

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

**FEATURED SPONSOR:**



**IN THIS ISSUE**

- ▶ Cybersecurity for ISPs
- ▶ AI to Minimize Satellite Outages
- ▶ AI & Quantum Threat Prevention
- ▶ SATCOM + 5G for Resilience
- ▶ DT Assurance for CSPs
- ▶ Cybersecurity Certification
- ▶ GenAI Social Attack Prevention
- ▶ Assurance for Satellite IoT
- ▶ Open & Ethical AI Standards
- ▶ Automotive Data Privacy
- ▶ Letter from the Editor
- ▶ IT & Telecom Industry News
- ▶ Article Index



PIPELINE / VOLUME 20 / ISSUE 11

# PL

## PREVENTING RAMPANT CYBERATTACKS

WITH:



### PREPARING FOR AI & QUANTUM THREATS

FROM:

dispersive

## DT

MIGRATION  
ASSURANCE

### PREVENTING GENAI SOCIAL ATTACKS

FRAUD-FREE IOT

AI SECURITY & SAFETY

DATA PRIVACY & SECURITY

### MINIMIZING SATELLITE OUTAGES WITH AI

SAVING LIVES WITH  
SATCOM +

## 5G

WITH:  
ORACLE

### THE ABCs OF CMMC CERTIFICATION

## SECURITY & ASSURANCE



NEWSWIRE

Not for



Not for distribution or reproduction

## 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**

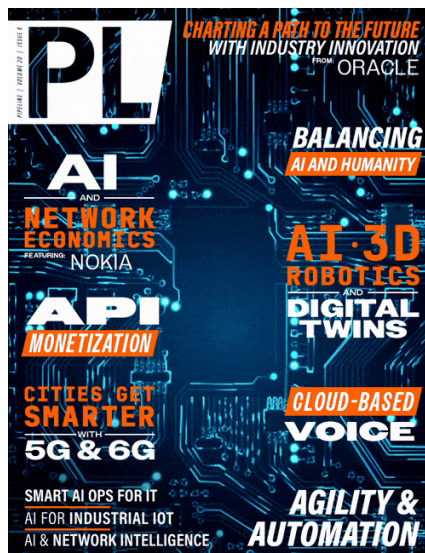
**CONNECT WITH US**

[Follow @PipelineWire](#)

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



## Latest Issues





[Advertising Placements](#)

[Sponsor Articles and Issues](#)

[View More Issues](#)

## TRENDING NEWS

**D & P Communications  
Expands Multigigabit Services  
With Adtran**

[Full Story>](#)

**TMF Group Trusts Orange  
Business for Centralised  
Hybrid Cloud Deployment**

[Full Story>](#)

**BroadbandOne Announces  
Strategic Partnership with  
Etheric Networks**

[Full Story>](#)

**Juniper Networks Announces  
Secure AI-Native Edge  
Solution**

[Full Story>](#)

**Fortinet Report Finds Lack of  
Security Awareness in most  
Workforces**

[Full Story>](#)

