SPECIAL PULLOUT SECTION

TELECOM BUSINESS 2011

Fast Forward to an OTT Future in IPTV

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Two years ago at TelcoTV, I presented a future vision where over the top (OTT) content delivery would become a significant driver for change in our industry—and a key part of the future consumer entertainment experience.

A number of you shared this view, but we were all unsure what timescales and technical challenges were involved in delivering actual commercial services.

As we move toward the end of 2011, where are we with OTT?

Firstly, let's be in no doubt that commercially deployed OTT is happening. In early 2011, a major European operator deployed a hybrid/OTT service delivering a wide range of traditional broadcast and Internet-delivered content plus applications in a compelling offering. In the United States, GoogleTV and Logitech launched their retail OTT device alongside Roku and Boxee.

Secondly, the appetite for content is clearly there. The rapid rise in viewing figures for catch-up TV and video-on-demand—via Hulu and Netflix, for example—is reshaping our industry, with cord-cutting now acknowledged, even by initial skeptics, as a threat to existing pay-TV business models.

Thirdly, it has become the major talking point in our industry. Whether it's TV manufacturers, IPTV service providers or the cable networks, OTT is now on the roadmap.

So, how should the IPTV industry respond to these potentially seismic changes? As the leading provider of IPTV set-top boxes in the North American market, we are seeing very encouraging developments that will enable IPTV service providers to not only survive but prosper in this new environment.

The great news is the IPTV industry already has a head start. We understand broadband and how to manage content across IP networks. Quality of service and experience are core to the success of services—and these will remain constant in the OTT world. There is a clear understanding of the importance of "anchor content"—the sports, movies and entertainment that customers will continue to demand as part of their package.

Many customers we speak to are now building out networks—in some cases fiber to the home—that will make OTT a natural extension to their existing service offering. It's this combination that I believe will be the real winner, with IPTV delivering the consistent broadcast and quality on-demand content complemented by OTT to deliver niche content, applications, gaming and communications.

To meet this challenge, the IPTV ecosystem is responding with new innovations to support customers. For Amino, this means enhancing our set-top box range with OTT functionality to build on the very positive acceptance we have experienced with our next generation IPTV devices in the North American market.

With over 200 customers now actively trialing or deploying our existing range, we look forward to introducing this new OTT feature set to build on our market leading position. Innovation is our cornerstone—as acknowledged by Infonetics Research earlier this year, we're #1 for our product roadmap according to market feedback. But it's not just the device—it's also working across our extensive ecosystem in North America to ensure we deliver the complete package that makes commercial sense to our customers.

These are exciting and defining times. The TV status quo is being redefined, and the future winners and losers will be dictated by the activity or inactivity of the incumbents and pretenders to the industry thrones. The new TV landscape may not be mainstream this year—or even in 2012—but I would contend that today's OTT movers and shakers will buy themselves an opportunity to dominate in the future. Equally for us industry players, making the right proposition and customer choices will be essential for our future prosperity.

The Network's New Dilemma: Balancing Costs With User Experience in the Web 2.0 World

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With today's rich Web 2.0 content, particularly video, in our "always on" world, service providers are struggling to keep up with customers' skyrocketing bandwidth demands. Customers expect consistent availability of high-speed Internet access (with average speeds of 3.9 Mbps), to consume all the rich-media applications and services they want to run their lives and businesses.

If you consider the file size for many sharing sites, like RapidShare of MegaUpload, or software updates from Microsoft, Apple or Adobe exceeds hundreds of megabytes per file, and a single video stream from sites like YouTube or Netflix consumes between 500 MB and 700 MB (that's not even HD, which can be up to 3,600 MB), it's easy to see how all this rich, multimedia content is placing a huge burden on the network.

Then consider what happens when "flash mob" events occur that have people flocking to the Internet looking for information. These unplanned spikes in traffic spell trouble; and at the first sign of trouble, service providers are on the hook. Regardless of where a problem originates, a customer's Internet service provider tends to be the one who gets the call; and these calls are costly in very real terms, from call center staffing and operations to reduced customer satisfaction, affecting loyalty and churn.

This is why service providers everywhere are looking at how to support all this rich Web 2.0 content, as well as architect their networks to deal with unusual traffic spikes, in a way that is cost-effective and meets customer expectations. The options to address these ever-escalating bandwidth requirements tend to be limited—add more bandwidth or upgrade the network—and often result in significant operational or capital investments. There is, however, a tried and true technology that warrants a new look. Caching may be just what service providers need to help significantly contain bandwidth costs and improve their customers' experiences.

Caching allows service providers to reduce the traffic traversing their upstream links to save on expensive bandwidth and store content closer to the customer to deliver a faster, better experience. For example, customers who use Blue Coat, which has been providing service providers with caching solutions for the past 15 years and has over 20 patents specific to Web caching, have significantly cut infrastructure costs and delivered a more responsive Web experience with caching. Typically, providers spending more than $10 per Mbps/month see a return on investment in roughly 12–18 months.

