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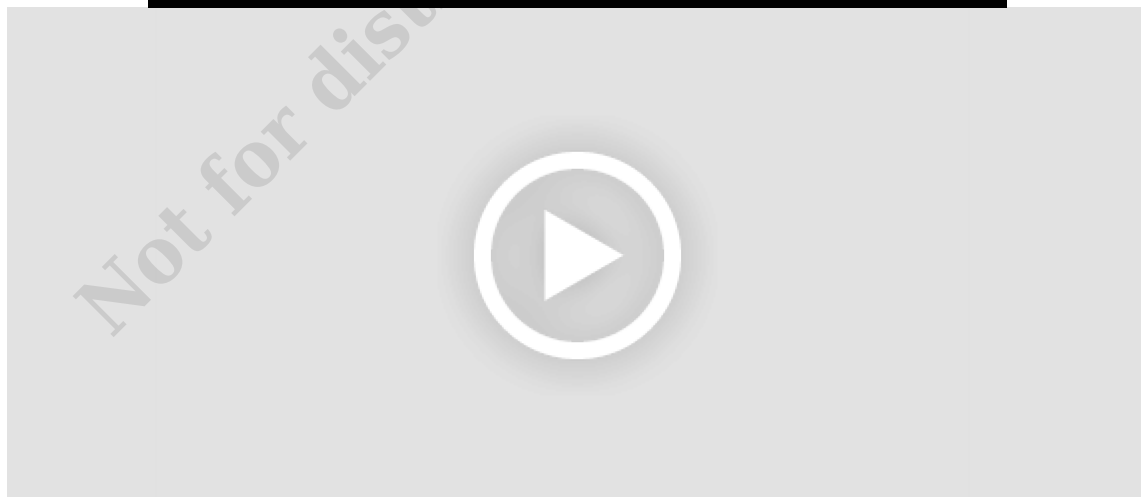
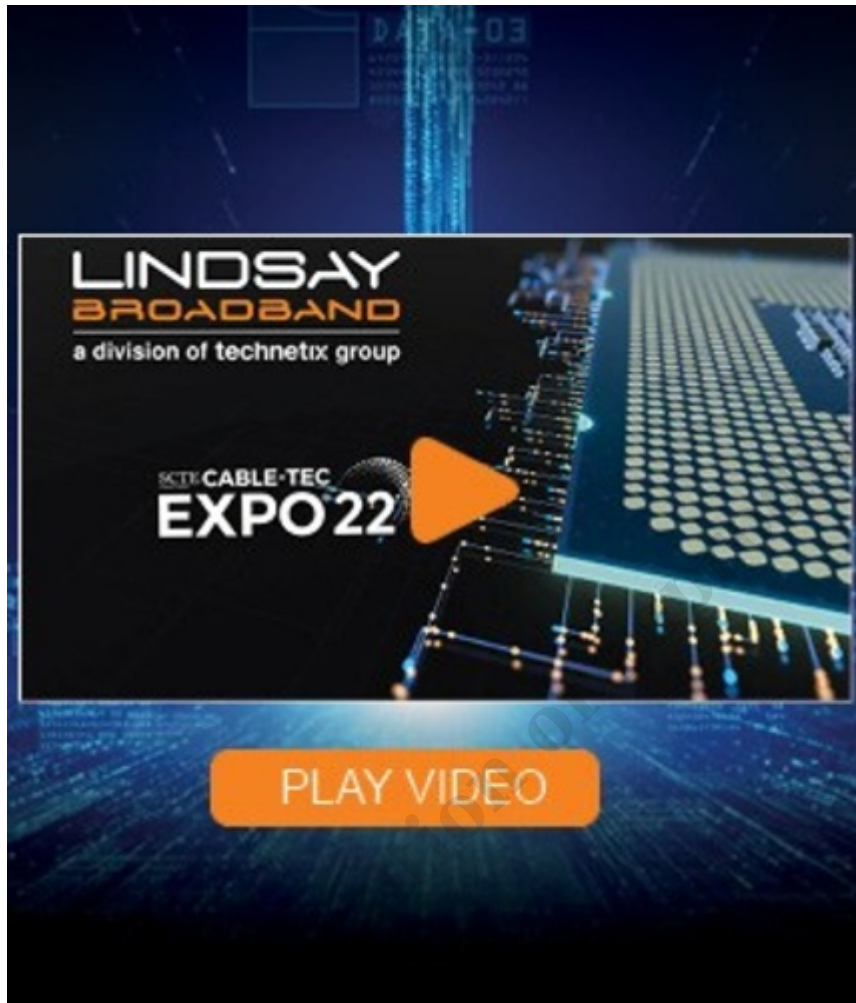
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IonQ Announces Technological Breakthrough