**Comarch Joins the American  
Utilities Technology Council**

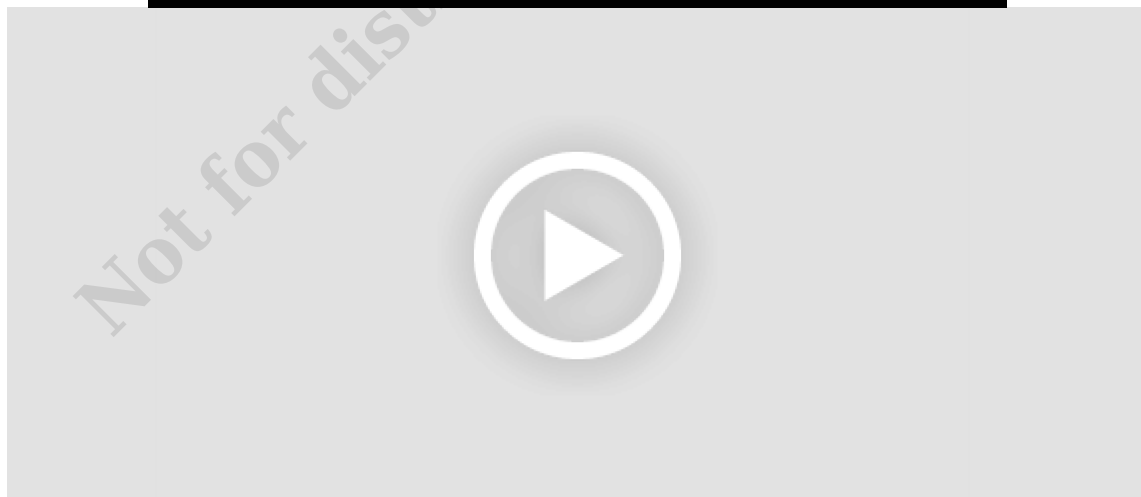
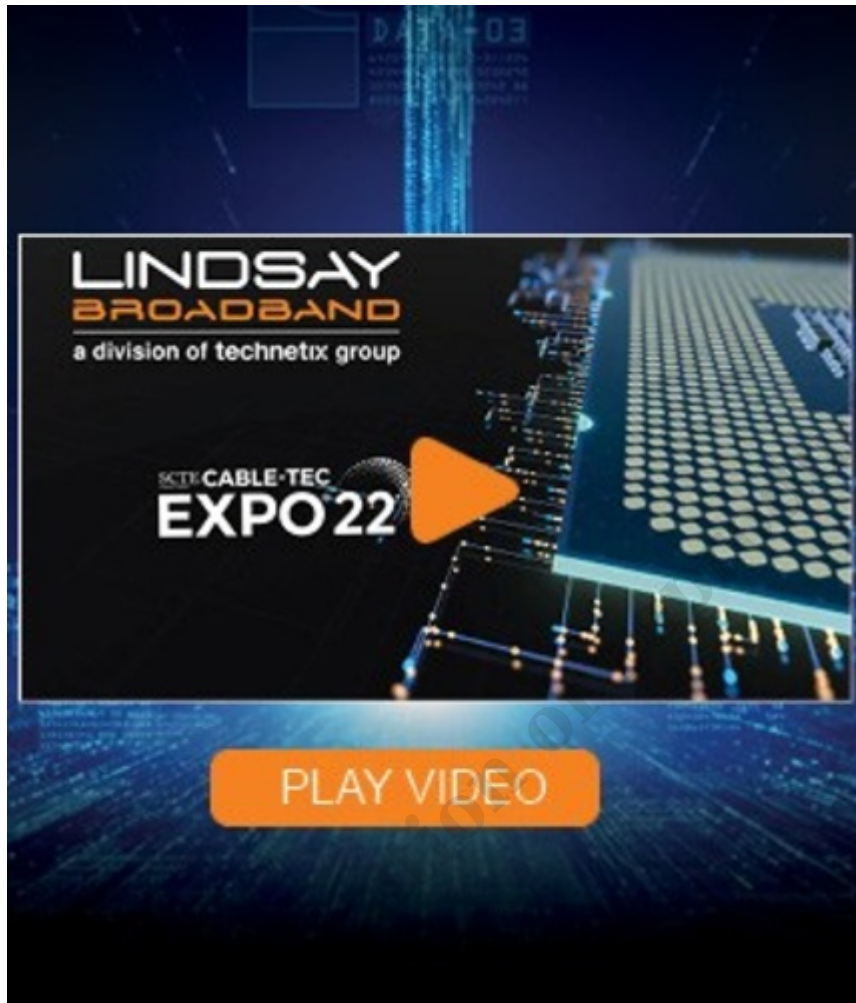
[Full Story>](#)

[View More News](#)

