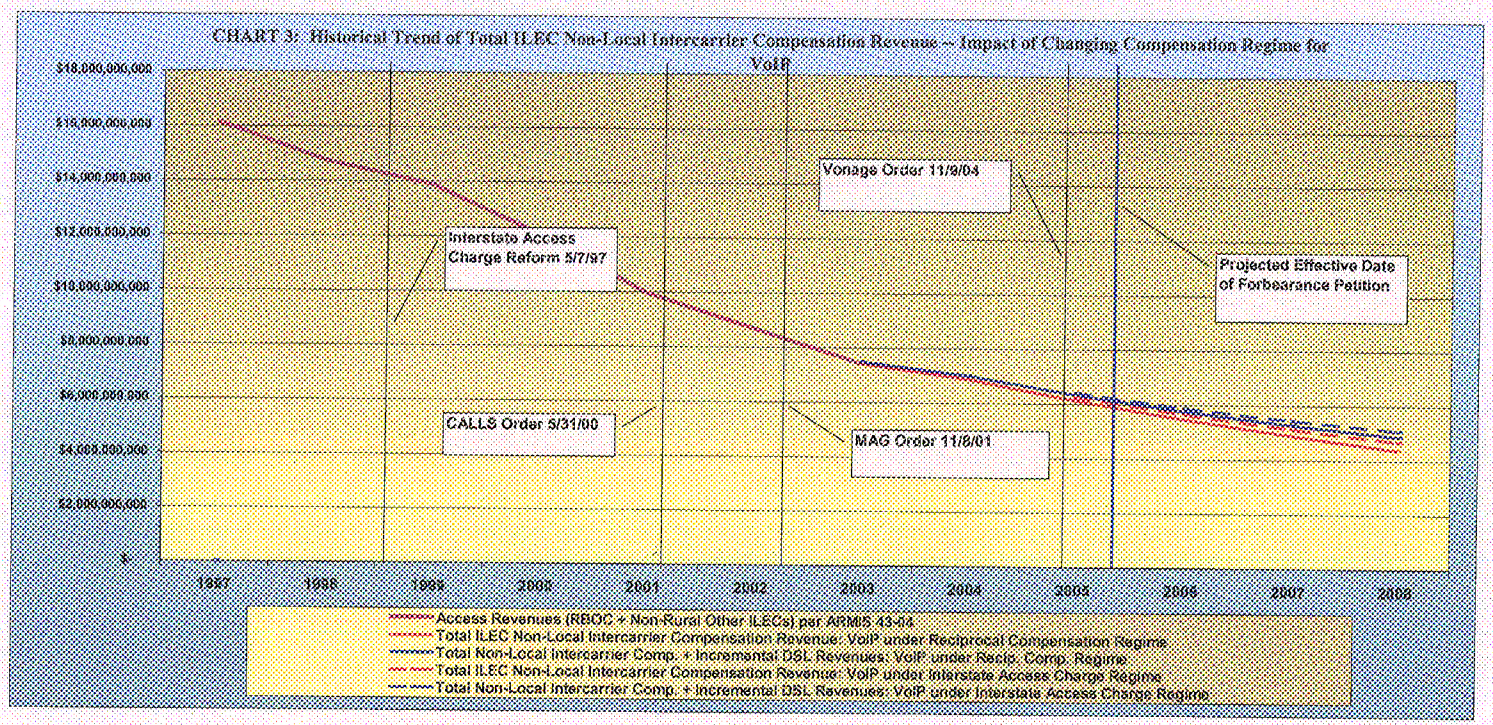
CHART 3: Historical Trend of Total ILEC Non-Local Intercarrier Compensation Revenue – Impact of Changing Compensation Regime for VoIP
$18,000,000,000
$16,000,000,000
$14,000,000,000
$12,000,000,000
$10,000,000,000
$8,000,000,000
$6,000,000,000
$4,000,000,000
$2,000,000,000
$
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Interstate Access Charge Reform 5/7/97
CALLS Order 5/31/00
MAG Order 11/8/01
Vonage Order 11/9/04
Projected Effective Date of Forbearance Petition
Access Revenues (RBOC + Non-Rural Other ILECs) per ARMIS 43-04
Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Reciprocal Compensation Regime
Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Recip. Comp. Regime
Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Interstate Access Charge Regime
Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Interstate Access Charge Regime

DATA FOR CHART 3: INCLUDES THE YEARS 1997 - 2008												
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	HISTORICAL SWITCHED ACCESS REVENUE (RBOCs + OTHER NON-RURAL ILECS (see tab Baseline Access Revenue 1997-03))							PROJECTED INTERCARRIER NON-LOCAL TRAFFIC REVENUE				
Access Revenues (RBOC + Non-Rural Other ILECs) per ARMIS 43-04	$ 16,158,968,015	$ 14,197,177,973	$ 13,905,455,311	$ 12,107,801,216	$ 9,992,875,286	$ 8,997,848,390	$ 7,438,235,436					
Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Reciprocal Compensation Regime	==========>						$ 7,438,617,738	$ 6,892,643,414	$ 6,146,700,308	$ 5,485,588,276	$ 4,900,244,074	$ 4,381,426,586
Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Interstate Access Charge Regime	==========>								$ 6,260,757,141	$ 5,652,841,846	$ 5,136,266,887	$ 4,693,204,353
Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Recip. Comp. Regime	==========>						$ 7,502,256,785	$ 7,011,330,394	$ 6,342,277,908	$ 5,765,305,551	$ 5,280,408,136	$ 4,872,334,444
Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Interstate Access Charge Regime	==========>								$ 6,417,219,221	$ 5,876,615,666	$ 5,440,397,936	$ 5,085,930,639

Note: "Total ILEC Intercarrier Revenues" includes net reciprocal compensation payments on non-local VoIP traffic, in addition to access revenues.

