

i-conXpress

Issue 2: 2009

The international newsletter for interconnect billing

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Crossing the Divide with Confidence: Will WiMAX Shrink The World Again?

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Recent years have seen the world around us shrink dramatically. First, GSM revolutionised voice communications; more recently, the march of broadband has transformed data communications and, with the advent of the outsourced 'cloud', IP has changed the way companies and individuals manage their personal and business lives forever. But now, is the scene set for WiMAX to take us into another new era of change?

In WiMAX, we have long sensed a commercial opportunity may be emerging for carriers keen to achieve a competitive edge yet constrained by the high cost of traditional mobile and fixed networks. Commentators increasingly believe this time may be upon us, and 2010 could be the year when WiMAX hits critical mass - just as 2006 saw VoIP seize market attention.

Voicing the challenges

Whilst VoIP promised greater efficiencies, and has proved highly popular with the end-user, it presents some practical user limitations - chiefly the basic need to operate it from a fixed computer terminal. Nonetheless, the telecoms sector has embraced the VoIP dream, driven by the realisation that every home around the world with a broadband connection presents a potential customer opportunity. And as the telco sector continues to stack up its profits even in tough economic times, who can blame IP entrepreneurs for longing for a slice of the voice business?

Of the many challenges which lie in wait for the VoIP telco, two in particular are worth special mention.

Firstly, in leveraging the existing broadband infrastructure, VoIP has come to inhabit a world where quality is a persistent headache and the last mile cost is high.

The second is the critical interconnect billing scenario

which lies waiting in the long grass for VoIP carriers. It is fair to conclude that the idea of interconnect billing is not always prominent in the mind of a typical VoIP carrier at the launch stage. Their domain expertise for IT will be very high, but possibly less so for traditional telecoms.

The interconnect dimension

Interconnect issues arise, as is logical, as soon as a call leaves its VoIP network and lands on a traditional mobile or fixed number (for instance, if one Skype-out to a friend on a GSM network). The first problem is that interconnect (termination) charges will now be levied, and the VoIP carrier is suddenly in a wholesale settlement process which it may or may not understand, and - unless it has seen fit to deploy an interconnect billing solution - may lack the tools to manage.

“ 2010 could be the year when WiMAX hits critical mass.”

The second hurdle is that, whilst the VoIP carrier is perfectly content to deal in the nice, simple data packets which it knows and loves, the interconnect partner terminating the call is living in a completely different world where xDRs are the accepted currency of choice.

A proven, auditable interconnect billing system is

therefore a strategic requirement for VoIP carriers keen to avoid being at the mercy of the existing carriers. By implementing such a system the carrier can 'cross the divide' with confidence, play in the commercial world of voice traffic, and meet head on the world of the xDR and the mysteries of reconciliation and settlement. Without it, the traditional telcos are unlikely to play ball.

WiMAX and the digital divide

WiMAX now appears ready to deliver a different network model which can satisfy both the last mile headache and the quality issues. High quality, cost-effective base stations can provide 20-30km of local coverage, and QoS has been seen to be comparable with mid-range DSL. We can expect to see voice over WiMAX make gains in the market just as voice over IP did earlier this decade.



WiMAX comes into its own across the wide open spaces of Africa and the Middle East

“ Without an interconnect billing system, the VoIP carrier could get into a wholesale settlement process it cannot manage.”

However, the dream of a truly mobile IP voice product may now also be imminent. Hardware manufacturer Beceem recently released a WiMAX chipset no larger than a piece of chewing gum. And the holy grail - a true WiMAX VoIP handset - was recently announced to the market by Fujitsu, which is to supply the devices to Smile Communications, a launch operator whose goal is to bring affordable communications to under-served customers in Africa and similar developing markets.

WiMAX may have problems dealing with the noise and interference of built up city areas, but it is in its element across the wide open spaces of Africa and the Middle East.

“ With a proven and auditable interconnect billing system carriers can cross the divide with confidence.”

As IP voice widens onto WiMAX, and WiMAX begins to mature into a genuine mobile communications platform capable of competing with and undercutting GSM, we may see the world shrink further to welcome the economically disadvantaged into the world of modern telecommunications.

As before, two technical worlds will still shake hands - the world of WiMAX data and the world of the xDR - to produce timely interconnect settlements and protect revenue.

