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IP-Enabled Voice Services

Impact of Applying Switched Access Charges to IP-PSTN Voice Services

FCC Wireline Competition Bureau
Docket Nos. 04-36, 03-266



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Executive Summary

I. EXECUTIVE SUMMARY**A. Introduction and Purpose**

IP-enabled voice services, also referred to in this report as Voice over Internet Protocol or VoIP,¹ provide enhanced features and functionality, as well as cost savings for both consumers and suppliers.² As a direct result, communications providers - including competitive local exchange carriers (“CLECs”), interexchange carriers (“IXCs”), incumbent local exchange carriers (“ILECs”) and non-carrier information services providers (“ISPs”) - are deploying VoIP services at a rapid pace.³ Likewise, both residential and business consumers are replacing traditional circuit-switched, voice services provided over the Public Switched Telecommunication Network (“PSTN”) with VoIP (this is especially true for IP-PSTN services which are the focus of this analysis).⁴ The purpose of this report and accompanying analysis is to provide information that will assist the Federal Communications Commission (“FCC”) in understanding the economic and regulatory impacts of this technology transition as they relate specifically to ILEC switched access and broadband revenues.

This analysis was performed in an effort to identify and compare the impact on ILEC revenues (specifically switched access and broadband revenues) associated with (1) granting the *Level 3 Communications LLC (“Level 3”) Forbearance Petition*,⁵ or, (2) on the other hand, imposing interstate switched access charges on non-local IP-PSTN IP-

¹ In this report, we refer to the IP-PSTN IP-enabled services as “IP-enabled services” or “VoIP.” We recognize that both “IP-enabled services” and “VoIP” are terms that can encompass a wider range of services than the ones that we model here. Our conclusions are limited to the IP-PSTN IP-enabled services modeled herein, and do not attempt to cover other services that could potentially be included within the labels “IP-enabled services” or “VoIP.”

² For example, Verizon has already cut its VoiceWing VoIP product from \$39.95 to \$29.95 and AT&T and Vonage have recently reduced their residential prices by \$5. Atlantic-ACM Report *VoIP Revolution 2004-2009* at 54. According to Atlantic-ACM (quoting Morgan Stanley’s Telecommunications Survey), the mean decrease in communications spending as a result of adopting VoIP for medium and large businesses in June 2004 was 24.6%. *Id.* at 79. Also, according to Atlantic-ACM (quoting Deutsche Bank), VoIP network costs can be 10%-40% less than TDM circuit-switched service depending on legacy architecture and type and quality of network. *Id.* at 92.

³ Qwest was the first RBOC to offer residential VoIP services in December of 2003 and was the first RBOC to offer access charge-free termination of IP traffic. Since that time, Verizon has deployed a residential VoIP service, and (as of 3Q04) SBC is trialing a residential VoIP product. All RBOCs have VoIP products for business customers.

⁴ Due to the distance *insensitivity* of VoIP services, residential and business customers are replacing both local and toll PSTN services with VoIP. Since Level 3’s Forbearance Petition is requesting forbearance from the application of switched access charges to VoIP, this analysis focuses only on “non-local” VoIP services (or VoIP services to the extent they are replacing traditional toll – not local) services.

⁵ See *Level 3 Communications LLC, Petition for Forbearance Under 47 USC Section 160(c) from Enforcement of 47 USC Section 251(g), Rule 51.701(b)(1), and Rule 69.5(b)*, WC Docket No. 03-266 (filed December 23, 2003) (“*Level 3 Petition*”).

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enabled services. Because this study was prepared to assist the Commission in its evaluation of the *Level 3 Petition*, we have tailored this study to correspond as closely as possible with that petition. For example, the *Level 3 Petition* excludes from the scope of its requested forbearance those geographic areas served by ILECs that are not subject to the market-opening requirements of Section 251(c) of the Act (e.g., see Section 251(f) of the Communications Act of 1934).⁶ Thus, this study approximates the scope of the *Level 3 Petition* by evaluating the economic impact for Regional Bell Operating Companies – “RBOCs” - (including both rural and non-rural study areas) as well as all other non-rural, non-RBOC ILEC study areas.

