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February 23, 1995

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

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

RE: Ex Parte Filing
CC Docket No. 94-1

DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

Attached is USTA's response to MCI's ex parte presentation to the FCC Tariff Division Staff on October 24, 1994 regarding the USTA update of the FCC's Frentrup/Uretsky short term productivity study for local exchange carriers. USTA filed the updated study with its reply comments on June 29, 1994 in this proceeding.

An original and two copies of this ex parte notice and the attachments, including a machine readable disk containing the copies of the original FCC Staff Lotus 123 spreadsheets and the USTA updated spreadsheet are being filed in the Office of the Secretary on February 23, 1995. Please include this notice and attached material in the public record of these proceedings.

Respectfully Submitted

Mary McDermott

Mary McDermott
Vice President - Legal &
Regulatory Affairs

cc: Mark Uretsky
Anthony Bush
Alexander Belinfante
ITS

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UNITED STATES TELEPHONE ASSOCIATION
RESPONSE TO MCI OCTOBER 29, 1994 EX PARTE

Overview

On October 24, 1994, MCI met with Commission staff from the Tariff Division to discuss USTA's update of the FCC short-term productivity study for local exchange carriers. MCI's ex parte presentation alleged that USTA's calculation of the productivity factor is different from the method used by the Commission in the original study in two significant ways. First, MCI alleged that the USTA update used average values for *GNP-PI* and *g*, the growth in minutes of use per line, when the original Commission study did not. Second, MCI alleged that USTA used inconsistent weights to compute the weighted average change for the Per Line and Balanced 50/50 formulas. These allegations are completely without merit.

Tariff Division staff at the Commission provided USTA with the two Lotus 123 spreadsheets which were used to make the Commission's original calculations. These spreadsheets clearly show that the Commission's original study used average values for *GNP-PI* and *g* and employed the same weighting scheme replicated by USTA. These spreadsheets also clearly produce the same results as reported in *A Study of Local Exchange Carrier Post-Divestiture Switched Access Productivity*, included as Appendix C of the Second Report and Order in CC Docket No. 87-313. USTA simply updated the Commission's original study using the identical methodology.

While it is true that USTA did use average values for *GNP-PI* and *g*, it is not true that "the original study used the values in each of the years," as alleged by MCI. As is documented below and in the two Commission spreadsheets (attached), the Commission's original calculations clearly used average values for *GNP-PI* and *g*. Again, the USTA update of the FCC short-term productivity study for local exchange carries follows the methodology of the Commission's original study *exactly*.

Similarly, it is also true that USTA used different weights to compute the average change for the Per Line and Balanced 50/50 formulas. Again, USTA followed the Commission's method exactly. As is documented below and in the two spreadsheets obtained from Tariff Division staff, the Commission's original calculations also used different weights to compute the average change for the Per Line and Balanced 50/50 formulas.

Finally, because of MCI's allegations, USTA recalculated the unitary X using the Balanced 50/50 formula but employing the assumptions cited in the MCI ex parte, letting the values of *GNP-PI* and *g* change annually and changing the weighting scheme. The resultant unitary X does not increase as reported in the MCI ex parte (from "2.67% to 3.38%"). In fact, except for small differences due to rounding, using annual values of *GNP-PI* and *g* versus average values makes no difference at all, and using the weighting scheme that MCI alleges is correct reduces the value of X.

USTA finds that making the adjustments MCI alleges are necessary does <u>not</u> produce the results reported by MCI in its ex parte. Rather, the answer is actually lower--falling from USTA's 2.67 percent to an MCI-adjusted 2.24 percent.

MCI Allegation

> USTA used the average values for GNP-PI and g, the growth in minutes of use per line, in its computation of the PCI changes, whereas the original study used the values in each of the years. (Formulas are in cells M26.M32, M33.M39, and Q26.Q32 of XCALCLEC.WK3)

Detailed Response

USTA followed the Commission's method which used average values for GNP-PI and g exactly. It is true that USTA did use the average values for GNP-PI and g in calculations to update the Commission's calculation of X to include the 1991 and 1992 access periods. It is not true that "the original study used the values in each of the years," as alleged by MCI.

The Commission's original study results were reported in *A Study of Local Exchange Carrier Post-Divestiture Switched Access Productivity*, included as Appendix C of the Second Report and Order in CC Docket No. 87-313. The Commission relied upon these study results to determine the appropriate value for the productivity offset to be included in the price cap adjustment formula. The study was conducted at the Tariff Division of the Common Carrier Bureau. Tariff Division staff provided USTA with two Lotus 123 spreadsheets [INDIVX and UNITARYX] which were used to make the original calculations relied upon by the Commission.

Both INDIVX and UNITARYX, the two spreadsheets given to USTA and used by the Commission, clearly used average values for GNP-PI and g.

