EXHIBIT NO. _____ (RJB-1T)

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of Qwest Corporation to Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order	**Docket No. UT-033044**

RESPONSE TESTIMONY OF

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ON BEHALF OF

QWEST CORPORATION

FEBRUARY 2, 2004

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I. EXECUTIVE SUMMARY

My testimony addresses the methods and inputs that AT&T uses to determine whether competitive local exchange carriers ("CLECs") can economically self-supply switching to serve mass market customers in specific geographic markets in Washington. My analysis concentrates on LATA 674, but the adjustments I make to the model for this LATA have similar impacts in other areas in the State of Washington. My analysis, which uses the AT&T Impairment model with the inputs advocated by Qwest witness Peter Copeland and used in the CLEC Profitability Model ("CPRO"), demonstrates that an efficient CLEC can serve DS0-level mass market customers economically with self-supplied switching in Washington. Table 1 provides a summary of my analysis.

Table 1 - Profitability of CLEC UNE-L Entry in Washington
($/Year/Customer DS0 Line)

Results

	LATA-672c	LATA-674	LATA-676
Revenues	$ 636.60	$ 640.31	$ 639.78
Costs	$ 487.20	$ 441.35	$ 534.99
Operating Margin	**$ 149.40**	**$ 198.96**	**$ 104.79**

My analysis shows that when the AT&T model is used with inputs that reasonably reflect the operations of an efficient CLEC, as required by the FCC's Triennial Review Order ("TRO"), it demonstrates that competitors are

not impaired without access to unbundled circuit switching in multiple Washington MSAs.

II. PURPOSE AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, TITLE, AND WORK ADDRESS.

A. My name is Richard J. Buckley Jr., and I am employed by Qwest as a Director in the Cost and Economic Analysis organization. My address is 1801 California St. Room 2040, Denver, CO 80202.

Q. PLEASE PROVIDE YOUR BACKGROUND AND WORK EXPERIENCE.

A. I have worked for Qwest and its predecessor companies for 23 years. Currently, I am responsible for providing regulatory support and testimony for local loop modeling and investment development. I have broad experience in developing costs for regulatory purposes, including developing forward-looking network cost models. My educational background includes a B.S. in Business Administration - Finance from the University of Northern Colorado.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to the direct testimony of AT&T witnesses Douglas Denney and Arlene Starr (Exhibit No. DD-1T) with regard to the inputs and assumptions that they use in the AT&T Impairment Tools ("AT&T Tools"). I also respond to the testimony of AT&T witness Michael Baranowski (Exhibit No. MRB-1T) and his presentation of the AT&T business

case model referred to as the Business Case Analysis Tool ("BCAT"). In addition, I provide an analysis and restatement of the AT&T Tools.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. Section III of my testimony discusses the inputs that Mr. Denney, Ms. Starr, and Mr. Baranowski should have used when they ran the AT&T Tools and BCAT. In that section, I also address concerns about the format utilized by the AT&T Tools for reporting the results of the business case analysis. Section IV presents the results of my sensitivity analysis, along with a discussion of the necessary adjustments to the AT&T Tools and BCAT formulas and inputs that I made in my analysis.

III. AT&T'S IMPAIRMENT ANALYSIS TOOLS

Q. PRIOR TO A DETAILED ANALYSIS OF AT&T'S MODEL ARE THERE SIMPLE METHODS AN ANALYST CAN USE TO CHECK THE MODEL FOR REASONABLENESS?

A. Yes. The simplest test is to compare it to what is actually happening in the real world and see if it makes sense. In the real world, AT&T, MCI, and many other CLECs have used UNE-P extensively, if not exclusively, as their means of serving customers, particularly mass market customers. This extensive use of UNE-P demonstrates that the CLECs unquestionably view UNE-P as being economic. Thus, a simple test of the reasonableness of the model's structure and inputs can be performed by substituting the UNE-P rates for the UNE-L

costs, CLEC switch costs and CLEC backhaul costs. This provides a comparison of the costs for the CLEC's current network structure with the revenues assumed in the AT&T Tools. In the table below, I provide this comparison. As the figures in the table show, even when UNE-P rates are substituted for the UNE-L costs, CLEC switch costs, and CLEC backhaul costs, BCAT still shows that a CLEC would operate at a loss.

Table 2

Results Including Long Distance - LATA 674

Revenues	**AT&T Default**	**UNE-P**
Basic	$264.77	$264.77
Access	$9.31	$9.31
Long Distance	$61.72	$61.72
Ancillary	$4.94	$4.94
Subtotal Revenues	$340.74	$340.74
Costs		
Access Payments	$7.79	$7.79
Settlement Payments	$6.56	$6.56
Back-haul and Hot-cut	**$126.01**	**$0.00**
Switching & Other Network Operating	**$37.03**	**$0.00**
POP-to-POP	$4.49	$4.49
UNE-L Loop	**$166.35**	**$216.24**
Customer Billing, Sales & Marketing and Care	$180.90	$180.90
Subtotal Costs	$529.13	$415.99
Operating Margin	**($188.39)**	**($75.24)**

In other words, BCAT produces a result that is directly contradicted by what is happening in the real world in Washington today. This counter-factual result reveals that there is something seriously wrong with the model and that it produces unrealistic, unreliable results. In this regard, AT&T recently

announced with great fanfare that it had reached the milestone of 4 million local phone residential customers in 28 states.[1] If UNE-P were unprofitable, as AT&T's model shows, AT&T certainly would not be providing local exchange service at this level. When the results of the model are so far off base in measuring the economic effect of UNE-P, it follows that the model cannot provide a reasonable estimate of profitability for a CLEC using a UNE-L architecture. Qwest witness Harry Shooshan provides discussion in his response testimony on the number of CLECs that are providing service in Washington using their own switching and UNE-L loops. Clearly, the real world evidence contradicts the AT&T Tools model and its assumptions.