In summary, the *Level 3 Petition* asks the FCC to confirm, for covered geographic areas, that carriers serving VoIP providers may exchange traffic with LECs under the current *de facto* intercarrier compensation mechanism used for the majority of VoIP traffic exchanged by carriers today – i.e., reciprocal compensation.⁷ Whereas traditional circuit-switched voice traffic that originates in one local calling area and terminates in another (e.g., “toll traffic”) is generally subject to intra- and inter-state access charges collected solely by LECs,⁸ VoIP providers have generally taken the position that they are information service providers.⁹ As such, VoIP providers use tariffed business services to connect with a PSTN carrier (usually a CLEC) who then exchanges with other carriers traffic bound for a customer not served by that LEC.¹⁰ When the LEC serving the VoIP provider exchanges traffic with another LEC or CMRS carrier, that traffic is subject to

⁶ See 47 U.S.C. § 251(f)(1). Throughout this study, the Communications Act of 1934, 47 U.S.C. § 151 *et seq.* will be referred to as the “Communications Act” or “Act.”

⁷ The *Level 3 Petition* refers to this traffic as “voice-embedded IP-PSTN traffic” (*Level 3 Petition* at 2). We use the terms “voice embedded IP traffic,” “IP-enabled services” and “VoIP” synonymously throughout this report.

⁸ We do not, in this summary, attempt to enumerate the exceptions to this generalization.

⁹ With respect to the IP-PSTN IP-enabled service traffic that is subject to this report, all VoIP traffic includes a net protocol conversion. In addition, the VoIP service may include other enhanced features and functions. See *Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, Memorandum Opinion and Order, 19 FCC Rcd 22404, 22424 ¶32 (2004) (“*Vonage Order*”). On the basis of these protocol conversions and/or enhancements, IP-PSTN IP enabled services appear to meet the statutory definition of “information services.”

¹⁰ Many VoIP providers currently operate as non-regulated “information service” providers, which reduces overall regulatory burden and allows the VoIP provider to qualify to originate and terminate traffic without payment of access charges. As such, they are not eligible to enter into interconnection agreements directly with incumbent LECs. Therefore, VoIP providers typically purchase network access from CLECs, which, in turn, exchange traffic with the ILECs pursuant to interconnection agreements. In some instances, the CLEC and the VoIP provider may be the same entity, as CLECs are not required to provide enhanced services or information services through a separate affiliate.

It is also important to note that not all VoIP traffic is exchanged without payment of access charges, a fact that is reflected in our quantitative analysis. Outbound calls placed by VoIP users may be subject to access charges if they terminate “off-net” in a location at which the VoIP provider does not purchase direct network access. Inbound calls placed by PSTN users to VoIP services will typically be subject to access charges if the dialed number is not “local” to the calling party.

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reciprocal compensation payments made between the originating and terminating carrier based upon interconnection agreements. Thus, when a consumer chooses to replace a traditional circuit-switched voice service with VoIP, LECs terminating a “non-local” call from that customer no longer receive switched access revenues, but instead, receive reciprocal compensation payments. Similarly, when a PSTN user calls a VoIP customer using a “locally-dialed” number, the originating LEC does not receive originating access, but instead pays reciprocal compensation, even when the VoIP customer is physically located outside the PSTN user’s local calling area.

The *VoIP Impact Model*, designed by QSI Consulting, Inc. (“QSI”), and described in this report, evaluates those differing compensation arrangements and quantifies the impact of two specific compensation scenarios that generally frame the debate over the *Level 3 Petition*:

- **Scenario 1:** consistent with the *Level 3 Petition*, assume reciprocal compensation applies to VoIP traffic as a transitional mechanism until such time as broad-based intercarrier compensation reform can be instituted,
- **Scenario 2:** assume the FCC changes the status quo related to intercarrier compensation for VoIP traffic and imposes interstate switched access charges on the “non-local” VoIP traffic covered by the *Level 3 Petition*.¹¹

QSI defines the difference in intercarrier revenues recovered by the RBOCs and non-rural other ILECs in relation to *Scenario 1* versus *Scenario 2* as the “impact” of applying interstate access charges. The impact of imposing access charges on VoIP, which alternatively could be viewed as the impact of continuing the *de facto* status quo through forbearance (or any other ruling that access charges do not apply), is of interest for numerous reasons; however, the primary purpose of this analysis is to quantify the impact as it relates to ILEC switched access and broadband revenues.

