



# ENUM Summit Raises Questions, Concerns

ENUM is rolling right along with a conference here and a discussion panel there. The most recent was the ENUM Summit in Boston. It was a well attended and professionally structured conference with a mix of theorists, scientists, and some people with real revenue generating service awareness to bring to the party. This combination of elements created an interesting reaction.

ENUM is capturing the attention of IP and PSTN audiences alike, but the attraction is polarized. There are those that wish to keep the economic models of the past alive, or at least centralized control and the power to influence prices. There are others working off of a clean slate. Those that primarily seek to control the future talk about the technology from the vantage of "being the authority." Being the "authority" on the subject is intended to indirectly lend credibility and, therefore, the power to steer agendas. With the agenda, there is a stated goal that all move to consensus on — hopefully. The other camp has no legacy encumbered vision of the future and is building their services with an open mind and open source in many instances. Their priority is creating a service that is accepted and used by the industry first. If, in the process, they become the dominant provider and, therefore, the "authority," well, that's capitalism.

The stated goal of the proclaimed authority and, more importantly, the path to the goal, were called into question by many at the Summit and it was evident that there is still a good deal of work to do before any such consensus is reached. One issue was the "cost" of ENUM to the users (carrier, end user, or others). Cable and Wireless Jamaica's representative wanted to know, "if they do not wish to be a part of the US 1+ ENUM, would they still have to pay something, just as they have to pay today to be a part of the North American Numbering Plan?" For this question and many others the answers weren't as clear as was hoped. Nevertheless, this is a major undertaking, trying to recreate a central authority for voice calls in an IP world. It will probably take a while to get every carrier in agreement and into an agreement. Good luck!

This overview is generally the plan that is in motion to create a hierarchy, both technically and politically with a governing body to rule the ENUM domain. But, what about the other half, those that actually have a service in production and are setting the new rules for voice calling out in the marketplace everyday — today. Where are the actual implementations?

Private ENUM registries exist and there are live examples of true success stories. Many carriers (including IXCs, CLECs, MSOs VoBBs), enterprises, universities, and even an RBOC have announced and actually implemented services from VoIP Peering providers. It appears that some of these service providers are so infuriating to the ENUM authorities that they might try to create an ENUM police force and have them arrested. Well, not really, but who knows? After all, the purpose of the authority is to identify and document the rules that all carriers using ENUM must abide by and have the FCC adopt it in some Communications Act. I suppose, the penalties for non-compliance with the top level root will be determined at the same time as the cost model. The other option is to ignore the private ENUM existence, at least in public.

Regardless, there were a few fundamental networking views in the room that were clearly flawed. The biggest rambling confusions were the debate about Public ENUM and the perceived non-existence of private IP networks. At the root of this is the difference between an individual subscriber using a device provided by a carrier (i.e., a mobile phone), and a private network (carrier, or enterprise) and the devices on those networks. An individual will most likely not register their own device to an ENUM database, whereas enterprise and carrier network managers routinely register IP addresses and control the functions of the network itself and the devices on it.

There are many enterprises that have private Wide Area Networks and run IP applications over them — more and more are running VoIP. Not only is this private network, NOT the Internet, but they specifically built to avoid any access to the Internet. This is for security reasons primarily, but also quality. It also conveniently avoids the whole Net Neutrality issue — which is another topic altogether.

These are private IP networks. When the enterprise network managers interconnect their networks to their peers' networks (other enterprises, or even carriers for in/outbound traffic to the PSTN) either through direct connections (private peering), or via a peering fabric, they are essentially building private Internets. This is happening with enterprise VoIP today and carriers have been doing it for a while. Amazingly, there were a few people in the room who didn't grasp the idea. To them, everything that uses IP is on the Internet, or else it doesn't work or isn't practical. They say, "Why would anyone build a network that can't be reached by everyone?" Again, for consumers, this may be true, but, for enterprise networks, the reasons are security and quality.

There are some people in the ENUM planning groups that aren't necessarily in touch with what is already actually happening. This may be a result of very large organizations not communicating internally or just different entities within the same company that have recently been merged and have never communicated in the past. The clash between what's real and what's theory is not limited to doers and seekers in different organizations, but includes even those within the same companies that have different agendas. The research people in the labs and the whole-sale sales groups usually have very different revenue targets and degrees of authority in the company. In the end, the market decides what drives policy and that is based on what is available, in use, and making (or saving) money. We all have a long way to go, but natural selection has a way of sorting things out for the better. We all have events like the ENUM Summit to thank for helping us out in the process. ■

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