Atlantic; the equipment is placed in relay racks in the same area as Bell Atlantic's similar equipment, and Bell Atlantic maintains the equipment at the direction of the CLEC. See *Local Competition First Report and Order*, 11 FCC Rcd at 15784, n. 1361; and at 15785, ¶559. The TAct directs that an incremental costing method shall be used to price collocation to the CLECs. 47 U.S.C. §252(d)(1).

The FCC delineated the minimum requirements for the provision of collocation in its First Report and Order, *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability*, FCC 99-48 in CC Docket No. 98-147 (hereinafter, *Advanced Telecoms Order*), released March 31, 1999. The FCC's ruling in the *Advanced Telecoms Order* directly affects this docket and our analysis of collocation costs. The *Advanced Telecoms Order* requires ILECs to permit collocation of any equipment used for the purpose of gaining interconnection or access to UNEs, without limitation on the use of any features or capability of the equipment, including

switching capability. Requiring ILECs to optimize the space available at their premises in order to foster deployment of advanced services even in rural areas, the FCC ordered ILECs to make available different kinds of collocation and to provide almost unfettered access to the collocated equipment. Bell Atlantic, therefore, must permit both shared cages and cageless collocation, must provide direct access in any unused space without the necessity of separate entrance or intermediate arrangements, may not impose unreasonable minimum space requirement on CLECs, and must permit the CLEC 24 hour/7 days access to its collocated equipment, *inter alia*. *Advanced Telecoms Order*, ¶¶ 39-51.

Keeping the FCC's directives in mind, we predicate our analysis of the costs proposed for collocation on a recognition that Bell Atlantic bears the burden of proving that the charges are reasonable and forward-looking. For each component of the non-recurring and recurring costs of collocation, Bell Atlantic must demonstrate (1) the reasonable basis for and (2) the forward-looking nature of its charges.

Non-Recurring Collocation Costs for Cage Construction

The basis for Bell Atlantic's cage construction charges is clear and no party has objected to the technology proposed. Furthermore, we are convinced the cost is not zero and no

party has provided a convincing calculation of the cost. We must, on this record, look to historic cost as a basis for forward-looking costs. However, we find that the proposed costs are unreasonable because they were derived from an average of a very small number of actual construction projects. Further, the costs were obtained through "cost-plus" contracts. Thus, the historic costs of each project may not have been as efficiently managed as those which could have been obtained in a competitive bidding process for the opportunity to construct the collocation cages. Therefore, we find that Bell Atlantic has not met its burden of proof that the proposed charges are reasonable, despite the fact that they are based on actual installations.

Although Bell Atlantic argues that a one-at-a-time, individual case basis approach is necessary because CLECs will not divulge their planned demand for cages, we agree with the Massachusetts Department of Telecommunications and Energy's observation that "Bell Atlantic likewise cannot know with certainty the underlying demand for its own retail services, and yet Bell Atlantic plans and designs its networks and its procurement and construction program to achieve the greatest possible efficiencies given that uncertain demand." *Consolidated Petitions of New England Telephone and Telegraph*

Company, et al. for Arbitration of Interconnection Agreements, DPU/DTE 96-73/74, 96-75, 96-80/81, 96-94-Phase 4-G, at Section III.A.2, ¶6 (issued June 11, 1998). We are not convinced that the degree of customization required precludes accounting for efficiencies in the planning, design, and procurement costs and thus avoiding over-inflated construction costs. This is especially relevant where, as here, the forward-looking costing approach contemplates an emerging network rather than a reconfigured old network.

In order to determine adequately forward-looking costs for cage construction, and in light of the fact that Bell Atlantic has had the opportunity to construct a number of cages of varying sizes in New Hampshire by now, we will direct Bell Atlantic to provide, within 30 days of the date of this order, current costing information for such actual construction. We will direct Staff to review the information and report to us within 15 days. We may, on the basis of Staff's report, order Bell Atlantic to issue a Request for Proposals (RFP) for construction of multiple cages. The RFP, by its nature, would obtain current New Hampshire-specific data and take into account any cost efficiencies that could be obtained in planning, designing, and contracting out work for multiple cages in the multiple-carrier CO. We anticipate that

Bell Atlantic possesses and will provide sufficient current cost information, representing reasonable costs for cage construction, so as to obviate the need for an RFP.

Non-Recurring Costs for POT Frames

Bell Atlantic proposes as non-recurring collocation costs for POT frames the installed investment in the POT frame (investment times installation factor). The threshold issue is whether the installed investment cost is reasonable. These costs are historically accurate and recent and, therefore, bear the necessary relation to reality we require to determine that it is a good representation of a reconstructed network that employs the most efficient technology for reasonably foreseeable capacity requirements. As for the installation factor, it is not dissimilar to what we are approving for other installations and we will therefore approve it. In sum, we are convinced that Bell Atlantic's cost figures for POT frames are reasonable and credibly forward-looking.

Non-Recurring Engineering & Administrative Costs

Bell Atlantic's proposed non-recurring E&A costs were severely criticized as excessive by Staff, AT&T, BayRing, and the OCA. Contrary to their efforts regarding other non-recurring costs, however, none of those parties suggested alternative figures or any method of reducing those figures. Bell Atlantic presented only one estimated average time for performing the tasks necessary to process a collocation application; Bell Atlantic's presentation did not include minimum, maximum, and average times as was the case regarding non-recurring OSS costs. Based on the record, we find that a 20 percent reduction in the proposed E&A charges produces reasonable and justifiable charges. We will so order.

Non-Recurring Site Preparation Costs

The *Advanced Telecoms Order* directs that charges for space preparation, security and other collocation expenses are to be allocated on a *pro rata* basis so that the first collocator does not bear the entire cost. As an example, in ¶51 of the *Advanced Telecoms Order*, the FCC posits a cageless collocation arrangement that requires air conditioning and a power upgrade. In that hypothetical case the FCC determined that the ILEC is not permitted to require the first collocator to pay the entire cost of site preparation. Instead, the FCC

requires an ILEC to develop a system of "partitioning the cost" (¶51) via a ratio of the conditioned space to the overall space. The FCC leaves it to state commissions to determine the proper pricing methodology to ensure properly allocated site preparation costs. In light of the FCC's *Advanced Telecoms Order*, we will order Bell Atlantic to file its method of partitioning the site preparation costs, as part of its compliance filing in this docket.

Further, in order to foster the entrance of collocated CLECs, and in the interests of establishing just and reasonable rates for collocation, we will allow all collocation NRCs to be amortized over a period of up to 5 years, at the CLEC's option, with a carrying charge equal to the overall cost of capital included in the cost study, for the unamortized balance. As in any amortization process, Bell Atlantic would have recourse against a given CLEC in the event of failure to pay its recurring or unamortized non-recurring charges.

3. Recurring Costs for Physical Collocation

a) Bell Atlantic - Recurring Costs for Physical Collocation

Recurring POT Frame Costs

Bell Atlantic proposes to charge on average $153 per year as a POT frame recurring cost. To develop recurring costs for

the POT frame, Bell Atlantic multiplied the installed investment by carrying charge factors, including building investment and cost factors, as well as joint and common cost factors.

Bell Atlantic Recurring Building Costs Per Square Foot

Bell Atlantic's cost study identifies a recurring cost per square foot for each density zone, multiplied by the amount of floor space occupied by each cage, to determine an annual charge. The weighted average recurring cost per assignable square foot is based on Bell Atlantic's CO building investment. The CO building investment per square foot was multiplied, according to Bell Atlantic, by an appropriate carrying cost factor to obtain the recurring cost per assignable square foot for each CO and each density zone.

Bell Atlantic argues that its methodology using booked investment is more appropriate than using tax assessed values for the COs, as Staff suggests. Tax assessments do not take into account the telecommunications-specific building needs and cannot be based on comparable buildings because there are none. Furthermore, Bell Atlantic argues, the booked value is a conservative value, pointing out that its alternative was to use the SGAT Recurring Cost Study value, which utilizes a current cost to book cost ratio (CC/BC). Using the CC/BC

would have increased building costs significantly, according to Bell Atlantic.