Carriers opposing the *Level 3 Petition* have raised concerns about universal service based on the theory that ILEC switched access charges set substantially above cost implicitly fund high cost areas. Hence, according to this theory, VoIP services which do not produce switched access revenues have the potential to harm universal service objectives. While we take no position relative to this theory, we note that the purpose of the analysis is to provide a quantifiable impact on ILEC switched access revenues (other than exempt rural companies) so that a debate on the issue can, at a minimum, be discussed factually. By quantifying the difference between *Scenario 1* (application of reciprocal compensation) and *Scenario 2* (application of interstate switched access) described

¹¹ SBC’s recently filed TIPToP tariff also would apply switched access charges to “local” VoIP traffic. See Ameritech Operating Companies FCC Tariff No. 2, Section 25.3, Original Pages 25-21 and 22, effective November 25, 2004. This study does not attempt to quantify the impact of the TIPToP tariff specifically, or, more generally, imposing access charges on “local” VoIP traffic.

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above, the FCC can better understand the implications of forbearance as a transition mechanism to more comprehensive intercarrier compensation reform.

B. Results

Measuring the impact of VoIP services on switched access and broadband revenues for ILECs not under the rural exemption is a multi-faceted undertaking. To be properly understood and interpreted, the results must be viewed in context and as a whole. Toward this end, the QSI analysis tracks numerous data specific to ILEC switched access revenues and the results of applying either reciprocal compensation or switched access charges to VoIP traffic. Nonetheless, we believe the most pertinent results show that applying interstate access charges to “non-local” IP-PSTN IP enabled services will increase the combined switched access and DSL revenues of the RBOCs and non-rural other ILECs as follows:

Table 1

Increase in Switched Access and DSL Revenue (RBOC and Non-Rural other ILECs)

| 2005 | 2006 | 2007 | 2008 |
|---------------|---------------|---------------|---------------|
| \$74,941, 313 | \$111,310,115 | \$159,989,800 | \$213,596,195 |

This overall impact combines two, offsetting effects of shifting VoIP from the current, *de facto* application of the reciprocal compensation regime to an access charge regime at interstate access rates:

- (1) Increasing compensation for ILEC terminated minutes from reciprocal compensation rates, which generally run \$0.0007 per minute, to interstate access rates, which average approximately \$0.006 for the RBOCs, will tend to increase the amount of intercarrier compensation received by the ILEC. Similarly, in some instances, depending on how the interstate access regime was administered, the ILEC would also receive originating access on some ILEC-originated/IP-network terminated calls, rather than paying reciprocal compensation to the terminating IP network. This also increases ILEC intercarrier compensation.¹²

¹² If one starts with the assumption that interstate access revenues *should* apply to non-local, IP-PSTN IP enabled services, even though such charges are not levied today, this same data represents the amount of ILEC switched access revenues that ILECs would not receive in the future if the FCC grants Level 3’s requested forbearance and confirms the legality of the reciprocal compensation framework (as opposed to the switched access framework). We understand that parties have differing opinions related to that particular issue and we take no position in this analysis as to whether, as a normative matter, access charges or reciprocal compensation should apply. Indeed, this analysis relies upon data to demonstrate the potential ramifications of each position.

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- (2) Increasing intercarrier compensation rates from reciprocal compensation to access will increase the prices charged for VoIP services, and thus reduce the attractiveness of VoIP services relative to other offerings. If VoIP applications are less desirable, then some portion of those consumers who would have purchased ILEC broadband services (*i.e.*, DSL) in order to take advantage of VoIP services will no longer do so.¹³ These DSL revenues that are “lost” as a result of the demand suppression resulting from access charges applied to IP-PSTN VoIP services offset the increase in ILEC switched revenues, mitigating the total increase in ILEC revenues.

