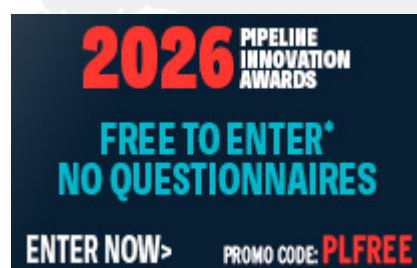


- Past Issues
- News Center
- Research Center
 - Webinars
 - Events
 - Sponsors
 - Members

FEATURED SPONSOR:



IN THIS ISSUE

Seamless Connectivity Services
Distributed AI Networks
Unified Endpoint Security
NIG2 & Supply Chains
WANs, Data Centers & Edge AI
Intent-Based Networking for OT
Liquid Cooling & Power
Enterprise Network Provisioning
Designing Self-healing Networks
The Resurgence of Fiber Optics
Letter from the Editor
IT & Telecom Technology News
Article Index



PIPELINE / VOLUME 22 / ISSUE 3

PL

DELIVERING
**SEAMLESS
CONNECTIVITY**
WITH:
CableLabs®

THE
**AI FACTORY
BACKBONE**

WITH:
NOKIA

NAVIGATING
**NIS2 SUPPLY
CHAINS**

INTEGRATING
**INTENT-BASED
NETWORKS**

TRANSPARENT
**ENTERPRISE
SERVICES**

THE
**FIBER
RESURGENCE**



+

UNIFIED
NETWORK
SECURITY

AI &
HYBRID
NETWORKS

LIQUID
COOLING &
STRANDED
POWER

DESIGNING
**SELF-HEALING
NETWORKS**

NETWORK TRANSFORMATION

NEWSWIRE

LATEST UPDATES

ADVANCED ANALYTICS

WEBINAR:

A Dynamic Panel Discussion
Featuring Industry Leaders

[PARTICIPATE](#)



Pipeline

The Impact of Transformation



A Dynamic Panel Discussion
Featuring Industry Leaders

[VIEW](#)



Pipeline

Research Center

- Promote Content & Collateral
- Target-market Visibility
- SEO Optimized
- Capture Sales Leads

[UPLOAD ASSETS](#)

Pipeline



Be Recognized as a
Top Industry Innovator



EXCLUSIVE
SPONSORSHIP
PACKAGES
AVAILABLE

Hyperinteractive Ads

- Targeted
- Perpetual
- Extensible
- Hyperinteractive
- Capture Opportunities

[PLACE YOUR ADS NOW](#)

Pipeline

Dynamic Webinars

- Superior Quality
- Engage Buyers
- Extensive Lead Gen
- Expert Moderation
- Speaker Support
- Advanced Platform

[REQUEST WEBINAR INFO](#)

Pipeline

Memberships

- Unlimited Services
- Best Pricing
- Elevated Visibility
- Direct Access

[BUILD YOUR PACKAGE](#)

Pipeline

The Network Transformation Imperative

A Dynamic Panel Discussion
Featuring Industry Leaders

[VIEW](#)



Pipeline

Pipeline Video Services

- On-site Videos
- Animation and Whiteboard
- User Interface Demonstrations
- Editorial Interviews

[GET STARTED >>](#)

Pipeline

Pipeline WEBINAR
Leverage *Pipeline* to
Expand Your Brand &
Your Thought Leadership

Ads	Editorial	Events
Awards	Branding	Memberships
News	Webinars	Research

[WATCH VIDEO NOW](#)



Not for distribution or reproduction

Pipeline
MARKET RESEARCH

**CUSTOM RESEARCH
REPORTS & SURVEYS**

LEVERAGE THE
COLLECTIVE KNOWLEDGE
OF THE GLOBAL MARKET

GET PRICING & DETAILS

HOW TO
BE INCLUDED IN *PIPELINE*

CLICK HERE ►

Pipeline Video Services

- On-site Videos
- Animation and Whiteboard
- User Interface Demonstrations
- Editorial Interviews

GET STARTED >>

Pipeline

**Check Out the
Latest Content**

- Whitepapers
- Webinars
- Articles
- Case Studies
- Videos
- Surveys

READ NOW >>

Pipeline

CONNECT WITH US

[Follow @PipelineWire](#)

