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Service Provider
Survival Guide
Debuts!
(page 48)

The VoIP Authority Since 1998™



Triple Play Fever Catch It!

10 Things Service Providers Must Know

Also In This Issue:

- VoIPeering: New Monthly Column!
- Pannaway's Mike Skubisz On The Future of VoIP
- IP PBX ROI

INTERNET TELEPHONY®

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Internet telephony is revolutionizing telecommunications through the convergence of voice, video, fax, and data, creating unprecedented opportunities for resellers, developers, and service providers alike. **INTERNET TELEPHONY®** focuses on providing readers with the information necessary to learn about and purchase the equipment, software, and services necessary to take advantage of this technology. **INTERNET TELEPHONY®** readers include resellers, developers, MIS/networking departments, telecom departments, datacom departments, telcos/LECs, wireless/PCS providers, ISPs, and cable companies.

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The VoIP Authority

By Greg Galitzine



February, Short But Sweet In Miami

February is by far my favorite month of the year. My mom gave birth to her youngest son (yours truly) in February. My beautiful wife gave birth to our amazing twins in February. Internet Telephony magazine was born in February. And my favorite trade show of the year takes place in February. (Hint: the show's initials are [Internet Telephony Conference & EXPO!](#))

This year's event in Miami (February 22–25) is shaping up to be a fantastic occasion. As always we're expecting a packed Exhibit Hall, and we are confident that we have put together a conference program that is unrivaled in this industry. Internet Telephony Conference & EXPO is where people come to learn all about purchasing and deploying VoIP and IP Telephony, and the conference tracks at the Miami event feature a wealth of new content, much of it geared towards the service provider market, with topics such as VoIP Peering, UNE-P to VoIP migration strategies, Triple Play sessions, and more. The February issue, which you hold in your hands, also features several new additions to the Internet Telephony universe.

This month, Hunter Newby, chief strategy officer at telx — an interconnect which maintains facilities in New York City and Atlanta — debuts his new monthly column entitled VoIPeering, which will cover the ins and outs of peering and the important role peering plays in the VoIP market. Peering is the concept of interconnecting networks allowing IP (and thus VoIP) traffic to be carried between service providers and companies without the need to engage a middleman, or in this case, an additional service provider.

Also debuting this month is the *Service Provider's Survival Guide to a Successful VoIP Migration*. This five-part series will offer ongoing commentary from Volo Communications' CEO Shawn Lewis on a number of topics relating to the need for CLECs to migrate to VoIP in order to stay alive. This series is certainly something CLECs will want to pay close attention to. The ground rules regarding UNE-P are changing and in many cases VoIP might be the only road to survival. Compelling stuff.

And of course, if you hadn't noticed by looking at this month's cover, our main feature for February is Triple Play. This issue is chock full of information relating to the technology that many analysts forecast will be the hottest thing to hit the VoIP landscape for 2005. We feature a full-on TMC Labs review of Pannaway's triple play service as well as a conversation with Pannaway's CTO Michael Skubisz and his views on the future if VoIP and Triple Play.

So I hope to see you all in Miami, where I look forward to hearing about all the interesting and profitable business ventures and relationships that will be "born" during the event. There's simply no better place to be. Miami. In February.