Bell Atlantic Recurring Power Costs for Physical Collocation

To identify a cost for DC power per amp, Bell Atlantic determined the investment required to install the type of power plant that would currently be ordered, which includes the microprocessor plant, rectifiers, batteries, automatic breakers, power distribution cabinet, and emergency diesel/turbine. An installation factor, a carrying charge factor, a building factor, and a joint and common cost factor were then applied to compute an annual recurring cost per amp for each density zone for all collocation cages requiring over 60 amps. The same process was used, but reflecting the addition of a battery distribution fuse bay, to compute an annual recurring cost per amp for each density zone for all collocation cages requiring less than 60 amps.

According to Bell Atlantic, both AT&T and Staff are wrong to exclude the cost of investment in electrical power equipment. Bell Atlantic claims that the fact that cages will produce no quantifiable increases in DC power equipment costs is immaterial. In support of this contention, Bell Atlantic cites the Massachusetts DTE order finding the Bell Atlantic method sound “because it properly accounts for the incremental

energy costs associated with providing power to the CLEC's equipment." DTE Order 96-94, Phase 4-G, at p. 20 (June 11, 1998). Bell Atlantic stresses that the intent of a TELRIC study is to estimate the incremental cost of providing a service element, regardless of who is utilizing the service and regardless of whether or not the capacity has been exhausted. Physical collocation is based on the premise that CLECs will be installing transmission equipment, which inevitably requires some amount of power for which the CLECs must pay.

b) AT&T - Recurring Costs for Physical Collocation

AT&T contends that Bell Atlantic has not justified its proposed power charges. Bell Atlantic's per amp charge for DC power is a charge for the equipment necessary to produce DC power, not a charge for the power itself, according to AT&T. Bell Atlantic has not made any showing that collocation will produce an incremental need for DC power equipment in existing COs. Therefore, AT&T argues, the power cost is not an incremental cost for providing collocation space. Bell Atlantic has merely shown the cost per amp of the equipment used to produce power now. Under TELRIC, therefore, Bell Atlantic should not be allowed to impose these charges. In effect, AT&T argues, Bell Atlantic is attempting to charge for

backup power equipment that Bell Atlantic already has in place and would continue to maintain for its existing CO equipment whether collocation occurs or not. AT&T did not brief further specific arguments regarding recurring costs for physical collocation.

c) OCA - Recurring Costs for Physical Collocation

Reiterating its arguments regarding other recurring SGAT rates, the OCA objects to the square foot rental rate for collocation space. In determining its building cost portion of collocation space rental rates, Bell Atlantic used the full asset cost accumulated to include all costs associated with initial construction, renovation and other costs. The OCA recommends that the Commission reduce asset costs in a manner tied to the amount the asset has been depreciated, as detailed in Section IV.C.4 above. According to the OCA, the resulting reduction of rental to no more than $10 to $11 per square foot, including all associated expenses such as utilities, property tax, and insurance, would be reasonable.

d) Staff - Recurring Costs for Physical Collocation

According to Staff, Bell Atlantic's annual building costs, based on assignable square footage in each CO, reflect embedded booked costs. In Staff's view, booked costs

represent only what Bell Atlantic has invested in the property, not what is required incrementally on a forward-looking basis. Bell Atlantic provided no independent third party analyses, and no municipal tax assessment information about building values. Staff suggests using an equalization ratio in order to validate building values and represent current fair market value, thereby producing a reasonable representation of TELRIC cost.

Staff argues that Bell Atlantic's incremental cost of adding the power capacity to service a CLEC must be either zero or a *de minimus* amount. In support of this position, Staff points to testimony by Bell Atlantic's witness who averred that ample spare capacity exists currently and additional amperage could be obtained when necessary by increasing the number of rectifiers. An entirely new microprocessor plant is unnecessary, but according to Bell Atlantic's witness, what Bell Atlantic has put forward is not an incremental cost but rather a proportional share per amp of building an entire microprocessor plant.

Staff argues that the recent Supreme Court's *Iowa II* decision upholding the FCC requirement that ILECs provide UNEs in a combined form means that no additional DC power charge is necessary. In other words, Staff's position is that no

separate power charges are necessary or appropriate in a purely UNE-P environment.

e) COMMISSION ANALYSIS - RECURRING COSTS FOR PHYSICAL COLLOCATION

Recurring Costs for POT Frames

No party has specifically argued that the installed POT frame recurring costs are unreasonable, and we find that Bell Atlantic's installed POT frame investment cost is reasonable. We also approve the joint & common costs factor, 9.57 percent, utilized by Bell Atlantic. It cannot be called excessive, as it is comfortably lower than the 15 percent approved as reasonable with respect to overall recurring costs in the Stipulation, and is in fact lower than the 10.4 percent urged by AT&T for that purpose.

Recurring Costs for Building

Bell Atlantic proposes a recurring per square foot charge. For recurring costs, Bell Atlantic subjects the installed investment cost for the building space to several factors: (1) a building carrying charge factor and (2) a joint and common costs factor. We therefore next consider whether the factors applied to the installed investment cost for the building space are reasonable.

Bell Atlantic uses its gross booked investments, minus retirements, to determine annual building costs. Although

gross booked investments do not reflect depreciation, we agree with Bell Atlantic that depreciation is included in the building carrying charge factor. Hence, the building carrying charge factor adequately covers the necessary elements. We also agree that a CC/BC ratio would produce a higher figure if depreciation were accounted for before applying a building carrying charge factor. As in the case of POT frame recurring costs, the factors for joint and common costs (together, 9.43 percent) are comfortably below any comparable upper limit of reasonableness.

While it might be considered inappropriate for Bell Atlantic to recover building costs from CLECs when such costs are presently in its rate base, such an analysis fails to take account of the forward-looking basis of utility ratemaking. Certainly Bell Atlantic will stand to recover additional revenues associated with the same patches of building space in its CO as a result of these charges. However, that fact alone does not require that we institute a rate proceeding to reduce Bell Atlantic's rate base allocation to retail customers or to adjust other customers' rates to reflect the contribution from the CLECs: the magnitude of the revenues involved would not be sufficient to trigger a revenue requirements or rate design investigation. Of course, such CLEC revenues will be taken into account at any time that Bell Atlantic's rates or rate

design is examined. We find that Bell Atlantic's recurring building charge per square foot is reasonable.

Recurring Costs for Power

Pursuant to the requirements of the TAct, §§251(c)(6) and 252(d)(1), as with other types of costs in this docket, Bell Atlantic must recover from CLECs its incremental costs for DC power delivered to the collocation point. It follows that if there is an incremental cost for producing the power used by CLECs, Bell Atlantic must be made whole. Bell Atlantic has priced power based on the costs of an entire microprocessor plant. However, although no party disputes that collocators will draw power, Bell Atlantic has not shown that additional power equipment must be installed in order to meet CLEC needs. Therefore, at present there is no incremental cost for generation. Eventually, perhaps, Bell Atlantic will require more generation equipment and will expend funds to build it. If Bell Atlantic had forecast its future need it would be possible to determine the net present value of those future costs. Without such a forecast, and given Bell Atlantic's own testimony that ample power exists, we conclude that, even with the collocation of multiple new CLECs, new generation equipment installation is not on the planning horizon. Therefore, there is no evidence on this record of Bell

Atlantic's incremental cost for power and we will not approve Bell Atlantic's power costs.

Because Bell Atlantic has not addressed the issue of its incremental electric utility service cost caused by placement of CLEC equipment in COs, we have not addressed it in this Order.

4. Virtual Collocation Costs

a) Bell Atlantic - Virtual Collocation Costs

Bell Atlantic puts forward both non-recurring and recurring costs for virtual collocation. The non-recurring costs for virtual collocation, according to Bell Atlantic, include the labor costs incurred to (1) place interconnection cables, (2) recover engineering and implementation expenses, and (3) install and perform testing of transmission equipment. Non-recurring tasks include preparation of an estimate for construction, participation in project management activities and method of procedure meetings, and installation and turn-up of the equipment.

The recurring costs Bell Atlantic claims for virtual collocation include five components: (a) access charges, (2) the cost of fire retardant fiber cable to the fiber distribution frame, (3) the cost of fiber jumpers to the transmission equipment, (4) the cost of building floor space

at the per square foot cost developed in the physical collocation study, and (5) the cost of DC power at a per amp cost developed in the physical collocation study.