[Back](#) [More](#)

Latest Issues





[Advertising Placements](#)

[Sponsor Articles and Issues](#)

[View More Issues](#)

TRENDING NEWS

Marvell Boosts AI and Data Center Performance

[Full Story>](#)

Bell Canada Launches On-demand and Streaming TV App

[Full Story>](#)

Qualcomm and CP Plus Partner for AI Video Security

[Full Story>](#)

DT and OpenAI Partner on AI Products and Experiences

[Full Story>](#)

NVIDIA Debuts New Open Models for Agentic AI

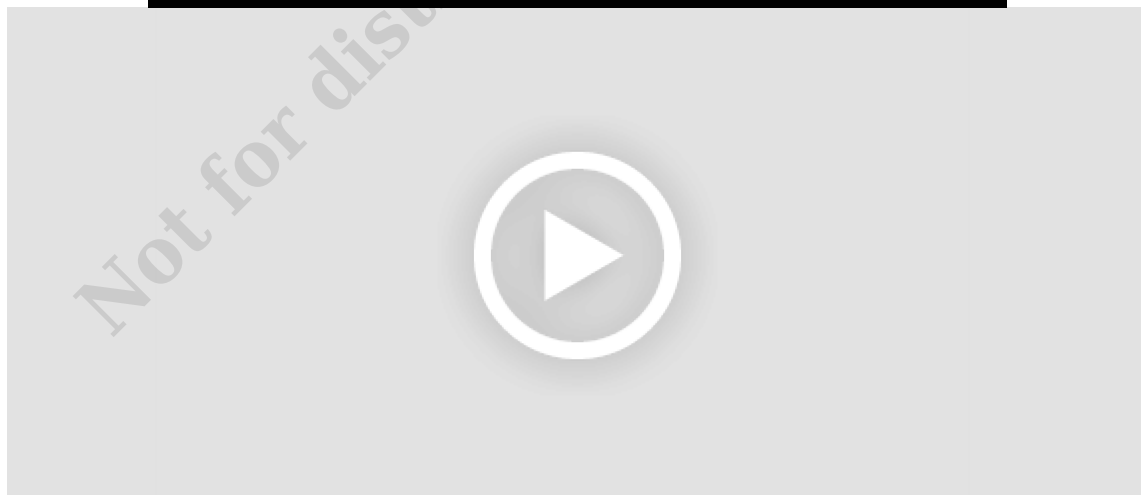
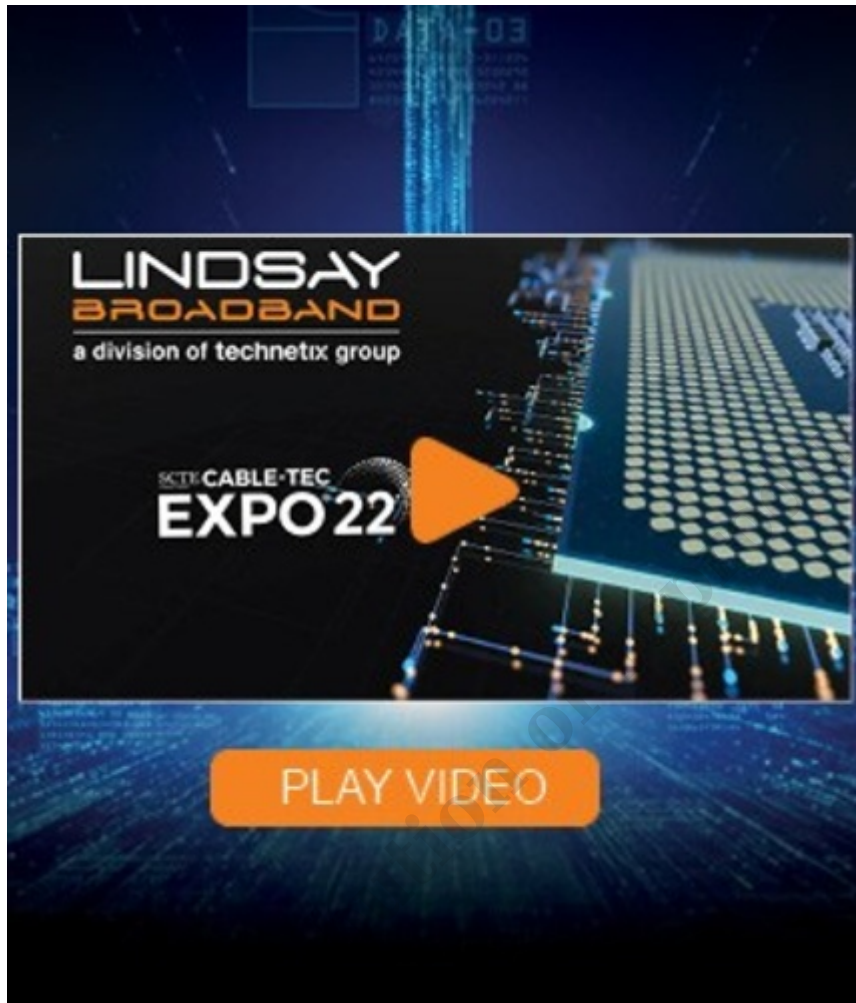
[Full Story>](#)

