

## Inside This Issue

1. **EU addresses VoIP penetration in Europe**
2. **Ericsson scores two IMS wins**
3. **Trends in enterprise VoIP**
4. **MCI being wooed by Verizon and Qwest**

For more information contact:

**Rod Hackman**  
Partner  
rhackman@mercatorcapital.com

[www.mercatorcapital.com](http://www.mercatorcapital.com)

### Virginia Office:

One Fountain Square  
11911 Freedom Drive  
Suite 1080  
Reston, Virginia 20190



## EU addresses VoIP penetration in Europe

Representing a major boost for the VoIP industry in Europe, national telecom regulators of 25 European Union member countries have adopted a policy aimed at facilitating the rollout and widespread use of VoIP in Europe.

The European telecom regulators, who work under the umbrella of the European Regulators Group (ERG), formulated a plan of action for creating a level playing field to allow VoIP services to compete against traditional telephony networks.

The move should mean the elimination of several barriers that have limited VoIP penetration in Europe compared to adoption seen in the rest of the world. There are an estimated 4.9 million VoIP customers in Japan and one million customers in the United States, compared to only 110,000 in Germany, 220,000 in France and 50,000 in the United Kingdom.

According to ERG, the technology has failed to take off in Europe because only 6.5% of EU households have access to broadband Internet services. At the same time incumbent operators retain around 85% of the fixed-line market, including in the UK, where competition was introduced 20 years ago. According to ERG, VoIP and broadband access could drive demand for each other. The regulator aims to substantially increase broadband penetration from 6.5% today to a target of 50% by 2010. ERG believes this level of penetration is achievable if

interesting new services such as VoIP are made available to consumers at attractive prices.

ERG also acknowledges that VoIP services have several "compelling advantages, such as lower infrastructure deployment costs, as well as more efficient network utilization."

At the end of two day deliberations ERG came out with EU-wide "light touch" approach to VoIP "as the best way to encourage competition between Internet carriers of telephone traffic and traditional telephone networks, and to promote the penetration of VoIP in Europe".

The approach focuses on the regulatory principles of objectivity, technological neutrality, transparency, non-discrimination and proportionality that would help consumers and service providers to make informed choices.

The biggest regulatory challenge for VoIP is to ensure that throughout the EU, this service is not stifled in the early stages by heavy-handed regulation. To achieve this, the commission calls for a common pro-competitive approach to VoIP, shared by all regulatory authorities in the 25 member states.

The EU group of regulators has its hands full with important regulatory issues involving VoIP. Currently there are different policies in EU member states regarding VoIP numbering, number portability, emergency services and whether

## EU VoIP – continued

or not non-geographic numbers should be permitted.

In some countries, like Germany, VoIP service providers are given numbers starting with the “032” prefix, regardless of where the service is based. Such numbering schemes are currently available in 18 countries in EU. But according to certain service providers, this may hold back VoIP potential since customers prefer a local number rather than a uniquely prefixed VoIP number. ERG is likely to support a technologically neutral numbering plan; the same number ranges could be available for both traditional voice and VoIP services so as not to discriminate between the two.

The ERG statement on the issue of emergency services in the VoIP environment categorically states that VoIP emergency calls from fixed or otherwise known locations should be routed to the nearest emergency center on the basis of the contractually agreed upon physical address. Additionally, the caller’s location information should also be provided if technically feasible. In the case of nomadic VoIP services, the end user must be informed by the VoIP provider about any limitations of routing emergency calls. Though it is currently difficult for VoIP providers to offer the same emergency functionalities as the traditional PSTN, the commission has encouraged market players to work together on possible solutions rather than imposing strict obligations.

The EU regulatory framework has made it clear that that the EU approach is “technology neutral” and does not seek to choose winners or losers or to favor any particular technology. The policy could urge the traditional incumbents to make use of VoIP technology “as such upgrades are in their own commercial interest.”

“The world is moving towards IP technology, and the Internet Protocol provides a common data carrier for any information stored in digital form, including voice,” the ERG statement read.

Many service providers have reacted positively to the ERG regulatory framework. While appreciating the “hands-off” approach to regulation, service providers including **Vonage**, **Skype**, **AT&T**, and **KPN** pointed out that the development of IP-enabled voice services is at an extremely critical stage.

Comments submitted by **Vonage** said, “The NRAs (national regulatory authorities) must identify the goals they hope to achieve in regulating VoIP services and then adopt narrowly tailored regulations to realize those objectives in most unobtrusive manner as possible.”

