building their own facilities. *Id.* at 816. Where they want to provide services that they cannot technically offer over the incumbents' facilities, the new entrants will have an incentive to deploy their own advanced facilities in order to obtain a competitive advantage over the incumbent. By contrast, conscripting the incumbent into forced labor to modify its own network at the behest of any competitor would undermine these incentives and ultimately deter, rather than promote, facilities-based competition for advanced services.

Turning every incumbent local exchange carrier into a construction company for its competitors also would undermine the incumbent's ability to operate efficiently. Not only would it have to maintain a workforce sufficient to meet its own needs, its carrier of last resort obligations, and the obligations imposed by the 1996 Act, but it also would need to retain and devote substantial additional resources in order to meet an uncertain number of varying demands from its competitors, with no assurance that the costs of these additional resources could ever be recovered fully. Ultimately, this will harm consumers, because they will need to foot the bill for these unnecessary costs, and because their service could be impacted if resources are diverted from maintenance of their services.

There also are technical problems with the Commission's proposal. Conditioning a loop for one advanced service does not necessarily mean that the loop will support other advanced services. If electronics are added to a loop to enable it to support ISDN, for example, the presence of those electronics could disqualify that loop for ADSL. Therefore, an incumbent could not meet a general request to condition loops to support a variety of advanced services, as the Commission appears to require, and it may be technically feasible to condition a loop for one advanced service but not for another. Notice at ¶ 53. Moreover,

introducing a new advanced service into an existing binder group could interfere with advanced services already being providing through other pairs in that binder group, or even in an adjacent group. This is because, at the frequencies at which these services operate, one service may cause induction interference to another service in pairs that are in close proximity. As a result, in order to maintain service to existing customers, it would be necessary to divert any interfering advanced services onto pairs in a different binder group.

C. The Commission Should Continue To Allow Incumbent Carriers To Manage Loop Spectrum In Accordance With Their Nondiscrimination Obligations.

The Commission should not attempt to regulate loop spectrum. The technology for advanced services is, by definition, new and evolving. Any attempt by the Commission to set spectrum management rules would impede the development and deployment of these new technologies. The Commission should instead require local exchange carriers to manage loop spectrum in accordance with their non-discrimination obligations, at least until national standards for spectrum management are developed

The Commission should facilitate the management of loop spectrum by requiring all carriers to disclose to the incumbent the performance and spectrum utilization of the technologies they use to provide advanced services over the incumbent carrier's loops. As Bell Atlantic's Vice President for New Service Technology demonstrates in his attached declaration, technologies such as xDSL that operate at high power levels interfere with other services provided over loops in the same binder group and even, in some cases, adjacent binder groups. *See* Declaration of Mark A. Wegleitner at ¶ 6. To protect against this interference, the incumbent carrier must know the characteristics of the technology a carrier wishes to deploy and the specific type of loops over which they intend to use the technology.

See id. Mr. Wegleitner explains that the alternative -- having the incumbent investigate and remedy interference once it is discovered -- is unworkable. If interference is detected in a binder group, or in an adjacent binder group, each loop in the binder group must be shut down to isolate the problem, and this would impair customer service. The other option is to test each pair in the binder group manually. Both solutions are time consuming, inexact and expensive. *See id.* at ¶ 7.

D. The Commission Should Reaffirm That A Carrier Purchasing A Local Loop As An Unbundled Network Element Obtains The Exclusive Right To Use That Loop.

There is no reason to consider a requirement that would allow multiple carriers to purchase spectrum capacity on a single unbundled loop. The Commission has already determined that a carrier purchasing an unbundled element is purchasing the right to exclusive access or use of the entire element. It is not purchasing an access service, such as spectrum capacity on a single loop.

