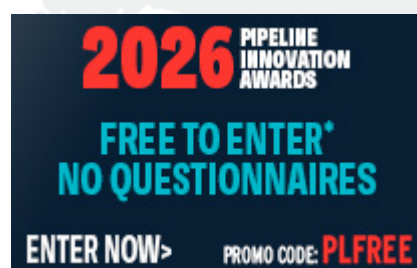


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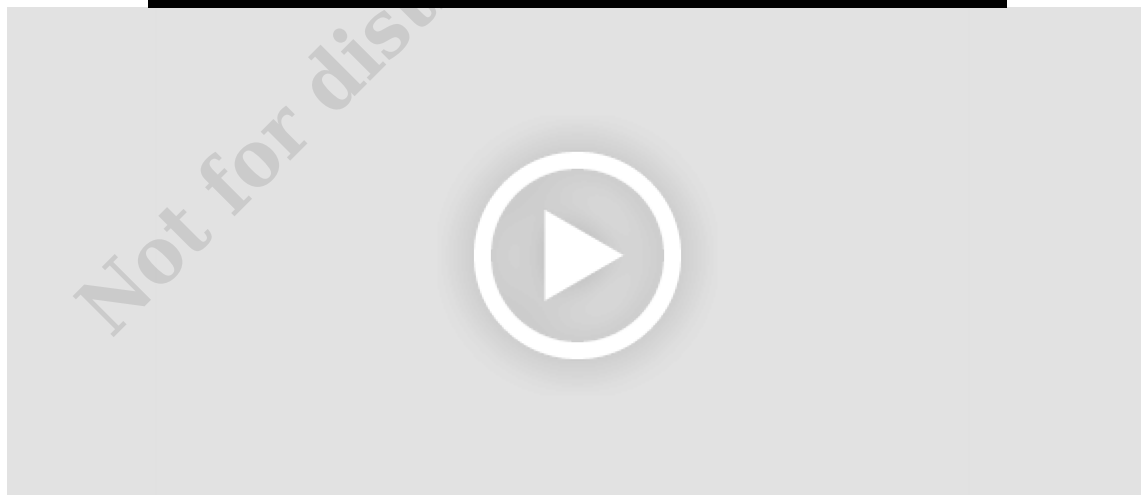
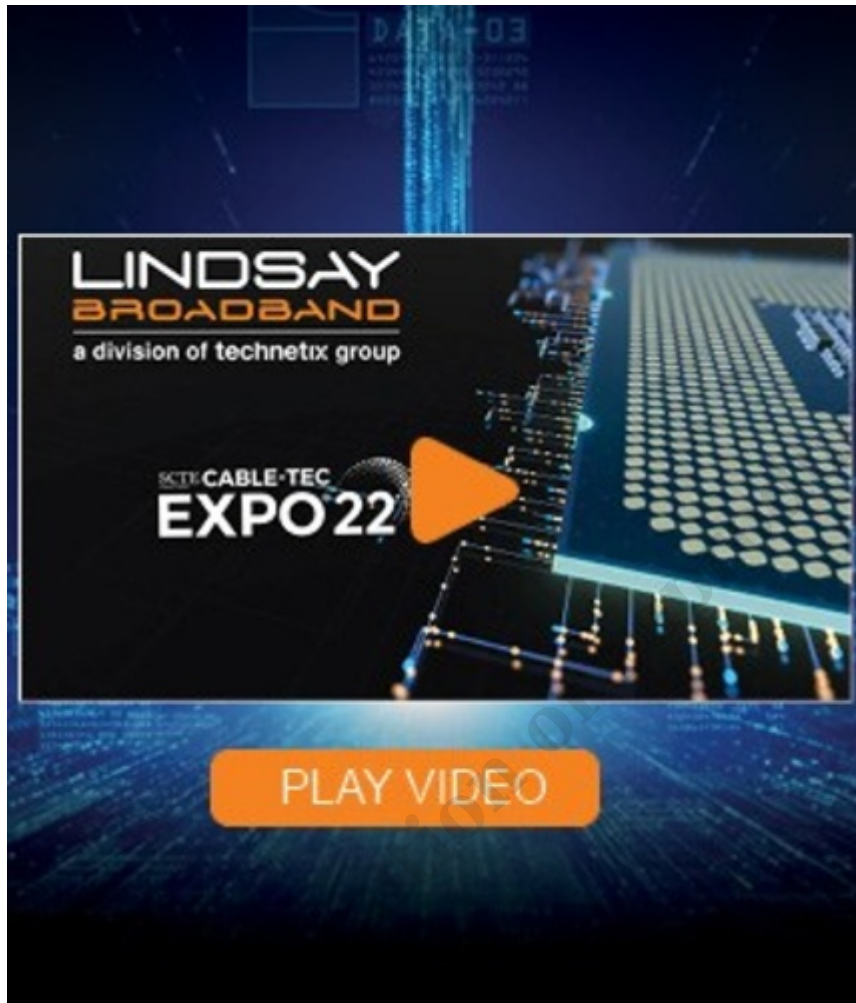
