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- ▶ Monetizing Innovation
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- ▶ 6 Digital Transformation Tips
- ▶ Stopping Generative AI Attacks
- ▶ Big Brands Bet on Blockchain
- ▶ 5G Innovation & FWA
- ▶ Energy & Sustainability
- ▶ The Telco-to-Techco Transition
- ▶ Letter from the Editor
- ▶ Technology Industry News
- ▶ Article Index



PIPELINE | VOLUME 19 | ISSUE 8

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**PRACTICAL
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Nokia Partners With MetaLINK To Provide Broadband Wireless In Ohio

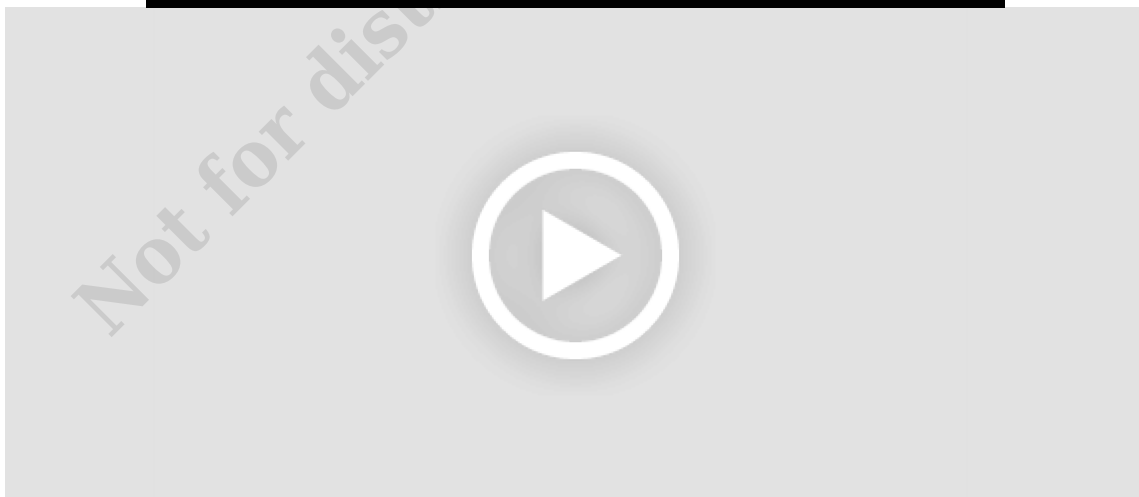
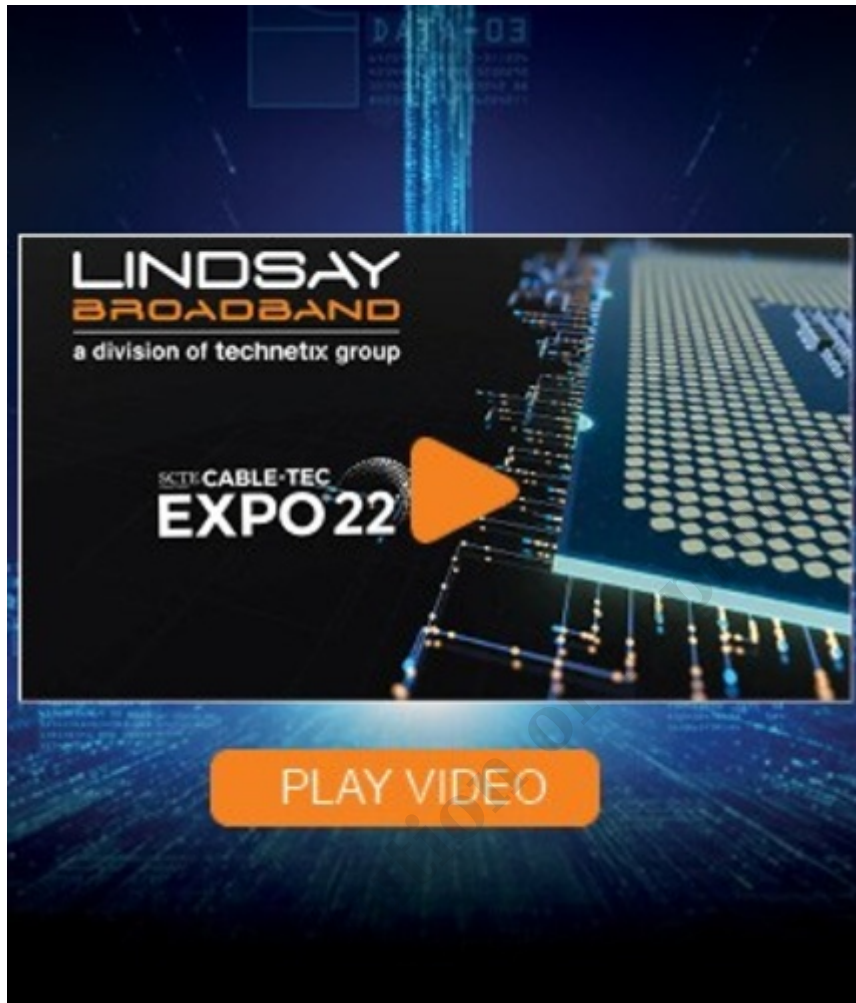
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NetApp Increases Simplicity for Modern Block Storage

