DIRECT TESTIMONY OF
THOMAS HYDE
ON BEHALF OF

## MCI TELECOMMUNICATIONS CORPORATION

DOCKET NO. 971140-TP
JANUARY 29, 1998

## Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND EMPLOYMENT.

A. My name is Thomas Hyde. I am presently providing consulting services to MCI Telecommunications Corporation ("MCl"). My business address is 780 Johnson Ferry Road, Suite 700, Atlanta, GA 30188.

## Q. PLEASE STATE YOUR BACKGROUND AND QUALIFICATIONS.

A. I have over thirty years of experience in telecommunications including installation, maintenance and design of switched and special toll services with AT\&T; pricing, rate and tariff development with South Central Bell and BellSouth Telecommunications (BST) for various services including intrastate and interstate switched and special access; and access and technology planning with the National Exchange Carrier Association (NECA). My job responsibilities required that I master diverse telecommunications disciplines including network design, equipment installation and maintenance, rate and tariff
development, project management, and technical aspects of the public switched network. In the 1980's, while responsible for the switched and special access rate and tariff development for BST following the divestiture of the Bell System, I developed rates and support documentation for the implementation of access. As part of that process, I also had the responsibility of assuring the validity of the cost and demand inputs used in developing those rates. During this time the Federal Communications Commission (FCC) held that this was the methodology to be emulated by the other Regional Bell Operating Companies (RBOCs). For the past five years I have been responsible for access and technology planning at NECA, responsible for planning and implementation of Local Transport Restructure, Access Reform, ISDN, SONET and various other services. I am presently providing telecommunications consulting services to MCI. I have recently filed unbundled network element non-recurring cost testimony with the Alabama, Florida, Georgia, Louisiana and South Carolina Public Service Commissions and the Tennessee Regulatory Authority. In addition, I have also recently filed Universal Service Benchmark testimony with the Kentucky and the South Carolina Public Service Commissions and the Tennessee Regulatory Authority.

## Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I was asked by MCI to adjust the BST non-recurring cost (NRC) study and proposed NRC charges and to develop revisions to remove the functions that are not needed when a combination of loop and port are provided to migrate an existing BST customer to an MCI service using unbundled network elements. I
was given the assumption that the loop and port are connected today, that soft dial tone is deployed and that BST will not disconnect the loop from the port before providing them to MCI. The combinations I examined are:

1. 2-Wire Analog Loop and 2-Wire Analog Port,
2. 4-Wire Analog Loop and 4-Wire Analog Port,
3. 2-Wire Digital ISDN Loop and 2-Wire Digital ISDN Port,
4. 4-Wire DS-1 Loop and 4-Wire Analog Port(s).
Q. WHAT BST COST MODEL DID YOU USE TO MAKE THE REVISIONS?
A. I used the public version of the cost study that BST has provided in Georgia and in other cost cases across the Southeast. I validated that work times and labor rates used in the public BST Georgia study to estimate the non-recurring costs were the same as used in Florida for the only combination element recently filed in Florida. I then assumed that BST would use this same cost study if they filed up-to-date cost studies in Florida for the remaining elements. In this manner, I did not have to utilize worktimes and labor rates that BST claims in Florida are confidential.

## Q. WHAT ARE THE PROVISIONING ASSUMPTIONS THAT UNDERLIE THE BST DIRECT COST STUDY?

A. As an initial matter, it is important to understand the assumptions in the BST NRC cost study. As reflected in Mr. Varner's deposition in the recent Florida
cost docket, when provisioning an existing unbundled loop and port to CLECs for combination, BST assumes that the loop will be disconnected at the Main Distribution Frame (MDF) and routed to the CLEC's collocation space via a crossconnect and be connected to the CLEC's equipment at the collocation space. Under BST's assumption, the CLEC would then "combine" the loop and port by obtaining a cross connect that would connect the loop coming out of the CLEC collocation space with the port of the BST switch. This is a very inefficient process and requires work (time and labor) by several BST functional work groups to perform service order processing, engineering, and connect and test functions.

