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**BEFORE**  
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**THE PUBLIC UTILITIES COMMISSION OF OHIO**

PUGO

In the Matter of the Application )  
of Cincinnati Bell Telephone Company )  
for Approval of Retail Pricing Plan ) Case No. 96-899-TP-ALT  
Which May Result in Future Rate )  
Increases and for a New Alternative )  
Regulation Plan. )

**TESTIMONY**

**OF**

**Allen R. Francis**

**On Behalf of  
The Staff of The Public Utilities Commission Of Ohio**

**March 19, 1999**

**(Public Version)**

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**I. INTRODUCTION**

**Q. Please state your name and business address.**

**A. My name is Allen R. Francis. My business address is 180 East Broad Street, Columbus, Ohio 43215.**

**Q. By who are you employed?**

**A. I am employed by the Public Utilities Commission of Ohio ("Commission" or "PUCO").**

**Q. What is your current position with the Commission and what are your duties?**

**A. I am presently a Policy Specialist in the Telecommunication Division, Utilities Department. The primary duties of my position include: arbitrating and mediating interconnection agreements, reviewing filed and draft applications of telephone utilities for compliance with Commission established guidelines, analyzing rate structures, and analyzing tariffs and cost studies. In support of this analysis, I prepare portions of Staff Reports of Investigation and offer testimony in Commission cases.**

**Q. Would you briefly state your work experience and background?**

1           A.     I joined the Commission as a Utility Rate Analyst II in 1987. I was  
2                   promoted to Utilities Rate Analyst Coordinator in March 1994. I assumed  
3                   my current position in October 1996. Prior to that, I held the position of  
4                   Methods Analyst with Rockwell International where I participated in the  
5                   development of its operational computerized inventory control tracking  
6                   system. Prior to that, I was manager of Ohio Oil Equipment Company  
7                   where I was responsible for product costing and inventory control systems.  
8                   I also spent several years in the field of aviation with responsibilities in the  
9                   area of aircraft systems.

10  
11          **Q.     What is your educational background?**

12          A.     I hold a Bachelor of Science Degree in Business Administration from  
13                   Franklin University and an Associate Degree in Business Management  
14                   from Columbus State University. Additionally, I have taken courses in  
15                   electronic engineering from Columbus State University. I have also  
16                   received a large amount of training in the telecommunications field from  
17                   the industry through workshops, seminars, and special focused training  
18                   from companies such as AT&T, Cincinnati Bell, Ameritech and others.

19  
20          **Q.     Have you previously testified before this Commission?**

21          A.     Yes, I provided testimony in Ameritech's Alternative Regulation  
22                   Proceeding, Case No. 93-487-TP-ALT. Additionally, I sponsored Staff

1 Exhibits, Nationwide State Status on Caller ID Service, *In the matter of*  
2 *Ohio Bell Telephone Company application to establish regulations for*  
3 *Advanced Custom Calling Services, Case No. 90-467-TP-ATA and 90-*  
4 *471-TP-ATA.*

5  
6 **Q. Have you ever been published?**

7 **A.** Yes, results of my investigation into nationwide state status on Caller ID  
8 service were published by The National Regulatory Research Institute in  
9 September 1992, "Utility Customers Information: Privacy and  
10 Competitive Implications."

11  
12 **II. Purpose of Testimony**

13  
14 **Q. What is the purpose of your testimony in this proceeding?**

15 **A.** I will address Staff's position and recommendations as they relate to  
16 CBT's Total Element Long Run Incremental Cost (TELRIC) study  
17 provided in support of its unbundled loop pricing proposal. I will further  
18 address the study assumptions used by CBT in developing TELRICs for  
19 the unbundled loop. Specifically, I will address Staff's recommendation  
20 related to CBT's unbundled loop cable investment calculation, field code  
21 development, and fill factors. Additionally, I will address Staff's  
22 recommendation to CBT's proposal to include all "new cost" in its Annual

1 Charge Factor (ACF) calculation; CBT's proposed factor files for power  
2 and common equipment factors, land and building factors. Lastly, I will  
3 address Staff recommendation to CBT's non-recurring charges associated  
4 with its provisioning of the unbundled loops.

5  
6 I am also responding to CBT's Objections 94, 97, 98, 100, 101, 102, 103,  
7 104, 105, 106; AT&T Objections 18, 24, 30 - 38; MCI Objections 30, 31,  
8 40 - 49.

9  
10 **III. New Cost In Annual Charge Factor (CBT 94, MCI 30)**

11 **Q. Did Staff recommend in the Staff Report that the new cost component**  
12 **of the ACF be removed from the ACF and included in CBT's access to**  
13 **its Operation Support Systems (OSS) TELRIC study?**

14 **A.** Yes, for two reasons, first, it is my non-legal reading of the FCC Rule  
15 51.319 (f)(1) (*"Operations support systems functions consist of pre-*  
16 *ordering, ordering, provisioning, maintenance and repair, and billing*  
17 *functions supported by an incumbent LEC's databases and information"*)  
18 which leads me to believe that the functions which CBT is attempting to  
19 identify and recover in its ACF factor appear to be OSS related. Second,  
20 in an attempt to verify the reasonableness of CBT's new costs, Staff  
21 submitted Data Request No. 90. CBT's response to Data Request No. 90  
22 did not provide a basis to verify the reasonableness of the new costs nor

1 did it provide enough information to determine the functions being  
2 performed.

3  
4 **Q. Is it your determination that CBT will not incur costs to implement**  
5 **and provide unbundled network elements, as CBT suggests?**

6 **A.** No, actually I believe CBT will likely incur costs associated with the  
7 provisioning of unbundled network elements (UNEs).

8  
9 **Q. Should CBT be afforded the opportunity to recover those types of**  
10 **costs?**

11 **A.** Yes, but I believe they should be recovered in a separate TELRIC  
12 supporting the OSS UNE, as discussed in Ms. Soliman's direct testimony.  
13 Further, if the Commission agrees with Staff's recommendations to  
14 remove the "new cost" from the ACF and for CBT to provide a separate  
15 TELRIC study for access to OSS functions, then CBT must provide  
16 sufficient support for its proposed new cost. I am recommending that the  
17 determination of the reasonableness of the OSS new cost be done within  
18 the review of the TELRIC for access to OSS functions and not here.

19  
20 **Q. CBT suggests that a significant portion of these new costs are not**  
21 **associated with OSS functions and that it would be inappropriate to**

1 include 100% of the new costs in an OSS TELRIC study (page 6 of  
2 Mr. Mette's December 23, 1997 testimony), do you agree?

3 A. If CBT would have supported this claim then I would have agreed. It  
4 would not be appropriate to recommend that CBT attempt to recover costs  
5 in an OSS TELRIC that were not OSS related. Based on CBT's  
6 supporting documents, I have not been able to determine what new costs  
7 are not related to OSS. Therefore, my recommendation is to remove all of  
8 the new costs from the ACF calculation.

9  
10 Q. How would you recommend that CBT recover new costs that are not  
11 OSS related?