In addition, Bell Atlantic avers, T&M costs will be incurred for “cable pull and splice” activities. They are the same as those for the physical collocation scenario -- certain other miscellaneous charges will apply, Bell Atlantic states, in circumstances where special training of Bell Atlantic technicians is necessary, special maintenance or repair is requested, or if an escort for a CLEC technician is necessary.

b) Other Parties and Staff - Virtual Collocation Costs

AT&T calls for the Commission to reject Bell Atlantic’s collocation costs in their entirety. AT&T objects to Bell Atlantic’s non-recurring E&A costs as unsubstantiated for both non-recurring and recurring virtual collocation costs. In fact, according to AT&T the same problems that pervade Bell Atlantic’s physical collocation studies also infect Bell Atlantic’s virtual collocation study, resulting in Bell Atlantic’s failure to meet its burden of proving that the costs are reasonable and forward-looking. BayRing claims the E&A costs are unreasonably high and unvalidated. Staff avers that the E&A costs are inflated. Because Bell Atlantic’s proposed recurring costs for building square footage and power

costs are identical to those proposed for physical collocation, the parties and Staff object to those charges on the same grounds detailed above.

c) COMMISSION ANALYSIS - VIRTUAL COLLOCATION COSTS

Labor charges for tasks performed by Bell Atlantic employees in the area of virtual collocation suffer from the same deficiencies as we determined in the case of physical collocation. While we agree with the intervenors and Staff that the estimated costs are too high, no specific alternative was advanced for our consideration, and we find that some costs will in fact be incurred. As we determined in the case of physical collocation, the record supports a finding that at least 20 percent of the costs could be avoided through further economies, and we will direct Bell Atlantic to reduce its associated charges accordingly.

Our analysis of Bell Atlantic's proposed charges for building square footage and power costs for virtual collocation is the same as our analysis for physical collocation, above. Hence, we will require Bell Atlantic to revise its charges to remove the proposed power costs, and we approve the proposed building space charges.

E. House and Riser

1. Parties' Positions on House and Riser

House and riser cable (House and Riser) refers to the portion of the local distribution plant that is located inside multi-tenant buildings, either commercial or residential.

Carrier networks can be efficiently connected to House and Riser cables at a single location within the building. Bell Atlantic proposes rates for providing connection to the House and Riser within a multi-story building to a CLEC that is providing its own link to the end-user. Bell Atlantic developed a standard design for House and Riser for use throughout New Hampshire.

The Bell Atlantic design consists of three backboards and six 50-pair blocks placed in the basement of the building; a 300-pair cable is terminated at the basement blocks and pulled to the top story, with a backboard and 50-pair block placed on each story. Bell Atlantic proposes that CLECs wishing to serve the building will install their own terminal blocks (*i.e.* backboard and connecting block) near Bell Atlantic's existing block to facilitate cross-connection via jumper wires.

Interconnection, as proposed by Bell Atlantic, occurs between the Bell Atlantic network interface device (NID) and the CLEC's NID and is performed by Bell Atlantic, not CLEC, technicians. Separate CLEC blocks are necessary in order to isolate troubles, Bell Atlantic argues, and only Bell Atlantic technicians can insure the integrity of the network and avoid the risk of outages.

To cost the House and Riser service, Bell Atlantic presented a study to determine recurring House and Riser costs and a time and materials calculation of the non-recurring interconnection costs. The study covered four rate centers in each of the three density levels. The costs related to the 50-pair terminal investment, according to Bell Atlantic, amount to $134.04 per month for non-recurring and $0.60 per month for recurring.

AT&T objected to Bell Atlantic's insistence on NID-to-NID interconnection, claiming that direct cross-connection by CLEC technicians to the Bell Atlantic NID would accomplish the interconnection more efficiently and economically. There is simply no need for an extra connection and no need for Bell Atlantic's one-time charge of $134.04 and it therefore should be eliminated entirely, according to AT&T.

AT&T also argues that CLECs should be permitted to perform the cross-connections, fearing that Bell Atlantic technicians will not perform the work in a timely manner. Finally, AT&T requests that the Commission order Bell Atlantic to share information about existing House and Riser facilities in New Hampshire.

2. COMMISSION ANALYSIS - HOUSE AND RISER

The use of NIDs to accomplish the interconnection would protect consumers from outages in service. A NID is a connection block to which a customer connects inside wire, in this case House and Riser cable. The FCC's *Local Competition First Report and Order* requires that Bell Atlantic provide access to its NID as a network element via the CLEC's NID; the FCC did not rule on whether direct connection of CLEC loops to an ILEC's NID is required. *Local Competition First Report and Order* ¶¶ 392-396. Nonetheless, we recognize that the proposed building configuration is not necessary in all cases and that it is possible to connect directly to the Bell Atlantic NID.

In pages 65 to 71 of its *Opinion and Order in Phase 2*, Order No. 97-19, dealing with the ALJ's Recommended Decision regarding UNE rates (December 22, 1997), the NYPSC approved direct connection of CLEC cables to New York Telephone's (NYT's) NID and a further alternative configuration whereby the CLEC supplies a termination "point of demarcation" arrangement. The NYPSC conditioned such direct connection, which would obviate the need for one terminal block and a NID-to-NID connection for each cable pair, on (1) capacity availability, (2) the rules governing equipment standards, and (3) NYT's authority to specify where the cross-connection can be made so as to preserve NYT needed access. The NYPSC

deferred the decision as to whether only New York Telephone technicians should be permitted to work on direct connections to a New York Telephone block, despite the recommendation of the ALJ, because of ongoing discussions between NYT and a CLEC to permit a 6-month trial of cooperative House and Riser provisioning. *Id.* at p. 71.

The 6-month trial to determine if CLECs could make their own cross-connections without disrupting service, anticipated in the NYPSC's *Opinion and Order in Phase 2*, began in January 2000. On January 19, 2001, both Verizon New York Inc. (Verizon) and the participating CLEC filed reports on the results of the trial; additional comments on the results were filed by Verizon and three CLECs. Noting that over the course of the trial there were no customer service outages caused by RCN technicians, the NYPSC issued an order on June 8, 2001, concluding that the trialed process "will be valuable in enhancing customer choice and service quality and should be generally available." Case 00–C-1931, In the Matter of Staff's Proposal to Examine the Issues Concerning the Cross-Connection of House and Riser Cables, *Order Granting Direct Access to House and Riser Facilities, Subject to Conditions,* at page 6.

The conditions imposed by the NYPSC address Verizon's concerns regarding (1) general craftsmanship, and (2) payment issues. The conditions are:

(1) General Craftmanship

The carrier wishing to use House and Riser pairs (the Using carrier or UC) owned by another carrier (the owning carrier or OC) identifies itself to the OC and indicates, in writing, its intent to access House and Riser directly. One representative of the UC is then trained by the OC in the OC's standards and practices. The OC must offer training at least monthly. The UC then trains its own technicians.

(2) Payment Issues

The UC must negotiate billing and payment process agreements with the OC, including ordering methods and payment verification for pairs used.

The NYPSC's *Order Granting Direct Access* instructs Verizon and the CLECs to meet with the NYPSC Staff to develop training and compensation procedures that Verizon will then file in its tariff. Prior to the development of these processes, Verizon is directed to process CLEC requests on a case-by-case basis. An OC can file a complaint with the NYPSC regarding craftsmanship or billing and a finding by the NYPSC of poor performance will result in restrictions, suspension, or revocation of the direct access to House and Riser. Carriers that are unable to utilize the direct access capability were directed by the NYPSC to use the current New York tariff provisions for dispatching the OC's technician.

Our goal here is to preserve quality of service without imposing unnecessary costs on competitive entrants. Accordingly, we will not limit House and Riser interconnection to the design proposed by Bell Atlantic, but will permit CLECs to utilize the House and Riser interconnect methods approved by the NYPSC in its *Opinion and Order in Phase 2*, subject to the three conditions imposed by the NYPSC. We will also permit direct access to House and Riser, as the NYPSC did and subject to the processes outlined by the NYPSC for safeguarding craftsmanship and payment.

We will grant AT&T's request for an order requiring Bell Atlantic to provide House and Riser information. This is reasonable given Bell Atlantic's apparent agreement to provide that information. As the incumbent carrier Bell Atlantic is in sole possession of such information.