In the *Local Competition Order*, the Commission found that "[w]hen interexchange carriers purchase unbundled elements from incumbents, they are not purchasing exchange access 'services'. They are purchasing a different product, and that product is the right to exclusive access or use of an entire element." *Local Competition Order* at ¶ 358. A carrier purchasing a local loop as an unbundled network element "will have to provide whatever services are requested by the customers to whom those loops are dedicated . . . both local and long distance services." *Id.* at ¶ 357. Accordingly, "interexchange carriers purchasing unbundled loops will most often not be able to provide solely interexchange services over those loops." *Id.*

The same reasoning applies to advanced services. If a common carrier purchases a loop as an unbundled network element, under this reasoning it will have to provide whatever services are requested by the customer served by that loop, including advanced and voice services. The Commission's order would prohibit carriers purchasing unbundled loops from providing solely advanced services over those loops.

E. There Is No Need To Establish Standards Here For The Attachment Of Electronic Equipment At The Central Office End Of A Loop.

It is entirely premature and unnecessary for the Commission to consider setting standards for the attachment of equipment at the central office end of a loop. The technology for advanced services, such as xDSL, is still in its infancy and developing very rapidly. Any attempt by the Commission to set standards would impede the development and deployment of new innovative technologies. Instead, it should leave standards-setting to the normal standards process, once the technology is sufficiently settled to permit national standards.

Moreover, carriers are already attaching equipment at the central office end of loops to offer advanced services. Bell Atlantic is unaware of any problems resulting from the absence of Commission-imposed equipment standards. As new, innovative equipment is developed, that equipment is being tested with the current network to ensure its performance. Commission-prescribed standards could constrain that process and retard innovation. The Commission should therefore continue to allow industry standards bodies to set technical standards for the equipment used to provide advanced services.

In addition, the Commission should not apply Part 68 rules to central office equipment, as it suggests. Part 68 rules are limited in scope to ensure that connection of customer premises equipment will not harm the telephone network. Connection of

equipment in the central office is far more complex and requires very different standards. Rather than attempting to develop a new set of rules, however, the Commission should endorse use of industry-wide central office standards while giving each carrier the flexibility to determine appropriate requirements to meet the needs of a particular office. So long as those requirements are applied on a non-discriminatory basis, competition will not be impacted.

F. There Is No Reason For The Commission To Require Subloop Unbundling Of Loops With Digital Loop Carriers or Remote Terminals.

There is no reason for the Commission to require subloop unbundling of loops that are configured with digital loop carriers or remote terminals. The Commission has already found that it is inappropriate to require subloop unbundling and nothing has changed that would justify a reversal of that finding.

In the *Local Competition Order*, the Commission found that proponents of subloop unbundling had failed to address technical issues regarding network reliability, service quality and the risk of service disruption. The Commission therefore concluded that "the technical feasibility of subloop unbundling is best addressed at the state level on a case-by-case basis." *Local Competition Order*, ¶ 391

The situation is no different today for loops served by remote terminals. Providing access to loop concentration points by competitors would increase the risk of error by a competitor's technicians that may disrupt service to customers of one or both carriers. There is still no technology that would eliminate or substantially reduce this risk. Moreover, the

lack of technical standards for sub-loop elements and the absence of overall responsibility for loop performance is very likely to degrade overall service quality.

The Commission should continue to allow states to address subloop unbundling issues on a case-by-case basis. They are closer to the local issues and are better equipped to address the numerous technical and operational issues associated with subloop unbundling.

V. THE COMMISSION SHOULD UPHOLD ITS PRIOR DETERMINATION THAT ACCESS SERVICES ARE NOT RETAIL SERVICES SUBJECT TO THE WHOLESALE DISCOUNT PROVISIONS OF SECTION 251(C)(4).

A. The Commission Has Already Determined That Access Services Are Not Retail Services And Are Not Subject To Wholesale Pricing Requirements.

In the *Local Competition Order*, the Commission correctly concluded that exchange access services should not be subject to the wholesale discount requirements of Section 251(c)(4). The Commission now proposes to impose wholesale discount requirements on advanced services offered as exchange access services under access tariffs. There is no reason for the Commission to reverse its prior decision.