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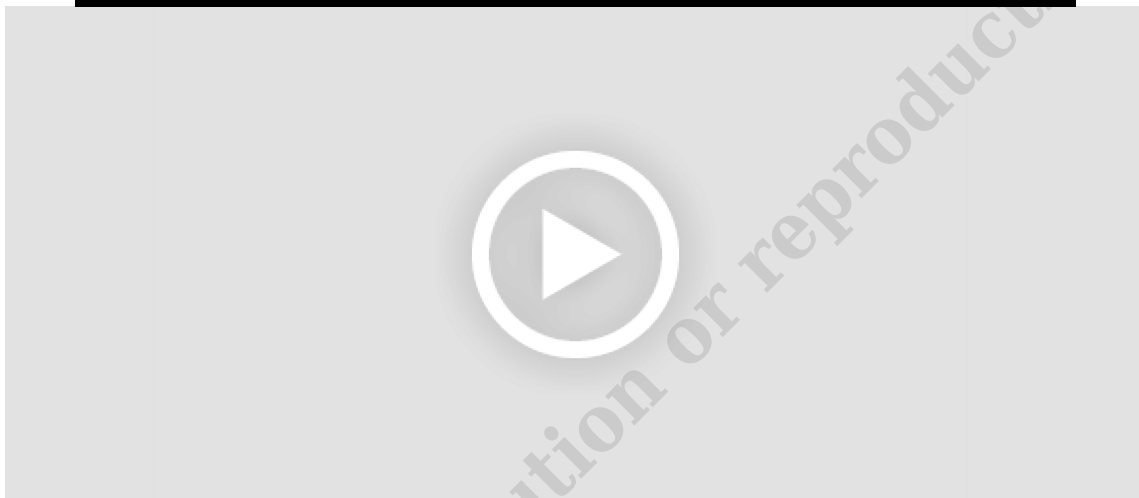
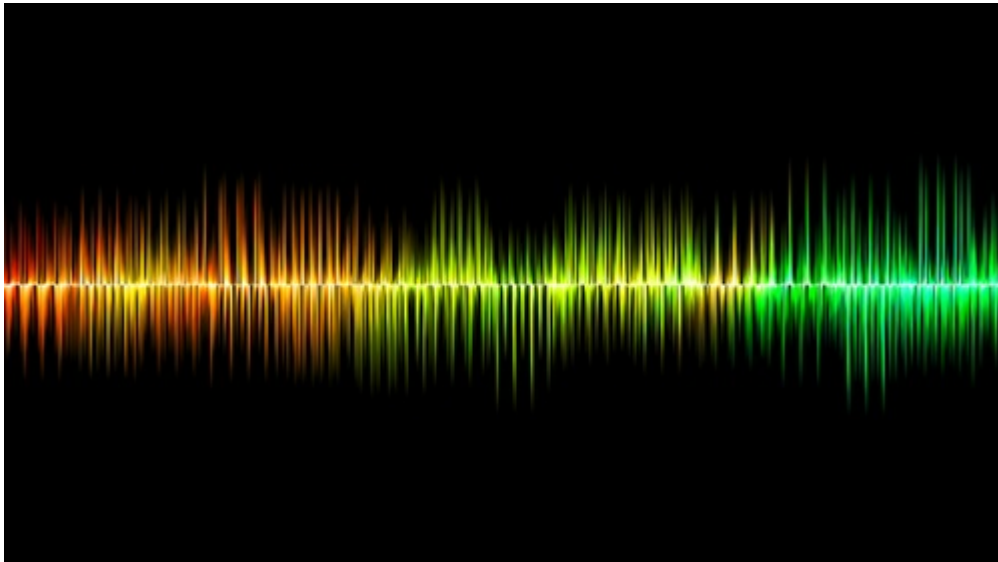
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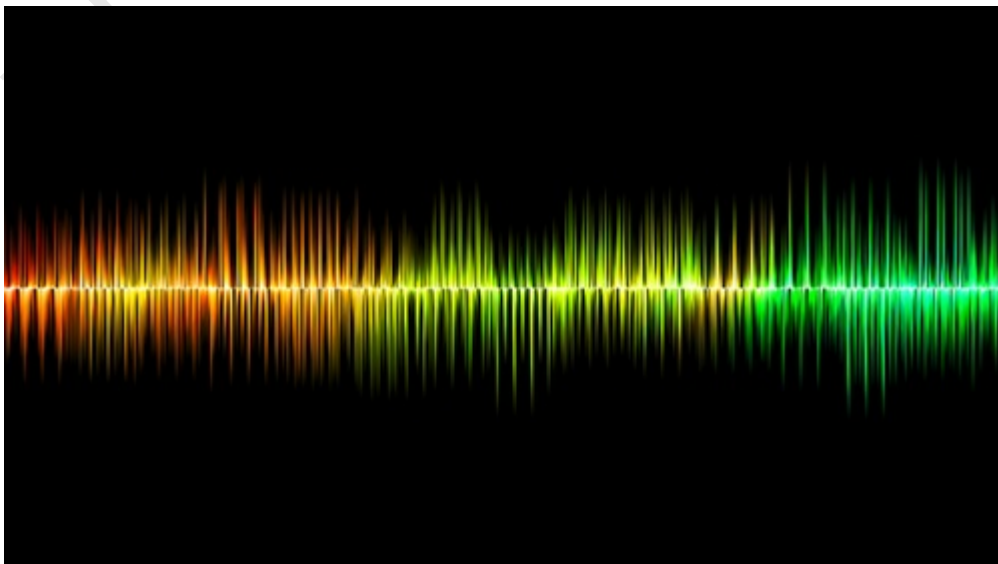
End-to-End Solutions for Broadband Networks