Case in point, a regional telco, North-Eastern Pennsylvania Telephone (NEP), was looking to manage dramatic increases in its network traffic and subscriber growth. The telco turned to its managed service provider, Netegrity Consultants, which implemented Blue Coat's CacheFlow® appliance for caching Web traffic. The deployment delivered bandwidth savings of 40%—for every 100 requests to the Internet, approximately 40 could be served locally from the cache—and allowed NEP to cut its upstream bandwidth requirements nearly in half, resulting in savings of tens of thousands of dollars a month.

Another regional telecommunications provider based in Kansas was able to leverage Blue Coat solutions, including CacheFlow and the Blue Coat PacketShaper® appliance, to not only save on bandwidth and boost the user experience but also get full visibility on all the traffic on its network. It then used this information to create and deliver on different quality of service levels using Blue Coat to control and prioritize traffic, so one user couldn't interfere with another's experience. Immediately after the Blue Coat deployment, customer satisfaction increased. The provider found raising the priority of gaming applications had a direct, positive impact on the experience; in fact, users saw such significant improvements in response times for "World of Warcraft" and networked games played on consoles like Microsoft Xbox and Sony PlayStation that the provider attracted new customers due to word of mouth.

Caching enables service providers to adapt to the new bandwidth-intensive realities of the network. It can deliver real and significant cost savings and an opportunity to create new services that can help service providers differentiate themselves in the market, as well as monetize the ever-growing rich Web 2.0 content. Isn't it time you revisited your caching strategy?

To learn more and find out how CacheFlow can help your organization address today's network

The Dynamic Optical Layer: Simplified Network, Magnified Results

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Today's networks are more complex than ever before, with increasing connectivity requirements and bandwidth-intensive services that continue to evolve at a rapid pace. Dense Wavelength Division Multiplexing (DWDM) is the technology of choice for scaling the capacity of service delivery networks, but for many operators, this technology is far from optimal. When capacity needs increase, adding an additional wavelength is a time-consuming process—one that, as more wavelengths are added, becomes increasingly costly to maintain.

To remain competitive, network operators must reduce their delivery costs. To ensure consistently high levels of customer satisfaction, they need to minimize the time needed to provision or change services. Reliably achieving these goals requires network operators to make significant investments in their service delivery infrastructures in a way that addresses technical and financial challenges—both today and in the future.

The Myth of the Cost-Effective Fixed Optical Layer

A fixed DWDM-based optical layer has traditionally been seen as a more cost-effective solution than one based on Reconfigurable Optical Add/Drop Multiplexing (ROADM). While it is true that fixed optical layers may be cheaper to install, with growing capacity demands and unforeseen bandwidth growth, they are becoming much more expensive to manage and maintain over the long run. To enable the network to scale, today's fixed optical layer requires expensive, user-intensive procedures and significant pre-planning. In many cases, the full potential of the network with respect to capacity and interconnectivity cannot be realized because operators cannot move or change existing connections without violating service level agreements.

In this fixed optical model, after service equipment is installed, all wavelengths must be tested and rebalanced to provide equalization each time the network grows. Not only does this require site-by-site truck rolls to manually adjust the power of each wavelength, but the process also introduces the risk of human error and the possibility of a network disturbance, which can cause poor system performance or even outages.

The Benefits of a Dynamic Optical Layer

As part of the BTI 7000 Series of packet optical networking platforms, BTI's integrated approach to delivering a dynamic optical layer delivers significant value at all stages of service delivery—from installation to operation—to yield a strong return on investment for network operators.

The benefits of the dynamic optical layer are made possible because the packet and optical layers are married into one platform. By integrating Carrier Ethernet technologies with a touch-less optical layer and the service-centric management tools that simplify Ethernet and wavelength service delivery, network operators can build high operational value. The Dynamic Optical Layer consists of ROADM-on-a-Blade (ROB) modules for flexible, point-and-click wavelength routing, and DWDM Line Amplifier (DLA) modules for reach extension in an extremely compact form factor. The common control system, integrated on ROB and DLA modules, enables plug-and-play operation to simplify the planning, deployment, service provisioning, ongoing optimization, and power management of the network. These elements combine, as the system-oriented foundation of a packet optical service delivery network, to support a full-40 wavelength (400Gbps) system capacity and offers "any-wavelength anywhere" add/drop access, automated network equalization, and per-channel performance monitoring metrics. At a more technical level, the dynamic optical layer enables power balancing to be transitioned from a tedious, manual procedure to an automated process where components work together to automatically measure span losses, adjust the input power to amplifier dynamic range, set output launch power, continuously adjust per-channel equalization and compensate for channel and line variations.

Instead of looking at the network as a group of independent elements, BTI takes a fully integrated, systems-oriented approach to delivering a dynamic optical layer. All of the components work together to simplify and reduce the need for preplanning, manual provisioning, hands-on maintenance and site-by-site power adjustments across the entire network.

Making the Case for an All-Fiber Network

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It's hard to get a bunch of independent operating companies (IOCs) to agree on anything. That's one of the reasons they are called "independents." However, when it comes to building "greenfield" deployments, there seems to be universal agreement among IOCs that an all-fiber network is the most stable, scalable and efficient to operate. The problem is that many IOCs have a lot of existing copper or HFC plant and struggle between the high capital costs of deploying fiber and leveraging the assets they currently have in the ground.