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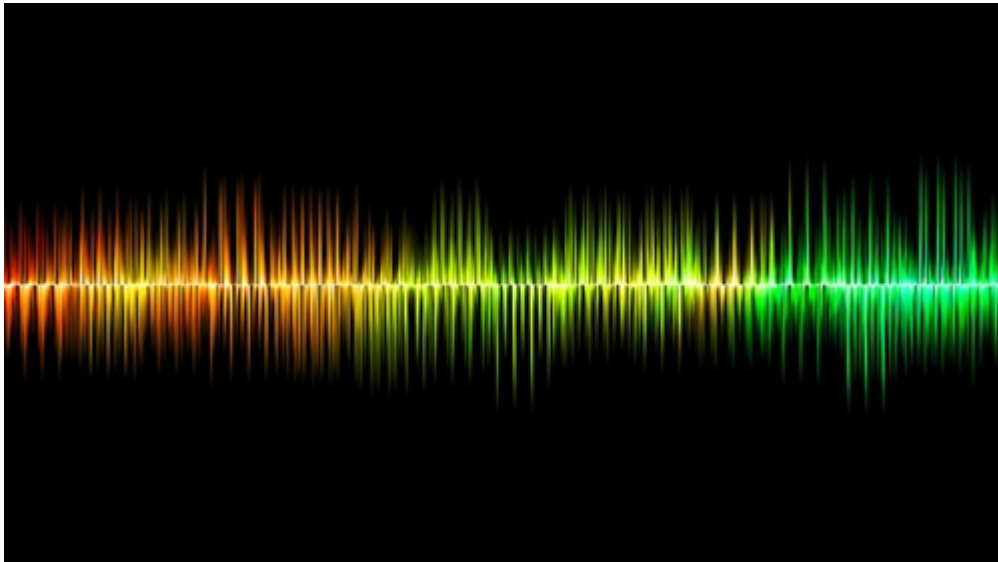
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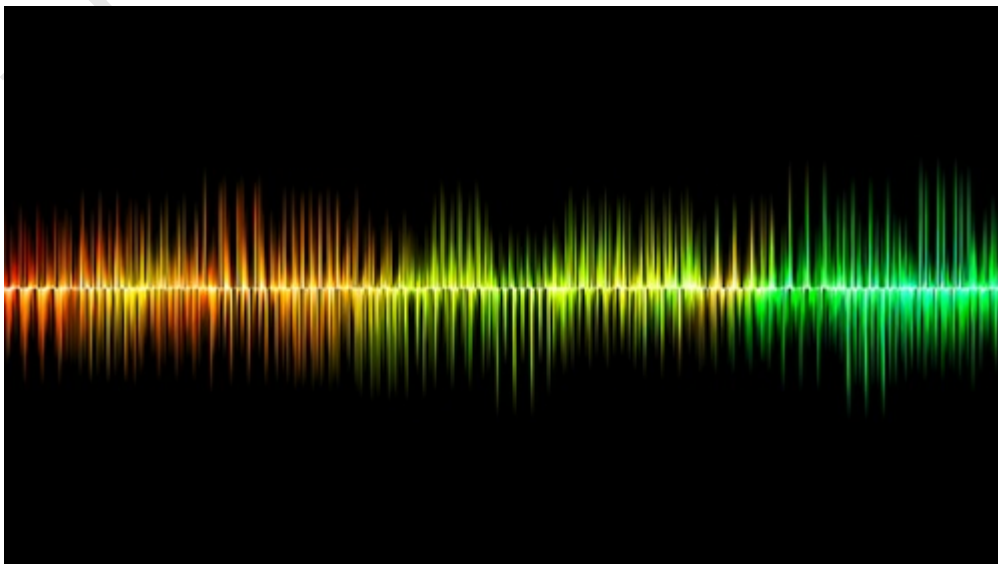
End-to-End Solutions for Broadband Networks