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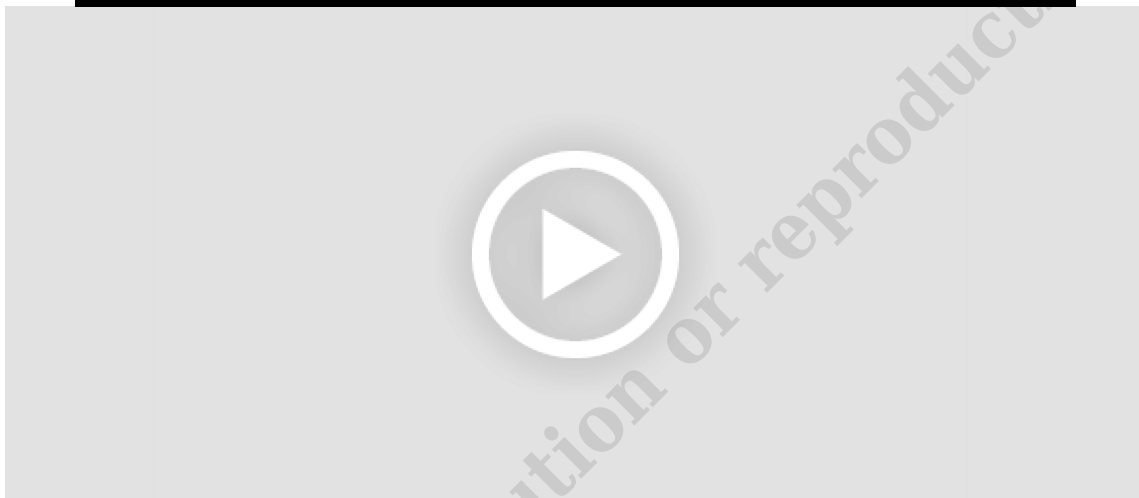
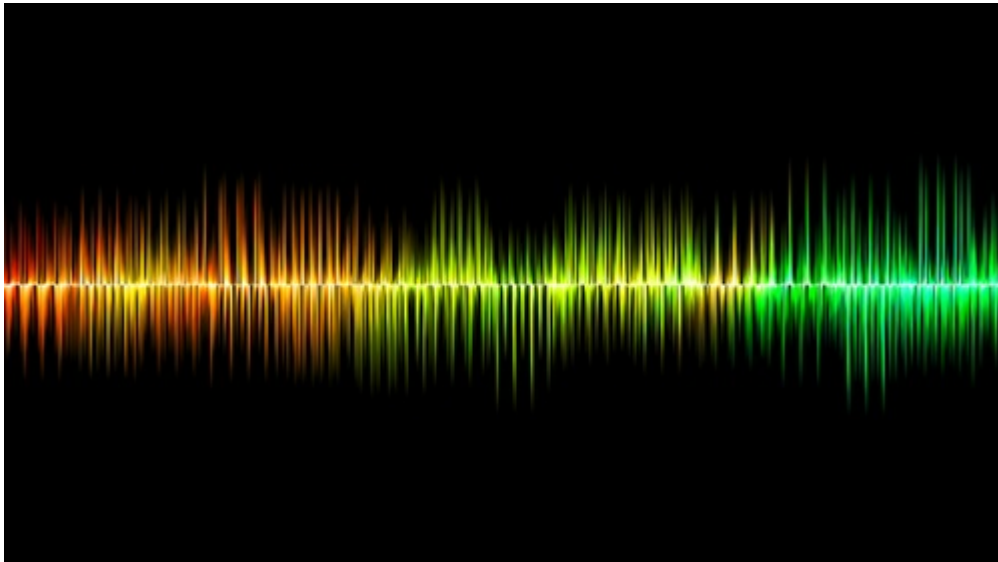
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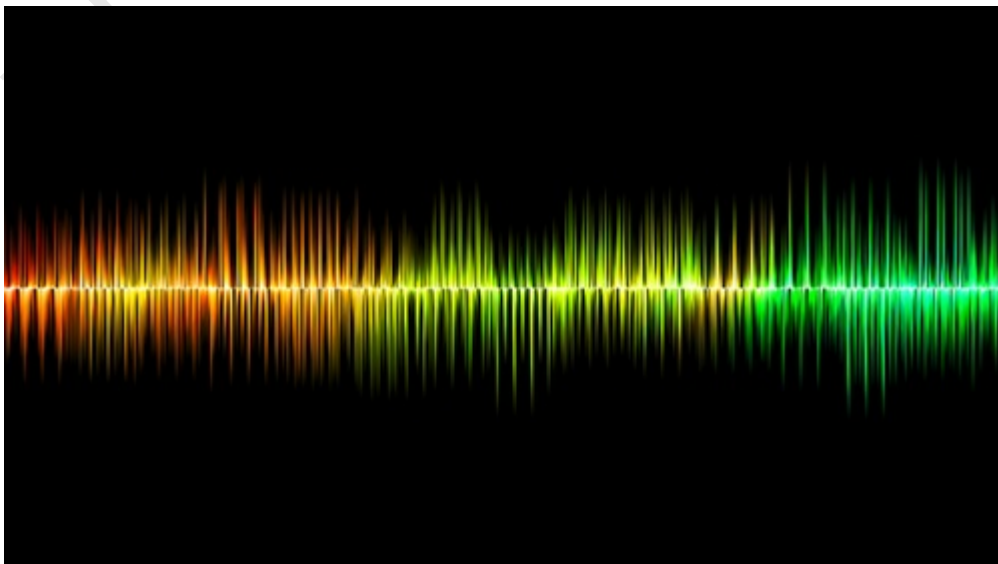
End-to-End Solutions for Broadband Networks