In case you missed Lindsay Broadband - a division of Technetix group at the SCTE Cable-Tec Expo, this video highlights the must-have, end-to-end solutions for your network.



Predicting Colonial Pipeline: Mitigating Risk and Compliance

Mitigating risk and compliance for lawful intercept using lawful intelligence is explored in this Pipeline article feature SS8. Learn how CSPs can comply with lawful intercept regulation, while empowering law information with critical, real-time data.





Podcast: The Evolution to 6G

The world's eyes are already looking forward to the potential of 6G. Demands resulting from innovative use cases, for instance specific requirements from different industries and other user groups, as well as overarching goals like sustainability, are driving the standardization and development of mobile technologies.

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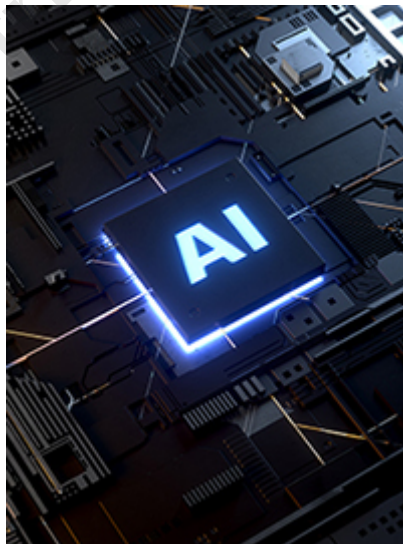
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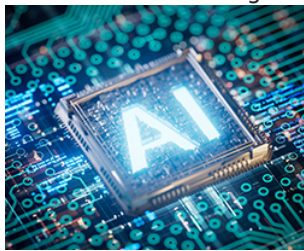
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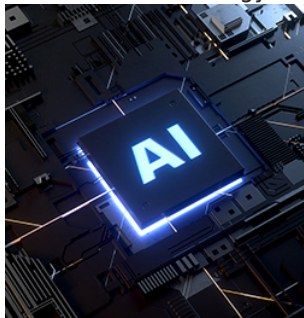
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MATRIXX ONLINE CHARGING

The Need for Speed and Real-Time

Everything is moving to real-time. Consumers want ubiquitous connectivity and instant access to applications, media, information and social networking. In today's diverse communications marketplace, there are a number of factors that are driving service providers to interact with subscribers in real-time:

- ▶ Increased adoption of prepaid services and payment methods
- ▶ Bill Shock prevention and spend control
- ▶ Third party content and applications
- ▶ 4G and LTE network rollouts

As these forces create a new Telco 2.0 marketplace, three trends are apparent: IP networks are the de facto standard. The usage events from these networks and the services that run on them are growing exponentially. Service providers need to interact with subscribers in real-time to deliver the exemplary customer experience and control required in the all IP environment.

As these trends converge, network bandwidth becomes a coveted asset where the return on investment needs to be maximized. This can be achieved through the shaping of subscriber consumption with a subtle combination of segmented pricing models, service class options,

personalized offers and subscriber policies. Get it wrong and the customers will head to the call center or even churn. Get it right and you've created an informed, dynamic relationship with the subscriber, turning bandwidth usage threats into opportunities and delivering an individual and compelling customer experience.

Service providers are challenged to keep up with subscribers' growing appetite for real-time-based services, keep their competitive edge, and keep costs and operational expenses from spiraling out of control.

MATRIXX Online Charging Empowers Operators to Meet the Real-Time Challenge

MATRIXX Online Charging helps service providers meet the challenges of the Telco 2.0 market by providing the industry's fastest, most efficient real-time charging application.

MATRIXX is the only real-time charging solution that can provide the scalability and speed needed to move to an all real-time world, while providing an extremely low and predictable Cost Per Transaction (CPT).