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



Predicting Colonial Pipeline: Mitigating Risk and Compliance

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





Podcast: The Evolution to 6G

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

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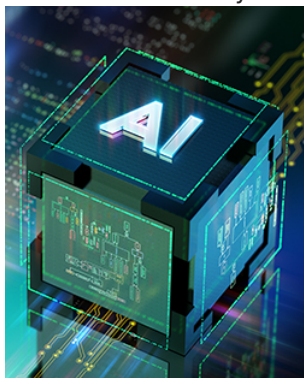
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Introducing our New State-of-the-Art Geographic Platform

One of the ultimate goals of Broadband providers is to bring fast, reliable service to their customers, who are often located in rural parts of the country. Connecting unserved or under-served communities through broadband technology improves their way of life and closes the digital divide. But doing so can be costly and time consuming.

What if there were a way to make it all easier by streamlining each phase of your network implementation, improving decisions by using real-time data and therefore optimizing your current and future operations?

CHR Solutions is a proven industry leader with over 75 years of experience and we have found a way to expedite your builds, decrease labor costs, forecast in real-time, and increase monetization to speed up broadband access to rural America.

Geospatial Data is Not New- But the Way We Use It Sure Is.

By using Geospatial data in a new way, we provide our clients with a platform that utilizes real-time information to improve efficiencies, take the guesswork out of decisions, and ultimately increase speed to market. The platform features a customizable dashboard that enables all aspects of your business to format and display the data in a way that optimizes its use in their specific operations.

CHR's Geographic Platform

- Improves efficiencies
- Takes the guesswork out of decisions
- Increases speed to market

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Living on the (Network) Edge:

A TELECOMMUNICATION PROVIDER'S GUIDE TO MAKING THE MOVE

The Internet of Things (IoT) is not new. Neither is the rapid rise of connected devices or customers' demands for instantaneous service. These are realities of digitalization. While they have become normalized, they are by no means the final destination on the journey to digital transformation. They are merely the first wave of the transformation process. In their wake, the next round of changes is brewing. These changes will require providers turn their focus to the periphery of their networks and get closer to their customers. This next frontier for providers to conquer? The Edge.

networktransformation.fntsoftware.com



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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 platform 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 API 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		

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

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

Using Interactive Television to Build Revenues, Engage Customers

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

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

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

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

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

Interactive Customer Care Drives Loyalty

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



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

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

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

DIGITAL **TRANSFORMATION** FOR TELCOS:

101 guideline

November 2023

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Embracing A Catalog Driven Social Network

By Faisal Ishaq
Principal Solutions Architect & Regional Sales Director
ConceptWave Software Inc.

WHITE PAPER

Case Studies



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**Chorus New Zealand:
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OSS solution to
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February 2014
Dean Ramsay and Dr. Mark H Mortensen

Ref: RKB39

Whitepapers



Know Your Customers, Keep Your Customers: Five Key Benefits of Using Automated Surveys to Gauge Customer Satisfaction

CSG International | September 2011

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Whitepapers

White Paper

Common Language Drives Customer Value for All Network Technology: 5G/MEC and Virtualized Networking Included

Sponsored by: icorectiv

Karl Whitebeck
January 2021**EXECUTIVE SUMMARY**

icorectiv TruOps Common Language was established to facilitate the service design and asset tracking needs of the operations and business management processes for prevailing and emerging network connectivity architectures. Common Language has been used by communications service providers for over 40 years.

Complexity from new technology evolution (e.g., network virtualization, private networks, hosted networks, 5G, multi-access edge computing (MEC), and the Internet of Things [IoT]) requires assets to be aligned with business and technical objectives to keep costs within expectations, address end-to-end (E2E) service objectives, support partner accountability, maximize interactive efficiency, and show business management responsibility. On the basis of its successful long-standing customer implementations and evolutionary approach to the network management processes, Common Language is expected to play a major role in the evolution and deployment of new facilities-based networks and the virtual aspects upon which these new technologies come to rely.