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.





The Network Transformation Imperative

*A Dynamic Panel Discussion Featuring
The Industry's Top Thought Leaders*



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Agile Architecture for Digital Innovation

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Transformation from Product-Centric to Customer-Centric
and Creating Competitive Advantage Along the Way

WHITE PAPER
TELECOMMUNICATIONS

Karen McStane - Vice President, North America
Pitney Bowes Software



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The Uplift Advantage

How firms in the communication industry have become smarter about contacting customers—and are driving results.



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Report

Reducing order fallouts: Key to success with business services

January 2015

Mark Mortensen and Anil Rao

www.analysismason.com

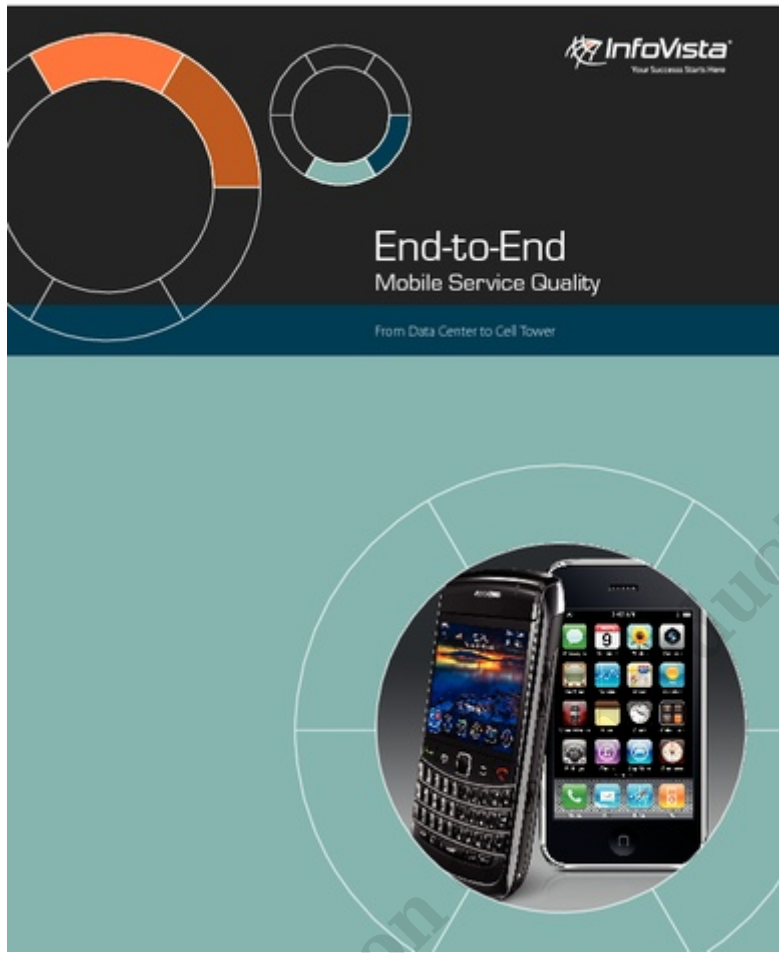
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Weathering the Wireless Tsunami
**How MNOs Can Reach
High Ground in Today's
Communications Market**