While agreeing to put in place emergency services, the service providers urged the commission to allow them additional time so they can work with vendors to implement a mature technology for consumers to access emergency services. “If the commission establishes clear goals and a reasonable timeframe for development and implementation, manufacturers can work towards those goals and, given enough flexibility, can design the equipment necessary to make the transition to IP-enabled services,” said a statement from **Avaya**, adding that the commission should also work with industry to develop EU-wide standards and protocols.

**AT&T** urged ERG to take holistic view of VoIP and not to treat it as a mere replacement of legacy networks, “**AT&T** believes that, while the EC is correct in not attempting any formal, rigid classification of different publicly available VoIP service offerings in the consultation document, it is important to acknowledge that, particularly when delivered by means of CPE that facilitate enhanced functionalities, VoIP not only offers voice communications, but can also converge voice communications seamlessly with additional data or video applications and devices.”

## Ericsson scores two IMS wins

**Ericsson** has announced major IMS (IP Multimedia Subsystem) deployments with **Telecom Italia Mobile** and **TeliaSonera**. **Telecom Italia Mobile (TIM)** will implement a core-to-handset IMS architecture, while the Nordic carrier **TeliaSonera** will conduct a converged wireless/wireline IMS trial.

The new converged services platform is designed to deliver advanced multimedia applications to any end user regardless of which network they are using. The IMS architecture is intended to act as a bridge between networks, converging wireless and wireline over a common core.

According to **Ericsson**, the **TIM** deal is all about combining services (voice added with other applications like video, gaming etc). While not bridging wireline and wireless networks, **TIM's** proposed architecture would bridge voice and data services over the phone, allowing customers to share video, images, and launch data collaboration services with other mobile users while having ongoing phone conversations.

Under the terms of the contract, **Ericsson** will supply the IMS core elements for **TIM's** network and the handset client software necessary to launch the new collaborative applications. Ericsson did not name specific vendors for the necessary handsets, but said that the new IMS-based services would be available on numerous terminals from several providers. **TIM** plans to launch a video based service in the second quarter of this year.

The **TeliaSonera** trial will involve the carrier's operations throughout the entire Nordic region, in order to test **Ericsson's** solution in a multi-vendor environment. However, **Ericsson** will not be the only vendor working on the core upgrade trial. The carrier has selected two other vendors (yet to be named) to implement their solutions.

**TeliaSonera** will test VoIP and Push-to-Talk over Cellular (PoC) service, which will utilize the Universal Mobile Telecommunications System (UMTS) packet instead of the traditional voice channel, as well as the some of the combinational services. The end goal of the trial would be to fully converge the carrier's mobile and fixed networks over a common platform.

**Ericsson** has signed 27 IMS contracts for commercial launch or trial. The contracts are distributed over the Americas, Europe, Asia and Africa and include GSM/GPRS, WCDMA, CDMA2000 and wireline implementations. According to **Ericsson**, IMS deployments will continue to be attractive in all major markets.

According to a spokesperson from **Ericsson**, the pioneers of IMS will be mobile operators with IP core networks. IMS will help operators to reduce operational costs and prepare for fixed-mobile convergence (FMC). Most importantly it will help them deploy revenue-generating applications such as push-to-talk.

Apart from **Ericsson**, other vendors that have sped up the IMS based implementations include **Alcatel**, **Siemens**, and **Lucent**. **Siemens** has contracts with **France Telecom** and **KPN**. **France Telecom** is also working on wireless/wireline convergence using IMS architecture from **Siemens**, and has tested the concept at **Orange UK** and **Wanadoo UK**. The carrier is planning to test out IMS-based services with about 200 trial customers.

**Lucent** has a major IMS contract with **Sprint**. **Alcatel** recently announced that **T-Mobile USA** will deploy its Spatial softswitches as they continue to upgrade their core network. **Alcatel** acquired **Spatial Wireless** last year to propel its wireless portfolio and IMS capabilities.

## Trends in enterprise VoIP

Recent quarterly updates on enterprise VoIP published by analyst firms reveal that the market continues to be dominated by **Cisco, Avaya, Nortel** and **Alcatel**. No startup is making its presence felt in a major way in the enterprise sector.

The deployments by larger vendors are mainly proprietary versions of industry standards. While these proprietary standards will not disappear for at least the next couple of years, the market is seeing joint deployments of one vendor's IP PBX along with IP phones from another vendor. Vendors are actively moving towards the SIP standard. According to certain tier two vendors, smaller enterprises are opting for SIP-based IP phones. Larger enterprise customers are also demanding open standards and no longer wish to commit to proprietary phones.