Kaspersky Warns of Cyberattacks, Supply Chain, and Current Threats

[Full Story>](#)

[View More News](#)

Featured Content



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.

[Request Video](#)

[View More Videos](#)

Latest Webinars

Previously live

IT Ukraine Association

JEVERA
software solutions

23 NOV 2023
4PM EET
online

Discover how to mitigate risks of 2024

**“DIGITAL TRANSFORMATION
FOR TELCOS: A 101 GUIDELINE”**

The Impact of Transformation

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



© 2018. All rights reserved.

The Network Transformation Imperative

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



© 2008. All rights reserved.

Agile Architecture for Digital Innovation

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



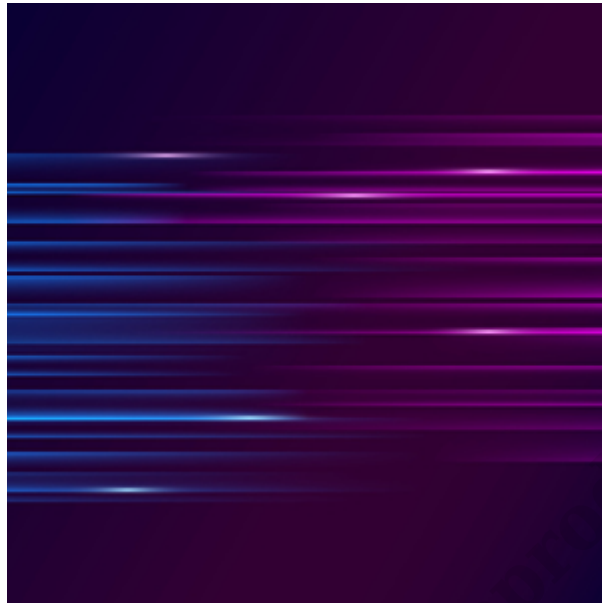
© 2007 All rights reserved.

[Participate in Webinars](#)

[Join Next Webinar](#)

[View More Webinars](#)

Latest Articles



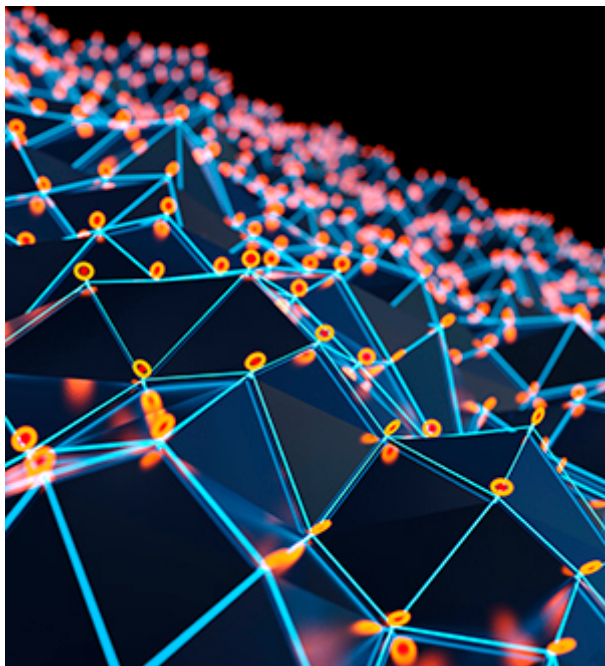
Seamless Connectivity Services

[Order Article Reprint](#) [Read More](#)



Distributed AI Networks

[Order Article Reprint](#) [Read More](#)



Unified Endpoint Security

[Order Article](#) [Reprint](#) [Read More](#)

Not for distribution or reproduction.