The Commission earlier found "several compelling reasons to conclude that exchange access services should not be subject to resale requirements." Exchange access services are "fundamentally non-retail services" and the fact that they are offered pursuant to tariffs that do not restrict their availability "does not alter the essential nature of these services." *Local Competition Order*, ¶ 874. Moreover, "because access services are designed for, and sold . . . as an input component to . . . retail services, LEC's would not avoid any 'retail' costs when offering these services at 'wholesale.'" *Id.*, ¶ 874. As the Commission explained, "Congress clearly intended section 251(c)(4) to apply to services targeted to end user subscribers.

because only those services would involve an appreciable level of avoided costs that could be used to generate a wholesale rate." *Id.*

These compelling reasons apply with equal force to advanced services offered as exchange access services. These are "fundamentally non-retail services" because they are designed for and sold as input components to retail Internet services. For example, Bell Atlantic's exchange access DSL service cannot, by itself, be used by an end user to gain access to the Internet. Instead, competing carriers and Internet Service Providers will need to package these DSL exchange access services with other Internet services, such as e-mail and an "on-ramp" to the Internet, and offer these packages as retail services to end users.

The fact that some large end users might purchase these xDSL exchange access services directly from an access tariff and create their own Internet service package is no different from what they can do today when they purchase exchange access service to create their own long distance service. In either case, the direct purchase of exchange access services by large end users does not change the fundamentally non-retail character of exchange access services.

Moreover, the costs of providing DSL exchange access services to Internet Service Providers and to competing carriers are essentially the same. There are no retail costs associated with providing these services to Internet Service Providers that Bell Atlantic would avoid when providing them to competing carriers. They are therefore not the types of retail services that Congress required be made available at an "avoided cost" wholesale discount.

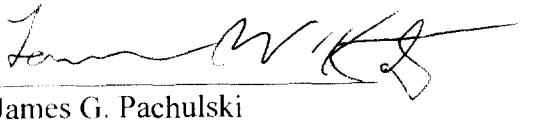
B. Imposing Wholesale Pricing Requirements On DSL Services Provided As Exchange Access Services Under Access Tariffs Will Create An Incentive For Internet Service Providers To Game The Regulatory System To Qualify For Wholesale Discounts.

Bell Atlantic expects that carriers and Internet Service Providers will purchase DSL services from Bell Atlantic's access tariffs for the same purpose – to package these access services with other Internet services and offer them to end users in competition with one another. But if the Commission were to impose wholesale pricing requirements on DSL services at levels similar to those provided for other services when they are provided as exchange access services under access tariffs, it would create a significant difference between the price that competing carriers and Internet Service Providers pay for these services. This price disparity will create a strong incentive for Internet Service Providers to game the regulatory process and become "carriers" just to obtain the wholesale discount, even though those discounts would not cover "avoided costs," which simply do not exist for DSL services.

Internet service providers have already begun setting up shop as "carriers" for the sole purpose of getting paid reciprocal compensation for the Internet traffic that is delivered to them. One example is illustrative: During the first quarter of this year alone, just one of these "carriers" that provides no dial tone to anyone, sends essentially no traffic to Bell Atlantic, and whose customer service representative says is not offering local telephone service, collected several million dollars in reciprocal compensation – all to provide the same Internet service it provided before it re-labeled itself a "carrier." The lure of wholesale discounts would undoubtedly drive even more Internet Service Providers to pretend they are "carriers."

In any event, it simply isn't possible to maintain a significant price difference for the access services that carriers and Internet Service Providers use to provide Internet service packages to end users in competition with one another. Internet Service Providers will either figure out a way to obtain the wholesale discount by masquerading as "carriers" or stop purchasing these access services.

Respectfully submitted,



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September 25, 1998

CERTIFICATE OF SERVICE

I hereby certify that on this 25th day of September, 1998 a copy of the foregoing "Comments" was served on the parties on the attached list.

Jennifer L. Hoh

* Via hand delivery.