Regarding the Average Value of GNP-PI

INDIVX and UNITARYX both use an average value of GNP-PI equal to 3.90% (see cells L14 and B3, respectively).[1] The Second Report and Order (Appendix C) provides the GNP-PI observations related to each access period which are used to produce this average. These data can be found on page 3 of Chart DATA in Appendix C. These data were used by USTA to confirm the 3.90%

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[1] Appended to this document are print-outs which display a *value view* and *text view* of all cells referenced herein for the Commission's two spreadsheets, INDIVX and UNITARYX, and USTA's spreadsheet, XCALCLEC. A bold outline designates the primary cells discussed in this document,
while a normal outline calls attention to all cells related to the calculations. The value view shows the value from calculations and/or formatting of a cell's contents. The text view indicates the formulas used to calculate the values shown.

calculation. An unambiguous reference to the use of 3.9% as the average value of GNP-PI used in the Commission's calculations can be found in ¶13 of Appendix C.

The USTA spreadsheet XCALCLEC likewise computes an updated average GNP-PI also based on GNP-PI observations related to each access period (see cells T42.T48 and U42.U48 for this data). The calculations which develop each access period's value of the change in GNP-PI can be seen in cells S42.S48. See cell B2 for the average computation which results in a value of 4.06%.

The method employed by USTA to convert observations of GNP-PI relating to individual access periods to an average GNP-PI for the analysis period is in all ways exactly identical to the Commission's method.

Regarding the Average Value of g

INDIVX and UNITARYX both use an average value of g. INDIVX uses an average g equal to 6.69%, derived from an assumed 10% growth in CL minutes and an assumed 3.1% growth in lines (see cell H45 in INDIVX for the calculation and ¶13 of Appendix C for a description of the calculation), to make calculations relating to the individual historic values of X for both Common Line Per Line (2.32) and Traffic Sensitive (3.64). UNITARYX uses an average value of g equal to 4.75%, derived from an assumed 8% growth in minutes and an assumed 3.1% growth in lines (see cell B1 in UNITARYX and ¶13 of Appendix C), to calculate the prospective unitary X (3.43) reported on Chart PROD in Appendix C.

USTA determined that the 6.69% value could be approximated by using the growth rates in unadjusted CL minutes and lines from the Chart RATE in Appendix C. Using these values, the historical value of g over the analysis period was 6.81%. Since USTA was engaged in the performance of an historical update of the Commission's methods, the same technique was used. The historical growth rate of minutes was 9.47% (see cell Y24 in XCALCLEC), and the historical growth rate of lines was 3.08% (see cell AC24 in XCALCLEC). These values were used in exactly the same manner as the assumed historic values were used in the Commission's calculations to obtain the updated historic average value of g equal to 6.19% (see cell B1 in XCALCLEC).

MCI Allegation

> USTA used inconsistent weights to compute the weighted average change for the per-line and balanced 50/50 formulas. (The incorrect formula is in cell E16 of XCALCLEC.WK3, for the per line formula. The correct formula is in cell E28, for the 50/50 formula.)

Detailed Response

USTA followed the Commission's method for computing weighted average changes for the Per Line and Balanced 50/50 formulas exactly. It is true that USTA used different weights to compute the average change for the Per Line and Balanced 50/50 formulas. However, these weights are constructed the same way as the Commission's weights, thus replicating the Commission's methods.

INDIVX computes the weighted average change for the Per Line formula using the individual historic values of X for Common Line Per Line (2.32) (see cell L15 in INDIVX) and Traffic Sensitive (3.64) (see cell O15 in INDIVX). These weights are 3372/(8886 + 8037) applied to Common Line Per Line and 8037/(8886 + 8037) applied to Traffic Sensitive (see cell O54 in INDIVX). UNITARYX uses different weights for the weighted average change in the Balanced 50/50 formula to determine the prospective unitary X (3.43) (see cell B7 in UNITARYX). These weights are 3372/(3372 + 8037) applied to Common Line Per Line and 8037/(3372 + 8037) applied to Traffic Sensitive (see cell G18 in UNITARYX).

These weights are based on data provided in the Commission's INDIVX spreadsheet and the Commission's description of the calculation in ¶12 of Appendix C. INDIVX indicates totals for CL Rev and SLC Rev of $8,853,290 (see cell C45 in INDIVX) and $5,473,989 (see cell D45 in INDIVX). By definition, CCL Rev equals the difference between CL Rev and SLC Rev or $3,379,301. USTA thus interpreted the weight from INDIVX applied to Common Line Per Line given above as

CCL Rev/(CL Rev + TS Rev),

the weight from INDIVX applied to Traffic Sensitive given above as

TS Rev/(CL Rev + TS Rev),

the weight from UNITARYX applied to Common Line Per Line given above as

CCL Rev/(CCL Rev + TS Rev)

and the weight from UNITARYX applied to Traffic Sensitive given above as

TS Rev/(CCL Rev + TS Rev).

USTA employed identically the same method as the Commission in establishing the weights in XCALCLEC. For the Per Line computation in cell E16 using the individual historic values of Common Line Per Line and Traffic Sensitive, USTA used the following weights, as the Commission did:

(CCL Rev)/(CL Rev + TS Rev)

and

TS Rev/(CL Rev + TS Rev).

