

A SAVERA COUNTENANCE?

Alun Lewis interviews Inderpal Singh Mumick, co-founder, CEO and Chief Technology Officer of Savera Systems at the company's New Jersey premises, about their solutions for bringing Web-based interfaces to bear on operator and customer relationships

The last ten years have seen a host of new technologies impact on the telecommunications world. From access to switching to backbone transmission, various advances have combined to redraw traditional models of cost, capacity and performance. Attention is now starting to focus instead on the wider implications of these developments for the actual commercial structure of the whole industry. In particular, these involve the role that the Web has to play in the new business relationships that are emerging between operators and customers, between the operators themselves and with their own internal IT and communications structures. As the monopolies have ended, services must be delivered across multiple networks, adding another level of complexity to an already intricate process.

Getting the right strategy

It's certainly true that the telecommunications industry has, to a certain extent, failed to take advantage itself of technologies and applications that its customers are already using in their day to day business activities. Outside of the US, competitive forces have been slow to gather and drive change within the operators themselves. That is no longer the case. Time to market, a rapid return on investment and market perceptions of both customer and shareholder value are now critical to business success.

In this context, operators must look to leverage every advantage they can from new ways of doing business, particularly with the merging of packet and circuit switching. For Savera Systems, this offers an opportunity to bring their expertise to bear on an increasingly important sector of the market – real time, scalable and flexible billing and information management solutions that bring the power and ubiquity of the Internet and Web-based interfaces to bear on operator and customer relationships.

AL: Inderpal, telecoms used to be a monolithic sort of business in Europe – one operator, one level of service and one

centralised billing system. How do you see the structure of the new world emerging ?

ISM: Most of the underlying regulatory, technical and business drivers that are creating this new environment are already well understood. Where there's less certainty – at least in the current European context – is in understanding the impact of complexity on what was once a very straightforward business. Let me explain what I mean by this.


In the space of just a few years, we've seen the number of operators in many countries around the world multiply by between factors of ten and a hundred, as well as a parallel fragmentation of single operators into multiple entities. The UK alone has over 400 licensed operators, for example. It's therefore increasingly unlikely that a call – either voice or data – will remain on just one network to reach its destination. For that call to be made successfully or for a particular service to be invoked, there must be interaction between the different operators to deliver consistent levels of service and – most importantly – to bill appropriately for interconnect services.

Now consider the implications of this for the number of links that must exist between each operator. The figures don't grow arithmetically as each new operator enters the market – they grow exponentially ! Add onto this another level of complexity brought in by the Internet IP-based traffic and you have the potential for an interconnect billing nightmare.

All the available figures bear this out. Billing World magazine estimates that that up to 80 per cent of interconnect bills are incorrect. Other industry commentators have been quoted as saying that as many as half of all European operators don't even have interconnect billing systems in the proper sense. When you consider that interconnect charges are starting to make up to as much as 40 per cent of total operator revenues in mature telecom markets, this translates into a frightening amount of hard cash.

Why is this ? The fundamental reason is that traditional

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approaches to billing fall over when complexity reaches a certain point. The fact that they've kept up with things by moving from a mainframe to a client server architecture misses the point entirely. What's happening in reality is that an increasingly fragile – and expensive – house of cards is being built to handle new applications and functionalities.

The clients get 'thicker' with all the attendant problems of cost and software and hardware management. New intercarrier agreements that don't follow traditional ITU models emerge. Traffic expands and systems stop being scalable past a certain point. The cards start falling.

Put bluntly, the old ways are failing and we need a new idea – that's why Savera, right from the start, decided to use the Web as a 100 per cent basis for its current billing solutions – InterCarrier and RealTime Prepaid.

AL: Carriers have been happy enough to help their customers use the Web for business, but they seem to have been slow to adopt it themselves. Why do you think they should use it ?

ISM: Frankly, there's no other way that they can solve the problems that are starting to bubble up out there. The Web is, at least in the US so far, becoming the standard model for business IT – it's reaching right into the heart of every industry and changing it dramatically. It even has a name – e-business. An e-business is a business that uses the Web for running its business, including running the business applications used by its employees. The issues that used to concern people about reliability and security for mission critical applications are being solved since so much money is being pumped into the sector and the underlying infrastructure. If I was an operator, I'd worry far more about the length of time that my traditional billing system is down than about now trusting my core applications to the Web.

Using the Web enables us to actually remove layers of complexity from billing – not be forced to add even more of them to handle new situations. Other industries are routinely accessing key applications such as SAP through the Web – with deregulation and competition, the telecoms business is open to same commercial forces as any other sector – and can benefit from the same IT tools.

Our InterCarrier product, for example, is a Web-based settlement and management solution for all the entities that are now inhabiting the networking space – telecom and IP carriers, resellers, service bureaux, and trading houses. It can be accessed through Intranets, Extranets or the public Internet, processing billable transactions in realtime to give users the ability to track and bill for use of each other's voice, data and IP networks. With the Web as the underlying model you don't get any problems with installing and updating clients or expanding the system.

