Home
Subscribe
Knowledge Center
About Pipeline
Innovation Awards
Executive Summits

June 2024, Volume 20, Issue 8

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

FEATURED SPONSOR:

IN THIS ISSUE

DIGITAL GREEN PUBLISHER™

PL

Pipeline | Volume 20 | Issue 6

PRECISION LIQUID COOLING
FOR DATA CENTERS

SOLVING
SATCOM
CHALLENGES

AI FOR IT
INTELLIGENT
NETWORKS

PC-BASED
LLMs & AI
HAVE ARRIVED

THE
AI-POWERED
TELCO

SECURE &
SEAMLESS
OPEN WI-FI

PRESHOW GUIDE TO
DTW IGNITE
2024

OPTIMIZING IT & TELECOM NETWORKS
AI-ASSISTED VOICE TECHNOLOGY
NAAS FOR LAW ENFORCEMENT

INNOVATION

NEWSWIRE

CONNECT WITH US

Follow @PipelineWire

Back More
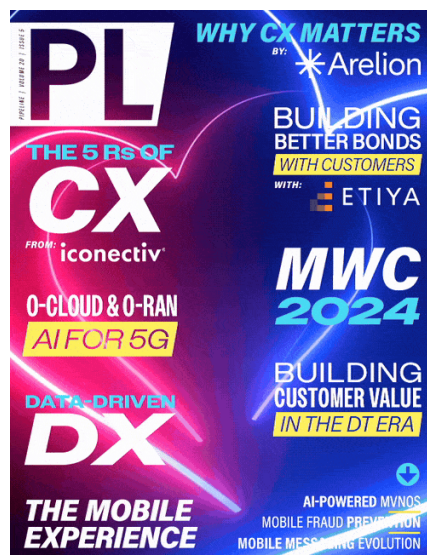
[Advertising Placements](#)

[Sponsor Articles and Issues](#)

[View More Issues](#)

TRENDING NEWS

Dell and Ericsson to Accelerate Telecom Cloud Transformation

[Full Story>](#)

CGI Appointed Technology Delivery Partner for UK Emergency Services

[Full Story>](#)

CrowdStrike and NinjaOne Announce Strategic Partnership

[Full Story>](#)

Northern Data Group and VAST Data Partner to Deliver AI Cloud

[Full Story>](#)

Orange and Nokia to Accelerate 5G in Europe

[Full Story>](#)

ServiceNow Makes Strategic Growth Investment In InMorphis

[Full Story>](#)

[View More News](#)

