

## Neustar SVP Steve Edwards talks VoIP's impact on number portability

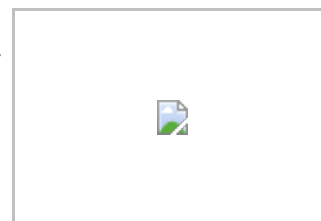
June 4, 2012 | By Samantha Bookman



*Number portability is one of those functions we rarely think about: We reassign a phone number from one device to another by doing very little other than filling out a form. The ease of implementing this process is part of what has made Neustar ([NYSE: NSR](#)) one of the best-kept secrets in the telecom industry, says Steve Edwards, the company's senior vice president of carrier services.*

*Edwards, a veteran of Sonus Networks ([Nasdaq: SONS](#)) and AT&T ([NYSE: T](#)), has been using his 30-plus years of experience in telecom to help Neustar continue its core mission of enabling networks, devices and users to connect by providing the information they need to do so.*

*As the administrator of the NPAC (Number Portability Administration Center), Neustar's local number portability information likely finds its way into every switch in the United States and Canada. As the structure of the U.S. telecom network changes, so has this vital service. And the growth of VoIP, as interconnected VoIP porting began in 2007, has helped drive much of that change. In this interview, Samantha Bookman talks with Edwards about number portability and the opportunity he sees in the burgeoning VoIP space.*



Edwards

***FierceEnterpriseCommunications: Neustar plays an interesting role within telecommunications infrastructure. Can you give us a bit of background on the company?***

**Steve Edwards:** We distribute information that enables every voice call to be terminated and every text message to be delivered. Similarly, we also run a registry and a clearing house for common short codes. So if you're responding to *American Idol* or any of these shows where you're voting, or any promotion, then we're ensuring that you dial the same short code irrespective of what carrier network you're dialing from.

Turning our attention to the Internet, we manage Internet infrastructure globally. We probably resolve something like 16 billion DNS queries a day. So all the big guys that depend on the Internet for their web access and business, they basically outsource the management of that DNS infrastructure to Neustar.

We also participate in the Ultraviolet consortium. We're not actually managing the video content, we're not the CDN, we don't have any network, but what we are doing is authenticating the user, the device

that you see the movie on, and the content that you've paid for.

So in all these examples we're really kind of in the middle, and we process information to make things work, whether it's connecting calls, routing short codes, connecting to IP addresses or websites, or actually getting access to digital movies. And we do that in a neutral, trusted environment.

***FEC: Let's look at local number portability and Neustar's role in maintaining this required service via NPAC.***

***SE:*** We've been running number portability for close to 15 years now. It's one of these things that's been taken for granted, in terms of the ability for you or I to walk into a wireless store and go in with your phone number and a device and leave 15 minutes later with a new service provider or device, but you've kept your identity. You've kept your telephone number. And you can do that in minutes, in fact the information that gets updated throughout the whole U.S. telecoms infrastructure is done in seconds.

Although it has oversight from the FCC, it really is a kind of a contract that is managed by the industry, and it's absolutely critical that neutrality is maintained, to ensure that there's a level playing field. As you can imagine, when you introduce something as complex as number portability across everybody in the ecosystem, things get complicated.

***FEC: Over the 15 years that Neustar has been contracted to provide number portability, what changes have you seen?***

***SE:*** If you look over the life of number portability, there's a couple of aspects to it. One, number portability has innovated a lot, from wireline to wireless to VoIP, and now there are additional IP fields that are in that number portability environment that can extend it to other applications like IP interconnect, rather than just portability.

Equally, this information is used for many applications. One is number management. If you go back several years, tens of years, every service provider was given a block of numbers. As long as you didn't change those numbers you knew where to send the call. With number portability, that distorts the whole picture.

***FEC: What complications has number portability caused for the telecom industry?***

***SE:*** If the information finds its way into a switch, then it basically has to extend into network management systems, into billing systems, etc. As you can imagine number portability just turns on its head all these addressing and routing structures.

Additionally, as the demand grows for more and more numbers, potentially you could run out of numbers. Area codes, for example. The impact of this number portability database is that it is used to manage on a far more granular basis--it's actually 1,000 blocks of numbers instead of 10,000 blocks of numbers--to preserve numbers and area codes. It's critical because if you had to go from a 10-digit to an 11-digit number, it would cost the industry billions and billions of dollars to change that.