F. Non-Cost Issues

1. Bell Atlantic - Non-cost Issues

Bell Atlantic's witnesses filed direct and rebuttal testimony regarding non-cost issues on July 11, 1997 and April 17, 1998. A panel of expert witnesses filed supplemental testimony on November 16, 1998. According to Bell Atlantic's witnesses, the filed SGAT provides a comprehensive wholesale general offering that successfully establishes all three modes

of competitive entry anticipated by the TAct, *i.e.* interconnection, UNEs, and resale, and meets the requirements of §§251 and 252. Bell Atlantic supports competitors via a dedicated organization called the Telecom Industry Services (TIS), consisting of five teams, which coordinates the delivery of quality service to wholesale customers via uniform processes. TIS Operations Center personnel act as liaisons between the customer and multiple Bell Atlantic departments.

Bell Atlantic testified to the existence of a three volume CLEC and Reseller Handbook Series that facilitates CLECs' and resellers' electronic interaction with Bell Atlantic. The handbook, which has been updated, discusses products, business rules, and processes. In addition, Bell Atlantic states that pursuant to requests of competitors and Staff, the TIS held quarterly meetings in Manchester in 1998, open to competitors operating in one or more of the northern New England states. These meetings provided opportunities for competitors to obtain direct answers for specific problems and questions.

Bell Atlantic's testimony recounts its experience in New Hampshire, up until October 31, 1998, in provisioning interconnection, collocation UNEs, access to databases and signaling systems, directory listings services, number

portability, reciprocal compensation, resold services, and access to OSS. In every area, according to Bell Atlantic, the provisioning has been successful, with continually improving response times.

Bell Atlantic updated its pre-filed direct testimony to detail its OSS accessibility in New Hampshire. In particular, Bell Atlantic explained improvements made to its system response time for mechanized pre-ordering functions. Mechanized pre-ordering functions give CLECs information on product and service availability and other real-time information necessary for effective end user customer service. According to Bell Atlantic, its goal was to make the system response time to a CLEC no more than 4 seconds longer than the system response time to Bell Atlantic. Bell Atlantic testified that its goal has been met for all of its mechanized pre-ordering functions.

Bell Atlantic also testified that Electronic Data Interchange (EDI), a national standard data format, is now available to both reseller and UNE customers for pre-ordering and ordering OSS functions. This represents progress in converting Bell Atlantic’s system interface to conform to national standards.

Bell Atlantic claims it has procedures in place regarding access to poles, ducts, conduits and rights-of-way, information about which is available to competing carriers on request, as well as an 800 number for assistance. Bell Atlantic claims that timeframes are in place where possible but that some aspects of timeframes are situation specific and cannot be determined in advance. Its License Administration Staff is in charge of insuring that time commitments are met and, in the event that unforeseen circumstances result in the need for time extensions, the customer is notified in writing. CLECs, according to Bell Atlantic, will receive the same if not better service than Bell Atlantic provides itself.

In sum, Bell Atlantic avers that no non-cost issues remain; non-discriminatory provisioning is in place. Bell Atlantic sees no need for assigning a manager for New Hampshire CLECs. Currently, each CLEC has an Account Manager who acts as the CLEC's advocate within Bell Atlantic. Bell Atlantic's economies of scale would suffer if every state mandated a state manager. CLECs are well informed about procedure, according to Bell Atlantic. The various procedural handbooks contain lists of the appropriate contacts for specific problems and Section 9.4 of the Bell Atlantic Graphical User Interface User Guide tell CLECs how to access

Bell Atlantic's formal escalation procedure to resolve complaints. Finally, Bell Atlantic points out, a dissatisfied CLEC can seek redress through the Commission pursuant to RSA 365:1 and the Commission's Rules Puc 1311.02 and Puc 1312.04(b). Thus, Bell Atlantic claims it has a formal procedure in place for resolving competing carriers' problems.

2. AT&T - Non-cost Issues

AT&T asserts that the SGAT should not be approved until Bell Atlantic demonstrates the ultimate non-cost test, that of operational readiness. According to AT&T, Bell Atlantic must demonstrate its capacity to provide the SGAT services in a non-discriminatory manner and in commercially reasonable volumes. Such a determination regarding operational readiness requires analysis of OSS tests, which were on-going in New York at the time AT&T filed its testimony and were scheduled for later tests throughout the New England region. Because the OSS testing is crucial to a finding of operational readiness, AT&T argued that the Commission should defer consideration of those issues to a §271 docket in New Hampshire, which would include OSS testing.

In addition to the need to demonstrate operational readiness, AT&T argues that the Bell Atlantic SGAT filing must demonstrate that it provides non-discriminatory access to

poles, ducts, conduits, rights-of-way, and other pathways. According to AT&T, the pathways include all facilities to which competing carriers require access in order to compete effectively, pursuant to the §271 competitive checklist, including manholes, cabinets, panels, boxes, remote terminals, cross-connect cabinets, vaults, risers, etc.

AT&T objects to the SGAT's failure to set provisioning intervals for obtaining access to the pathways and to the SGAT's inclusion of administration fees for preparatory work and for rights-of-way license fees, *inter alia*, citing 47 U.S.C. §224(f) in support of its objections. Section 224(f) mandates that all utilities must grant telecommunications carriers and cable operators non-discriminatory access to all poles, ducts, conduits and rights-of-way owned or controlled by the utility.[23] AT&T claims *inter alia*, that Bell Atlantic's current and standard interconnection agreements contain provisions permitting Bell Atlantic to refuse to grant CLEC requests to modify pathways. According to AT&T, the FCC's interpretation of §224(f) as expressed in its *Local Competition*

[23] Section 224(f)(2) carves out a limited exception allowing electric utilities and ILECs to deny access where there is insufficient capacity or for reasons of safety, reliability and general engineering purposes. In ¶1176 of the *Local Competition First Report and Order,* the FCC expands the scope of this exception, §224(f)(2), to permit ILECs to consider issues of capacity, safety, reliability and engineering when processing attachment requests, provided the consideration is done in a nondiscriminatory manner

First Report and Order and read in conjunction with §251(b)(4) of the TAct constitutes a comprehensive non-discrimination standard which is violated by Bell Atlantic's SGAT. AT&T cites Paragraph 1123 of the *Local Competition First Report and Order* as the goal of that standard: to "ensure that no party can use its control of the enumerated facilities and property to impede, inadvertently or otherwise, the installation and maintenance of telecommunications and cable equipment by those seeking to compete in those fields."

The SGAT, according to AT&T, improperly contains no written procedures and no timeframes for provisioning. AT&T contends that procedures and time frames for provisioning are necessary to insure non-discriminatory provisioning. Without the certainty of process and time lines a CLEC will not have an incentive to plan routes or build infrastructure, nor will regulators be able to measure Bell Atlantic's fair provisioning performance. The bottom-line, according to AT&T, is that competition will be stifled.

Furthermore, AT&T avers, the SGAT unfairly requires CLECs to have a Bell Atlantic representative present at the time construction begins on CLEC projects, but fails to put forth a process for scheduling the project or to state a timeframe within which Bell Atlantic must provide the representative. In

contrast, the SGAT contains specific and abbreviated time intervals by which CLECs must abide. AT&T detailed a number of similar instances which demonstrate discriminatory treatment of CLECs. For instance, the SGAT requires that CLECs indemnify Bell Atlantic for damage caused by CLECs but not vice versa, and requires the removal of CLECs' facilities if Bell Atlantic needs the space, but not vice versa.

AT&T further argued that Bell Atlantic is incapable of providing support parity. Areas of significant concern to AT&T are (1) the degree of manual intervention required for serving CLECs as opposed to Bell Atlantic, (2) insufficient capacity to handle reasonably forecast volumes, (3) problems with the EDI interface, and (4) electronic format provisioning of directory listings.

AT&T recommends that the Commission reject the filed SGAT or, in the alternative, defer approval, as permitted by §252(f)(4), until after the completion of a §271 proceeding. AT&T requests that the Commission, if it nonetheless decides to approve the SGAT, condition approval so that Bell Atlantic cannot refuse to negotiate with any carrier over terms that are contained in the SGAT, in order to prevent the SGAT from being utilized as a barrier to competition.