USTA then, in a manner identically the same as the Commission's, used different weights for the Balanced 50/50 computation in cell E28 to determine the historical unitary X:

(CCL Rev)/(CCL Rev + TS Rev)

and

TS Rev/(CCL Rev + TS Rev).

The USTA calculation of the historical unitary X which MCI alleges to be incorrect was reported in Economic Performance of the LEC Price Cap Plan: Reply Comments as 2.67 percent. In consideration of the expressed concern about the weights used in the *original* calculations contained in the spreadsheets provided to the USTA by Tariff Division staff, USTA has recalculated the value of the historical unitary X for the period 1984 through 1992 using the weighting scheme that MCI alleges to be correct. Using the weighting scheme that MCI alleges to be correct, the historical unitary X for the period 1984 through 1992 is 2.23 percent.

A	I	J	K	L
11	Assume:			
12				
13				CL X FACTOR
14			GNP-PI	3.90%
15			Per Line X	2.32%
16			50/50 X	5.61%

A	I	J	K	L
11	Assume:			
12				
13				CL X FACTOR
14			GNP-P	0.039
15			Per Line X	2.32%
16			50/50 X	5.61%

	A	A	B
1		g =	4.75%
2		gbar =	2.60%
3		gnppi =	3.90%
4		Per Line X =	2.97%
5		50/50 X =	4.17%
6		alpha =	61.38%
7		Compromise X =	3.43%

	A	A	B
1		g =	4.75%
2		gbar =	2.60%
3		gnppi =	0.039
4		Per Line X =	2.97%
5		50/50 X =	4.17%
6		alpha =	61.38%
7		Compromise X =	3.43%

	A	A	B	S	T	U	V	W
1		g =	6.19%	-2.80688266	7	1		19.02828287
2		gnppi =	4.06%	-2.67211322	19	1	8 PERIOD	19.11356205
3		alpha (% slc) =	65.71%	-2.63703958	32	1	TOTAL SW RATE/MOU	19.10820345
4				-2.71890020	50	1	REGRESSION	19.31459223
5			0.00%	-2.74161328	63.5	1	----------	19.44856070
6	INDIVX		4.28%	-2.78584210	74	1		19.53857247
7	----------			-2.76115241	86	1		19.60447847
8			CL	-2.79317982	98	1		19.67145657
9			----------					
10		Per Line X =	-0.08%					
11		Compromise X =	2.96%		Regression Output:			
12				Constant			0	Constant
13				Std Err of Y Est			0.0597	Std Err of Y Est
14			CL PCI	R Squared			0.1624	R Squared
15			----------	No. of Observations			8	No. of Observat
16		Per Line	98.07%	Degrees of Freedom			6	Degrees of Fre
17								
18				X Coefficient(s)		-0.0007	-2.6994	X Coefficient(s)
19	UNITARYX			Std Err of Coef.		0.0007	0.0428	Std Err of Coef.
20	----------							
21								
22		Per Line X =	1.64%			0.0669		
23		Compromise X =	2.67%			0.0625		
24						-0.90%		
25								
26								
27								
28		Compromise						
29								
30								
31								
32								
33								
34								
35								
36								

	gnp-pi	GNP-PI*** START QUARTER	GNP-PI*** END QUARTER	analysis period	data source period
37					
38					
39					
40					
41	4.12%	218.7	227.7	1 = 6/84 - 5/85	82/4 83/4
42	4.17%	227.6	237.1	2 = 6/85 - 5/86	83/4 84/4
43	3.45%	110	113.8	3 = 7/86 - 6/87	84/4 85/4
44	3.40%	114.7	118.6	4 = 1988	86/2 87/2
45	4.34%	119.7	124.9	5 = 4/89 -12/89	87/3 88/3
46	4.87%	123.3	129.3	6 = 1990	88/2 89/2
47	4.80%	131.2	137.5	7 = 1991	89/4 90/4
48	3.40%	114.8	118.7	8 = 1992	90/4 91/4

