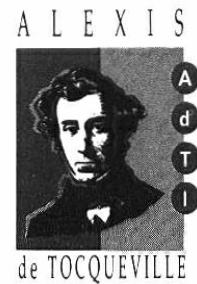


# VoIP Economics in 2004

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The Internet will continue to become the burgeoning choice for voice traffic and communications in 2004. Voice over Internet Protocol, also described as Internet telephony, or making phone calls over the Internet, is a watershed technology. In 2003, VoIP technologies performed extraordinarily well on Wall Street, attracting billions of dollars in new investment. This can only be expected to accelerate as VoIP becomes the choice platform for communications in the \$500 billion/yearly voice industry.

As a technology, VoIP is a convergent technology, which gives it the teeth to irreversibly change a number of economic realities. VoIP will create new companies, new services and new products. Much in the same way that the PC impacted typewriters, handheld devices with VoIP applications will eliminate “voice only” phones with limited utility. In 2004, it is safe to predict that not only will VoIP continue to significantly impact the telecommunications and IT sector, but the U.S. economy as a whole.

## VoIP and Traditional Telephone Market Contraction

Ben Charney of CNET recently reported “More than 1 million U.S. residents make free VoIP calls over their broadband connection; another 1 million subscribe to commercial VoIP plans, which allow dialers to reach traditional home and business phone lines.”<sup>1</sup> Including lost revenue from services such as conference calling, call forwarding and voice mail, it is safe to estimate that VoIP usage in 2003 cannibalized over \$1 billion in sales from both traditional local and long distance service providers in 2003.

In 2004, we can expect to see VoIP grow these numbers in two directions:

- 1) VoIP Commercial Enterprise Systems: Growth in hardware sales to business used to replace traditional PBX technology and/or phone systems. New technology that enables voice and data to travel interoffice for locally, nationally and worldwide provides businesses with exceptional efficiencies, in some cases returning millions of dollars in savings in the first year to new customers.
- 2) VoIP Carrier Services: Growth in both the number of service providers and consumers. VoIP carriers will enable any commercial and residential broadband users to send voice to either traditional telephone owners or VoIP subscribers. Cost savings to consumers of up to 30% over traditional phone service will cause these markets to continue to grow as well.

## VoIP Carrier Competition

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<sup>1</sup> Cablevision Adds VoIP to the Broadband Menu, Ben Charney, CNET, November 11, 2003 ([http://rss.com.com/2100-7352\\_3-5106133.html](http://rss.com.com/2100-7352_3-5106133.html)),

Local calling competition has had a slow, lugubrious history largely due to the cost-prohibitive nature of building local calling networks. However, because VoIP is an Internet backbone service, new carriers with very little capital will be able to compete with traditional phone service providers for local and business markets. In 2004, new VoIP providers like Vonage and Comcast will increase the number of VoIP customers by several million for a number of reasons:

1. While larger providers such as Verizon will be slow (and hesitant) to offer discounted VoIP services to their customers, expect smaller CLECS (competing local exchange carriers), to rapidly introduce the service. Battling a host of legal, financial and regulatory hurdles, CLEC models have shown limited success. However, attractive profits in VoIP will move CLEC providers to Internet telephony models.
2. There are over 70 million American cable subscribers in America. Soon, VoIP technology will enable cable companies to sell voice services to potentially every cable subscriber in the U.S.
3. We can expect to see significant growth in cable voice services customers. Their biggest competition, the incumbent phone companies, significantly lag behind cable companies in broadband deployment as almost 70% of the broadband subscribers in the U.S. are cable subscribers.
4. Broadband growth will be the lynchpin for VoIP growth. In sum, if cable providers are more successful in broadband sales than traditional phone service providers without VoIP, with VoIP, it is safe to predict cable companies will have an even easier time growing their base of VoIP customers, as well as cannibalizing residential voice customers from traditional phone service companies.

#### VoIP – Investment and Divestment

The continual decline in the demand for services from traditional phone carriers is causing investors to divest from the largest local phone companies and invest in VoIP related companies. The momentum of 2003 will only continue even more investment in VoIP equipment and network suppliers in 2004. Examples include:

1. Major Traditional Voice Carriers
 

a. Verizon	52 Week / Change 2003	-27.87%
b. SBC	52 Week / Change 2003	-23.84%
c. Bell South	52 Week / Change 2003	-15.15%
2. Carriers
 

a. Net2Phone	52 Week / Change 2003	25.90%
b. DeltaThree	52 Week / Change 2003	322.35%
c. IBasis, Inc	52 Week / Change 2003	241.21%
3. VoIP Equipment Providers
 

a. Sonus	52 Week / Change 2003	508.11%
b. Cisco	52 Week / Change 2003	47.09%
c. Lucent	52 Week / Change 2003	81.36%

## Summary

Along with the factors previously discussed, VoIP presents a number of additional considerations:

- 1) New VoIP product offerings will continue to improve market valuations of companies like Lucent and Nortel. Once burdened by the slow sale of circuit-switch technology, these companies are able to manufacture and sell routers, media gateways, and other types of hardware for VoIP networks. Traditional carrier equipment manufacturers that were predicted to be out of business in a few years now appear to have stable futures.
- 2) VoIP demand will drive broadband demand. Broadband demand will continue to accelerate growth in overall IT industry. It is likely that by 2008, VoIP applications will become the overall leader within the Internet IT purchases category.
- 3) Expect additional layoffs in traditional phone carrier companies. However, expect significant job growth in the VoIP/IT sector. Billions of dollars in investment will easily grow employment in the VoIP related products and services industry. These jobs will be in both the professional and non-professional categories. For example, VoIP systems will increase the use of Customer Relationship Management (CRM) companies, which will in turn increase the need for operators and data entry personnel. To the same extent, professional workers will be needed to develop both software and network interfaces for VoIP enterprise, equipment and carrier systems.
- 4) VoIP's impact on the \$500 billion market for voice services will have an overall positive impact on U.S. GDP. In some deployments, VoIP has reduced business voice services costs up to 85%. Companies small and large will have increased efficiencies. In many cases, reduced costs for business operations will either increase their ability to invest or reduce business debt.
- 5) It is also certain that VoIP will deliver long-awaited competition in the local services market, a goal of the 1996 Telecommunications Act. Competition will only deliver more choices for Americans increasingly reliant on advanced but economical devices and networks to stay in touch.