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August 2, 2001

Ms. Magalie Roman Salas  
Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

Re: Notice of Ex Parte Presentation: Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, CC Docket No. 00-256; Federal-State Joint Board on Universal Service, CC Docket No. 96-45; Access Charge Reform for Incumbent Local Exchange Carriers Subject to Rate-of-Return Regulation, CC Docket No. 98-77; and Prescribing the Authorized Rate of Return for Incumbent Services of Local Exchange Carriers, CC Docket No. 98-166. |

Dear Ms. Salas;

Attached is an updated version of the analysis AT&T filed in the above mentioned proceeding. This analysis includes data for the year 2000.

I have submitted an original and one copy of this Notice in accordance with Section 1.1206 of the Commission's rules.

Sincerely,

A handwritten signature in black ink, appearing to be "P. Merrick".

Attachments

cc: Geoff Waldau

## ANALYSIS OF MAG PLAN FOR INCENTIVE REGULATION (Updated August 2001)

In its NPRM (§ 20) on the MAG plan, the Commission sought comment on what effect the MAG plan is likely to have on non-price cap carrier revenues. Comments were requested on whether an inflation factor equal to the GDP Price Index (GDP-PI) accurately reflects changes in costs per line and whether an X-factor or consumer productivity dividend should be included in the RPL (revenue per line). As shown in the analysis provided with AT&T's February 26, 2001 comments, the simple answer is that the incentive regulation scheme proposed in the MAG plan is likely to provide ROR carriers with a substantial windfall. Growth in the GDP-PI tends to overstate increases in their costs per line and thus, the use of GDP-PI must be accompanied by an X-factor in order for the RPL mechanism to be consistent with the trend in carriers' cost per line.

Data for the NECA common line and traffic sensitive pools, which have been updated here to include the year 2000, indicate that historical growth in the GDP-PI has exceeded the growth in pooled revenue per line during the past several years. The likely impact of MAG is estimated by calculating what LEC interstate access revenues would have been if the MAG plan for incentive regulation had been in effect historically, with primary emphasis on the period from 1995 to 2000. Using NECA data for the common line and traffic sensitive pools, AT&T demonstrates that if all the ROR carriers had been operating under the MAG plan during those years, they would have received substantially more revenue than was actually obtained.

### Analysis

The basic premise of the MAG incentive regulation scheme is fairly simple. A carrier is entitled to receive a certain amount of revenue from the pool for each access line it provides, with the revenue per line (RPL) amount adjusted each year for inflation using the GDP-PI, the same index used for the price cap carriers. Growth in a carrier's common line and traffic sensitive revenue is thus approximately equal to the growth in its lines plus the rate of inflation.<sup>1</sup> Tables 1A and 2A attached show that this growth exceeds the historical growth in revenues and revenue requirements for the NECA common line and traffic sensitive pools in recent years. Under the MAG plan, this additional revenue would come mainly from ever-increasing subsidy support.

Historical data for the NECA common line pool from 1991 to 2000 are summarized in Table 1A. Universal service contributions (*i.e.*, "flowback") in 1998, 1999, and 2000, which do not represent a cost of providing service, are removed to obtain the pool's adjusted revenue requirement. Historical data for the NECA traffic sensitive (TS) pool (excluding special access) are summarized in Table 2A, with selected growth rates shown in the lower portion of the table. Because NECA does not report the total number of access lines for companies in the TS pool, the growth in lines was estimated based on

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<sup>1</sup> More precisely, the rate of growth in revenue can be calculated as:

$$\% \Delta \text{Rev} = (1 + \% \Delta \text{Lines}) * (1 + \% \Delta \text{GDP-PI}) - 1.$$

access minutes (which NECA does report) and the assumption that minutes per line for the pooling companies grew at the same rate as that for the entire ROR LEC industry. The growth in lines for pooling companies is thus estimated as the growth in pooled access minutes minus the growth in industry minutes per line. As discussed below, there are problems with the TS pool data prior to 1995, presumably as a result of carriers leaving the pool. Focusing on the growth rates for 1995 to 2000, which are shown in the lower portion of Table 2A, it is clear that the growth in GDP-PI plus lines far exceeds the growth in TS revenue.