MATRIXX Online Charging delivers sophisticated real-time rating and discounting capabilities, giving operators the edge to differentiate, personalize and successfully compete.

Its extreme performance supercharges operators to accelerate their service offerings and easily scales to cost-effectively manage surging network traffic.

Its stability and efficiency drive increased profitability by providing operators with predictable and measurable costs so that service profitability is determined and ensured before services are launched.



IS YOUR GLOBAL WAN DEVOPS FRIENDLY?

SD-WAN: USE CASE



TELIA CARRIER'S SD-WAN SERVICE HELPS DRIVE NETWORK AGILITY AND CONTINUITY TO SUPPORT THE ENTERPRISE ADOPTION OF DEVOPS.

ENTERPRISE DEVOPS

Enterprise DevOps journeys are diverse. Some journeys start due to existential risks, some due to a significant need to cut costs, and others begin with big investments to unlock new business opportunities. Whatever the reason, for large global enterprises, embracing DevOps is a transformative cultural technology journey. Focused on agility and continuity of delivery.

SD-WAN: BOOST AGILITY

SD-WAN provides an opportunity for enterprises to build, control, and manage an intelligent overlay network for better integration with cloud and internet environments. Through application awareness, automated policy control, zero-touch provisioning, and other value-added services, enterprises can implement a modular and smart networking architecture to operate faster.

INTERNET: GUARANTEE CONTINUITY

Modern enterprises should build internet-scale operations and manage distributed, globally accessible applications and cloud services that are critical to the DevOps flow and set of practices based on continuous experimentation and feedback loops. Telia Carrier's SD-WAN service will help enterprises avoid persistent internet overlay problems. We offer a choice of internet access services that provide high bandwidth, dedicated connections to reach specific sites, applications, and cloud services around the world.

THE OVERLAY AND UNDERLAY: A FUNCTIONAL BOND

A sustainable alignment between the internet underlay and the intelligent SD-WAN overlay will bear the potential to optimize network stability and performance while scaling flexibility for DevOps deployments.

Data generated by DevOps pipelines can traverse our internet backbone network with fewer hops compared to other internet service providers. We directly connect more than 99% of the global internet routing table, making us the world's best-connected internet backbone network.

PARTNERSHIP: CULTURAL FIT

Technology partnerships are critical for building the right DevOps environment. We understand that enterprises expect flexibility, responsiveness, and expertise from us. We ensure customers are always close to the technology of SD-WAN with no unnecessary layering in between.

We help accelerate DevOps journeys with better internet access and a streamlined onboarding process to help customers deploy a functioning SD-WAN solution and experience a multitude of benefits.

TOP 3 DEVOPS NEEDS

TEST ENVIRONMENTS

Using zero-touch provisioning DevOps can have a zero secure connection for testing environments within minutes.

CI/CD PIPELINE

Deploy applications in minutes, on any platform, with consistent user experience.

AUTOMATION

Automation of manual networking tasks helps DevOps on their own automation journey.

VISIT OUR WEBSITE FOR MORE INFORMATION ON OUR SD-WAN SERVICE

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Accelerating the deployment of 5G with simple and flexible transport networks



Mobile Network Operators (MNOs) are struggling to meet the demands of connecting their existing 4G/LTE networks, building out transport for new 5G networks, and laying the groundwork for distributed compute. ADVA can help with a proven solution that meets the operational requirements and the demanding business case.

Challenges faced by MNOs in their 5G transport network planning

MNOs aiming to deploy 5G face a fundamental question of how to design their transport network. This is the network connecting cell towers and small cells to their core network. It is referred to as Mobile Backhaul (Fronthaul, Midhaul and X-Haul, depending on the technology used).

MNOs plan to make a strategic investment in fibre for mobile transport, with microwave and mm wave radio deployed only where needed¹. Drivers for microwave include cases such as avoiding delays in fibre deployment and overcoming obstacles in geographic regions such as roads and railway infrastructure.

In addition to the physical medium for transport, MNOs face other questions in three broad areas:

- Support of existing 4G macro cells, and new 5G cells
- Architecture and technology selection
 - Architecture options such as the optimal location of edge compute
 - Technology options and protocol selection - such as use of small cells, massive MIMO, C-RAN, common radio public interface (CPRI), eCPRI, O-RAN, and backhaul
- Accommodating sharing of the transport network to bring cost per cell site down

¹ <https://www.gsma.com/spectrum/wp-content/uploads/2020/04/3-Mobile-Backhaul-Options.pdf>

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CASE STUDY: MULTI-CHANNEL CUSTOMER INTERACTIONS



Client: Leading Retail Entertainment Provider (The Company)

CHALLENGE

The Company was looking for a single vendor to deliver a comprehensive solution that combined agent-led customer care, multi-channel inbound and outbound customer interaction management, 1st and 3rd party collections, in-store data lookup (Reverse Phone Append), and consolidated customer reporting while simultaneously reducing overall customer care costs. The initiative was to consolidate services being handled by two vendors and connect one of the Company's selected in-house operations.