IP phones continue to be expensive for the end user. List prices of the current IP phone solution ranges from \$350 to \$700 per IP phone handset, which in turn is making it difficult for businesses to justify the purchase for these potentially feature-rich phones. It remains a challenge to create next generation of IP phone offerings at lower cost with standard executive features.

In addition, businesses cannot afford to pay for functionality they do not need. Analyst firms reveal that one of the major concerns of vendors is to bring the cost of desktop IP phones to \$150-\$250. Vendors will continue to offer the high-end executive phones with a price point of \$350-\$700 that contain new features such as Web browsing, PIM, and PDA synchronization.

IP phones with large displays and more mobility options are becoming available. On the development side, there is a natural evolution from 10/100 Mbps to 1 Gbps interfaces on the phone. Several vendors also regard support for ENUM as important in their developmental roadmap.

The proportion of IP lines shipped by legacy PBX vendors (**Nortel, Siemens, Avaya, Alcatel**) is steadily

increasing. Although overall shipments are still dominated by TDM lines, analysts are beginning to see IP lines accounting for between 10 and 20 percent of overall shipments from legacy equipment vendors. Coupled with **Cisco's** marketing push in the enterprise space, this has caused almost every major enterprise IT or telecom manager to consider evaluating or deploying IP technology.

There has also been significantly more activity in integrating IP PBX systems with mobile / Wi-Fi phones. Mobility has become a major competitive advantage and certain start-up vendors have surfaced that specialize in the mobility aspect of IP PBXs. Video to the desktop via the IP PBX is another area of future development.

The hosted PBX / IP Centrex vendors have not been able to offer serious competition to feature rich IP PBX vendors. Some IP Centrex hardware vendors have shifted their focus toward residential Voice-over-Broadband instead. As a result, IP PBX continues its onward march inside enterprises.

Several manufacturers currently developing wired IP phones have started to develop wireless LAN phones. Analysts believe there will be more introductions of these phones in 2005. In North America, there has been some service provider pull-through for this market, driving customer interest as well. Chipset vendors such as **Agere** are focusing on the delivery of solutions for converged cellular and WLAN / Wi-Fi handsets. **Broadcom** is looking at dual-mode network architectures and the various standards that are evolving in the industry. Voice enabled 802.11 chipsets, which make Voice-over-Wi-Fi possible, are slowly developing into an industry sub-sector, though the market is still in its infancy. Vendors like **Broadcom, Agere** and **Texas Instruments** who have dominated 802.11 chipset business over the last several years entered the voice enabled 802.11 chipset business in 2004. These vendors are well positioned to dominate voice enabled chipset business as well.

## Enterprise Trends – continued

**Spectralink**, **Symbol** and **Cisco** currently dominate the VoIP-over-WLAN/Wi-Fi market although dual mode handset technology is starting to evolve. **NTT DoCoMo** has emerged in this category. **Motorola** has moved into the final commercialization stages of their dual mode solution, and general availability is expected in

the near future. Both **Motorola** and **Avaya** (whose initial solution has been jointly developed by **Motorola**, **Avaya** and **Proxim**) have deployed trial solutions at several corporate locations. These trials are designed to properly soak the technology and provide **Motorola** with practical feedback as they finalize their solution.

## MCI being wooed by Verizon and Qwest

Close of the heels of **SBC** acquisition of **AT&T**, **Verizon** and **Qwest** are trying to woo the second largest US long-distance service provider and a pioneer in IP networking, **MCI**. Either of the two bids would create the second largest US service provider.

The two companies have been trying to sweeten their offers in tandem for the past month. According to **Verizon** chairman and CEO Ivan Seidenberg, his company and **MCI** have been talking about a deal since last summer. The talks accelerated once **Qwest** made a bid for **MCI**.

