

The Infozech Bulletin

A monthly Newsletter brought to you by Infozech

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editor's note

Friends,

The dynamic telecom market, of which you are a part, remains one of the fastest growing and most competitive segments of the global economy. One of the largest implementers of ICT products and solutions, the telecom sector is forever on the technology treadmill, keenly watching out for offerings that are specialized, cutting-edge and in tune with its rapidly changing requirements.

One of the key challenges that organizations such as yours face today, is maintaining the momentum on new product and service introductions and cutting time-to-market, to cater to an ever-demanding and discerning customer base.

It is our endeavor, therefore, to keep you abreast of the technology developments taking place in the global marketplace and their implications for incumbent telcos and emerging, Next Gen telecom services providers. *The Infozech Bulletin*, the newsletter you hold in your hands, we hope will fulfill this purpose.

The *Bulletin*, will also provide you a window into the special work that Infozech, an India-based company is undertaking in the telecom space, with its wide range of billing and customer care solutions. Infozech Software, which has built expertise in Billing, Rating and Mediation solutions, is helping global telcos enhance competitiveness, increase efficiencies, interface better with customers, achieve bottom line improvements and realize their business objectives.

We hope this monthly newsletter enables you to gain insights on the technology that is getting available and how you can deploy to achieve significant benefits within your organizations.

Do get back to us with your feedback on the *Bulletin*.

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Ringing in a new BUSINESS OPPORTUNITY

The term "broadband" has become commonplace for describing the future of digital communications. Put simply, broadband means having a wider range (band) of frequencies. It is widely used to refer to a range of technologies being offered or developed for the delivery of data communications services, like faster, always-on access to the Internet and ease in downloading heavy files like music and movies.

Today's broadband services represent a new generation of high-speed transmission offerings that are aimed at residential and small business users. The primary competing technologies in broadband access are asymmetric digital subscriber line (ADSL) and cable modems, although there are a range of other options. Both of these services provide speeds in the region of 512 Kbps to two megabits per second (Mbps)—eight to 32 times the speed of an ISDN channel.

Trends defining the broadband market

The broadband market is being characterized by the following trends:

- Broadband penetration is increasing rapidly. It reached 21 percent of US homes during 2003, representing a 5.7 percent increase from the 2002 figures.
- DSL had an estimated 30 percent of the residential market, but took 45 percent of fourth quarter 2003 additions
- Canadian high-speed data (HSD) penetration reached an estimated 36 percent during 2003
- Telco-cable competition is shifting to become "bundle against bundle," with telcos adding TV services to their bundles.
- DSL-based TV is gaining momentum outside the US. For the longer term, telco network upgrades are looking increasingly necessary.
- Video-over-IP is expected to become the next big thing, driven by better video compression technology, higher DSL data speeds, the growth of home networking, and low-cost media adapters that link the TV to a broadband connection

Facing rapid expansion, creating opportunities

With the number of worldwide broadband subscribers expected to reach 150 million by 2005, broadband is rapidly becoming a mass market and a lucrative distribution mechanism for online content and services. Various types of service providers—including incumbent PTTs, alternative carriers, cable operators, ISPs and ASPs—are looking to leverage the burgeoning broadband access market as a means of introducing new revenue-generating IP communications services.

On Billing, rating and CRM

A robust, world-class billing system forms one of the most critical components of a telecom operator's infrastructure, as it has a direct impact on the bottom line.

Billing can be defined as the process of adding up the price of each transaction made in a certain fixed period to determine the final aggregate amount, followed by the generation of a printable image of the bill. Pricing is a key aspect of billing. Records of the transaction are retrieved from the storage system at the end of the fixed period and then processed to generate the final bill. This bill will also include other monthly fees and credits. Billing includes various components, including rating, discounting, promotions and pricing.

Rating, meanwhile is the process of computing a rate for usage of a service-voice or data. Rating means pricing individual calls. Each call is sent to a rating engine and transactions are rated. The billing system takes all these calls and aggregates all other charges to arrive at the final pricing. Pricing is the process of computing a price for a call by doing rating, discounting, and applying promotions—short-term incentives given to customers.

A CRM solution alongside a billing system provides telecom operators with a user-friendly interface for creating accounts, services, products and packages. Besides, the account information, product/service details, payment, adjustments, call rating details and invoices are all stored in the billing system, and making it accessible online can provide instant information to customers.

