



## iTrinegy NE-ONE Emulator ensures successful VoIP trader deployments for iMarket Communications

### The Customer

iMarket Communications is a premier telecommunications provider specializing in trader voice and data solutions for the financial, banking and energy industries. Its fully redundant digital network is comprised of multiple backbone carriers, and best-in-class technology to safeguard the security, efficiency and affordability of telecom applications.

Its customers range from the major global banks and international brokers through to smaller trading houses. These companies trust iMarket to establish secure point-to-point or multi-point networks for their traders to conduct business in fast-paced environments where delays in service cannot be tolerated. The end points between these lines could be only a short distance apart or stretched across the globe.

### The Problem

For many years financial trading systems have been operated over E1/T1 circuits. However, the whole market is going through a process of transition with the carriers looking to replace traditional SDH circuits with Ethernet. While the carriers are keen to make this move, many of iMarket's customers still require delivery by E1/T1/SDH circuits. To overcome this issue iMarket terminates the carriers' Ethernet lines with routers in order to emulate E1 or T1 across these links. In essence, iMarket is running TDM over MPLS for its clients. *"The biggest problem we have with this method is the stability of clock synchronization which is largely affected by latency or more critically jitter"*, explains Cliff Wilton, iMarket's VP Engineering EMEA, *"That hasn't been a significant issue in the past but now we are being asked to stretch the distances between connection points so the latency is increasing and we didn't really know how our solutions would handle this"*.

### The Requirement

When a client purchases an iMarket Private Line, iMarket assumes responsibility for buying the required links from the carrier. Typically this involves signing a multi-year contract and if it transpires that iMarket's equipment cannot work properly, it is iMarket that is left bearing the line rental cost.



*iMarket Communications solutions ensure traders are always connected and ready to transact business*

Therefore, in order to minimize such risk, iMarket needed a method of being able to verify, prior to signing any contract, that its equipment was going to work properly and not be adversely impacted by any latency or jitter.

### The Solution

Cliff started to investigate a possible solution, *"We started with a search for 'TDM over MPLS' and 'circuit emulation' but that returned very little about how to actually deliver this type of verification. We approached existing suppliers but they couldn't help either, so we broadened the search to see 'how to simulate latency and delay' and found iTrinegy"*.



*NE-ONE Network Emulator rapidly delivered ROI for iMarket*

After reviewing the iTrinegy network emulator product range, Cliff determined that the NE-ONE desktop model was going to meet iMarket's needs.

*“In terms of set up, I would say that within 5 minutes of getting it out of the box we had the NE-ONE set up exactly as we wanted to. It is one of the simplest pieces of test kit I have ever used.*

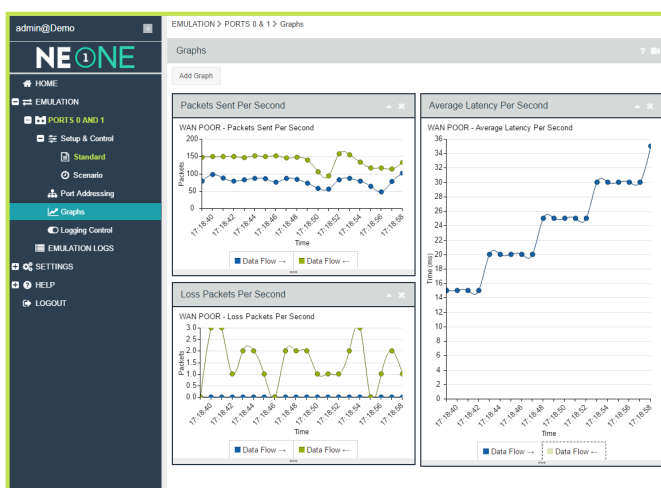
*Another attraction for us was the fact that iTrinegy were able to provide local support, in the time zones we operate in.”*

Initially, the NE-ONE emulator was used to check how iMarket’s equipment would cope with latency and jitter on a network established between London and Madrid and it quickly confirmed that their devices were well able to perform in this environment. This gave iMarket the confidence to go ahead and sign the line contract with the chosen carrier.

Since then, the NE-ONE has been used to identify the tolerance limits of iMarket’s systems. Cliff explains, *“We used the NE-ONE to simulate a London to Madrid link and set the latency to match the parameters of the carrier’s SLA. We then started to increase the latency incrementally, until it was close to 1 second. At these delay times we expected echo to start creeping in but this didn’t happen which really surprised us. In our industry, a lot of money is spent on echo-cancellation devices but the NE-ONE showed that our products are very delay-tolerant which is great to be able to prove”*

*“It’s a comfort factor to know how far we can push our units - what the safety margins are and know that as long as we are within these we can reliably deploy to clients from Day 1.”*

### Graphing Capability Provides Visibility



One NE-ONE feature Cliff particularly likes is the graphing function which he describes as “brilliant” as it is giving him visibility of what is actually happening when making any change in the network parameters rather than having to make an educated guess.

Today, the NE-ONE is firmly established as an integral part of iMarket’s test setup. It sits across one of the company’s dedicated E1 test links. When clients come into the iMarket office Cliff and his team will typically use the NE-ONE to dial up the latency and jitter upon the selected carrier’s SLA to show how well the iMarket VoIP products can perform and nobody has cause to say “I can’t hear you”.

In the longer term, Cliff sees that the whole network topology is going to need to change, *“We will be more and more focused towards SIP and we will be connecting directly via Ethernet straight into SIP gateways. That is the next step in the evolution of our market over the next four to five years”.*

*“So, moving forward, I am sure that we will come across situations where we will want to use the NE-ONE to test networked application performance and experiment with different settings to be sure our solutions are going to work in these new environments rather than just guessing”.*

### The Benefits

*“The outlay for an NE-ONE is modest. We have achieved multi-fold ROI very quickly with it by being able to conduct realistic proof-of-concepts prior to signing up line rentals with the carriers. It has helped to demonstrate the robustness of our financial trading solutions and given our customers the reassurance that when they invest in our products, they are going to work as expected. All in all, it has been a Win/Win situation”,* concludes Cliff.