By ConceptWave Software Inc.

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TOP TEN PREDICTIONS FOR THE TELECOMMUNICATIONS
INDUSTRY IN 2011**For B/OSS, Managing the Manager is #1, says Progress Software**

Progress Software Corporation (NASDAQ: PRGS), a leading software provider that enables companies to be operationally responsive, predicts that telecommunications service providers will increasingly be able to detect technology problems that might affect customers, solving them before the customers even know they exist.

Sanjay Kumar, Industry Vice President for Communications and Media at Progress Software, said, "The telecommunications field is very competitive, and service providers have to do what they can to differentiate their offerings. Solving problems before they happen goes a long way toward managing the customer experience." The firm also predicts that mobile service providers will have to build stronger relationships with customers, mainly by providing unique offerings to grab and hold their attention.

Progress Software's Telecommunications predictions for 2011:

1. **For B/OSS, managing the manager is key.** Traditional business and operational support systems (B/OSS) will require systems to manage the systems. Most service providers have invested so much in their B/OSS infrastructure assets that they cannot be easily replaced and need an adapted layer to respond to real-time business demands and reenergize the existing B/OSS infrastructure's value.
2. **You will predict problems before they come to light.** Telco service providers will be able to predict when there is a potential issue that will affect customers—and correct it before it happens. The pre-emptive correction of problems before the customer knows they exist will become a key factor in differentiating service providers and improving the customer's level of service.
3. **Loyalty program.** Mobile service providers facing mounting competitive forces will have to build stronger relationships with their customers. They will need to provide customers with unique, interactive experiences to build stronger loyalty by tapping into customer call patterns and locations, correlating with customer preferences and providing value-added services to customize each customer's experience in a unique way.
4. **Partly cloudy.** As communication service providers head for the cloud, they will struggle with data interoperability between cloud and non-cloud environments. Operators will need advanced data transformation and adaptive technologies to take full advantage of cloud-based applications.
5. **Mind the gap.** Operators will be increasingly trapped in the gap between customer expectations for flexibility and speed, and the limitations in existing B/OSS infrastructure. This will drive demand for new business user toolsets to overlay B/OSS, enabling service providers to respond and deploy new solutions faster.

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EXFO Service Assurance and Juniper Networks Assure Performance and Quality of Multiplay Networks

BENEFITS SUMMARY

- › Ensures service performance and quality throughout the multiservice delivery network
- › Enables service providers to establish a quality advantage to increase customer satisfaction and reduce churn
- › Delivers actionable information to proactively identify, diagnose and resolve issues before subscribers are impacted
- › Reduces operational costs by minimizing truck rolls and maximizing technician and customer service time

The promises of increased average revenue per user (ARPU), lower operational expenses and gaining a competitive advantage are driving service providers to expand their multiservice IP networks. Voice, video and data services over separate networks are being converged over next-generation IP networks to deliver interactive multiplay service offerings. Providers are banking on these multiplay bundles to build customer loyalty, increase customer satisfaction and significantly reduce churn.

As providers roll out these new, dynamic business, communications and entertainment services, they face significant challenges to deliver service bundles that exceed the quality expectations of their subscribers. While the converged network simplifies service delivery, it is very complex and must be properly managed and monitored to meet quality of experience (QoE) and quality of service (QoS) expectations.

