WORLD TELECOM LABS

Changing the Way the World Communicates

Leading Nigerian Clearing House Expands WTL Platform

Background

Deregulation of the Telecommunication industry in Nigeria came with the usual problems of a multi-operator scenario, namely, physical interconnectivity and settlement of the accompanying charges. **Interconnect Clearing House Nigeria (ICN)** was licensed by the Nigeria Communications Commission (NCC) to provide and operate Interconnect Exchange Services throughout Nigeria.

The principle of a clearing house is that as an independent third party, it is not in competition with the operators for subscribers and is focused on the twin issues of adequate interconnect capacity and prompt settlement of interconnect usage charges. ICN had grown rapidly and as a result of its success needed more switch capacity and greater flexibility.

When established, ICN, deployed cutting edge telecommunications technology of that time, namely a large SIEMENS EWSD, fully redundant TDM switch with a maximum system configuration capacity of 8064 E1"s. However, it had become clear that as technology and the Nigerian market had evolved this needed to be upgraded.

The Problem

ICN faced 2 principal problems with their existing infrastructure: firstly, it could not keep pace with the industry's migration to VoIP and secondly, it was a large monolithic switch located in Lagos whilst the business was increasingly distributed around the country.

With more than 50 fixed and mobile operators linked to their network, the inability to connect new customers using VoIP was becoming a serious constraint on ICN's future expansion prospects.

WTL Solution

WTL were originally called in a number of years ago to supply extra VoIP connectivity for the EWSD. WTL's SoIP Gateway was used to collect VoIP traffic from various customers of the exchange and deliver this traffic to the Siemens switch as TDM using SS7.

This was a completely standard installation for the WTL team and the project went very smoothly. It was also possible to configure the SoIP so that calls from different customers were presented in a way that the existing-billing system could interpret and therefore the project was considered a great success both technically and commercially.

Since deployment in 2008 the SoIP has continued to run faultlessly under heavy load. This has led Jude Chukwuma, the CTO to repeatedly compliment WTL on the stability of the equipment. He jokes, "I know we have to pay our quarterly support charges but this is not easy to justify for equipment which has never caused any problem!" He also points out that the support from WTL is much more approachable and flexible than ICN has experienced from other larger manufacturers.

Next Step

It was no surprise that when ICN came to consider the next stage of their VoIP expansion they should turn to WTL. This time the question of locating remote PoPs in other parts of the country needed to be addressed. A further challenge here is that, unlike Europe and North America, IP connectivity is limited and expensive.

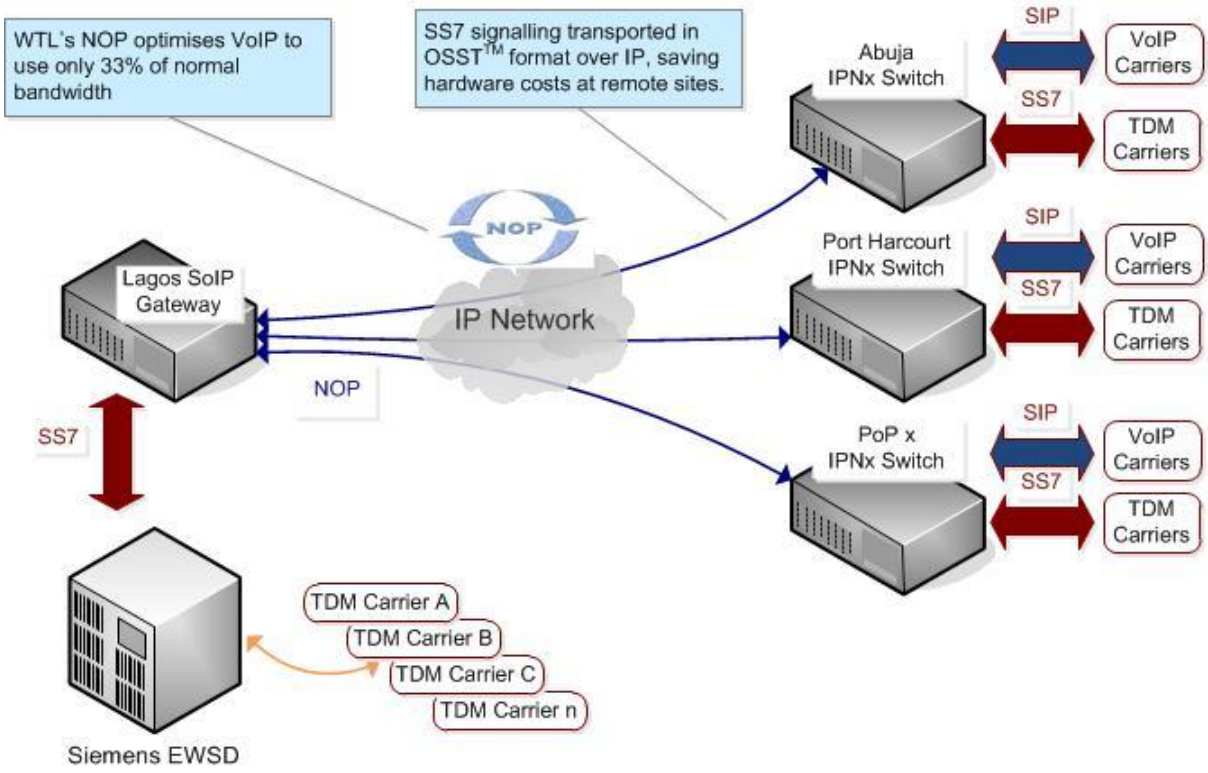

Figure 1: Distributed, Optimised, Multi-Protocol Switch

The design proposed used distributed WTL switches in the main cities in Nigeria. The switches are scalable and capable of multi-protocol support. This gives ICN the maximum flexibility to accept customers in these locations using whatever method of interconnect they prefer:- TDM traffic as SS7 or ISDN and VoIP with either SIP or H323 signalling.

All calls are converted to VoIP for transit to the central switch. However, the added ingredient is that all traffic is translated to WTL's NOP format to be transported to Lagos in the most efficient way possible. Extra compression of the VoIP calls means IP bandwidth savings of 66% with no loss of voice quality and ensures that the costs of IP capacity are kept under control.

About ICN

Interconnect ClearingHouse Nigeria (ICN) is a company licensed by Nigeria Communications Commission (NCC) to provide and operate Interconnect Exchange Services throughout Nigeria

ICN is an independent third party, that is not in competition with the operators for subscribers and is focused on the twin issues of adequate interconnect capacity and prompt settlement of interconnect usage charges, ICN is in the best position to provide a lasting solution to interconnect issues in the Nigerian Telecom Industry. This is achieved by putting in place the necessary infrastructure, technology and business processes for effective and efficient interconnection.

ICN is set to leverage the gains in the development of the Nigerian Telecommunication and Information Technology industry by optimizing and facilitating the efficient utilization of the existing infrastructures and resources.

http://www.interconnectnigeria.com/

About WTL

World Telecom Labs is a Belgium-based company which has long been a leader in the provision of VoIP switches, Pre-Paid applications, and signalling gateways for emerging carriers and telecom service operators. WTL has an installed base of 100,000s of voice ports with service providers worldwide switching billions of minutes of VoIP traffic using WTL equipment. For more information about WTL and its products, please visit **www.wtl.dk** or email **sales@wtl.dk**.