Very little of this work is necessary when the loop and port remains intact and the loop is not disconnected by BST at the MDF for delivery to a CLEC collocation space for subsequent re-connection to the switch port.

## Q. WHAT ADJUSTMENTS DID YOU MAKE TO THE BST NRC COST STUDY TO REMOVE UNNECESSARY WORK FUNCTIONS FOR A COMBINED LOOP AND PORT?

A. As I indicated earlier, I was asked to adjust the BST NRC direct cost study using the assumption that the non-recurring cost should represent the cost of migrating an existing BST customer to MCI and, therefore, the loop and port are already connected.

I was also asked to assume that soft dial tone using dedicated inside plant and dedicated outside plant (DIP/DOP) was deployed in the BST network and that BST would not disconnect the loop and port before furnishing the UNEs to MCI. As a result of these assumptions, there are significant amounts of work functions contained in the BST NRC direct cost study that are unnecessary.

I was also asked to assume two scenarios regarding the "fall-out" of orders from the mechanized process. In one scenario, I assume that $80 \%$ of the orders are handled electronically and $20 \%$ of the orders require manual intervention. This is the assumption that BST utilized in its NRC cost studies in Louisiana, Alabama, Georgia, Tennessee and North Carolina, as opposed to the $100 \%$ "fall-out" -or manual processing of all orders -- that BST's NRC cost study assumes in Florida. In other words, BST developed costs assuming manual order processing. To derive proposed costs for electronic orders in Florida for the elements in the recent Florida cost docket, BST made a subsequent unsupported adjustment to that manual cost. No such adjustment has been made for the costs for the elements that had permanent rates assigned in the initial arbitration hearing. I also developed a second scenario where $97 \%$ of the orders are processed electronically and only $3 \%$ of the orders require manual intervention. This level of efficiency is what BST's witness Stacy indicated in his Georgia testimony that BST is able to achieve for its own orders.

## Q. PLEASE EXPLAIN THE ADJUSTMENTS THAT YOU MADE TO THE BST NRC COST STUDY TO ELIMINATE UNNECESSARY WORK

# FUNCTIONS FOR THE COMBINATION OF A 2-WIRE ANALOG LOOP AND PORT. 

A. Page 1 of Exhibit $\qquad$ (TAH-1) is the output sheet which reflects the adjustments that I made to correct the BST NRC direct cost study for a 2-Wire analog loop and a 2-Wire analog port to eliminate unnecessary work functions for the combination 2-Wire loop and port and includes a 3\% "fallout" of electronic orders. Page 2 of Exhibit ___ (TAH-1) contains the same adjustments as on page 1 with a $20 \%$ "fallout". Page 3 of Exhibit ___ (TAH-1) is the output sheet compiled from the BST NRC direct cost study for the 2-Wire analog loop and the 2-wire analog port which reflects the work functions that BST assumes are necessary under the scenario where the loop is disconnected at the MDF, crossconnected to the CLEC collocation space, and reconnected back to the switch port via another cross-connect.

I used the SL2 (Designed) 2-Wire analog loop instead of the more appropriate SL1 (non-designed) loop since BST has not filed the SL1 in Florida as they have in the other southeastern states.

The loop work functions for engineering, connect and test, and travel are not needed under the assumption of an existing BST customer whose service is migrated to MCI without disconnect because these functions are only involved when a service is connected. Under the assumption that an existing loop and port are already connected, and that the customer served by that loop and port are to be "migrated" to MCI, these functions would no longer be necessary.

Therefore these worktimes were reduced to zero. Of the five service order functions, only the ICSC function is involved with clearing a "fallout" of an electronic order for "migrating" an existing BST customer to MCI. All other service order functions were also reduced to zero worktimes because they would not be necessary under the "migration" scenario. I have adjusted the ICSC worktime to reflect an efficient provisioning process whereby $97 \%$ of the orders are processed electronically. Therefore, only $3 \%$ of the orders will require the work activities of the ICSC to correct the "fallout" condition. Since the assumption is that soft dial tone is deployed in the BST network, there should be no work activity to disconnect an existing loop. Therefore, I have eliminated the work times associated with the loop disconnect function. I have also corrected the error that BST made in implementing their assumption of 15 minutes per "fallout" order to correct the "fallout" condition and applied the worktime only to the first loop element and not to the additional loop element. The 3\% ICSC manual correction of "fallout" orders is represented by applying a work time of .0075 hours to all orders at the direct labor rate for the ICSC function.