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ATTACHMENT A

DECLARATION OF DONALD E. ALBERT

Donald E. Albert, hereby declare as follows

1. I am Network Services Director of Competing Local Exchange Carrier ("CLEC") Implementation for Bell Atlantic Network Services, Inc. In that position, I am directly involved with the negotiation of CLEC interconnection agreements and the network implementation of co-carrier, unbundling, interconnection and collocation arrangements throughout the Bell Atlantic region. I am responsible for many of the network engineering and operational aspects of implementing the Telecommunications Act of 1996 (Act) and the Commission's orders in CC Docket No. 96-98 – the Local Competition proceeding

2. I am familiar with the Commission's Notice of Proposed Rulemaking in CC Docket No. 98-147, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*. In that proceeding, the Commission suggests "cageless" physical collocation as a means of expanding the number of available central offices in which physical collocation can be accommodated and increasing the number of physical collocators in a given office. Although the Commission does not define "cageless" collocation, I have previously testified in several state proceedings in which one or more CLECs have introduced cageless collocation proposals. These proposals, which no Bell Atlantic state has adopted, would allow the CLECs to place equipment in the portion of Bell Atlantic's central offices which Bell Atlantic uses to provide local telephone service, exchange access, and other services to its customers, including to other carriers. This is in contrast to the present physical collocation arrangements in which

competitors' equipment is placed in separate cages in a separate, secured portion of the central office. Under these existing arrangements, competitors' employees are not afforded access to other areas of the central office.

3. In my view, allowing multiple carriers to place multiple pieces of equipment throughout Bell Atlantic's central offices would create serious security, network reliability, operational, and accountability problems. In our current telecommunications environment, CLECs, Competitive Access Providers, and interexchange carriers all collocate equipment in incumbent local exchange carriers' central offices. A single Bell Atlantic central office may have six or more collocating carriers. This number will continue to grow as additional carriers request collocation as permitted by the Act for interconnection and access to unbundled network elements.

4. The ability of an unspecified number of employees, from a number of companies, to have access to portions of Bell Atlantic's central offices that houses Bell Atlantic's equipment creates service quality accountability problems and will substantially increase the potential for network outages. Located in Bell Atlantic's central offices is telecommunications equipment that can affect millions of Bell Atlantic's customers (e.g. The Signal Transfer Points of Bell Atlantic's Signaling System Seven Network), equipment that provides E911 services, fiber optic systems carrying thousands of individual circuits, switches providing dial tone to 50,000 or more end users, and critical high capacity data services

5. Bell Atlantic and other carriers generally use the same or similar equipment to perform similar network functions. Although specific items of equipment may be different, or may be of different vintages or have different modifications (including plug-ins), much of this equipment looks the same. Even if CLECs employ well-trained, conscientious technicians,

human errors will happen. A commingled cageless environment is a ticking time bomb where a competitor's technician could mistakenly open the wrong equipment cabinet and begin to remove plug-ins, thereby adversely affecting Bell Atlantic's customer service. Or a competitor's technician could mistakenly open a Bell Atlantic cabinet on a type of equipment where the technician needs to be grounded with a grounding strap and the resulting static discharge would affect Bell Atlantic equipment and service. Bell Atlantic spends millions of dollars on equipment and labor to minimize the potential of major service failures and disruptions. Allowing a wide-open cageless collocation environment would increase the risks and inevitable occurrence of human error network failures.

6. Commingling of different companies' equipment also increases the possibility of loss of property. Although on the surface it may sound like crying wolf, human beings are still human beings, and commingled cageless collocation will significantly increase the quantity of people, from a number of companies, that have unrestricted access throughout Bell Atlantic's central offices. A number of Bell Atlantic's central office buildings are "unmanned", or only have full time employees assigned during the day. There are many non-secured areas of Bell Atlantic's central offices which contain certain equipment such as portable test sets and thousands of plug-in equipment cards, ranging in value up to $25,000 per card. While this equipment is readily available to Bell Atlantic's technicians for use on Bell Atlantic's equipment, unrestricted access by the CLEC's technicians would make this equipment accessible to them as well. Conversely, the CLEC's technicians may leave behind similar equipment that could become commingled with Bell Atlantic's equipment creating the potential for confusion. In addition, since collocated carriers use much of the same equipment as Bell Atlantic, it is possible that a technician who discovers a defective plug-in card in their equipment, could remove a bad

card from their equipment and swap it with a good card from Bell Atlantic's (or another carrier's) equipment. This situation has occurred on customer premises where equipment from multiple carriers is often not secured.