Q. HOW DO YOU RESPOND TO AT&T'S ASSERTION THAT ITS BUSINESS CASE ANALYSIS IS "CONSERVATIVE"?

A. As a proponent of preserving the availability of UNE-P throughout Washington, AT&T's use of the term "conservative" presumably is intended to mean that it has erred on the side of understating CLEC costs and overstating CLEC revenues. However, an analysis of BCAT clearly demonstrates that, consistent with its desire to perpetuate UNE-P, AT&T has done precisely the opposite of what its use of the term "conservative" implies – that is, it has overstated CLEC costs and understated revenues.

[1] http://www.att.com/news/item/0,1847,12778,00.html

The simple "sanity test" discussed above, where I ran AT&T's study using UNE-P inputs instead of UNE-L, is a graphic demonstration that AT&T's study is not conservative. To the contrary, it demonstrates that AT&T has cut corners to preserve UNE-P. In the testimony that follows, I point out specific instances where AT&T's study is quite the opposite of conservative.

Q. MR. DENNEY AND MS. STARR PROVIDE A DESCRIPTION OF THE CLEC NETWORK THAT WOULD BE USED TO PROVIDE SERVICE ABSENT UNBUNDLED SWITCHING. IS THIS NETWORK SIMILAR TO THE NETWORK MODELED IN CPRO?

A. Yes. The AT&T model and CPRO assume substantially the same network components. Both models include a CLEC switch, transport facilities, collocation space and digital loop carrier ("DLC") equipment. In addition, both models include unbundled loops ("UNE-L") that are leased from the incumbent local exchange carrier ("ILEC"), the activities needed to transfer the loops to the CLEC's collocation space and overhead activities and costs, such as billing, uncollectibles, customer care and customer acquisition.

Q. IN ADDITION TO INCLUDING SIMILAR NETWORK COMPONENTS, DO CPRO AND THE AT&T MODEL BOTH INCLUDE ESTIMATES OF THE REVENUES A CLEC WOULD REALIZE USING SELF-PROVISIONED SWITCHING?

A. Yes. Both models include estimates of the revenues a CLEC would generate using the network assets listed above to provide local service to mass market

customers.

Q. WHY DO CPRO AND THE AT&T MODEL PRODUCE SUCH DIFFERENT RESULTS WHEN THEIR STRUCTURES ARE SIMILAR?

A. The output of any cost model or business case model is largely dependent on the input values and related assumptions that a modeler chooses. Because of this, models with similar structures will produce dissimilar results if they rely on different input values and assumptions. Therefore, the validity of the results produced by a model is heavily dependent upon the accuracy and reasonableness of the inputs to the model (or, as the popular saying goes: "garbage in – garbage out".) In this case, the AT&T model uses numerous unrealistic inputs for the costs and revenues an efficient CLEC would experience using self-provisioned switching to serve mass market customers in Washington. As I discuss below, these inputs violate the TRO's requirements that all cost and revenue assumptions reflect the operations of an *efficient* CLEC and that revenues be based upon current or "prevailing" prices and revenues.[2] As my sensitivity analysis demonstrates, when these inputs are replaced with more realistic assumptions that meet the requirements of the TRO, the AT&T model and CPRO produce similar results.

[2] TRO ¶517 & n. 1579; id. ¶520 & n. 1588.

Q. WHAT PORTIONS OF THE AT&T MODEL DO MR. DENNEY AND MS. STARR ADDRESS?

A. The AT&T model is made up of two major components. The first is the "DS0 Impairment Tools" and the second is the "Business Case Analysis Tool." Mr. Denney and Ms. Starr provide the discussion concerning the structure and inputs for the "DS0 Impairment Tools" portion of the model. This portion includes the costs they have identified for the transport (both leased and self-provided), the DLC used as transport electronics, the termination equipment, the collocation facilities, and the non-recurring activities required to transfer a loop from the ILEC switch to the CLEC collocation facilities (or from one CLEC to another). Mr. Denney and Ms. Starr refer to these costs in the "Impairment Summary" as the "Components of Impairment."

Q. DO YOU AGREE WITH THIS CHARACTERIZATION?

A. No. The costs of these network components and activities are costs that any efficient CLEC entering the market with self-provisioned switching would incur to serve mass market customers. These are not "impairment costs"; they are the routine costs of doing business, which the FCC has directed should be included in a business case analysis. Mr. Denney's and Ms. Starr's mischaracterization of these costs is a thinly veiled attempt to confuse the actual issue before this Commission and an acknowledgement on their part that AT&T views even routine network costs as giving rise to impairment.

Q. MR. DENNEY AND MS. STARR DEVOTE MUCH OF THEIR TESTIMONY TO COMPARING CLEC AND ILEC COSTS IN AN ATTEMPT TO SHOW THAT CLECS ARE IMPAIRED BECAUSE THEY HAVE GREATER NETWORK AND OTHER COSTS THAN ILECS? IS THIS COMPARISON APPROPRIATE AND ACCURATE?

A. No. The proper purpose of business case models, as established by the TRO, is to identify the costs that are associated with an efficient CLEC using UNE-L to serve enterprise and mass market customers and to compare those costs to the revenues that the CLEC would generate.[3] If the use of reasonable assumptions shows that the CLEC's revenues would exceed its costs in a particular market, it is appropriate to infer that an efficient CLEC could operate economically in that market without relying on the ILEC's switching. Nothing in the TRO suggests that the issue of economic impairment hinges on whether a CLEC's costs are greater than an ILEC's, as Mr. Denney and Ms. Starr assume throughout most of their testimony. In fact, the FCC has made it clear that "[s]tate commissions should not focus on whether competitors operate under a cost disadvantage."[4] The critical inquiry, which Mr. Denney and Ms. Starr fail to address properly, is whether a CLEC can operate economically with self-supplied switching – an inquiry that is not dependent on the economics of the

[3] TRO ¶517

[4] TRO ¶517, n. 1579.

ILEC's operations.