Table 2 below isolates each of these offsetting impacts relative to the final results discussed in Table 1 above.

Table 2
Detailed Presentation of Results (RBOC and Non-Rural other ILECs)

| | 2005 | 2006 | 2007 | 2008 |
|--|---------------------|----------------------|----------------------|----------------------|
| SCENARIO 1: | | | | |
| Switched Access Revenues and Incremental DSL assuming continued application of reciprocal compensation | \$6,342,277,908 | \$5,765,305,551 | \$5,280,408,136 | \$4,872,334,444 |
| SCENARIO 2: | | | | |
| Switched Access Revenues and Incremental DSL assuming application of interstate switched access revenues | \$6,417,219,221 | \$5,876,615,666 | \$5,440,397,936 | \$5,085,930,639 |
| Impact on Switched Access Revenues | \$114,056,833 | \$167,253,570 | \$236,022,613 | \$311,777,766 |
| Impact on Incremental DSL Revenues | (\$39,115,520) | (\$55,943,455) | (\$76,032,812) | (\$98,181,572) |
| Overall Impact on Switched Access Charges and DSL Revenues Associated with Applying Switched Access Charges to VoIP | \$74,941,313 | \$111,310,115 | \$159,989,800 | \$213,596,195 |

For purposes of identifying the initial switched access increase associated with *Scenario 2* relative to *Scenario 1* (*i.e.*, difference between the application of switched access charges relative to the application of reciprocal compensation rates), see row entitled “*Impact on Switched Access Revenues*” (a total of \$114,056,833 in 2005). For purposes of understanding the revenue impacts of the demand suppression for ILEC DSL services that could be expected to result from the application of switched access charges, see row entitled “*Impact on Incremental DSL Revenues*” (a total of (\$39,115,520) in 2005). The sum of these two values generates the overall impact described in Table 1 above.

The tables above represent the various impacts as a gross dollar value. The table below provides the same information as a percentage of total RBOC and non-rural other ILEC switched access revenues:

¹³ More generically, if it can be assumed that VoIP is a value-added feature applicable to a broadband connection, increased prices for VoIP services would tend to lower demand for broadband connections as a whole (*ceteris paribus*).

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Table 3
Impact in Percentage Terms (RBOC and Non-Rural other ILECs)

| | | 2005 | 2006 | 2007 | 2008 |
|---|--|-----------------|-----------------|-----------------|-----------------|
| DSL + Switched Access Revenue Impact | Increase in Switched Access and DSL Revenue | \$74,941,313 | \$111,310,115 | \$159,989,800 | \$213,596,195 |
| | Total Switched Access and Incremental DSL Revenue (assuming interstate access applies to VoIP) | \$6,417,219,221 | \$5,876,615,666 | \$5,440,397,936 | \$5,085,930,639 |
| | Increase as a Percentage | 1.17% | 1.89% | 2.94% | 4.20% |
| Switched Access Revenue Impact | Increase in Switched Access Revenue (assumes switched access applies to VoIP) | \$114,056,833 | \$167,253,570 | \$236,022,613 | \$311,777,766 |
| | Total Switched Access Revenue (assumes switched access applies to VoIP) | \$6,260,757,141 | \$5,652,841,846 | \$5,136,266,687 | \$4,693,204,353 |
| | Increase as a Percentage | 1.82% | 2.96% | 4.60% | 6.64% |

As Table 3 above indicates, to the extent interstate switched access charges were to apply to IP-PSTN VoIP traffic, the RBOCs and non-rural ILECs could expect to see their intercarrier compensation revenues increase by 1.82% in 2005 with that percentage growing to 6.64% in 2008. However, if we factor in the offsetting impact of DSL demand suppression that is likely to result from the application of switched access charges, net DSL and intercarrier revenues could be expected to grow from just above 1% in 2005 to approximately 4.2% in 2008.