3. BayRing - Non-cost Issues

Like AT&T, BayRing argues that an SGAT should include provisioning and repair intervals. Failure to include such implementation intervals, BayRing concludes, will enable Bell Atlantic to continue the dilatory practices that have impeded competition in New Hampshire. In support of this position, BayRing detailed the difficulty and delay it experienced in obtaining trunking facilities from Bell Atlantic. After a two month delay during which BayRing sought and received constant, helpful intervention by Commission Staff, trunking was obtained but was installed without diversity. Bell Atlantic's failure to provide diversity resulted in service outages which BayRing claims might otherwise have been significantly mitigated. BayRing also testified to lengthy delays in pole and underground conduit preparation. According to BayRing, the inclusion of provisioning and repair interval requirements in the SGAT will avert these kinds of delays and foster the development of local competition in New Hampshire.

BayRing argues that the language in Section 6 of the SGAT is inadequate to insure non-discriminatory service to resellers. Section 6.2.2.1(C)(1) merely provides that "reasonable priority rules" will dictate the way service orders are filled when service facilities are scarce. BayRing recommends that priority rules be clearly defined and subject

to Commission oversight to insure fair implementation by Bell Atlantic. Section 6.3.2.2(A) permits Bell Atlantic to discontinue services to a reseller's end user for cause without notice. BayRing points out that, as such action will irreparably harm the reseller's relationship with the end user, Bell Atlantic must give notice to the reseller. Section 6.3.2.2(B) should similarly be changed so that Bell Atlantic must cooperate with resellers in the case of suspected fraud by an end user and must not discontinue service without notice to the reseller.

Specific time limits should apply to Bell Atlantic regarding billing, according to BayRing. BayRing argues that Section 6.4.1.3 should include a requirement that Bell Atlantic make billing tapes available to the relevant reseller five days after the billing date. Section 6.4.1.8 should include a requirement that billing disputes be resolved within three months. Furthermore, billing disputes resolved in a reseller's favor should result in a credit to the reseller for disputed amount penalties, whether the reseller pays the disputed bill in advance or not. BayRing argues that Section 6.4.1.8(F) be revised accordingly. Finally, Section 6.4.1.9(B) should not provide Bell Atlantic with any discretion on providing bill

verification information, BayRing avers. In BayRing's view, resellers are simply not liable for unverifiable bills.

4. Staff - Non-cost Issues

Staff witness Forest Livingston testified that the SGAT should include a formal problem resolution process and a formal opportunity for CLECs to review and minimize special construction charges. A formal problem resolution process is necessary, according to Staff, to resolve CLEC-Bell Atlantic problems without Commission involvement. Commission Staff have spent significant time coordinating the communications and problem-solving efforts between CLECs and Bell Atlantic. Staff recommends the formal process include:

> 1) a written complaint presented on a form created for the purpose,
>
> 2) a written response from Bell Atlantic within a specified time presented on a form created for the purpose,
>
> 3) if the response does not satisfy the CLEC's need, a request from the CLEC to the PUC for an expedited formal Commission arbitration process.

According to Staff, this process will enhance the communication between Bell Atlantic and the CLECs and also insure that a dispute is clearly documented for Commission review should that review become necessary.

In addition to a formal resolution process, Staff argues that the SGAT should include a formal opportunity for CLECs to

review and minimize special construction charges for collocation. This process will provide the necessary artificial impetus for Bell Atlantic to keep these charges reasonable. Otherwise, Staff posits, the construction charges will become a barrier to competition. Staff proposes that CLECs have an opportunity for a view of the proposed construction, that Bell Atlantic obtain three bids for the work, and that Bell Atlantic provide the CLEC with a documented rationale for choosing a specified bidder.

Staff's initial prefiled testimony recommended that Bell Atlantic hold quarterly open meetings with all interested CLECs to discuss and resolve common problems. According to Staff's later filed Supplemental Comments, Bell Atlantic voluntarily undertook such quarterly meetings with good effect.

Staff testimony stressed the need for Bell Atlantic to specifically designate at least one manager authorized to assist New Hampshire CLECs to obtain the services committed to by Bell Atlantic. In Staff's view, Bell Atlantic's Regulatory Management Team had been responsive to CLEC problems referred to it by the Commission only after the "normal CLEC support system" failed because of lack of authority to take the necessary actions to meet CLEC commitments.

5. COMMISSION ANALYSIS

The essence of non-cost issues is non-discrimination. Bell Atlantic and all local exchange carriers have a general duty of non-discriminatory interconnection with other telecommunications carriers, non-discriminatory resale, non-discriminatory dialing and numbering access parity, and non-discriminatory access to rights-of-way, pursuant to §§251(a) and (b) of the TAct. Bell Atlantic, as the incumbent LEC, has additional obligations, pursuant to §251(c). Bell Atlantic is obligated to provide interconnection that is at least equal in quality to that provided to itself, to provide non-discriminatory access to UNEs, to offer its retail services for resale without discriminatory conditions, to provide notice of changes that affect the interoperability of carrier networks, and to provide nondiscriminatory collocation.

Paragraphs 1123 through 1186 of the FCC's *Local Competition Third Report and Order* thoroughly discuss non-discriminatory access and §224(f). The FCC commences its discussion with a conclusion that on balance utilities must accommodate requests for access by telecommunications carriers and cable operators. The FCC goes on to establish a few rules and guidelines for providing access. The rule contained in ¶1157 is particularly germane here. The FCC holds that a

utility may not favor itself over other parties with respect to the provision of telecommunications, in particular with respect to attachments to the ILEC's facilities. Therefore, any provisioning priorities established by Bell Atlantic must treat competitors and Bell Atlantic itself as absolute equals.

a) Space and Service Capacity

The FCC specifically addresses the issue of capacity expansion, holding in ¶1162 that the principle of non-discrimination established in §224(f)(1) mandates that the ILEC must take the steps necessary to expand capacity on poles, ducts, conduits, and rights-of-way if and when a carrier so requests. In ¶1163, the FCC notes that the ILEC must first take all reasonable steps to accommodate the request for access, but, in situations where demonstrable safety and reliability concerns arise, the ILEC has authority to deny a request. In any event, costs are to be borne only by the parties directly benefitting from the modification.

We find the FCC's discussion of this issue clear and unambiguous. Bell Atlantic may not include provisions in its SGAT which would deny CLEC's capacity expansion requests. Requests must be accommodated unless demonstrable safety and reliability concerns outweigh the non-discrimination requirement of §224(f)(1).

The same primacy of §224(f)(1)'s non-discrimination requirement applies to Bell Atlantic's reservation of facility space to meet future needs. As the FCC states in ¶1165-1170, the practice could result in denial of access even when unused capacity exists and, hence, threaten the development of competition, directly contrary to the goals of Congress.

AT&T's argument that the TAct's mandate of access to poles, ducts, conduits, and rights-of-way owned or controlled by the ILEC reaches to all possible pathways to interconnection is not supported by the FCC's *Local Competition First Report and Order*. The FCC instead recognizes, in ¶1185, that an over-broad construction of the phrase would impact small incumbent LECs adversely. As the FCC phrases it, §224(f) does not grant access to every piece of equipment or real property owned or controlled by the utility, and the paragraph specifically exempts a utility from making space available on its corporate office roof for a competitor's transmission tower. Nonetheless, the FCC's articulation of such an extreme example leaves an understanding that facilities used in the normal course of service delivery to customers should be available to requesting carriers.

b) Operational Readiness

We are not convinced by AT&T's argument that operational readiness must be demonstrated in this docket. Pursuant to §271(c)(2)(A)(i) and (ii), the fundamental prerequisite to an analysis of Bell Atlantic's §271 application is the existence of approved interconnection agreements or, where no functioning interconnection agreements exist, the existence of an SGAT which is either approved or in effect. The existence of one or the other serves as the basis for analysis as to whether Bell Atlantic has successfully met the fourteen point competitive checklist enumerated in §271(c)(2)(B) of the TAct. Without the existence of one or the other, a §271 analysis cannot go forward. However, approval of an SGAT neither requires nor demonstrates proof that the SGAT functions in conformance with the §271 competitive checklist. As we made clear in our order dated August 25, 1997, Order No. 22,692, this docket deals with an SGAT review, not a §271 application.

Our task is to ascertain that the SGAT itself is a non-discriminatory interconnection agreement. We do not agree with AT&T that operational readiness must be demonstrated in this docket. We will not defer our judgment until after a §271 docket is complete. A positive finding that the SGAT is non-discriminatory is not commensurate with a decision that Bell

Atlantic has successfully met any of its §271 obligations in New Hampshire.