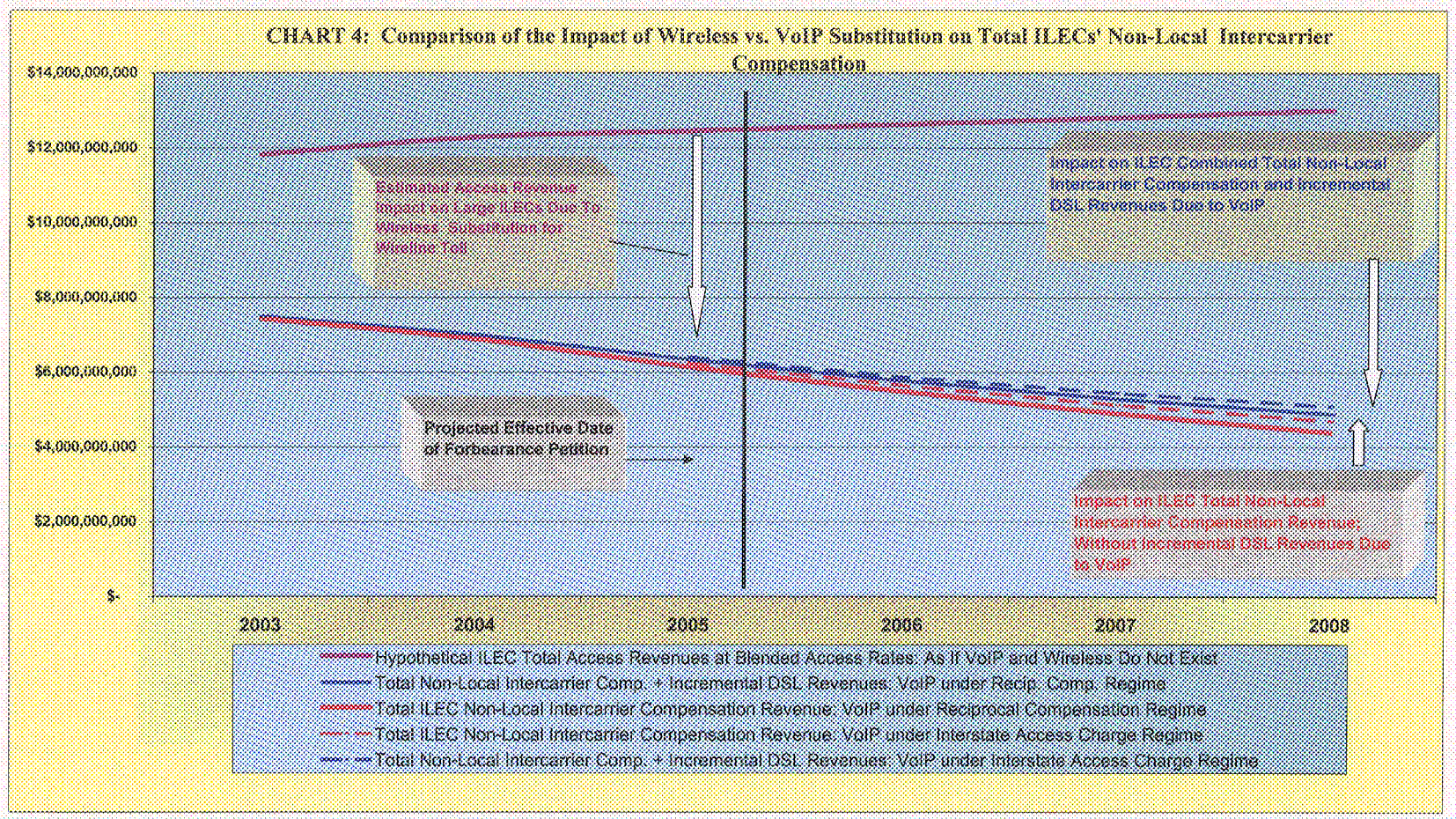
CHART 4: Comparison of the Impact of Wireless vs. VoIP Substitution on Total ILECs' Non-Local Intercarrier Compensation
$14,000,000,000
$12,000,000,000
$10,000,000,000
$8,000,000,000
$6,000,000,000
$4,000,000,000
$2,000,000,000
$-
2003
2004
2005
2006
2007
2008
Estimated Access Revenue Impact on Large ILECs Due To Wireless Substitution for Wireline Toll
Impact on ILEC Combined Total Non-Local Intercarrier Compensation and Incremental DSL Revenues Due to VoIP
Projected Effective Date of Forbearance Petition
Impact on ILEC Total Non-Local Intercarrier Compensation Revenue, Without Incremental DSL Revenues Due to VoIP
Hypothetical ILEC Total Access Revenues at Blended Access Rates: As If VoIP and Wireless Do Not Exist
Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Recip. Comp. Regime
Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Reciprocal Compensation Regime
Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Interstate Access Charge Regime
Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Interstate Access Charge Regime

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DETERMINATION OF VoIP IMPACT ON ILECS' INTERCARRIER NON-LOCAL TRAFFIC COMPENSATION REVENUE NET OF GAINS IN DSL REVENUE

LINE	DESCRIPTION	REVENUE IMPACT BY YEAR					
		2003	2004	2005	2006	2007	2008
1	Hypothetical Access Revenues on VoIP Replacement Minutes (as if VoIP does not exist): Blended Access Rates	$ 125,843,678	$ 208,299,318	$ 323,320,606	$ 456,276,236	$ 620,252,107	$ 789,675,707
2	Intercarrier Compensation on VoIP Minutes: Reciprocal Compensation Regime (1)	$ 3,082,302	$ 8,378,481	$ 8,472,312	$ 12,377,875	$ 17,819,043	$ 23,211,280
3	Intercarrier Compensation on VoIP Minutes: Interstate Access Charge Regime			$ 122,629,146	$ 179,631,245	$ 253,841,656	$ 334,989,035
4	Incremental DSL Revenues due to VoIP Availability: VoIP under Reciprocal Compensation Regime	$ 63,839,047	$ 119,496,960	$ 195,977,600	$ 279,717,270	$ 380,184,092	$ 490,807,858
5	Incremental DSL Revenues due to VoIP Availability: VoIP under Interstate Access Charge Regime			$ 156,462,080	$ 223,773,820	$ 304,131,250	$ 392,726,286

Note (1): Today VoIP is compensated at reciprocal compensation rates.

IMPACT OF COMPENSATION REGIME ON LARGE ILECS' INTERCARRIER NON-LOCAL TRAFFIC COMPENSATION REVENUES: COMPARISON TO WIRELESS

		Actual - Baseline	Projected Access Revenues (2004 - 2008)				
		2003	2004	2005	2006	2007	2008
6 = calculation	Forecasted Access Revenue Decline (Based on User-Adj Inputs for Access Rates and actual MOU trends)		-7.37%	-10.88%	-10.83%	-10.79%	-10.74%
7 = calculation	Access Revenues (RBOC + Non-Rural Other ILECs) per ARMIS 43-04	$ 7,435,535,436	$ 6,887,464,093	$ 6,138,227,995	$ 5,473,210,601	$ 4,882,728,030	$ 4,356,215,316
8 = calculation	Hypothetical ILEC Total Access Revenue: Historical Access and VoIP MOUs at Blended Access Rate (after wireless substitution)	$ 7,561,379,014	$ 7,004,032,628	$ 6,242,115,144	$ 5,585,842,586	$ 4,965,363,274	$ 4,431,970,436
9	Estimated % of Total Interstate MOUs Attributable to Interstate Wireless Usage in 2003	38.06%					
10	Forecasted Change in Access Revenues lost to Wireless		22.84%	17.25%	13.73%	11.11%	8.19%
11 = calculation	Estimated Access Revenue Impact on Large ILECs Due To Wireless Substitution for Wireline Toll	$ (4,268,246,485)	$ (6,285,780,554)	$ (6,213,349,702)	$ (7,066,603,847)	$ (7,851,366,791)	$ (8,573,065,742)
12 = 8 - 11	Hypothetical ILEC Total Access Revenues at Blended Access Rates: As if VoIP and Wireless Did Not Exist	$ 11,829,625,499	$ 12,289,813,182	$ 12,455,464,846	$ 12,652,446,433	$ 12,816,729,065	$ 12,005,042,175
13 = 7 + 2	Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Reciprocal Compensation Regime	$ 7,438,617,738	$ 6,895,842,574	$ 6,146,700,308	$ 5,485,588,476	$ 4,900,547,073	$ 4,379,426,596
14 = 7 + 3	Total ILEC Non-Local Intercarrier Compensation Revenue: VoIP under Interstate Access Charge Regime			$ 6,269,757,141	$ 5,652,841,846	$ 7,139,582,847	$ 7,663,204,263
15 = 13 + 4	Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Recip. Comp. Regime	$ 7,502,456,785	$ 7,011,338,534	$ 6,342,677,908	$ 5,785,105,531	$ 5,220,498,178	$ 4,872,334,444
16 = 14 + 5	Total Non-Local Intercarrier Comp. + Incremental DSL Revenues: VoIP under Interstate Access Charge Regime			$ 6,417,219,221	$ 5,876,315,846	$ 5,440,937,939	$ 5,055,935,638
17 = 14 - 13	Impact of Change in VoIP Intercarrier Compensation Regime on Total ILEC Non-Local Intercarrier Comp. Revenue (net of increased DSL revenue)			$ 123,056,403	$ 167,253,371	$ 238,034,774	$ 283,777,667
18 = 17 / 13				2.0%	3.0%	4.9%	6.5%
19 = 16 - 15	Impact of Change in VoIP Intercarrier Compensation Regime on Total ILEC Non-Local Intercarrier Comp. Revenue With Incremental DSL Revenue Net of Gains Applied to VoIP			$ 74,761,313	$ 91,210,315	$ 220,439,261	$ 183,601,194
20 = 19 / 16				1.2%	1.6%	4.0%	3.6%