While the focus of our model and underlying analysis is the RBOC and non-rural ILECs' switched access revenues (and the impact on that revenue stream relative to forbearance), the relationship between VoIP and DSL as complementary services couldn't be ignored. Between third quarter 2003 and third quarter 2004 the RBOCs alone added over 3.6 million new DSL lines to their networks (bringing the total for the RBOCs to just shy of 11 million DSL subscribers at the end of third quarter 2004).¹⁴ DSL subscribership is driven by many factors, dominant among them being the consumer's appetite for faster access to Internet applications. Yet, as VoIP services become accepted more readily by consumers and marketed more heavily by suppliers, the demand for VoIP services is certain to extend to consumers who do not yet have a broadband connection. As such, VoIP is likely to drive additional broadband demand including increased demand for ILEC DSL services. For these reasons, the increased revenues resulting from incremental DSL demand caused exclusively, or in part, by VoIP services must be considered when evaluating the overall economic impact of VoIP technology substitution on ILECs.

¹⁴ VoIP Impact Model, RBOC DSL Analysis Tab.

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There are a number of interesting interactions that the model highlights with respect to DSL stimulation from VoIP. First, to the extent ILECs lose *access lines* as a result of VoIP substitution (contrasted with simple traffic loss), they see a relative increase in DSL subscribership. While this increase is not 1:1, the analysis indicates a strong, direct-causal relationship between the growth of VoIP services and DSL subscribership, *i.e.*, as VoIP grows, DSL demand grows accordingly (as would be expected). Second, the analysis shows that the FCC's decision related to the *Level 3 Petition* is likely to affect not only the growth rate of VoIP, but also growth prospects for the enabling broadband products that support it (some of which are ILEC DSL products). For example, if interstate switched access rates become the standard intercarrier compensation mechanism for VoIP traffic, the underlying increase in VoIP costs related to that change will translate not only to diminished VoIP demand but diminished broadband demand, including demand for ILEC DSL services.

It is important to note that the data presented in Table 1, Table 2 and Table 3 above does not consider the additional revenues that ILECs will certainly enjoy by expanding their own VoIP services (nor does it consider the subsequent demand and revenue decrease they will also experience for VoIP services were interstate switched access rates applied to VoIP traffic). The information above measures only the relative impact of intercarrier compensation revenue gains/losses with gains/losses in incremental DSL revenues stimulated by the widespread acceptance of VoIP services.

It was noted above that several other factors must also be considered so as to understand this data in the proper context:

- i.* The model does not consider the impact of expanding interstate access charges to cover "local" VoIP termination.

Some stakeholders have taken the position that interstate access charges should apply to all VoIP traffic, even traffic that, under any other paradigm, would be considered local traffic.¹⁵ For example, SBC has filed a tariff (the "True IP to PSTN" or "TIPToP" tariff) that would apply an interstate access charge to all IP-PSTN traffic terminating to a PSTN end user.¹⁶ Requiring a VoIP provider to terminate "local" communications at interstate access rates rather than reciprocal compensation rates would further increase the VoIP provider's costs and drive up consumer prices for VoIP. This impact would become even more significant as more consumers adopt VoIP as a full replacement for ILEC wireline local service, in addition to toll services which appear to be the primary focus of VoIP users today. With cable company VoIP offerings and subscribership

¹⁵ See e.g., *IP-Enabled Services*, Comments of SBC Communications, Inc., WC Docket No. 04-36 at 27-33 (filed May 28, 2004).

¹⁶ See Southwestern Bell Telephone Tariff FCC No. 73, Transmittal No. 3019 (filed November 24, 2004).

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increasing, the effect of applying interstate access charges on IP-PSTN IP-enabled services could be substantial.

- ii. The results assume that the FCC does not begin significant intercarrier compensation reform prior to 2008, and that states continue only to make modest reductions in intrastate access charges.