Wholesale Reconciliation in a WiMAX World

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WiMAX is big news in Asia Pacific where the trend for new licences is increasingly shifting from GSM and 3G licences to WiMAX and Broadband Wireless Access.

The WiMAX Forum recently published a set of standards urging WiMAX carriers to voluntarily implement certain measures which will inevitably intensify competitiveness with the incumbents. The intention is to help facilitate the conditions under which such new carriers can confidently compete or create joint roaming alliances to extend their effective network reach.

The data and billing standards are long and complex, but include the following key stipulations:

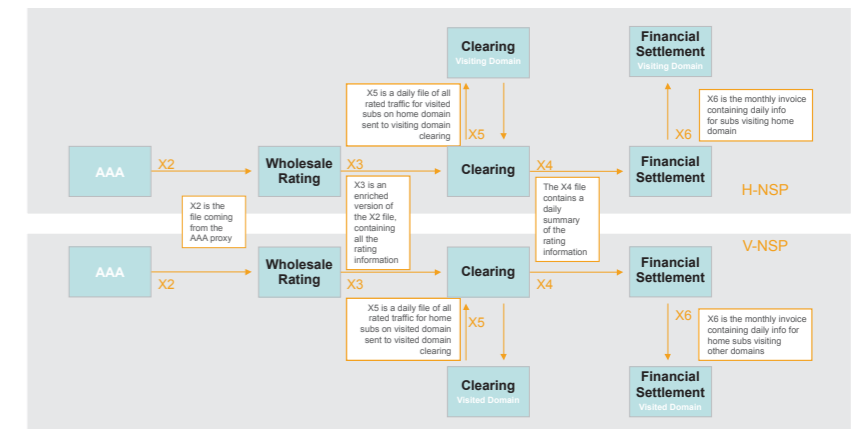
- Records should be collected and rated hourly as a minimum, in either real-time or near real-time.
- Exchange of files with roaming partners should take place daily, within four hours of midnight.
- There should be a prescribed eight hour window

to exchange records, if two parties discover a discrepancy and wish to re-analyse rather than proceed to full dispute.

- It should be a critical business requirement to re-rate traffic - as is standard in the world of inter-carrier billing.

In all of the areas identified, i-conX has a solution which is fully compliant with the WiMAX Forum standards. The i-conX system has also shown - during 'live' use - to cope comfortably with the new file formats and network protocols presented by WiMAX or mixed WiMAX network architecture.

If desired, converters can also be applied by i-conX to create a facsimile xDR record from the raw data format, to facilitate easier settlement processes with the traditional xDR based carriers. In this way, i-conX provides a fully future-proofed solution which allows WiMAX carriers to enter the market with confidence.



The WiMAX Forum has already published stringent guidelines for rating and settlement in a WiMAX world

Signed, Sealed and Delivered

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Vice President Sales and Marketing



This spring, we affirmed our position as the world's fastest growing interconnect vendor, announcing important contract wins with two of Europe's leading mobile operators.

Our first coup came when we finalised the implementation of our solution with Belgium's BASE Telecom in April. Part of the KPN European enterprise covering the Netherlands, Belgium and Germany, BASE currently serves 3.4m customers – 590,000 of whom were acquired during 2008.

Following this achievement Tele2 Russia elected to replace its existing system with our licensed solution. The contract was formalised during a trade mission to Moscow alongside Irish government agency, Enterprise Ireland.

Here we take a more detailed look at the significance of these important 'done deals'.

Making the switch for Belgium's BASE

BASE implemented our a-s-p interconnect billing service as part of a scheme to replace and upgrade its existing interconnect system. As well as overcoming the particular challenges of the project - mainly related to the intricacies involved in replacing a legacy system - we were especially pleased to learn that the customer cited the deployment as one of the company's top achievements during 2008.



"Interconnect information management and

billing has always been a tedious task. Today, a tailored solution has been conceived: i-conX," said BASE Interconnect Manager, Christine Vanoppen.

"i-conX is a comprehensive and user friendly environment. When adding high levels of accuracy and flexibility, trust is being created. It is thanks to this trust that BASE can now focus on its core business."

Though there are inevitable complications in switching to another solution - especially in more mature markets - our a-s-p platform presents a new, much more flexible approach for operators looking to migrate from redundant systems and processes. A clear and logical migration path means that this can now be achieved with minimal disruption to business processes, helping to 'erase' operators' former fears of the risks associated with the 'big switchover'.

