SAS® Customer Analytics for Communications

Segment, Retain, Cross-Sell and Up-Sell

What does SAS® Customer Analytics for Communications do?

SAS Customer Analytics for Communications turns raw data into insights about future customer behavior. The solution illuminates behavior patterns hidden in large volumes of data spread across multiple systems. It alerts you to customers who are likely to purchase a new product or upgrade service, customers who are likely to leave and customers who should be targeted in a campaign.

Why is SAS® Customer Analytics for Communications important?

Historically, service providers who lose customers are not likely to reacquire them, so it is critical to know that a customer may soon leave. Traditionally, regulators set rates that ensured that fixed costs would be recovered. However, regulated services now make up a much smaller and declining proportion of revenues, and communications service providers (CSPs) must generate new revenues to cover the high fixed cost of operations.

For whom is SAS® Customer Analytics for Communications intended?

SAS Customer Analytics for Communications is intended for Tier 1 and 2 CSPs (telecoms and cable), particularly wireless network operators and multi-play service providers as well as CSPs facing new competitive threats.

Overview

In today's challenging economy, a better understanding of customers' needs and improved customer services are imperative for lowering acquisition costs, improving retention rates and increasing wallet share. This insight is now critical to success because CSPs are experiencing decreasing customer loyalty and rising acquisition costs. With no single view of the customer, CSPs cannot determine customer preferences to identify new opportunities for organic growth through cross-sell and up-sell strategies.

SAS Customer Analytics for Communications turns raw data into insight that CSPs can use to manage marketing strategy intelligently and increase revenue. The integrated software infrastructure enables users to analyze complex customer behavior hidden in large volumes of historical data and answer critical business questions. The framework helps CSPs understand customer needs and preferences, and align products and services accordingly. Such insights help marketing and sales personnel target customers with suitable marketing campaigns and improve their response rates.

Key Benefits

- **Optimize data management using industry standards**. SAS Customer Analytics for Communications uses a fully documented, customer-centric foundation data model (FDM) that contains information about each customer. The FDM is aligned with the TMForum Information Framework (SID), the most widely adopted industry standard data model.

- **Spend more time on model improvement and result interpretation**. A dynamic analytical base table (ABT) framework can create a single view of the entire customer experience, enabling analysts to focus more on improving models and interpreting results than on data management.

- **Improve retention rates**. Predict the likelihood that a customer may depart, gain insight into timing and reasons for departure, and use scoring to select the best preventive action.

- **Uncover new opportunities to increase wallet share**. By using historical data, CSPs can identify customers most likely to purchase new products or upgrade to a higher level of service.

- **Respond quickly to changes in market conditions**. At each stage of the process, SAS Customer Analytics for Communications supports the business reporting features. These reports help decision makers quickly strategize their business goals and take appropriate actions at the right time.

Solution Overview

SAS Customer Analytics for Communications is a comprehensive solution that enables large CSPs to excel at the key marketing activities of segmentation, retention and cross-sell/up-sell. The design philosophy and product offering has been honed by large-scale engagements with many of the world's most advanced network operators.

CSPs face high fixed costs, so it is essential to maximize the value of each customer. This is particularly true in the era of smart phones and video on demand. Unlike traditional cell phones, landline phones and cable TV, today's environment is one in which the customer wants complete control but also simplicity.

Advanced, behavioral-based segmentation techniques enable operators to group customers into smaller batches.

This microsegmentation provides a much clearer picture of customer behavior and experience.

Customer churn is a key metric for comparing the projected financial health of a network operator. The evidence suggests that a customer who leaves a CSP is unlikely to return for many years – if ever. SAS Customer Analytics for Communications enables the most accurate predictions of a customer churn. Armed with this predictive information, retention strategies can be implemented before the customer leaves. Indeed, the best network operators regard churn not as a problem, but as an opportunity to entice customers from rivals.

As margins become slimmer for basic communications services, operators must fill the revenue gap with new products and services. But overwhelming your customers with offers for every

product and service is counterproductive because customers don't want to be inundated with irrelevant offers. Predicting the purchasing behavior of customers enables network operators to be highly effective in their cross-sell and up-sell campaigns.

CSPs offer their customers both prepaid and post-paid service options. In developing markets prepaid is more common, while in developed markets customers are more likely to have a post-paid plan. SAS Customer Analytics for Communications supports both pricing models as well as complex hybrids of the two.