Equally, this information is used for disaster recovery. So we've used it for things like Katrina, where in the New Orleans area switches were completely underwater, and we rerouted those numbers to switches that were functioning to give people wireless service. And it's pretty important for public safety, law enforcement type applications.

The importance of this database and the information that's contained in it really does become mission critical for many of the things you and I rely on every day, and really is a key part of the U.S. telecoms

infrastructure.

***FEC: How is VoIP's growth and permeation of the telecom infrastructure affecting number portability?***

**SE:** The key thing about IP is it brings so much more flexibility and service creation than you have in a purely legacy POTS environment. Whether it's rich communication services, whether it's video, whether it's presence--all these value added services or all these elements that will improve the consumer experience, you can do over IP that you just couldn't do in a POTS environment.

If you're a service provider, you have a lot of opportunities to drive up ARPU. I've been looking at some of the international markets, and in many cases ARPU is still declining, whereas in the U.S., ARPU is stabilizing and for many of the big guys it is starting to go up again, because they've actually found a lot more applications to be able to charge for, whether it's video or data or some of these other services.

***FEC: What advantages does VoIP bring to the portability equation?***

**SE:** Here's an example of linking VoIP with a telephone number. You can imagine with cable you've got a broadband connection to your home and you've associated a telephone number. In most cases today, that phone number attached to your triple play service is a fixed line phone number. But what you really want to do is to say, 'hey, that's my identity, and I want to receive a text message.' Actually, you could receive a text message on your tablet that's connected to that broadband connection over WiFi. Or you could receive a text message on your Outlook that might pop up as an email. Or you could receive a text message that's on your set-top box that once again is connected to WiFi through your broadband connection.

One of the things we've developed is a gateway that can connect any IP device in your home, that's typically sitting on the back end of a broadband connection, let's say a VoIP connection that has a telephone number associated with it. We can now extend, say, text messages bi-directional to that device. So you could have your tablet sitting at home and you could enable that to send and receive text messages. So there's a lot more value that you can bring on an IP or VoIP infrastructure that you weren't able to do in a PoP environment.

***FEC: How does the transition to from IPv4 to IPv6 affect number portability?***

**SE:** Clearly one of the tasks we have as new IP addressing comes out like IPv6, is that we need to make sure--because there's a whole suite of BSS and OSS systems alone hooking off the end of this--we have to make sure they're all fully compliant.

***FEC: The Yankee Group recently completed a study on the NPAC for Neustar. What were some key findings?***

**SE:** Three things jumped out to me. The first one was consumers' affinity with their telephone number. It is a part of the identity that you and I have. We can remember our phone number but we can never remember our IP address. Actually, we're now using our phone number for far more than just making voice calls and sending text messages. We're using it as a method of authentication. Whether you want to use it for mobile payments, whether you want to use it for healthcare--or even if you sign up for Facebook and you want to have an alert when somebody updates things on your wall. All of these are used in telephone numbers and identity to send information to you, in a way.

Another finding is that it really has spurred innovation. If you go back, this is really driven from

traditional wireline, 15 years ago, and then along came mobile. I think in 2003 there were like 159 million mobile subscribers, and now there's 328 million. So if you realize the telephone number is important for your identity and you want to encourage competition, you need to provide an environment that consumers like you and I trust so we can take that telephone number and switch mobile service providers.

And then if you go onto VoIP--for example, in consumer cable VoIP in 2008, the numbers were something like just over 12 million subscribers, and now in 2011 there are over 25 million cable VoIP subscribers. So this comes back to encouraging competition without losing your identity. When the cable guys began offering triple play, in many cases they started with a PoP service that they bundled. But as they've been building out their next generation networks and their IP infrastructures they've started migrating from legacy PoPs into a pure VoIP play. So that's driven a lot of growth.

And the other ones are the new entrants, like Google ([Nasdaq: GOOG](#)) Voice, or Magic Jack ([Nasdaq: CALL](#)). It's interesting because if you've watch the Magic Jack ads recently, after they tell you how much it costs to use, they say, 'now you can take your phone number with you.'

So you can really build on this innovation and competition. If you really do provide a simple environment from the consumer perspective to take your identity and switch service providers, then you're giving consumers choice. So number portability has really driven a lot of innovation--whether it's a shift in mobility, a shift to VoIP, or a shift to different devices to get a better experience.

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