A	A	B	S	T	U	V	W
1	g =	6.19%	-2.80688266	7	1		19.02828287
2	gnppi =	@AVG(S42..S48)	-2.67211322	19	1	8 PERIOD	19.11356205
3	alpha (% slc) =	65.71%	-2.63703958	32	1	TOTAL SW RATE/MOU	19.10820345
4			-2.71890020	50	1	REGRESSION	19.31459223
5		0.00%	-2.74161328	63.5	1	----------	19.44856070
6	INDIVX	4.28%	-2.78584210	74	1		19.53857247
7	----------		-2.76115241	86	1		19.60447847
8		CL	-2.79317982	98	1		19.67145657
9		----------					
10	Per Line X =	-0.08%					
11	Compromise X =	2.96%		Regression Output:			
12			Constant			0	Constant
13			Std Err of Y Est			0.0597	Std Err of Y Est
14		CL PCI	R Squared			0.1624	R Squared
15		----------	No. of Observations			8	No. of Observat
16	Per Line	98.07%	Degrees of Freedom			6	Degrees of Fre
17							
18			X Coefficient(s)		-0.0007	-2.6994	X Coefficient(s)
19	UNITARYX		Std Err of Coef.		0.0007	0.0428	Std Err of Coef.
20	----------						
21							
22	Per Line X =	1.64%			0.0669		
23	Compromise X =	2.67%			0.0625		
24					-0.90%		
25							
26							
27							
28	Compromise						
29							
30							
31							
32							
33							
34							
35							
36							
37							data
38				GNP-PI***	GNP-PI***	analysis	source
39				START QUARTER	END QUARTER	period	period
40			gnp-pi				
41			4.12%	218.7	227.7	1 = 6/84 - 5/85	82/4 83/4
42			(U42/T42)-1	227.6	237.1	2 = 6/85 - 5/86	83/4 84/4
43			(U43/T43)-1	110	113.8	3 = 7/86 - 6/87	84/4 85/4
44			(U44/T44)-1	114.7	118.6	4 = 1988	86/2 87/2
45			(U45/T45)-1	119.7	124.9	5 = 4/89 -12/89	87/3 88/3
46			(U46/T46)-1	123.3	129.3	6 = 1990	88/2 89/2
47			(U47/T47)-1	131.2	137.5	7 = 1991	89/4 90/4
48			(U48/T48)-1	114.8	118.7	8 = 1992	90/4 91/4

A	G	H
25		g factor
26		
27		(A)
28		
29	Ameritech	7.79%
30	Bell Atlantic	6.03%
31	Bell South	5.56%
32	Nynex	5.94%
33	Pac Tel	8.64%
34	Southwestern	6.59%
35	US West	7.43%
36	Centel	5.40%
37	Cincinnati	6.04%
38	Contel	7.49%
39	GTE	6.64%
40	Lincoln	6.94%
41	Rochester	6.61%
42	SNETCO	4.78%
43	United	9.10%
44		
45	TOT	6.69%

	A	G	H
25			g factor
26			
27			(A)
28			
29		Ameritech	7.79%
30		Bell Atlantic	6.03%
31		Bell South	5.56%
32		Nynex	5.94%
33		Pac Tel	8.64%
34		Southwestern	6.59%
35		US West	7.43%
36		Centel	5.40%
37		Cincinnati	6.04%
38		Contel	7.49%
39		GTE	6.64%
40		Lincoln	6.94%
41		Rochester	6.61%
42		SNETCO	4.78%
43		United	9.10%
44			
45		TOT	(1+0.1)/(1+0.031)-1

	A	A	B
1		g =	4.75%
2		gbar =	2.60%
3		gnppi =	3.90%
4		Per Line X =	2.97%
5		50/50 X =	4.17%
6		alpha =	61.38%
7		Compromise X =	3.43%

	A	A	B
1		g =	1.08/1.031-1
2		gbar =	2.60%
3		gnppi =	3.90%
4		Per Line X =	2.97%
5		50/50 X =	4.17%
6		alpha =	61.38%
7		Compromise X =	3.43%

A	A	B	C	D	V	W	X	Y	Z	AA	AB	AC	AD
1	g =	6.19%	based on unadj. CL minutes			19.02828287	7	1		18.51567708	7	1	
2	gnppi =	4.06%			8 PERIOD	19.11356205	19	1	8 PERIOD	18.54569309	19	1	8 PERIOD
3	alpha (% slc) =	65.71%	based on unadj. rev.		TOTAL SW RATE/MOU	19.10820345	32	1	CL MOU	18.56964941	32	1	LINES
4					REGRESSION	19.31459223	50	1	REGRESSION	18.61669458	50	1	REGRESSION
5		0.00%				19.44856070	63.5	1		18.64858065	63.5	1	
6	INDIVX	4.28%				19.53857247	74	1		18.69192902	74	1	
7						19.60447847	86	1		18.71591324	86	1	
8		CL	TS			19.67145657	98	1		18.74011062	98	1	
9													
10	Per Line X =	-0.08%	3.44%	back-solve for 4 Xs based on fitted values from regressions									
11	Compromise X =	2.96%	3.44%	(formula cells = M32,M39,Q32)									
12					0	Constant			0	Constant			0
13			% change	% change	0.0597	Std Err of Y Est			0.04034938	Std Err of Y Est			0.00633965
14		CL PCI	CCL	TS	0.1624	R Squared			0.97740857	R Squared			0.99494241
15					8	No. of Observations			8	No. of Observations			8
16	Per Line	98.07%	5.55%	0.63%	6	Degrees of Freedom			6	Degrees of Freedom			6
17													
18					-2.6994	X Coefficient(s)		0.007565688	18.9472807068	X Coefficient(s)		0.00253476643	18.4944456894
19	UNITARYX				0.0428	Std Err of Coef.		0.000469577	0.02896676658	Std Err of Coef.		0.00007377938	0.00455122583
20													
21													
22	Per Line X =	1.64%	weighted average of individual per line Xs					178525235.6				109582588.346	
23	Compromise X =	2.67%	back-solve for comp. X based on total % change from individual Xs					355387096.6				138012221.28	
24			(formula cell = E28)					9.47%				3.08%	