The default assumptions in the model assume that interstate access rates do not decline through 2008, and that intrastate access rates decline only five percent per year from 2005 through 2008. Alternatively, however, the analysis could consider the relief requested in the *Level 3 Petition* as an interim transitional measure until the Commission (or the Commission and the states) adopts intercarrier compensation reform. If the FCC (or the FCC and the states) begins to implement significant or comprehensive intercarrier compensation reform prior to 2009, the revenue gain to the ILECs from imposing access charges on IP-PSTN IP-enabled services would be substantially reduced, as would the ILECs' vulnerability to VoIP substitution.

For example, if the FCC (or FCC and states) were to implement a comprehensive intercarrier compensation reform program that, beginning in 2005, reduced interstate access charges over four years to the ISP-bound compensation rate of \$0.007 (assuming linear reductions), the model results would be as follows:

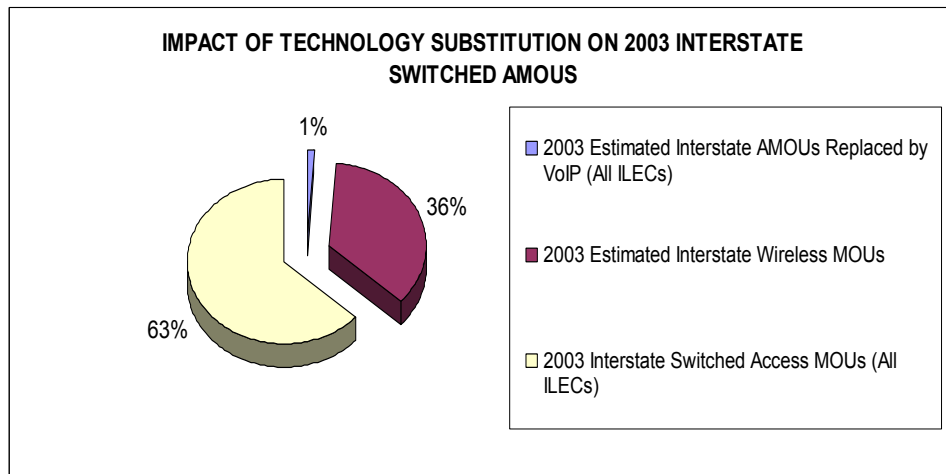
| | 2005 | 2006 | 2007 | 2008 |
|---|---------------|---------------|---------------|---------------|
| Impact of Change in VoIP Intercarrier Compensation Regime on Total ILEC Non-Local Intercarrier Compensation Revenue (Access Applied to VoIP) | \$114,056,833 | \$127,585,004 | \$124,041,715 | \$89,847,531 |
| Impact of Change in VoIP Intercarrier Compensation Regime on Total ILEC Non-Local Intercarrier Compensation Revenue with Incremental DSL Revenue (Access Applied to VoIP) | \$74,941,313 | \$71,641,549 | \$48,008,902 | (\$8,334,041) |

It should be noted that these results, and the ILECs' reduced vulnerability to IP-PSTN VoIP-based substitution, are independent of the issue of whether and to what extent the FCC or states allow ILECs to recoup revenues lost through reduced access charges in other rates or universal service support as a part of an intercarrier compensation reform plan. In any event, prompt initiation of intercarrier compensation reform reduces both the benefit to the ILECs of imposing access charges on VoIP, and the ILECs' vulnerability to VoIP substitution.

- iii. Substitution of wireless for traditional toll services has had, and will continue to have, a far greater impact on ILEC switched access revenues than will VoIP in the next four years.

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Wireless services are used by consumers today to make non-local calls that were formerly carried by LECs and for which those LECs previously recovered switched access charges.¹⁷ As a result of flat-rated wireless long distance packages and other real or perceived benefits of wireless services, consumers are replacing traditional landline voice toll services with wireless non-local voice services at an accelerating pace. This consumer-driven technology substitution from wireline to wireless dwarfs VoIP substitution today, and the analysis indicates that it will continue to dwarf VoIP substitution throughout the study period (through 2008). As a point of reference, the chart below for 2003 provides the relative interstate¹⁸ voice market share for each of the three technologies at issue (*i.e.*, landline toll, wireless and non-local VoIP):