Recently, however, the evaluation criteria for pulling fiber into these "brownfield" areas have changed as a result of major shifts in consumer behavior, technology options, and the competitive and regulatory landscape. As a result, business models are changing rapidly and, for some, radically—making fiber to the premises (FTTP) a much clearer option.

The Changing Business Model

While service provider voice revenues are declining, new broadband services are emerging. Video game consoles and TV set-top boxes that were once used exclusively for entertainment are morphing into devices used to communicate, connect and share. Table stakes for service providers in the future will be the ability to quickly deliver advanced broadband services, often characterized by low latency and symmetric high bandwidth. Those who can deliver these services most efficiently will be the "winners" in their markets. FTTP provides the best technology to meet these requirements head-on.

Making the Case

The case for moving to an all-fiber network continues to improve. Beyond the fact that the cost of capital will likely never be lower than it is right now, service providers should focus on these considerations when comparing fiber buildouts with improvements to existing copper.

> Lower Capital Requirements: Only fiber can claim a life of 20+ years with virtually no limits on bandwidth potential—reaping the benefits for a generation. Copper plant upgrades become a never-ending treadmill just to keep up with emerging bandwidth requirements. The second time a copper network is upgraded, in many cases the capital invested will have surpassed the cost of building a new fiber plant.

> Lower Operating Expense: Copper has significant physical and bandwidth limitations, and it requires constant maintenance and upgrading as well as a costly active-powered outside plant. Fiber is a passive network—only requiring power at the end points, where the subscriber picks up the cost of powering the connection. Service provider experience has clearly shown that a smaller staff is required to maintain and support a fiber network.

> Higher Revenue: FTTP deployment experience clearly shows higher customer satisfaction, lower churn rates, more advanced services, and higher percentage of consumers taking triple play bundles—resulting in higher average revenue per user (ARPU).

Expand Your Horizon

Fiber is a strategic investment linked to a long-term vision. Service providers investing in FTTP are fully optimizing their network in terms of subscriber take rate and ARPU, and their experiences show that these advantages have increased the speed of their return on investment.

There are many great FTTP success stories from hundreds of service providers in a variety of markets—especially in rural areas. Armed with solid business plans and a strong focus on addressing the needs of the local community, many rural providers have achieved a return on their investment in as little as five years.

Calix, North America's market leader in FTTP deployments, has a broad portfolio of innovative and high-performance fiber access systems. Talk to Calix and see how our Unified Access portfolio can help you move Fiber Forward in your access network.

Rural Telcos Can Help Shape Their Future

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The nature of telecommunications is changing in front of our eyes, and rural telcos are being forced to figure out what they can and must do to survive. As a rural provider, what can you do about FCC interconnection reforms that threaten to virtually eliminate a current major revenue source and remove a primary method for funding infrastructure improvements and the expansion of services to your rural customers? And how must you evolve in order to thrive in a market of rapidly changing consumer behaviors, where voice-centric service is shifting to data-centric service?

For many rural telcos the future can seem troubling, but it is important to keep in mind that you can help shape the future by informing your community about the potential impact of FCC rulings and preparing for whatever comes by thoroughly understanding every aspect of your current business. In order to help control your future, you need to make sure your story is heard and employ the best industry tools and resources to understand, prepare and improve your business.

Inform and Educate Your Community

Organizations like OPASTCO, NTCA, WTA and the NECA alliance are doing their part to get the concerns of rural carriers about FCC changes heard, but as providers you need to help spread the word into your communities. The average American doesn't comprehend the personal impact the FCC rulings may generate, and they need to. By educating your community, customers, relatives, friends and neighbors in whatever way you can about the issues, you can help create a larger group of people invested in trying to get a fair and equitable resolution for all citizens, especially rural Americans. Using flyers and the company communications tools at your disposal, contacting local newspapers, providing information to local Chambers of Commerce about the potential impacts to local businesses, educating senior citizen groups about how these changes may impact their services and bills, and urging members in the community to contact their congressional representatives are just a few ways that you can heighten awareness in your corner of the world. By doing things like these, you can have a say in the future.

Minimize Cost and Maximize Revenue

Beyond telling your story, you also need to analyze your current business to make sure that you are minimizing costs and maximizing current and future revenue. Do you have dropped usage and phantom traffic that you should be billing? Are you providing the service bundles, promotional offers and self-care options your clients want? Do you have the reporting and data analysis tools you need to identify consumer trends, internal inefficiencies and possible revenue issues?

CDG Can Help You Prepare for the Future

Understanding your business is the foundation for improving your ability to adapt to both regulatory and consumer changes, and CDG's MBS and CABS billing solutions are designed to help do just that. We understand your business and can help you prepare for the future by improving your efficiencies, expanding your data analysis and reporting abilities, decreasing your overhead costs and increasing your revenue streams. Our clients have access to experts in all facets of the telecommunications business, including revenue assurance, auditing, mediation, billing system development and network optimization. Through our systems, support and strategic partnerships, we are helping our clients take the steps needed to prepare for the future.