CROSS-CHANNEL SOLUTIONS PROVIDED

- Inbound Store and Customer Care
- 1st and 3rd Party Notifications and Automated Collections
- Past-due Postcard Reminders
- Interactive Self-help IVR
- Secure Payment IVR
- Customer Satisfaction Surveys

SOLUTION

CSG deployed inbound and outbound self-service customer care and collections solutions that utilized two of its direct customer interaction on delivery channels: Interactive Voice Response (IVR) and direct mail (postcard notifications). By utilizing these proactive customer interaction delivery channels, CSG was able to supplement current agent activity with a automated self-service interactions, which helped the Company control costs and increase agent productivity and customer convenience.

- Speech-enabled inbound IVR solution for in-store and online customers, which supports self-inquiry and self-resolution
- Integrates with the Company's historical database for customer identification
- Dynamic customer routing to the appropriate associate based on skill set to facilitate first call resolution
- Designed an enhanced pre-collection strategy that leveraged outbound interactive voice messaging and Postcard Reminders for past-due videos and games
- Secure Payment IVR (CSG is a PCI-DSS Level 1 Service Provider) for customer self-resolution of past-due accounts
- In-store account lookups based on home telephone number (Reverse Phone Append)
- Customer Satisfaction Surveys allow the Company to improve the customer experience based on customer feedback
- 1st and 3rd party Automated Collections (outbound & inbound) for self-care within the automated call (Secure Payment IVR)
- Delivers reporting to separate corporate and franchisee store collections
- Integrates with the Company's collection associates to augment automated systems
- Past-due Direct Mail Postcard Reminders deliver a hard-copy written format reminder that an item is past-due and gives the customer self-service options to purchase the past-due item immediately by calling into CSG's self-service Secure Payment IVR

RESULTS

- Implementation of Automated Collection Solutions reduced the Company's annual collection costs by \$1.7 million
- 1st party Automated Collections notifications and self-care options significantly reduced the number of accounts being sent to 3rd party collections — cutting average collections costs per customer by more than 50%
- Solution generated approximately \$2.9 million in additional collections
- Solution decreased the Company's client roll rate by 3% as well as its days sales outstanding (DSO) and delinquency rates

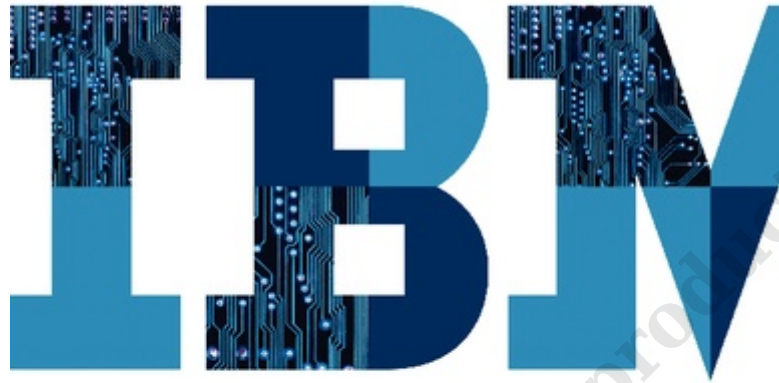
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Delivering a new ROI for communications

Return on insight in a big data world



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Customer-Focused Experience Management Must Be an End-to-End Process



By Susan McKeon and Sheryl Kingstone | June 2011

Key Takeaways

- The new market reality for communications service providers (CSPs) is to transform their business around their customers.
- Yankee Group believes enhancing customers' experience is CSPs' last remaining opportunity for real competitive differentiation.
- Today's CSP operations infrastructure is neither meeting the needs of customers, nor is it as cost-effective as the competitive market requires.
- CSPs must have an end-to-end perspective on customer experience.
- Intelligent, interactive operations software is key to delivering on this perspective.
- Transformation to customer-centric operations requires a process-based overlay to existing operations.

A Good Customer Experience Is Essential in the Connected World

CSPs are experiencing pressure for a fundamental transformation due to the hyper-convergence of connectivity, media, mobility and devices. In a world where product differentiation leads to short-term success, customer-centricity is paramount. But unlike earlier times, managing customer experience is not simply a matter of capturing customer information and order requests. Today's reality requires CSPs to evolve from an operational service strategy to a more customer-focused experience management model. This is the only way they can differentiate from the competition as they strive to increase customer loyalty and overall spend.