"We were especially pleased to learn that BASE cited the i-conX deployment as one of the company's top achievements in 2008."

Our system also has the functionality to deal with specific regional anomalies. For example, some of the more demanding elements of the BASE project included overcoming Belgium's complex voice interconnect agreements, full number portability and issues surrounding MMS/SMS accounting.

Another particular challenge of this nature was working around Belgium's incumbent agreements, which are some of the most complex in Europe.

As well, BASE presented extremely rich EDR formats which required sophisticated pre-processing by the i-conX system.

The core implementation was achieved to a rapid

10-week timescale - with additional interfaces configured in the following months - and BASE is now benefiting from the intuitive design, interfacing and reporting capabilities offered by our system, as well as real-time accessibility to billing information.

Flying the flag for Irish-Russian commerce

Senior representatives of the Irish Government led their recent trade mission to Moscow by announcing i-conX's latest contract with Russian GSM operator, Tele2.



Accompanied by Tele2 Russia's Chairman, Yuri Dombrovsky, we joined Ireland's Minister for Trade and Commerce,

Mr. Billy Kelleher T.D., as well as Enterprise Ireland representatives to mark the major contract win and celebrate its significance for Irish-Russian commerce. News of the deal was widely reported across the national Irish press with headlines in the Irish Times, Sunday Business Post and Irish Independent among other high-profile national media.

Commenting on the announcement Minister Kelleher said:

"i-conX is the world's fastest growing interconnect vendor; securing 14 new contracts since 2006. This latest contract represents another significant milestone for the specialist provider and should be an inspiration to other software and high technology companies seeking to export their products and services to consider this extremely promising high-growth market."

Russia's telecommunications market is heavily regulated with strict licence separation with regard to international, national, regional and local traffic,

and regional spectrum (mobile) licences. Tele2 Russia holds licences in 20 regions, across 11 separate time zones and so required a solution with the capacity to cope with the proliferation of complex interconnect scenarios that could arise from the interaction between the Country's carrier levels.

As well as the flexibility to work around these types of regional anomalies, our solution delivers the functionality to manage billing requirements within global corporations, involving numerous subsidiaries or legal entities. This means that telco groups can manage billing operations centrally at both an individual and group wide level. In addition, our reporting tools allow real-time visibility of interconnect transactions across a wide variety of business units.



(Left to right) Yuri Dombrovsky, Chairman, Tele2 Russia - Mr. Billy Kelleher T.D., Ireland's Minister for Trade and Commerce - Gavin Stewart, Vice President Sales and Marketing, i-conX Solutions - Mike Hogan, Manager Russia & CIS, Enterprise Ireland

"News of the i-conX deal was widely reported across the Irish national press."

Enterprise Ireland's Head of International Sales and Partnering, Gerry Murphy concluded:

"This significant contract with one of the world's leading telcos confirms i-conX's position as a global expert source for independent business advice, as well as a trusted service provider and will spur the company's next wave of global growth."

i-conX on the Road



Revenue Assurance for High Growth Markets

18th – 21st January

Here we presented on 'Identifying and characterising the opportunities and trends in interconnect billing' and the implications for operators in high growth territories.



IIR Interconnection World Forum

26th – 28th January

The IIR Interconnection World Forum has traditionally been an important event for us and this year was no exception, with our CEO chairing the opening day and presenting on next generation billing.



Capacity Middle East

23rd – 24th February

The Middle East continues to be a prime market for us and at Capacity Middle East we took the opportunity to demonstrate our new credit management module which will particularly benefit telcos operating in the region.



Billing & Revenue Management

10th – 12th March

Our new Vice President Asia Pacific, Veronica Shum, made her i-conX debut in Kuala Lumpur as part of our progress in this important market.



EI Trade Mission to Moscow

18th – 21st May

As reported on this page, we formalised the Tele2 Russia contract during the Enterprise Ireland (EI) trade mission to Moscow.

True Integration: i-conX to Launch Full Route Optimisation Functionality

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Product Manager



i-conX is to supplement its status as vendor-of-choice for interconnect billing by launching a fully integrated route optimisation (RO) product in late 2009.

This product will present a unique proposition to the market – the world’s first, truly integrated, single-database interconnect and route optimisation solution, boasting common reference data capability and with a common GUI look and feel.