12 A. Although I do not know what costs these would be given CBT's lack of  
13 support. If it were the case, I believe that CBT's original proposal to  
14 include these costs as shared costs in the ACF factor is one reasonable  
15 method. However, if it is determined that these costs are to be included in  
16 the ACF I would recommend that these costs only be recovered for a  
17 certain period of time. This is because CBT will be allocating one-time  
18 up-front costs not recurring costs. I believe that CBT should track the  
19 recovery of these costs and after the point in which the costs are recovered  
20 CBT should remove the new cost factor from the ACF.  
21



1 To the extent that CBT could separately identify new costs, a second  
2 reasonable method would be for CBT to include the new costs in the rate  
3 structure for the UNE that is responsible for causing the costs.  
4

5 **IV. Unbundled Loop NRC (Time Estimates) (CBT 97, MCI 40 & 48, AT&T 30,**  
6 **and Staff Report 114)**  
7

8 **Q. Can you respond to Mr. Mette's supplemental testimony at pages 27-**  
9 **29 in which he discusses CBT's latest non-recurring rate structure**  
10 **proposal?**

11 **A.** As discussed in more detail below, CBT originally proposed a non-  
12 recurring Service Order charge and a Line Connection charge for when a  
13 New Entrant Carrier (NEC) orders an existing unbundled loop. For a non-  
14 existing (new) unbundled loop, CBT proposed a non-recurring Loop  
15 Establishment charge. CBT is now proposing a per-order service order  
16 charge and a per-loop connection charge for both existing and non-existing  
17 loops. An existing loop is also referred to as a migration loop and a non-  
18 existing loop is referred to as a new loop. Although the current rate  
19 structure for both a migration loop and new loop are the same, the current  
20 proposed charges are different from each other.  
21

22 **Q. Do you agree with CBT's new proposal?**

1           A.     I believe that the new rate structure proposal is reasonable and is a move in  
2                 the same direction as recommended in the Staff Report. However, Mr.  
3                 Mette stated that the new proposal is based on the original non-recurring  
4                 cost study. This leaves me with the concerns I discuss below. Therefore,  
5                 my testimony is focused on CBT's original non-recurring cost study and  
6                 rate structure.

7  
8           **Q.     Did you analyze CBT latest proposed NRC rate structure charges?**

9           A.     Yes. However, it was not until CBT submitted CBT Exhibit 13 and late  
10                filed Exhibit 14, that I was able to successfully duplicate Mr. Mette's  
11                calculations as he explains them in his testimony. Exhibit 13 and 14 are  
12                spreadsheets that provide a mapping that shows how the different  
13                components of the NRC cost are calculated together to derive at Mr.  
14                Mette's new proposed rate structure.

15  
16          **Q.     What is Staff's recommendation related to CBT's non-recurring cost**  
17                **development associated with the provisioning of a non-existing (new)**  
18                **unbundled loop?**

19  
20          A.     CBT's has developed its service order cost based on its current service  
21                ordering system, which largely entails manual functions. As CBT  
22                develops its TELRIC for access to OSS functions, as recommended by

1           Staff and discussed in Staff witness, Ms. Soliman's testimony, these  
2           manual functions should be removed from the service order costs.  
3           Therefore, the electronic interface cost associated with providing access to  
4           CBT's OSS should be recovered in a TELRIC for access to OSS functions.  
5           This still leaves the question of how to recover the cost of the manual  
6           functions. To this end, Staff recommends that, in addition to the  
7           development of the TELRIC for access to OSS functions, CBT should  
8           develop a rate for the provisioning of new unbundled loops that reflects  
9           the manual interface associated with its CLEC Service Center. This will  
10          afford a NEC who wishes to purchase unbundled elements through a  
11          manual interface the opportunity to do so. For a NEC that wishes to  
12          purchase unbundled elements through CBT's electronic interface service,  
13          it would have the opportunity to do so though the OSS electronic interface.

14  
15       **Q.   The Staff Report recommended that the cost associated with the Loop**  
16       **Assignment Center (LAC) when provisioning new unbundled loops**  
17       **should be recovered through a separate rate developed by an access to**  
18       **OSS functions TELRIC, and not in the NRC for unbundled loops as**  
19       **proposed by CBT. Is this still Staff's recommendation?**

20       **A.   It is not.**

21  
22       **Q.   What is Staff's revised recommendation with respect to the LAC?**

1           A.    After further review, Staff is now of the opinion that the LAC functions  
2                   will occur only in CBT's manual system. Consistent with the  
3                   recommendation above, Staff believes these manual functions should not  
4                   be included in the OSS TELRIC when NECs gain electronic access to  
5                   CBT's Operation Support Systems. However, to the extent that the  
6                   manual system is replaced with an electronic interface, only that electronic  
7                   interface replacement should be recovered in the TELRIC for access to  
8                   OSS. Therefore, I am revising Staff's recommendation to agree that  
9                   CBT's cost associated with the manual functions should be recovered in  
10                  the unbundled loop establishment NRC.

11  
12                However, it is clear that the time estimates that CBT developed for these  
13                activities do not take into account that the probability multiple loops may  
14                be ordered at the same time and on the same service order and for the same  
15                location. This notion is supported CBT's response to Staff's Data  
16                Request #88, question 2, which indicates that CBT's rate structure  
17                development did not assume that multi-loop orders might be placed by a  
18                NEC. Staff recommends that when CBT performs manual LAC functions  
19                for the provisioning of unbundled loops to a NEC, it should recover the  
20                non-recurring cost on a per-occasion, per-location basis.

21

1           **Q.    With respect to Staff's recommendations for the NEC Service Center**  
2           **functions and the treatment of LAC functions, would it be reasonable**  
3           **for CBT to break-up the cost components in the original proposed**  
4           **unbundled loop establishment NRC into a per-occasion, per-location**  
5           **charge and a per-loop charge?**

6           **A.    Yes, Staff recommends that CBT do so. However, let me first explain that**  
7           **CBT's proposed non-recurring costs are a combination of six components.**  
8           **The first is the NEC Service Center function. The next three components**  
9           **are LAC functions. The fifth and sixth components are the Network Field**  
10          **Maintenance and Client Technical Operation functions. With respect to**  
11          **the Network Field Maintenance function, Staff recognizes that, if CBT**  
12          **needs to run jumper cables between the NEC's tie cable and cable**  
13          **appearance on the main distribution frame, it would likely do so loop-by-**  
14          **loop. For this function CBT's proposed time estimate appears reasonable.**  
15          **Therefore, it is reasonable to recover the cost of this function on a per-loop**  
16          **basis.**

17  
18          In regard to the cost recovery of the sixth component, Client Technical  
19          Operation functions, here again, CBT did not account for the probability  
20          that a NEC may order multiple loops per-order and for the same location.  
21          On a loop-by-loop basis, CBT is proposing to recover the cost of  
22          dispatching a technician to the serving area connector (SAC) box that

1 feeds the end user's location for the purpose of making physical cross  
2 connections. From the SAC box, the technician will travel to the end  
3 user's location to make physical cross connections and testing at the drop.  
4

5 It is my understanding the nonrecurring cost should reflect the cost of  
6 going to the customer premise only when it is needed, and to the extent it's  
7 not needed, that cost should not be included. It appears that only when a  
8 cross connection is needed at the customer's premise will a technician  
9 need to visit the customer's premise. However, CBT's NRC does not  
10 take this into account and, therefore, the cost appears to be overstated.  
11 This should be corrected by CBT.  
12