In addition, even if Mr. Denney and Ms. Starr were addressing the proper question, the AT&T Tools are not the proper analytical tool for answering the question they pose. The model simply identifies the transport and collocation costs for the CLEC network; it does not include essential costs of the ILEC's network that would be necessary for any fair and reasonable comparison of ILEC and CLEC costs. For example, while AT&T Tools includes CLEC network costs for DLC equipment and collocation facilities in 67 wire centers in LATA 674, it does not include Qwest's costs for land, central office buildings and switches in those same wire centers. If these costs were included, as they must be for an accurate comparison of ILEC and CLEC costs, Qwest's network costs would far exceed the CLEC network costs. Qwest witness Peter Copeland further addresses AT&T's alleged cost disadvantage and demonstrates that it is Qwest who operates at a cost disadvantage, when the relevant costs are compared. The Commission's objective, as required by the TRO, is to determine if there are geographic areas within Washington where CLECs can develop a successful and economic business plan using UNE-L to serve mass market customers. Mr. Denney's and Ms. Starr's inaccurate, incomplete analysis is an irrelevant distraction from that objective.

Q. HOW DID THE FCC DIRECT STATE COMMISSIONS TO ANALYZE CLEC ENTRY INTO THE MASS MARKETS WITHOUT

UNBUNDLED SWITCHING?

A. The FCC instructed that state commissions "should determine if entry is economic by conducting a business case analysis for an efficient entrant. This involves estimating the likely potential revenues from entry, and subtracting out the likely costs (accounting for scale economies likely to be achieved)."[5] Typically, this involves conducting a cash flow analysis and developing a net present value ("NPV") for the study period. A credible business case will simulate what is expected to happen to a business venture over a reasonable period of time. The revenues and costs that drive most business decisions are collected and incurred over an extended number of years. Often, investments in fixed assets (such as switches) and other start-up costs occur in the initial years of a business venture, and it is typical for firms to experience negative cash flows in these years. Financial viability, therefore, often depends upon generating sufficient positive cash flows in later years to make up for early losses. Cash flows account for all of the costs and revenues associated with investments. The last step, developing the NPV, provides a financial manager with information relating to the expected value of this stream of cash flows in today's dollars. This serves to eliminate the problems that arise when comparing varying vintages of cash flows by recognizing the time value of money. This information allows the decision-makers to understand how

[5] TRO ¶517, n. 1579.

changing the timing of cash flows will affect the final value.[6] If a prospective business project has a positive NPV based on a rational analysis, a firm will have a sound basis for pursuing the project. If the project has a negative NPV, a rational firm likely would not pursue it. This is how the CPRO model analyzes the CLEC business case. My exhibit RJB-2 provides a simplified example of the cash flow analysis approach. The data necessary to make informed business decisions is easily accessed in this format. The analysis shows when investments occur, what tax liabilities are anticipated and when the project will reach a break-even point.

Q. DID THE AT&T TOOLS MODEL USE THIS APPROACH TO DETERMINE THE CLEC'S PROFITABILITY?

A. No. The DS0 Impairment Tools identifies what AT&T considers to be the components of the CLEC "backhaul" network. The investments identified for CLEC-constructed fiber rings, leased transport, collocation facilities, DLC equipment, termination equipment and loop transfer labor costs are then "ramped up" and converted to a monthly cost. As Mr. Denney and Ms. Starr explain it, "The 'ramp up' adjustment reflects the fact that common equipment that must be installed on day one is recovered over a smaller number of customers in the earlier stages of CLEC entry than in latter periods, when

[6] See Argenti, *The Fast Forward MBA Pocket Reference*, John Wiley & Sons, Inc. New York, 1997.

market share has matured and stabilized."[7] A "ramp up" is unnecessary if the analysis uses a normal cash flow structure. The monthly costs for these

[7] Direct Testimony of Douglas Denney and Arlene M. Starr (Exhibit No. DD-1T), December 22, 2003, at page 33.

activities and capital investments are then passed to the "BCAT." Mr. Denney and Ms. Starr contend that the costs they analyze comprise the cost disadvantage that the CLEC confronts when serving mass market customers. They state that these costs are "insurmountable" and are costs that are not incurred by Qwest. In fact, even if that comparison were relevant, Qwest's network contains many similar pieces of equipment and requires similar labor activities. While Mr. Denney and Ms. Starr claim that the CLEC costs constitute barriers to entry or are "cost disadvantages," in reality, as I stated earlier, they are simply a cost of doing business and are precisely the types of costs the TRO requires be included in a business case analysis. The TRO recognizes that these costs are not inherently barriers to entry by establishing that CLEC entry may be economic if a CLEC's likely revenues would exceed its likely costs. There would be no need to perform this cost/revenue analysis if, as Mr. Denney and Ms. Starr claim, the CLEC costs they address were insurmountable barriers to entry.[8]

Q. DO YOU HAVE CONCERNS WITH THE MANNER IN WHICH THE AT&T TOOLS DATA IS PROVIDED TO THE BCAT?

A. Yes. By converting the data to a per-line, monthly cost prior to exporting it to the BCAT, the AT&T Tools model has made it difficult to develop a cash flow

[8] In this regard, the FCC specifically states that "[a] cost disparity that is typical of, and has not prevented, entry into the industry is insufficient to justify impairment under our standard." TRO ¶520 & n.1588.

analysis. A cash flow analysis is an integral part of the business case approach. In contrast with the AT&T method, a cash flow analysis recognizes that depreciation is not a cash expenditure. It also clearly shows the impact of income taxes on the project's net income. Furthermore, by incorporating "ramp-up factors" and "investment adjustment factors" in the calculation of the monthly costs passed to the BCAT, the AT&T Tools have masked the straight-forward and transparent nature of the standard cash flow approach. By simply providing results as a per line impairment, the Tools fail to provide information that a financial manager would need in analyzing the affect of various investment decisions. The widely used framework of discounted cash flow analysis provides this information.[9]

Q. ARE THERE OTHER PROBLEMS ASSOCIATED WITH THE "IMPAIRMENT TOOLS" APPROACH?

A. Yes. The investment to monthly cost conversion utilizes annual cost factors ("ACF") for cost of money, depreciation and income tax. By including these components in the cost and revenue comparison, the AT&T analysis inappropriately treats depreciation as a cash flow item. Depreciation should be accounted for in a cash flow analysis, but only to properly calculate income tax amounts. Depreciation is a non-cash item. A cash flow analysis will recognize the capital expenditure in the year that it occurs. The depreciation associated with that expenditure will be used to offset taxable income in