Featured Content
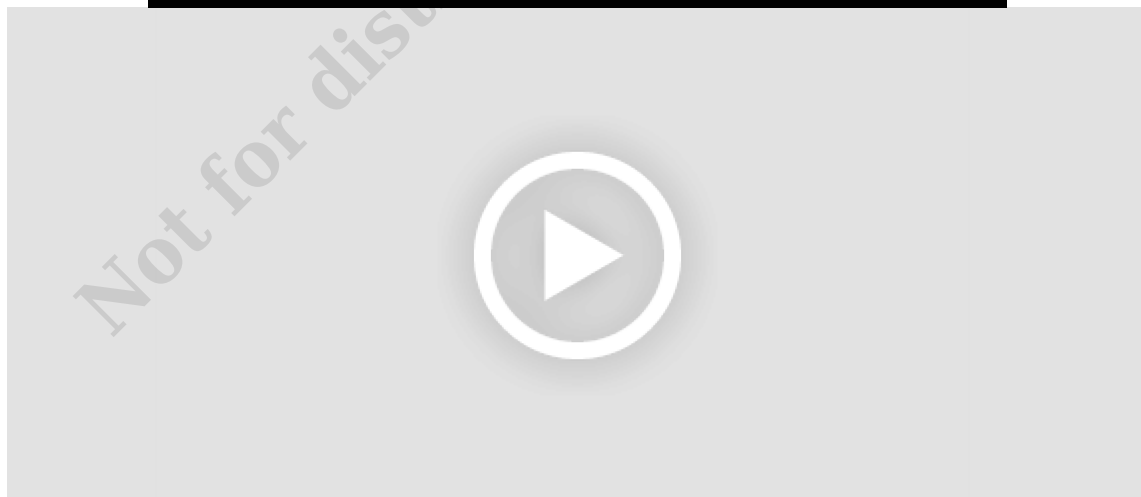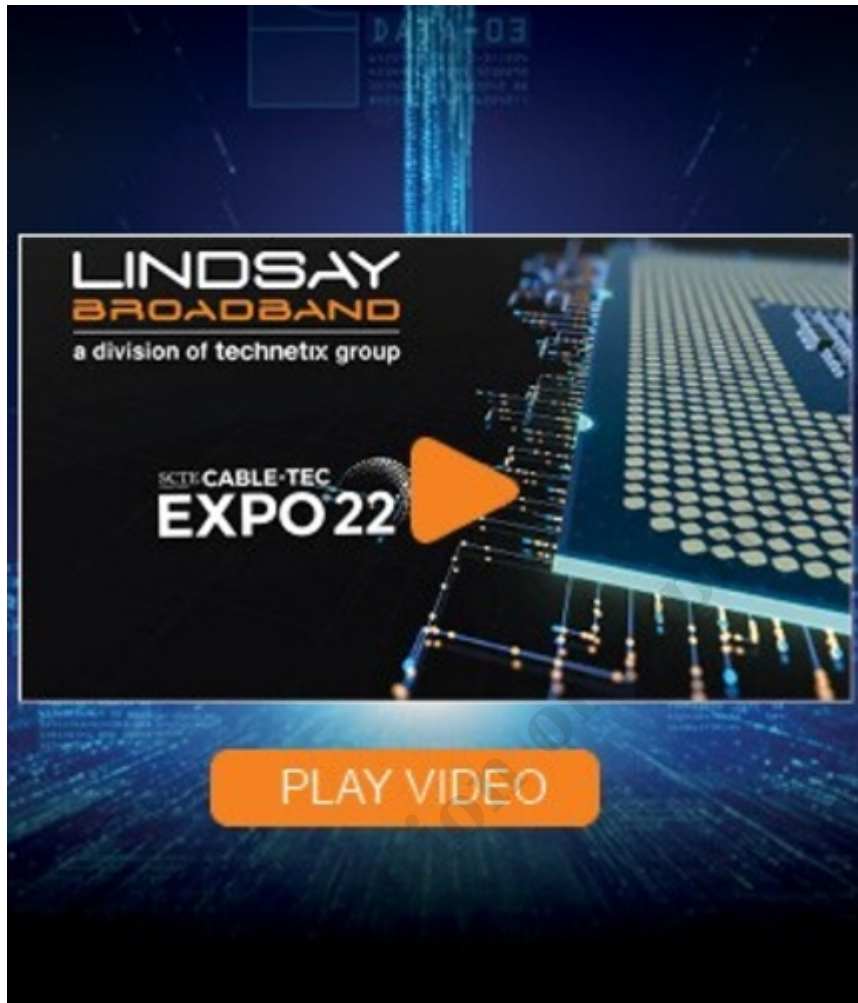
End-to-End Solutions for Broadband Networks