Note (2): The change in VoIP traffic intercarrier compensation when interstate access rates are applied vs. reciprocal compensation rates.

Note (3): The sum of the change in VoIP traffic intercarrier compensation and the change in incremental DSL revenue attributable to VoIP stimulation when VoIP traffic pays interstate access rates. Incremental DSL revenue is suppressed due to suppression of VoIP subscribership when higher prices must be charged to cover cost of interstate access rates.

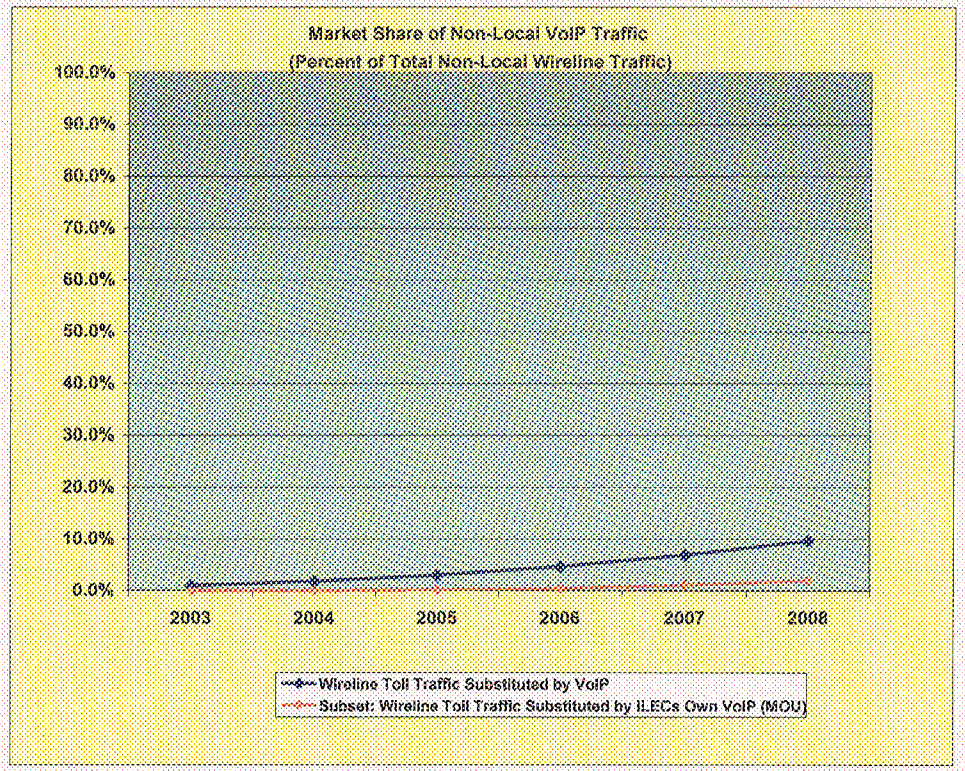
purple line

red line

dashed red line

blue line

dashed blue line



	2003	2004	2005	2006	2007	2008
Baseline 2003 Total RBOC and Other Non-Rural ILEC Switched AMOU	673,839,529,762					
Assumed Annual Change in Switched AMOU		-7.37%	-7.37%	-7.37%	-7.37%	-7.37%
Forecasted Total Switched AMOU		624,171,073,014	578,163,689,417	535,547,434,866	496,072,436,100	459,507,124,556
Wireline Toll Traffic Substituted by VoIP (MOU)	6,484,153,804	11,314,561,779	17,822,969,639	26,038,573,328	36,854,327,735	48,828,903,780
Total Non-Local Wireline Traffic (Traditional + VoIP)	680,323,683,566	635,485,634,792	595,986,628,956	561,586,008,194	532,926,763,836	508,336,028,336
VoIP as % of Total Non-Local Wireline Traffic	**1.0%**	**1.8%**	**3.0%**	**4.6%**	**6.9%**	**9.6%**
Subset: Wireline Toll Traffic Substituted by ILECs Own VoIP (MOU)	-	-	891,148,477	2,603,857,333	5,528,149,160	9,765,780,756
ILEC VoIP as % of Total Non-Local Wireline Traffic	**0.0%**	**0.0%**	**0.1%**	**0.5%**	**1.0%**	**1.9%**

ASSUMPTIONS/CALCULATIONS	2003	2004	2005	2006	2007	2008
% VoIP Lines that are ILEC VoIP (applies to DSL-based lines)	0%	0%	5%	10%	15%	20%

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IP Enabled Traffic - Revenue Impact

From the ILEC perspective - i.e., positive values are ILEC revenues, negative values are ILEC payments

Impact of VoIP Compensation Regime on ILEC Inter-Carrier Compensation (per MOU) Using Rates in Effect As of 2003

	Call Type	Origination[1] Calling Party	Termination[1] Called Party	Total	Note
A1	Traditional Toll[2]	$0.0141	$0.0000	$0.0141	*Orig. on ILEC; Term. on "Cable"*
	VoIP Under Recip. Comp.	($0.0007)	$0.0000	($0.0007)	*Call ILEC to VoIP; Term. on "Cable"*
	VoIP Under Interstate Access	$0.0060	$0.0000	$0.0060	*Call ILEC to VoIP; Term. on "Cable"*
A2	Traditional Toll[2]	$0.0141	$0.0141	$0.0283	*Orig. on ILEC; Term. on ILEC*
	VoIP Under Recip. Comp.	($0.0007)	$0.0000	($0.0007)	*Call ILEC to VoIP; Term. on "DSL"*
	VoIP Under Interstate Access	$0.0060	$0.0060	$0.0120	*Call ILEC to VoIP; Term. on "DSL"*
B1	Traditional Toll[2]	$0.0000	$0.0141	$0.0141	*Orig on "Cable"; Term. on ILEC*
	VoIP Under Recip. Comp.	$0.0000	$0.0007	$0.0007	*VoIP call orig on "Cable"; Term. on ILEC*
	VoIP Under Interstate Access	$0.0000	$0.0060	$0.0060	*VoIP call orig on "Cable"; Term. on ILEC*
B2	Traditional Toll[2]	$0.0141	$0.0141	$0.0283	*Orig on ILEC; Term. on ILEC*
	VoIP Under Recip. Comp.	$0.0000	$0.0007	$0.0007	*VoIP call orig. on "DSL"; Term. on ILEC*
	VoIP Under Interstate Access	$0.0060	$0.0060	$0.0120	*VoIP call orig. on "DSL"; Term. on ILEC*