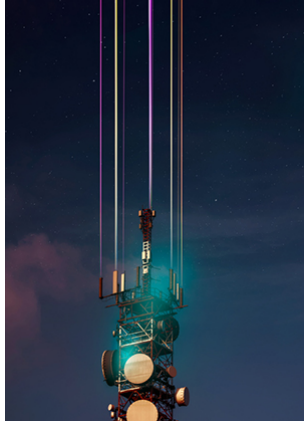
NIS2 & Supply Chains

[Order Article Reprint](#) [Read More](#)

[Sponsor Articles](#)

[Advertising Placements](#)

TRENDING ARTICLES



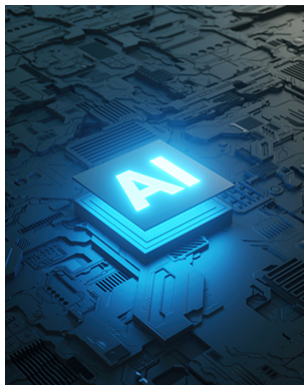
5G NTN Satellite Networks



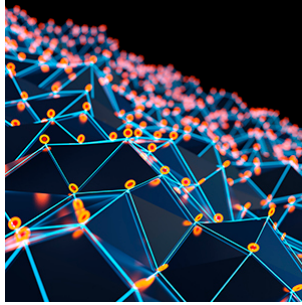
Edge AI & Local LLMs



Quantum Network Simulation



Transforming CX with Agentic AI



Internet Connectivity Trends
[View More Articles](#)

Other Featured Content

**DON'T LET
YOUR NETWORK...
END UP
HERE.**

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 portability, they do add a new level of complexity to the network. Soberly, you're maintaining far more hardware and software configurations and are left exposed to the types of errors that can lead to outages and degrade 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.

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, testing, scalability, and resiliency.

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.

WWW.NAKINASYSTEMS.COM



TRIBOLD 3.0™

The communications industry's most advanced
Enterprise Product Management software solution

TIME TO TAKE CONTROL

These are challenging times for the telecoms and media sectors. Fierce competition is lowering margins. Converging technologies are making product differentiation problematic. Cost pressures are mounting. Customers are treating products as disposable commodities while brand loyalty is fast becoming a thing of the past.

Facing these difficulties, Communication Service Providers (CSPs) are discovering that delivering innovative, profitable products is an increasingly demanding task, but one that has become paramount to their ability to effectively compete and deliver in this fast evolving industry.

Enterprise Product Management is about taking control over these challenges and providing the key to how CSPs go to market and with what products and services.

tribold
product • performance • profit

...



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 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 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
- Integration 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-cure 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-cure 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 \$2.8 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

csgi.com

© 2012 CSG Systems International, Inc. and/or its affiliates ("CSG"). All rights reserved.





e-billing and Analytics Solution

Increase billing transparency and control, enhance customer experience and loyalty, reduce support costs, and deliver faster ROI.

Customer Experience Competitive Advantage

Faced with the challenge of how to increase profitability, Communication Service Providers (CSPs) are increasingly focusing on customer experience as a way to differentiate from the competition, maximize revenues and reduce costs. Business customers represent a significant source of revenue for many CSPs and, as such, it's vital to provide high levels of customer service to attract and retain these key customers and maximize their lifetime value. The enablement of customer experience is an important factor in improving customer experience while improving efficiency and driving down costs.

In the continuing search for new revenues, CSPs have expanded the range of services they provide to their business customers to include mobile voice and data, fixed-line voice, IP data services — with a corresponding increase in billing complexity and, in some cases, a decrease in customer satisfaction due to the siloed presentation of billing information for each service type. As a consequence, CSPs are looking for ways to evolve their customer experience to new levels of interactivity with a single view of services through the provision of unified communication channels. To achieve this goal, CSPs have to be able to abstract the customer experience layer from the underlying billing and CRM infrastructure, which often means dealing with multiple complex legacy source data systems that can hinder the development and delivery of e-enabled customer experience.