Hand in hand with the benefits of full integration, customers will still have the flexibility to take route optimisation or interconnect products as a stand-alone solution, and always with the option to migrate seamlessly at a later date to the full combined solution, if they wish.

On paper it makes sense to have a fully integrated system, especially when you consider the similarities between reference and carrier rate data often maintained by billing and RO departments (see Figure 1).

While these two systems may be operating efficiently in parallel, there is an argument that an operator’s efficiency can be further enhanced by streamlining departmental efforts within one system, thereby allowing more time to be spent on other areas such as business analysis.

The launch of our route optimisation application represents an exciting new era for i-conX. As well as being enthused by the opportunity to bring this offering to our customers, we now have the capacity to offer truly integrated solutions.

Integrating the benefits

Integration can happen on a number of levels. While both billing and RO systems can be marketed as ‘integrated’, i-conX’s integrated solution will be completely transparent to the customer since it will share a common core database.

Where typical integrated solutions will often require back-end jobs to align data to/from systems - which could lead to performance strain as well as potential data leakage if either system fails - the i-conX RO

module can be integrated with the existing interconnect system over a single database. This means that it can also be offered to the market as a stand-alone solution, depending entirely on individual customer needs.

“ This product will present a unique proposition to the market – the world’s first, truly integrated, single-database interconnect and route optimisation solution.”

By adopting a truly integrated approach telcos can benefit from:

Single database integration

- There will be a notable reduction in the time taken for RO deployments if the data gathered for the interconnect system has already been implemented.
- No risk of data leakage between interconnect and RO applications since back-end jobs will not be required to transfer data to/from both systems.

Common login and GUI

- Users will be issued with a single login whether the RO system is purchased as a stand-alone or integrated product.
- Subscribers will also share a common GUI look and feel, as well as menu structure. However, customers using the integrated solution will have the advantage of being able to manoeuvre between both products, seamlessly enhancing usability and workflow.

Common reporting

- Company users within different departments will have access to shared information between billing and RO systems.

Clear path for product upgrades

- Because the RO product will be broken down into key modules, operators with the existing interconnect system can easily add relevant modules as and when the business demands.

Reduction in training

- Removing the need for separate departments to maintain reference data and duplicated efforts, such as carrier rate import, will mean that training on shared activities needs only to be carried out once.

With customers expecting lower cost calls but seeking improved quality, our new RO offering enables operators to meet the growing demands to succeed in the delivery of voice traffic.

“ On paper it makes sense to have a fully integrated system, especially when you consider the similarities between data maintained by RO and billing departments.”

In the next issue of i-conXpress, we will take a look at the principles of route optimisation in more detail.

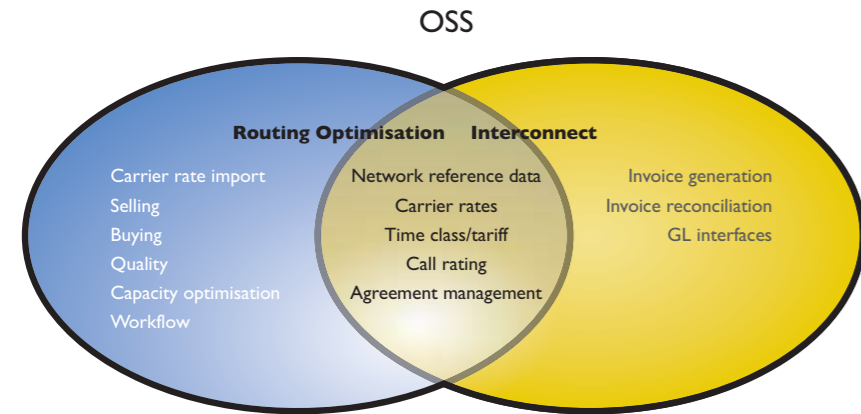
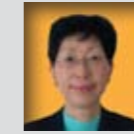


Figure 1 demonstrates the considerable overlap between the reference and carrier data often maintained by interconnect billing and RO systems.

New Starters



Co-author of our lead WiMAX article, **Veronica Shum** joins i-conX to focus on business development in the AsiaPac region. With 20 years experience – the

last decade of which she has specialised in interconnect – Veronica is a high profile, well respected industry figure. During her time with Integration Management P/L she established an Asia Pacific clientele for its interconnect billing solution in>Bill and is now transferring her IT, computer science and business management skills to support i-conX in building our presence in the world’s fastest growing telecoms market.