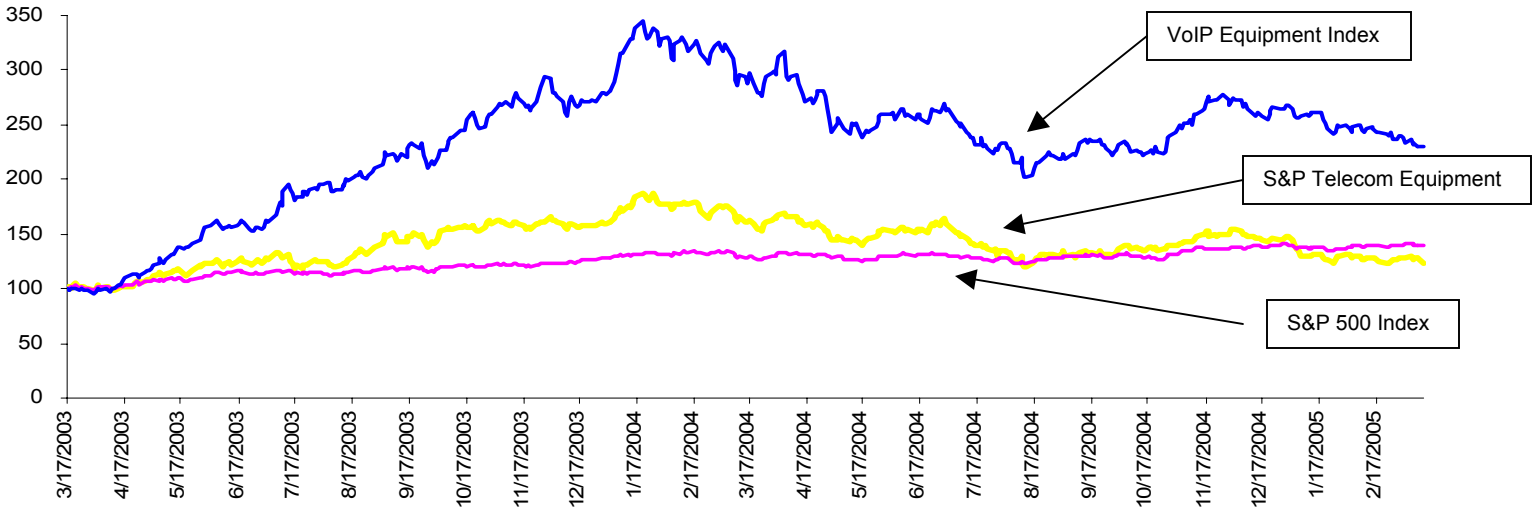
**Verizon** has expressed commitment to invest in **MCI's** IP network in a big way, which could be a deciding factor for **MCI** to opt for **Verizon** instead of **Qwest**. **Verizon** plans to invest approximately \$3 billion in **MCI's** IP backbone, network and systems after the transaction is complete. **Verizon** does not currently have its own Internet backbone network which is driving their investment **MCI's** IP backbone.

**MCI** has about 4,500 points of presence on a global IP network that reaches into 2,800 cities in more than 140 countries. **MCI** has around one million business customers compared to **AT&T's** 3 million. **MCI** has also recently started hosted VoIP services covering both business and residential segments.