The only port work function necessary for a migration of an existing BST customer to MCI would be the Connect \& Test function for Recent Change Line Translations (RCMAG). The service order functions are already included in the loop "fallout" correction, since the loop and port would be ordered on the same order. As with the loop, if an existing port is not disconnected from the loop when "migrated" to MCI, connect and test functions, excluding RCMAG functions, would not be necessary. Since the RCMAG functions may be necessary every time a customer change occurs, the port NRC is represented by
applying the installation work time of .0250 for both the first and additional elements to the direct labor rate and .0125 for both the first and additional disconnect functions to the direct labor rate and the disconnect discount factor.

The total combined NRC would be the sum of the adjusted loop and port NRCs.

## Q. PLEASE EXPLAIN THE ADJUSTMENTS THAT YOU MADE TO THE BST NRC COST STUDY TO ELIMINATE UNNECESSARY WORK FUNCTIONS FOR THE COMBINATION OF A 4-WIRE ANALOG LOOP AND PORT.

A. Page 1 of Exhibit ___(TAH-2) is the output sheet which reflects the adjustments that I made to correct the BST NRC direct cost study for a 4-Wire analog loop and a 4-Wire analog port to eliminate unnecessary work functions for the combination 4-Wire loop and port and includes a 3\% "fallout" of electronic orders. Page 2 of Exhibit __ (TAH-2) contains the same adjustments as on page 1 with a $20 \%$ "fallout". Page 3 of Exhibit ___(TAH-2) is the output sheet compiled from the BST NRC direct cost study for the 4-Wire analog loop and the 4 -wire analog port which reflects the work functions that BST assumes are necessary under the scenario where the loop is disconnected at the MDF, crossconnected to the CLEC collocation space and reconnected back to the switch port via another cross-connect.

The appropriate adjustment to the non-recurring cost for providing the 4-Wire analog loop and port combination would be the same as for the 2 -Wire analog
loop and port, except that a different disconnect discount factor was used by BST.

## Q. PLEASE EXPLAIN THE ADJUSTMENTS THAT YOU MADE TO THE BST NRC COST STUDY TO ELIMINATE UNNECESSARY WORK FUNCTIONS FOR THE COMBINATION OF A 2-WIRE DIGITAL ISDN LOOP AND PORT.

A. Page 1 of Exhibit __(TAH-3) is the output sheet which reflects the adjustments that I made to correct the BST NRC direct cost study for a 2-Wire digital ISDN loop and a 2-Wire digital ISDN port to eliminate unnecessary work functions for the combination 2-Wire ISDN loop and port and includes a 3\% "fallout" of electronic orders. Page 2 of Exhibit ___(TAH-3) contains the same adjustments as on page 1 with a $20 \%$ "fallout". Page 3 of Exhibit $\qquad$ (TAH-3) is the output sheet compiled from the BST NRC direct cost study for the 2-Wire digital ISDN loop and the 2 -wire digital ISDN port which reflects the work functions that BST assumes are necessary under the scenario where the loop is disconnected at the MDF, cross-connected to the CLEC collocation space and reconnected back to the switch port via another cross-connect.

The appropriate adjustments to the non-recurring costs for providing the 2 -Wire digital ISDN loop and port combination would be the same as for the 2-Wire analog loop and port except that a different RCMAG worktime and a different disconnect discount factor were used by BST. The ISDN port NRC is represented by applying the installation work time of .0667 for both the first and
additional elements to the direct labor rate and .0333 for both the first and additional disconnect functions to the direct labor rate and the disconnect discount factor.