13 **Q. Do you have any further recommendations related to the LAC cost**  
14 **recovery?**

15 **A.** Yes, additionally Staff recommends that, when CBT develops a more  
16 mechanical method of assigning loops, it should revise the NRC TELRIC  
17 to reflect the new efficiencies. For example, Staff understands that the  
18 LAC function is largely a manual process for inventory tracking and  
19 assigning loops. Therefore, based on CBT's forward-looking network  
20 design that is comprised of Integrated Next Generation Digital Loop  
21 Carrier (NGDLC) technology and Fujitsu FACTR system, some or all of  
22 the manual LAC functions may no longer be required. It is my

1 understanding that the FACTR system is a computerized method that may  
2 do some of the same things that the manual LAC system does. The  
3 FACTR system may simplify the provisioning, grooming, and  
4 maintenance of provisioning unbundling loops. To that extent, CBT  
5 should reflect these efficiencies in its non-recurring cost.  
6

7 **Q. Could you please summarize Staff's unbundled loop establishment**  
8 **NRC recommendation?**

9 A. First, CBT should create alternative rates for its UNE loop establishment  
10 NRC. One that reflects the manual costs associated with the NEC Service  
11 Center function and an alternative rate that reflects the cost when a NEC  
12 purchases CBT's loops using an OSS electronic interface. Second, CBT  
13 should recover the LAC function costs in the NRC, as it proposes,  
14 however, CBT should develop the cost on a per-occasion and per-location  
15 basis taking into consideration the probability of multi-loop orders. Third,  
16 CBT should recover the cost of the Network Field Maintenance function  
17 on a per-loop basis, as it proposed. Lastly, CBT should adjust its  
18 installation time estimates for Client Technical Operation functions taking  
19 into consideration multi-loop orders and further it should structure the  
20 charge to reflect when a customer visit is required and again for when a  
21 visit is not.  
22

**V. Existing Loop Service Order (CBT 105, MCI 48, AT&T 37, Staff Report 113)**

**Q. Please explain Staff's recommendation with respect to CBT's proposed service order cost development for existing unbundled loops.**

**A. Like the unbundled loop NRC for ordering new loops, CBT has developed its service order cost based on an interface system that is largely manual. Also like the NRC, the manual service order functions will not be present in the electronic Operation Support Systems. Therefore, Staff believes CBT's proposed service order rate structure, which is based on the cost of manual interface functions, is reasonable, when a NEC is purchasing unbundled loops through a non-electronic interface system. However, when a NEC chooses to purchase unbundled loops through CBT's OSS system, the charge it pays should recover only the electronic interface cost associated with replacing the manual system.**

**VI. Line Connection Charges for Existing Loops (Central Office Network Field Maintenance Time Estimates) (CBT 106, MCI 48, AT&T 37, Staff Report 113)**

**Q. In regard to CBT's line connection charge proposal, why does Staff believe the estimated labor time for the central office network field**



1 maintenance personnel should be the same time estimate used in the  
2 loop non-recurring charge for new loops?

3 A. According to the function description provided in CBT's supporting  
4 documents, found in the NRC for new loops and in the line connection  
5 study for existing loops, a central office network field maintenance person  
6 will be required to run jumper cables between the NEC's tie cable and  
7 cable appearance on the main distribution frame. The descriptions for  
8 both functions appear to be very similar. The difference being that the line  
9 connection service will also include screening the service order and  
10 scheduling a technician to be dispatched to the central office. It seems  
11 reasonable that the time estimate should also be the same or, at least,  
12 nearly the same. However, this is not CBT's proposal. In fact CBT's  
13 time estimate for the line connection charge for existing loops is four  
14 times greater than what it uses in the non-recurring rate for non-existing  
15 loops. Staff is confused by CBT's claims that, if the requested loop is an  
16 existing loop, then CBT will not be required to do a field visits (as it does  
17 in the case of a non-existing loop). Yet, the time estimate for an existing  
18 loop is longer. Staff believes that, since a field visit is not needed for  
19 existing loops then the shorter time estimate as used in the non-recurring  
20 rate for non-existing loops is more reasonable. Staff points out that, if  
21 CBT would have performed a motion and time study (discussed further in

1           Section VIII below) we may not have had the same level of concern as we  
2           do today with CBT's time estimates.

3  
4           **Q.    MCI objects to Staff's recommendation to require CBT to rerun its**  
5           **non-recurring cost studies implementing Staff's proposed corrections.**  
6           **Instead MCI recommends that the Commission should completely**  
7           **reject CBT's flawed studies. What is Staff's response?**

8           **A.    Staff is recommending that CBT submit TELRIC studies that reflect the**  
9           **cost of provisioning elements to a NEC through an electronic interface to**  
10          **CBT's OSS system, and certain corrections be made to CBT's proposed**  
11          **non-recurring cost studies, and that those corrected studies be the basis for**  
12          **charging a NEC whom elects to purchase elements through a manual**  
13          **interface system. By rerunning the studies with modifications actually has**  
14          **the same result as starting over. Rerunning the studies using modifications**  
15          **is more efficient and under my approach is consistent with past**  
16          **Commission practices.**

17  
18          **VII.   Unbundled Loop Qualification and Conditioning (AT&T 38, MCI 49, Staff**  
19          **Report 114-116)**  
20

1       **Q.     Does Staff have an opinion in regard to CBT's proposal to have a**  
2       **Conditioning charge for the removal of load coils that may exist on**  
3       **unbundled loops?**

4       **A.     Yes, from a non-legal standpoint it appears clear that the FCC, in Order**  
5       **96-98, at Paragraph 382, considered the likelihood that certain unbundled**  
6       **loops may need conditioning in order to provide certain types of service**  
7       **above the typical voice grade POTS loops. Specifically, the FCC provided**  
8       **an example of when loop conditioning may be required. In paraphrasing**  
9       **the FCC, when a competitor seeks to provide digital loop functionality,**  
10      **such as ADSL, and the loop is not currently conditioned to carry digital**  
11      **signals, but it is technically feasible to condition the facility, the incumbent**  
12      **LEC must condition the loop to permit the transmission of digital signals**  
13      ***at the requesting carrier's expense.* Additionally, in footnote 826 of the**  
14      **same Order, the FCC implies that conditioning may involve removing**  
15      ***load coils* and bridge taps. Therefore, Staff believes that CBT's request to**  
16      **be compensated for this type of conditioning is not inconsistent with the**  
17      **FCC's 98-96 order. It is also a reasonable proposal by CBT to not include**  
18      **conditioning costs onto all unbundled loops, but only charge for**  
19      **conditioning on an as needed basis.**

20  
21      **Q.     Does this mean that Staff recommends approval of CBT's proposed**  
22      **charges for the Qualification and Conditioning?**

1           A.    No. Staff disagrees with CBT's proposed Qualification charge and to the  
2                    reasonableness of the level or magnitude of its proposed Conditioning  
3                    charge.