CALL TYPES

A	***PSTN to IP*** call, locally dialed (includes *de minimis* POTS-to-POTS), interconnection point within same local calling area as originating caller (originating and terminating caller in different local calling areas).
	A1: Terminates on non-ILEC IP - *See PowerPoint DIAGRAM 5*
	A2: Terminates on ILEC IP - *See PowerPoint DIAGRAM 6*
B	***IP to PSTN*** call, interconnection point within same local calling area as terminating caller (originating and terminating caller in different local calling areas).
	B1: Originates on non-ILEC IP - *See PowerPoint DIAGRAM 3*
	B2: Originates on ILEC IP - *See PowerPoint DIAGRAM 4*
Note 1:	A value of $0 represents no payments or revenue; it is not meant to suggest that some amount of internal, incremental cost is not experienced by either the originating or terminating carrier. Instead, it is simply meant to represent that no payment is made nor revenue received by/to another carrier.
Note 2:	For the most part, these calls are not considered "toll" calls today and access is not paid. This analysis is simply meant to show the disparate revenue/payment experienced by the ILEC given potentially different treatment (i.e., toll versus other).
Note 3:	Assume zero call set up time (OMOU = TMOU on individual call).

VoIP Traffic Impacts Based on Assumptions

Assumptions	2003	2004	2005	2006	2007	2008
Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally"	30%	30%	30%	30%	30%	30%
Price Stimulation of VoIP Originating Traffic When VoIP is under **RECIPROCAL COMPENSATION** regime	1.10	1.10	1.10	1.10	1.10	1.10
Price Stimulation of VoIP Originating Traffic When VoIP is under **INTERSTATE ACCESS** regime			1.05	1.05	1.05	1.05
Adj. of Terminating Volumes: VoIP customer does not receive as many calls as pre-VoIP (incoming calls are still directed to the customer's ILEC line: Ex.2-line household/business) (factor)	0.80	0.80	0.80	0.80	0.80	0.80

Traffic Type[1]	2003	2004	2005	2006	2007	2008
Terminating Volumes associated with lines substituted by Cable VoIP times Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally"	900,662,548	1,488,899,686	2,211,104,900	3,201,484,848	4,563,957,134	6,090,130,859
Terminating Volumes associated with Cable VoIP times Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally" times Adj. of Terminating Volumes	720,530,038	1,191,119,749	1,768,883,920	2,561,187,718	3,651,165,707	4,872,104,687
			1,416,107,136	2,048,950,175	2,920,932,565	3,897,683,750
Terminating Volumes associated with lines substituted by DSL VoIP times Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally"	536,800,846	1,017,665,442	1,737,298,707	2,666,986,159	3,600,845,789	4,727,153,083
Terminating Volumes associated with DSL VoIP times Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally" times Adj. of Terminating Volumes	428,640,677	814,132,353	1,389,837,366	2,053,564,927	2,880,436,631	3,781,722,466
			1,111,869,893	1,642,851,942	2,304,349,305	3,025,377,973
Originating Volumes associated with lines substituted by VoIP Cable Lines	3,164,901,867	5,231,999,011	7,709,798,042	11,249,923,549	16,037,812,070	21,400,541,880
Originating Volumes associated with VoIP Cable Lines times Price Stimulation Factor	3,481,392,076	5,755,145,012	8,848,733,848	12,374,915,904	17,641,373,377	23,540,996,166
			9,626,596,755	9,449,935,781	13,471,594,139	17,976,456,254
Originating Volumes associated with lines substituted by DSL-based VoIP lines	1,882,788,525	3,578,046,840	6,194,899,890	9,020,205,872	12,652,212,742	16,611,077,869
Originating Volumes associated with DSL based VoIP lines times Price Stimulation Factor	2,071,067,375	3,933,851,304	6,715,290,879	9,922,229,869	13,917,434,017	18,272,186,656
			5,128,040,307	7,576,975,536	10,627,868,704	13,953,309,410

DSL Revenue Increase Due to VoIP

Assumptions	2003	2004	2005	2006	2007	2008
Assumed % of DSL-based VoIP Lines Where DSL is Ordered Because of VoIP service	12%	15%	12%	12%	15%	15%
Additional DSL Revenues Due To VoIP (per DSL per month)	$ 30.00	$ 30.00	$ 30.00	$ 30.00	$ 30.00	$ 30.00
DSL Lines and Revenues	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Incremental DSL Based VoIP Lines under Reciprocal Compensation (exclude non-ILEC DSL; includes VoIP lines lost by wireless, CLECs...)	1,178,501	2,194,203	3,621,897	5,179,950	7,040,675	9,096,858
Incremental DSL Revenues due to VoIP Stimulation: Reciprocal Compensation Regime	$ 93,859,947	$ 118,480,980	$ 195,577,690	$ 279,717,273	$ 380,194,652	$ 490,897,858
Incremental DSL Based VoIP Lines under Access Charge Regime (excludes non-ILEC DSL; includes VoIP lines lost by wireless, CLECs...)			2,897,448	4,143,960	5,632,080	7,372,700
Incremental DSL Revenues due to VoIP Stimulation: Interstate Access Charge Regime			$ 156,462,080	$ 223,773,820	$ 304,155,220	$ 392,718,280

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IP Enabled Traffic - Revenue Impact

From the ILEC perspective - i.e., positive values are ILEC revenues, negative values are ILEC payments

Impact of VoIP Compensation Regime on ILEC Inter-Carrier Compensation (per MOU) Using Rates in Effect As of 2003					
Call Type		Origination Calling Party	Termination Called Party	Total	Note
A1	Traditional Toll[1]	$0.0141	$0.0000	$0.0141	*Orig. on ILEC; Term. on "Cable"*
	VoIP Under Recip. Comp.	($0.0007)	$0.0000	($0.0007)	*Call ILEC to VoIP; Term. on "Cable"*
	VoIP Under Interstate Access	$0.0060	$0.0000	$0.0060	*Call ILEC to VoIP; Term. on "Cable"*
A2	Traditional Toll[1]	$0.0141	$0.0141	$0.0283	*Orig. on ILEC; Term. on ILEC*
	VoIP Under Recip. Comp.	($0.0007)	$0.0000	($0.0007)	*Call ILEC to VoIP; Term. on "DSL"*
	VoIP Under Interstate Access	$0.0060	$0.0060	$0.0120	*Call ILEC to VoIP; Term. on "DSL"*
B1	Traditional Toll[1]	$0.0000	$0.0141	$0.0141	*Orig on "Cable"; Term. on ILEC*
	VoIP Under Recip. Comp.	$0.0000	$0.0007	$0.0007	*VoIP call orig on "Cable"; Term. on ILEC*
	VoIP Under Interstate Access	$0.0000	$0.0060	$0.0060	*VoIP call orig on "Cable"; Term. on ILEC*
B2	Traditional Toll[1]	$0.0141	$0.0141	$0.0283	*Orig on ILEC; Term. on ILEC*
	VoIP Under Recip. Comp.	$0.0000	$0.0007	$0.0007	*VoIP call orig. on "DSL"; Term. on ILEC*
	VoIP Under Interstate Access	$0.0060	$0.0060	$0.0120	*VoIP call orig. on "DSL"; Term. on ILEC*

CALL TYPES

A — ***PSTN to IP*** call, locally dialed (includes *de minimis* POTS-to-POTS), interconnection point within same local calling area as originating caller (originating and terminating caller in different local calling areas).

