Review of WTL NOP

I had a very revealing talk with M, the senior technical person at XXXX about why they use the WTL equipment.

Background

XXXX are a carriers' carrier who run wholesale routes for customers around the world. A typical example is a mobile operator in Africa who wants to outsource the management of their international traffic. XXXX manage everything: the satellite or fibre capacity, the modems & routers, the compression equipment and then the termination of the traffic in Europe. We were introduced to them by our long term customer Xplorium but they did extensive evaluation before choosing us and they continue to keep an eye on the market for anything new.

Installed Base

You will not have read any WTL case study or news items about XXXX because they refuse to allow publicity – as a company policy they prefer to operate 'under the radar'. XXXX run traffic from Ghana, DRC, Burundi and Niger using our equipment. Each location will typically have 240 or 480 simultaneous calls. This changes as they sometimes move things about depending on demand.
Competition
M considers there are only 3 serious players in this part of the market: WTL, Dialogic & Memotec.

Network Design

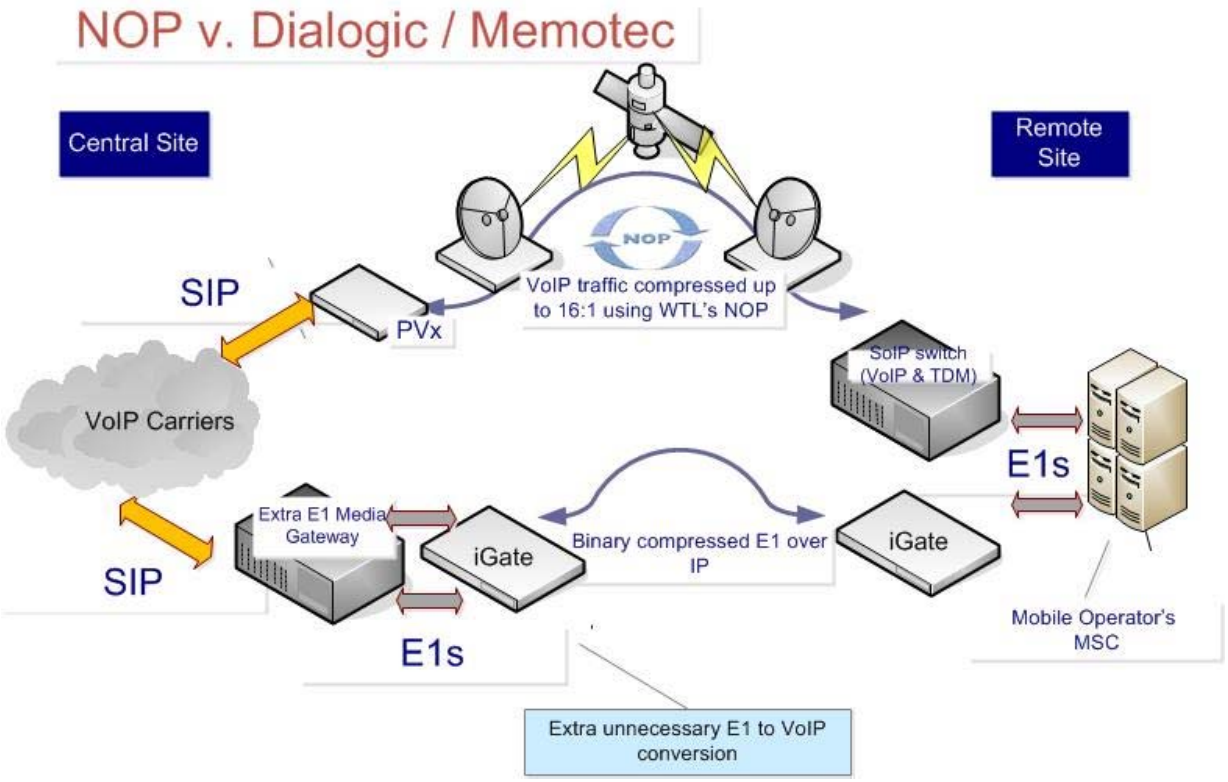
A major benefit for WTL is the flexibility of our network design. They particularly appreciate that it is possible to collect via E1s on a WTL SoIP at the remote end and terminate using SIP on a central WTL PVx (normally they connect to the MSC of the African operator who does not have a VoIP option). It turns out that this is not possible easily with Dialogic or Memotec. The competition are actually still using the old style of E1 compression boxes from pre-VoIP days slightly modified to operate over IP links. They are strictly point-to-point and I believe this also means that they must be deployed as matching pairs (unlike the WTL hub-and-spoke network designs).