For more information about how CDG can help you, contact us at 888-234-4443 or visit www.cdg.ws.

Let Managed Services Lead the Way to Improved Efficiency and Profitability

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Meeting ever changing customer demands in a rapidly evolving broadband landscape while optimally operating a network is no trivial task. Tack on the need for generating positive cash flow and net margin, and the demands on Communication Service Provider's (CSP's) are only growing. This environment requires scalability, efficiency and flexibility—all of which are benefits of managed services.

Managing the complex nature of a modern network can distract you from other priorities. Thanks to managed services, you are free to spend more time and effort focused on customer needs and satisfaction and less time navigating network issues.

In simple terms, managed services engage solutions from network operations experts who attend to the complex processes and support systems of today's communications network, allowing CSP's to focus on growing their business. Many network operations can be remotely managed and monitored by professionals who ensure the network is performing optimally and efficiently. It is an important trend that all service providers need to investigate as they look to cut costs, build efficiencies, and focus on customers.

CHR Solutions offers a robust portfolio of managed services that give clients the ability to dedicate their energy to the customer while comfortably knowing that their network is in expert hands. CHR's portfolio includes:

Managed IT

Over 75% of IT budgets are spent on managing existing systems and software infrastructure which suffers from the obsolescence curve. Rather than managing your own IT network, Managed IT will do it for you and ensure your systems and software are performing optimally, all the time.

With Managed IT, your IT budget is predictable, freeing you up from the capital intensive and often unpredictable budget cycle of corporate IT. We combine unparalleled services with support that relieves you from the capital and resource constraints of your network.

White Label Managed IT Services

Grow your business by extending managed services to your customers. The managed services business opportunity for the small to medium business market is tremendous. CHR Solutions can empower you to meet the growing IT needs of your customers without developing the internal capability and capacity. Our White Label program includes a 'Business-in-a-Box' solution complete with sales, process and support training, template documents, sales tools, marketing material and business case models.

Managed NOC Services

In today's network environment, 24/7 network monitoring is not just encouraged – it's required. Customers no longer have patience for network outages which are counted in hours or even minutes. Proactive and precise monitoring by expertly trained network professionals is now in reach.

CHR provides comprehensive Managed NOC Services to ensure visibility of network and IT applications. Our Managed NOC Services provide 24/7 proactive network monitoring—often detecting and preventing network issues before they create problems for customers. CHR's Managed NOC Services includes:

> Proactive and immediate incident management
> Increased productivity of your support staff
> Significant reduction in downtime
> A more satisfied customer and end-user experience
> Reduced network support and monitoring costs
> We understand, manage and support Enterprise, Telco and Next-Gen networks

For more information, visit www.CHRSolutions.com.

Reinforcing Mobile Backhaul Using a Multi-Technology Approach

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As high-bandwidth mobile traffic continues to increase, both challenges and opportunities arise for mobile backhaul providers. The rapid uptake of 4G technologies such as Long Term Evolution (LTE) means that broadband mobile backhaul must keep up.

The answer is not as simple as just adding bandwidth, however. Backhaul providers must support TDM transport in 2G and 3G networks while they make the transition to packet transport for 4G. There is still a large installed base of 2G/3G systems; of the approximately 190,000 cell sites in the United States, almost all require T1 TDM backhaul. More than 75% of cell sites employ more than one generation of technology.

Reliance on T1 physical interfaces has, until now, driven mobile backhaul requirements. Given the wide availability of T1 copper, fiber and microwave services, T1 TDM was a logical choice for 2G/3G wireless connectivity. However, providing backhaul using TDM (T1/E1) becomes uneconomical as 4G traffic proliferates. The industry estimates TDM traffic accounts for as much as 30%–40% of a wireless operator's op-ex budget.

Diversity Creates Challenges

In contrast to previous generations, 4G LTE technologies are based on new packet-based architectures, including Ethernet physical interfaces, which carry the same expectations for 99.999% availability as SONET implementations.

Most cell sites will need to support CDMA, GSM 2G and UMTS 3G networks for many years to come. Therefore the addition of 4G means backhaul providers must support T1 TDM and Ethernet services side-by-side. Additionally, some wireless carriers require T1 TDM traffic in native TDM format as opposed to utilizing Circuit Emulation Services (CES), because CES brings tradeoffs between latency (delay) and bandwidth efficiency; CES also requires all network elements be synchronized, which increases cost and complexity.

A blended TDM/Ethernet model offers an economical and forward-looking solution in environments that require T1 TDM, or where a SONET Multiservice Provisioning Platform (MSPP) exists at the cell site. The optimum MSPP allows the backhaul provider to add a Framed Generic Framing Protocol (GFP-F) Ethernet interface card to the existing SONET MSPP and provision Ethernet services with no service interruption, providing minimal latency and negligible jitter and frame loss. This single platform provides true carrier-grade quality, reliability, performance and protection for both T1 and Ethernet services.