We have determined that our review of the SGAT does not require proof of operational readiness. Therefore, we will not in this docket reach the questions raised by AT&T regarding Bell Atlantic's capacity to handle the expected volume of interconnection requests, nor potential problems with the EDI interface, potential delays by the use of manual intervention, nor potential problems with electronic provisioning of directory listings. Given the lack of an extensive record on these issues in this docket, we believe that it is more appropriate to consider these issues if and when they are raised by AT&T or other CLECs in other dockets.

c) Text Amendments

Our review of the SGAT leads us to mandate certain textual changes in order to make it non-discriminatory on its face. Some of the changes were raised by particular parties, some we raise *sua sponte*. We do not and cannot guarantee that the implementation of every phrase in conjunction with every other phrase contained in the SGAT will be non-discriminatory. Our intent is to direct Bell Atlantic to correct such terminology as appears discriminatory and to provide adequate process for

obtaining redress of any discriminatory effects which occur despite our efforts.

Liability AT&T objected to the liability provisions of the SGAT. Section 4.2.1.3(C) of the revised SGAT filed on August 4, 2000,[24] limits Bell Atlantic's liability to damages to the CLEC's premises caused by Bell Atlantic's gross negligence or willful misconduct. Section 4.2.3.1 limits a CLEC's liability for damages to Bell Atlantic's facilities if the loss or damage is caused by any gross negligence or willful misconduct on the part of the CLEC. Section 4.2.3.1 further holds the CLEC liable for damages to the facilities of Bell Atlantic caused by gross negligence or willful acts of a CLEC's officers, employees, agents or contractors. The wording of these sections differs enough so as to create crucial differences despite what may be an intent to create equal rights.

First, there is an important difference between the terms "willful misconduct" and "willful acts." The presence of misconduct is determined subjectively whereas the presence of an act is determined objectively. There is nothing in the record to justify such a difference. The fact that one phrase

[24] All sections of the SGAT addressed in this portion of this order are contained in the SGAT dated September 9, 1997 as revised and re-filed on August 4, 2000.

applies to the CLEC's officers and the other to Bell Atlantic the corporation does not appear have a material effect; however, in order to constitute non-discriminatory language, the language should be the same. Similarly, there is an unjustified difference between "premises" and "facilities" which could result in different treatment. The language in each case should be "facilities."

Indemnification AT&T objected to the indemnification requirements of the SGAT. Section 4.2.1.3.(D) requires a CLEC to indemnify Bell Atlantic against claims arising from the use of interconnection services. Section 4.2.3.7(B) requires a CLEC to indemnify Bell Atlantic against claims by third persons arising out of the construction, installation, operation, maintenance or removal of CLEC facilities connected to Bell Atlantic interconnection services when such claims are based on the tortious conduct of the CLEC. Section 4.2.3.7C requires a CLEC to indemnify Bell Atlantic against claims by the CLEC or third parties when such claims arise out of any act or omission of the CLEC. We find that the indemnification clauses are reasonable, except as to Section 4.2.**1.**3.7C which appears so broad as to remove a CLEC's right of redress against Bell Atlantic in every situation. Bell Atlantic shall re-draft and file language to clarify what is meant by "arise out of."

Section 4.5.2.2.2C gives Bell Atlantic the right to reserve vacant space in its CO for facility additions planned within three years. This provision violates §224(f)(1), as discussed *supra* at Section III.F.5 (a), and will not be approved.

Section 4.5.2.2.2F requires CLEC personnel to be accompanied by qualified Bell Atlantic representatives in all manhole and vault locations, subject to an escort charge. Paragraph 1182 of the FCC's *Local Competition First Report and Order* recognizes an ILEC's concerns that only properly trained personnel work in proximity to its lines. We find Bell Atlantic's requirement reasonable but too broadly drawn. We direct Bell Atlantic to amend the language to define what "qualified" means or to delete the word, to make the word "representatives" singular, and to include a deadline by which the representative must be provided. In addition, this section must include language to the effect that the requirement for an escort no longer pertains after Bell Atlantic fails to meet a promised deadline without agreement by the requesting carrier. With respect to AT&T's request that the indemnification clause be made reciprocal, we note that the language of the clause does not describe a harm that Bell Atlantic could do to a CLEC. That is, Bell Atlantic will not be using a CLEC's equipment.

Accordingly, we will not require symmetry of the indemnification language, but would entertain a request for such symmetry in the future if it can be shown under what circumstances a need for indemnification could arise.

Section 4.5.2.2.5G permits Bell Atlantic to provide an escort for CLEC personnel, during the installation phase of collocation, in areas outside the CLEC's multiplexing collocation node, subject to appropriate charges. As above, this section must include a deadline by which time the escort shall be provided. This section must also cross-reference the section of the SGAT which defines the "appropriate charges."

Section 4.5.2.2.5H gives the CLEC access to special construction sites at the commencement, during the middle, and at the end of construction; additional access will be provided upon request and subject to appropriate charges. This section fails to define the amount or explain what the appropriate charges cover. No reference is made to the need for an escort; the CLEC is not necessarily venturing beyond its multiplexing collocation node, as covered in 5G above. Further, Bell Atlantic does not charge for its provision of accompaniment and observation pursuant to 5M, discussed below. For all of these reasons, we will deny the charges.

Section 4.5.2.2.5M gives Bell Atlantic discretion to provide a Bell Atlantic employee to accompany and observe CLEC personnel at the CLEC's requested time of entry at no cost to the CLEC. This provision is reasonable. Nonetheless, it must be amended to include language that Bell Atlantic's personnel must adhere to the CLEC's reasonable timetable and that access will not be denied or delayed as a result of the non-appearance of the Bell Atlantic personnel.

Section 4.5.2.2.5N provides that CLECs will have access to their collocated equipment twenty-four hours a day, seven days a week, without a security escort "except as noted in Section 4.5.2.2.5N" (sic). We find this section confusing, even without the obvious typographical error. Assuming the final section reference is to 5M, above, the term "security escort" is used here for the first time. We require the use of the same term in sections where Bell Atlantic means the same thing. Thus, "security escort" should be used in 5G, 5M, 5N, and in 2F, and should be clearly defined.

Section 4.5.2.2.6B makes the CLEC responsible for coordinating with Bell Atlantic to insure that services are installed in accordance with the service request. The CLEC must obtain written approval from Bell Atlantic of its proposed scheduling of work, in order to coordinate the use of temporary

staging areas and other building facilities, which approval will not be unreasonably withheld. We find troubling the absence of any timeframe within which Bell Atlantic must respond to a CLEC's scheduling proposal. The potential for unreasonable delay, even if approval were eventually granted or not withheld unreasonably, makes this provision inadequate. Bell Atlantic is directed to redraft it to specify a reasonable timeframe.

Section 4.5.2.2.6D states that the CLEC must pay a service charge whenever Bell Atlantic identifies a trouble as being on the CLEC side of the Point of Termination. This appears fair but should include the reverse. Bell Atlantic must pay a service charge whenever a CLEC identifies a trouble as being on the Bell Atlantic side of the Point of Termination.

Section 4.5.2.2.8A gives Bell Atlantic the right to reclaim CO collocation space, with prior notice, in order to fulfill its legal and tariff obligations to provide telecommunications services to its customers. We find that this section violates the non-discrimination requirement of §224(f)(1), as discussed above, and will require Bell Atlantic to delete it.

Section 4.5.2.2.8E gives Bell Atlantic the right to rearrange a CLEC's facilities in any conduit system as Bell

Atlantic sees fit in order to accommodate additional facilities of either Bell Atlantic or another CLEC. We find that this section should be amended to read as follows: "Should the Telephone Company need to install additional facilities to any conduit system in which the TC occupies conduit for the purpose of meeting the Telephone Company's own service requirements or for providing for physical collocation for another TC, the Telephone Company will, after notifying the TC of the additional occupancy, rearrange the TC's facilities in the conduit system as reasonably determined by the Telephone Company. This will be done at no cost to the rearranged TC and without disrupting the services provided to the TC's customers, so that the additional facilities of the Telephone Company or other TC may be accommodated."