The tendency for revenues to grow under MAG by more than the growth in costs means that over time carriers will enjoy ever increasing amounts of excess revenues and earnings. This is illustrated in Table 3A, which shows the trend in interstate access revenues if all ROR carriers had operated under the MAG plan for incentive regulation from 1995 to 2000. The calculations are based on illustrative data whereby data for the NECA pools are used to represent the entire ROR carrier industry.

The shorter historical period of 1995 to 2000 was chosen because it appears that a substantial number of companies exited the NECA traffic sensitive pool during 1993 to 1995, and, as a result, trends in the NECA data for those years cannot be used to represent the industry. Traffic sensitive minutes reported by NECA declined from 1993 to 1995, while total minutes for the ROR carriers increased as they normally do. As a result, the trend in NECA pooled revenues and revenue requirements for those years cannot be considered representative of the entire ROR LEC industry. It is likely that those companies leaving the pool had relatively lower costs, causing the pool's overall average cost per unit to rise, even though unit costs may have been declining for individual companies.<sup>2</sup> The situation appears to have stabilized since 1995, with growth in NECA TS minutes similar to that for all ROR carriers in total. Thus, 1995 is an appropriate year to use as the initial year in the analysis.

In the upper portion of Table 3A, industry revenues are developed on the basis of revenues reported by NECA for its common line and traffic sensitive pools. For common line revenues, it is assumed that the pool represents 96.7% of the ROR carriers' total common line revenue.<sup>3</sup> This assumption is then used to "gross up" the NECA results to obtain total revenues and revenue requirements for all ROR carriers. Because the vast majority of ROR companies are members of the common line pool, NECA pool data provide a reasonably proxy for the entire industry.

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<sup>2</sup> While minutes in the traffic sensitive pool declined from 1993 to 1995, the pool's overall revenue per minute rose. The longer term trend is for minutes to grow while revenue per minute declines over time.

<sup>3</sup> According to the June 2000 TRP filings, anticipated revenue requirements for the NECA pool comprised 96.7% of total ROR revenue requirements for the period July 1, 2000 to June 30, 2001.

With the traffic sensitive pool, the number of participants is considerably smaller. Data on access minutes reported by the pool were compared with total ROR industry minutes to estimate the percentage of industry TS revenue represented by the pool. To account for the fact that rates within the pool are somewhat higher than those of non-pooling companies, the fraction of pooled minutes to total minutes was multiplied by a factor of 1.0914, the ratio of NECA's composite interstate access rate to that for ROR LECs as a whole.<sup>4</sup> The resulting fraction provides an estimate of the percentage of total ROR LEC TS revenue that resides in the pool. Industry revenues are then estimated by dividing the pool amounts by this percentage. The key assumption underlying these calculations is that the ratio of NECA's composite interstate access rate to that for ROR LECs as a whole can be applied to traffic sensitive rates and has remained constant over the period. Industry special access revenues were then approximated by assuming that NECA's percentage of total special access revenue is the same as that for switched TS revenue. The series for industry special access revenue shown in Table 3A was thus calculated by dividing the NECA amounts by the same percentage used for TS revenues.

It should be emphasized that, because the data on ROR carriers are incomplete, the calculations presented here are intended mainly for illustrative purposes. To the extent that trends in the NECA data are representative of all ROR carriers, these calculations illustrate the impact that implementation of the MAG plan in its current form is likely to have, as well as the type of data and analysis that are needed to formulate a better version of the plan. The Commission should require carriers to provide this data in a format that can readily be analyzed by the Commission and other interested parties.

To simulate the impact of MAG incentive regulation on interstate access services, including both switched and special access, the analysis starts with estimated industry revenue in 1995 and adjusts the RPL at the beginning of each subsequent year by the percentage increase in the GDP-PI.