[9] See Argenti, *The Fast Forward MBA Pocket Reference*, John Wiley & Sons, Inc. New York, 1997.

subsequent years, but it will not be included in the calculation of free cash flow for those years. The inclusion of the income tax portion of the ACF increases the monthly cost to account for the income tax liability that the firm will bear. That is entirely appropriate when developing product costs for pricing purposes. However, it is not appropriate when analyzing cash flows to assist in making a decision on the profitability of business venture. Many start-up businesses operate at a loss for the first few years and therefore do not have a tax liability in these years. By including this tax liability, AT&T is including a cost that the typical firm, including an efficient CLEC, will not incur. Indeed, in the AT&T Tools default analysis the CLEC never generates a profit. Including costs for an income tax expense, therefore, is illogical and inconsistent with AT&T's own results.

Q. MR. DENNEY AND MS. STARR CONSISTENTLY CLAIM THAT THE AT&T TOOLS IS CONSERVATIVE. DO YOU AGREE?

A. No. The AT&T Tools utilizes some inputs that AT&T has advocated in TELRIC cost docket proceedings. While some of these inputs understate costs, AT&T deviated in several important and inconsistent ways from their cost docket advocacy. For example, a key assumption in AT&T's HAI model, the model AT&T and MCI offer in cost dockets to establish UNE costs and rates, is that a carrier will usually be able to share the costs of placing telephone cables with at least two other utility companies. This assumption results in the telephone company paying only about 35% of placement costs,

which decreases network investment by millions of dollars in most states. In the AT&T Tools model, by contrast, AT&T assumes that a CLEC will incur 65% of placement costs, which produces a higher cost than would result with the HAI sharing assumption. This is a transparently result-oriented approach.

Similarly, another input referred to as "churn," which is the term used for the frequency with which customers leave a carrier, has a major impact on the costs of the efficient CLEC. The churn default value in AT&T Tools of 4.6% is substantially more than the churn rates efficient CLECs are actually experiencing today. Mr. Copeland provides data on the churn rates for various CLECs in his rebuttal testimony and in the CRO inputs documentation filed with his direct testimony.

In addition, the calculation in Tools that determines the actual churn amount appears to overstate the annual churn quantity. The AT&T approach to determining the small business portion of the mass market limits the lines based on AT&T's interpretation of the “enterprise” share of DS0 services. This effectively reduces the higher revenue business lines in their analysis. The BCAT calculation of the average revenue per line is dependent on the mix of residential and small business lines. The assumption is that business lines will generally have higher rates and more toll usage. By understating the number of business lines BCAT effectively understates the potential revenues.

Q. DOES THE AT&T TOOLS EMPLOY ANY OTHER METHODS FOR IMPROPERLY OVERSTATING COSTS?

A. Yes. The model uses an improper assumption for calculating customer acquisition costs, which are among the key cost components of an efficient CLEC. The model develops these costs on a per line basis by dividing the customer acquisition costs by the average number of lines at a location. The model assumes that the "efficient" CLEC will serve all geographic areas and target the "average" customer. In reality, it is far more likely that an efficient CLEC will target customers that are above average in the revenues they generate. The likelihood that a CLEC would operate in this manner is borne out by experience in most local exchange markets in Qwest's region.

Q. THE "IMPAIRMENT TOOLS" NETWORK STRUCTURE ASSUMES THAT THE CLEC WILL BUILD ITS OWN TRANSPORT FACILITIES. IS THIS APPROPRIATE?

A. In many cases, this approach will not be appropriate. If a CLEC leases transport from the ILEC, it will avoid the large capital expenditures required to build its own transport network. The AT&T model has ignored this option, which is not consistent with how an "efficient" CLEC would operate. As a CLEC's operations and customer base grow, there may come a point where the CLEC's economics justify construction of a transport network. It is clearly wrong and inefficient, however, to assume that a CLEC will always build its own transport network.

Q. MR. DENNEY AND MS. STARR ASSUME THAT A CLEC ENTERING THE MASS MARKET WILL SERVE EVERY ILEC WIRE CENTER. IS THIS A REASONABLE ASSUMPTION?

A. No. It would be more reasonable to assume that a start-up would target a narrower universe of customers and expand the market once the business begins to generate a positive cash flow. In retrospect, it is clear that a fundamental mistake that some data local exchange carriers made in the late 1990s was to attempt to establish a national footprint in a very rapid fashion. The costs associated with placing equipment in hundreds of central offices created an excessive financial burden for firms with so few customers per office. A more moderate, incremental approach is for a carrier to allow revenues to build over time and to finance expansion of its network with internal funds. That is the plan that would most likely be used by an efficient CLEC. Even if the CLEC had a desire to provide service in all wire centers, it is more reasonable to expect that it would use EELs (Enhanced Extended Link or loop-transport combination) in wire centers with low potential demand. The AT&T model invests over $70,000 for collocation facilities and DLC equipment in wire centers with as few as 31 forecasted CLEC lines. A rational business decision of an efficient CLEC would be to avoid serving those wire centers altogether or at least to find a less expensive method for serving them.

Q. WHAT DOES THE AT&T MODEL DO WITH THE COSTS DEVELOPED BY THE DS0 IMPAIRMENT TOOL?

A. These costs (the costs of the backhaul portion of the network) are passed to the BCAT at a per line monthly cost level. As I stated earlier, it would be extremely difficult for the BCAT to calculate cash flows with data provided in that format. The BCAT then adds in the monthly per-line costs for switching, the operating costs (such as customer care, customer acquisition, general administration, etc.) and the revenues. The results are displayed as monthly per line values for the various categories of revenues and costs. Based on the comparison of the cost total to the revenue total, the BCAT determines whether the CLEC would be profitable.