A	A	B	C	D	V	W	X	Y	Z	AA	AB	AC	AD
1	g =	(1+Y24)/(1+AC24)-1	based on unadj. CL minutes			19.02828287	7	1		18.51567708	7	1	
2	gnppi =	4.06%			8 PERIOD	19.11356205	19	1	8 PERIOD	18.54569309	19	1	8 PERIOD
3	alpha (% slc) =	65.71%	based on unadj. rev.		TOTAL SW RATE/MOU	19.10820345	32	1	CL MOU	18.56964941	32	1	LINES
4					REGRESSION	19.31459223	50	1	REGRESSION	18.61669458	50	1	REGRESSION
5		0.00%				19.44856070	63.5	1		18.64858065	63.5	1	
6	INDIVX	4.28%				19.53857247	74	1		18.69192902	74	1	
7						19.60447847	86	1		18.71591324	86	1	
8		CL	TS			19.67145657	98	1		18.74011062	98	1	
9													
10	Per Line X =	-0.08%	3.44%	back-solve for 4 Xs based on fitted values from regressions									
11	Compromise X =	2.96%	3.44%	(formula cells = M32,M39,Q32)			Regression Output:				Regression Output:		
12					0	Constant			0	Constant			0
13			% change	% change	0.0597	Std Err of Y Est			0.04034938	Std Err of Y Est			0.00633965
14		CL PCI	CCL	TS	0.1624	R Squared			0.97740857	R Squared			0.99494241
15					8	No. of Observations			8	No. of Observations			8
16	Per Line	98.07%	5.55%	0.63%	6	Degrees of Freedom			6	Degrees of Freedom			6
17													
18					-2.6994	X Coefficient(s)		0.0075656884	18.9472807068	X Coefficient(s)		0.00253476643	18.4944456894
19	UNITARYX				0.0428	Std Err of Coef.		0.0004695768	0.02896676658	Std Err of Coef.		0.00007377938	0.00455122583
20													
21													
22	Per Line X =	1.64%	weighted average of individual per line Xs					178525235.64				109582588.346	
23	Compromise X =	2.67%	back-solve for comp. X based on total % change from individual Xs					355387096.62				138012221.28	
24			(formula cell = E28)					(+Y18+1)^(12)-1				(+AC18+1)^(12)-1	

A	C	D	E F	G	H	I	J	K	L	M	N	O
13									CL X FACTOR			TS X FACTOR
14								GNP-PI	3.90%			
15								Per Line X	2.32%	Per Line PCI and ROR CCL		3.64%
16								50/50 X	5.61%	50/50 PCI and ROR CCL		3.64%
17												
18												
19												
20							dZ		0			
21												
22												
23							Common Line PCI					Percent Change i
24	Common Line	SLC										
25	Revenue	Revenue			g factor	% SLC	Per Line	50/50 Formula	API Formula	USTA Formula	2nd 50/50 Formula	Per Line
26												
27	(3)	(4)			(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
28												
29	$803,888	$522,732		Ameritech	7.79%	65.03%	94.24%	94.74%	100.15%	103.90%	100.15%	-3.03%
30	$988,820	$619,351		Bell Atlantic	6.03%	62.64%	95.81%	95.50%	100.95%	103.90%	100.95%	-1.70%
31	$1,483,274	$843,958		Bell South	5.56%	56.90%	96.23%	95.70%	101.16%	103.90%	101.16%	-1.80%
32	$1,186,948	$744,876		Nynex	5.94%	62.76%	95.89%	95.54%	100.99%	103.90%	100.99%	-1.60%
33	$843,377	$597,438		Pac Tel	8.64%	70.84%	93.50%	94.38%	99.77%	103.90%	99.77%	-2.97%
34	$838,123	$538,948		Southwestern	6.59%	64.30%	95.30%	95.25%	100.69%	103.90%	100.69%	-2.03%
35	$988,682	$630,784		US West	7.43%	63.80%	94.55%	94.89%	100.31%	103.90%	100.31%	-2.85%
36	$46,494	$18,384		Centel	5.40%	39.54%	96.38%	95.77%	101.24%	103.90%	101.24%	-2.64%
37	$51,043	$33,261		Cincinnati	6.04%	65.06%	95.80%	95.49%	100.94%	103.90%	100.94%	-1.41%
38	$95,569	$48,660		Contel	7.49%	50.91%	94.50%	94.87%	100.28%	103.90%	100.28%	-3.97%
39	$1,080,841	$607,724		GTE	6.64%	56.23%	95.25%	95.23%	100.66%	103.90%	100.66%	-2.84%
40	$11,300	$7,106		Lincoln	6.94%	62.88%	94.98%	95.10%	100.53%	103.90%	100.53%	-2.51%
41	$21,563	$13,719		Rochester	6.61%	63.62%	95.28%	95.24%	100.68%	103.90%	100.68%	-2.13%
42	$144,710	$85,714		SNETCO	4.78%	59.23%	96.95%	96.05%	101.53%	103.90%	101.53%	-0.86%
43	$268,658	$161,332		United	9.10%	60.05%	93.11%	94.19%	99.57%	103.90%	99.57%	-4.71%
44												
45	$8,853,290	$5,473,989		TOT	6.69%	61.83%	95.21%	95.21%	100.64%	103.90%	100.64%	-2.39%
46												
47												
48							Traffic Sensitive Rate Change					Switched Access
49												
50							Per Line	50/50 Formula				Per Line
51												
52							(C)	(D)				(H)
53												
54				TOT			0.26%	0.26%				-0.35%