---

## Featured Content

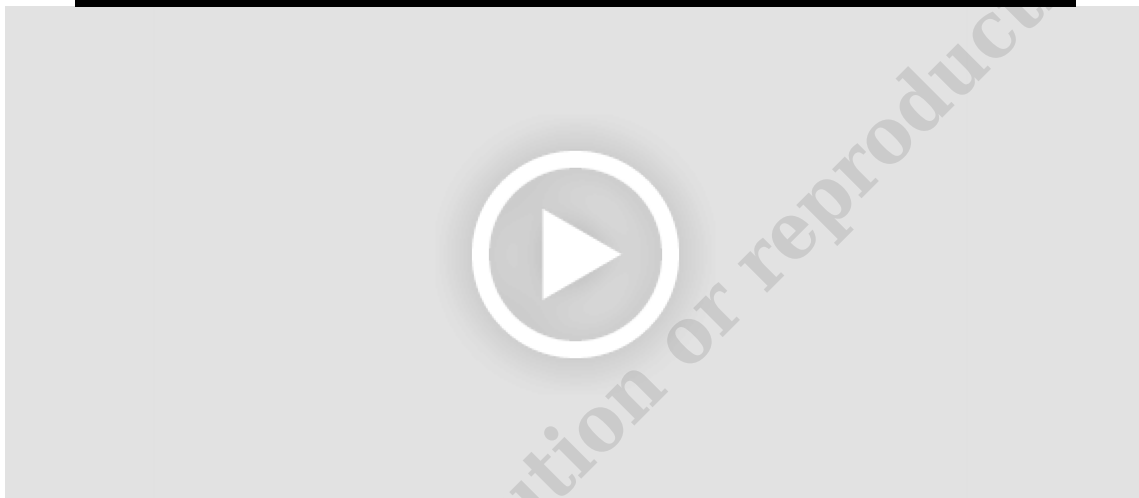
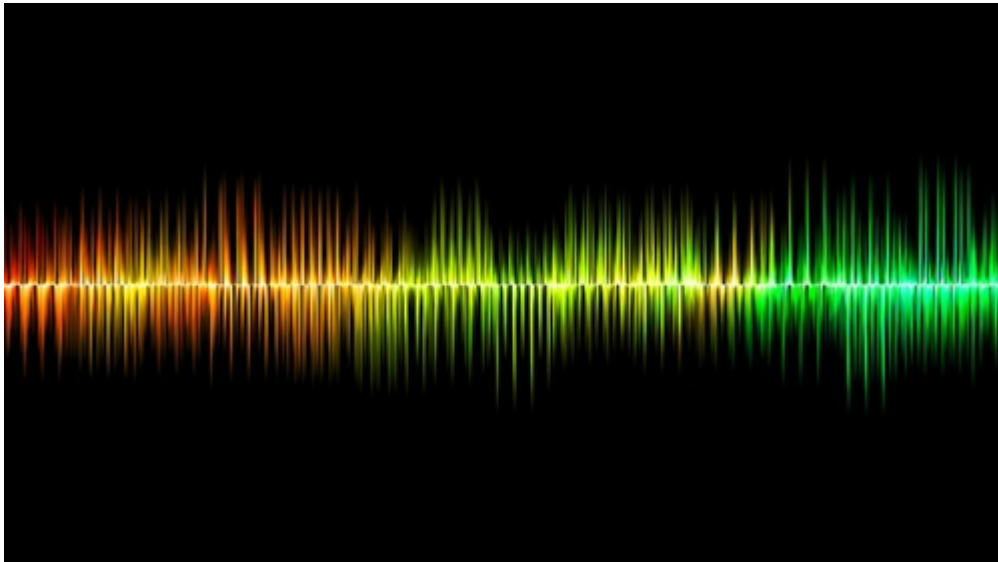
---



### End-to-End Solutions for Broadband Networks

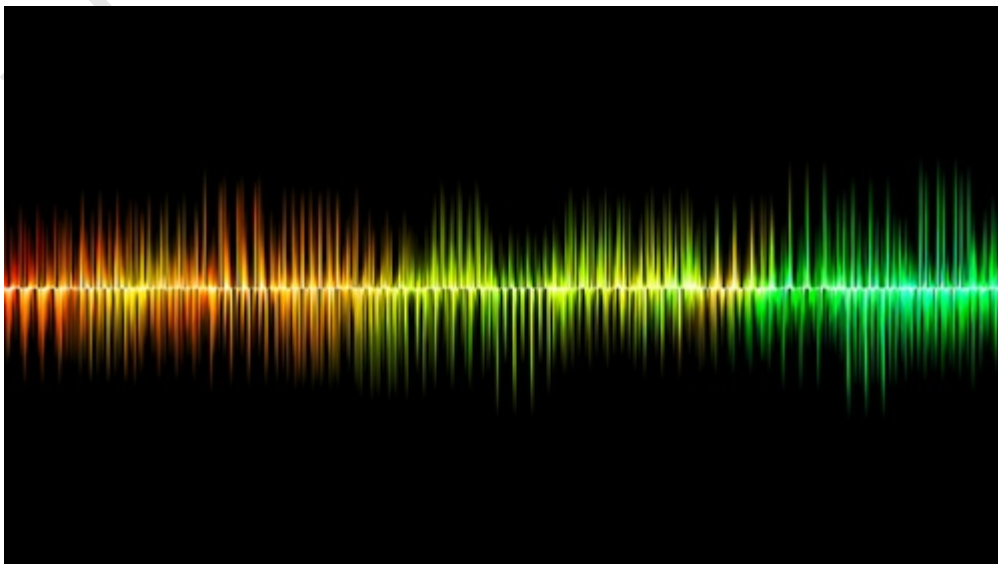
In case you missed Lindsay Broadband - a division of Technetix group at the SCTE Cable-Tec Expo, this video highlights the must-have, end-to-end solutions for your network.