Likewise, CSPs are grappling with economic and ecosystem challenges. Iconic devices such as the BlackBerry and iPhone have stimulated customer demand for more sophisticated tools and services, changing their connectivity lifestyles. In the past, innovation was constrained by less feature-rich phones with architectures proprietary to specific CSPs. The new world order, however, is driving change across consumers, devices, data connectivity and application ecosystems (see Exhibit 1 on the next page).

The Customer Is Now in Charge

Yankee Group first identified the concept of the Anywhere Consumer[®] in 2007 as a class of consumer that demands connectivity at the core of their every activity. This point of view influences their buying behaviors, from the devices they acquire and the services to which they subscribe to the applications they download.

Today, we sharpen our focus beyond Anywhere to connected experience. This takes customers to a new world of always-on connectivity, smart devices with intuitive interfaces and cloud-based content and applications, all delivered according to the customer's expectations, including:

- More channels of interaction, e.g., mobile and social networks
- Immediate delivery of content and applications
- The latest digital lifestyle solutions

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Managed IT Services provide the benefits of dependable business continuity and IT innovations that are in line with your business processes. CHR's team of experts will partner with you to uncover hidden costs within your IT operations and develop such tools as cost savings analysis models.

*According to Gartner Research study

- 24x7 Server Monitoring & Management
- 24x7 Device Monitoring & Management
- 24x7 PC Management
- Baseline Audit & Alignment
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- Backup Services
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MDS BillAnalyzer

Deliver clear e-bills to business customers, provide the management information and customized reporting they need to effectively manage their accounts and services, simplify integration with existing infrastructure, improve ROI and reduce risk.

Consolidated e-billing and Analytics for Business Customers

Communication Service Providers (CSPs) are faced with the challenge of how to increase revenues and drive up profitability despite intense competition and slow growth in core markets. One revenue growth strategy being pursued is to expand into new business areas and increase the range of products offered. However, this expansion can increase billing complexity and have a negative impact on customer experience. As business customers represent a significant source of revenues for CSPs, it is imperative to deliver increasing levels of value to customers while reducing complexity and minimizing the cost to serve.

Businesses are demanding access to tools that enable them to view their consolidated bills, analyze usage, leverage business intelligence reports and control the cost of the services they use across their organization. CSPs need to satisfy this need to differentiate from the competition, attract and retain key customers, and efficiently deliver a superior customer experience.

MDS BillAnalyzer

MDS BillAnalyzer is a sophisticated e-billing and analytics application that allows you to present an integrated view of products and services to business customers. It provides a seamless customer experience from disparate billing systems and allows business customers to manage their consolidated bills in a convenient manner that eliminates the need for paper bills. Powered by the Lavastorm Analytics Engine, MDS BillAnalyzer provides light-touch integration capabilities to deliver rapid go to market and low-risk deployment that capitalizes on existing infrastructure.

MDS BillAnalyzer



MDS BillAnalyzer Analytics Dashboard

Advantages for CSPs

Single View of Products and Services

MDS BillAnalyzer has been designed to be billing-system agnostic. It streamlines the task of bringing together information from multiple billing systems, presenting the customer with a single, converged view of their services. Its non-intrusive ETL functionality and standard APIs simplify the capture of data from multiple sources, provide data synchronization and assurance, support data enrichment for presentation, and offer rapid system integration with low project risks and costs.

Single View of Customer

With MDS BillAnalyzer, CSP care staff and relationship managers can view bill and usage data in the same way as customers. It provides them with a holistic view of the customer and their services, enhancing first-time call resolution and helping staff to have a better understanding of the true value of the customer.



Reports



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THE LOW-LATENCY SERVICES MARKET:

Evaluating the Emerging Market Opportunity for Service Providers and Telecom Carriers

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Trade Show and Event Partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Webinar Branding Sponsorship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovation Awards Sponsorship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing, Writing, and Design Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THOUGHT LEADERSHIP:												
Company, Executive, or Technology Spotlight Article	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sponsored Thought Leadership Article	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commissioned Article	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Executive Spotlight/Video Interview	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whiteboard Video	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whitepaper Writing and Distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resource Center Asset Hosting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketplace Directory Listing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry Reports and Surveys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICT Executive Summit Events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovation Awards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Webinar Participation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipeline Guest Speaking & Event Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipeline Guest Blogging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LEAD GENERATION:												
List Rentals with Lead Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Direct Contact Advertising	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resource Center Asset Hosting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Content Distribution and Sponsorship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spotlight Articles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sponsored Articles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digital or Physical Article Reprints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICT Executive Summit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Webinars with Extended Lead Generation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketplace Directory Listing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Brochures

Distributed cell site gateway from ADVA and Edgework
 Open and disaggregated path to 5G infrastructure



As innovation and growth in packet and wireless networks continues to accelerate, communication service providers (CSPs) and mobile network operators (MNOs) no longer have time to wait for their vendors to come up with higher capacity devices that meet the latest requirements. Now there's a new way to grow networks that combines the agility of software-based feature development with the performance and economics of bare-metal switches. Building a network for 5G access is now as simple as selecting a hardware component with higher capacity and installing the network operating system (NOS). And to help, ADVA and Edgework have combined forces to deliver a disaggregated cell site gateway (DCSG) solution that provides the required features in an open and multivendor fashion.

