

ATTACHMENT C

COMPTEL 12/20/2013 Ex Parte Letter

WC Docket Nos. 05-25, 10-90; RM-10593; GN Docket Nos. 13-5, 12-353

AT&T Discusses Its SIP Peering Architecture¹

By [Doug Mohney](#), Contributing Editor

AT&T (News - Alert) is gearing up a full-blown SIP transport architecture and plans to peer with **a select number of Tier 1 providers -- everyone else is going to have to purchase transport services.** Further, while not explicitly detailed or stated by AT&T, the company could already be running SIP peering traffic with one or more Tier 1 carriers on the Q-T.

For HD voice and UC video advocates, SIP peering at the Tier 1 carrier level is the primary key to make seamless calls/sessions between end-users regardless of what network they are on. Currently, there are many "islands" of HD voice and UC video calls at the enterprise and ITSP/hosted VoIP level, but few of them can talk to each other, much less to a large Tier 1 carrier.

AT&T's public discussion of SIP transport and SIP peering across its network and with other Tier 1 providers is a significant game changer, given AT&T's status and the number of end-points (i.e. devices and phone numbers) it has, over 90 million between wireline, broadband, and wireless phones in operation.

Details on the company's SIP plans came at the fifth annual IIT VoIP Conference and Expo recently in Chicago. AT&T's Senior VoIP Enterprise Architect/Manager Sumitra Sinha gave a remarkable and thorough presentation free of marketing hype, discussing in no-nonsense terms the company's strategy, business opportunities for SIP traffic, and the underlying architecture the company has setup to make everything run smoothly at a carrier class level.

AT&T will exchange SIP traffic at the access border controller layer (i.e. SBCs, more specifically Acme Packet ([News - Alert](#)) SBCs) via IP handoff at a few "strategic locations," directly peering with a select number of Tier 1 carriers. AT&T will also provide transit and direct termination through its network and support all roaming traffic to interwork with other wireless carriers. A PowerPoint slide listed connection points in Los Angeles, New York, Philadelphia and Atlanta.

While a number of VoIP purists have been railing against phone numbers, AT&T is onboard with ENUM in a big way, first using its own internal database for lookup, then accessing the CC1 ENUM Telcordia ([News - Alert](#)) database for lookups; CC1 holds/will hold more than 500 million phone numbers in North America, including AT&T and Verizon's, for IP-based interconnect rather than dropping into the PSTN.

¹ <http://sip-trunking.tmcnet.com:80/topics/enterprise-voip/articles/109840-att-discusses-its-sip-peering-architecture.htm>

Unlike IP peering, AT&T doesn't believe that SIP peering will be settlement-free. Instead, there will be a number of business models (i.e. rates) with SLAs included in service. Traditional IP peering has been done on a "best effort" basis, but moving up the network stack means that MPLS and QoS come into play to provide the necessary speed for supporting real-time communications (i.e. voice and video).

One use of SIP transport that AT&T is strongly discouraging: Wholesale dumping of vanilla VoIP calls onto AT&T's PSTN network. Sinha said that carriers that tried to dump SIP traffic onto AT&T's TDM network for simplified transit purposes would find their calls rejected. Carriers who wanted such services are encouraged to negotiate with AT&T to use the company's SIP trunks for ingress and egress.

Transcoding for various flavors of codecs will be supported in the architecture, including AMR and AMR-WB, the favorites of the GSM cellular industry. AT&T Wireless currently support AMR, so it's not a big stretch to see AMR-WB to show up in the U.S. in a year or two.

The benefits of SIP transport AT&T expects to see is better voice quality at lower costs. It is a migration the company would like to see happen sooner, rather than later, given the costs of supporting both IP and PSTN/TDM infrastructure.

Last month, both Cincinnati Bell ([News - Alert](#)) and Metaswitch said "major carriers" were in discussions as to the ways SIP transport could be used for making money and delivering enhanced services such as video and HD voice. And I've been lead to believe at least one or two Tier 1 carriers could already be plugged into AT&T's SIP transport architecture for initial testing of traffic exchange.