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February 9, 1995

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street NW - Room 222  
Washington, D.C. 20554

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FEB 09 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

RE: Ex Parte Filing  
Docket No. 94-1  
DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

Attached is a USTA paper prepared in response to the position on productivity contained in AT&T's January 31, 1995 ex parte in this docket.

An original and two copies of this ex parte notice and attachment are being filed in the Office of the Secretary on February 9, 1995. Please include this notice and attached material in the public record of these proceedings.

Respectfully submitted,

Mary McDermott  
Vice President, Legal & Regulatory Affairs

cc: Kathleen Wallman  
Richard Metzger  
Michael Katz  
David Nall  
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## AT&T'S APPROACH TO PRODUCTIVITY IS INCORRECT

In 1989, the FCC accurately explained productivity as follows:

"Productivity advances in a firm or industry are manifested in increased output from the same amount of factors of production, or equivalently, the same amount of output from decreased levels of factor utilization. In either case, the dollar cost of a unit of output declines due to the diminished factor requirement per unit of output. Of course, if some or all factor prices are rising at the same time, those price rises will at least partially offset the reductions that would flow from improved productivity by itself. Nonetheless, the net price effect of productivity and any such factor price increases would continue to be less than the factor cost changes in isolation."<sup>1</sup>

The FCC determined in the 1989 price cap order that the Christensen Total Factor Productivity Methodology was an appropriate way to measure productivity.<sup>2</sup> Indeed, it was this methodology that the Commission relied on in setting the productivity offset for AT&T. The Interstate Commerce Commission uses the Christensen methodology in its price cap plan for the railroad industry.

At the outset of this proceeding, USTA employed Christensen Associates to calculate the productivity offset for the price cap LECs using TFP. TFP is the ratio of total output to total input, where output includes all services provided by the LECs and total input includes the capital, labor, and materials used to provide those services. Christensen's methodology directly measures output and input. Therefore, it is a direct measure of TFP. Christensen's methodology is not dependent on arbitrary cost allocations, such as depreciation and separations. Nor is it subject to arbitrary productivity adjustments such as the 50/50 formula for common line. Christensen's methodology measures the actual experienced productivity, including all sources of scope and scale.

Even though AT&T has supported the Christensen methodology for

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<sup>1</sup> Report and Order and Second Further Notice of Proposed Rulemaking, CC Docket No. 87-313, 4 FCC Rd 2873 at Para. 198 (1989).

<sup>2</sup> Id. at Para. 225 and n. 504 and see generally id. at Para. 198-239.

determining productivity in the past,<sup>3</sup> AT&T has now changed its view. AT&T now claims that earnings are a better way of measuring productivity. It is evident AT&T's only reason for attempting to measure productivity using earnings is to produce a higher offset for the LECs. However, as USTA and others have demonstrated, earnings do not measure output and input.<sup>4</sup> For that reason alone, AT&T's model is theoretically incorrect. Resetting the productivity offset to reduce LEC earnings to a specific level is rate-of-return regulation.<sup>5</sup>

The following are the major flaws in AT&T's position on productivity in this docket:

1. The AT&T model does not measure productivity. This model starts with interstate accounting results which are based on arbitrary accounting and cost allocation rules including separations and depreciation. AT&T's model does not correct for any of these adjustments. (For example, the Price Cap LECs' earnings from 1991 through 1993 could be restated from 12.39% to 11.50% if

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<sup>3</sup> AT&T employed Christensen Associates to perform a TFP study that AT&T filed in United States v. AT&T, Civ. Action No. 74-1698 (D.D.C. filed Nov. 20, 1974.) The purpose of that study was to determine the productivity of Bell System. AT&T advocated Christensen's methodology as the appropriate method for determining productivity.

<sup>4</sup> See Ex Parte letter to Mr. William F. Caton from Jo Ann Goddan, Pacific Telesis, dated December 9, 1994; Ex Parte letter to Mr. William F. Caton from Maureen Keenan, Bell Atlantic Network Services, Inc., dated November 8, 1994; Ex Parte letter to Mr. William F. Caton from Maureen Keenan, Bell Atlantic Network Services, Inc. dated November 10, 1994; Ex Parte letter to Mr. William F. Caton from Maurice P. Talbot, Jr., BellSouth, dated December 8, 1994. USTA Reply Comments, June 29, 1994, Attachment 4, Economic Performance of the LEC Price Cap Plan: Reply Comments by National Economic Research Associates, Inc., pp 33-36.

<sup>5</sup> FCC policy certainly favors price regulation over rate of return. See, e.g., Price Cap Performance Review for Local Exchange Carriers 9 FCC RD 1687, 1688 (1994) ("Moving from traditional rate of return regulation to price cap regulation was a significant improvement and response to these dramatic changes. ... In contrast to rate-of-return regulation, a regulatory system that caps prices creates profit incentives similar to those in fully competitive markets and generates positive motivations for reasonable rates, innovation, productivity growth, and accurate cost allocation, while reducing regulatory burdens.")

the most recent FCC recommended depreciation rates were used.<sup>6</sup>) This is just one of many examples of how earnings can be affected without any change in experienced productivity.