Section 4.5.2.2.8F permits Bell Atlantic to rearrange a CLEC's facilities "in an emergency;" Bell Atlantic must make "reasonable efforts" to notify the CLEC prior to rearranging the CLEC's facilities located in a conduit, manhole, cable vault, roof space, transmitter/receiver space, riser system or cable support structure. The section also provides that the CLEC will be charged for the rearrangement if the emergency occurs as a result of the CLEC's presence.

We recognize Bell Atlantic's need to respond to extraordinary situations with emergency measures that may necessitate rearranging a CLEC's facilities. We also recognize the need to define those extraordinary situations, at least by example. We will order Bell Atlantic to amend the language of this section to include the following introductory sentence: "An emergency exists when continued service to customers and/or the continued safety of personnel or facilities is in imminent danger."

Section 4.5.2.2.8H gives Bell Atlantic sole discretion to determine that a multiplexing node is not efficiently used within a reasonable amount of time and, with six months notice, to reclaim and reassign space that is not being efficiently used. We find the language of this section unacceptable. Neither the "efficiently used" nor the "reasonable amount of time" is defined, and Bell Atlantic is permitted to step into the shoes of the competing carrier for planning purposes. We will not approve this section as written. We will allow Bell Atlantic to work with Staff to draft language for our consideration that addresses its concerns more narrowly.

Resale provisions

Section 6.2.2.1.(C)(1) authorizes Bell Atlantic to handle service orders in accordance with reasonable, non-

discriminatory but unenunciated priority rules. The SGAT's requirement for non-discriminatory priority rules meets the requirements of the TAct. Nonetheless, clearly enunciated priority rules would be helpful and would avoid delayed or unfair distribution of scarce resources. We will order Bell Atlantic to draft such rules and submit them for our review within 60 days of the issuance of this order.

Section 6.3.2.2.2 permits Bell Atlantic to discontinue service or cancel an application for service without notice to a CLEC in two situations. Notice is not required when Bell Atlantic is under court or government order to cease furnishing services, nor in the event of fraudulent use of the network. We do not understand the absence of notice to the CLEC in either of these situations. Bell Atlantic need not give the CLEC lengthy advance notice but there seems to be no good reason to give the CLEC no notice at all. Even in an emergency situation Bell Atlantic can provide information to the CLEC as to the actions taken and the reasons therefor, and we will so order.

Section 6.4.1.3 deals with billing periods and the charges covered in one bill. As BayRing pointed out, there is no mechanism in this section to assure that CLECs have access to billing tapes within a reasonable time. We find reasonable

BayRing's recommendation that Bell Atlantic make billing tapes available to the relevant reseller five days after the billing date each month. This will provide CLECs with an opportunity to review charges for their end users in a substantially equal manner to that provided to Bell Atlantic.

Section 6.4.1.8 deals with billing disputes between resellers and Bell Atlantic. The resolution process does not specify a timeframe for resolution, nor any requirement for written response by Bell Atlantic. We accept as reasonable BayRing's recommendation for a maximum of three months within which disputes should be resolved. We believe that documentation of dispute resolution adds certainty to the process. Therefore, we will require that both CLECs and Bell Atlantic provide written notifications regarding disputes. We will not require a particular format for such notification at this time, but may revisit the issue if further experience indicates that the Commission's ability to resolve disputes is compromised by the lack of uniformity in issue presentation.

Section 6.4.1.8(F) deals with the crediting of Disputed Amount Penalties and Late Payment Penalties when a dispute is resolved in favor of a Reseller. The Disputed Amount Penalty is defined at Section 6.4.1.8(H)(2)as the disputed amount resolved in the reseller's favor times a penalty factor which

is the lesser of two interest rates listed at (H)(2)(a) and (b). Thus, apparently the Disputed Amount Penalty is only levied in the event the dispute is resolved in favor of the reseller. However, we infer that the Disputed Amount Penalty is levied at such time that any reseller notifies Bell Atlantic that it disputes a billed amount, since Sections 8(D) through (H) refer to credits for a Disputed Amount Penalty.

Although the language is somewhat confusing, it appears that when a dispute is resolved in favor of a non-paying CLEC, the CLEC receives full credit for the Disputed Amount Penalty when the CLEC pays the disputed bill by the regular payment date and pro rata credit when the CLEC pays the disputed bill before the date the resolution is resolved. Thus, a CLEC must pay its disputed bills timely or pay the Disputed Amount Penalty.

We do not have experience with Disputed Amount Penalties, nor is there testimony as to its purpose. We surmise that its purpose is to dissuade CLECs from utilizing billing disputes to take financial advantage of non-payment during the dispute. Such a non-payment grace period is provided in Bell Atlantic's tariff for retail customers who dispute their telephone bills. Since the penalty seems rationally related to the purpose, we do not find the Disputed Amount Penalty unreasonable *per se.*

However, we find the application of the Disputed Amount Penalty as detailed in 6.4.2.8(D)-(H) unreasonable. We will therefore require Bell Atlantic to provide credit for Disputed Amount Penalties any time a dispute is resolved in favor of the Reseller, until such time as Bell Atlantic provides and we approve a different scheme of application.

Section 6.4.1.9(B) states that Bell Atlantic will provide a requesting CLEC with billing verification information "if available." We find that bills which cannot be reasonably verified upon request are bills that are invalid and, therefore, Bell Atlantic must strike this language.

d) Other Non-cost Issues

1. Staff argued forcibly that a formal problem resolution process should be included in the SGAT. Bell Atlantic claims that the process is already in place by virtue of the inclusion of contact personnel. As above regarding billing disputes, 6.4.1.8, and service order priorities, 6.2.2.1(C), we require documented process. Hence, for a complaint to come before the Commission, we direct that the complaining carrier must have first presented it to the other carrier in written form on one page; the responding carrier must respond within 10 business days in written form on one page. Failure to timely respond will give the complaining carrier the immediate right to

request, within 10 business days, an expedited or “fast track” Commission arbitration pursuant to the method awarded and described in Issue 4 and further detailed in Issue 29 of the Arbitrator’s Final Report to the Commission in DE 96-252, dated November 15, 1996, as approved by the Commission in Order No. 22,433 issued December 2, 1996. We also note that mediation (alternative dispute resolution) of a complaint is available if the parties so agree. As part of its merger obligations, Bell Atlantic was required to and did file with the Commission an alternative dispute resolution process.

2. We find merit in Staff’s argument that Bell Atlantic should be required to put special construction projects out for bid. The SGAT’s special construction charges apply only when conditioned CO space is unavailable and new space must be constructed. In the event that Bell Atlantic decides additional space must be constructed to accommodate a CLEC’s request, the requesting CLEC should be permitted to view the CO in order to understand the scale of the project. Within 15 business days, Bell Atlantic should obtain at least two estimates for the work to be done, in addition to an in-house estimate. Before commencing work but in any event no more than 10 business days after receipt of the estimates, Bell Atlantic should notify the CLEC of Bell Atlantic’s choice of contractor

and the reasons for its choice. The requesting CLEC should then decide, and inform Bell Atlantic, within 10 business days whether or not Bell Atlantic should move forward with the special construction.

3. At the time the parties and Staff filed briefs in this docket, we had determined that a separate phase of this proceeding would determine whether Bell Atlantic is required to provide CLECs with combined UNEs other than those already combined. However, later court decisions obviate the need for such consideration. After the Eighth Circuit vacated it, the Supreme Court reinstated the FCC's rule 51.315(b), finding that the FCC's decision to forbid ILECs from separating network elements before leasing them to CLECs was reasonable. Basing its argument on the Supreme Court's reasoning with regard to Rule 51.315(b), the FCC asked the Eighth Circuit to also reinstate rules 51.315(c) through (f), which the Eighth Circuit had similarly vacated and Supreme Court did not address. In its July 18, 2000 order, the Eighth Circuit refused, distinguishing its rationale regarding 51.315(b) from its rationale for vacating (c) through (f). Thus, Bell Atlantic is only required to provide combined UNEs in circumstances where the elements are already combined.

Bell Atlantic filed a revised SGAT on August 4, 2000 to conform with the FCC's rules, hence including pricing for certain UNE combinations: loop and port combinations previously used by Bell Atlantic to provide local exchange and associated switched exchange access services (UNE-Ps). These UNE-P prices are to be modified in light of our decisions herein and filed for our review as compliance filings.

4. Reciprocal compensation for traffic carried by Bell Atlantic for CLECs and vice versa is currently under consideration in Docket No. DT 99-085.

