

# Leading North American MSO Provider Uses Guavus to Accelerate their Operations and Dramatically Reduce Costs

## INDUSTRY

Multiple-System Operator

## PRODUCT

Guavus Live Ops

## CHALLENGE

Long delays in problem resolution

Care Operations Team was unable to quickly distinguish between customer premise and headend issues

Technicians dispatched to homes unnecessarily (high cost)

Subscribers' experience affected by planned network upgrades

Negative impact to Customer Satisfaction and Net Promoter Score

## RESULTS WITH GUAVUS

**Dramatic reduction** in Mean Time to Detect and Understand from hours to minutes for both network and subscriber problems

**Improved customer satisfaction (NPS)** through rapid resolution of outages

**Faster deployment of new services** without the fear of changes negatively affecting the network

**\$70M cost savings** in first year by distinguishing CPE vs. CMTS/Video Server problems. Reduced truck rolls and customer service calls

**Rapid root-cause analysis** of problems via correlation of calls, tickets and equipment types

**Performance issues revealed** by lowering the baseline to discover previously hidden anomalies

As a leading Multiple-System Operator in North America, this corporation offers content, TV and internet services to millions of subscribers. Its thousands of employees focus on providing an excellent experience to customers spread throughout the United States. Managing a network this size requires the ultimate in organization and rapid access to information.



### The Problem:

#### Delayed Problem Resolution Affecting Customer Satisfaction

Large amounts of customer service calls were coming into the Care Center. The Operations Team was unable to identify the root of the problem and rapidly distinguish between customer premise problems and headend CMTS or video server issues. To satisfy customers, Care agents placed tickets to dispatch technicians to homes, however many times it was a headend problem instead of an individual set-top box problem. It was frustrating for customers to wait for a technician to visit their home, only to discover the technicians could not resolve their issue. This frustration negatively impacted their opinion about their service and the Net Promoter Score.



### The Solution:

#### Guavus Platform Pinpointed the Root Cause Within Minutes

The Guavus Platform brought together data from separate portions of the Care organization: technical support calls, subscriber trouble tickets and truck roll data, allowing the Care Ops teams to quickly discover previously overlooked issues common across micro-populations of subscribers. Using Machine Intelligence, Guavus automatically determined the normal rate of care events specific to that micro-population and recognized anomalies in these rates **in real-time**, avoiding the use of "one-size-fits-all" thresholds. Care Ops was able to immediately triage and pinpoint the heart of the problem and resolve it more expeditiously. Customer Satisfaction and Net Promoter Score dramatically improved.

#### Dramatic Cost Reduction

Not only were their customers happier, but the cost savings was incredible. By identifying the true cause of the problem, they were able to avoid a large number of truck rolls to homes and customer service calls. This resulted in huge savings since each truck roll costs \$75, and each call approximately \$7.

**They saved \$70M in the first year alone!**



## WHY GUAVUS?

**Proven ability to unify separate silos** of big data revealing previously hidden problems and anomalies

**Machine Learning and Intelligence** allows correlation of disparate data sets (e.g. calls, tickets and outages) to enable new insights and good decision making

**Big Data at Scale:** Guavus analyzes over 1 billion records per day for this customer!

**Closed loop actions:** Automatic actions can be taken when anomalies are detected (e.g. call deflections, trouble tickets issued)

**Rapid real-time analysis** of data yielding results within 100 milliseconds

**Subscriber level data** is correlated against network level data to see which items actually impact customers

**Real time comparison** of separate events happening in the network

**20 million time series** (arrays of numbers indexed by time) correlated and analyzed

**Data lake integration** through open APIs provides comprehensive network overview and enriched profiling of subscribers' behaviors and actions

## Dramatic Savings with Improved Customer Satisfaction in First Year!

### Agility in Change Management

According a recent Gartner study, up to 80% of network incidents are caused by scheduled changes. Guavus makes the Service Operations team more agile by giving them the ability to rapidly identify if any planned network change has caused a problem and remedy the situation asap.

Guavus platform has become so valuable to this provider, that it is now part of the step-by-step Methods of Procedure (MOP) that maintenance and operations technicians must follow when implementing a network change or upgrade. They are required to check Guavus software for 2 hours after performing a maintenance upgrade to rapidly identify any potential negative impact of the change. Additionally, the Change Review Team uses the Guavus platform the next day to review all the changes made the night before and check for any fallout. Over 2000 employees use Guavus software.

### Revenue Growth Through Faster Deployment of New Services

Through rapid identification of potential issues, Service Operations has been able to deploy new equipment and services with confidence and minimize any negative impact on customers. When rolling out a new video service, analytics were used to prioritize which pieces of equipment needed to be upgraded first. Using their full equipment list, Guavus was able to correlate subscribers to each type of equipment, examine failure rates over time, and identify the impact of these failures on customers. This enabled them to prioritize equipment changes, minimize capital expenses and rollout enhanced video on demand services faster. They were able to realize a Capital Expense savings of \$32M, while still maintaining a high level of customer satisfaction throughout the deployment of the new services.

### Closed Loop, Automated Responses using Machine Intelligence

Guavus uses Machine Learning to correlate and analyze large, disparate sources of information. Through self-discovery and applied Machine Intelligence, the Guavus Platform takes in huge datasets of network, subscriber, equipment type and call records to automatically establish baselines. Each day records from set-top boxes, firmware versions, geographic location and headend data are automatically compiled and correlated against calls received and truck roll data. Machine Intelligence is



implemented to reveal when any of these events go beyond the baseline and automated, closed loop actions are taken to reduce the response time.

### **Data Lake Integration**

Guavus integrates with the MSO's data lake for enriched, subscriber level information. The data collection is centralized and is co-located with the Hadoop cluster that processes it. In this way, data-in-motion is exchanged with data-at-rest to provide a comprehensive and enriched view of the network, down to a subscriber level. Machine Intelligence uses this combined data to derive previously unrevealed insights, enabling optimization of the network.

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