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.
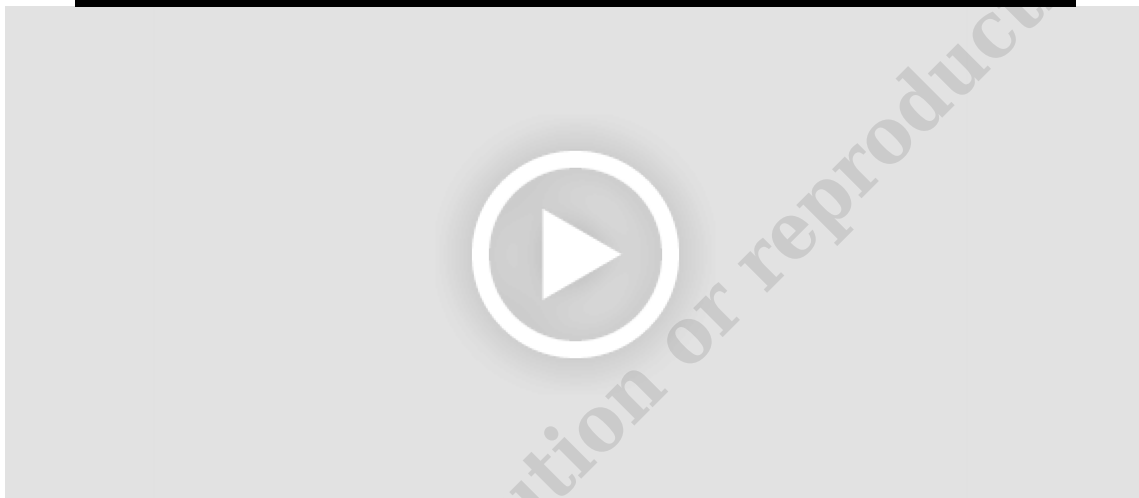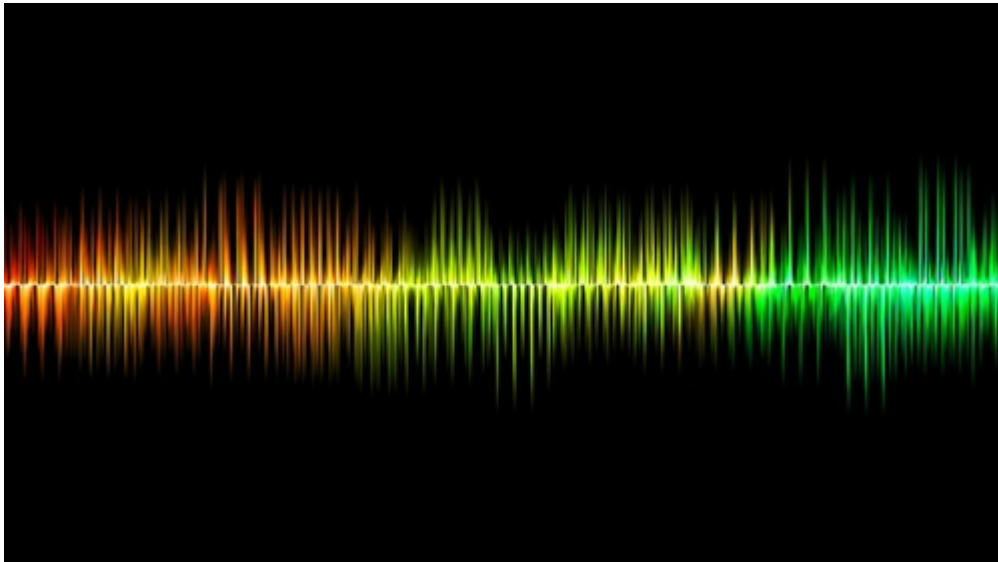
Predicting Colonial Pipeline: Mitigating Risk and Compliance

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.
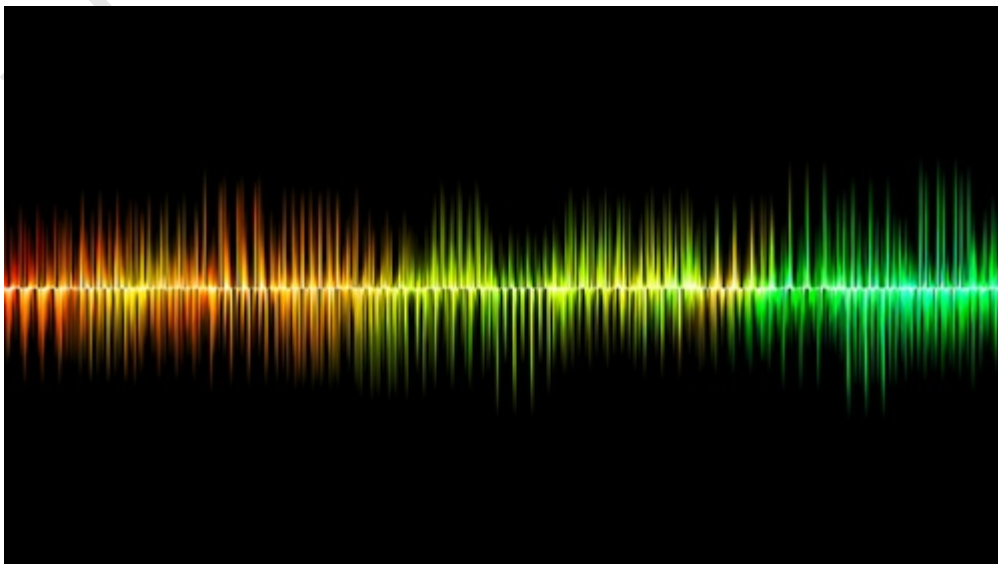
Podcast: The Evolution to 6G

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

Participate in Webinars

Join Next Webinar

View More Webinars

Latest Articles

Precision Liquid Cooling

Satellite Communications

AI for Network Management

PC-based AI & LLMs

Sponsor Articles

TRENDING ARTICLES

Autonomous Industry Innovation

IT & Telecom Industry News

IT & Telecom Industry News

Transforming Telecom with AI

AI + AR: Immersive Intelligence

View More Articles

Improving Wholesale Bottom Line by Deploying a Premium Reporting Portfolio

Network and Service Quality Visualization Supports Service Offering Differentiation

CHR Solutions

Managed IT Services

We focus on your network so you can grow your business.