## 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*



© 2018. All rights reserved.



## Agile Architecture for Digital Innovation

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



© 2017. All rights reserved.

[Participate in Webinars](#)

[Join Next Webinar](#)

[View More Webinars](#)

---

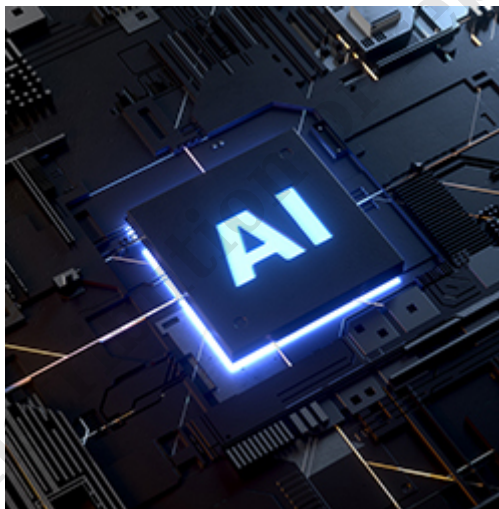
## Latest Articles

---



### Cybersecurity for ISPs

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



### AI to Minimize Satellite Outages

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



# AI & Quantum Threat Prevention

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



## SATCOM + 5G for Resilience

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

[Sponsor Articles](#)

[Advertising Placements](#)

### TRENDING ARTICLES

---

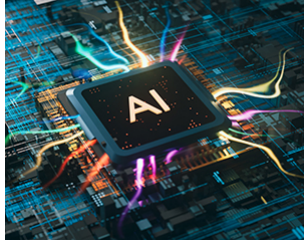


AI + XML for Intelligent Content





IT and Telecom Industry News



An Executive Guide to AI



Pillars of Intelligent Automation



AI for Microsoft Teams

[View More Articles](#)

---

## Other Featured Content

---





## Case Study: MVNO Integration

**PROJECT**  
MVNO integration

**SITUATION**  
A converged provider, desiring to offer wireless services to its customers, acquired the regional subscribers of a national provider. This effort required the conversion of approximately 35,000 subscribers as well as the MVNO integration to this national provider to support these customers as well as add new customers.

**CHALLENGE**  
Provide a business-to-business MVNO integration from the first provider's system to other provider's system, with a complex, in-store conversion procedure for handset swaps.

**RESULTS**

- Cycle30 designed and integrated a complete order to cash business integration to support the MVNO offering
- Solution included direct order-entry integration, provisioning and LNP integration as well as end customer and wholesale billing integration and reconciliation
- Conversion process involved a challenging, in-store manual conversion and phone swap with an average customer handling time of 35 minutes
- Project finished in six months with a complete system for ordering, provisioning and billing
- 35,000 subscribers converted within six-month timeline with less than two percent attrition

Cycle30 | 710 2nd Avenue, Suite 1300 | Seattle, WA 98104 | Cycle30.com | 1-877-628-5455  
© 2010 Cycle30 Inc. All Rights Reserved.

014976

Not for distribution or reproduction.

# 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 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

[www.csl.com](http://www.csl.com)

© 2011 CSG International, Inc. Confidential and Proprietary

ONTOLOGY™

ONTOLOGY 5



**FOR NETWORK  
OPERATORS**

Ontology, NFV and the Future OSS  
September 2015



Know your network: Now.



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

**With over 75% of your IT budget dedicated to maintenance,\* it's difficult to move ahead.**

CHR's world-class **Managed IT Services** drive down operational costs and create new revenue streams.

Our comprehensive suite of Managed IT Services free you from capital constraints and resource restrictions. Simply put, we focus on your network so you can grow your business.

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

\*According to Gartner Research study

- 24x7 Server Monitoring & Management
- 24x7 Device Monitoring & Management
- 24x7 PC Management
- Baseline Audit & Alignment
- Support Center Services
- Backup Services
- Procurement Services
- Vendor Management
- Business IT Consulting
- And more...