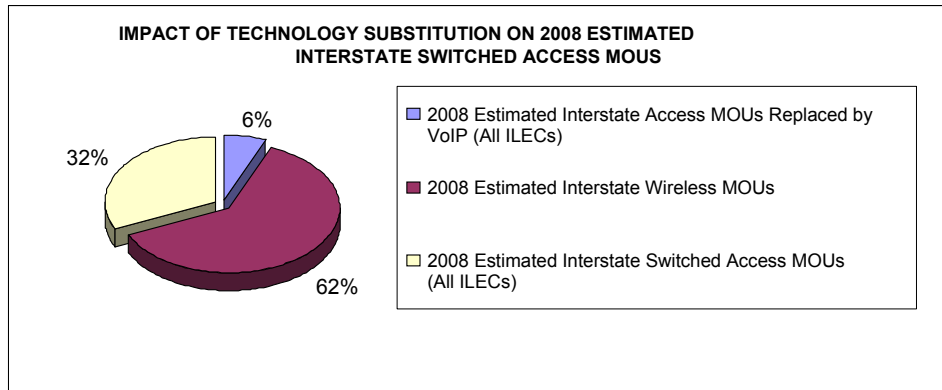
In 2003, wireless substitution accounted for approximately 36% of all interstate voice traffic, compared to a still relatively large share of 63% for traditional landline toll services. Non-local VoIP services, on the other hand, accounted for less than 1%.

However, wireless market share has continued to grow steadily. We project that for 2005, wireless will comprise approximately half of the total interstate minutes of use. Further, while VoIP will make substantial penetration progress by 2008, based on current trends, wireless will have become the principal technology for long distance calling. The following chart shows the projected composition of these interstate minutes in 2008:

¹⁷ As with VoIP, some non-local wireless calls are still subject to access charges on the “distant” (wireline) end of the call, but many are not, and these calls would have been subject to access charges at both ends if they had been made from a wireline phone.

¹⁸ Due to the limited availability of the wireless traffic data, only interstate jurisdiction was chosen.

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By 2008, it is anticipated that wireless will constitute 62% of the market for interstate calls, with traditional landline comprising only 32%. IP-PSTN VoIP minutes, while growing rapidly in year-over-year terms, will still constitute only about 6% of non-local usage. Wireless minutes, on the other hand, are expected to gain significant share, growing by 26 percentage points between 2003 and 2008, compared to VoIP's five percentage point increase over the same period.

- iv. The model ignores peer-to-peer VoIP products such as Skype or Free World Dial-Up when those calls do not reach the PSTN.

One recent study has projected that Skype's worldwide subscriber base will be between 142.54 million and 245.66 million users by 2008.¹⁹ While these forecasts seem relatively aggressive given our research related to technology adoption in this area, it is clear that as Skype and other peer-to-peer services gain more users, and as there are more IP-based end users in general, a greater amount of "non-local" calling (and "local" calling as well) will be made entirely outside the PSTN. Like wireless-to-wireless calling, this will reduce the total amount of minutes traversing the traditional wireline PSTN, whether using traditional toll services or IP-PSTN IP-enabled services.

The model does not attempt to capture this migration from services that use or interact with the PSTN to services that avoid the PSTN altogether. To the extent this migration is significant, overall volumes would be suppressed, and, at a minimum, the ILECs would receive less benefit from applying interstate access charges to IP-PSTN VoIP.

- v. The model results ignore entirely the ILECs' own VoIP service revenues, which continue to grow.

¹⁹ Evaluserve, *Impact of Skype on Telecom Service Providers* at 5 (January 6, 2005).