This paper explains how teams with network and partner-provided asset management responsibilities can achieve business value by maximizing the use of common nomenclature. In addition, the paper describes how a common naming strategy improves the effectiveness of real-time network operations and key business management functions. This paper also explains how Common Language can bring increased awareness when defining, launching, and managing new network-based services.

Introduction

As network technology and business strategies continue to evolve, the greatest challenge asset-based communications service providers face is how to manage the physical and virtual assets that define the services they provide. Understanding the physical and logical placement of assets is strategic to several interrelated operations functions including network planning, inventory, service orchestration, catalog, activation, network assurance, service-level agreements (SLAs), policy, rating, and charging. The multilevel construct of the underlay and overlay connectivity infrastructure and the E2E partner-added services to customers of all types brings additional layers of asset tracking complexity that must be addressed by each of these business and operations management domains.

January 2021, IDC #US47230621

Brochures

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.





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THE LOW-LATENCY SERVICES MARKET:

Evaluating the Emerging Market Opportunity
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Rural America needs access to broadband. But closing the digital divide can be complicated—and with so many service providers facing increased competition, mounting costs, supply chain issues and eroding revenues, you need more than a quick fix.

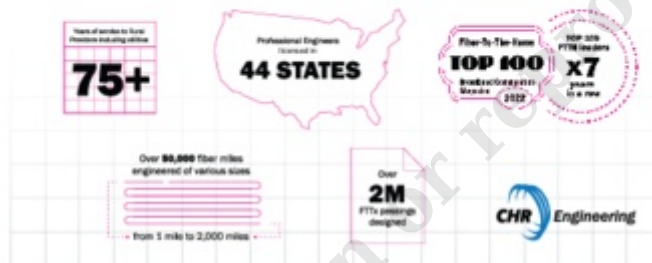
CHR Solutions has the technology and the expertise to help you make informed decisions that enable you to get the job done efficiently, on budget and on time. From feasibility studies to network design to construction, we partner with you every step of the way to optimize your operation and increase your speed to market.

“

CHR helped to train and guide us through the fiber-to-the-home design, engineering and permitting processes. They have become my go to liaison with city, county and state permitting authorities. If you want to work with people that are willing to help and get your foot in the door in your state right-of-ways, I highly recommend CHR (they even do wireless & tower engineering too)!

- Jason Pond, CEO, Grizzly Broadband, LLC

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Convergys Perspective Paper

4G Services: Getting pay for play

Insights and new survey data on leading communication service providers' 4G strategies

Going Global with M2M: What You Must Know to Control Costs

To launch a successful global M2M deployment, service providers and enterprise customers should first develop a plan that takes into account diverse cultures, languages, regulations, technologies and pricing. This Aerus White Paper outlines how differing regions and individual countries can create challenges in certification, support, and cost control and recommends actions to avoid these pitfalls.



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PTP Test Applications

Hamadoun Dicks, Product Specialist, Transport & Datacom Business Unit

4G/LTE deployments and increased bandwidth requirements in Carrier Ethernet services are the driving force behind the new backhaul network technology. Synchronization is required for cellular and wireless network operations because base stations must be synchronized in order to hand off calls between base stations, minimize dropped calls and ensure proper billing. Since precision time protocol (PTP) provides both phase and frequency, it is quickly becoming the synchronization technology of choice for packet networks.

WHAT IS IEEE 1588V2/PTP?

PTP provides high clock accuracy in a packet network by continuously exchanging packets with appropriate timestamps. In this protocol, a highly precise clock source, referred to as the grandmaster clock, generates timestamp announcements. It also responds to timestamp requests from boundary clocks, thus ensuring that the boundary clocks and the slave clocks are precisely synchronized with the grandmaster clocks. By relying on the holdover capability, the precision of the integrated clocks and the continuous exchange of timestamps between PTP-enabled devices, the frequency and phase accuracy can be maintained within a submicrosecond range, thus ensuring synchronization throughout the network.

The objective of PTP deployment is simple: by exchanging timestamps, the slave clock can determine its offset from the grandmaster clock and thus adjust itself. This provides frequency and phase synchronization through packet distribution.