13										CL X FACTOR			TS X FACTOR
14									GNP-PI	3.90%			
15									Per Line X	0.0232	Per Line PCI and ROR CCL		0.0364
16									50/50 X	5.61%	50/50 PCI and ROR CCL		3.64%
17													
18													
19													
20								dZ		0			
21													
22													
23						Common Line PCI							Percent Change in CCL Rate
24	Common Line	SLC											
25	Revenue	Revenue		g factor	% SLC	Per Line		50/50 Formula	API Formula	USTA Formula	2nd 50/50 Formula		Per Line
26													
27	(3)	(4)		(A)	(B)	(C)		(D)	(E)	(F)	(G)		(H)
28													
29	$803,888	$522,732	Ameritech	7.79%	65.03%		94.24%	94.74%	100.15%	103.90%	100.15%		-3.03%
30	$988,820	$619,351	Bell Atlantic	6.03%	62.64%		95.81%	95.50%	100.95%	103.90%	100.95%		-1.70%
31	$1,483,274	$843,958	Bell South	5.56%	56.90%		96.23%	95.70%	101.16%	103.90%	101.16%		-1.80%
32	$1,186,948	$744,876	Nynex	5.94%	62.76%		95.89%	95.54%	100.99%	103.90%	100.99%		-1.60%
33	$843,377	$597,438	Pac Tel	8.64%	70.84%		93.50%	94.38%	99.77%	103.90%	99.77%		-2.97%
34	$838,123	$538,948	Southwestern	6.59%	64.30%		95.30%	95.25%	100.69%	103.90%	100.69%		-2.03%
35	$988,682	$630,784	US West	7.43%	63.80%		94.55%	94.89%	100.31%	103.90%	100.31%		-2.85%
36	$46,494	$18,384	Centel	5.40%	39.54%		96.38%	95.77%	101.24%	103.90%	101.24%		-2.64%
37	$51,043	$33,261	Cincinnati	6.04%	65.06%		95.80%	95.49%	100.94%	103.90%	100.94%		-1.41%
38	$95,569	$48,660	Contel	7.49%	50.91%		94.50%	94.87%	100.28%	103.90%	100.28%		-3.97%
39	$1,080,841	$607,724	GTE	6.64%	56.23%		95.25%	95.23%	100.66%	103.90%	100.66%		-2.84%
40	$11,300	$7,106	Lincoln	6.94%	62.88%		94.98%	95.10%	100.53%	103.90%	100.53%		-2.51%
41	$21,563	$13,719	Rochester	6.61%	63.62%		95.28%	95.24%	100.68%	103.90%	100.68%		-2.13%
42	$144,710	$85,714	SNETCO	4.78%	59.23%		96.95%	96.05%	101.53%	103.90%	101.53%		-0.86%
43	$268,658	$161,332	United	9.10%	60.05%		93.11%	94.19%	99.57%	103.90%	99.57%		-4.71%
44													
45	@SUM(C43..C29)	@SUM(D43..D29)	TOT	(1+0.1)/(1+0.031)-1	61.83%	(1+(((C45+$DZ)/C45)*(($GNPPI-$XPL-H45)/(1+H45)))		95.21%	100.64%	103.90%	100.64%		(C45*(J45-1)+D45*(H45/(1+H45)))/(C45-D45)
46													
47													
48						Traffic Sensitive Rate Change							Switched Access Rate Change
49													
50						Per Line		50/50 Formula					Per Line
51													
52						(C)		(D)					(H)
53													
54			TOT			+GNPPI-O15		0.26%					3372/(8886+8037)*O45+8037/(8886+8037)*J54