Q. MR. BARANOWSKI STATES THAT THE BCAT USES A CONSERVATIVE APPROACH TO ESTIMATING COSTS AND REVENUES. DO YOU AGREE?

A. No. The BCAT uses the same methodology as the AT&T Tools. The switch and DCS investments are converted to a per-line annual cost and added to the summary of CLEC network unit costs. Consequently, the results include depreciation as a cash cost item, and they include an allowance for income taxes, even though the firm is unprofitable. In addition there appears to be several algorithm errors that result in higher costs. I provide a detailed explanation of those errors in the restatement of the Impairment Tools in Section IV. The BCAT also includes the churn calculation error I discussed earlier when it calculates the customer acquisition costs. This results in an overstatement of the CLEC costs. There also are several input values that are

undermined by the data provided by Mr. Copeland in his presentation of the CPRO model. BCAT's use of these default values results in either an overstatement of costs or an understatement of revenues. For instance, Mr. Baranowski assumes the residential local rate will be 10% less than Qwest's current 1FR rate. This is completely inconsistent with rate information that is readily available on AT&T's own web site. This input cannot be called conservative. My input changes to BCAT are discussed in greater detail in Section IV.

Q. THE FCC ENDORSED THE USE OF A BUSINESS CASE TO ASSESS POTENTIAL COMPETITION. DOES THE BCAT USE A STANDARD BUSINESS CASE APPROACH?

A. No. The BCAT (and the AT&T Tools in general) uses a methodology that is more in line with TELRIC or TSLRIC product costing. A typical business case model lists the revenues, capital outlays, and expenses on an annual basis. It also will usually provide information concerning when the firm will reach a break-even point and will provide information on the terminal value of the firm. The terminal value addresses the market value of the firm at the end of a specified period. The BCAT data do not provide any of this information. The BCAT format appears to be designed in a manner that is intended to prove impairment. The emphasis appears to be on proving a cost disadvantage rather than providing the user the information required to make a rational business decision.

IV. RESTATEMENT OF THE IMPAIRMENT MODEL

Q. HAVE YOU PROVIDED EXHIBITS TO ASSIST THE COMMISSION IN UNDERSTANDING THE IMPACT OF NECESSARY CHANGES TO AT&T'S TOOLS ANALYSIS?

A. Yes. In Exhibit RJB-3, I have taken AT&T results, presented separately for each LATA in Washington, and have made twelve adjustments that correct errors in AT&T's model. The end result is a far more accurate assessment of the economics of an efficient CLEC providing service with UNE-L and self-supplied switching. With the corrections, the results in each LATA are positive by comfortable margins. In the following testimony, I will explain each of the changes, using the Seattle LATA as the example. In addition, Exhibit RJB-4 shows the AT&T default results and the final results with all adjustments at the MSA level.

Q. ARE THERE PARTICULAR INPUTS THAT HAVE MORE IMPACT THAN OTHERS IN THE "TOOLS" DETERMINATION OF CLEC PROFITABILITY?

A. Yes. While demand and churn definitely affect the final operating margin, the primary cause of the negative result in the BCAT is the assumption that the CLEC will start with Qwest's retail basic exchange rates and discount from that point. In fact, AT&T assumes that by the end of the 10-year study period the business basic exchange rate will be half of what it is today. The same sort

of discounting occurs with the other revenue sources (toll, features, etc.). With that level of forecasted revenues it would be surprising if any CLEC or ILEC could be profitable. In addition, as I discussed earlier, the FCC has specifically instructed that revenues should be based on current or prevailing prices and revenues, not on speculative forecasts of the future.

A. Algorithm corrections

Q. HAVE YOU IDENTIFIED ANY ERRORS IN THE AT&T TOOLS FORMULAS?

A. Yes. There are four items that I have identified so far that appear to be formula errors. They are: (1) the application of the maintenance factor in the Transport Impairment Tool; (2) the calculation of the churn amount for the first five years; (3) the calculation of the land investment associated with the CLEC central office; and, (4) the calculation of the customer acquisition costs per line for business mass-market customers. Qwest has propounded data requests regarding various aspects of the AT&T model. Depending on the responses to those requests, other corrections may need to be made later.

Q. PLEASE EXPLAIN THE CHANGE YOU MADE TO THE METHOD USED IN THE AT&T TOOLS TO APPLY THE MAINTENANCE FACTOR AND WHY THAT CHANGE IS NECESSARY.

A. The maintenance factor formula in the Transport Tool is in the Facility Cost Calculator tab and is applied to the various investment items that make up the

self-provided DS3 transport. The calculation applies an annual maintenance factor and then divides the result by 12, to develop a monthly maintenance expense. As provided, the formula does not divide the maintenance expense for the investment for cross-connects for sub-rings and the fiber facility by 12, failing to convert the expense into a monthly expense.

Table 3

Default =((E26*'equipment inputs'!B22+'facility cost calculator'!E40*'equipment inputs'!B47+ 'facility cost calculator'!E49*'equipment inputs'!B63)/12)*'facility cost calculator'!E56+ 'facility cost calculator'!E67*'equipment inputs'!B22+ 'facility cost calculator'!E80*'fiber structure'!B94
Adjusted =((E26*'equipment inputs'!B22+'facility cost calculator'!E40*'equipment inputs'!B47+ 'facility cost calculator'!E49*'equipment inputs'!B63)/12)*'facility cost calculator'!E56+ **(**'facility cost calculator'!E67*'equipment inputs'!B22+ 'facility cost calculator'!E80*'fiber structure'!B94**)/12**

Thus, the algorithm appears to mix monthly and annual maintenance amounts and treats the total as a monthly amount. The adjusted section in Table 3 shows the correction in bold. Making this correction changes the BCAT number from ($188.39) to ($184.61).