4  
5           **Q.    Please address Staff's disagreement with CBT's proposed**  
6                   **Qualification charge.**

7           A.    As discussed above, the FCC considered the likelihood and need to  
8                    condition certain loops and stated who would bear the cost. However, I do  
9                    not believe that the lack of CBT's knowing which loops may or may not  
10                  need to be conditioned should result in its competitors paying for that lack  
11                  of knowledge. It appears to Staff that this could have been a type of  
12                  inventory function, which CBT could have developed in order to identify  
13                  the type and location of any loop at any given time. It is not a function of  
14                  physically conditioning a loop or specifically removing load coils.  
15                  Therefore, Staff recommends that carriers not be required to pay a  
16                  Qualification charge as proposed by CBT.

17  
18          **Q.    In regard to the Qualification charge, is Staff's recommendation**  
19                  **consistent with its recommendation found in the Staff Report?**

20          A.    Yes, Staff disagreed with CBT's proposed Qualification charge and  
21                  recommended modification to the calculation of the Qualification charge.  
22                  However, over the past months Staff has developed a clearer

1 understanding of CBT's proposal. Now Staff recommends the elimination  
2 of the charge.

3  
4 **Q. Please address Staff's concerns with the NRC Conditioning charge.**

5 A. As stated in the Staff Report, after reviewing the supporting documents for  
6 the non-recurring conditioning loop cost it is believed that, to the extent  
7 certain costs are OSS related, those costs should be removed from this  
8 charge. A further concern is with respect to CBT's labor time estimates.  
9 Staff continues to recommend that CBT replace its estimates by arriving at  
10 actual labor times by conducting a time-and-motion study.

11  
12  
13 **VIII. Time-and-Motion Study (CBT 98, Staff Report 115)**

14  
15 **Q. What is CBT's objection to Staff's recommendation that it perform a**  
16 **time-and-motion study for the unbundled loop qualification and**  
17 **conditioning NRC?**

18 A. As I understand CBT's objection number 98, at page 16, of Mr. Mette's  
19 Direct Testimony, it appears that CBT is of the opinion that performing a  
20 time-and-motion study would be prohibitive due to the cost and time the  
21 study would require.

1           **Q.     Does Staff agree?**

2           **A.     Before Staff could agree or disagree it first would need to know the level**  
3                   of the cost and time CBT considers prohibitive. It is very likely that  
4                   competitive carriers will have a different interpretation of what is  
5                   prohibitive. In Staff's view, the charges that result from the estimated  
6                   labor times that CBT is proposing are so significant that they must be  
7                   substantiated. However, Staff and CBT agree that, over time, CBT will  
8                   gain the actual experience needed to provide the Commission with better  
9                   information on the labor hours associated with these functions. For this  
10                  reason, Staff did not recommend that CBT immediately undertake a time-  
11                  and-motion study to replace its current proposed labor time estimates. I  
12                  am recommending that the Commission require CBT to update its NRC  
13                  TELRIC studies to incorporate the results of an actual time-and-motion  
14                  study and that the study be provided to the Commission Staff for review  
15                  prior to the end of its alternative regulation plan or any extensions to  
16                  CBT's plan, which expires July 2001.

17  
18       **IX.    Forward Looking and Efficient Technology in the Network Design (CBT**  
19           **100, MCI 43, AT&T 32, OCC 100, Staff Report 110)**

20  
21       **Q.     In objection 100, it appears that CBT is not in disagreement with Staff**  
22           **'s recommendation that CBT's network design be configured to**

1           **reflect the most efficient technology. However, CBT states that it is**  
2           **not clear as to Staff's recommendation on this point. Will you please**  
3           **clarify Staff's recommendation?**

4           A.    Yes. As discussed in my testimony, Staff is concerned with certain  
5           assumptions that CBT included in its unbundled loop TELRICs, such as,  
6           fill factors, cable investments, DLC loop technology, and development of  
7           geographical rate bands. In addition Staff had concerns about the cost-of-  
8           capital and deprecation lives used by CBT. Mr. Chaney addresses cost-of-  
9           capital issues and behalf of Staff, and Mr. Kotting address equipment  
10          lives.

11  
12  
13       X.    **Fiber or Copper Feeder Plant (CBT 101, MCI 43, AT&T 32, Staff Report**  
14           **110)**

15  
16       Q.    **In regard to the reasonable forward-looking economic design of an**  
17           **unbundled loop's feeder plant, the Staff Report recommended that**  
18           **CBT's feeder should be redesigned to use 100 % fiber plant. Can you**  
19           **clarify Staff's recommendation?**

20       A.    Staff's recommendation was based on what we believed would be a  
21           reasonable forward-looking economic design of feeder plant that would be  
22           reasonable to use in a TELRIC study. The design must consider network

1 usage that allows for multiple competing carriers offering many types of  
2 existing and new services over unbundled loops. To do this, we believed  
3 at that time that 100% of the feeders would need to be comprised of fiber  
4 systems.

5  
6 **Q. Did CBT use this assumption in developing its unbundled loop**  
7 **TELRIC study?**

8 A. As discussed in the Staff Report, CBT did redesign its copper DLC loops  
9 to fiber DLC loops. However, CBT did not redesign what is currently a  
10 non-DLC copper loop to a DLC fiber loop.

11  
12 **Q. Did CBT agree with Staff's recommendation?**

13 A. It did not. It appears that neither did MCI or AT&T. Since neither party  
14 seemed to agree with Staff, I went back and reviewed the analysis of the  
15 feeder assumptions, as well as the parties' testimonies.

16  
17 **Q. What did you find?**

18 A. In revisiting CBT's unbundled loop study, I first reviewed the lengths of  
19 loops in all three proposed service Bands for both residential and business  
20 lines. I found that all of CBT's non-DLC copper loops were shorter than  
21 9000 feet in total length and, of course, the feeder plant was much shorter  
22 than that.



1

2

**Q. Why is that significant?**

3

A. Based on my experience, I believe it is reasonable to assume that loops of less than 9000 feet in length may be more economically provisioned using copper cable. However, a copper loop could extend out to 12000 feet if that plant is provisioning less than 600 pairs. I believe this type of placement is common engineering practice.

8

9

**Q. Did CBT develop its copper feeder cost based on length and density?**

10

A. CBT calculated its loop costs based on a determined average length of the loops in each of the three service Bands. CBT developed its Bands based on density of loops per square mile.

12

13

**Q. Even if all of the copper loops are shorter than 9000 feet and if you assume density limitations do not come into play why would not a more forward-looking economic approach be to redesign the copper loop to a fiber DLC system?**

14

15

16

17

A. At first glance, comparing the low per-foot cost of fiber with the higher per-foot cost of copper it appears intuitive that a fiber system is more economical. However, a second glance shows that, in addition to the cost of fiber cable, expensive electronics are needed and the costs associated with the electronics may cause a fiber DLC system to be both uneconomical for CBT to invest in and for a NEC to purchase. I believe

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1           this is why CBT, MCI, and AT&T disagreed with the Staff  
2           recommendation. This is also why I am revising Staff's recommendation.  
3           I am making this revision only to the extent that CBT's copper loops can  
4           provide similar quality as that of a fiber system at an equal or lower cost,  
5           which I believe it can.