2. In its "study", AT&T arbitrarily inflated the price cap LECs' earnings. It did so by increasing earnings by the amount by which the LECs priced below their ceilings. AT&T assumes incorrectly that a company that prices below its PCI could increase its rates with no impact on demand. This assumption ignores the effect of price elasticity. If a company could increase rates without having any impact on demand, a company would be priced at its ceiling. However, due to competitive pressures, many LECs have priced below their cap. The AT&T method, if relied upon, would reduce any incentive for a price cap company to price below its cap.

3. In its formula, AT&T supposedly used half of the productivity and GNP-PI amounts for the time period from January through June of 1991. AT&T stated that these amounts were obtained from the LECs' annual Tariff Review Plans (TRPs). The TRPs for this time period did not include any amounts for GNP-PI or productivity. In fact, under the Commissions rules, the LEC price cap indices for the January through June of 1991 time frame were not to be adjusted for a productivity offset or the GNP-PI.<sup>7</sup> Therefore, AT&T had no basis for making these adjustments but has overstated LEC productivity as a result.

4. AT&T made an error in its methodology related to the July through December of 1993 period. AT&T used actual 1993 price cap indices (PCIs) for the entire year and annual revenues but divided both the GNP-PI and productivity offset by two. The 1993 actual PCIs reflected the full annual amounts for productivity and GNP-PI. There is no reason for AT&T to divide the productivity or the GNP-PI by two. The result of the error is that AT&T overstates its productivity calculation.

5. AT&T further overstates LEC productivity results by assuming that the average rate of return for the three years equates to a single year productivity impact. In doing so, AT&T ignores the compounding effect of the productivity offset. A simple example will illustrate this problem. Assume that a company earned the following amounts in excess of 11.25%: year 1 equals \$2M, year 2 equals \$4M, and year 3 equals \$6M -- for a total of \$12M. Also assume that a productivity increase of 1 for the first year equals \$2M. According to AT&T's analysis, the productivity offset should be increased by 2 (\$12M divided by 3 (years) divided by \$2M). However, based on the price cap formula, an increase of 2 to the

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<sup>6</sup> See Ex Parte letter to Mr. William F. Caton from Mary McDermott (USTA) dated December 19, 1994 in CC Docket 94-1.

<sup>7</sup> 47 CFR §61.48(e).

productivity offset would impact earnings by the following amounts: year 1 equals \$4M, year 2 equals \$8M and year 3 equals \$12M -- for a total \$24 Million. Thus, AT&T's methods overstates the effect on the productivity offset by a factor of two.

6. AT&T criticizes the Christensen study for not utilizing the "50/50" calculation for Carrier Common Line. However, because the Christensen study used Carrier Common Line minutes as a measure of output, use of the "50/50" formula would have resulted in a lower productivity offset for the LECs.

7. AT&T faults the Christensen study for not using FCC prescribed depreciation rates. Those depreciation rates do not measure the decline in the efficiency of assets. Economic depreciation rates are the appropriate measure to use in a TFP study and the Christensen study does so.

8. While attempting to verify the data underlying AT&T's analysis, USTA found that AT&T may have double counted the \$1 billion impact of exogenous cost reductions that have already been included in the LECs' price cap indices used by AT&T in its analysis.

9. AT&T claims that the Christensen TFP study should have measured only interstate access, rather than total company, productivity. This claim is mistaken. Total Factor Productivity is the ratio of total output to total input, where total output includes all services provided by the firm and total input includes all resources used. If the provision of interstate services and intrastate services were independent of each other, it would be possible to calculate a separate TFP for each. But interstate and intrastate services have common inputs. Therefore, it is not appropriate to calculate an interstate TFP. Any allocation of the common inputs would be arbitrary and different allocation schemes would produce different results.

10. AT&T claims, without corroborating data, that in the near future LEC input prices are likely to rise more slowly than input prices for the entire U.S. economy. On February 1, 1995, USTA submitted a paper by Christensen Associates that demonstrates that AT&T's position is incorrect. There is no conceptual or empirical basis for adding an input price differential to the productivity study. Christensen Associates and NERA have both proven that there is no difference in the input inflation experienced by the LECs as compared to the overall U.S. economy.<sup>8</sup>

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<sup>8</sup> See USTA Ex Parte, filed February 1, 1995: An Input Price Adjustment Would Be An Inappropriate Addition to the LEC Price Cap Formula by Dr. Lauritis R. Christensen; and, USTA Reply Comments filed June 26, 1994, Attachment 4, Economic Performance of the LEC Price Cap Plan, pp 23-31.

11. AT&T argues that moving average TFP understates the trend in productivity growth. The USTA proposed moving average Total Factor Productivity offset is, by its nature, unbiased since it smooths short term fluctuations in productivity that occur in individual years. The rolling average, by smoothing annual deviations, captures the real long term trend of the data. Further, 100% of LEC productivity gains will be automatically passed through to customers via the moving average.

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AT&T's model has serious theoretical and mathematical flaws. USTA submits that even if these flaws could be corrected, the result would be an indirect productivity offset based on economic earnings. However, a direct measure for a productivity offset is preferred. USTA is the only party that has put on the record a direct productivity study that is based on sound economic theory. Therefore the Commission should use the results from the Christensen study in setting the productivity offset.