- **A1:** Terminates on non-ILEC IP - *See PowerPoint DIAGRAM 5*
- **A2:** Terminates on ILEC IP - *See PowerPoint DIAGRAM 6*

B — ***IP to PSTN*** call, interconnection point within same local calling area as terminating caller (originating and terminating caller in different local calling areas)

- **B1:** Originates on non-ILEC IP - *See PowerPoint DIAGRAM 5*
- **B2:** Originates on ILEC IP - *See PowerPoint DIAGRAM 6*

Note 1: A value of $0 represents no payments or revenue; it is not meant to suggest that some amount of internal, incremental cost is not experienced by either the originating or terminating carrier. Instead, it is simply meant to represent that no payment is made nor revenue received by/to another carrier.

Note 2: For the most part, these calls are not considered "toll" calls today and access is not paid. This analysis is simply meant to show the disparate revenue/payment experienced by the ILEC (given potentially different treatment (i.e., toll versus other).

Note 3: Assume zero call set up time (OMOU = TMOU on individual call).

Assumptions	2003	2004	2005	2006	2007	2008
Traditional Traffic: Forecasted Blended Large ILEC Average Access Rate	$ 0.0141	$ 0.0141	$ 0.0136	$ 0.0131	$ 0.0126	$ 0.0121
VoIP Traffic Under Reciprocal Compensation Regime	$ 0.0007	$ 0.0007	$ 0.0007	$ 0.0007	$ 0.0007	$ 0.0007
VoIP Traffic Under Access Charge Regime: Interstate Access Rate			$ 0.0060	$ 0.0060	$ 0.0060	$ 0.0060
Traditional Traffic: Assumed Annual Change in ILEC AMOU		-7.37%	-7.37%	-7.37%	-7.37%	-7.37%

Traffic Type	2003	2004	2005	2006	2007	2008
Terminating Volumes associated with lines substituted by Cable VoIP lines Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally"	$ 12,731,156	$ 21,046,149	$ 30,071,357	$ 41,912,840	$ 57,545,342	$ 73,993,660
Terminating Volumes associated with Cable VoIP lines Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally" times Adj. or Terminating Volumes	$ (504,371)	$ (833,784)	$ (1,238,219)	$ (1,792,831)	$ (2,568,818)	$ (3,410,473)
			$ 6,490,843	$ 12,293,701	$ 17,525,695	$ 23,386,102
Terminating Volumes associated with lines substituted by DSL VoIP lines Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally"	$ 15,147,488	$ 28,770,157	$ 47,264,989	$ 67,211,661	$ 90,796,050	$ 114,667,699
Terminating Volumes associated with DSL VoIP lines Probability "Locally Dialed" Call to VoIP is Terminated "Non-locally" times Adj. or Terminating Volumes	$ (300,048)	$ (569,803)	$ (972,896)	$ (1,437,496)	$ (2,016,306)	$ (2,847,206)
			$ 13,342,436	$ 19,714,223	$ 27,652,192	$ 36,304,636
Originating Volumes associated with lines substituted by VoIP Cable Lines	$ 44,737,062	$ 73,955,555	$ 105,669,889	$ 147,280,495	$ 202,212,652	$ 200,011,669
Originating Volumes associated with VoIP Cable Lines times Price Stimulation Factor	$ 2,436,974	$ 4,028,802	$ 5,982,714	$ 8,662,441	$ 12,348,961	$ 16,478,417
			$ 39,159,581	$ 56,899,615	$ 80,829,865	$ 107,858,732
Originating Volumes associated with lines substituted by DSL-based VoIP lines	$ 53,227,820	$ 101,097,492	$ 166,052,651	$ 236,179,533	$ 319,054,667	$ 403,641,389
Originating Volumes associated with DSL based VoIP lines times Price Stimulation Factor	$ 1,449,747	$ 2,753,586	$ 4,700,704	$ 6,845,861	$ 9,742,204	$ 12,790,630
			$ 61,536,484	$ 90,923,708	$ 127,594,306	$ 167,439,095
Total ILEC Access Revenue on VoIP Replacement Minutes (blended access rates; accounts for annual reduction in traditional AMOU)	$ 125,543,578	$ 208,294,518	$ 323,220,606	$ 486,378,236	$ 628,352,107	$ 788,678,707
Total ILEC Intercarrier Comp. Revenue on VoIP Minutes: Reciprocal Compensation Regime	$ 3,062,303	$ 5,378,481	$ 8,473,212	$ 12,377,678	$ 17,519,843	$ 23,211,358
Total ILEC Intercarrier Comp. Revenue on VoIP Minutes: Interstate Access Charge Regime			$ 172,529,148	$ 179,831,348	$ 253,561,658	$ 354,929,038

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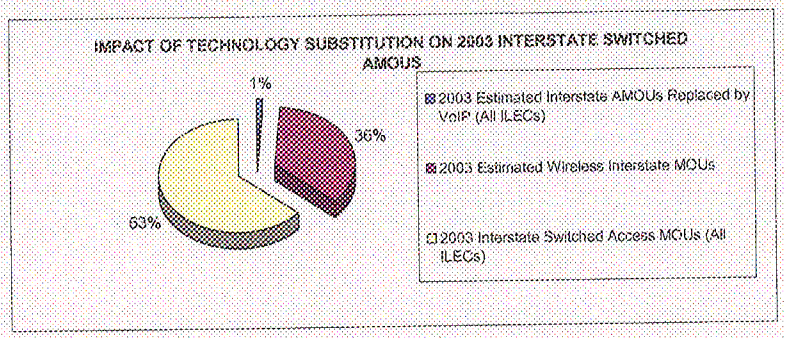
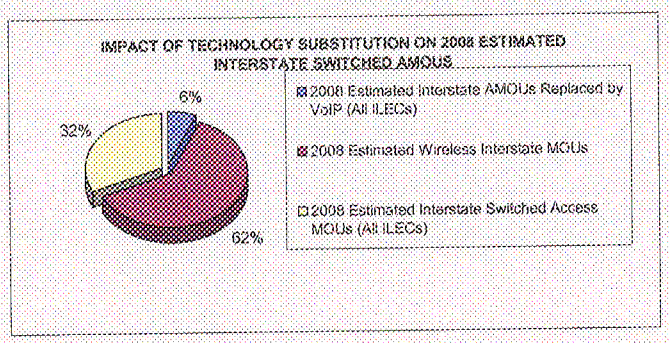




COMPARISON OF ACCESS MOU TO WIRELESS & VoIP MOUs (VoIP Under Reciprocal Compensation)

2003

	Originating	Terminating	TOTAL	% Interstate	2003 Estimated Interstate AMOUs Replaced by VoIP (All ILECs)
VoIP Under Reciprocal Compensation (all ILECs)	5,645,984,948	8,033,596,861	13,679,581,809	57.18%	7,822,282,294