At the Mobile Switching Center, an aggregation node can combine traffic from hundreds of cell sites. This is a superior and more economical approach than overlaying new Ethernet-centric equipment at cell towers, where footprint is scarce. Newer hybrid Ethernet/SONET systems provide a seamless transition from a TDM to a packet network, morphing from a SONET MSPP into a native Ethernet edge platform.

Newer hybrid Ethernet/SONET equipment will also provide Connection-Oriented Ethernet (COE) services. Available over SONET and native Ethernet topologies, COE offers efficiencies in bandwidth not available with legacy GFP-F SONET MSPPs. COE provides guaranteed services with 99.999% availability, protected, broad-scale aggregation for Ethernet service backhaul traffic.

4G wireless networks will soon challenge DSL and cable modem wireline service, opening up great opportunities for mobile backhaul providers. Providers who embrace the future of wireless communications should fully evaluate potential technology partners for the many-faceted task of implementing a modern mobile backhaul system, if they are to profit from these opportunities.

B/OSS From the Cloud—Instead of a Box

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The intricacies of running a business for today's communications service providers (CSPs) are not only complex, but ever changing and quite unique. The B/OSS in a box you opted for may not be the right fit for your business today.

A leading-edge B/OSS offering must support your business from beginning to end and evolve as your strategy changes. If your B/OSS remains confined to its box, where does that leave you?

Benefits of a Fully Integrated Cloud Solution

The good news is that you don't have to reinvest in a lot of new hardware or relationships to get today's leading-edge functionality. HickoryTech has partnered with SaskTel International—two vendors known for delivering depth of product functionality in their area of expertise. HickoryTech's SuiteSolution® billing and customer management software coupled with SaskTel International's provisioning, activation and service assurance capabilities deliver functionality to smaller providers that couldn't otherwise afford it.

> Reduced Capital Expenses—No expensive hardware to invest in; we'll host that for you.
> Simplified Integration—Pre-integrated for straightforward implementation.
> Easy To Access—Simply login via Internet Explorer.

Benefits of a Fully Integrated B/OSS Solution

Because both partners are part of an operating telecom, we are aware of the value a quality B/OSS brings to your business.

> Lowers Implementation Risk—Reduce the time required to implement a best-in-class, fully integrated system specifically fits your business requirements.
> Improves Efficiencies—Automated processes assure every customer is handled appropriately, saving time and money.
> Enhanced Customer Experience—The single CRM facilitates order activation resulting in a quality customer experience.
> Modular—You have options to include additional world-class products such as POS/retail management, provisioning, facilities management, and workforce management.

Experienced, Practical and Effective

Proven B/OSS based on sound business logic, developed by CSPs for CSPs. HickoryTech and SaskTel International benefit from the experience, knowledge and recommendations of a progressive customer base providing triple- and quad-play services. With HickoryTech's 47 years of software expertise and SaskTel International's 25 years as a global innovator and experience-backed solution provider, we've earned a reputation for delivering quality products and superior service to users across North America.

Visit us at www.hickorytech-is.com and www.sasktelinternational.com, or call us today to find out how your company can bill and provision effectively through the cloud.

The Home Entertainment Network: Key to Higher Telco Profits

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The killer application for home entertainment networks, IPTV is clearly one of the most rewarding opportunities for carriers today. The addition of IPTV services has been proven to stop landline subscriber erosion, increase average revenue per user, reduce churn and improve broadband purchases while protecting telcos from the competitive threats of triple play from the cable industry.

Understanding the Home Entertainment Network

The advent of IPTV has added a new network, the home entertainment network, to the service providers' realm. The home network, once the domain of the home owner, is now an essential piece of the home entertainment service delivery platform. While core and access technologies are critical, so is providing enough bandwidth, robustness and visibility in the home to reliably deliver pay-TV services.

The home entertainment network is different from the traditional home network. First, it is essentially real time. Customer expectations for pay-TV service demand a more robust technology with significantly less jitter, latency and data loss. Second, home entertainment networks are bandwidth intensive. The requirements of multiple HDTV streams, whole home DVR and other services add up, making the throughput requirements typically 5–10 times higher.

While widely deployed networking technologies such as Ethernet or 802.11 Wi-Fi might seem the obvious choices, they don't meet most carrier requirements. Wi-Fi, a popular and widespread home networking technology, isn't a reliable alternative due to robustness and bandwidth limitations over the wide range of home sizes and construction. While CAT5 is robust and reliable, it is not widely deployed throughout most homes, and installation can increase costs significantly.

Luckily, most houses already have communication-quality network wiring installed—the existing coax and phone wires—which can meet the bandwidth requirements of home entertainment networks.

HomePNA: The Telco's Home Entertainment Network Solution

When telcos want to get into IPTV and triple play, the technology they turn to most is ITU-T standard G.9954; HomePNA. Four of the five largest carriers in North America deploying IPTV are using HomePNA. Over 30,000 HomePNA nodes are deployed each business day worldwide.

Why HomePNA? It provides the performance and business attributes telcos want. HomePNA 3.1 delivers high-speed IP data over existing coax and phone wires. The latest HomePNA solutions can provide over 200 Mbps of continuous user data throughput to meet the needs of service providers for the foreseeable future. It provides advanced features such as guaranteed quality of service and remote management and diagnostics capabilities that were developed specifically to allow telcos to provide reliable IPTV service while minimizing op-ex costs. HomePNA coexists with ADSL, VDSL and related technologies.