CHR's Managed IT Services is a comprehensive suite of managed solutions that help drive down operational costs and free clients from capital constraints and resource restrictions. Whether you're looking to install your first computer network, support an existing network, or expand your current technology, we are 100% committed to making sure business owners have the most reliable and professional IT so they can concentrate on growing their business.

> CHR's IT team is consistent, skilled and extremely knowledgeable about what they do. Having them here and being proactive in what we need, plus the time-saving factor without us trying to "fix" our own IT needs allows us to be so much more productive and happy.
>
> — Terri B., Haddington Ventures

CAPABILITIES

- Advanced NOC Monitoring
- 24x7 Network & Server Monitoring
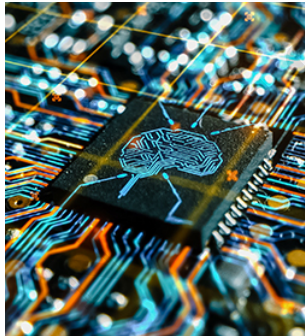- 24x7 PC Management
- 24x7 Support
- Backup & Disaster Recovery
- Cloud Migrations
- Procurement Services
- Vendor Management

BENEFITS

- 24x7 Support
- Improved Reliability
- Increased Visibility
- ITIL Aligned
- One Stop Shop for IT
- Reduced Operational Costs
- Improved Efficiencies
- More Time to Focus on Your Business

Cybersecurity

We protect your most sensitive data by equipping your business to detect and stop cyber attacks. We offer capabilities of firewall, security, and vulnerability management to help you protect your customers and network.

NOC Monitoring

We offer services to secure and optimize your IT infrastructure. Monitoring solutions include processor utilization, proactive remediation for monitored environments, disk utilization, patch management, and more.

24x7 IT Support

Quality customer support for something as critical as your IT is a must. We staff a team of seasoned IT experts to help enhance the level of customer satisfaction, as well as help you increase productivity, improve resolution times, and meet compliance standards.

Cloud Solutions

Our Cloud Solutions offer a flexible and affordable solution that allows businesses to connect to their office and clients across the country. Along with our Managed NOC Services, we can provide you with a team of engineers to help run and optimize your cloud operations.

IT Consulting

IT projects can be overwhelming. Understanding the right mix of servers, applications, and security solutions to maximize performance and minimize risk is often a daunting task. We perform IT assessments, Office 365 migrations and offer other IT project services that provide the economical and reliable business continuity our clients demand.

Contact 713.351.5296 • info@CHRManagedServices.com • www.CHRManagedServices.com

CSG Point of View:
Making the Most of Policy Management

"It is now generally agreed … that the market focus for policy control and its related technologies has shifted from basic traffic management to enabling the implementation of real-time discounting, upselling, cross-selling and a range of mobile broadband services as yet unimagined. Fundamental to the realization of this bright new and hopefully profitable future is the requirement for close integration between OLC (On-Line Charging) and the PCRF." Informa Telecoms & Media

Profitability as well as Control

The exponential growth of mobile data traffic has been well-documented. According to Cisco, mobile data traffic in 2010 was three times the size as that of the entire global internet in 2000. As a result, Communications Service Providers (CSPs) have understandably been scrambling to control the amount of traffic on their networks before the networks get swamped and customers get more than disgruntled.

On its inception, many pundits lauded policy management as the solution to cure all network woes. CSPs could throttle back heavy users, avoid congestion and keep customers happy.

But this approach has limitations, since the heaviest users are potentially the heaviest spenders. Policy management practices restrict their usage without exploring other, more profitable mechanisms for traffic shaping. Mechanisms that can earn the CSP revenue as well as offering the CSP – and importantly the customer – control over their own destiny.

'Policy 2.0' has emerged as an improved model for CSPs – add some charging to policy management to enable operators to extract revenue from the high-end users, not just restrict their access/ bandwidth/ usage.

While this development goes some way towards delivering on the potential that policy management has to offer, it does not go far enough. True integration of policy management with sophisticated online charging provides the opportunity not only to manage

bandwidth and even gain revenue, but to deliver truly innovative solutions to service providers, to offer compelling value to customers and a competitive advantage in the market.

Policy Management Develops

Initially, faced with the dramatic growth in data on their networks, CSPs turned to policy management to fix particular, urgent problems. They needed to protect their network – and quickly.

