



## **Comments and Observations on Bruce McLeod's “SIP Trunking for Cable Business Voice Opportunities”**

*Peter Sandstrom, Chief Technology Officer, BandTel – February, 2011 (Rev 110208a)*

### **Synopsis**

*The following are some comments and observations from Peter Sandstrom, CTO of BandTel, pertaining to Mr. Bruce McLeod's article entitled “SIP Trunking For the MSO operator”. April 2009. The article can be found on the web at ...*

[http://www.cablefax.com/ct/voice/SIP-Trunking-for-Cable\\_34896.html](http://www.cablefax.com/ct/voice/SIP-Trunking-for-Cable_34896.html)

The reason for commenting on Mr. McLeod's article are due to the fact that we believe Mr. McLeod has identified a significant new vertical market in the telecom industry; i.e. Cable Operators now moving to service enterprise telecom needs with VoIP SIP-Trunking technologies.

BandTel agrees with his vision, and so felt compelled to comment. The comments below are responses to each of the major topics Mr. McLeod identifies in his article.



## SIP to SIP Peering

SIP peering between carriers will happen, but not immediately (on a large scale at least). At present there is simply not enough critical mass of customers going from one carriers IP network to another.

But what can and is happening today is all the traffic that is generated from a cable companies SIP trunking effort can be back-hauled to that cable companies PSTN point of presence, and then offloaded to a PSTN carrier of its choice.

In so doing the MSO makes revenue on both sides of the equation; i.e. the MSO's SIP subscriber and a lower cost bypass of MA-Bell, going direct to the wholesale long distance market.

## T1 over HFC

DOCSIS indeed has something in the works to handle T1 over HFC. But go that route and now the MSO faces the following issues:

- **Get a Big TDM Switch-** The MSO would need to provision a traditional TDM switch at its head-end to handle telephony from a customer trunk side perspective. That's a complex undertaking, and beyond the investment threshold of many MSO's.
- **Handle Usage Based Billing-** If you're selling T1s your selling to business. That customer is going to want a usage based product (i.e. billed by the minute). So the billing system and associated operations will become far more sophisticated.
- **Not Doing SIP-Trunking-** you're still doing just plain old T1 when transporting over HFC, and so not leveraging all the benefits that SIP-Trunking has to offer "the carrier". One of the biggest lost benefits is the ability to have a large geographical DID pool base.

With an HFC T1 anchored to a TDM switch back at the MSO's head-end office, and so still stuck in CLEC mode by being tied to rate center geography. That scenario will not allow the MSO to realize the large geographical DID pool that real SIP-Trunking can make possible. .

- **Use Up Your Cable Bandwidth-** T1 over HFC is basically a circuit, so it uses valuable bandwidth on the cable network, regardless of whether the "circuit" is being used or not.

But with SIP-Trunking you don't have that disadvantage. SIP-Trunking makes the most efficient use of the MSO cable network, taking "IP bandwidth" from the network only when it's being used.

## T1 over HFC (cont.)

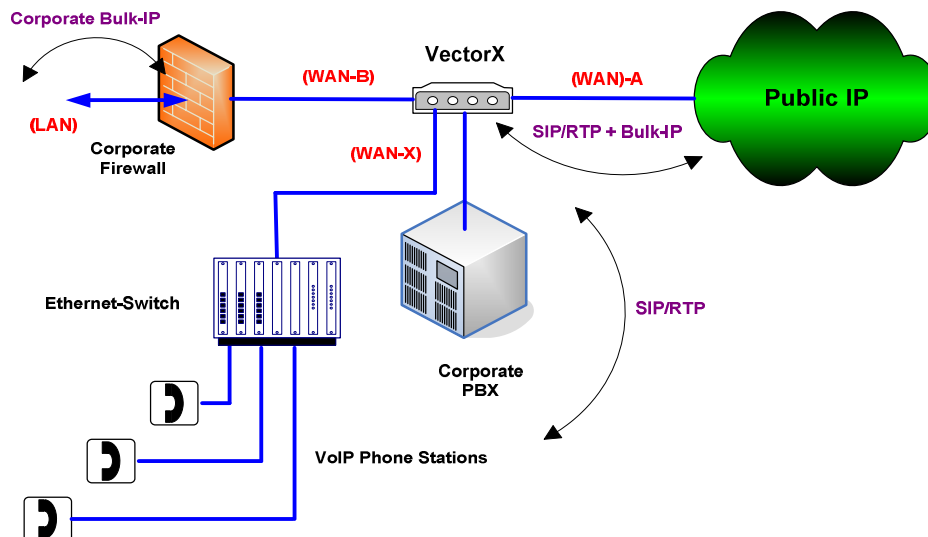
- **T1's for an IP-PBX???**- Business users today are rapidly moving to native VoIP PBX's. The open source Asterisk PBX is the great example of this new class of PBX and migration.

IP-PBX's can interface directly to IP, so there is no need for circuit based connections of any kind (T1 or otherwise). That being the case why would an MSO build out an expensive DOCSIS T1/HFC solution? The technology is already obsolete as enterprise users are rapidly migrating away from circuit based telephony interface technologies (T1 included).

Further, in the interim VoIP T1 gateways can easily handle the T1 PBX interface requirements directly over the MSO's existing cable IP network, and do so with no changes needed for that already existing cable IP network.

## Quality of Service

If you read between the lines Mr. McLeod is saying that Cox Cable had some issues with QoS as they probably failed to work out a corporate firewall strategy.



BandTel has solved this problem with its VectorX™ concept. VectorX™ allows one to do VoIP over IP (not HFC), and still realize great QoS while simultaneously sharing VoIP and corporate bulk traffic on the same IP drop. VectorX also keeps the VoIP deployment away from and out of the corporate firewall.



## The IP-PBX Starting to Dominate

Mr. McLeod states ..." ***The IP PBX has become the dominant telephony apparatus being purchased by medium to large enterprise customers. Shipments of IP PBX overtook legacy TDM PBX several years ago, and the trend will only continue***".

Mr. McLeod is correct in that these systems are overtaking TDM PBXs sales. But what he doesn't tell you are these are for the most part hybrid PBX's, deploying IP-phones to the desktop, and then connecting back to the PSTN with a TDM based T1.

Reason's for this are that SIP-Trunking to the enterprise is still fairly new, and so there aren't many carriers that are really that good at it. IP bandwidth is also not deemed as being as reliable as TDM technology on the trunk side by the end user. But that view (and reality) is rapidly changing. .

Bottom line is all these new IP-PBXs are, or will be looking to connect to someone's SIP-Trunking product services very soon to save money.

## Building Holistic Communications

Mr. McLeod also states that "***building the holistic communication capability becomes a tremendous integration challenge for the service provider***". Read "to be successful you'll need a cookie cutter CPE solution for deployment" on hand ...

1. That has QoS on IP (not HFC)
2. That avoids the clients firewall
3. That allows you're support group to understand and debug mainstream IP-PBX's from an ST perspective so that you, the carrier, can help in quickly debugging and resolving issues pertaining to turn-up of these types of systems.

BandTel has that solution and expertise to cover all these key points,



## Summary

Mr. McLeod's closing *statement* ("**SIP trunking is a great opportunity for cable operators to harvest new revenue in the commercial space**") we believe sums it up nicely. Cable Companies are the next phone mainstream company if they can figure out how to master the new technology, or partner with someone who already has.

If you'd like to explore BandTel SIP-Trunking services further, please contact BandTel sales today at:

- **1-603-528-6538 opt 4** (ST enabled) or **1-800-730-2870 opt 4**
- **sales@BandTel.com**