-Greg Galitzine, ggalitzine@tmcnet.com

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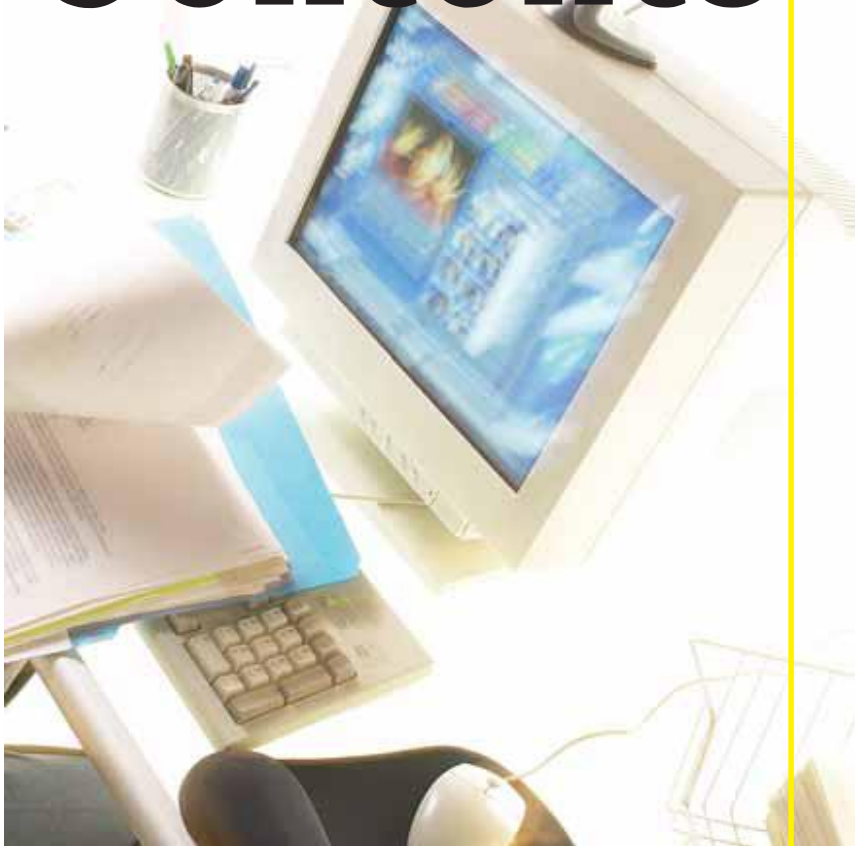
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By Hunter Newby

The ENUM Reality

There are many different implementations, but one thing is the same: [ENUM \(define - news - alert\)](#) is changing the way voice communications is managed, and in the process, is undoing the traditional telephone company business model. For those who are unaware, there are several commercial ENUM registries in the world, all currently being utilized to varying degrees. Economics and adoption rate will determine which registries succeed and which fail.

So, what is ENUM? The acronym stands for Electronic NUmber Mapping and refers to a system of mapping public telephone numbers to Internet URI's (Uniform Resource Identifiers), basically linking a number to an address. This system works well as part of a database that can store private numbers (such as those of an enterprise) and/or public numbers (such as those of a CLEC or MSO.) The purpose of the database, or registry, is to act as a central point for the call to query. The query will return a "yes" or "no," essentially to confirm if the number being called is in the database. If it is, the call is connected or peered via either the public Internet or a private IP network. The wonderful benefit of ENUM is that it can make these identifications and subsequent connections directly between the parties and their respective networks without the need for additional networks or routing. Thus, it is very efficient and it eliminates the costs associated with legacy, outdated systems and business models. Since this technology exists and can be implemented by almost anyone with a need, most if not all of the ENUM calling today is settlement-charge free.

So, who is using ENUM today? There have been discussions, but no conclusions as of yet, regarding two ENUM consumer classifications: carrier and user. Traditional carriers are commonly known as companies that are in the business of selling telecommunications services. They include RBOCs, I/CLECs and IXCs. Users are typically consumers of telecommunications services and fall in to another two groups: enterprises and end users, or individuals. Enterprises consist of businesses, educational and research institutions, and government entities. There are examples across the board of each of the above using ENUM whether knowingly or not, but those who have actually implemented ENUM have done so out of pure economic gain.

ENUM Economics

How does ENUM impact telecom economics? There are three basic ways to save money with ENUM:

1. Carriers reduce inter-carrier settlement fees.
2. Enterprises eliminate per-minute metered phone call fees intra and inter-company by building their own VoIP ([define - news - alert](#)) networks, or by buying a flat rate service.
3. End users move from a per-minute metered service to a flat rate.

The enterprise user category is at a tremendous advantage because they have no business model to charge someone for calling them, so they have nothing to lose and a lot to gain by implementing ENUM.