5. On February 1, 2000, BayRing filed a motion in this docket for relief regarding the rates Bell Atlantic had billed BayRing, apparently charged in accordance with the SGAT currently in effect pursuant to Commission Order 22,692, issued August 25, 1997. According to BayRing, the bill presented included charges for the previous 20 months, *i.e.* the length of time since the SGAT went into effect pursuant to §252(f)(3)(b). BayRing sought retroactive substitution of whatever SGAT terms are ultimately approved in this docket pursuant to §252(f)(4). BayRing stated that it filed the motion out of concern about the potential for prejudice to itself and other parties as a result of the length of the proceeding.

Bell Atlantic filed a Motion in Opposition to BayRing's motion. Bell Atlantic denied that the charges were made pursuant to the SGAT, claiming the charges are governed by negotiated interconnection agreements with BayRing. According to Bell Atlantic, BayRing should have utilized the alternative dispute resolution provision contained in its interconnection agreement.

As noted in the Procedural History, *supra* Section I at p. 13, by letter from the Executive Director the Commission acknowledged the motions and announced that an Order of Notice would issue subsequent to the issuance of the Commission's decision in the instant docket, for a new docket to deal with the issues raised in the motions. The Commission Letter directed attention to its statement in Order No. 22,692 that the rates of an SGAT which goes into effect automatically pursuant to §252(f)(3)(b) are considered the equivalent of temporary rates under RSA 378:27.

In response to another letter filed by BayRing on March 30, 2000, Bell Atlantic objected to BayRing's apparent conclusion that the Commission had already approved a retroactive substitution of the ultimately approved SGAT rates. Bell Atlantic argued that, by statute, for the currently effective SGAT rates to be considered temporary rates, the

Commission would have had to have held a properly noticed hearing on the issue. No such hearing having been held, Bell Atlantic related its own understanding of the statement in Order No. 22,692: that the currently effective SGAT rates would be subject to change prospectively when the Commission completes its continuing review under §252(f)(4). However, Bell Atlantic reiterated its argument that BayRing's rates are those contained in interconnection agreements, not those contained in the SGAT.

We find that no hearing has been held to set temporary rates for the duration of this docket, as is required by the plain meaning of the language in RSA 378:27. We opened a separate docket on this matter, DT 00-072, within which, pursuant to our direction in the Commission Letter referenced above, we will consider the arguments of the parties regarding the issues contained in Bayring's Motion.

6. Our current Docket No. DT 01-006, Carrier to Carrier Metrics, will examine standards proposed by Bell Atlantic, now named Verizon New Hampshire, for evaluating carrier-to-carrier performance in New Hampshire. Parties to this docket are on notice that our efforts in that docket may impact decisions on non-cost elements of the SGAT.

We conclude by thanking all of the participants in this docket for their contributions to what has become a sizeable record and for their patience during the Commission's lengthy review of the important issues in this case.

Based upon the foregoing it is hereby

ORDERED, that Conversant's Petition for Late Intervention is granted, with recognition that the record was closed at the time the Petition was filed; and it is

FURTHER ORDERED, that recovery from CLECs of Bell Atlantic's OSS development costs is denied; and it is

FURTHER ORDERED, that Bell Atlantic shall recover its on-going annual OSS costs via a transaction charge to OSS users; and it is

FURTHER ORDERED, that the charge for recovery of on-going annual OSS costs shall be $0.21 per transaction; and it is

FURTHER ORDERED, that non-recurring costs shall be calculated by the method proposed by Bell Atlantic with adjustments to inputs as follows:

Bell Atlantic shall subject its survey time estimates to a weighting of 85-10-5,

Bell Atlantic shall calculate the above ensuing reduction as a percentage and apply the same percentage reduction to the non-survey-SME estimates and Coordination Bureau estimates,

Bell Atlantic shall re-calculate the copper/fiber mix so as to reflect the percentage of fiber feeder that would exist assuming that loops greater than 12,000 feet are fed by fiber,

Bell Atlantic shall assume 50 percent TR-008 IDLC, and

Bell Atlantic shall remove up-front charges for future disconnect costs; and it is

FURTHER ORDERED, that recurring costs for outside plant loop costs shall be calculated for the SGAT by the Telecom Model assuming a 50 percent TR-008 IDLC network and using 12,000 feet as the copper/fiber breakpoint; and it is

FURTHER ORDERED, that loop charges shall be deaveraged as contained in the Stipulation; and it is

FURTHER ORDERED, that recurring costs for switching costs shall be calculated for the SGAT by the method put forward in the Stipulation proposed by Bell Atlantic and Staff, adjusting the installation factor to 36 percent; and it is

FURTHER ORDERED, that Bell Atlantic shall forthwith file with the Commission its method of allocating non-recurring collocation charges on a pro rata basis consistent with ¶51 of the FCC's *Advanced Services Order*; and it is

FURTHER ORDERED, that Bell Atlantic shall not create separate entrances or intermediate arrangements but shall provide direct access to collocation space; and it is

FURTHER ORDERED, that within 30 days of the date of issuance of this order, Bell Atlantic shall file with the Commission current information regarding cage construction

costs for cages actually built in New Hampshire, pursuant to our discussion *supra* at pages 106-108; and it is

FURTHER ORDERED, that Bell Atlantic's proposed non-recurring costs for POT Frames are approved; and it is

FURTHER ORDERED, that Bell Atlantic shall amortize all collocation non-recurring costs for up to 5 years when a CLEC so requests; and it is

FURTHER ORDERED, that Bell Atlantic shall reduce by 20% its proposed non-recurring costs for Engineering and Administration for both physical and virtual collocation; and it is

FURTHER ORDERED, that Bell Atlantic's proposed power charges for collocation are denied; and it is

FURTHER ORDERED, that Bell Atlantic's proposed building space charges are approved; and it is

FURTHER ORDERED, that House and Riser interconnection shall not be limited to the design proposed by Bell Atlantic; and it is

FURTHER ORDERED, that alternate direct connections to House and Riser as discussed herein are permissible subject to capacity availability, equipment standards, and the preservation of Bell Atlantic access needs; and it is

FURTHER ORDERED, that Bell Atlantic shall provide CLECs with direct access to House and Riser cables pursuant to our discussion *supra* at pages 125-127; and it is

FURTHER ORDERED, that the SGAT shall not deny CLEC collocation capacity requests for any reasons other than safety and reliability concerns, which concerns must be demonstrable; and it is

FURTHER ORDERED, that Bell Atlantic shall amend the following sections of the filed SGAT, regarding non-cost issues, pursuant to our directives in Section III.F.5 *supra*:

Section 4.2.1.3,

Section 4.2.3.1,

Section 4.2.3.7,

Section 4.5.2.2.2,

Section 4.5.2.2.5,

Section 4.5.2.2.6,

Section 4.5.2.2.8,

Section 6.2.2.1,

Section 6.3.2.2.2

Section 6.4.1.3,

Section 6.4.1.8,

Section 6.4.1.9; and it is

FURTHER ORDERED, that Bell Atlantic shall amend the SGAT to include a formal dispute resolution process containing the timeframe and Commission arbitration elements described herein; and it is

FURTHER ORDERED, that before commencing any special construction projects Bell Atlantic deems necessary to accommodate a CLEC request for space, Bell Atlantic shall, as discussed herein, permit the CLEC to view the area in question, shall obtain bids, shall explain to the CLEC Bell Atlantic's choice of contractor, and shall permit the CLEC the option to retract its request; and it is

FURTHER ORDERED, that within 45 days from the date of this order, Verizon shall file revised tariffs in compliance with this order for all charges affected hereby, including compliance tariffs for the additional UNEs and currently combined UNEs as required by the Supreme Court and submitted by Verizon on August 4, 2000; and it is

FURTHER ORDERED, that a docket shall be opened, upon receipt of the compliance tariffs, to review the cost support for the additional UNEs and UNE combinations required by the Supreme Court, to which docket the parties to this docket shall be mandatory parties.

By Order of the Public Utilities Commission of New Hampshire this sixth day of July, 2001.

_____	_____	_____
Douglas L. Patch	Susan S. Geiger	Nancy Brockway
Chairman	Commissioner	Commissioner

Attested By:

_____
Kimberly Nolin Smith
Assistant Secretary