- For the inflation adjustments, 4th quarter values of the GDP chained price index were used, with each year's RPL calculated by adjusting the previous year's RPL by the most recent 4th quarter to 4th quarter growth in GDP-PI.
- Total switched access revenue (common line plus traffic sensitive) is then calculated by multiplying each year's RPL by the corresponding number of access lines.
- Since the MAG proposal did not provide any details on how to include special access, the simulation shown in Table 3A is based on special access being capped on the basis of revenue per special access line, similar to the mechanism for capping switched access on the basis of revenue per subscriber line. The allowed revenue per

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<sup>4</sup> According to MAG's Petition for Rulemaking (at 11), the existing composite interstate per-minute access rate for ROR LECs is \$0.0394, while the comparable NECA per-minute access rate is \$0.0430.

special access line is then adjusted each year by the increase in GDP-PI. Historical special access data for NECA is shown in Table 4A, which presents revenue and demand volumes from 1994 to 2000. The number of special access lines is calculated in terms of voice grade equivalent (VGE) circuits.<sup>5</sup>

## Results

Interstate access revenues generated by the MAG plan are shown in the line labeled "Total revenue" in the middle of Table 3A, which is the sum of switched access revenue (shown on the line labeled "Total CL + TS revenue") and special access revenue. Excess revenues resulting from MAG are displayed in the following line, which shows the difference between interstate access revenues under MAG and the actual revenues.<sup>6</sup> These excess revenues are negative in 1996, but increase in each subsequent year, reaching a total of \$604 million in 2000.

It is not surprising that the MAG plan generates excess revenues, since it does not contain any type of productivity factor. A reasonable X-factor can be estimated by calculating the X which, when included in the RPL mechanism, results in 2000 revenues being equal to the revenues obtained under rate-of-return regulation.<sup>7</sup> This is essentially the same type of calculation performed by the Commission staff in its Imputed X-Factor Study done for the price cap LECs<sup>8</sup> and results in an imputed X-factor of 3.37% for total interstate access. Because these figures do not include a consumer productivity dividend, nor do they reflect any decline in the LECs' cost of capital over the period, they represent a very conservative estimate of what an appropriate X-factor would be.

It should be noted that this X-factor is not directly comparable to the X-factor used for the price cap LECs, because the overall price cap mechanisms differ. Under MAG, each carrier's revenue per line, rather than individual rate elements, is governed by the price cap formula. Because the number of access lines has a tendency to grow by less than usage and those rate elements whose volume is a function of usage, the X-factor associated with MAG will be somewhat lower than that associated with conventional price cap regulation.

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<sup>5</sup> Because the high capacity channel terminations and circuits shown in Table 4A refer to DS1 facilities, they are multiplied by 24 to obtain the number of voice grade equivalent facilities.

<sup>6</sup> Because the 1997 actual revenues appear to have been misreported in NECA's 1998 TRP filing, the excess revenue shown for 1997 is probably incorrect. This, however, does not affect the trend from 1995 to 2000, which is the key factor in this analysis.

<sup>7</sup> With an X-factor included in the RPL mechanism, the RPL would be adjusted annually by the percentage change in the GDP-PI minus the X-factor.

<sup>8</sup> *Further Notice of Proposed Rulemaking*, CC Docket Nos. 94-1 and No. 96-262, released November 15, 1999, Appendix C.

Also included in Table 3A are calculations that identify the major sources of revenue under the MAG plan, showing how much of carrier revenues are obtained from interstate access charges and how much are derived from the various subsidy mechanisms. Switched access revenues are calculated on the basis of the MAG plan being fully phased in, with a \$0.0160 per minute composite access rate and SLC rates set at their \$6.50 and \$9.20 caps. No changes were made to special access revenues. The remaining revenues generated by the RPL mechanism are provided by the various subsidy programs, namely, Long Term Support, Local Switching Support, and the proposed Rate Averaging Support. As shown at the bottom of Table 3A, subsidy requirements increase substantially from year to year, amounting to about \$1.7 billion in 2000.