Subsequently, CSPs have taken a more holistic approach to policy, implementing more scalable solutions that address multiple issues across the business.

Today, there is increasing recognition that charging needs to be utilized alongside policy in order to grow revenue. When combined with policy, charging can be used, for example, to offer top-ups to customers who are about to exceed their download cap, providing the

Network Automation Blueprint

A best practice reference architecture for achieving secure & reliable digital services

CSG
INTERNATIONAL
accelerate business. anywhere.
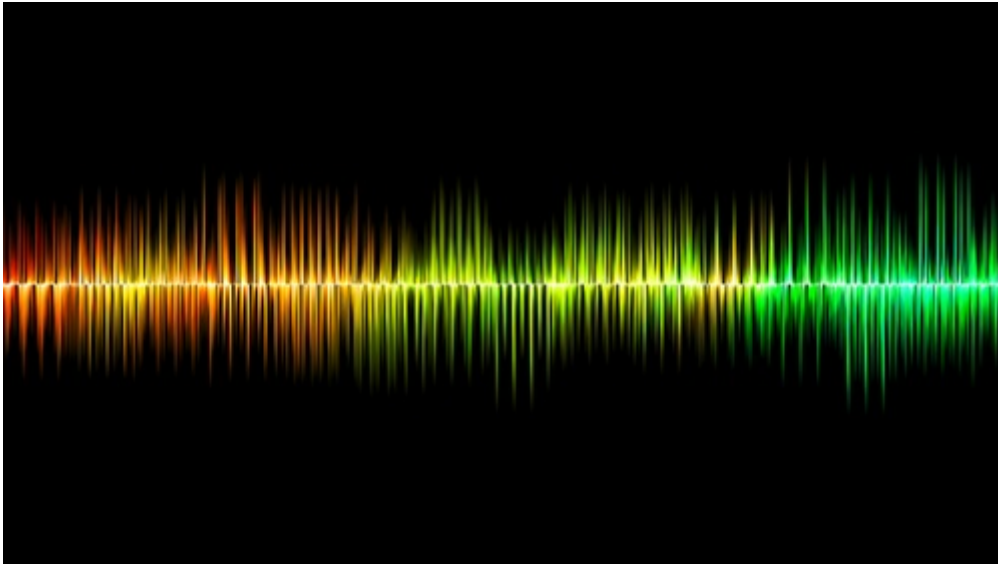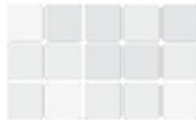
The Cable Customer of the Future:
More Autonomous, Mobile & Personalized
3 Key Trends that will Dramatically Change the
Cable Industry Over the Next 5 Years
CSG International | May 2012

Managed BSS for Accelerated Business Growth

The Challenges for Market Growth

Communication Service Providers (CSPs) in today's Telecoms industry are keenly aware of the need to innovate and grow market share while controlling cost to serve and improving margins.

Managed BSS solutions

Business Customer Management – for customers Corporations & MNCs

VNE – for Network Operators & VNOs

MDS Managed Service Solutions

Opportunities for Established Operators

For established Mobile Network Operators faced with declining revenues, opportunities exist to (a) drive acquisition/retention activities through improved customer experience, and (b) maximize the value of the business customer base through enhanced corporate service offerings.

(a) Customer Experience – Improving the experience of existing customers, often with a range of service offerings distributed across many source billing systems, requires the adoption of a 'Single View' approach to customer management and reporting:

- Single View of Customer
- Single View of Products
- Single Point of Contact
- Single Bill and Reporting.

This is especially relevant for multinational corporations that operate across regional boundaries

in multiple languages and currencies that have little or no centralised telecoms account management and cost analysis.

The typical approach to achieving a single view of the customer is through billing transformation, which can be a costly and complex initiative.

(b) Enhanced Corporate Service Offerings – Convergence, whether in the form of Unified Communications or Fixed-Mobile Convergence, is an expectation driven by the market. This presents CSPs with a whole new set of challenges that reach far beyond IT systems. The convergence of mobile, fixed-line and IP services crosses the entire customer lifecycle, including:

- Order Capture – for multiple services with different requirements and lead times
- Order Management – that includes hardware, software and network provisioning
- Rating & Billing – for recurring charges, usage charges, one-time charges, credits and adjustments across multiple integrated services
- Care & Manage – unified account management, e-bill presentation and online analysis.