## Q. PLEASE EXPLAIN THE ADJUSTMENTS THAT YOU MADE TO THE BST NRC COST STUDY TO ELIMINATE UNNECESSARY WORK FUNCTIONS FOR THE COMBINATION OF A DS-1 LOOP AND 4WIRE ANALOG PORT.

A. Page 1 of Exhibit ___(TAH-4) is the output sheet which reflects the adjustments that I made to correct the BST NRC direct cost study for a DS-1 loop and a 4Wire analog port to eliminate unnecessary work functions for the combination DS-1 loop and 4-Wire analog port and includes a 3\% "fallout" of electronic orders. Page 2 of Exhibit ___ (TAH-4) contains the same adjustments as on page 1 with a 20\% "fallout". Page 3 of Exhibit___(TAH-4) is the output sheet compiled from the BST NRC direct cost study for the DS-1 analog loop and the 4-wire analog port which reflects the work functions that BST assumes are necessary under the scenario where the loop is disconnected at the MDF, crossconnected to the CLEC collocation space where multiplexing takes place and reconnected back to the switch port via another cross-connect.

The appropriate adjustments to the non-recurring costs for providing the DS-1 loop would be the same as for the 2-Wire analog loop except that, since a DS-1 is treated as a special service, the service order functions for ACAC and Install and Maintenance (SSIM) may be necessary on a "fallout" basis. The other
service order functions, network plug-in administration and the work management center would still not be necessary, because they are used only for new connect plug-ins and for coordinating dispatched technicians. In addition to the ICSC functions that are the same on all of the combined services, DS-1 loops would be represented by applying the installation worktimes of the ACAC of .0019 for both first and additional and the worktimes of the SSIM of .0075 for the first and .0050 for the additional to the direct labor rate.

The port costs are the non-recurring costs for the 4-Wire analog port multiplied by 24 to allow for the maximum DS-1 capability of 24 voice grade facilities.

## Q. CAN YOU SUMMARIZE THE NON-RECURRING CHARGES FOR THE

 VARIOUS LOOP/PORT COMBINATIONS THAT YOU CALCULATED BY ADJUSTING BST'S COST STUDY?A. The following chart summarizes the adjusted costs for the loop/port combinations as well as listing BST's proposed costs for those same combinations:

|  | $3 \%$ Fallout | $20 \%$ Fallout | BST Proposed |
| :---: | :---: | :---: | :--- |
| 2-Wire Analog -First | $\$ 1.6755$ | $\$ 3.4643$ | $\$ 153.4205$ |
| -Additional | $\$ 1.3598$ | $\$ 1.3598$ | $\$ 117.9089$ |
| 4-Wire Analog -First | $\$ 1.6389$ | $\$ 3.4277$ | $\$ 327.3543$ |
| -Additional | $\$ 1.3232$ | $\$ 1.3232$ | $\$ 237.0027$ |
| 2-Wire ISDN | -First | $\$ 3.8319$ | $\$ 5.6207$ |
| -Additional | $\$ 3.5162$ | $\$ 3.5162$ | $\$ 269.9648$ |