TABLE 1A - COMMON LINE POOL DATA

Common Line (BFP) pool results from NECA TRPs

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>
Access revenues (inc. SLCs)								787,234,000	860,075,000	972,201,000
Long term support								476,541,000	472,328,000	477,225,000
Total CL revenues	756,703,000	757,596,000	854,526,000	923,110,000	971,727,000	1,066,571,000	1,140,030,000	1,262,744,000	1,332,360,000	1,449,390,000
BFP revenue (1)	708,083,000	729,933,000	839,465,000	902,909,000	958,702,000	1,066,571,000	1,140,030,000	1,262,744,000	1,332,360,000	1,449,390,000
Total expenses	579,899,000	596,334,000	697,297,000	737,847,000	784,507,000	870,588,000	927,294,000	1,045,499,000	1,109,702,000	1,204,781,000
Avg. net investment	1,139,416,000	1,187,543,000	1,263,712,000	1,467,216,000	1,548,397,000	1,742,073,000	1,890,967,000	1,931,069,000	1,979,178,000	2,174,302,000
Return (residue for dist.)	128,184,000	133,599,000	142,168,000	165,062,000	174,195,000	195,983,000	212,736,000	217,245,000	222,658,000	244,609,000
ROR (residue ratio)	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%
Flowback removal (2)								(39,592,000)	(40,509,000.00)	(33,007,000.00)
<b>Adjusted rev. requirement</b>	<b>708,083,000</b>	<b>729,933,000</b>	<b>839,465,000</b>	<b>902,909,000</b>	<b>958,702,000</b>	<b>1,066,571,000</b>	<b>1,140,030,000</b>	<b>1,223,152,000</b>	<b>1,291,851,000</b>	<b>1,416,383,000</b>
Access lines (2)	7,635,403	7,998,789	7,990,655	8,582,626	8,951,113	9,584,556	9,933,111	10,502,918	11,064,890	12,109,021
<b>Data on inflation:</b>	4Q90	4Q91	4Q92	4Q93	4Q94	4Q95	4Q96	4Q97	4Q98	4Q99
GDP Price Index	87.76	90.47	92.56	94.79	96.74	98.79	100.63	102.49	103.69	105.31
% increase	4.18%	3.09%	2.31%	2.41%	2.06%	2.12%	1.86%	1.85%	1.17%	1.56%
<b>Growth rates</b>	<u>1991-2000</u>	<u>1995-2000</u>								
CL (BFP) revenue	8.01%	8.12%								
Access lines	5.26%	6.23%								
GDP Price Index	2.05%	1.71%								
GDP-PI & lines combined	7.41%	8.05%								

Notes:

Source: NECA TRP, RORCOS-1(H), p. 1.

Revenues and costs for 1997 may have been misreported.

(1) BFP revenue = BFP expenses + BFP return.

(2) Access lines and flowback (universal service contributions) obtained from NECA TRP filings.