7. Allowing CLECs to locate equipment in close proximity to Bell Atlantic equipment may also increase the risk to the integrity of the central office and personnel working in that office. A case in point is a recent incident involving collocated equipment that had not yet been certified as complying with Network Equipment and Building Specifications (NEBS) standards, despite assurances from the manufacturer that it would meet NEBS tests. Soon after it was installed, but before it was activated, it failed fire-retardant tests and nearly caused the personnel conducting the tests to be overcome by smoke. If that equipment had been activated and subjected to fire or high heat, Bell Atlantic equipment in close proximity could have been severely damaged and Bell Atlantic's customers could have lost service. In addition, personnel working in the office could have been injured. Before it could be used, the manufacturer had to engage in major re-design of the equipment to meet NEBS standards.

8. In another instance, a collocator placed equipment in its cage that had not yet been NEBS tested without informing Bell Atlantic. When asked to deactivate the equipment, the collocator refused, and both the collocator and manufacturer claimed that it was unlikely that the equipment would fail the NEBS tests. In fact, when tested, the units failed to meet NEBS emissions standards. The collocator needed to turn off the units and replace them with redesigned equipment that met those standards. If they had not been replaced, significant harm to Bell Atlantic's own equipment and its customer's services could have occurred.

9. Bell Atlantic is responsible for the levels of customer service provided to all users of Bell Atlantic's network, including financial and contractual obligations to CLECs and some large

business customers. Unrestricted access by the employees of multiple carriers throughout Bell Atlantic's central offices will not only create the very real potential for more network failures, often it will not be possible to tell which employee of which company caused a failure to occur.

10. Video surveillance cameras and card key access, which some competitors have proposed in state proceedings, are inadequate in a multi-carrier environment, because they are reactive types of security that may identify the responsible party only after an incident has occurred. Cameras are not proactive and do not provide the same assured security that is accomplished by segregated physical access. Cameras will not prevent human errors that could occur if technicians work on the wrong equipment. With video surveillance, the horse is already out of the barn, and Bell Atlantic's obligation is to prevent service problems, not to view outages as they occur or assess the blame after the fact. Commingling ignores Bell Atlantic's right to protect its network, a right that under these proposals would continue to be enjoyed by all carriers except the incumbent local exchange carriers that have the carrier of last resort obligations. Bell Atlantic requires a prevention scheme rather than a detection or recovery system to ensure that accidents and/or malicious destruction is avoided. This requirement ensures the provision of service quality to our customers. A recovery system is secondary to the primary goal of service assurance.

11. For carriers that prefer not to place equipment in physically separate areas of the central office, Bell Atlantic makes virtual collocation available in all central offices, including those in which it also provides physical arrangements. Virtual collocation has been used in Bell Atlantic since 1994. Bell Atlantic now has over 320 virtual collocation arrangements completed or under construction. In many cases, collocators have decided to use virtual collocation in central offices where physical collocation is also available. In addition, there are two CLECs

who so far have found it cost effective to use only virtual collocation to deploy their equipment. A number of the carriers using virtual collocation are gaining access to unbundled local loops through the arrangement.

12. Virtual collocation does not require any more resources than non-secure cageless collocation. Under the latter, the collocator would be required to provide personnel to install and maintain its own equipment. Under virtual collocation, fewer collocator resources are required because Bell Atlantic's technicians will maintain the hardware virtually collocated in the central office. Besides the direct costs, however, non-secure cageless collocation will create large costs both for Bell Atlantic and for all telecommunications users, as the risks of network disruption unnecessarily rise.

13. Implementing non-secure cageless collocation in a given central office will take just as long as implementing virtual collocation in the same central office. There are no equipment or operational installation differences, and no differences in required work activities between the two arrangements.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on September 24th, 1998

Donald E. Albert

ATTACHMENT B

DECLARATION OF MARK A. WEGLEITNER

I, Mark A. Wegleitner, hereby declare as follows:

1. I am Vice President, New Services Technology for Bell Atlantic Network Services, Inc. In this position, I am responsible for planning and managing the development of new services such as asymmetric digital subscriber line (ADSL) services, throughout Bell Atlantic's service area.