New Channels to Market for Greenfield Operators

For Greenfield Virtual Network Enablers (VNEs) the recent resurgence of interest in the VNE business model, and the fact that convergent services are fast becoming a necessity rather than a nice-to-have, presents an opportunity for a broader range of service providers to grow revenues in the B2B market, including:

Managed BSS for Accelerated Business Growth

MDS

Case Studies

Communications Provider Retrieves over $400,000 in Revenue, Cuts Transaction Time by 25 Percent

Mohave Wireless

Customer: Mohave Wireless, LLC
Web Site: mohavewireless.com
Customer Size: 15,000 subscribers
Country/Region: United States
Industry: Telecommunications
Partner: Info Directions Inc.

Customer Profile
Mohave Wireless is a rural cellular communications company that provides voice and data service over a CDMA network in Mohave County of northwestern Arizona.

Business Situation
Mohave Wireless needed to eliminate manual processes related to orders, fulfillment and collections and gain greater visibility into their billing processes.

Solution
The CostGuard OSS/BSS software solution from Info Directions manages rating, billing, workflow, customer care, taxation, collections, order management and selling activities to produce efficiencies throughout the back office.

Benefits
- Captured over $400,000 in lost revenue
- Eliminated manual billing processes
- Reduced retail transaction times by 25 percent
- Earned market advantage in the ability to offer new products

background

Mohave Wireless is a rural cellular communications company that provides voice and data service over a CDMA network in Mohave County of northwestern Arizona – a market that includes Kingman, Bullhead City and Lake Havasu City. Providing local cellular service since 1992, Mohave Wireless is committed to delivering enhanced phone service including robust voice and call quality, while providing the latest mobile products and services to its subscriber base.

With approximately 15,000 subscribers and nine retail locations, Mohave Wireless was experiencing enormous growth as the predominant service provider for the county. The company was suffering under the weight of an inefficient back office system that required manual processes related to orders, fulfillment and collections.

Mohave Wireless was previously operating on a billing system that was not user-friendly or intuitive. Employees were frustrated with the amount of time it took them to enter a simple order and were spending extra time gathering customer information on paper to later relay into the system. The previous solution was difficult to navigate and offered an archaic "green screen" interface that resulted in incorrect orders that had to be corrected manually. With this system, bill runs were always occurring on a specific day and did not allow the company the flexibility of managing their own billing calendar. Mohave Wireless was searching for a way to eliminate repetitive processes and create an infrastructure for proactive monitoring and management of orders, with maximum efficiency and speed while reducing the time and cost that personnel had to spend on such processing.

Simultaneously, the company wanted to ensure that it was capturing and correctly assessing usage overages that they could not distinguish with their current solution. Leadership understood that it needed an automated system that could effectively manage rating, billing, CRM and retail operations for its growing subscriber base.

solution

The system that Mohave Wireless adopted is the CostGuard OSS/BSS solution from Info Directions. CostGuard manages rating, billing, workflow, customer care, taxation, collections, order management and selling activities for telecommunications service providers. Its Web-based solution both manages billing support functions and provides workflow automation features to produce efficiencies throughout the back office.

The two companies jointly evaluated each step in Mohave Wireless's business processes, from sales and order capture to fulfillment, customer care, and invoicing. "Info Directions is organized and professional, which made for the smoothest billing conversion we have ever experienced," said Remy Herbine, General Manager for Mohave Wireless.

By providing advice and system insight, Info Directions helped Mohave Wireless improve their business processes and maximize the benefits of their CostGuard solution. With this guidance, Mohave Wireless was able to take advantage of features such as trouble tickets and Guided Assignment to enhance the efficiency of their system. "The new system is easy to train employees using Guided Assignment. This makes it easier to understand new products and services and offer them to customers with confidence," said Jill Brown, Sr. Financial Analyst for Mohave Wireless. CostGuard's Guided Assignment feature helps salespeople and customer care representatives suggest additional services or accessories based on a customer's previous selections.

infodirections

Whitepapers

A Best Practices Framework for the Telecom Ecosystem

It is proposed to develop a best practices framework for the telecom ecosystem to boost investment in innovation and increase vendor diversity. The design and implementation of this framework should involve telecom operators, both large and small vendors, investors, government agencies and other relevant players.

Disclaimer

The recommendations presented in this paper are intended to seed industry discussion with the aim of gaining wide acceptance across the industry. We recognize that not all the recommendations may be supported by all players participating in the discussions. Our intent is to identify the most important areas to achieve meaningful change, and to work towards consensus on implementing them within an effective best practices framework for the telecom ecosystem.