Customer Needs

In maturing markets, business customers are increasingly basing their purchasing decisions on service quality and support rather than on price alone. Hard-working managers are demanding access to

systems and tools that enable them to become more productive, simplify their tasks, take control of their organizational spend, and allow them to effectively manage their relationship with the CSP. Specifically, these customers want to have convenient and secure access to their consolidated service and usage information in a single online location; with the ability to view summary spend information across their organization, view out of the box and custom reports and, drill-down to analyze the detail of service usage.

MDS e-billing and Analytics Solution

MDS e-billing and analytics solution provides businesses of all sizes, from global corporate enterprises to SMBs and sole traders, with secure online access to their consolidated accounts and electronic billing information. They permit customers to view trends, analyze details of spend and take control of their communication services. The MDS e-billing and analytics solution empowers customers to make informed business decisions, enhances the loyalty and lifetime value of these important customers, provides additional value to attract new customers and retain existing ones, and reduces operational and support costs.

Utilizing a powerful analytics engine, MDS e-billing and analytics solution simplifies the task of integration with legacy billing and CRM systems, delivering rapid go-to-market, low-risk integration, accelerated time-to-value and lower total cost of ownership.

E-Billing and Analytics Solution



Distributed cell site gateway from ADVA and Edgeworks

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 Edgeworks 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 25GbE 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 DCSC as well as OpenRAN. Both are essential to supporting the move to next-generation radio architectures.

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

SPIRIT COMMUNICATIONS

Switches to EMC Watch4net and reduces OPEX by 60%



ESSENTIALS

Challenges

- Customer contracts required robust SLA monitoring solution
- The legacy system (InfoVista) grew too expensive and difficult to maintain
- InfoVista was slow to deliver upgrades
- InfoVista's upgrade costs were comparable to purchasing an entire solution

Solution

- Watch4net was deployed in just a few days
- Watch4net is running in a virtualized environment
- Dedicated Oracle Solaris resources are no longer required, resulting in cost savings

IT improvements

- 60% reduction in cost-per-managed device
- 40% savings on collectors and additional modules
- Replaced Java JRE with fast AJAX/Web 2.0 front end
- Troubleshooting is simpler, faster due to Watch4net's streamlined architecture

Business Benefits

- Increased revenue from premium portal offerings
- Improved data retention (from 7 days to 7 months of "6-minute" data)
- Improved SLA metrics and more accurate billing from more granular bandwidth utilization reports
- Enhanced service offering with ad-hoc reporting and automated report delivery

CUSTOMER PROFILE

ABOUT SPIRIT COMMUNICATIONS

Headquartered in Columbia, SC, Spirit Communications provides carrier-class telecommunications services to businesses and government agencies throughout the southeastern U.S. over its private fiber-based MPLS network. Spirit offers a wide variety of solutions including VoIP, SIP trunking, local and long-distance calling, wholesale long distance, SS7, AIN, on-demand video conferencing, audio/Web conferencing and hosted Internet services. Spirit Communications prides itself in providing solutions that are reliable, flexible and responsive to customers' business needs.

Monitoring efficiently the wide choice of bandwidth and quality of service along with the service level agreements (SLA) is essential to the success of their enterprise.

BUSINESS CHALLENGE

Spirit operates a mixed network comprising equipment from Alcatel-Lucent, Cisco, Adva, Adtran, Ciena, Brocade and more – over scores of servers and several thousand network devices. Proactive performance monitoring is strategic to Spirit success in delivering a competitive offering that features a variety of options for granularity of bandwidth and quality of service (QoS). Spirit provisions service level agreements (SLAs) that allow customers to select end-to-end performance metrics based on CIR, frame loss, delay and jitter. Spirit's customer contracts absolutely require robust SLA monitoring solution.

In 2006, Spirit implemented InfoVista's performance management solution. The product met the initial requirements, but as time went on, the software became more cumbersome to upgrade and maintain; additionally, Spirit needed upgrades to support the Alcatel-Lucent 5620 SAM and these were slow in coming. Spirit decided to investigate a variety of alternatives, including using open source tools to build their own solution as well as purchasing commercially available products.