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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-4-Wire A | alog Void | Grade Loo |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | C |  |  |  |  | $F$ |  | ExF |  | +G |
| Function | $\underset{\text { Payband }}{\text { JFC, }}$ | JFC/Payband Description |  | tion mes Additional |  | nect mes Additional | Direct Labor Rate | First | Additionat | Disc | nect <br> $t$ | Disconnect Discount | Discounte | Disconnect cost | Dire | Cost |
| SERVICE ORDER | 2300 | Customer Point of Contact - ICSC | 0.0075 | 0.0000 | 0.0000 | 0.0000 | \$42.09 | \$0.3157 | Ads.0000 | \$0,0000 | Adrational | Factor | First | Additional | Firat | Additional |
| SERVICE ORDER | 470x | Cirauit Provisioning Group (CPG) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$36.25 | \$0.0000 | \$0,000 | \$0.0000 |  |  | \$0.0000 | \$0.0000 | \$0.3157 | \$0.0000 |
| SERVICE ORDER | 4 WXX | Work Management Center (WMC) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$33.95 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 |
| SERVICE ORDER | 471X | Acc Cust Advocate Cntr (ACAC) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$38.26 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0600 |
| SERVICE ORDER | 411X | Install 8 Mtice - Spec Sves (SSIM) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$42.96 | \$0.0000 | \$0.0000 | \$0.0000 | \$0,0000 | 0.9043 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 |
| ENGINEERING | 400 X | Address 8 Facility Inventory (AFIG) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$33.15 | \$0.0000 | \$0.0000 | 50.0000 | \$0.0000 | 0.9043 | \$0,0000 | \$0.0000 | \$0.0000 | \$0.0000 |
| Enginetring | 470x | Circuit Provisioning Group (CPG) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$36.25 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 |
| Enginetring | 32xX | Outside Plant Eng (FG30) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$50.84 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$0,0000 | 50.0000 | \$0.0000 |
| CONNECT \& TEST | 344 X | Ntwk Plug-In Admin (PICS) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$36.75 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$00000 | \$0.0000 | $\$ 0,0000$ $\$ 0.0000$ |
| CONNECT \& TEST | 431X | CO Install 8 Mica Field - Ckt 8 Fac | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$42.17 | \$0.0000 | \$0.0000 | \$0.0000 | 50.0000 | 0.9043 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 $\mathbf{5 0 , 0 0 0}$ |
| CONNECT \& TEST | 471X | Acc Cust Advecate Crit (ACAC) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$38.26 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$0.0000 | \$0,0000 | $\$ 0.0000$ $\$ 0.0000$ |
| CONNECT \& TEST | 411X | instail \& Mice - Spec Sves (SSIM) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$42.96 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$0.0000 |  |  |
| TRAVEL | 411X | Install 8 Mitos - Spec Sves (SSIM) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$42.96 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.9043 | \$0.0000 | \$0.0000 | $\$ 0.0000$ | $\$ 0.0000$ 50.0000 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | Total | \$0.3157 | \$0.0000 |
|  |  |  |  |  | .1.2-Exc | ange Ports | 4-Wire A | Volee | ade Port |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | c |  |  |  |  | F |  | ExF |  |  |
|  | JFCI | JFCPPayband | inste <br> Worl | ation <br> Imes |  | nect imes | Direct Labor |  |  |  | inect <br> $t$ | Disconnect Discount | Discount | Disconnact st | Direc |  |
| Function | Payband | Description | First | Additional |  | Additional |  | First |  | Firat | Additional |  | First | Additional | First | Additional |
| Service Order Comect \& Test | 2300 | Customer Point of Contact - ICSC Network Servicas Clerical | 0.0000 0.0000 | 0.0000 0.0000 | 0.0000 0.0000 | 0.0000 0.0000 | $\$ 42.09$ $\$ 3276$ | $\$ 0.0000$ $\$ 0000$ | \$0,0000 | \$0.0000 | \$0.0000 | 0.8350 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0060 |
| Connect 8 Test | 4 Nix | Recent Chng Line Trans (RCMAG) | 0.0250 | 0.0250 | 0.0125 | 0.0125 | \$37.34 | \$0.8335 | \$0.9335 | 50.4658 | \$0.0000 | 0.8350 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 |
| Connect 8 Test | 431 X | CO Install 8 Mice Field - Ckt 8 Fac | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$42.17 | 50.0000 | \$0.0000 | \$0.0000 | \$0.4608 | 0.8350 | \$0.3997 | \$0.3897 | \$1.3232 | \$1.3232 |
| Connect \& Test | 4 AXX | Acc Cust Advocate Cntr (ACAC) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | \$38.26 | \$0.0000 | \$0.0000 | \$0.0000 | \$0.0000 | 0.8350 | $\$ 0.0000$ $\$ 0.000$ | \$0.0000 | \$0.0000 | \$0.0000 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |





## ASSUMPTIONS:

BELLSOUTH ASSUMPTION OF DISCONNECT
AND SUBSEQUENT RECONNECTION TO




## Florida





Total - loop and 24 port $\frac{\text { First }}{\$ 32.6134} \frac{\text { Additional }}{\$ 32.0454}$