In addition, you can easily make a host of real time changes to all aspects of billing functionality such as subscriber management , rate alterations, customer care, discounts, price planning and ►

soon, as well as generate reports for marketing, financial and executive uses. This part of the system uses our patented Mareti technology which can capture call usage or transaction data and gets it processed as soon as it's recorded. This has a huge flow through impact across the whole value chain, giving faster feed back on new services, a wider range of charging and customer care options, but simultaneously gives greater control over credit and fraud risks.

InterCarrier also takes full advantage of the inherent flexibility of the Web by being based on the increasingly popular Application Service Provider (ASP) concept. For a start, carriers don't actually need to physically own their own billing applications – a useful approach for new entrants. Billing tools and information can be accessed from wherever there's a Web-enabled terminal and an IP link. Operators are going to have to increasingly re-model themselves and transform into e-businesses in their own right. Our systems enable them to do this.

The other upside comes from the sheer ubiquity of the Web now as an interface that has gained wide acceptance with the general public. From the secretary to the CEO, access to tools and information is through a familiar Web browser interface. We use the same browser interface and that reduces both installation and training costs.

AL: So how's InterCarrier going down in Europe so far ?

ISM: One of our biggest customers there so far is the Tele2 group, a multinational wireline carrier that owns 17 operators in 17 different countries. They're using InterCarrier in ASP mode to deliver intercarrier billing services across the members of their Group.

In their own words, Kurt Demeuleneere, their technical controller, was recently quoted as saying: 'We expect substantial improvements in controlling our operations using InterCarrier. Now we can check and analyse all incumbent and carrier invoices on a per minute basis, by time of day, service type and destination. The real benefit is that InterCarrier is so easy to use. It allows us to download any data into an Excel spreadsheet, make changes and then upload it. This saves Tele2 a great deal of time and virtually eliminates manual input errors.'

Antti Antonov, Tele2's International Business Manager also supported our strategy: 'Managing interconnect agreements amongst various carriers is getting more and more complex in the increasingly deregulated telecommunications environment. Savera's agreement-centric and Web-based system will allow us to leverage the collective buying power of Tele2 and remain highly competitive.'

AL: Along with voice/data convergence and the Internet, PrePaid services have been one of the hottest recent things driving growth. How do you see the sector evolving ?

ISM: Once again, we see the Web and related ASP model as being at the heart of change in this area. When we started Savera back in 1997, we saw



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two markets desperately in need of the benefits that the Web can bring. The first, as I've discussed above, was the whole morass of interconnect issues. The second was prepaid services, in all their variety. This led us to develop our RealTime Prepaid system.

Prepaid has had a huge impact on the success of the mobile market, solving at a single stroke all the previous problems to do with customer creditworthiness or fear of overspending. It's already starting to underpin a lot of growth in the Voice over IP services market, especially as you'd expect in the international call sector. The third area – and we're just starting to see this take off – is in pre-paid ASP services.

The ASP services market is currently running at around \$1 billion a year. Predictions indicate that this is going to grow to around \$11 billion by 2003. Where does the concept of pre-paid fit into this ?

Essentially, there are an increasing number of applications that are being centrally hosted for customers to access and use as and when they need to. However, for many potential customers, especially small to medium enterprises and those starting off in the e-business culture, there may be uncertainties about their credit rating that would interfere with traditional leasing or bureau software solutions. They themselves might be unsure about how much demand they may have for particular applications that militate against outright purchase of an entire application.

In this context, prepaid ASP offers an attractive model both to the application provider and the customer. The list of potential applications is enormous – as is, naturally, the potential customer base. From purchasing to customer care systems – even Human Resources – can all adapt to prepaid ASP. The key issue with this is that the supporting systems must operate in real time.

To exploit this, our RealTime Prepaid solution – as its name implies – delivers this functionality both for traditional telecom applications in the mobile and VoIP sectors as well as this emerging ASP world.

Users – whether they're telecom operators or Internet businesses – are able to provide current information to customer care, marketing and finance departments as well as to subscribers themselves over a secure Web interface. It has a full range of Application Programming Interfaces (APIs) so that carriers can incorporate 3rd party solutions like service provisioning, credit card processing using cyber-cash, Short Message Services (SMS), Interactive Voice Response (IVR) and inventory management.

AL: I noticed that both you and one of the other co-founders of Savera came from the very traditional telecoms environment of Bell Labs. Where do you see the rest of the journey taking you and Savera ?

ISM: Having a background like that has been very valuable. A few years ago we saw the coming power and flexibility of the Web and recognised how it could be adapted to support operations in the telecommunications – most crucially, without losing any of the 'Bellhead' values of reliability, integrity and quality of service.

Over the last couple of years I think that Savera has demonstrated the benefits that the Web approach can bring to the telecommunications environment. It's almost like the wheel is coming full circle. The telecoms business has helped the Web change the world – it's now changing the way that telecoms itself does business. ■