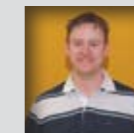


Nigel Camp has joined us as Product Manager and Subject Matter Expert (SME), with a current emphasis on Route Optimisation (RO). During his 10 years

in the telecoms industry, Nigel has worked with Subex Azure, Monnet, Interroute and Colt Telecom and has gained particular expertise in RO. In his role with i-conX, Nigel is working closely with the company’s newly assigned Software Engineers to drive ongoing research and development into this important implementation and as such is a key figure in our future business plans.



Supporting the ongoing development of our RO offering, **Martin Corley** (left) and **Adrian Cahill** (below) have been appointed as specialist Software Engineers at our Dublin HQ. The new team members both boast a raft of qualifications and relevant industry



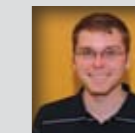
experience. Martin has a Masters degree and previously worked with Microsoft; while Adrian spent five years researching the streaming of multimedia content over IP networks as part of his PhD.

As well as introducing new team members dedicated to driving our specialist business forward in new markets and for new applications, we have also sought key personnel to enhance our existing services.



Micheál O'Dwyer has joined the Dublin office as Mediation Specialist and Business Analyst. Drawing on his 13 years experience in the telecoms

market, including a position with one of Ireland’s top three mobile operators, Meteor, Micheál performs crucial analysis of EDR formats received by customers to identify the appropriate processes for importing the data.



A former Billing Analyst for British Telecom, **Gael Quinio**, joins the Dublin team as a Junior Interconnect Analyst and will be responsible for looking after

customers subscribing to our SaaS. With a relevant degree obtained from the Université de Nantes in France, experience with one of the world’s leading incumbent operators and a fluent speaker in French, English and Russian - as well as basic Spanish - we are confident Gael will prove an invaluable addition to the team.

Quiz



In recognition of our new ties with Russia, we decided to dedicate this issue's quiz to finding out a little bit more about our Eastern European colleagues' culture and customs.

Babushka is the Russian word for:

- a) Old lady
- b) Old friend
- c) Old man

A Kalinka is:

- a) A headscarf
- b) A dance
- c) A sword

The festival of Kolydaki is celebrated by:

- a) Making pancakes
- b) Making masks
- c) Making a snow lady

Email your answers to info@iconxsolutions.com to be in with a chance of winning an i-Pod Nano.



Winner

Congratulations to NAVANEETH KUMAR, Supervisor - Billing, Applications and IT, at Wataniya Telecom, who won our African themed quiz in the last issue. Navaneeth correctly identified Atai as a Moroccan green tea, Dama as a religious ceremony performed by the Dogon people and an Umshiza as a public duel between Zulu men.

Diary Dates

Diary Dates 2009

31st Aug - 3rd Sept 2009: African Telecoms Billing & Revenue Management (Cape Town)

21-23 Sept: IP & Telecoms Interconnect Strategies (Berlin)

30 Sept-3 Oct: Carriers World (London)

13-14 Oct: Capacity Africa (Cape Town)

2-4 Nov: Carriers World CEE (Vienna)

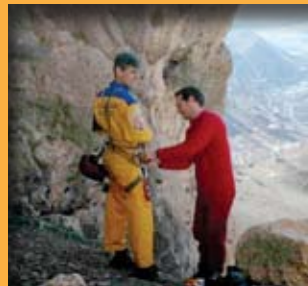
4-5 Nov: Capacity Asia (Kuala Lumpur)

10-11 Nov: Iraq Telecoms (London)

23-24 Nov: Capacity Europe (Amsterdam)

For more information, or to arrange a meeting with i-conX, please contact:

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Vincent's Diary

'There ain't no mountain high enough' to keep our Implementations Analyst, Vincent Coessens, from delivering our promise of 'on-the-ground' support to our global customer base. Here, we see Vincent on-site during an i-conX project in Kurdistan, Iraq, where he took the opportunity to hook up with the local caving club on a weekend excursion.

Many non-cavers will not appreciate that to go down, you often have to first 'go up'. In this instance, Vincent visited Kilka Simaq mountain, between Koya and Dokan. The bright red all-in-one jumpsuit is believed to have triggered an 80s' fashion revival amongst the Kurdish youth!