Why telcos need a robust billing, rating and customer care solution: Changing technologies, volatile market trends, mergers and acquisitions and altering regulatory environments means global telecom operators are constantly devising new strategies to keep their heads above water. What they need is robust billing systems that:

- reflect the change in the aggregate if the price of an individual transaction changes
- offer configuration tools that allow for quick loading of business rules, enabling them to rapidly take new products and services to the market for additional revenue streams and cash flows
- provide tools for customizing or personalizing billing and reporting
- fine tune billing cycles and account parameters
- create promotional discounts that are easy-to-implement
- apply invoice corrections immediately
- manage accounts receivables and payables
- track account disputes
- provide customer care with Web-based interfaces

Moving towards Voice-over-IP (VoIP)

The Internet and other public or private communications networks that deploy the same protocols (TCP-IP)—used traditionally as data, for sending e-mail and browsing—are increasingly being harnessed for transferring voice traffic. Voice over Internet Protocol (VoIP), clearly is the new name of the game and such services are gaining popularity across the globe.

On-line music services boom to drive billing and customer care solutions market. Take the instance of online music services. According to business intelligence firm, Forrester, the online music business is expected to grow from a projected US\$ 308 million in 2004 to around US\$ 4.4 billion in 2008.

Clearly, the broad acceptance of the Internet is creating demand for a means of music content delivery. Digital music media is set to leverage the Internet transmission system. Consumer markets have accelerated demand for sophisticated communications transmission.

Sales of digital tunes, meanwhile, in 2004, in the United States reached US\$ 270 million, more than double the takings from 2003, according to JupiterResearch. That revenue will rise to US\$ 1.7 billion, or 12 percent of total consumer spending on music, by 2009, the research firm projected.

Downloading music over broadband, then, is going to be a major sunrise area for Next Gen service providers and a significant opportunity exists for software companies that can develop solutions that support pay-per-download, subscription and customer care services for this emerging market.



Benefits of Voice over Broadband

VoIP networks not only provide a cheaper means of carrying voice (with considerable network and administrative savings), they also support an enhanced range of services and personal productivity applications via an IP phone's interactive screen, that are catalyzing the growth of broadband deployment, particularly among enterprises worldwide.

The advantages of a broadband connection for individuals and enterprises include the fact that using it, people can talk, get a physical phone number, carry the phone and use voice mail and conferencing facilities. Key beneficiaries of this technology include international callers, frequently traveling executives, students and enterprises (for inter- and intra-office communication).

Enterprise customers, in fact, are discovering that new applications capabilities, enabled through these "information appliances," provide an equal, if not greater benefit that the initial cost savings model used to justify an IP-PBX implementation.

The emerging business opportunity

A number of opportunities exist for players—both IP services providers and content and applications developers—in the voice-over-broadband marketplace. As far as Indian software and services players are concerned, a significant potential exists, especially for companies specializing in the telecom space that are already catering to the needs of leading broadband ISP, cable operators and businesses using broadband applications.

Infozech enters Mexican market



Infozech Software recently announced its entry into Mexico, with a contract from MCM Telecom, a reputed broadband services company.

MCM will be deploying Infozech's flagship

billing and customer care product, eBill, for its customer billing services, over the next six months. Besides implementing the solution, Infozech will be involved in a multi-year support engagement with the Mexican firm.

Infozech will be undertaking billing and customer management for MCM's broadband pre-paid and post-paid Voice-over-IP services, using eBill. The product, an end-to-end billing application, will be used for provisioning, customer management, recurring billing, auto payments and credit monitoring by MCM. eBill will also offer MCM customers a Web interface for access over the Internet, enabling them to make online payments and avail other self-service benefits.

Infozech's i-Rater sets price/performance record on Sun Solaris platform

- Rating solution for telcos performs 50 times better than competing products
- Exponentially reduces Total Cost of Ownership
- Ranks among the world's fastest Rating engines

Infozech's i-Rater has achieved breakthrough performance on the cutting-edge Sun Solaris10/Sun Studio 9 platform, making it one of the world's fastest rating engines.

Infozech, which shares a Technology Partnership with ICT major Sun, partici-

Hughes Software and Infozech launch VoIP-based Prepaid Billing Solution

Communications software leader Hughes Software Systems (HSS) and Infozech have jointly launched a VoIP Prepaid Billing solution for global customers.

Targeted at Next Gen and incumbent telecom services providers, the integrated offering is a readily deployable Solutions Framework that enables users to cut down the time-to-market new services and make them business ready in the shortest possible time.