Wireless

2003 Estimated Wireless Interstate MOUs	**250,868,866,667**	A

NECA USAGE DATA FOR INTERSTATE SWITCHED ACCESS MINUTES OF USE

2003 Interstate Switched Access MOUs (All ILECs)	**444,096,592,588**	B

SUM OF WIRELESS INTERSTATE AND ILEC INTERSTATE ACCESS MOUS

Sum of Wireless Interstate and ILEC Interstate Access MOUs	**694,733,258,255**	C = A + B
Estimated % of Total MOUs Attributable to Wireless Interstate Usage	**36.08%**	D = A / C

SUMMARY OF DATA FOR PIE CHART

2003 Estimated Interstate AMOUs Replaced by VoIP (All ILECs)	7,822,282,294
2003 Estimated Wireless Interstate MOUs	250,868,866,667
2003 Interstate Switched Access MOUs (All ILECs)	444,096,592,588

2008

	Originating	Terminating	TOTAL	% Interstate	2008 Estimated Interstate AMOUs Replaced by VoIP (All ILECs)
	42,516,924,723	60,496,980,796	103,013,905,519	57.18%	58,905,676,984

Wireless

2008 Estimated Wireless Interstate MOUs	**585,763,866,667**	See tab wireless Forecast

INTERSTATE ACCESS MINUTES OF USE FORECASTED BY THE MODEL

2008 Estimated Interstate Switched Access MOUs (All ILECs)	**302,819,520,188**	2003: FCC WCB, IATD, NECA Network Usage by Carriers: 1999 - 2003 report; 2008: see separate Tab wireless Forecast

SUMMARY OF DATA FOR PIE CHART

2008 Estimated Interstate AMOUs Replaced by VoIP (All ILECs)	58,905,676,984
2008 Estimated Wireless Interstate MOUs	585,763,866,667
2008 Estimated Interstate Switched Access MOUs (All ILECs)	302,819,520,188

SOURCES

Tab *Calc VoIP Replacement Minutes*, Orig and Term MOU adjusted upwards to include rural ILECs

Historical Wireless and Wireline MOUs

		Wireless				Wireline	Wireline + Wireless
	Year	Total Billable MOU (billions)		% Interstate	Interstate MOU (billions)	Interstate AMOU All ILECs	Interstate AMOU All ILECs
		A	Source:	B[5]	C = A * B	D[6]	E = C + D
Data	2000	256,000,000,000	1	16%	41,424,000,000	566,917,722,227	608,341,722,227
Data	2001	456,000,000,000	2	22%	100,320,000,000	538,311,935,354	638,631,935,354
Data	2002	619,000,000,000	2	26%	160,940,000,000	486,140,272,616	647,080,272,616
Data	2003	800,000,000,000	3	31%	250,666,666,667	444,066,592,588	694,733,259,255
Data / Projection	2004	1,000,000,000,000	4				

Note 1 http://www.nordiowirelesswatch.com/story.php?story_id=1700&s=7

Note 2 http://www.intelecard.com/worthaclick/ionwire.asp?ICNwireID=311

Note 3 CTIA Semi-annual survey Year End 2003

Note 4 CTIA projection of YTD wireless MOUs as of June 30, 2004, annualized (by doubling). http://files.ctia.org/img/survey/2004_midyear/752x571/MOU_slide5.jpg

Note 5 2000 - 2002: FCC WCB, IATD, Trends in Telephone Service, May 2004, Table 11.4, distribution of residential wireless MOUs. 2003 projected using Excel TREND function

Note 6 FCC WCB, IATD, NECA Network Usage by Carriers: 1999 - 2003 report

Forecast of Wireless and Wireline MOUs

Assumed Annual Rate of Change in Wireline AMOU 2004-2008 (tab Total Sw Access Forecast) -7.37%

		Wireless (using Excel TREND function on 2000 - 2003 MOUs)				Wireline	Wireline + Wireless
	Year			Annual Growth	Interstate MOU (billions)	Interstate AMOU All ILECs	Total Interstate
				G = (calculated from F)	F = C (trended)	H (calculated)	I = F + H
forecast	2004			23.8%	310,424,666,667	411,334,612,089	721,759,278,756
forecast	2005			22.2%	379,259,466,667	381,015,293,487	760,274,760,153
forecast	2006			18.1%	448,094,266,667	352,930,800,385	801,025,067,052
forecast	2007			15.4%	516,929,066,667	326,916,404,643	843,845,471,309
forecast	2008			13.3%	585,763,866,667	302,819,520,166	888,583,386,833

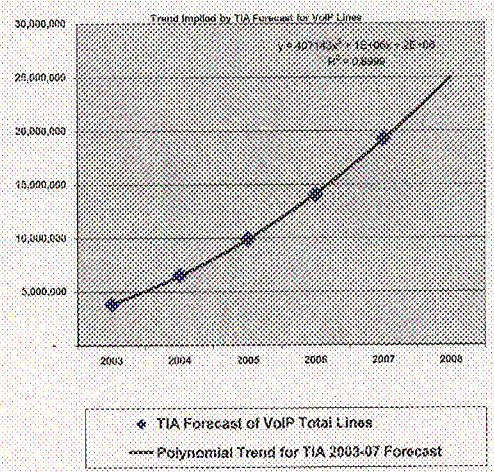
Forecast of Annual Growth in Access Revenues Lost to Wireless

Annual Rates of Change		2004	2005	2006	2007	2008
Assumed Change in Blended Access Rate	From *User Adjustable Inputs*	0.00%	-3.79%	-3.74%	-3.69%	-3.64%
Forecasted Change in Wireless "Toll" MOUs	Interstate AMOU	**23.84%**	**22.17%**	**18.15%**	**15.36%**	**13.32%**
Change in Access Revenue Lost to Wireless - CALCULATED		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

to Results tabs

QSI consulting, inc.

VoIP Line Forecasts (US)				
Source	Year	External Forecast		To the MODEL
		TIA Forecast (Bus+Res, US total)		
Forecast	2003	3,800,000		3,800,000
Forecast	2004	6,500,000		6,500,000
Forecast	2005	9,900,000		9,900,000
Forecast	2006	14,000,000		14,000,000
Forecast	2007	19,200,000		19,200,000
Forecast	2008	NA		[illegible]



Other External Forecasts			
Analysys Report	Atlantic Report	Basis for User-Adjustable Inputs	
% VoIP Lines - Medium and Large Business	% VoIP Revenues – Enterprise Customers	Assumed % VoIP lines that are substituting Special Access	
	79%		
73%	66%	37%	Use hyperlink to see where input is used
86%	41%	30%	Use hyperlink to see where input is used
Analysys Forecast April 24, 2004 Press Release: *VoIP is a turning point for US telecoms, says Analysys* http://www.prweb.com/releases/2004/4/prweb120716.htm	Atlantic-ACM *VoIP Revolution 2004-2009: The Opportunity. The Market. The Players.* Oct-04 Page 111		
Source of data in press release is fee-based March 2004 Report *VoIP in the US Market: services, business models and regulation* http://research.analysys.com			

Data for Regression (Polynomial Curve Lines = A1 * Year + A2 * Year Squared + Intercept

X	X^2	Y
2003	4,012,009	3,800,000
2004	4,016,016	6,500,000
2005	4,020,025	9,900,000
2006	4,024,036	14,000,000
2007	4,028,049	19,200,000