Q. WHAT ADJUSTMENTS DID YOU MAKE TO THE CHURN CALCULATIONS?

A. In the assumed growth period (i.e., the first five years), churn is added to reflect the costs for customer acquisitions and loop connections/disconnections

above and beyond normal growth in demand. When the CLEC reaches the total projected demand (after 5 years) it will continue to add new customers only to the extent that it loses customers who leave the geographic area or switch to another provider. The adjustment I made to the churn calculation is in the DS0 Impairment Tool. The ACF Adjustments tab contains a matrix that calculates net lines at the end of the period, the gross additions of lines and the number of disconnects. It does this by month for both residence and business. The matrix for the first twelve months is shown below in Table 4. The net lines are calculated by multiplying the addressable lines by one-fifth of the projected total demand (5%) and growing that evenly throughout the year. For example, the projected 5-year total for CLEC residential lines is 72,775 (in LATA 674). One-fifth (or 20%) of that amount yields the 14,555 end-of-year lines. That number divided by 12 equals the 1,213 net lines added per month assumed by the AT&T model. Table 4 shows that progression on a month to month basis. The problem occurs when the model calculates the churn or disconnects for application against hot cuts and customer acquisition costs.

Table 4

Net Res Lines at EOP	Net Bus Lines at EOP	Res Disc	Bus Disc	Res Gross Adds	Bus Gross Adds
1,213	172	28	4	1,241	176
2,426	344	84	12	1,297	184
3,639	516	139	20	1,352	192
4,852	688	195	28	1,408	200
6,065	860	251	36	1,464	208
7,277	1,033	307	44	1,520	216
8,490	1,205	363	51	1,576	224
9,703	1,377	418	59	1,631	231
10,916	1,549	474	67	1,687	239

12,129	1,721	530	75	1,743	247
13,342	1,893	586	83	1,799	255
14,555	2,065	642	91	1,855	263

The figures in the disconnect columns could easily be summed for each twelve month period and reported in the demand matrix in the DS0 Output tab. Instead the model looks up the disconnect value for the last month in the year. In this case it finds the 642 in the last row of the third column (Res Disc), and it multiplies that number times 12. The result is the 7,700 residential disconnects or churn used by the DS0 Impairment model to calculate hot cut costs and by the BCAT to calculate customer acquisition costs. In fact, the table shows that the residential churn for the year was 4,017 rather than the 7,700 used by AT&T. Making this change for both residential and business churn (incremental to the previous correction) changes the result from ($184.61) to ($146.95).

Q. THE THIRD ERROR YOU MENTIONED DEALT WITH LAND COSTS. WHAT CHANGES DID YOU MAKE TO THAT CALCULATION?

A. The BCAT calculates the land and building costs that are associated with the CLEC switches. The land and building investments are incurred in the first year of the enterprise. Rows 127 and 128 of the Switching Calcs tab in the BCAT contain the calculations that determine the total land purchased and the increase over the previous period. The formula in row 128 compares the value for total land investment in year 2 to year 1 to determine the increase, if any.

In year 3 the formula changes to a comparison between the total land investment for the current period and the increase in land for the previous period. Consequently, the model assumes that in every other year the CLEC will repurchase land for the same two switches placed in service in year 1. Instead of two parcels of land for two switches, the model purchases ten parcels of land for the two switches. For LATA 674, this correction changes the result from ($146.95) to ($145.19). Once again, these numbers are incremental to the previous correction.

Q. THE LAST ITEM LISTED WAS SMALL BUSINESS CUSTOMER ACQUISITION COSTS. PLEASE EXPLAIN THAT ADJUSTMENT.

A. Customer acquisition costs are the marketing and sales costs involved in winning a new customer for the CLEC network. The BCAT calculates this number in the Basic Inputs tab (cell C88) by dividing $125 by the number of lines per location. For residential, it divides $125 by 1.166 lines per residential location. This yields $107.20 per line. The small business calculation adjacent to the residential calculation simply refers to the residential result and uses the same $107.20 per line. The small business value for lines per location is identified in cell C23 as 2.55. This input to the formula would develop a business customer acquisition cost per line of $49.04. With this change, the result changes from ($145.19) to ($139.64).

B. Cost and Expense Input Adjustments

Q. HOW DID YOU STRUCTURE YOUR ADJUSTMENTS TO THE MODEL INPUTS?

A. I started with the corrected AT&T Tools modules and made adjustments to the Impairment Tools inputs in a sequential and cumulative fashion. The results for each of the runs and the incremental changes are shown in Table 5 at the end of this section. The input values generally come from the data provided by Mr. Copeland in his direct testimony. The inputs changed are: (1) the minimum number of CLEC switches per geographic area; (2) the switch maintenance factor; (3) the other taxes factor as used in the BCAT; (4) the other taxes as used in the Transport and DS0 Tools; and, (5) the churn rate.

Q. ARE YOU LIMITING THE INPUT ADJUSTMENTS TO ONLY THESE PARTICULAR FACTORS?

A. For this analysis, yes. Other inputs in the AT&T Tools that are likely to be subject of debate in this proceeding also could be changed to meet the standard of an efficient CLEC. To ensure that my sensitivity analysis is conservative, however, I have only modified the inputs listed above. For instance, as I discussed earlier, AT&T assumes that the CLEC would self-provision transport between the CLEC switch and certain larger ILEC wire centers. The AT&T Tools does not provide a readily available means to choose between the CLEC constructing its own fiber ring facilities versus using transport UNEs.

Consequently, I will address only the input items that are common between the AT&T Tools and the Qwest CPRO model.

Q. WHAT CHANGES DID YOU MAKE TO THE BCAT INPUT FOR THE MINIMUM NUMBER OF CLEC SWITCHES?

A. I changed the default value from two per geographic area to one. With the structure in BCAT for switch fixed cost, wire center land cost, and wire center building cost, this change does not have a major impact in LATA 674. However, placing two switches in every area regardless of the demand is inconsistent with the objective of estimating costs for an *efficient* CLEC. Redundancy of switches is not a necessary expenditure and simply serves to increase costs in the model. This input adjustment changes the LATA 674 result from ($139.64) to ($138.80). This change has more of an impact in an area with fewer CLEC customers. The change is more than $13 for LATA 676 and more than $20 for LATA 672c.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO THE SWITCH MAINTENANCE FACTOR.