6  
7   **XI.    Fill Factors (CBT 102, MCI 44, AT&T 33, Staff Report 111)**

8  
9       **Q.    Can you explain the rationale behind Staff's recommendation to**  
10       **reject CBT's proposed fill factors for the feeder and distribution**  
11       **facilities?**

12       **A.   Staff recommended that the fill factors CBT assumed in its unbundled**  
13       **loop TELRIC be rejected because they do not reflect reasonably accurate**  
14       **forward-looking fill factors. The Commission's Local Service Guidelines**  
15       **in Case No.95-845-TP-COI, Section V.B.8, state, "These fill factors are**  
16       **the proportion of a facility that will be filled with network usage."**  
17       **Therefore, CBT's fill factors should not reflect its current actual usage, but**  
18       **a forward-looking projection of network usage. Secondly, the guidelines**  
19       **place the burden on the incumbent LEC to justify the reasonableness of the**  
20       **fill factors used in its TELRIC studies.**

1           **Q.     If the Commission rejects CBT's fill factors what alternatives are**  
2                   **there left?**

3           **A.     Although it is not Staff's burden to develop CBT's fills, we feel obligated**  
4                   **to provide the Commission with alternatives which could be used as proxy**  
5                   **fills which we feel comport with the Commission guidelines.**

6  
7           **Q.     What forward-looking fill factors does Staff recommend CBT should**  
8                   **assume in its unbundled loop TELRIC?**

9           **A.     For the DLC electronic equipment investments I recommend using the**  
10                   **same fill factor that will be applied to the interoffice electronic circuit**  
11                   **equipment at the DSO level. This factor is discussed in Ms. Soliman's**  
12                   **testimony. I am recommending XX% fill for the fiber feeder as discussed**  
13                   **later in my testimony. I did not attempt to develop a specific fill factor**  
14                   **assumption for distribution plant or copper feeder. However, for the**  
15                   **Commission's consideration, I am providing a range of XX% to XX% for**  
16                   **distribution fills and XX% to XX% for copper feeder fills. The range**  
17                   **reflects a variety of State determinations as well as the different proposals**  
18                   **in this case. The middle point of XX% for distribution fills also reflects**  
19                   **the average of CBT's and the Parties' proposals for distribution fills.**  
20                   **Within the range, I recommend the use of XX% for copper feeder simply**  
21                   **because it fits within my proposed range and is consistent with the fills I**

1 am recommending for fiber feeder. I agree with the remainder of CBT's  
2 proposed unbundled loop fill factors.

3  
4 **Q. Why do you believe that CBT's fills do not comport to the**  
5 **Commission's guidelines for fill factors?**

6 **A. My non-legal interpretation of Guideline V.B.8's requirement that fill**  
7 **factors should represent the proportion of facilities that "will be" filled**  
8 **with network usage is that, the fill factor should be developed on a**  
9 **forward-looking basis. As discussed in the Staff report, CBT's fill factor**  
10 **development was based on actual embedded usage and not on the usage**  
11 **that CBT should expect to encounter on a forward-looking basis in a**  
12 **competitive environment.**

13  
14 **Q. Will CBT's loop facility become more utilized in a competitive**  
15 **environment?**

16 **A. I believe that it is likely that in a competitive environment CBT and NECs**  
17 **will market and price their services in an effort to create demand for**  
18 **multiple loops at a single location. Therefore, it will be increasingly likely**  
19 **that an average household will have more than a single loop. It is further**  
20 **possible and likely that CBT and NECs will market and price business**  
21 **services in ways that increase business customer demand to require**  
22 **additional loops. Fax machines, computer dial-up services and Internet**

1 services for both residential and business customers come to mind. In  
2 addition, ATM machines are increasing the need for additional loops.  
3 This increase in demand and usage over the existing facilities should be  
4 considered in developing fill factors. At the same time competition  
5 should drive any market participant to become more efficient and reduce  
6 unnecessary cost and excess capacity.

7  
8 In addition, some NECs will provide services to their end-users by  
9 reselling CBT's retail services. The reselling of CBT's bundled services  
10 does not lessen the loop utilization. In fact, with creative marketing,  
11 packaging, and pricing, NECs that resell CBT's bundled services may  
12 increase the need for additional bundled loops. This too should be  
13 considered by CBT in its fill factor development.

14  
15 **Q. How will a facilities based NEC that provisions services over its own**  
16 **loops impact CBT's loop utilization?**

17 **A.** If this was the only factor in considering a forward-looking fill in a  
18 competitive environment I believe that this could cause CBT's loop  
19 utilization to decrease. However, this is not the only factor and likely any  
20 decrease will be mitigated by CBT's own efforts to compete. Further, I  
21 believe that the loss in utilization could be made up in the same manner I  
22 discussed above.

1

2

**Q. Theoretically in a competitive environment is it more likely that CBT will utilize its loops at their assumed actual capacity or is it more likely that CBT will utilize its loops at a capacity closer to the usable capacity?**

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**A. First, let me define usable capacity and actual capacity. Usable capacity is the maximum physical capacity engineered in the network equipment or resource that *can* be used for providing the required functionality capable of being used to generate revenue, less the capacity needed for network administration, maintenance, or testing. Assume that CBT engineered its outside copper plant at a usable capacity of 85%. This would afford CBT the potential to provide revenue generating services or functionality over 85% of the equipment or resource that is being studied. Actual capacity on the other hand, as CBT uses it, is the amount of the equipment that was determined to be in use based on historical studies or samplings.**

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**Theoretically, actual capacity could be equal to usable capacity but most likely will be less than usable capacity. CBT's use of actual capacities is based on a "snapshot" approach. Therefore, it depends on how and when you look at the equipment or resource being studied.**

**With that background I believe that in a competitive environment it is more likely that CBT will utilize its loops to the maximum extent that the**

1 equipment is engineered to function. The forward-looking capacity that  
2 CBT will utilize in a competitive environment should fall somewhere  
3 between the capacity that CBT experienced historically and the maximum  
4 usable capacity. It should include the allowance for growth over the study  
5 period. I will refer to the forward-looking capacity as objective capacity or  
6 objective fill.

7  
8 **Q. How would CBT benefit by using its proposed actual fill factors?**

9 A. It is important to understand that, the lower the fill factor, the higher the  
10 per unit cost, a higher cost means a higher per unit price charged to the  
11 purchaser to recover investment. If CBT's prices are founded on costs  
12 which are established by using CBT's proposed historical fill factors then  
13 CBT's prices to competitors may likely be overstated. Additionally, as  
14 competition increases CBT's fills will move upward toward the usable  
15 capacity level. As this occurs, and if CBT does not recalculate its cost  
16 based on the increase in utilization, that situation would create a barrier to  
17 competitive entry. CBT will over-recover its costs.

18  
19 **Q. If CBT's fill factors were too high would it have the opposite effect?**

20 A. Absolutely. That is why it is so important that CBT develop more  
21 reasonable fill factors, that reasonably take into consideration all of the  
22 scenarios I described earlier.