Using HomePNA, telcos have seen installation times go from six to eight hours per house down to three, enabling them to increase the number of installs per day from one to three. At the same time, the diagnostic capabilities and test tools enable installers to verify network performance during installation. The same diagnostic tools can be accessed using TR-069 providing service providers with the means to remotely monitor home network performance parameters such as SNR, PER and data rate between every HomePNA device from their operations center. Eliminating service calls and truck rolls while significantly improving customer satisfaction is a winning combination.

Certified HomePNA products are available from well over a dozen manufacturers. Unlike some other technologies, HomePNA has been integrated into many devices such as set-top boxes, Ethernet bridges, residential gateways, MDU masters and ONTs helping service providers to drive down equipment and installation costs.

Please visit the HomePNA website and blog www.homepna.org for more information on HomePNA technology, applications, members and certified products.

Iowa's Connected Campaign Gains Attention

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There is a disconnect happening in Iowa and across our nation. Current state and federal policies are in the works that could jeopardize access to equitable and fairly priced communication services as early as 2020. You know of these policies as the national broadband plan (NBP). In Iowa, we call these issues, "The Great Disconnect."

Simply put, The Great Disconnect refers to the lack of understanding of the role independent telecommunications companies play in Iowa, and the potential of a double standard regarding communication services in urban versus rural America.

Formed in October 2010, The Great Disconnect initiative is the voice of three organizations: Iowa Network Services (INS), the Iowa Telecommunications Association (ITA) and the Rural Iowa Independent Telephone Association (RIITA).

The purpose of the joint venture is to sponsor, manage and conduct an integrated, statewide public relations, outreach and advocacy campaign on behalf of the independent telecommunications industry in the state of Iowa. These entities have partnered to:

> Ensure policy-makers in Congress, the FCC, the Department of Agriculture and the Iowa Legislature understand the importance of robust broadband deployment in rural America.

> Create awareness of how proposed policies need to be dramatically altered to guard against discrimination of telecommunications services between rural and urban citizens.

The initiative challenges members to participate at the grassroots level, engaging their communities, their legislators and economic development to educate them on the NBP.

Connectivity to All

The theme of the initiative is "Connectivity to All." While much of the joint effort is built around external communications, a unique feature is an interactive website that was developed by INS Web Development in conjunction with a communications partner and the Independent Telecommunications Companies (ITC) coalition committee. Through TheGreatDisconnect.org website, policy-makers and the general public can learn how ITCs enable telecommunications services across the state. Consumers can also get involved in spreading the message, with resource materials located in the "Take Action" area of the site.

In addition, a special "ITC Members" login provides a secure area for members to download predesigned campaign templates, letters and promotional items as well as share their materials, ideas and local activities.

Building Momentum

From news conferences and rallying at the state Capitol to bill stuffers and enewsletters, the ITC members have been very active in getting the word out. Launched on April 20 of this year, the coalition has already generated over 25 interviews with state and local press, met with legislators and key decision-makers over 50 times, and received national exposure in Telecompetitor.com and the NTCA Washington Report.

As time has proven, in today's "connected" world, many of the best public affairs campaigns are most successful at the "grassroots" level. The Great Disconnect is a rally cry to speak up for rural America and demand equal Connectivity for All. Iowa Network Services and the Iowa Independent Telecommunications Companies invite you to visit TheGreatDisconnect.org. Click on the hot spots and navigate the site to learn how we crafted this important message. We hope other telecommunications organizations like you take advantage of the existing Great Disconnect campaign and join us in our efforts. For more information on how you can get involved, contact Iowa Network Services at CustomerCare@netINS.com.

A Sputnik Moment for Independent Telcos

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In the most recent State of the Union, President Barack Obama reflected on the changing times and observed, "The rules have changed. In a single generation, revolutions in technology have transformed the way we work, live and do business." Referring to this time as our "Sputnik moment," he suggested that "the outcome means whether new jobs and industries take root in this country or elsewhere."

For our industry, the analogy holds true. The rules for winning have changed as well, and the outcome will determine whether new jobs and industries will take root in our communities, powered by our networks and managed by our people.

For some of us, the opportunities have never been so abundant. But for legacy mindsets, the future looks challenging and perhaps overwhelming, particularly as the confluence of marketplace and regulatory shifts compounds elements of uncertainty.

Metaswitch Networks, the leading provider of next-generation switching and applications, has been in collaboration with independent telcos to address today's challenges. The following is an excerpt from a new Metaswitch whitepaper entitled, "A Sputnik Moment, Strategies for Independent Telcos," which provides a roadmap for success in today's "Connected Age" and digital economy.