A. The switch maintenance factor used by the BCAT is 5.58 percent. The CPRO model uses 3.5 percent. This is based on the ARMIS maintenance information for medium sized ILECs. The actual number used by Qwest in its TELRIC and TSLRIC models is approximately 2 percent. Adjusting the maintenance factor to a conservative 3.5 percent changes the LATA 674 result from ($138.80) to ($136.47).

Q. WHAT CONCERNS DID YOU HAVE WITH THE "OTHER TAXES" FACTOR THAT WAS USED IN THE AT&T TOOLS MODEL?

A. I had three major concerns with this factor: (1) a deviation between the documentation and the actual value used in the model; (2) the calculation of the factor, stemming from an apparent misunderstanding or lack of knowledge regarding Washington's Other Taxes expense; and, (3) the application of the factor in the model.

Other Taxes (Account 7240) represent primarily property taxes and gross receipts taxes. In the "AT&T Impairment Tools Explanation and Documentation of Input Values", on page 4, the other taxes factor is defined as being "based on percent of total revenue (530), other tax (7240) 2001 ARMIS 43-03 report." The table for Section 3.1 of that Documentation Manual shows a "State Required Input" value of 4.77%, which is relatively close to what I got when I used Qwest's 2001 Submission 3 data to re-calculate this value.[10] The AT&T Tools Model however, uses an input value of 5.4%. That was the first error I found.

The second concern I had stems from the fact that when I analyzed the individual taxes that were actually booked to this account, I found that almost 50% of the total amount of $76.6M booked to this account in 2002 related to customer pass-through taxes that should not be included in the cost study since

[10] Line 7240 (col. B – Total) / Line 530 (col. B – Total) = 77,740/1,600,213 = 4.84%

they are ultimately passed-on to customers. Only 18% of the total taxes booked to this account related to revenue-based gross receipts taxes and PUC and FCC fees, and 32% related to property taxes. Recalculating the AT&T tax factor to only include revenue-based taxes yields a revised tax factor value of .95%. This obviously would also require the use of another factor for property taxes that would most likely be related to investment values.

And that brings me to my third concern – the application of the tax factor in the AT&T Tools Model. Both the DSO Impairment module and the BCAT use the same "other taxes" factor value, but the DS0 Impairment module applies the factor against an investment amount, while the BCAT applies it to a revenue amount. There are several things clearly wrong with this approach, in addition to the failure to exclude the pass-through tax impacts. First, it is mathematically incorrect to calculate a factor using revenues in the denominator and then to apply it to a number other than a revenue amount. Thus, AT&T's use of this factor against an investment number is clearly incorrect. Secondly, the factor calculation, as performed by AT&T, used the entire tax expense amount in the numerator and thus, the tax factor used in the BCAT revenue calculation already included a component for property taxes – applying it a second time in the DS0 Impairment Module, against an investment base, was a clear case of expense double-counting.

Q. HOW DID YOU CORRECT THE "OTHER TAXES" FACTORS BETWEEN THE DS0 IMPAIRMENT TOOLS AND THE BCAT?

A. The output from the DS0 Impairment module used by the BCAT contains the 5.4% "other taxes" factor, and BCAT then applies the factor against revenues. To use different values for this factor between the DS0 Impairment Tool and the BCAT, the user must overwrite the value in the BCAT's DS0 Output tab or in the Basic Inputs tab. The label for the other taxes in the BCAT describes the factor as "Taxes other than income and pass through – revenue related." As I explained above that value should be less than 1 percent. In Washington, the value was 0.6 percent for 2001 and 0.95 percent for 2002. I substituted the 0.95 percent for the AT&T Tools default 5.4 percent used by the BCAT. This factor is applied against the total CLEC trended revenues on lines 179 through 188 of the BCAT's retail revenues tab. This input adjustment changes the LATA 674 result from ($136.47) to ($124.47).

Q. WHAT CHANGES DID YOU MAKE FOR OTHER TAXES IN THE AT&T TOOLS?

A. For the AT&T Tools, I used the user interface input screens and adjusted the "other taxes" value from 5.4 percent to the value used in CPRO for "other taxes on capital equipment." This number is 0.581 percent and represents the property taxes as a percent of total plant in service. The taxes are applied in the Tools, in both the Transport and the DS0 modules, to the capital

investments associated with transport, DLC and collocation. This input adjustment changes the LATA 674 result from ($124.47) to ($120.21).

Q. THE FIFTH INPUT CHANGE YOU LISTED WAS CHURN. WASN'T CHURN ADDRESSED EARLIER IN THE ALGORITHM CORRECTIONS?

A. Yes. However, this is an adjustment to the input level for churn versus the manner in which the quantity is actually calculated. The CPRO input for monthly churn is 3 percent. Mr. Copeland provides support for that value in his response testimony. The AT&T Tools uses a churn input of 4.6 percent, 50 percent higher than the reasonable number used in CPRO. Churn has a fairly large impact on costs as the churn quantity is applied against both the hot cut costs as well as the customer acquisition costs. This input adjustment changes the LATA 674 result from ($120.21) to ($95.78).

C. Revenue Input Adjustments

Q. WHAT ASSUMPTIONS ARE MADE WITH REGARD TO REVENUES IN THE BCAT AS FILED BY MR. BARANOWSKI?

A. The major assumption is that the efficient CLEC will use the Qwest rates for basic exchange local service as a starting point for its pricing plan. In other words, the CLEC will offer a "1FR" and a "1FB" product at the same basic rates as Qwest. Furthermore, Mr. Baranowski assumes that the CLEC will start off with a 10% discount for both residential and business. He takes that

even further for business and assumes that by the end of the 10-year study period the business rate will be approximately 50 percent of the Qwest rate today. This assumption is in direct conflict with the FCC's directions on prices and revenues. To reiterate, the TRO states:

> [W]e expect states to consider prices and revenues prevailing at the time of their analysis. We believe that these are reasonable proxies for likely prices and revenues after competitive entry and will result in a more administrable standard."[11]

It would not be difficult for AT&T witnesses to determine how AT&T, as a CLEC offering local service, plans to price that service. My exhibit RJB-5 contains several press releases issued by AT&T. These releases describe the residential local service pricing plans offered by AT&T. They do not support the prices assumed in the BCAT. They are more in line with the CPRO rate assumptions. As Mr. Copeland explains in his response testimony, the CPRO assumed the rates that MCI is using in its marketing of local service. Those products (and their rates) are based on packages of local service, features, intra-LATA toll and inter-LATA toll. This would be the most likely method a CLEC would utilize to compete for local and long distance customers. In a recent issue of Telephony magazine, AT&T CEO David Dorman was quoted as saying that "Bundled local and long-distance service offerings are increasingly the norm, and they have proved to be a strong growth area for

[11] TRO ¶ 520, footnote 1588.

us."[12] This is in direct contrast to the position taken by Mr. Baranowski in the BCAT.