1  
2 **Q. How does Staff propose that CBT develop its fill factors for its loop**  
3 **TELRIC study?**

4 **A. The best approach would have been for CBT to develop a study that**  
5 **defines fill factors consistent with the Commission's Local Service**  
6 **Guidelines. Those fill factors should reflect the forward-looking**  
7 **utilization assumptions I described earlier. The fill factors should also**  
8 **reflect a reasonable point at which CBT will actually reinforce its plant as**  
9 **that plant becomes filled in a competitive environment. CBT could have**  
10 **used its current or actual fill factor data as a starting point, but it is Staff's**  
11 **opinion that the data in and of itself, does not comply with the Guideline**  
12 **V.B.8. To the extent that CBT has an engineering study that defines**  
13 **capacity fill factors consistent with the Commission's Local Service**  
14 **Guidelines those fills should be used in the TELRIC studies. However, I**  
15 **do not believe CBT has such a study. If CBT does not have such a study,**  
16 **the Commission should consider requiring CBT to develop such a study.**

17  
18 **XII. Fiber Feeder and Cable Fills (CBT 102, MCI 44, AT&T 24&33)**  
19

20 **Q. Do you disagree with CBT's statement that using 36-fiber strand**  
21 **cable, instead of 48-fiber strand cable, would increase their fiber**  
22 **feeder cable investments?**



1           A.     Staff's recommendation was based on our misunderstanding as to the type  
2                   of DLC system CBT will deploy on a going-forward basis. Although I  
3                   have not done the analysis to determine the cost difference between the  
4                   two cable sizes its seems conceivable that CBT is correct. I discuss this  
5                   more below.

6  
7           **Q.     In regard to CBT's fiber strand fill factor assumption for DLC**  
8                   **systems, explain why Staff rejected CBT's assumption that only 33%**  
9                   **of the 12-fiber strand cable would be utilized.**

10          A.     In CBT's proposed cost development, it assumed that where CBT deploys  
11                   a fiber DLC system, on the average it will place a 48-fiber strand cable  
12                   consisting of four 12-fiber strand cable buffers, as the feeder plant. When  
13                   Staff originally reviewed CBT's cost development it was believed that  
14                   CBT was deploying an asynchronous DLC system. It was Staff's  
15                   understanding that for each 12-fiber strand buffer CBT would utilize two  
16                   fibers as working strands, and two fibers for protection, leaving the  
17                   remaining 8 unused strands in each buffer for spare. Based on this, Staff  
18                   believed that CBT could have achieved the same result at a lower cost if it  
19                   used 6 strand fiber buffers instead of 12-fiber strand buffers. This was the  
20                   foundation for the Staff Report recommendation. However, it was  
21                   explained that on a going-forward basis CBT will not install any new  
22                   asynchronous equipment. On a going-forward basis CBT will deploy

1 SONET OC-3 DLC systems. Therefore, four fiber strands per SONET  
2 OC-3 DLC system are needed for transmitting and receiving. One set of  
3 two strands is needed for transmitting and receiving in one direction of the  
4 SONET system and one set of two strands is needed to transmit and  
5 receive in the opposite direction of the SONET system for a total of four  
6 strands. To clarify, this is different than in an asynchronous system where  
7 you have actual service (working) and protection fiber strands. Therefore,  
8 when CBT places one DLC system it will use XX% of the 12-fiber strand  
9 buffer cable or XX% of the strands available in the 48-fiber strand cable  
10 when four systems are deployed.

11  
12 As stated above the Staff Report stated that CBT's assumption should  
13 have been based on four fiber strands per a 6-fiber strand cable buffer.  
14 Staff believed that this would be a better usage of CBT's resources and  
15 comports with the forward-looking concept found in the Commission's  
16 Guidelines. CBT disagrees with Staff's recommendation. As I understand  
17 CBT's concern, if it used a 6-fiber strand buffer instead of a 12-fiber  
18 strand it would be required to reduce the size of the cable down to 36-fiber  
19 strand cable, from 48-fiber strand cable. CBT avers that on a strand-by-  
20 strand basis, its investment would be greater for placing a 36-fiber strand  
21 cable in replace of a 48-fiber strand cable. As I stated in my previous  
22 response, CBT may be correct.

1

2

**Q. Does Staff's current understanding change its recommended fill factor?**

3

4

**A. No. The fiber strand usage per 12-fiber strand buffer should still be increased to XX% therefore increasing the usage per 48-fiber strand cable as well. Staff believes this to be a more reasonable approach to a forward-looking study than CBT's approach.**

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The reality is Staff believes that CBT will utilize more than four-fiber strands for every 12 strands installed. Staff's opinion is further supported by CBT's explanation that it would expect that recently placed cable would not utilize more than 12 strands but that older placed cable ultimately could be utilized at XX%. This would indicate that forward-looking fill should be somewhere in between CBT's actual utilization and XX% utilization.

17

**Q. Can CBT purchase fiber cable smaller than 12-strand cable?**

18

**A. According to CBT, yes it can. However, I believe that regardless of the size of cable, it is reasonable to assume that CBT's utilization can be greater than one-third.**

19

20

21

1           **Q.     Assuming that CBT is using the appropriate size of fiber cable, is**  
2                   **Staff's fill factor recommendation the same?**

3           **A.     Yes. For the following three reasons XX% is still a reasonable forward-**  
4                   **looking fill factor assumption.**

5                   1) In light of CBT's indication that it would expect older placed  
6                   cable ultimately could be utilized at XX%.

7                   2) The XX% fills are representative of actual usage based on  
8                   historical practices.

9                   3) Each DLC system requires the usage of four-fiber strands, if the  
10                  first DLC system (4 strands) is CBT's "actual usage" then based on  
11                  my earlier discussion of increased usage the forward-looking fill  
12                  will be greater. The next step up is a second DLC system or 8  
13                  strands (XX%). If usage continues to increase, it is possible that  
14                  CBT will ultimately add a third DLC system and utilize all 12  
15                  strands. However, it is not likely that every fiber strand in the  
16                  feeder plant will be utilized at 100%. The middle increment of  
17                  XX% percent also happens to be consistent with Commission's in  
18                  Ameritech TELRIC proceeding, Case No. 96-922-TP-UNC.

19  
20       **XIII. Digital Loop Carrier Equipment (CBT 100, MCI 43, AT&T 32)**  
21

1           **Q.    In determining DLC transmission equipment investments, did CBT**  
2           **included vendor discounts it will receive for Fujitsu?**

3           **A.    Originally, it appears that CBT did not included vendor discounts. As**  
4           **pointed out by MCI's Mr. Starkey's direct testimony on page 31, and in**  
5           **CBT's response to MCI data request number 3.12, it appears that CBT's**  
6           **calculated investment is based on Fujitsu's "Base Price" as of 1995. It**  
7           **further appears that in 1997, CBT was to receive a minimum level of**  
8           **discounts from Fujitsu on equipment purchased. Additionally, as Mr.**  
9           **Starkey points out, CBT's agreement will further provided CBT with**  
10          **additional discounts when CBT purchases equipment over certain dollar**  
11          **levels.**

12  
13          **Q.    Should these discounts be included in the investment calculation in**  
14          **CBT's TELRIC?**

15          **A.    Yes. All vendor discounts should be included in calculating CBT's**  
16          **investments. I recommend that CBT rerun its TELRIC to reflect its**  
17          **vendor discount over the period in which CBT's study is calculated.**

18  
19          **Q.    Are you aware in supplemental testimony that CBT has proposed to**  
20          **change the level of discounts that were originally filed in its**  
21          **unbundled loop studies?**

1           A.    Yes. CBT has agreed to include discounts for hardware and plug-in  
2                   equipment that reflect a 20 million-dollar level of investment in the year  
3                   1999.