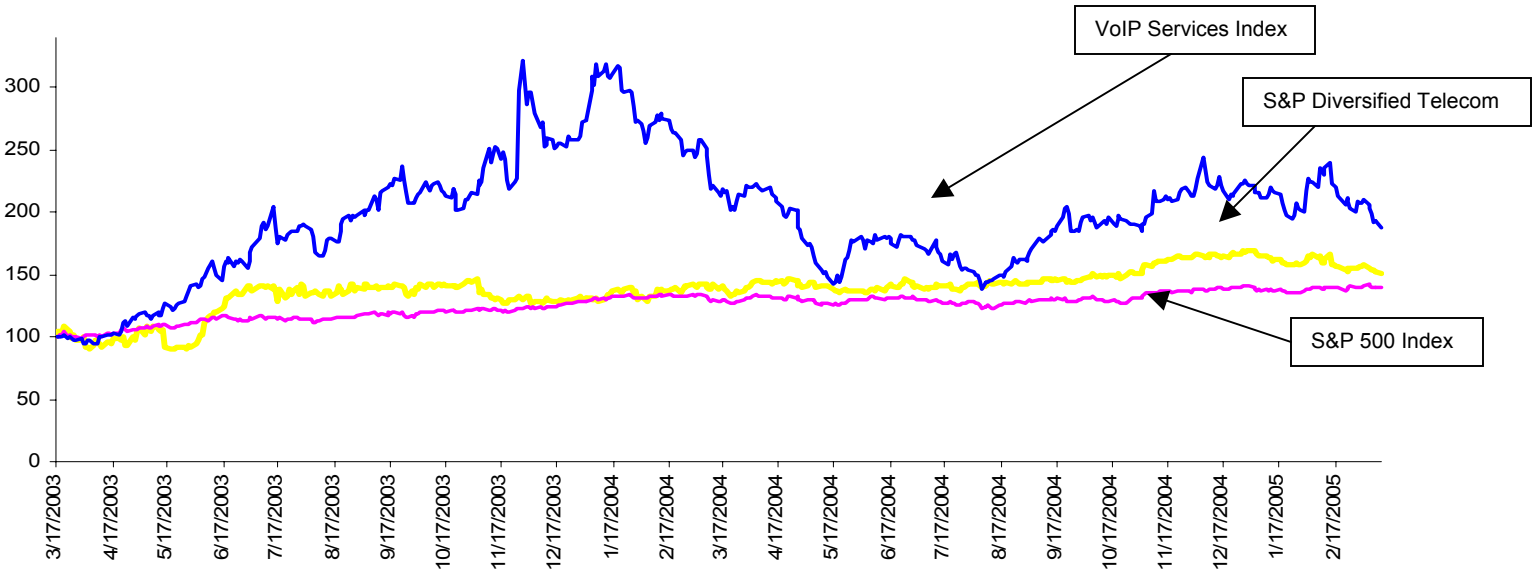
## Financial developments February 2005

Company	Product/Services	Development	Details
AudioCodes	VoIP hardware	Quarterly Results	Revenue \$25.2 million. Net income \$2.6 million.
Deltathree	VoIP hardware	Quarterly Results	Revenue \$6.2 million. Net loss \$0.6 million
iBasis	VoIP services	Quarterly Results	Revenue \$75.1 million. Net loss \$1.2 million
U4EA Technologies	VoIP hardware	Funding	Raised \$5.2 million. Investors include IIU, ISIS and Singer & Friedlander
VocalTec	VoIP hardware	Quarterly Results	Revenue \$1.1 million.
Brooktrout	VoIP hardware	Quarterly Results	Revenue \$ 22.018 million. Net income \$0.863 million.
RADVISION	VoIP hardware	Quarterly Results	Revenues \$17.6 million. Net income \$2.8 million.
Net2Phone	VoIP services	Quarterly Results	Revenue \$20 million. Net Loss 8.6 million
Mind CTI	VoIP solutions	Quarterly Results	Revenue \$ 4.88 million. Net income \$2.14 million.
Sandburst	VoIP solutions	Funding	Raised \$ 15 million. Investors include NeoCarta Ventures, SpaceVest, 3i US

**VoIP Equipment Index**



**VoIP Services Index**



	Average Returns				
	<u>VOIP Services Index</u>	<u>VOIP Equipment Index</u>	<u>S&amp;P 500</u>	<u>S&amp;P 600 Diversified</u>	<u>S&amp;P Telecom Equipment</u>
Annualized LTM	(7.64%)	(18.80%)	8.34%	8.14%	(23.20%)
30-Day Return	(5.44%)	(6.72%)	3.09%	(3.33%)	(3.93%)

Mercator Capital is a privately held investment bank committed to helping our clients achieve superior results. Our success stems from our focus on providing clients with quality advice and developing creative solutions. With decades of Wall Street leadership and extensive industry knowledge, we pride ourselves on a culture of excellence that promotes intellectual insight and rigorous analysis. We focus on building long-term relationships with our clients rather than pursuing individual transactions. For our clients, our approach means a much greater understanding of their business and markets, a more thoughtful and committed effort and an unmatched degree of senior-level service.

Our clients rely on our deep understanding of technological vision and financial expertise to assure the successful execution of their strategic initiatives.

#### Virginia Office:

One Fountain Square  
1911 Freedom Drive Suite 1080  
Reston, Virginia 20190

Rod Hackman  
David Ballarini  
Lior Samuelson

rhackman@mercatorcapital.com  
dballarini@mercatorcapital.com  
lsamuelson@mercatorcapital.com

#### Israel Office:

Zvi Tower Building, 10<sup>th</sup> Floor  
24 Raoul Wallenberg Street  
Tel Aviv 69719, Israel

(703) 995-5524  
(703) 995-5521  
(703) 995-5525

#### Mercator Capital, Inc. Disclaimer:

The information and opinions in this report were prepared by Mercator Capital, LLC. ("Mercator Capital"). The information herein is believed by Mercator Capital to be reliable and has been obtained from and based upon public sources believed to be reliable, but Mercator Capital makes no representation as to the accuracy or completeness of such information. Mercator Capital may provide, may have provided or may seek to provide M&A and other advisory services to one or more companies mentioned herein. In addition, employees of Mercator Capital may have purchased or may purchase securities in one or more companies mentioned in this report. Opinions, estimates and analyses in this report constitute the current judgment of the author as of the date of this report. They do not necessarily reflect the opinions of Mercator Capital and are subject to change without notice. Mercator Capital has no obligation to update, modify or amend this report or to otherwise notify a reader thereof in the event that any matter stated herein, or any opinion, estimate, forecast or analysis set forth herein, changes or subsequently becomes inaccurate. This report is provided for informational purposes only. It is not to be construed as an offer to buy or sell or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy in any jurisdiction.