Q. WHAT REVENUE INPUTS DID YOU CHANGE IN BCAT?

A. The BCAT includes an assumption that local service rates will decline over the study period. For residential rates, the model assumes an immediate 10% discount from the Qwest 1FR rate. For business, the model assumes the same immediate 10% discount and then discounts that rate at 6% per year for the remaining 9 years. The BCAT has a structure that allows the user to make similar adjustments to costs. Mr. Baranowski's default inputs assume that there will be no reductions in costs during the study period. The first adjustment I made was to set these rate deflation factors to zero (0) percent. This adjustment allows for a consistent treatment of the rates and costs. Leaving the rates at the AT&T default levels and setting the deflation factors to zero changes the results from ($95.78) to ($34.58). The second adjustment to the revenues I made was the replacement of the basic local service default rates with the average residential and business rates used by CPRO. These are a mix of packages with a limited number of long-distance minutes and an unlimited number of long-distance minutes plus several switch features. The average bundle rates are $43.59 for residential and $48.79 for business. In addition to the package rates, the Subscriber Line Charge (SLC) was adjusted from the $6.11 in the AT&T default values to $7.01 for residential and $7.38

[12] Telephony, October 27, 2003, at page 6.

for business. These adjusted values represent the SLC and average Local Number Portability (LNP) charges actually being levied by MCI. The long distance revenues produced by the BCAT were set to zero as they are included in the packages. Also the ancillary revenues were set to $3.00 to be consistent with the CPRO assumptions. These ancillary revenues include such things as international long distance and directory assistance. Mr. Copeland provides the support for the $3.00 amount in his direct testimony (Exhibit No. PBC-1T). These adjustments change the results from ($34.58) to $170.26. LATAs 672c and 676 also result in positive operating margins. Exhibit RJB-3 includes the information provided in Table 5 for LATAs 672c and 676.

D. Market Penetration Adjustments

Q. WHAT OTHER ADJUSTMENTS DID YOU MAKE TO THE AT&T IMPAIRMENT TOOLS TO MAKE THEM COMPARABLE TO THE CPRO ASSUMPTIONS?

A. One other difference that exists between CPRO and the AT&T model concerns the universe of addressable lines. AT&T makes two adjustments to line counts in the process of determining the CLEC line share. The first concerns the portion of existing lines that are on Integrated Digital Loop Carrier systems and results in less than one percent of the lines being excluded from the potential mass-market universe. The second adjustment concerns the portion of the business DS0 counts that AT&T considers “enterprise” and excludes from the revenue calculation. CPRO includes all DS0 line counts when

developing the CLEC 5 percent market share. I set the enterprise percentages by zone to zero (0) percent for all zones. This adjustment increases the number of business lines, which has two impacts. First it changes the mix of business and residence and thus changes the average revenue per line. Second, by increasing the total number of lines (5 percent of business vs. the AT&T default which produces 2 percent) it decreases the average cost per line. This adjustment changes the results from $170.26 to $198.96. Table 5 below summarizes the impact of each of the model adjustments.

Table 5

	LATA 674 Operating Margin	Incremental Change
AT&T Default	($188.39)	
Formula Corrections		
1. Maintenance Expense	($184.61)	$3.78
2. Churn calculation	($146.95)	$37.66
3. Switch Land	($145.19)	$1.77
4. Business Customer Acquisition	($139.64)	$5.54
Cost and Expense Inputs		
5. Minimum number of switches	($138.80)	$0.84
6. Switch maintenance factor	($136.47)	$2.33
7. "Other taxes" on revenues	($124.47)	$12.00
8. "Other taxes" on investment	($120.21)	$4.26
9. Churn Percentage	($95.78)	$24.43
Revenue Adjustments		
10. Rate Deflation Factors	($34.58)	$61.20
11. CPRO Bundle Prices	$170.26	$204.83
Market Penetration Adjustments		
12. Small Business DS0 Lines	$198.96	$28.70

Q. PLEASE SUMMARIZE THE INFORMATION PROVIDED BY YOUR SENSITIVITY ANALYSIS.

A. Certainly. My analysis shows that while there may be disagreement on certain cost inputs, they should not be the Commission's primary focus. With the exception of churn, most changes to the AT&T Tools cost inputs will have a fairly small impact on the final operating margin. The item that does warrant attention is the question of likely revenues, and I would especially direct the Commission's attention to that item. As I stated earlier, the TRO was clear on the fact that the revenues be based upon current or "prevailing" prices and revenues.[13]

V. CONCLUSION

Q. WHAT ARE YOUR CONCLUDING COMMENTS?

A. The testimony of Mr. Denney, Ms. Starr, and Mr. Baranowski has two recurring themes. The first is that any cost that may be unique to the CLEC network is a disadvantage and an impairment. This is a distraction from the actual task at hand. This Commission must determine if a CLEC providing local service to mass market customers can do so economically without access to unbundled switching. Identifying a cost that a CLEC has and an ILEC does not (or vice versa) will not answer that question. A properly constructed

[13] TRO ¶517 & n. 1579; id. ¶520 & n. 1588.

business case with a reasonable cash flow analysis will give the Commission the information it needs to reach a conclusion. CPRO provides that structure. The AT&T BCAT does not. However, even the BCAT, when using reasonable inputs, shows that the "efficient" CLEC can economically serve the mass market consumers. And, this finding is in spite of structural constraints that still overstate the network costs.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.