Background

Telcos need significant innovation to address their key challenges of: generating new revenue streams, reducing the energy consumption of networks, managing complexity (which is different from reducing complexity) and making networks more robust to vendor failures, cyber-attacks and environmental extremes (e.g., floods, high temperatures, hurricanes). Current telco innovation and procurement practices, rather than encouraging the innovation they need, are unfortunately deterring it. Our international consultation with telecom vendors and industry stakeholders[1,2] has identified key areas where telecom operators globally should improve their processes for engagement with the telecom ecosystem in order to encourage more investment in innovation more widely.

We organized a series of colloquiums with leading telecom industry veterans to consider the following questions:

- What does innovation mean in the context of the telecom industry?
- How can supply chain diversity be encouraged and supported?
- What are the barriers to innovation, and how can they be overcome?
- How can investment risk be reduced?

The discussions were held under Chatham House Rules to encourage candor and we followed this up with a series of published articles.[3,4,5] This paper summarizes the recommendations which emerged from these discussions and is derived from our "code of conduct" proposal published in November 2020.[6]

Importance of Startups

Our recommendations are predicated on the assumption that the telecom ecosystem benefits when startups are motivated to invest in R&D and offer innovative new products. Large companies typically begin as startups but tend to become less innovative and less responsive to their market as they grow, making them vulnerable to disruption by more innovative and nimble new players. This creates a cycle of destruction and renewal which drives advancement in every field of human endeavor.[7]

white paper

never underestimate the power of identity

hackers in an increasingly vulnerable digital world

Without question, the power of the digital economy permeates nearly everything we do. Evolving well beyond eCommerce and mBanking, the connected society includes social media, video subscriptions, file sharing, ride hailing, and homestay, all of which have quickly become a regular part of our lives every day. While the convenience is alluring, the risk can be alarming. These applications often contain payment and other confidential information that need to be secure in order to ensure that only the right people are properly entitled to access the information or assets involved. To complicate matters further, applications are constantly trying to improve the user experience by reducing the friction in the authentication process. Unfortunately, making access easier for the customer is also making it easier for fraudsters.

"Hackers can have access to your bank accounts, bitcoin, payment services and many other aspects of your digital life before anyone is the wiser."

According to an article by CBS News New York[1], a woman lost more than $30,000USD when a fraudster posing as her bank took over her account. The article says the scammer did this by telling the woman her account was compromised, then sent her text messages to change her password – giving the con artist access to her account. Hackers can have access to your bank accounts, bitcoin, payment services and many other aspects of your digital life before anyone is the wiser. That is a powerful proposition for fraudsters.

Clearly, the digital world is increasingly vulnerable. Fraud is getting progressively sophisticated and more difficult to prevent resulting in billions of dollars in financial losses annually. Victims are not only unsuspecting senior citizens and always-connected millennials, but also disco entrepreneurs and everyday consumers. Even the chief technologist of the very organization vested with the responsibility to protect consumers by stopping unfair, deceptive or fraudulent practices in the marketplace has been a victim of fraud. Interestingly, the telephone number, which is the entryway for much of this fraud, is being exploited by adept criminals in novel ways. Fortunately, the victims no longer need to be victimized because much can be done to protect consumers from this type of identity theft and related harms.

iconectiv

SS8®

COLLECT. MONITOR. ANALYZE. VISUALIZE.

Compliant, Scalable and 5G-Ready Lawful Interception

SS8 Networks provides the fastest and simplest way to collect, monitor, analyze, and visualize lawful intelligence data. For more than 20 years, we have been innovating and evolving our solutions to optimize how communications service providers (CSPs) meet regulatory requirements and local law enforcement needs.

We provide a powerful platform for monitoring and data extraction across voice, messaging, internet, fixed, mobile and over-the-top (OTT) communications services in real-time. Our solutions simplify data capture and ensure CSPs can scale to meet the demands of cloud-based communications, Internet of Things (IoT), and a growing number of networking technologies.

EXTRACT, COLLECT AND DISTRIBUTE DATA IN REAL-TIME

- Supports 5G, 4G, VoLTE, MCPTT, IoT, Broadband IP and other legacy services.
- Provides complete summarization records for Packet Data Scales to serve growing data volumes.
- Location Services solution designed for Lawful Intelligence.
- Supports several network architectures, communications services and complex call flows.
- Supports in-network, virtual or cloud deployment options.