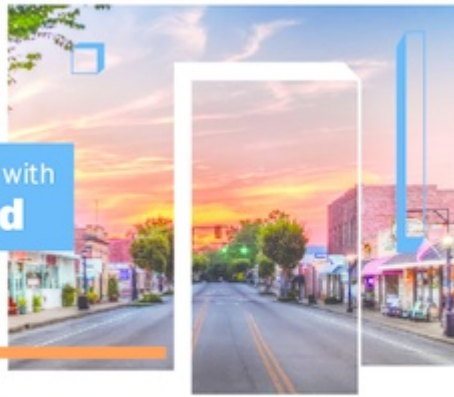
ph 713.351.5111 email [info@CHRSolutions.com](mailto:info@CHRSolutions.com)

**CHRSolutions**  
CORP





## Building the Future with **Broadband**



### Creating Communities

Communications service providers play a vital role in building rural America. Connecting unserved or under served communities through broadband technology improves their way of life and closes the digital divide by providing economic opportunities otherwise not possible.

CHR Solutions is a proven industry leader with over 75 years of experience and will help you invest in broadband. Our complete solution gives you the tools necessary to make strategic business decisions for building, marketing, and monetizing your network.

ENGINEERING SERVICES	BUSINESS SOFTWARE	BUSINESS CONSULTING
Network Planning & Design Broadband Viability and Feasibility Studies Outside Plant Engineering (Architecture, Field Notes, Design, Permitting) GIS/CAD Services Project/Construction Management Loan & Grant Assistance	Customer Management Billing Service Activation Sales & Marketing Order Capture Facilities Management Dashboards Case Management Financials	Regulatory Marketing Product Management Customer Service Billing CyberSecurity NOC Monitoring Invoice Fulfillment Systems Rollout

Not for distribution or reproduction.





**Opportunity in the Air**  
Congestion Management and the Mobile  
Broadband Revolution

[www.tekelec.com](http://www.tekelec.com)





**A Revolution in Evolution**  
Policy Control and Mobile Broadband's  
Long-term Leap

[www.tekelec.com](http://www.tekelec.com)

**Case Studies**

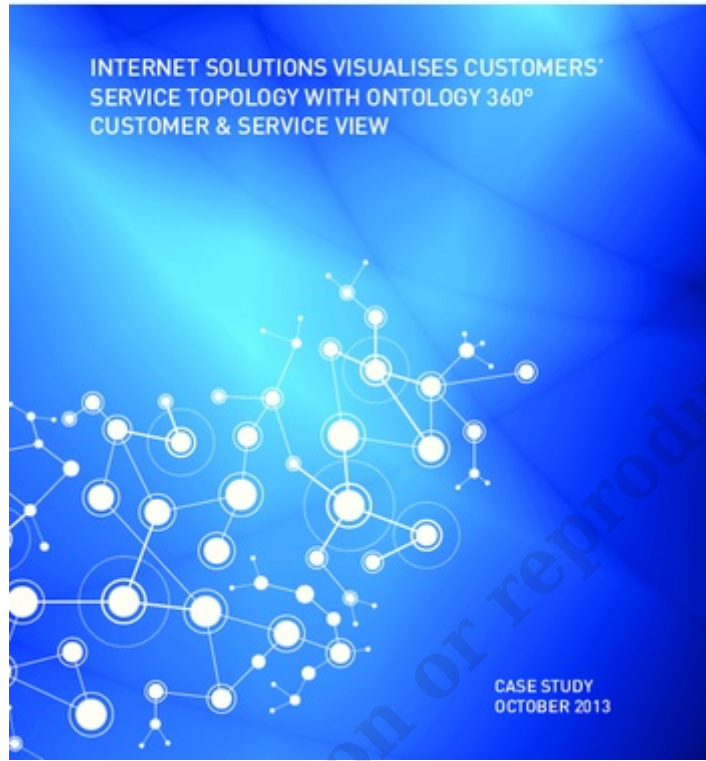
Not for distribution or reproduction.

ONTOLOGY™

Search, don't integrate.



internet solutions  
A DIVISION OF DIMENSION DATA



## Case Studies



## Case Study: CDMA acquisition and conversion

**PROJECT**  
CDMA acquisition and conversion

**SITUATION**  
When a GSM provider acquired a CDMA competitor in order to expand its geographic footprint, it needed to integrate the acquired network, subscribers and inventory into its existing order-to-cash billing platform.

The provider engaged Cycle30 to convert the acquired CDMA system customers so that they could be billed and managed from the same platform as the provider's other services.

**CHALLENGE**  
The acquired CDMA provider enjoyed a small, local-company reputation among its customers, and had historically referred to its new parent company as "the big competitor" in its marketing campaigns. This created a high standard for the parent company to attain as it reached out to this newly acquired customer base ahead of the conversion.

Assimilating 42,000 pre-paid and post-paid subscribers from a different consumer brand and wireless technology required careful planning for a cost-effective and positive customer experience. Each difference in technology between CDMA and GSM systems had to be evaluated and reconciled to integrate them successfully, without duplication or error.