4  
5           Q.    Is this acceptable to Staff?

6           A.    I believe that this result is consistent with the investments and investment  
7                   discounts determined by the Commission in past proceedings.

8  
9  
10   XIV.   Integrated vs. Universal DLC Systems  
11

12          Q.    In your investigation, did you evaluate CBT's Integrated DLC system  
13                   as it is used in CBT's retail bundled loops study?

14          A.    I did not. I only investigated CBT's proposed unbundled loop TELRIC  
15                   that is based on the Universal DLC system architecture.

16  
17          Q.    Can you explain why you only investigated the Universal DLC  
18                   system?

19          A.    Throughout the course of my investigation CBT averred that only the  
20                   Universal DLC architecture could support the provisioning of unbundling  
21                   of loops. CBT explained that loops in an Integrated DLC system terminate  
22                   directly on the central office switch and, therefore, can not be unbundled.  
23                   Therefore, to provision unbundled loops, CBT must use the Universal

1 DLC system architecture. The Universal DLC system terminates the loops  
2 to the main distribution frame (MDF) within the central office switch prior  
3 to being terminated to the central office switch. It is my understanding  
4 that it is at the MDF that CBT will unbundle loops and provision them to  
5 carriers. Secondly, CBT suggested that its loop inventory tracking system  
6 is not capable of tracking and assigning loops on an unbundled basis using  
7 an Integrated DLC system. Staff accepted CBT's rationale.  
8

9 **Q. Does Staff still accept CBT's rationale?**

10 **A.** Yes, however several months later Staff became more aware of the Next  
11 Generation Digital Loop Carrier (NGDLC) system that CBT is now using  
12 in its network. It appears that NGDLC can afford CBT with the ability to  
13 provision unbundled loops using Integrated DLC architecture. In using an  
14 Integrated NGDLC system much of the electronics that are required in a  
15 Universal DLC system will now not be required. Although I have not  
16 seen a revised study, CBT's cost to provision unbundled loops may be  
17 reduced. Additionally, the Integrated NGDLC architecture may allow  
18 CBT to do loop grooming electronically at the central office instead of  
19 dispatching a technician to the remote terminal site. However, as  
20 discussed earlier, CBT argues that its inventory tracking system is not  
21 capable of tracking and assigning loops though a Universal DLC system.  
22 Therefore, what is unclear is whether it would be more cost effective for

1 CBT to modify its inventory tracking system to be compatible with the  
2 Integrated NGDLC architecture or to provide unbundled loops through the  
3 Universal DLC system. Therefore, I am recommending that, to the extent  
4 CBT is unable to justify that it would be more costly to modify its  
5 inventory tracking system, and that it is not able to groom loops in the  
6 central office at a cost savings, then it should rerun the unbundled loops  
7 study using the investments dollars associated with the Integrated NGDLC  
8 system.

9  
10 **Q. If CBT is not able to utilize the NGDLC system for the above-stated**  
11 **purpose, for what services or functions is CBT providing using the**  
12 **NGDLC?**

13 **A** Although my knowledge is somewhat limited, I understand that NGDLC  
14 permits integration of different network access services onto a common  
15 digital local loop without the need for conventional central office  
16 equipment to groom the circuits. Some of the advantages of NGDLC are:  
17 a) A lower implementation and maintenance costs because of reduced  
18 equipment requirements; b) the integrated terminal hardware and software  
19 in the switch provides for more rapid service provisioning; and c) the  
20 ability of remote provisioning and monitoring reduce the requirement for  
21 field technician visits.  
22



1           **Q.     What services can be offered over a NGDLC system?**

2           **A.     My understanding is that a carrier that has a mix of services, such a voice,**  
3                   broadband data, low-speed data, or video service will likely benefit from  
4                   deploying NGDLC. This is because these services can be consolidated  
5                   over an integrated local loop infrastructure. I understand that Fujitsu  
6                   FACTR system, used by CBT in its NGDLC, can be upgraded to provide  
7                   xDSL technologies like Asymmetrical Digital Subscriber Line (ADSL)  
8                   service. In the past, ADSL could only be provisioned over certain copper  
9                   facilities. I am aware that CBT was granted Commission approval to  
10                  provide an ADSL offering that gives subscribers the capability to use their  
11                  local loop to carry high-speed data. However, according to CBT's  
12                  approved ADSL tariff, only copper loop facilities that are available and  
13                  suitable will be provisioned to offer ADSL. This would indicate that  
14                  today CBT is not provisioning ADSL over its NGDLC, but that it might be  
15                  able to do so in the future.

16  
17  
18   **XV.   Unbundled Loop Cable Investments (CBT 103, MCI 45, AT&T 31 & 34,**  
19           **Staff Report 111)**

20           **Q.     How did CBT calculate the Cable Investments for its unbundled loops**  
21                   **TELRIC?**

1           A.     CBT used its Perpetual Inventory Record database to identify the  
2                   investment associated with various types of cables that would be used in  
3                   the feeder and distribution network. After determining the per-cable, per-  
4                   foot investment, CBT added the costs associated with installing the cable,  
5                   such as, labor and material cost for splicing, trenching, engineering, etc.  
6                   Next, CBT included miscellaneous costs for conduit material used when  
7                   installing underground, buried, and aerial cable. The final step was to total  
8                   these costs and mark them up by an additional 10% to recover additional  
9                   miscellaneous costs. The result was CBT's cost per pair foot.

10  
11          **Q.     What recommendation was made in the Staff Report with respect to**  
12                   **the development of cable investments?**

13          A.     Staff recommended that miscellaneous conduit material costs and the 10%  
14                   mark-up for miscellaneous cost be removed from CBT's TELRIC  
15                   compliance rerun. Staff concluded that it was unreasonable to allow CBT  
16                   to include unsupported miscellaneous conduit material cost. It is equally  
17                   unreasonable to allow an additional 10% mark-up for additional  
18                   miscellaneous cost.

19  
20          **Q.     Why is it unreasonable?**

21          A.     Primarily because CBT's unbundled loop TELRIC assumptions lack  
22                   sufficient support. Staff requested additional support for CBT's TELRIC

1 studies in Staff's Data Request 52. In response, CBT provided certain  
2 documents and studies that purported to support these costing  
3 assumptions. However, Staff became concerned due to the lack of support  
4 provided within those documents and studies. Therefore, Staff followed  
5 up CBT's response to data request 52, with data request 75. CBT's  
6 response was vague but did suggest that the miscellaneous conduit cost  
7 associated with underground cable is for concrete pads at the Service Area  
8 Interface (SAI) and the miscellaneous conduit cost associated with aerial  
9 cable is for protective conduit for above-ground cable at the SAI. CBT did  
10 not provide analytical support or sufficient rationale for including these  
11 costs in its cable investment.