Forecast by Regression

2008	25,930,000
	To VoIP Line Forecast (Main)

Regression Output Genereated by Excel

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.999938648
R Square	0.9998773
Adjusted R Squ	0.9997546
Standard Error	95618.28875
Observations	5

ANOVA

	df	SS	MS	F	Significance F
Regression	2	1.4901E+14	7.45049E+13	8148.96878	0.0001227
Residual	2	18285714286	9142857143		
Total	4	1.49028E+14			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.62909E+12	1.02732E+11	15.85733615	0.003953269	1.18704E+12	2.07108E+12	1.18704E+12	2.07108E+12
X Variable 1	-1628812857	102475806.5	-15.89460897	0.003934878	-2069730861	-1187895053	-2069730861	-1187895053
X Variable 2	407142.8571	25555.0625	15.93108434	0.003916544	297188.2973	517097.417	297188.2973	517097.417

[illegible]

VoIP customers exceed average originating toll patterns (factor)	2
VoIP customers exceed average terminating toll patterns (factor)	1.5

VoIP Impact Analysis: Minutes

1. AMOUs Replaced By VoIP (DSL + Cable): 2003-2008

Source	Base Year	Measure	LEC Set	Reciprocal Compensation Regime		Access Charge Regime	
				Originating	Terminating	Originating	Terminating
Calculated	2003	US (res and Bus)	RBOCs & Non-Rural Other ILECs	5,047,690,411	7,182,316,967	5,047,690,411	7,182,316,967
Calculated	2004	US (res and Bus)	RBOCs & Non-Rural Other ILECs	8,807,996,651	12,532,825,638	8,807,996,651	12,532,825,638
Calculated	2005	US (res and Bus)	RBOCs & Non-Rural Other ILECs	13,874,567,931	19,742,008,089	11,099,654,345	15,793,606,432
Calculated	2006	US (res and Bus)	RBOCs & Non-Rural Other ILECs	20,270,132,521	28,842,204,035	16,216,106,016	23,073,763,228
Calculated	2007	US (res and Bus)	RBOCs & Non-Rural Other ILECs	28,689,624,813	40,822,514,611	22,951,859,860	32,658,011,689
Calculated	2008	US (res and Bus)	RBOCs & Non-Rural Other ILECs	36,011,619,836	54,086,419,710	30,409,295,870	43,269,135,766

2. AMOUs Replaced by DSL-based VoIP: 2003-2008

Source	Base Year	Measure	LEC Set	Reciprocal Compensation Regime		Access Charge Regime	
				Originating	Terminating	Originating	Terminating
Calculated	2003	US (res and Bus)	RBOCs & Non-Rural Other ILECs	1,882,788,523	2,679,004,229	1,882,788,523	2,679,004,229
Calculated	2004	US (res and Bus)	RBOCs & Non-Rural Other ILECs	3,576,046,640	5,088,327,209	3,576,046,640	5,088,327,209
Calculated	2005	US (res and Bus)	RBOCs & Non-Rural Other ILECs	6,104,809,890	8,688,483,537	4,863,847,912	6,949,186,830
Calculated	2006	US (res and Bus)	RBOCs & Non-Rural Other ILECs	9,020,208,972	12,834,780,796	7,216,167,177	10,267,824,637
Calculated	2007	US (res and Bus)	RBOCs & Non-Rural Other ILECs	12,652,212,742	18,002,728,944	10,121,770,194	14,402,183,155
Calculated	2008	US (res and Bus)	RBOCs & Non-Rural Other ILECs	16,611,077,869	23,635,765,413	13,288,862,295	18,908,612,331

3. AMOUs Replaced by Cable-based VoIP: 2003-2008

Source	Base Year	Measure	LEC Set	Reciprocal Compensation Regime		Access Charge Regime	
				Originating	Terminating	Originating	Terminating
Calculated	2003	US (res and Bus)	RBOCs & Non-Rural Other ILECs	3,164,901,887	4,503,312,738	3,164,901,887	4,503,312,738
Calculated	2004	US (res and Bus)	RBOCs & Non-Rural Other ILECs	5,231,950,011	7,444,498,429	5,231,950,011	7,444,498,429
Calculated	2005	US (res and Bus)	RBOCs & Non-Rural Other ILECs	7,769,758,042	11,055,524,502	6,215,806,433	8,844,419,602
Calculated	2006	US (res and Bus)	RBOCs & Non-Rural Other ILECs	11,249,923,549	16,007,423,240	8,999,938,839	12,805,938,592
Calculated	2007	US (res and Bus)	RBOCs & Non-Rural Other ILECs	16,037,612,070	22,819,785,668	12,830,089,656	18,255,828,534
Calculated	2008	US (res and Bus)	RBOCs & Non-Rural Other ILECs	21,400,541,969	30,450,654,297	17,120,433,575	24,360,523,437

LEC ACCESS MINUTES OF USE (MOU) INPUT DATA

1. Non-Rural LEC Interstate and Intrastate AMOUs

Source	Base Year	Measure	LEC set	Value	Note
NECA 2003 AMOU Report (by LEC)	2003	Interstate AMOU	RBOCS & Non-Rural Other ILECs	385,316,656,805	*Lastest period available for which USF loop data are also available.*
NECA Network Usage Reports	2000	Interstate DEMs as % (Interstate + Intrastate DEMs)	RBOCS & Non-Rural Other ILECs	51.12%	*DEMs reporting became voluntary after 2000*
FCC Trends Report	2002	Orig CCL MOU as % Total CCL MOU (interstate)	Price Cap ILECs	34.52%	*Derived from 2004 FCC Trends Report Tab 1.4 (Price Cap interstate CCL MOU for 2002)*

2. Calculation of Interstate/Intrastate Originating and Terminating AMOUs

Source	Base Year	Measure	LEC set	Value	Note
Calculated	2003	Interstate Orig AMOU	RBOCS & Non-Rural Other ILECs	132,996,728,700	*Actual IS volumes split into Orig and Term using older CCL O and T data*
Calculated	2003	Interstate Term AMOU	RBOCS & Non-Rural Other ILECs	252,319,928,105	*Actual IS volumes split into Orig and Term using older DEM data*
Calculated	2003	Intrastate Orig AMOU	RBOCS & Non-Rural Other ILECs	99,587,177,405	*ST volumes forecasted from older DEM data and older CCL O and T volumes*
Calculated	2003	Intrastate Term AMOU	RBOCS & Non-Rural Other ILECs	188,935,695,552	*ST volumes forecasted from older DEM data and older CCL O and T volumes*

3. Calculation of % Non-Rural Loops

Source	Base Year	Measure	LEC set	Value	Note
NECA submissions	2003	USF Switched Loops	RBOCS & Non-Rural Other ILECs	152,563,845	
NECA submissions	2003	USF Switched Loops	all LECs reporting to NECA	170,646,386	
Calculated	2003	non-Rural LECs % of USF Loops		89%	