**RESULTS**

- Cycle30 delivered the provider's conversion with a minimum total system downtime
- Conversion delivered on time
- Conversion delivered on budget
- 99 percent customer record data accuracy, remaining items resolved before next cycle
- Delivered the new billing cycle with no pro-rates or adjustments

Cycle30 | 710 2nd Avenue, Suite 1300 | Seattle, WA 98104 | Cycle30.com | 1-877-628-5455  
© 2010 Cycle30 Inc. All Rights Reserved.

01/10/10

**Whitepapers**



## BSS TRANSFORMED: SHAPING UP FOR THE NEXT GENERATION

At present, the requirements for Business Support Systems in the communications industry are changing. Two sets of forces are driving this, particularly where the functions of billing and mediation are concerned. They can be defined as first, forces that impact the commercial landscape in which CSPs operate generally and second, as forces that drive each individual service provider as it responds to its own specific business goals.



### Brochures

ONTOLOGY™



Know your network: Now.

ONTOLOGY 5

Ontology 5 Platform DataSheet | v3.0 2015



Digital transformation, which is the key for higher agility, efficiency, cost reduction and improved customer experience, is inevitable for CSPs to survive in the new digital economy. However, large-scale digital transformation projects are expensive and risky and may take years to complete. Meanwhile, agile competitors are eroding your market share. Speed to digitalization is imperative.

**Why Etiya's Digital Business Platforms??**

Etiya Digital Business Platforms, unlike legacy BSS, will create real value for your business. They do not only provide technical capability, but offer an infrastructure to create an all-digital customer experience, with the personalization and flexibility demanded by Connected Customers. All this in a matter of months, while ensuring business continuity and, at the same time, reducing traditional BSS costs.

**Advanced technology to enable better customer focus**

Etiya's AI expertise and platform capabilities are used to differentiate the BSS platform via better customer insights, more personalized customer experiences and increased process automation. Knowing your customers' behaviour and needs allows personalized customer interactions and service targeting, and supports smart decision making during the customer journey, that will ultimately drive both customer and employee efficiency and satisfaction.

Etiya uses innovative AI technologies, including natural language processing (NLP) techniques and predictive analytics in its platforms to help companies transform their businesses and reduce costs.

**Modular, flexible, cost effective and scalable digital solutions**

Etiya Digital Business Platforms are 5G ready, agile, end-to-end, and fully virtualized digital platforms. They are cloud-native, full-stack platforms that are pre-integrated into partner solutions and include all Etiya's product portfolio: Customer Relationship Management (CRM), Customer Service Management (CSM), Configure, Price, Quote (CPQ), Product Catalog, Order Management, OmniChannel Management, Billing and Charging and APIs gateways. They support both B2C and B2B customer segment operations.

Since the platforms use a modular, API-driven architecture, they are flexible. CSPs can select to launch a full-stack new BSS platform, to replace their legacy platform, or modernize it step-by-step, by choosing which platform components they want first and add new solutions, as needed, later.

Its cloud-compatible implementation significantly reduces up-front CapEx, and all this enables fast implementation and a cost-effective digital transformation. And easy scalability also means, that the costs grow as the business grows.

Etiya real-time, automated digital platforms use microservices to speed time-to-market for new products and enable easy experimentation with new business models and service concepts.

**How does it work??**

Etiya Digital Business Platforms contain three main layers: Experience, Engagement, and Enablement. Data analytics, AI, and business intelligence functions are used to add intelligence to these layers and enable personalization, process automation, and efficiency.

Etiya Digital Business Platform Solutions			
Digital Experience	Online self-care, E-commerce, Mobile App, Content Management	Open APIs	Data Analytics, AI, Business Intelligence
Digital Engagement	CRM, CPQ, Offer Management, Rewards & Loyalty, Community Management, CSM, Recommendation Engine, Order Management		
Digital Enablement	Product Catalog Management, Charging & Rating Management, Billing Management, Partner Management, Policy Management		

## Mobile Video Policy Control

### Benefits at a glance

- Generate new revenue with mobile video services
- Create mobile video services tailored to specific customer segments
- Align revenue and network costs using dynamic policy controls

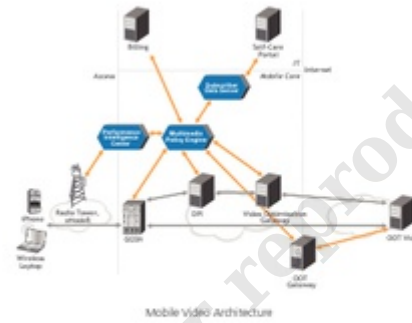


### Business Requirement

There is no question that video is both popular and consumes more network resources than almost any other application. A look at current data points tells the story: YouTube has become the second largest search engine. Mobile video is predicted to grow 66-fold from 2009 to 2014 and consume 66 percent of all mobile bandwidth by 2014. Clearly, finding ways to mitigate the impact of mobile video on the network in a way that still meets consumers' demands is critical to the success of mobile operators.