Dialogic

The product architecture is weird and I think it reveals the fact that the range is made up of different pieces acquired as they have bought companies over the years. In other words, it is not an integrated product range. There is a) the iGate 4000 Edge which is their SoIP equivalent that does E1 to 'Compressed'. B) The SBO which is the PVx equivalent (SIP to Compressed), and c) the IMG 1010 or 2020 which is the vanilla media gateway with no compression (like a Mediant 2000).
The trouble is you need a combination of these to achieve what we can do in a single box. So, for example, to go from E1 at the remote site to SIP in the centre we would use a remote SoIP with N x E1 ports feeding a central PVx. The Dialogic would need a pair of iGate 400 Edge to handle the E1 compression/decompression because if you collect the traffic as E1 it has to be decompressed to E1 and then, as a 2nd step turned from E1 to SIP. This means extra equipment (you need the IMG 2020 media gateway as extra kit at the centre to take the E1s from the iGate and turn them into SIP). This in turn means more cost, more rack space and loss of quality / extra delay because of an unnecessary extra decode/recode. I think I also picked up that the management and configuration of all these elements is not integrated.
The SBO is theoretically fine as a PVx replacement for pure VoIP applications but it is expensive and does not have the licensing flexibility we have (start small and add licenses as the traffic builds). I noted that the entry level is 500 sessions.

Memotec

Same design concept as Dialogic. M considers them good, stable equipment but they only handle TDM so again, you need an extra media gateway to complete the picture. The set-up is easy but is not flexible.



Compression Methods

Dialogic claim 16:1 but nobody uses this because of quality concerns. Instead most people fallback to 8:1. We realistically achieve 10:1 for usable quality.
Dialogic and Memotec use a completely different type of approach to NOP. They encapsulate the whole E1 and transfer it as a proprietary binary data stream. The good points about this are a) transparency and b) it is a very dense format and good compression achieved. However, this is outweighed by the downsides: a) the E1 has to be treated as one block of traffic – there is no possibility for switching individual calls as in NOP b) this approach is less resilient. Any link problems will affect the whole E1 and it may well need to resynchronise and go down affecting all users. With NOP we have many measures to bridge poor quality. Also, any interruption for us will occur as a small audio interference to all calls rather than anything more serious.

IP Link Quality

It seems that WTL NOP performs much better than the others in cases where the link is unstable, shared, variable or oversubscribed. The quote was that "with WTL the performance over VSAT is amazing. You can't differentiate between VSAT and fibre using NOP".

The competitors performance deteriorates sharply if the underlying link quality varies. Also their compression techniques seem to mean that the whole link is affected and may go down whereas we struggle on and keep the calls alive. M would not recommend Dialogic or Memotec for anything but a dedicated, point to point satellite link.

Support

M could not finish without praising our Support. She says that it is not just that we are responsive (which she is appreciative of anyway) but the expertise of our involvement and our fault-finding. She had a number of examples of cases where XXXX called up with an ill-defined problem ("voice quality sounds bad" or similar) and we were able to quickly log in, do some diagnostics and pinpoint the problem (typically the IP link or the modem/router). She says this is much superior to what you see from other companies.

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