2. I am familiar with the Commission's Notice of Proposed Rulemaking in CC Docket No. 98-147, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*. In that proceeding, the Commission has proposed that incumbent local exchange carriers could deploy advanced services in an affiliate that would be freed from certain unbundling, resale and interconnection requirements, and would be eligible for other limited regulatory relief. The Commission has also proposed that this "advanced services affiliate" be subject to structural separation rules similar to those set forth in Section 272 of the Telecommunications Act of 1996.

3. Bell Atlantic has deployed early generation ADSL equipment for trial purposes in wire centers in Northern Virginia, Boston, Ithaca, and Pittsburgh, and is now deploying next generation ADSL equipment for commercial service in the Pittsburgh, Philadelphia, Washington DC and Northern New Jersey areas. It plans to deploy ADSL in approximately 65 wire centers by early 1999, and in approximately 140 additional wire centers by the end of 1999. I estimate that if Bell Atlantic were to halt this deployment in its incumbent operating telephone companies

and deploy ADSL in an advanced services affiliate, it would not be able to offer ADSL service commercially until at least the second half of 1999, and the number of wire centers where ADSL would be available by the end of 1999 would be reduced by at least 30% from current projections. This estimate does not take into account any significant delays in securing certification from state commissions for the advanced services affiliate to the extent they are required.

4. The Commission's proposed rules would prohibit employees of the incumbent operating telephone companies from performing installation, maintenance and repair for the advanced services affiliate. Today these employees perform such functions for traditional services as well as for advanced services such as ADSL. Since the nature of the work is similar for voice and data services and is performed at the same locations, it is most efficient to have network operations work for voice and data services performed by the same employees. If Bell Atlantic were required to use separate employees solely for advanced services, it would sacrifice these efficiencies. I estimate that, as DSL penetration increases, the inefficiency introduced by the organizational restructure could lead to as much as a 50% increase in the total number of Bell Atlantic employees required to offer ADSL over the number of employees that would be required if these services were provided by the existing operating telephone companies. A similar duplication of resources would also occur if the advanced services affiliate were required to have separate product management, technology planning, sales and other employees.

5. I have analyzed the cost impact of offering ADSL as a stand alone service in an advanced services affiliate. Assuming no resale or other provision of voice services, this would require the affiliate to provision ADSL over a dedicated loop, rather than use the single loop for both voice and ADSL services, as incumbent and competitive carriers currently are able to do.

My analysis assumes that the affiliate could share operations, marketing, development and other functions with the incumbent, or obtain these functions at equivalent cost. Even with these assumptions, I estimate that such an arrangement could increase the cost of residential ADSL by 50% or more.

6. One of my responsibilities in my current position is to help ensure that new services provisioned over Bell Atlantic's network, and particularly its local loops, do not cause undue interference with other services. I have as part of this responsibility analyzed the potential interference caused by xDSL and other services. I have concluded that xDSL services operating at high signal power levels, can interfere with other services provided over loops in the same or even adjacent binder groups. In fact, I have concluded that loop technologies operating even at standard signal power levels may affect other services in the same or adjacent binder groups. To protect against this interference, Bell Atlantic requires carriers to disclose the power spectral density characteristics of the technology the carrier wishes to deploy on a particular unbundled loop. With this information, Bell Atlantic is better able to determine whether the technology will cause interference.

7. The alternative to spectrum management signal power limitations and assignment guidelines is to investigate and isolate interference after it begins to occur. There are two ways to do this. One is to shut down each loop one at a time in a binder group where interference is detected. When the offending loop is shut down and the interference ends, Bell Atlantic can identify that loop as the cause of the problem. This operation, however, takes the customer out of service for the period of the test. The other is to test the power level of each loop in a binder group. To be effective, this method may require testing at both ends of the loop. Currently, both these tests must be done manually, and are thus time consuming, expensive, and

often inexact. In addition, special test equipment is required, and the trouble may only be apparent when data is being sent or received. Until the problem can be remedied, other customers who receive services over loops in the binder group where interference is present will often have their service degraded or interrupted.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on September 24, 1998

Mark A. Wegleitner