**TABLE 2A - TRAFFIC SENSITIVE POOL DATA**

TS pool results from NECA TRPs:	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Access revenues	634,479,000	723,035,000	716,016,000	736,443,000	728,645,000	747,963,000	599,382,000	502,372,000	514,006,000	564,158,000
Local switching support								294,458,000	277,480,000	291,703,000
<b>Total TS revenues</b>	<b>634,366,000</b>	<b>722,955,000</b>	<b>716,010,000</b>	<b>736,370,000</b>	<b>728,614,000</b>	<b>747,941,000</b>	<b>599,379,000</b>	<b>796,815,000</b>	<b>791,484,000</b>	<b>855,849,000</b>
Total expenses	544,948,000	627,477,000	623,841,000	640,894,000	646,566,000	664,268,000	511,519,000	706,205,000	702,680,000	760,576,000
Avg. net investment	794,830,000	848,690,000	819,282,000	848,675,000	729,317,000	743,780,000		805,412,000	789,102,000	846,871,000
Return (residue for dist.)	89,418,000	95,478,000	92,169,000	95,476,000	82,048,000	83,673,000	87,860,000	90,609,000	88,784,000	95,273,000
ROR (residue ratio)	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%
Chargeable TS minutes (1)	11,842,118,638	12,082,805,836	13,222,836,257	12,693,759,293	12,105,386,402	12,451,777,195	13,364,965,704	14,782,195,075	15,831,783,747	18,225,517,942
<b>Data on inflation:</b>	<b>4Q90</b>	<b>4Q91</b>	<b>4Q92</b>	<b>4Q93</b>	<b>4Q94</b>	<b>4Q95</b>	<b>4Q96</b>	<b>4Q97</b>	<b>4Q98</b>	<b>4Q99</b>
GDP Price Index	87.76	90.47	92.56	94.79	96.74	98.79	100.63	102.49	103.69	105.31
% increase	4.18%	3.09%	2.31%	2.41%	2.06%	2.12%	1.86%	1.85%	1.17%	1.56%
<b>Growth rates</b>	<b>1991-2000</b>	<b>1995-2000</b>								
TS revenue	3.38%	3.27%								
TS minutes	4.91%	8.53%								
Minutes per line	NA	2.20%								
Access lines (estimated)	NA	6.19%								
GDP Price Index	1.75%	1.71%								
GDP-PI & lines combined	NA	8.01%								

**Notes:**

Source: NECA TRP, RORCOS-1(H), p. 2.

Revenues and costs for 1997 may have been misreported.

(1) Access minutes obtained from NECA TRP filings.

**TABLE 3A - SIMULATION OF MAG PLAN**  
Based on Illustrative Data (1995-2000)

	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>
<b>Estimated industry revenues:</b>						
NECA BFP Revenue	958,702,000	1,066,571,000	1,140,030,000	1,262,744,000	1,332,360,000	1,449,390,000
NECA CL Pool % of total	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%
Industry BFP Revenue	991,418,821	1,102,968,976	1,178,934,850	1,305,836,608	1,377,828,335	1,498,852,120
NECA TS Revenue	728,614,000	747,941,000	599,379,000	796,815,000	791,464,000	855,849,000
NECA TS Minutes	12,105,386,402	12,451,777,195	13,364,965,704	14,782,195,075	15,831,783,747	18,225,517,942
Industry TS Minutes (1)	22,903,762,000	25,235,239,000	27,022,225,549	28,561,213,481	31,167,604,788	34,046,582,703
NECA/ROR price ratio	1.0914	1.0914	1.0914	1.0914	1.0914	1.0914
NECA TS Pool % of total	57.68%	53.85%	53.98%	56.49%	55.44%	55.44%
Industry TS Revenue	1,263,145,687	1,388,900,672	1,110,407,931	1,410,662,084	1,427,685,376	1,543,826,506
Industry CL + TS Revenue	2,254,564,508	2,491,869,648	2,289,342,781	2,716,498,692	2,805,513,711	3,042,678,626
NECA Special Access Revenue	43,874,000	52,213,000	51,388,000	83,101,000	98,909,000	135,841,000
NECA Special Access Lines	485,580	638,688	1,117,638	1,837,524	2,386,716	3,492,605
Industry Special Access Revenue	76,061,198	96,957,742	95,201,271	147,120,009	178,417,380	245,037,310
Industry Total Revenue	2,330,625,706	2,588,827,391	2,384,544,052	2,863,618,701	2,983,931,091	3,287,715,936
<b>Simulation of MAG Plan:</b>						
Total access lines (2)	9,548,130	10,103,536	10,690,540	11,255,353	11,854,860	12,728,887
GDP-PI Adjustment		2.12%	1.86%	1.85%	1.17%	1.56%
Initial CL + TS revenue per line	236.13					
Adjusted revenue per line		241.13	245.62	250.16	253.09	257.04
Total CL + TS revenue		2,436,265,508	2,625,822,436	2,815,651,199	3,000,347,460	3,271,886,996
Initial special access rev. per line	90.35					
Adjusted special access rev. per line		92.27	93.99	95.72	96.85	98.36
Special access revenue		109,432,406	194,603,220	311,401,258	416,945,529	619,670,450
Total revenue		2,545,697,914	2,820,425,655	3,127,052,457	3,417,292,990	3,891,557,447
Excess revenue		(43,129,477)	435,881,603	263,433,756	433,361,899	603,841,511
Target Revenue					2,983,931,091	3,287,715,936
Imputed X-Factors (1995-99, 1995-2000)					<b>3.39%</b>	<b>3.37%</b>
<b>Sources of revenue under MAG plan</b>						
Total access lines (2)		10,103,536	10,690,540	11,255,353	11,854,860	12,728,887
Residence/SLB percentage		87.76%	82.45%	82.05%	81.36%	81.36%
MLB percentage		12.24%	17.55%	17.95%	18.64%	18.64%
Residence/SLB lines @ \$6.50		8,866,684	8,814,813	9,235,460	9,645,312	10,356,435
MLB lines @ \$9.20		1,236,851	1,875,727	2,019,892	2,209,548	2,372,452
Total SLC revenue		828,149,750	894,635,633	943,362,007	996,268,416	1,069,720,622
Special access surcharge rev.		375,549	505,200	545,700	425,769	378,297
Special access revenue		109,432,406	194,603,220	311,401,258	416,945,529	619,670,450
Traffic sensitive revenue		403,763,824	432,355,609	456,979,416	498,681,677	544,745,323
Total access revenues		1,341,721,528	1,522,099,662	1,712,288,381	1,912,321,391	2,234,514,692
Subsidy revenue (LTS,LSS,RAS)		1,203,976,386	1,298,325,994	1,414,784,076	1,504,971,599	1,657,042,755