4. Calculation of Interstate/Intrastate Originating & Terminating AMOUs (per loop)

Source	Base Year	Measure	LEC set	Value	Note
Calculated	2003	Interstate Orig AMOU per Loop	RBOCS & Non-Rural Other ILECs	872	
Calculated	2003	Interstate Term AMOU per Loop	RBOCS & Non-Rural Other ILECs	1,654	
Calculated	2003	Intrastate Orig AMOU per Loop	RBOCS & Non-Rural Other ILECs	653	
Calculated	2003	Intrastate Term AMOU per Loop	RBOCS & Non-Rural Other ILECs	1,238	
Calculated	2003	Orig Interstate and Intrastate AMOU per Loop	RBOCS & Non-Rural Other ILECs	1,525	*Bus and Res*
Calculated	2003	Term Interstate and Intrastate AMOU per Loop	RBOCS & Non-Rural Other ILECs	2,892	*Bus and Res*

SAR-ID	SAR-ABBR	TIER	Note	Interstate AMOU 2003	USF (Category 1.3) Loops 2003	2000 DEMs (in 000)		
						State	Interstate	
				Network Usage Data	*2004 NECA submission*	*NECA DEM data*		
105111	VERIZON MAINE	1	non-rural	1,660,004,850	698,325	2,158,435	2,590,162	
115112	VERIZON MASS.	1	non-rural	10,552,888,126	3,980,560	13,014,070	18,524,258	
125113	VERIZON NEWHAMPSHIRE	1	non-rural	2,542,889,865	726,497	2,301,872	4,719,677	
135200	SOUTHERN NEW ENGLAND	1	non-rural	7,795,878,498	2,204,505	7,991,533	10,329,000	
145115	VERIZON VERMONT	1	non-rural	1,272,406,603	349,788	781,851	1,987,247	
150121	FRONTIER- ROCHESTER	1	non-rural	1,171,398,169	410,706	907,362	1,470,946	
155130	VERIZON NEW YORK	1	non-rural	22,924,889,498	10,858,329	19,707,732	35,829,062	
165120	VERIZON NEW JERSEY	1	non-rural	17,030,894,014	8,095,951	22,977,346	25,715,988	
170169	VERIZON NORTH - PA	1	non-rural	1,305,164,800	548,614	1,159,968	1,616,067	
175000	VERIZON PENNSYLVANIA	1	non-rural	13,463,577,019	5,706,854	16,216,889	19,321,506	
185030	VERIZON MARYLAND INC	1	non-rural	11,231,667,216	3,733,450	6,327,021	14,266,276	
190233	VERIZON S-VA(CONTEL)	1	non-rural	2,226,901,730	807,361	2,128,125	2,517,753	
195040	VERIZON VIRGINIA INC	1	non-rural	10,394,183,260	3,304,881	5,987,364	14,738,942	
205050	VERIZON W VA INC.	1	non-rural	2,786,844,897	821,887	1,312,176	3,038,835	
210326	VERIZON FLORIDA	1	non-rural	7,002,542,327	2,221,297	4,321,227	6,747,797	
215191	SOUTHERN BELL - FL	1	non-rural	18,729,283,864	6,277,815	11,478,052	24,629,631	
225192	SOUTHERN BELL- GA	1	non-rural	11,299,863,443	3,897,169	6,970,413	17,245,741	
230479	VERIZON SOUTH - NC	1	non-rural	797,828,852	203,200	898,400	996,811	
230509	VERIZON S-NC(CONTEL)	1	non-rural	463,373,973	142,974	299,491	482,030	
235193	SOUTHERN BELL - NC	1	non-rural	6,528,972,271	2,362,747	4,376,191	8,992,294	
240479	VERIZON SOUTH - SC	1	non-rural	607,094,785	175,709	411,993	785,108	
245194	SOUTHERN BELL -SC	1	non-rural	4,139,100,034	1,422,703	2,057,079	5,469,989	
265181	SO CENTRAL BELL-AL	1	non-rural	4,839,158,213	1,834,337	3,818,031	6,301,271	
285061	CINCINNATI BELL - KY	1	non-rural	443,793,852	202,048	136,264	618,466	
285182	SO CENTRAL BELL -KY	1	non-rural	3,070,982,907	1,147,905	3,495,648	4,131,670	
289690	KY ALLTEL-LEXINGTON	1	non-rural	1,277,900,737	430,202			did not exist in 2000
275183	SO CENTRAL BELL - LA	1	non-rural	5,459,546,852	2,196,551	4,012,333	7,193,681	
285184	SO CENTRAL BELL -MS	1	non-rural	3,979,547,832	1,278,863	2,189,990	4,607,695	
295185	SO CENTRAL BELL - TN	1	non-rural	6,598,106,569	2,496,477	4,519,205	8,910,598	
300615	VERIZON NORTH - OH	1	non-rural	2,225,533,877	910,996	3,814,138	2,544,559	
305062	CINCINNATI BELL -OH	1	non-rural	1,736,288,870	736,349	893,051	2,189,741	
305150	OHIO BELL TEL. CO	1	non-rural	7,759,467,655	3,903,288	10,959,213	12,059,390	
310695	VERIZON NORTH - MI	1	non-rural	1,706,954,515	712,765	4,225,962	1,772,852	
315090	MICHIGAN BELL TEL CO	1	non-rural	8,613,926,484	4,966,710	21,555,119	14,114,278	
320772	VERIZON N - IN	1	non-rural	2,193,047,833	753,409	2,235,923	2,712,082	
320779	VERIZON N-IN(CONTEL)	1	non-rural	525,328,860	196,875	624,167	581,321	
325080	INDIANA BELL TEL CO	1	non-rural	4,820,054,269	2,219,943	5,123,284	7,463,830	
330886	VERIZON NORTH-WI	1	non-rural	947,874,926	391,941	1,642,291	1,291,072	
335220	WISCONSIN BELL	1	non-rural	4,194,110,161	1,946,471	6,083,014	6,295,052	
341015	VERIZON NORTH - IL	1	non-rural	1,592,774,568	640,195	3,362,581	1,971,752	
341036	VERIZON N-IL(CONTEL)	1	non-rural	332,238,840	130,206	1,052,653	569,763	
345070	ILLINOIS BELL TEL CO	1	non-rural	14,110,668,013	6,470,450	12,149,116	23,701,484	
355141	QWEST CORP - IA	1	non-rural	2,773,323,353	1,028,347	1,920,054	4,256,123	
365142	QWEST CORP - MN	1	non-rural	4,758,921,796	2,004,934	2,619,622	8,003,885	
371563	ALLTEL NEBRASKA, INC	1	non-rural	696,160,463	266,097	526,770	936,652	
375143	QWEST CORP - NE	1	non-rural	1,283,937,305	395,465	689,851	2,373,331	
385144	QWEST CORP - ND	1	non-rural	533,943,606	189,857	435,159	1,090,852	
395145	QWEST CORP - SD	1	non-rural	715,466,174	219,501	560,853	1,791,812	
405211	SOUTHWESTERN BELL-AR	1	non-rural	2,839,333,630	953,638	3,022,040	3,834,971	
415214	SOUTHWESTERN BELL-KS	1	non-rural	3,422,341,485	1,224,632	2,619,962	4,950,347	
425213	SOUTHWESTERN BELL-MO	1	non-rural	6,471,200,253	2,478,864	5,344,264	8,819,604	
429784	CENTURYTEL-MO CEN	1	non-rural	290,577,246	89,301			did not exist in 2000
429787	CENTURYTEL-MO SW	1	non-rural	865,910,738	221,874			did not exist in 2000