EVALUATION AND SELECTION

Spirit embarked on a search for solutions capable of providing performance reporting for Alcatel-Lucent equipment. Spirit determined that the cost of InfoVista upgrades equaled the cost of purchasing an entirely new solution. Next, the IT team carefully

THE EMC SOLUTION FOR SERVICE ASSURANCE

Transform Healthcare IT with an application-first approach to IT management



ESSENTIALS

Virtual Data Center Visibility

- Unified management of physical and virtual IT environments

Configuration Management

- Coverage across networks, storage, and servers

Identify and Act

- Advanced root-cause analysis for separating symptoms from problems

THE FOCUS OF IT OPERATIONS

"The goal of IT operations is to enable the business to operate more effectively, more efficiently, and with lower risks and costs...In short, IT operations isn't about bits, bytes, and bare metal; it's about enabling business leaders to do what they do best: run the business."

Gartner: Key Issues for IT Operations Management, 2013.

ENSURING HEALTHCARE SERVICES AND APPLICATION PERFORMANCE

As a CIO or IT leader of a Healthcare company, you have a tri-fold charge:

- Ensure applications and IT services are delivered consistently and at the highest possible levels—because that's what the business and end users care most about.
- Fully understand and effectively manage your IT service delivery environment, so that service levels to the business can be met or exceeded, ongoing operational costs are minimized, and problems—when they occur—can be resolved rapidly with minimal impact.

CHALLENGES TO TRANSFORMING IT

Moving applications to the cloud makes service assurance anything but easy. Factors such as the dynamic nature of a virtual data center (VDC), the rapid pace of IT change, lack of operational visibility and insight, and ineffective problem management make providing service assurance more of a long-term goal than short-term reality for many IT leaders. They need answers to critical management questions, including:

- How can I ensure applications and IT services are delivered consistently and at the highest possible levels?
- How do I understand risk conditions and business impact so I can prioritize my team's actions?
- How do I monitor, isolate, report on, and prioritize fault and performance problems more effectively and efficiently?

IT MANAGEMENT THAT ENABLES SERVICE ASSURANCE

Fully understand and effectively manage IT service delivery, and, in turn, provide service assurance to the business with the EMC® Solution for Service Assurance:

- Virtual Data Center Visibility
- Configuration Management
- Identify and Act

Operational Intelligence

EMC²

Brochures



SOLUTION BRIEF

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/2019/04/3-Mobile-Backhaul-Options.pdf>

Whitepapers

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



by Susan Monroe and Cheryl Kingsome | 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

CSFs 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 customers' experience is not simply a matter of capturing customer information and order requests. Today's reality requires CSFs 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, CSFs 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 CSFs. 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 consumers 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

This custom publication has been sponsored by Progress Software.

© Copyright 2011, Yankee Group Research, Inc. All rights reserved.

Whitepapers



303 Kings Highway North • 888.504.4110 • info@inc.com

Info Directions Earns Place on Inc. List as One of America's 5,000 Fastest-Growing Private Companies

5,000 Fast-Growth Companies Report Aggregate Revenue of \$214 Billion

VICTOR, August 13, 2009 – Inc. ranked software engineering firm Info Directions, Inc. on its annual ranking of the 5,000 fastest-growing private companies in the country. The list is the most comprehensive look at the most important segment of the economy – America's independent-minded entrepreneurs. Taken as a whole, these companies represent the backbone of the U.S. economy.

"Our third annual Inc. 5000 continues the most ambitious project in business journalism," said Inc. 5000 Project Manager Jim Melloan. "The Inc. 5000 gives an unrivaled portrait of young, underreported companies across all industries doing fascinating things with cutting-edge business models, as well as older companies that are still showing impressive growth."

Established in 1996, Info Directions is an Independent Software Vendor (ISV) that designs, hosts and installs billing, CRM and point of sale solutions for mobile, wireline and IP-based telecommunications service providers. Info Directions' software solutions, including its benchmark CostGuard® and Lexsys Point of Sale™ products, help service providers eliminate the complexity of selling, activating, managing, billing and caring for customers. Info Directions also appeared on the Inc. 500 list in 2001.