The Solutions Framework combines Infozech's Precall Prepaid Management platform—which provides card management, billing and customer care features for VoIP services—and HSS' VoIP Gatekeeper. The Web-enabled VoIP solution enables telecom service providers to offer flexible pricing and charge plans for their pre-paid services, manage card generation, card distribution, card re-charge and billing and introduce customer self-care options.

pated in the benchmark to demonstrate the scalability, high performance and economies of scale offered by i-Rater. The exercise also showcased i-Rater's ability to handle over 250 million transactions per hour on a medium range Sun Fire Server.

While most service providers produce less than one billion rateable events per day, i-Rater can rate this in a four-hour period, on an 8-processor machine, thereby significantly reducing the hardware and software investment for a large service provider.

FAST facts

- ◆ The telecommunications market outside the United States is estimated to be close to US\$ 1.4 trillion, according to the Telecommunications Industry Association (TIA)
- ◆ The overall telecommunications market internationally is poised for a healthy 10.3 percent compounded average growth rate (CAGR) through 2006
- ◆ International spending on communications services is expected to reach US\$ 788 billion in 2003—a 10.5 percent increase over 2002
- ◆ The largest regional market outside North America is Asia-Pacific with total telecommunications revenue expected to reach US\$ 421.6 billion in 2003, up from \$380 billion in 2002
- ◆ Within Asia-Pacific, Japan continues to exhibit only modest market growth while China and India are growing rapidly
- ◆ In recent years, growth in the subscriber base for mobile phones in both China and India has exceeded 80 percent CAGR
- ◆ Based on rapid market growth, telecom billing has metamorphosed from being a necessary expense into an important strategic tool, with telcos looking for scalable billing systems
- ◆ A number of leading Indian software and services companies are finding major opportunities in the global telecom market.



Infozech's eBill helps leading Indian telco introduce new services quickly, efficiently and at reduced costs.

Infozech is implementing a billing and customer care solution for an incumbent communications services provider in India, on the organization's Intelligent Network (IN). As part of the project, Infozech is working closely with a leading Network Equipment Provider (NEP) and Hughes Software Systems, the company providing the systems integration capabilities to interface the billing system with various IN equipment and existing third-party applications.

The customer

A premier telco in India with a PSTN network of around 45 million lines, covering 5,000 towns and 35 million telephone connections. One of the fastest growing communication service providers in India, the organization has a net worth of around US\$ 13.85 billion and is offering a host of services to its vast subscriber base.

The business requirement

The key objective of the customer was to rapidly roll out new, value-added, IN services across the country and maintain its position as the Number One telecom service provider in India.

The idea was to successfully harness the capability of the Intelligent Network (IN) System, which provided a framework to create new services and flexibly modify them in a centralized place, independent of the switch. The service provider was keen to launch the following new offerings:

- Free Phone (FPH)
- Premium Rate Service
- Prepaid Virtual Calling Card (VCC)
- Account Calling Card (ACC)
- Tele-voting

- Universal Access Numbering
- VPN
- Credit Card Calling (CCC)
- Local Number Portability services

The challenge

The customer was faced with the challenge of introducing its general IN services across four locations and its mass services in one location. The idea was to do so at a lower-cost of ownership (TCO), with reduced operational costs. On the Infozech side, the company had to ensure that its customer care and billing solution delivered major financial benefits and minimized the delivery cycle time for new services. Since defect control was crucial for the customer, Infozech also had to achieve near zero error tolerance.

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The vendors selected

While the Network Equipment Provider was involved in implementing the entire IN infrastructure, Infozech was retained as the OSS/BSS Independent Software Vendor to understand the billing needs for the new services on the anvil, manage the future needs and recommend, implement and inte-

grate them into the existing billing system. HSS, with its expertise in communication network interfaces, was given the charge of system integration.

The Infozech solution

Recognizing the need of the customer to cut time-to-market of new services and introduce multiple offerings, marketing programs and technologies quickly, Infozech brought to the table its flagship product, the eBill Customer Care and Billing solution. Considered critical for a rapid and successful service launch, the solution offered effective and accurate billing for IN services and enabled the customer to undertake the following:

- Process the CDRs and generate a detailed bill for each service, in the format required by BSNL
- Print the detailed bill in the given format centrally, as well as from a Remote Operator Interface (ROI)
- Query the bills/call records of a prepaid card and other IN services for a particular subscriber from ROIs

The Infozech advantage

Infozech Software Ltd. was selected as a preferred Independent Software Vendor (ISV) for this project owing to the following advantages it offered the customer:

- Expertise and understanding of telecom networks and OSS/BSS solutions
- Understanding of the Service Provider's business processes
- Dedicated, skilled team of telecom professionals for providing OSS/BSS solutions
- Capability to track technology
- Low Total Cost of Ownership
- Ability to provide 24x7 support