### Challenges

Previous network solutions for handling data services primarily centered on static service provisioning in which operators take a "one-size-fits-all" approach. However, with the advent of data-rich services like mobile video, that approach has a number of shortcomings. In fixed networks, geographical service demand can be accurately predicted and the network built out accordingly. However, mobile networks, by nature, enable movement, which makes it more difficult to predict geographical service demand and network build out. Moreover, operators are increasingly investigating and deploying tiered pricing plans, which offer end users a variety of service levels and options that go far beyond the "one-size-fits-all" static provisioning approach.



# The Business Potential of NFV/SDN for Telecoms

How a Network as a Distributed Cloud can Reshape Itself to Better Serve Customer Applications

## What will you learn

- What are the potential benefits of implementing Network Function Virtualization (NFV) and software-defined networking (SDN)?
- How to transform the (access) network towards a distributed cloud platform capable to reshape itself dynamically to better serve customer applications?
- How to run network functions and customer cloud applications on the same hardware?
- What are the benefits of collocated network functions and customer applications for improving customer experience?
- Why is it essential to implement control via policies in the NFV/SDN scenario?
- How does BSS/OSS support NFV and why should OSS work in real-time?

Network Function Virtualization (NFV) appears to be a very promising, yet very disruptive, technology. At its simplest, NFV is about decoupling software from hardware and enabling the implementation to run on a farm of commodity hardware. In other words, it means placing network functions (NF) in the cloud.

### The Potential Benefits of NFV/SDN technology

From the perspective of network operators, the new technology entails the ability to become a real cloud provider in a new sense, where a network is no longer simply an access network to data centers. On the contrary, the network can become a cloud serving as a platform for customer applications, and it can dynamically reshape its architecture to meet customer needs. This revolution is possible thanks to combining NFV and software defined networking (SDN) technologies, which means that networks can adapt by being reprogrammed. Moreover, network nodes can also become part of distributed data centers that not only can host network functions, but also host applications. From the perspective of customers, this means that applications can be moved "closer to the customer," entailing lower latency and higher speed, thus leading to better customer experience.

The technology also promises to open the network to innovation from the software developer ecosystem. Instead of rigid networks that are difficult to adjust to different application needs, the network is to be programmable, ready for the era of the Internet of Things (IoT), where applications can have their own virtual networks programmed.

From the cost savings point of view, the liberation from dedicated (expensive) hardware in favor of commodity (cheap) hardware promises to reduce CAPEX (capital expenditure). Also, the idea of a purely software-based network reconfiguration should reduce OPEX (operational expenditure). This may not be that obvious if one of the goals is to make the network more dynamic, reshaped to meet the needs of applications and thus be much more complex to control, when a traditional approach to network management is taken.



From the cost savings point of view, the liberation from dedicated (expensive) hardware in favor of commodity (cheap) hardware promises to reduce CAPEX (capital expenditure). Also, the idea of a purely software-based network reconfiguration should reduce OPEX (operational expenditure).