	A	A	B	C	D	E	F	G
1		g =	4.75%	Method 1	0.36%	|	Percent change	
2		gbar =	2.60%	Method 2	0.28%	|	in CCL rate	
3		gnppi =	3.90%	Method 3	0.23%	|	for 1% increase	
4		Per Line X =	2.97%	Method 4	-0.48%	|	in g	
5		50/50 X =	4.17%			|		
6		alpha =	61.38%	50/50	0.27%	|		
7		Compromise X =	3.43%	Per Line	-0.93%	|		
8								
9					% change		% change	% change
10					CCL		TS	TotSw
11		3372	21.699768	Method 1	0.56%		0.93%	0.82%
12		8037	-22.02138	Method 2	0.43%		0.93%	0.79%
13		2555	-7.0007	Method 3	0.36%		0.93%	0.76%
14			-7.322312	Method 4	-1.21%		0.93%	0.30%
15								
16		($59.9)	-38.18578	50/50	0.64%		-0.27%	-0.00%
17		$59.8	37.7739	Per Line	-2.23%		0.93%	-0.00%
18		$19.0	12.0085	Compromise	-1.13%		0.47%	-0.00%

	A	A	B	C	D	E	F	G
1		g =	1.08/1.031-1	Method 1	0.36%	Percent change		
2		gbar =	2.60%	Method 2	0.28%	in CCL rate		
3		gnppi =	0.039	Method 3	0.23%	for 1% increase		
4		Per Line X =	2.97%	Method 4	-0.48%	in g		
5		50/50 X =	4.17%					
6		alpha =	0.6138	50/50	0.27%			
7		Compromise X =	0.0343	Per Line	-0.93%			
8								
9					% change		% change	% change
10					CCL		TS	TotSw
11		3372	21.69976782	Method 1	0.56%		0.93%	0.82%
12		8037	-22.02138	Method 2	0.43%		0.93%	0.79%
13		2555	-7.0007	Method 3	0.36%		0.93%	0.76%
14			-7.32231218	Method 4	-1.21%		0.93%	0.30%
15								
16		($59.9)	-38.1857808	50/50	0.64%		-0.27%	-0.00%
17		$59.8	37.7739	Per Line	-2.23%		0.93%	-0.00%
18		$19.0	12.0085	Compromise	(GNPPI-XCOMP-((G/2)*(1-ALPHA)))/((1+(G/2))*(1-ALPHA))		+GNPPI-XCOMP	((3372/(3372+8037))*D18)+((8037/(3372+8037))*F18)

	A	B	C	D	E	P	Q	R	W	X	Y	Z	AA	AB	AC	AD
1	g =	6.19%	based on unadj. CL minutes			7	1		19.02828287	7	1		18.51567708	7	1	
2	gnppi =	4.06%				19	1	8 PERIOD	19.11356205	19	1	8 PERIOD	18.54569309	19	1	8 PERIOD
3	alpha (% slc) =	65.71%	based on unadj. rev.			32	1	TS RATE/MOU	19.10820345	32	1	CL MOU	18.56964941	32	1	LINES
4						50	1	REGRESSION	19.31459223	50	1	REGRESSION	18.61669458	50	1	REGRESSION
5		0.00%			ALT G retri	63.5	1		19.44856070	63.5	1		18.64858065	63.5	1	
6	INDIVX	4.28%			ALT Z perfo	74	1		19.53857247	74	1		18.69192902	74	1	
7						86	1		19.60447847	86	1		18.71591324	86	1	
8		CL	TS			98	1		19.67145657	98	1		18.74011062	98	1	
9																
10	Per Line X =	-0.08%	3.44%	back-solve for 4 Xs based on fitted values from regressions												
11	Compromise X =	2.96%	3.44%	(formula cells = M32,M39, Regression Output:												
12								0	Constant			0	Constant			0
13			% change	% change	% change			0.0763	Std Err of Y Est			0.04034938	Std Err of Y Est			0.00633965
14		CL PCI	CCL	TS	TotSw			0.0464	R Squared			0.97740857	R Squared			0.99494241
15								8	No. of Observations			8	No. of Observations			8
16	Per Line	98.07%	5.55%	0.63%	1.28%			6	Degrees of Freedom			6	Degrees of Freedom			6
17																
18							0.0005	-3.7179	X Coefficient(s)		0.007565688	18.9472807068	X Coefficient(s)		0.00253476643	18.4944456894
19	UNITARYX						0.0009	0.0548	Std Err of Coef.		0.000469577	0.02896676658	Std Err of Coef.		0.00007377938	0.00455122583
20																
21																
22	Per Line X =	1.64%	weighted average of individual per line Xs				0.024367175				178525235.6				109582588.346	
23	Compromise X =	2.67%	back-solve for comp. X based on total % change from ind				0.025454421				355387096.6				138012221.28	
24			(formula cell = E28)				0.58%				9.47%				3.08%	
25			% change	% change	% change											
26			CCL	TS	TotSw	2	0.0245									
27						3	0.0247									
28	Compromise		0.95%	1.40%	1.28%	4	0.0248									
29						5	0.0250									
30						6	0.0251									
31						7	0.0253									
32						8	0.0255									
33						2	0.0245									
34						3	0.0247									
35						4	0.0248									
36						5	0.0250									
37						6	0.0251		data							
38						7	0.0253		source							
39						8	0.0255		period							
40						cl unadj rev	slc rev	ts unadj rev								
41						$10,172,842	$1,296,104	$5,461,496	82/4 83/4	7						
42						$10,878,568	$2,484,658	$6,562,000	83/4 84/4	19	12					
43						$10,213,735	$3,646,949	$7,102,456	84/4 85/4	32	13					
44						$10,012,595	$4,563,679	$8,231,744	86/2 87/2	50	18					
45						$9,807,040	$5,703,289	$8,637,220	87/3 88/3	63.5	13.5					
46						$9,568,617	$5,926,881	$8,492,946	88/2 89/2	74	10.5					
47						$9,395,161	$6,062,676	$8,609,845	89/4 90/4	86	12					
48						$9,481,498	$6,230,468	$9,054,015	90/4 91/4	98	12					