BUILDING A SERVICE-AWARE DELIVERY ARCHITECTURE

The launch of multiplay services requires that best-effort Internet networks evolve into secure, resilient infrastructures that can assure user experiences. The transition introduces many considerations that must be addressed. For example, video service delivery can vary greatly from one time to another with multiple sources impacting traffic volume and quality.

Delivering multiplay services means service providers must re-examine their network architectures and make decisions that will affect their success now and in the future. Offering a broad portfolio of scalable, intelligent systems, Juniper Networks provides service-aware network solutions for introducing and further developing multiplay services. Juniper's unique converged edge architecture enables the dynamic allocation of bandwidth, to efficiently deliver high-quality multiplay services from multiple sources, including voice, video, data, gaming and more. The company's proven experience and partnerships with companies like EXFO Service Assurance give providers confidence in their execution.

THE NEED FOR MULTIPLAY SERVICE ASSURANCE

While bundled multiplay service offerings can help build customer loyalty, it is essential for providers to monitor the performance and quality of their services to continually ensure customer satisfaction. Quality and performance issues that can result in service interruptions and downtime will force customers to switch to other providers that can promise higher quality services at similar prices. Competition is pushing providers to develop an advantage based on quality because price alone is becoming less of a factor.

To establish a quality advantage, providers need to shift from pure network management tools to converged service assurance solutions that ensure the end-to-end delivery of critical IP services. Simply gathering statistics from network devices does not offer providers the necessary service intelligence to monitor performance and quality.

A converged service assurance solution coupled with a network capable of supporting multiplay services enables providers to continually meet customer expectations and verify service-level agreements (SLAs). Service quality matters and business success relies on it.



Brochures



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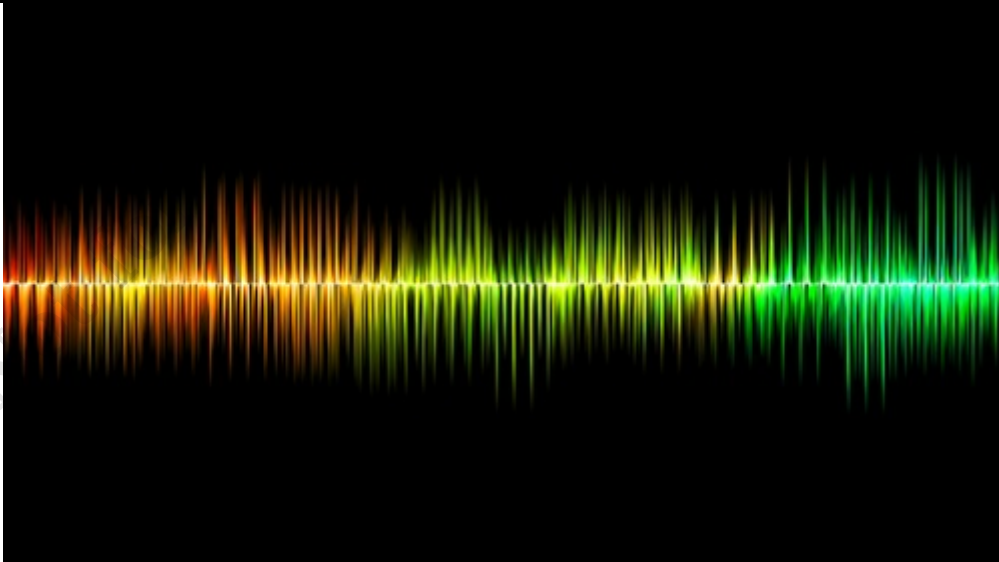
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AVOID government regulatory obstacles

Enghouse Data Services (formerly Moore Resource Systems) is a specialized team of GIS experts who make it possible for organizations to create and maintain geo-spatial enabled data for their next generation enterprise IT applications. The services that Enghouse provides can involve large data entry tasks to help populate unique data models or specific data updates based on field changes to a company's assets.

Our Enghouse Data Services team specializes in providing seamless project management support for an organization's own team. Data Services works with an organization's staff to assist in the tracking and completion of tasks on a daily basis to meet specific and prioritized needs.

DATA VALIDATION & QA

The Enghouse Data Services team offers specialized tools that enable validation of source data before conversion to the target. These specialized tools can highlight problem areas that need to be corrected (e.g. data integrity rules) that might be broken by migrating to the target system.