Section 9: Embracing the Enterprise

The Connected Age challenges businesses as well as service providers. They, too, are trying to position themselves in this digital economy to maximize opportunities with their customers. To leverage those opportunities, they need help. They need to better understand how technology and an app-enabled communications network can contribute to a growing bottom line and they're willingness to pay for it. Many service providers recognize this, and that's why we're seeing significant movement toward enterprise services. Failure to act now will bring disastrous consequences. According to recent market research sponsored by Metaswitch:

> 64% of the market is considering IP voice services like SIP Trunking or Hosted PBX connectivity in the next two years.

> Of the 27% that have already adopted these services, nearly three-fourths have opted for a new service provider.

> This implies that over 40% of an incumbent service provider's base is at risk if steps aren't taken to address this market demand for IP voice services.

What is at risk is not only today's revenue but tomorrow's growth. Adopters of IP voice, particularly hosted VoIP, are twice as likely to adopt other services from the IP service provider, particularly those now categorized as cloud services. The IP pipe, with voice and PBX functionality as the first and most logical application, can serve as a ladder for your customers to your cloud.

Cloud computing and managed services have growing appeal to business customers. These applications, and the service provider partners who enable them, can relieve business customers of the technical details of running their business so they can focus on what's most important—serving their customers and growing their top line. Service providers must build upon their capabilities to capture this opportunity.

Regardless of the enterprise service portfolio, the consultative approach is what adds the most value. Helping your customers improve their businesses through the utilization of your services will help you build a profitable enterprise-focused line of business, providing diversification of revenue.

Learn More at Metaswitch Forum, 2011–October 3–6, Bellagio, Las Vegas

The Metaswitch Forum has emerged as one of the industry's leading events. With this year's theme, "The Power of M," the event will be M-Powering for over 900 attendees. Included will be sessions to help carriers take advantage of the "Sputnik Moment." The forum offers an excellent opportunity to connect directly with other service providers and vendor partners to interact with the leading minds within the industry.

For information about the Metaswitch Forum 2011, visit http://www.metaswitchforum.com.

National Information Solutions Cooperative's iVUE Enterprise System

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NISC understands that telecom companies need an integrated software system that helps each department share data and information to operate more efficiently, reduce costs and to increase consumer satisfaction. Our suite of software services—the iVUE enterprise system—is built on a Java-based, open systems platform with dynamic frameworks that provides a common look and feel. Our solutions all integrate seamlessly to make that efficiency you desire a reality.

Accounting and Business Solutions (ABS)

NISC's iVUE ABS is designed to help today's telecom companies use powerful information to increase business results by improving productivity, reducing costs, streamlining operations and enhancing customer service. For systems that offer diversified services, the iVUE ABS delivers a multibusiness enterprisewide accounting solution. That makes it easy to generate invoices, work orders and purchase orders; track sales and returns; share customer information with the SIS and E&O products; and create custom forms, reports and queries. iVUE puts you in control of all the data you need.

NISC's full suite of graphical accounting and business applications, from General Ledger to Payroll to Accounts Payable and from Purchase Order to Work Order, offers your telecommunications company a flexible software enterprise system capable of streamlining your operations.

Engineering and Operations (E&O)

NISC's iVUE E&O solutions are designed to help today's telecommunications companies collect, share and transform data into powerful, business-building information. This allows you to allocate resources more efficiently, improve response times, streamline operations, boost customer service efforts and much more.

NISC SwitchTalk^{2TM}, Staking and Mapping, Mobile WorkForce, SmartTrack^{TM}, CallCapture^{TM}, Facility Management and Trouble Management are powerful engineering applications that now allow you to share all your organization's mission critical data with consistency, speed and simplicity—from the front office to the back office and in the field.

Subscriber Information System (SIS)

NISC's iVUE SIS makes it easy to access and view powerful, timely information you can use to effectively market and provide outstanding customer service to your voice, video, Internet and wireless subscribers. Designed to meet the specific needs of telephone companies like yours, iVUE SIS can help you sell a variety of diversified telecommunication services including landline telephone, VoIP, high-speed and dial-up Internet, special circuits, security systems, wireless/cellular service, video and more.

iVUE SIS allows you to rate the traffic at the appropriate tariff or contract rates and bill dedicated circuits to an end-user or an interexchange carrier using our Carrier Access Billing System (CABs) solution. This powerful solution is designed to help you maximize revenues by being able to bill for usage that you may not have previously billed, spot missing usage earlier and correct errors as they occur.

iVUE SIS also offers a complete, state-of-the-art software solution that allows you to easily process and bill telephone customers' local, toll, TV services, Internet services wireless/cellular, including next-generation wireless communications such as Short Message Service (SMS), Wireless Application Protocol (WAP), push-to-talk and other services through the End User Billing (EUB) solution. EUB is designed to help you improve efficiency in your office and to help free up employees to work smarter by eliminating daily processing chores associated with usage files.

Flexible, affordable and multiplatform compatible, iVUE SIS is designed to work the way you work, and features a single point of data entry, integration among applications and unparalleled ease of use. iVUE SIS is scalable to fit the needs of every telecommunication firm—large or small. You can easily implement the features you need now and add new features as your needs or markets change.

For more information about NISC and iVUE enterprise system, please visit www.nisc.coop.