	A	B	C	D	E
1	g =	(1+Y24)/(1+AC24)-1	based on unadj. CL minutes		
2	gnppi =	@AVG(S42..S48)			
3	alpha (% slc) =	+Q48/P48	based on unadj. rev.		
4					
5		0.00%			ALT G retrieves the data fro
6	INDIVX	4.28%			ALT Z performs the eight-peri
7					
8		CL	TS		
9					
10	Per Line X =	-0.0008067991751 02	0.0343703361658 67	back-solve for 4 Xs based on fitted values from regressions	
11	Compromise X =	2.96%	3.44%	(formula cells = M32,M39,Q32)	
12					
13			% change	% change	% change
14		CL PCI	CCL	TS	TotSw
15					
16	Per Line	(1+(((P48+0)/P48)*((B2-	(P48*(B16-1)+Q48*(B1	+B2-C10	(((P48-Q48)/(P48+R48))*C16)+((R48/(P48+R48))*
17					
18					
19	UNITARYX				
20					
21					
22	Per Line X =	1.64%	weighted average of individual per line Xs		
23	Compromise X =	0.026655121109648	back-solve for comp. X based on total % change from individual Xs		
24			(formula cell = E28)		
25			% change	% change	% change
26			CCL	TS	TotSw
27					
28	Compromise		(B2-B23-((B1/2)*(1-B3)	+B2-B23	((+P48-Q48)/(P48-Q48+

	P	Q	R	W	X	Y	Z	AA	AB	AC	AD
1	7	1		19.02826287	7	1		18.51567708	7	1	
2	19	1	8 PERIOD	19.11356205	19	1	8 PERIOD	18.54569309	19	1	8 PERIOD
3	32	1	TS RATE/MOU	19.10820345	32	1	CL MOU	18.56964941	32	1	LINES
4	50	1	REGRESSION	19.31459223	50	1	REGRESSION	18.61669458	50	1	REGRESSION
5	63.5	1		19.44856070	63.5	1		18.64858065	63.5	1	
6	74	1		19.53857247	74	1		18.69192902	74	1	
7	86	1		19.60447847	86	1		18.71591324	86	1	
8	98	1		19.67145657	98	1		18.74011062	98	1	
9											
10											
11			Regression Output:				Regression Output:			Regression Output:	
12				0	Constant			0	Constant		0
13				0.0763	Std Err of Y Est			0.04034938	Std Err of Y Est		0.00633965
14				0.0464	R Squared			0.97740857	R Squared		0.99494241
15				8	No. of Observations			8	No. of Observations		8
16				6	Degrees of Freedom			6	Degrees of Freedom		6
17											
18		0.0005	-3.7179	X Coefficient(s)		0.007565668363	18.9472807068	X Coefficient(s)		0.0025347664267	18.4944456894
19		0.0009	0.0548	Std Err of Coef.		0.000469578808	0.02896676658	Std Err of Coef.		0.0000737793806	0.00455122583
20											
21											
22		0.024367175				178525235.635				109582588.34637	
23		0.025454421				355387096.6166				138012221.26	
24		0.58%				(+Y18+1)^(12)-1				(+AC18+1)^(12)-1	
25											
26	2	0.0245									
27	3	0.0247									
28	4	0.0248									
29	5	0.0250									
30	6	0.0251									
31	7	0.0253									
32	8	0.0255									
33	2	0.0245									
34	3	0.0247									
35	4	0.0248									
36	5	0.0250									
37	6	0.0251			data						
38	7	0.0253			source						
39	8	0.0255			period						
40	cl unadj rev	slc rev	ts unadj rev								
41	$10,172,842	$1,296,104	$5,461,496	82/4	83/4	7					
42	$10,878,568	$2,484,658	$5,562,000	83/4	84/4	19	12				
43	$10,213,735	$3,648,949	$7,102,456	84/4	85/4	32	13				
44	$10,012,595	$4,583,679	$8,231,744	86/2	87/2	50	18				
45	$9,807,040	$5,703,289	$8,637,220	87/3	88/3	63.5	13.5				
46	$9,568,617	$5,928,881	$8,492,948	88/2	89/2	74	10.5				
47	$9,395,161	$6,062,676	$8,609,845	89/4	90/4	86	12				
48	9481498	6230468	9054015	90/4	91/4	98	12				