Figure 1. PTP network

PTP USE CASES

PTP is a packet-based technology. As the synchronization packets used by PTP are forwarded throughout the network between the grandmaster and hosts, they are subject to delay (latency), delay variation (packet jitter) and frame loss. Despite applying high priority to synchronization flows, synchronization packets will still experience congestion as well as routing and forwarding issues (e.g., out-of-sequence packets and route flaps). The host clock's holdover circuit must be stable enough to maintain synchronization in the event that synchronization packets experience these network events.

In addition to testing packet metrics to make sure they meet the service level agreement (SLA), in some cases, it may also be critical to validate the frequency measurements of the sync signal. A few use cases are detailed herein. Table 1 summarizes the different synchronization testing applications.

Service Turn-Up	When	Who	Tests	Duration	Product
Ethernet backhaul and PTP client turn-up	Performed every time a tower is put to service	Field technician	- EtherSAM (Y1564) - PDV GL measurements - Client emulation	30 minutes at 1 hour	NetBaker Series
Sync network installation	Performed when a sync network is being deployed or when a new grandmaster is added	Network engineer	- Wander measurements - DC PDV offset - Slave/client emulation	24 to 48 hours	SyncWatch PRO
Troubleshooting					
Basic troubleshooting	Packet metrics issues/defective slave client	Field technician	- EtherSAM (Y1564) - PDV GL measurements - Client emulation		NetBaker Series
Advanced troubleshooting	Incorrect clock output/defective grandmaster	Network engineer	- DE, MTE - DC PDV offset - Slave/client emulation		SyncWatch PRO

Table 1. Synchronization applications

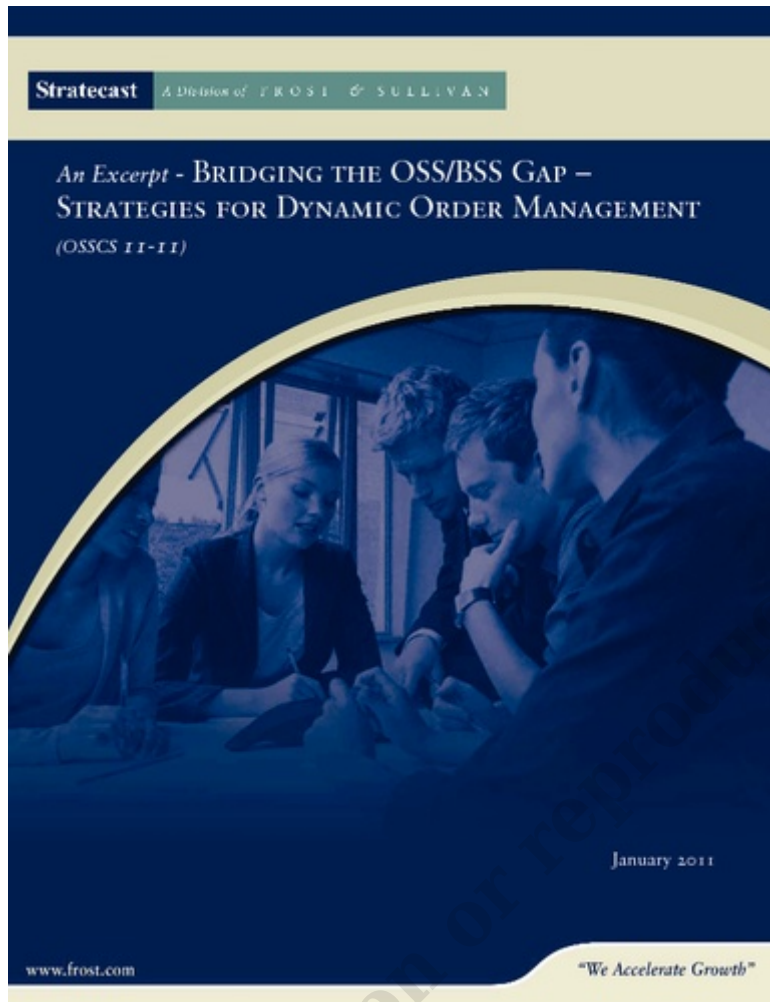
EXFO | Assessing Next-Gen Networks



Why MVNOs and Carriers Aren't Right for Your M2M Application



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