Task report post QC validation



DATA TRANSFORMATION

In a complex data cleansing and migration effort, data very often needs to be transformed between one or more formats. The Enghouse Data Services team accurately transforms the most challenging data, whether spatial or non-spatial.



GIS data aligned to imagery



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CSG Point-of-View: The Promise of Television Commerce



Interactive Television Technologies Can Deliver New Ways to Engage Your Customers and Increase Revenue and Upsell Opportunities in Real Time.

Using Interactive Television to Build Revenues, Engage Customers

The television viewing experience has been forever changed by the internet. Consumers want to engage and interact with their favorite television content—much like they do with content on their computers, mobile phones and other technology devices.

The mass adoption of web-enabled devices is transforming the way households access and consume media content on their televisions—and how they interact with businesses via the TV. Market research firm iNSTAT projects that more than 200 million web-enabled devices will be in use in the United States by 2014, and the average household will own between five and 10 such devices—televisions included.

With the set-top box in millions of U.S. households, cable and ODS providers have a clear advantage in leveraging T-commerce models to create new revenues and deliver new ways of interacting with customers that build loyalty and deliver a more personalized experience.

With new technology standards from CableLabs—namely the Enhanced TV Binary Interchange Format (E-BIF)—T-commerce is a viable business model for cable and ODS providers.

The E-BIF standard has already made its way into 25 million subscriber homes, offering an innovative and immediate way for providers to entice new consumers and retaining existing ones.

www.csg.com

Interactive Customer Care Drives Loyalty

Interactive TV models enable cable and ODS providers to deliver a more enriched customer experience. What better and more direct way to communicate with consumers than through their television?



The beauty of interactive TV is that it enables two-way communication between a provider and their customers in real-time.

Providers can send messages directly to subscribers about their bill, and then prompt the subscriber to view and pay their cable bill right from the television screen using their remote control.

With direct integration from the set-top box to back-office billing, customer care and other applications, any changes a customer makes to their account from the comfort of their couch are updated in real-time.

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Inventory Discovery & Reconciliation

If you want to get where you're going, you need an accurate map. Nakina Systems' Inventory Discovery & Reconciliation solution provides a true picture of your network's physical and logical inventory, so you can see beyond the horizon.

Setting sail

In today's hypercompetitive environment service providers are tasked with rolling out new services quickly — and delivering a superior customer experience. Yet rapid network expansion presents new challenges. Discrepancies between inventory and the real network are the norm, causing reduced order processing capacity, lower fault isolation and provisioning follow. Nakina Systems' Inventory Discovery & Reconciliation solution discovers optical Ethernet, IP/MPLS, and other network equipment and reconciles against industry standard inventory systems to reduce follow and provisioning times. Without an automated discovery and reconciliation solution like Nakina's, the investment in network-wide inventory systems is impossible to monetize.

Staying on course

A true picture of your network topology is an absolute necessity for rapid rollout of new services, efficient operation, and a predictable customer experience. Nakina's continuous

reconciliation capabilities ensure the highest level of network integrity. The discovery engine is constantly in contact with the network, performing regularly scheduled inventory discovery and reconciliation with network inventory databases. This constant feedback loop helps highlight inconsistencies before they become difficult problems. Nakina's customers can identify poor capacity management, lack of redundancy and many other challenges before they cause outages or other problems.

Finely tuned instrumentation

Nakina Systems' network integrity solutions enable our customers to accelerate time-to-revenue through faster deployments. Without a high integrity image, matching capacity to demand is a hit-or-miss affair: work orders and customer orders fall out due to non-existent or over-allocated ports; scarce capital resources are consumed when spare capacity is unused elsewhere. With an accurate and current picture of the network, there is no destination too far.

Key Functions

Nakina Systems' Inventory Discovery & Reconciliation replaces ad hoc data with a true network integrity solution. With an accurate picture of the network, you can feel more confident about the state of the network and your ability to deliver new services on time and on budget.