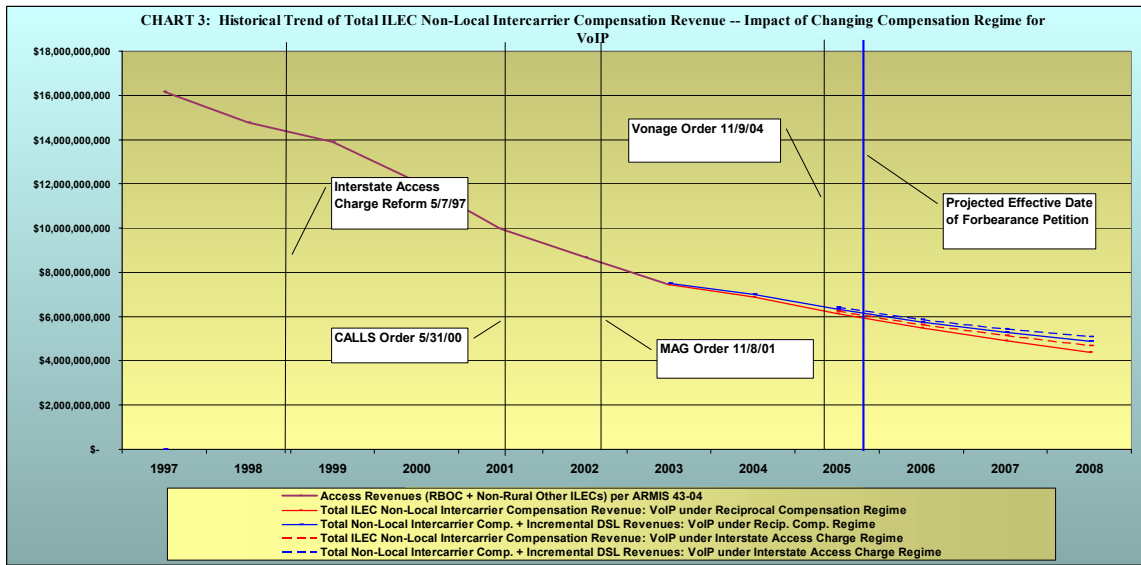
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Although the model attempts to estimate the impact on ILEC revenues of the reduced stimulation of broadband, including DSL, when interstate access charges are applied to VoIP, the model does not consider the additional revenues that ILECs will certainly enjoy by expanding their own VoIP services (nor the subsequent VoIP demand and revenue decrease ILECs would experience if access charges are applied). The RBOCs' own marketing information shows that they are transitioning to VoIP for both business and residential offerings. As mentioned above, all RBOCs (Verizon, SBC, Qwest and Bellsouth) provide VoIP services to business customers, and at least Qwest (OneFlex) and Verizon (VoiceWing) currently offer residential VoIP services, with SBC trialing residential VoIP. All indications are that RBOC deployment of VoIP services will only increase through 2008.

Finally, it bears noting that the FCC and the industry have been working diligently over the past 10 years (or more) to remove implicit subsidies included in ILEC switched access rates, and otherwise to reform those rates. They have accomplished this task, *inter alia*, by moving revenue previously recovered via traffic sensitive rate elements to non-traffic sensitive rate elements. Confirming application of reciprocal compensation rates for VoIP traffic during the transition to more comprehensive reform simply extends this trend (albeit at a much less aggressive pace than past switched access reform initiatives, e.g., *CALLS Order*, *MAG Order*, etc.).

A simple review of RBOC and non-rural other ILEC switched access revenues over time indicates that substantial reductions in traffic-sensitive revenues have resulted from numerous reform efforts. The impact of approving the *Level 3 Petition* extends this type of reform during the transition to more comprehensive reform that is underway. However, the impact of approving the *Level 3 Petition*, and rejecting ILEC attempts to apply interstate or intrastate access to IP-PSTN IP-enabled services, pales noticeably in comparison to past reform efforts in its anticipated impact on RBOC and non-rural other ILEC switched access revenues:

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The chart above, taken directly from the QSI analysis, shows the reduction in RBOC and non-rural other ILEC switched access revenues from 1997 through projected 2008 (assuming the FCC approves the *Level 3 Petition*). As the chart depicts, even for those who might interpret the approval of the *Level 3 Petition* as a loss in switched access revenues (an assumption we do not make), it is clear that, as a transition mechanism, forbearance both (a) is consistent with and (b) has less of an impact than past reform efforts.