**Notes:**

(1) From FCC September 2000 Monitoring Report (released 11/2000), Table 8.6, Interstate access minutes by study area, 1993-98.

1999 and 2000 minutes estimated by increasing 1998 minutes by growth in CCL minutes reported in NECA, Alltel, and Interstate TRPs from 1998 to 2000.

(2) From FCC December 1999 Monitoring Report (released 2/2000), Table 3.22, Number of loops by study area. Average lines for each year calculated as a simple average of year-end loops for that year and year-end loops for the previous year. 1999 and 2000 access lines estimated by increasing 1998 lines by growth in lines reported in NECA, Alltel, and Interstate TRPs from 1998 to 2000.

**TABLE 4A - TS Pool Data on Special Access**

	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Total revenue (000)	\$48,675	\$43,874	\$52,213	\$51,388	\$83,101	\$98,909	\$135,841
Demand volumes							
VG chan terms	293,976	197,671	233,916	119,784	117,684	102,168	118,441
VG circuits	226,032	97,236	173,412	92,142	90,516	78,588	91,109
WATS chan terms	32,664	17,189	12,300				
WATS circuits	28,248	10,200	15,996				
Hi cap chan terms	20,520	22,056	26,208	59,820	101,916	137,436	198,420
Hi cap circuits	15,132	15,756	18,720	42,729	72,792	96,172	141,729
Demand totals							
Chan terms	347,160	236,916	272,424	179,604	219,600	239,604	316,861
Circuits	269,412	123,192	208,128	134,871	163,308	174,760	232,838
VGE chan terms	819,120	744,204	875,208	1,555,464	2,563,668	3,400,632	4,880,521
VGE circuits	617,448	485,580	638,688	1,117,638	1,837,524	2,386,716	3,492,605

**Notes:**

Revenue data from NECA TRPs, RORCOS-1(H), line 160

Demand data from NECA TRPs, RORDMD-2, lines 120, 130, and 150

Revenues for 1997 may have been misreported.