Meeting the bandwidth demand in 5G

Access speeds will increase dramatically for 5G networks, and base stations will move from 10GbE to 100GbE and 250GbE uplink interfaces. Backhaul networks must rapidly grow to 100Gbit/s aggregated capacity. MNOs need to design and operate these higher-speed networks with proven technologies and established processes. At the same time, MNOs need to make their networks much more agile to unleash the power of 5G new radio (NR). They need to move from hardware-centric, static networks to software-defined architectures. With the latest software-defined networking (SDN) and network functions virtualization (NFV) network technologies, disaggregated radio architectures and networking

are paving the way for open, agile, and efficient mobile ecosystems.

Moving from closed to open

MNOs and CSPs want to break open single-vendor silos to increase competition and reduce cost. That has led to increasing interest in disaggregated networking with packet network devices implemented as white box switches and open network operating systems. That's why the Telecom Infra Project (TIP) defined the DCSG as well as OpenRAN. Both are essential to supporting the move to next-generation radio architectures.

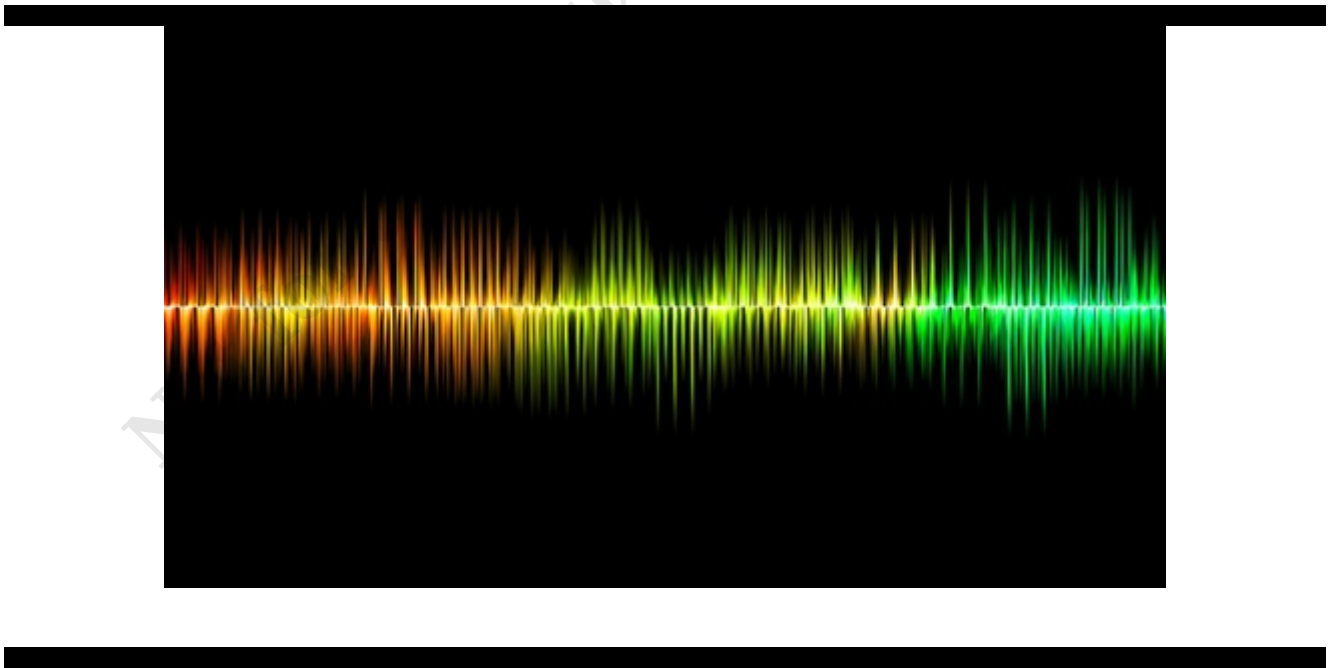
According to TIP's [DCSG Technical Specification](#), the DCSG is "an open and disaggregated platform based on commercial/off-the-shelf components and



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101 guideline

November 2023



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**YOU
HAVE THE
VISION
to grow your
infrastructure,
WE
HAVE THE
RESOURCES
to bring it
to life**



Looming deadlines, limited resources and a fiercely competitive market make it difficult to complete your wireless network. By outsourcing your **ENGINEERING, FURNISH AND INSTALLATION (EF&I)** we'll ensure the job is done right and on time.