"It is rewarding to be recognized by Inc. for accomplishing our strategic growth initiatives. We share this Inc. acknowledgement with our clients, who leverage our software solutions to create the new business models and superior customer experiences that drive both their growth and ours," said Don Culeton, president of Info Directions. "Innovation is one of the primary tenets on which Info Directions is built, and appearing on this list reinforces the importance of investing in our position as a leading developer of telecommunications billing, CRM and point of sale applications."

Despite the ongoing recession the aggregate revenue of the 5,000 companies that made the list increased to \$214 billion, up \$29 billion from last year, with a median three-year growth rate of 126 percent. Most important, the Inc. 5000 companies were engines of job growth, having created more than 1 million jobs since those companies were founded. Complete results of the Inc. 5000, including company profiles and an interactive database that can be sorted by industry, region, and other criteria, can be found on www.inc.com.

Whitepapers

Customer Centricity in the Telecommunications Industry

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

WHITE PAPER

TELECOMMUNICATIONS

Kevin McShane • Vice President, North America
Pitney Bowes Software



Not for distribution or reproduction.

Dynamic Product Management for Communication Service
Providers (CSPs) – The Time is Now

A Stratecast Whitepaper



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.



Customers expect organizations to be aware of their distinct preferences and to interact with them on an individual basis rather than as part of customer segments or groups. Providing each person with individualized messaging, offers, and products ensures a personalized customer experience.

Toward Superior Customer Experience: Building Blocks for Personalization

November 2022

Written by: Eren Eser, Associate Research Director, Services, IDC Türkiye

Introduction

Customers have always wanted a hassle-free experience in their interactions with brands. In the meantime, customer expectations for smooth and enjoyable experiences are constantly changing and evolving due to the ever-accelerating pace of digital technology and advances in the market. In parallel with its growing importance among customers, customer experience (CX) has become a strategic concern for businesses. According to IDC's Future Enterprise Resiliency and Spending Survey, enhancing customer experience was enterprises' top business goal globally for a five-month period (September 2021–January 2022, inclusive).

Customer experience now has significantly less friction thanks to developments in customer experience technologies across advertising, marketing, commerce, sales, customer service, and more. However, focusing purely on technological advancement without considering the human connection in CX projects hinders organizations in creating and sustaining emotional connections with customers.

Differentiating by efficiency or product is doomed to failure. The return on investment for efficiency improvements will eventually be close to zero at some time in the near future. The capacity to differentiate at the product level has been hampered by technology because every new product feature or function can easily be copied by rivals and introduced to the market. Customers now consider brand experience their key criterion for choosing which items to buy and use, since they perceive less differentiation at the product level, with products essentially identical in terms of desired features.

AT A GLANCE

KEY STATS

According to IDC research:

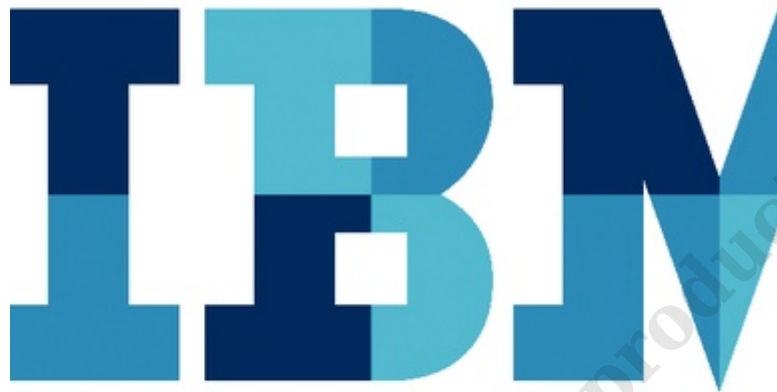
- Improving customer experience is a top business priority for most enterprises.
- Personalization improves engagement rates by 35–40% versus non-personalized communication.

KEY TAKEAWAYS

- Customers now view personalization as the default engagement standard.
- Organizations can differentiate themselves and achieve a long-term competitive edge by offering highly personalized customer experiences.

Network Analytics: Turn Big Data into Big Opportunity

*Seven Steps for Network Operations, Marketing,
Customer Care and IT*



IBM

Not for distribution or reproduction.