ACTIVE IN
35 COUNTRIES

COVERING MORE THAN
1 BN SUBSCRIBERS

8 OF 14 WORLD'S LARGEST

We work with 8 of the world's 14 largest communication service providers.

150 VENDOR INTERFACES

Proven network equipment interoperability with over 150 vendor interfaces to expedite deployment.

Xcipio

SS8's Xcipio platform ensures CSPs not only meet regulatory compliance, but are able to provide the most accurate data to intelligence agencies in real time.

Telesperience case study

improving data access helps Level 3 deliver an
outstanding and differentiated customer experience

prepared by
telesperience

sponsored by
ONTOLOGY

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 underlay 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 59% 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 structured tiered on-boarding 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 new 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

WWW.TELIACARRIER.COM

cycle30
we empower

Company Fact Sheet

About Cycle30
Cycle30 provides hosted order-to-cash billing services for telecom, cable and utility operators in North America. Cycle30 is a subsidiary of GCI, Alaska's largest telecommunications and cable provider (NASDAQ: GNCMA).

Over 10 years, the Cycle30 organization helped transform GCI from a multi-product carrier of disparate services to a truly converged operator of bundled telecom services, consolidating nine billing systems, and increasing operational efficiency and competitive agility. The Cycle30 platform also enabled GCI to improve product strategy and successfully merge consolidate multiple providers under a common billing/OSS system.

Proven over years of real-world operator experience with GCI, the Cycle30 organization now operates as a separate company, offering its converged billing platform as a hosted service to small-and-medium-size converged operators everywhere.

Cycle30 Services
Around its core billing engine, Cycle30 has integrated leading commercial software for ordering, provisioning and business support. This makes the Cycle30 hosted platform the only one of its kind in the world, with all the ordering, provisioning, billing and back-office revenue systems a converged provider needs for a complete order-to-cash system.

Management
Jim Dunlap – *President*
Ariel Baird – *Business Operations*
Andrew Dunn – *Application Architecture*
Wendy Gonzalez – *Products + Services*
Jeth Harbinson – *Global Sales*
John Hegarty – *Service Delivery*
Isaac Szymanczyk – *Communications + Marketing*

Operations
Cycle30 manages all operations from its headquarters in Seattle. The primary data center is located in Aurora, Colorado, with recovery and on-demand data centers in Scottsdale, Arizona and Philadelphia, Pennsylvania.

Cycle30 | 710 2nd Avenue, Suite 1260 | Seattle, WA 98104 | Cycle30.com | 1-877-628-6455
© 2010 Cycle30 Inc. All Rights Reserved.

Solutions for Enabling Lifetime Customer Relationships

Pitney Bowes
Software

Customer Centricity in the Telecommunications Industry

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

WHITE PAPER:
COMMUNICATIONS

Kevin McShane • Vice President, North America
Pitney Bowes Software
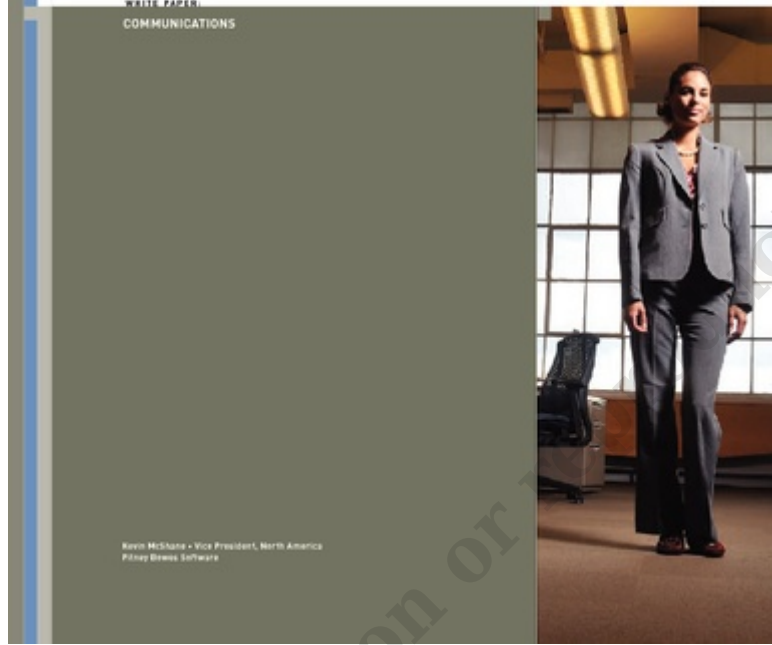
[Upload Content](#)

[View More Content](#)