The Workforce Management Advantage

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Over the past several years, we've all seen dramatic changes in the communications industry. With increased competition and new technology demands at the forefront of many discussions, companies have had to rethink their marketing strategies and continue to expand product offerings and network infrastructure to accommodate it all. In addition, customer perceptions have evolved to expect more with a decreased sense of brand loyalty. Rather than sitting back and hoping these will all go away, let's raise the question of how they can be put to your advantage.

Advantage #1: Get More Jobs Done Each Day

The Quintrex Workforce Management system will increase your employees' effectiveness when completing daily tasks by better organizing mobile assets and personnel. Advanced scheduling assigns service orders, work orders and trouble tickets through one system allowing truck rolls, scheduling and inventory to be managed with minimal employee intervention. With the ability to shorten drive times, schedule service installations by area and update techs with new jobs near their current location, you are better able to organize your employees' time and complete more jobs each day.

Advantage #2: Stay Connected

The Mobility Interface option offers a seamless flow of information while technicians are in the field. Using "store and forward" technology, technicians can enter pertinent information about the order and sync the details back to the system when an Internet connection is available. Keeping managers and dispatchers aware of each task's status, technicians can use their mobile devices (i.e., laptop, iPad or wireless phone) in the field without calling or physically reporting back to the office.

Advantage #3: Improve the Customer Experience

In today's competitive market, it is more important than ever to ensure your customers have the best experience possible in a trouble situation. Starting with the initial call, CSRs are equipped with the tools and questions necessary to either address the problem directly or immediately schedule a service call. Although some truck rolls are necessary, it is vital that a technician is sent with the right tools, equipment and experience to complete each task the first time. A repeat trip is not only costly to your bottom line, but also causes unnecessary frustrations for the customer. The ability to track inventory items used to complete each task further ensures all trucks are restocked with the proper equipment prior to each truck roll.

Advantage #4: Increase Your ROI

Every technician in the field poses a large investment in equipment, vehicles, tools and training. Whether through reduced truck rolls or simply getting more done each day, the Workforce Management solution helps your staff become as efficient as possible. When coupled with Quintrex's integrated Marketing Suite, you will see an even greater impact on your bottom line. Using an intuitive filter process, you can reach all your customers with a message or campaign unique to their service options. This gives you the ability to get the right message to the right group of people—without breaking your budget. Realizing immediate time and cost savings through reduced printing and postage fees, clients have seen return on investments of 137%, 163%, 168% and higher with this approach.

Take advantage of the Quintrex systems today. For additional information on any of its solutions, visit www.quintrex.com.

Telcom Insurance Group Offers an Independent Contractors Package

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While the unique liabilities and exposure to loss of independent contractors are complex, an appropriate insurance solution can be effectively structured at a modest cost. Because few insurance professionals adequately understand these complex issues, Telcom Insurance Group has developed a special insurance placement and consulting service in cooperation with one of the leading insurance companies to help. Let us be your insurance and risk management arm for your independent contractors, if you hire them, whether-or-not you received stimulus monies.

The good news for many of you is that you are receiving stimulus monies to build out and enhance services in your communities, which warms the hearts of all of your members/customers in those areas. Paperwork: Our understanding is that the good news and funding comes with lots conditions that must be met. We know that you are going to have your hands full with the project itself. With that in mind, Telcom Insurance Group is offering a Risk and Insurance Management Stimulus Assistance Package to you to eliminate one time-consuming task you will face with the acceptance of the funding. Many of you are or will be hiring independent contractors to help complete the projects. Making sure that these contractors have insurance and that you have proof of their insurance is critical to making sure that your insurance doesn't have to pay for their mistakes.

Some of you have independent contractors, and you are not receiving stimulus monies. We can help you, too!

Independent Contractors–Risk Management Package

Telcom has developed a quick and easy solution. We will, with your permission, manage the independent contractor exposure. This will entail multiple tasks, but the two major ones will be contractual review and certificate management. We will review all contracts that you have prepared or received to ensure that the insurance portion is adequate. We will also make sure upon execution of the contract that these companies are adequately insured and that we have collected and stored in a safe place the Certificates of Insurance (proof that they have insurance). We will spot-check the certificates periodically to make sure coverage remains in force continuously.

Independent Contractors–Insurance Package Options

We are offering two new products to help:

> Fidelity bonds: Your company is usually required by the grant or loan to have a bond. Whether we write your primary insurance or not, we are capable of placing fidelity bonds that meet the Department of Agriculture and National Telecommunications and Information Administration stipulated terms.

> Insurance for independent contractors: With regard to independent contractors, you may hire for parts of or for the entire project, we have partnered with a respected and well recognized national insurance company to develop a proprietary program that will make the process easy for you. By having your independent contractors contact us via our 800-222-4664 number, we can take the "guesswork" out of wondering if the contractor has adequate insurance. In 30 minutes or less, the contractor can receive a competitive bid from us that will meet the required coverage terms.

Doing Our Part to Be Part of Your Community

We understand your business and the special needs that the independent contractors dictate. To get started contact Peter Elliott, president and chief executive officer of Telcom Insurance Group, at 800.222.4664 to discuss the Telcom Insurance Group Independent Contractors Assistance Package.