12  
13 With respect to the additional 10% mark-up of miscellaneous cost, Staff  
14 requested CBT to support the mark-up assumption (Data Request 79,  
15 question 5). Once again CBT response was vague. CBT stated;

16  
17 *"The miscellaneous cost represents items such as transportation and taxes*  
18 *on material plus additional labor costs associated with garage time and*  
19 *job interruptions. This cost is an assumption of CBT."*

20  
21 CBT provided no further support. Again, without any analytical support  
22 or sufficient rationale Staff can not recommend such a substantial mark-

1 up. Therefore, Staff recommends that this assumption be removed in  
2 CBT's TELRIC compliance run.  
3

4 **XVI. Network Interface Device (NID) (CBT 104, AT&T 36, Staff Report 112)**  
5

6 **Q. In regard to the NID, what recommendation did Staff make?**

7 **A.** Although this may no longer be an issue with the parties, Staff continues  
8 to recommend that CBT should have a separate TELRIC-based charge for  
9 a NID.  
10

11 **Q. Why did Staff make this recommendation?**

12 **A.** Section VIII. B, of the Commission's Local Competition Guidelines states  
13 that, to meet the minimum requirements for unbundling its network, an  
14 ILEC must offer an unbundled NID. CBT chose to bundle its NID with  
15 the unbundled loop.  
16

17 **Q. Has CBT identified a separate cost for a NID?**

18 **A.** Yes. CBT identified a separate cost component for provisioning a NID.  
19 However, it bundled the NID cost with the cost development for the drop.  
20 CBT argues that it is necessary for an unbundled loop to be terminated on  
21 a NID. However, it is clear that a NEC could provide its own NID, if it  
22 chooses. What is unclear is in all cases will a CBT NID be required to

1 terminate a CBT unbundled loop or can a NEC choose to terminate a CBT  
2 unbundled loop onto a NEC NID. If the latter case is true, CBT will  
3 charge the NEC for an unbundled loop and a NID, even though the NEC  
4 will only utilize its own NID.  
5

6 **XVII. Factor Files and Field Codes - (MCI 31 & 46, AT&T 18 & 35)**

7 **Q. With respect to CBT's proposed investment factors for support**  
8 **structures, power and common equipment, and land and building,**  
9 **Staff recommended that CBT recalculate the factors based on only**  
10 **Ohio plant and investments. MCI appears to agree with the Staff's**  
11 **recommendation and further provides a concept for calculating the**  
12 **support structure factor based on Ohio-only data (Direct Testimony**  
13 **December 23, 1997, pages 13 and 14). Do you agree with MCI's**  
14 **concept?**

15 **A. Lacking the investment information from CBT needed to make this**  
16 **calculation, I think that MCI's concept is a reasonable alternative.**  
17 **However, as Mr. Starkey points out in his testimony, his concept provides**  
18 **a proxy base on the assumption that CBT's Ohio investment in each pole**  
19 **and foot of conduit adds an equal amount of investment to CBT's**  
20 **facilities. I would prefer that CBT develop the factors based on its**  
21 **forward-looking Ohio plant and investments, which I believe CBT has**  
22 **agreed to do.**

1

2

3 **XVIII. Rate Bands (West 7<sup>th</sup> Central Office and MCI Objection 42)**

4

5 **Q. In objection 42, MCI states that it is concerned that CBT's proposed**  
6 **rate band boundaries are not properly drawn. It appears that MCI**  
7 **believes the proposed rate bands are inconsistent with the concept of**  
8 **grouping loops by cost characteristics. MCI recommends that the**  
9 **Commission require CBT to revise its proposed rate bands. MCI**  
10 **avers that establishing loops provisioned solely from its West 7<sup>th</sup>**  
11 **Central Office as Rate Band 1 loops, and recombining all other**  
12 **current Rate Band 1 offices with offices currently included within**  
13 **Rate Band 2 to form a new Rate Band 2 is more reasonable. What is**  
14 **Staff opinion of MCI recommendation?**

15 **A. The Section V.B.2.a.6. of the Commission's Local Service Guidelines**  
16 **allows an ILEC the option to establish different rates for loops in at least**  
17 **three defined geographic areas that reflect geographic cost differences**  
18 **based on loop density. CBT's proposal reflects geographic cost**  
19 **differences based on loop density. The question then goes to the extent in**  
20 **which CBT needs to further deaverage or to what extent it groups its**  
21 **central offices based on density. I do not believe that CBT erred.**  
22 **However, I do agree with MCI's argument that CBT could have further**

1 defined Rate Band 1. Although I was unable to duplicate MCI's  
2 recalculated loop length, conceptually, I agree with its recommendation.  
3 In reviewing CBT's loop samples, it does appear that the West 7<sup>th</sup> Central  
4 Office loops are much shorter and denser than the remainder of CBT's  
5 proposed Rate Band 1.

6  
7 Furthermore, over 10% of CBT's total loops are provisioned out of the  
8 West 7<sup>th</sup> Central Office, which is larger than CBT's proposed Rate Band 3  
9 (fewer than 7%). The West 7<sup>th</sup> Central Office also provisions over 19%  
10 of all CBT's business loops. That is more business loops than are  
11 provisioned out of its proposed Rate Band 2 and Rate Band 3 combined.  
12 These numbers provide for additional support for making the West 7<sup>th</sup>  
13 Central Office a separate rate band.

14  
15 A third alternative would be to derive four rate bands. Under this  
16 approach, the West 7<sup>th</sup> Central Office would become Rate Band 1, the  
17 remainder of Rate Band 1 would become Rate Band 2. The current Rate  
18 Bands 2 and 3 remain unchanged but would be renamed Rate Band 3 and  
19 Rate Band 4.  
20

1 From a cost perspective, any of the three alternatives would be reasonable  
2 and consistent with Section V.B.2.a.6. of the Commission Local Service  
3 Guidelines.  
4

5 **Q. Mr. Mette at page 37 of his Supplemental Testimony proposes to**  
6 **change the original weighting of Business and Residence Loops in its**  
7 **unbundled loop study. Does Staff agree with CBT latest proposal?**

8 **A.** Actually, I believe that it fits very well with either the second or third West  
9 7<sup>th</sup> Central Office alternatives discussed above.  
10

11 **Q. Does this change affect any other rates that CBT has proposed?**

12 **A.** Yes. In supplemental testimony, MCP's Mr. Starkey pointed out that, to be  
13 consistent the percentage used for the order handling assumption, the non-  
14 recurring charge for the service order and establishing of an unbundled  
15 loop should also change. The percentage is calculated based on the same  
16 business and residence customer ratio. Therefore, as the weighting of  
17 business and residence loops change, so should the percentage of order  
18 handling ratio in this NRC.  
19

20 **Q. Does this complete your testimony?**

21 **A.** Yes it does.



## CERTIFICATE OF SERVICE

I hereby certify that a true copy of the **PUBLIC TESTIMONY OF ALLEN R. FRANCIS** was served by regular U.S. mail, postage prepaid, or hand-delivered, upon the following parties of record, this 19<sup>th</sup> day of March, 1999.



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