Multi-Vendor, Multi-Domain Topology Discovery

- Discover Optical Ethernet & IP/MPLS N/Ws (OTN/OTN/OTN networks)
- Reduce provisioning times

Full Discovery of Physical & Logical Inventory

- Topology, Links, Protection Groups, End-End Circuits
- Eliminates fall-outs due to inaccurate inventory

Pre & Post Circuit Qualification

- On the fly qualification of resource availability to support Assign & Design process

Integrated Security Solutions

- Eliminates fall-outs due to access issues and password issues
- Profile-based protection of access to network information

Standards-Based Interfaces

- Simple, Cost-Effective Integration with 3rd Parties





MATRIXX CONVERGENT CHARGING

As communications business models evolve and mature, marketing organizations are constantly creating new services, payment models are evolving, and devices are becoming increasingly sophisticated. Customer segments are becoming more defined and granular, and what once was either a prepaid or a postpaid relationship has grown into a multi-faceted array of payment options. These mix and match payment methods also provide options to charge physical goods to a mobile account or access personal funds as a customer would at a bank.

Devices and access methods are also multiplying making the picture yet more complex for service providers. Their subscribers have a choice of Smartphones, set top boxes, tablets, PCs, laptops, gaming consoles, and mp3 players to access services via cable, DSL, FTTH, 3G, Wi-Fi, Wi-Max and new LTE networks. However, competition is fierce and network access charges are becoming commoditized.

Communications service providers are challenged with rising above these complex operational and service delivery environments to focus on the customer. Regardless of device, access method or

payment option, customers should be presented with compelling, integrated service bundles that are intuitive and customizable to fit their personal needs. Convergent charging applications play a key role in delivering a differentiated and consistent customer experience as they provide the central link between services, payment methods, and devices.

MATRIXX Convergent Charging provides a highly flexible, hyper-efficient application that runs on low cost, commoditized hardware and which easily integrates with existing billing systems. It helps the marketing department and the business implement initiatives to strengthen the brand and increase customer value while providing dramatic scale and driving cost out of operations.

Increase Customer Value

MATRIXX Convergent Charging enables service providers to better monetize their portfolio of services and content and increase customer lifetime value. It provides a flexible and configurable set of pricing, charging and balance management features so that service providers can quickly and cost-effectively implement a convergent charging layer without disrupting existing IT and network assets.

Functional Highlights

- ▶ Bundle products and services together regardless of access network
- ▶ Quickly deploy new pricing models, promotions or discounts
- ▶ Manage balances and payment relationships
- ▶ Develop and implement loyalty programs and preferred pricing
- ▶ Track and enforce usage quotas, allowances and credit limits
- ▶ Bundle services together to provide cross-product discounts
- ▶ Roll out the same offers across prepaid and postpaid subscribers
- ▶ Share balances across devices, such as sharing a data allowance across a laptop, tablet and Smartphone
- ▶ Create prepaid/postpaid hybrid offerings

MATRIXX Software

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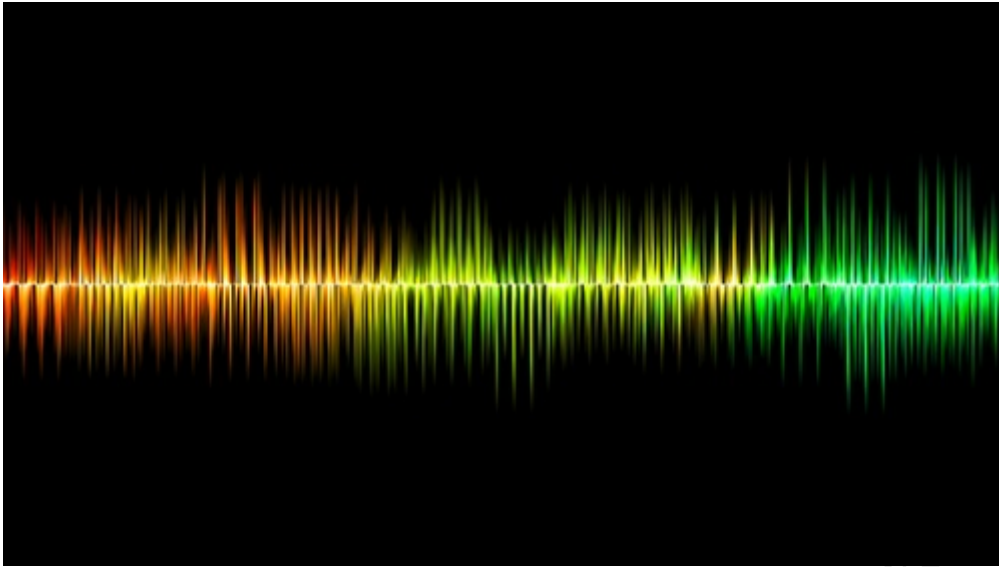
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