CHR's experienced engineering and technical teams combined with our multi-vendor relationships and decades of regulatory experience ensure a successful integration of your wireless system - everything from site acquisition to optimization.

- Network architecture and design
- Multi-vendor management and procurement advantages
- Logistics and support (Rack and Stack)
- Implementation and training
- Regulatory and finance
- FTTH, IP and IPTV specialties
- 4G wireless core and site acquisition/turn up



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Nakina Systems Corporate Overview

Want to get where you're going without getting stranded? You need to ensure network integrity.

Our solutions allow you to know and control what's in the network, where it is, how it's configured, and who can access it.

Know where you're going

The next generation of networks — whether LTE, fiber, or optical — replaces centralized architectures with highly distributed functions. While these new networks are designed to increase flexibility and profits, they do add a new level of complexity to the network. Suddenly, you're maintaining far more hardware and software configurations and are left exposed to the types of errors that can lead to outages and degraded customer experience. Nakina Systems' solutions power integrity in the world's largest networks, and they are provided in partnership with the world's largest and most advanced equipment manufacturers.

Chart your course

Nakina Systems and our integrity platform partners deliver software solutions that ensure your network is always headed where you intend.

Together, we help our customers:

- Accelerate network upgrades and new installs by providing a baseline readout of network elements software configuration before and after the upgrade.
- Reduce the drift between the gold standard network design and the network in operation through online auditing, discrepancy checking, and locking down the network with centralized security management and
- Improve asset utilization and reduce network hardware maintenance expenses by identifying discrepancies in inventory and asset records through automated network discovery.

Nakina Network Integrity Management Solutions empower next generation networks to deliver on their promises.

Our customers roll out services more rapidly, upgrade networks with less effort, and experience fewer outages because they partner with Nakina Systems.

Pick the right navigator

Nakina Systems takes a unique approach to the competing challenges of expanding networks and shrinking resources. By focusing on the issue of network integrity, we have freed millions of dollars from customer networks, helped service providers to deliver new offerings faster, and have helped decrease service outages across our customer base.

We are:

- Responsive to our customers, providing solutions to problems faster, more creatively, and more flexibly.
- Aggressive in our search to add value to our customers' operations.
- Consistently and relentlessly improving our technology, practices, and processes to achieve success for our customers and other stakeholders.

Nakina Systems has developed its framework and applications working with the world's most demanding customers in the world's largest and most complex networks. We understand carrier requirements, setting, scalability, and efficiency.



Corporate Factsheet

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Info Directions Maintains Gold Certified Status in Microsoft Partner Program

VICTOR, N.Y. (March 10, 2009) — Info Directions, leading provider of net-centric billing, rating, order management, workflow and selling solutions for communications service providers, is pleased to announce it has maintained Gold Certified status in the Microsoft Partner Program with a competency in ISV/Software Solutions.

Recognizing Info Directions' expertise and total impact in the technology marketplace, the Gold Certification ensures Info Directions has demonstrated expertise with Microsoft technologies and has a proven ability to meet customers' needs. Microsoft Gold Certified Partners receive a rich set of benefits including access, training and support, giving them a competitive advantage in the marketplace.

"Solutions Competencies are an important way for Microsoft to better enable ISVs to meet customer needs," said Sanjay Parthasarathy, corporate vice president of the Platform Strategy & Partner Group at Microsoft. "They allow ISVs to keep and win customers with their deep knowledge of solutions-based Microsoft platform technologies. Microsoft has a long history of working closely with ISV partners to help deliver compelling solutions and applications to our mutual customers, and the Solutions Competencies are an important step in continuing to enhance vital relationships with ISVs worldwide."

The Microsoft ISV/Software Solutions Competency recognizes the skill and focus partners bring to a particular solution set. Microsoft Gold Certified Partners that have obtained this competency have a successful record of developing and marketing packaged software based on Microsoft technologies.

"We are extremely pleased to have maintained Gold Certified Partner status in the Microsoft Partner Program. Our organization is focused on developing products and services that support the evolution of the rapidly changing communications market, so we make it a priority to participate in the Microsoft Partner Program at the highest level," said Tim Wiona, Vice President of Product Marketing at Info Directions. "Being a Microsoft Certified Gold Partner helps us meet our commitment to our clients by giving them the products, tools and services they need to leverage new opportunities and compete more effectively in the communications market."



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