telecoms.comarch.com

1

# The Balancing Act of Mobile Workforce Management

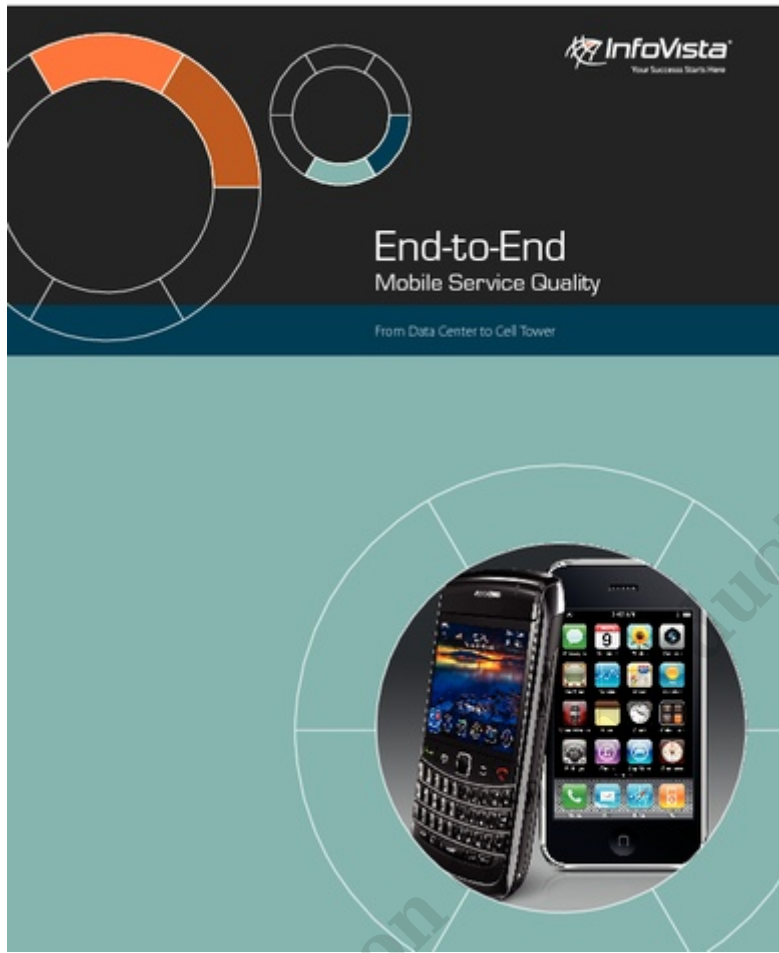
FULFILLING MULTI-SERVICE OBJECTIVES  
WITH PRIORITY-BASED OPTIMIZATION

A ViryaNet White Paper



WHY TELCOS ARE GETTING  
BETTER AT DELIVERING  
INDIVIDUALIZED  
CUSTOMER EXPERIENCES?









## 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 represents 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 e-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.

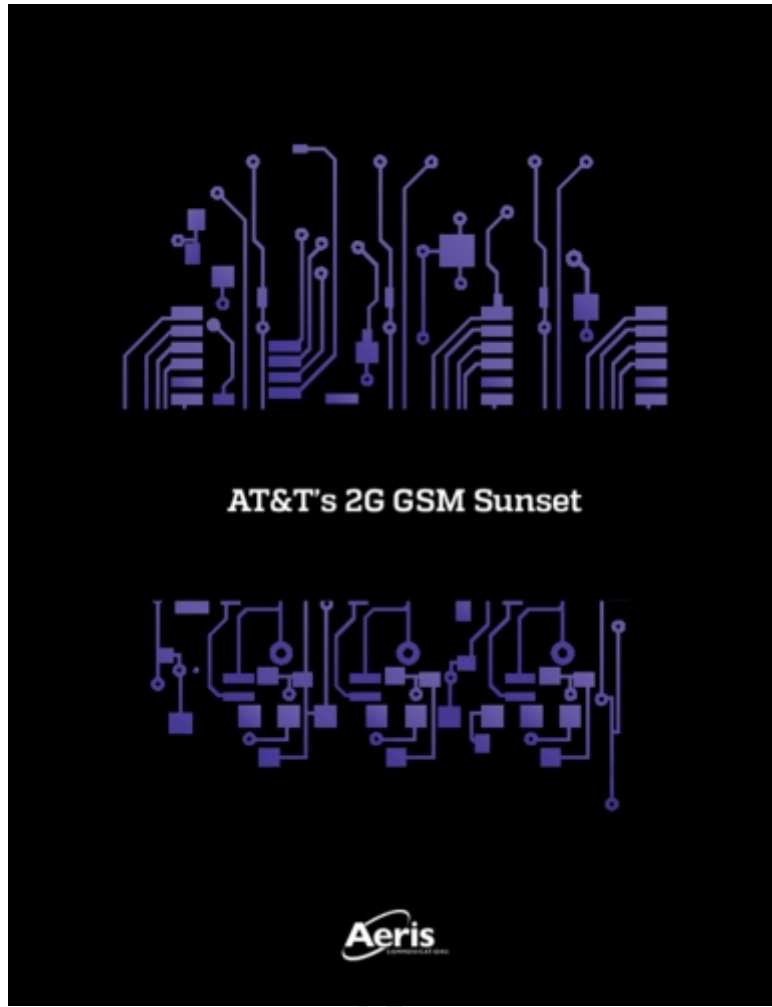
### MDS e-billing and Analytics Solution

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





[Upload Content](#)

[View More Content](#)

© 2024, 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.