Whitepaper by



CustomCall
DATA SYSTEMS

1009 S Whitney Way
Madison, WI 53711
608-274-7009
www.customcall.com

*The
Commercial Market Opportunity
For*

(Non-Tier 1)

Cable MSOs



A whitepaper covering the current industry, opportunities, and requirements for a non-Tier 1 Cable MSO entering the business services market.

Completed March 1, 2012

Copyright ©2012 CustomCall Data Systems, Inc.
All rights reserved.

IP Video Services Accelerator

Sigma Systems' IP Video Services Accelerator is a robust solution enabling cable service providers to extend video service offerings to deliver an enhanced and unified entertainment experience.

Without a doubt, the enhanced entertainment experience over IP video networks is emerging as the "next big thing" for service providers as over-the-top (OTT) content, Internet video and 3rd party applications continue to threaten customer loyalty. Gone are the days of just delivering traditional video offerings as cable service providers begin embracing the opportunity to create new business models and deliver an exciting, personalized multi-screen experience to subscribers. But without the proper supporting service fulfillment foundation, the accurate delivery of this experience is a significant challenge for cable service providers.



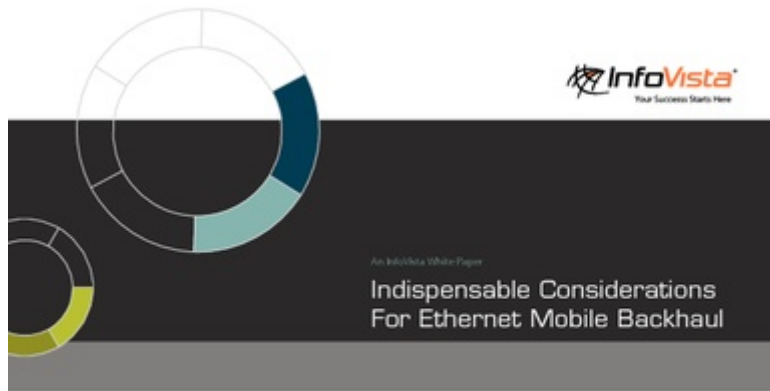
Simultaneous Linear & IP Video Provisioning & Support

The IP Video Services Accelerator provides a service fulfillment solution that simultaneously provisions and supports both linear and IP video networks to deliver digital TV, PPV, VOD, DVR/PVR, Internet Video, OTT content, and 3rd party applications. This unique integrated OSS service management solution eliminates operational silos and provides seamless order management, provisioning, and entitlement management across all technologies, services, and systems.

Simplify All-IP Video Migration

By supporting a hybrid linear and IP video network that provisions all video services, the IP Video Services Accelerator gives you the ability to simplify and implement a logical migration strategy from legacy to all-IP video. You can manage this migration at the pace of your business and benefit from the flexibility to migrate in stages, by managed service area, network segmentation, and even customer profile. With the IP Video Services Accelerator you can rapidly launch enhanced entertainment services and migrate linear video subscribers to a common OSS back-office solution when your business is ready.

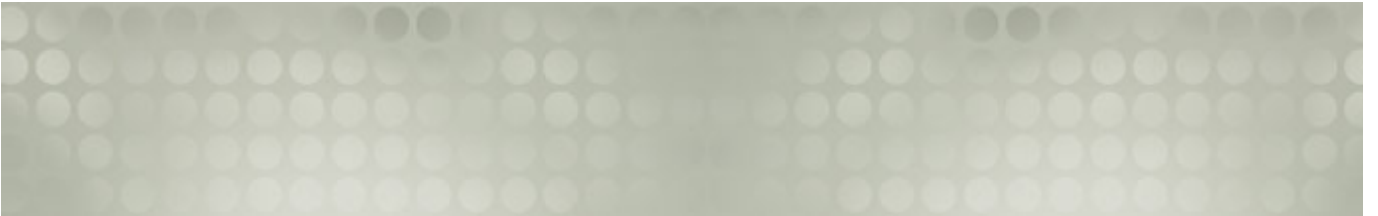




[Upload Content](#)

[View More Content](#)

© 2026, All information contained herein is the sole property of Pipeline Publishing, LLC. Pipeline Publishing L.L.C. reserves all rights and privileges regarding the use of this information. Any unauthorized use, such as copying, modifying, or reprinting, will be prosecuted under the fullest extent under the governing law.



Not for distribution or reproduction.