It would make sense for the traditional local carriers to implement ENUM from a network efficiency standpoint, but from a revenue standpoint, many still have their reciprocal compensation or inter-carrier settlement fees to protect. Since ENUM is basically a reciprocal traffic model enabler, this does not work so well for them at the moment. Increasingly, cable MSOs are getting into the voice business. This is due in large part to their broadband access to the home, but also due to the economics of VoIP. Since they have no legacy revenue models for per-minute metered voice, they offer their services for a flat rate to the end user. In order to raise the probability of profitability, the MSOs need to minimize their cost to terminate the calls their customers generate. ENUM plays right in to this. The MSOs don't care about reciprocal compensation because they don't have much of it, if any. Therefore, they are looking to establish these types of peering relationships. Their approach to buying is also changing. When negotiating with an IXC for domestic call termination, if they are presented with a rate per-minute, they counter with, "Oh, no, we don't pay per minute. We're going to send you X number of megabits of voice. What's our rate per meg?"

IXCs are a bit of a different breed. Reciprocal traffic can occur between those that own or control the network access to the voice device (out-dated business models aside). IXCs are traditionally the middle piece and don't own the access on either side. Since the cost to terminate a domestic U.S. call is so low now — well under a penny per minute — it can be considered "on-net" and no longer need be defined as long-distance. That doesn't help the pure domestic U.S. IXC revenue model. What is still considered long-distance, or "off-net," are international calls. VoIP has

It would make sense for the traditional local carriers to implement ENUM from a network efficiency standpoint.

been used in the international minutes business for almost 10 years now and it originally acted as a cloaking device to bypass international settlement agreements between carriers (what was originally known as a leaky PBX ([define - news - alert](#)), and is now known as a Grey Route) to create an arbitrage and lower costs. It was the difference between a circuit switched

minute and a data packet. One was regulated, or metered per minute, the other was not. The same thing holds true today domestically, but the rate per minute to most international destinations is still too high to play the flat rate game to the end user. Those places are still "off-net" and billed per minute although many at the lower VoIP wholesale rate.

What is well worth mentioning though is that the more developed the country, the more telecom infrastructure they have. Where there is oversupply, there are low costs to terminate. In those countries, such as the UK, France, Germany, Canada, and parts of Asia, the terminating rate is so low that some voice service providers have begun offering flat rate plans that includes those destinations. If you're an IXC on a traditional revenue model, that's spooky. It's like a big game of RISK; battles are fought and countries become "on-net."

An end user flat rate model works when the cost to terminate a traditional phone call being billed per minute to the provider offering the service, i.e., an MSO, or VoBB, is so low that even if the end user makes 120 hours of calls in a month, at a rate of \$0.005 per minute to terminate to the provider and a service plan rate of \$35 monthly, the carrier breaks even. Do you talk on your home phone more than 120 hours per month? Probably not. It's probably closer to a few hours a week. Starting from that point, the provider of the voice service then looks to further reduce costs by finding other networks it can directly connect and pass calls to, avoiding even having to pay

the \$0.005. As end users make the logical decision to move from their traditional local and long-distance providers to these new providers, keep in mind that it is the economics and not necessarily the technology that is making it happen.

Conclusion

As it is with anything that is new and being widely adopted simultaneously and globally, there are a few kinks to be worked out. There are some interoperability issues that need to be addressed between network operators' signaling, but this new system makes so much sense that these challenges are being met and overcome. There are even new business models coming to life around ENUM that solely deal with resolving these issues. They are successful because there is demand and the economics make sense. When was the last time that happened in telecom?

In the next issue there will be an analysis of the currently available ENUM registry services operated by e164.org, VeriSign, and The Voice Peering Fabric (<http://thevpf.com>). We will identify each registry's user groups and benefits. If you own, operate, or are aware of a commercially available ENUM registry and would like it to be reviewed, please e-mail hnewby@telx.com. **IT**

Hunter Newby is chief strategy officer at telx. For more information, please visit <http://www.telx.com>.



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