SAS Customer Analytics for Communications comes with both logical and physical industry-specific, best-practice data models. The models are aligned with the TMForum Information Framework (SID) standard. By using standard data models, network operators save
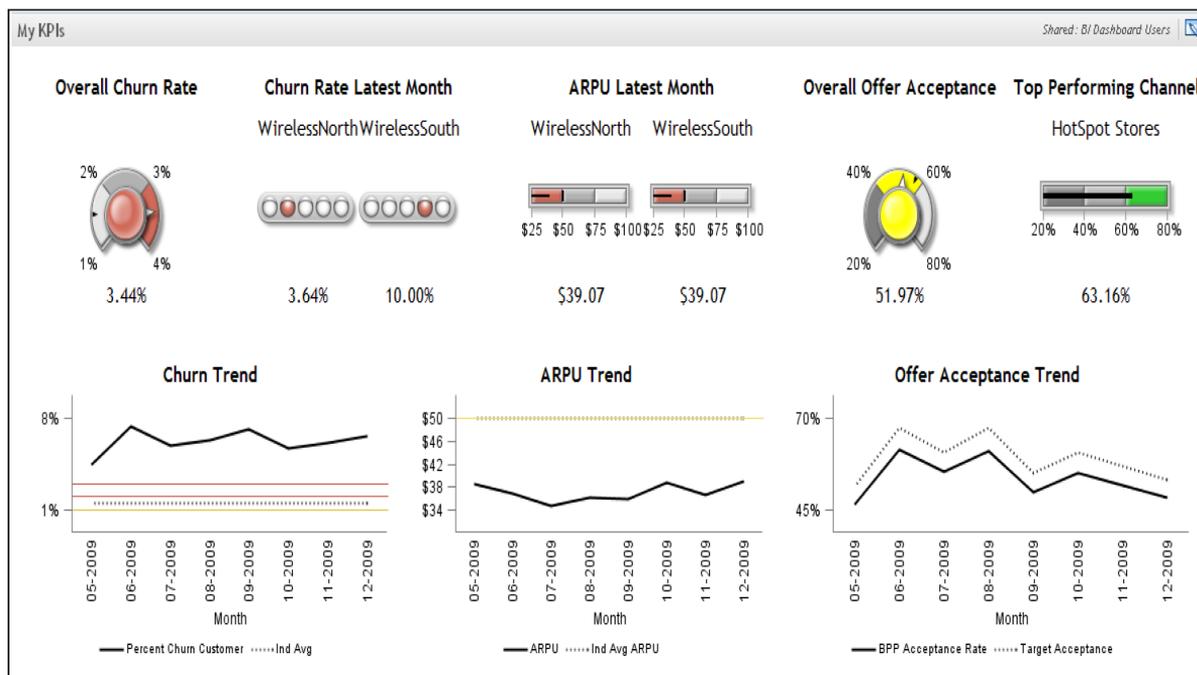
SAS® Marketing Automation allows users to build simple or complex campaigns using an intuitive graphical interface.

valuable time in solution deployment and also significantly reduce their risk compared to a proprietary implementation. The SAS approach in data modeling provides flexibility to create more reports without writing extraction, transformation and loadings (ETLs). Users can directly build reports using SAS OLAP Cube Studio. This approach results in quick startup time, lower startup costs and a simpler implementation model.

Key Features

Optimized data management, flexible architecture
- Extracts data from OSS/BSS systems, including billing, CRM, order management and activity-based management.
- Metadata management.
- Model management.

Dynamic analytical base tables
- Better control over definition of variables.
- Variables relevant to the business problem at hand can be analyzed and processed.
- Various derivations can be performed based on business requirements rather than a static list.
- ETLs will run only for the configured variables, resulting in improved performance.
- ABT will be built on limited customer records, resulting in processing efficiency.
- ETLs will run only for the variables identified as significant during the modeling process, resulting in improved performance.

A flexible segmentation model
- Segmentation analysis by behavior/customer type.
- Geographic segmentation.
- Profiles by gender, age, marital status, occupation, demographics, income and tenure on/off network.
- Profiles and usage revenue reports for:
  - Voice calls usage analysis.
  - Messaging usage analysis.
  - Data usage analysis.
  - Analysis by revenue.
  - Analysis by ARPU.
  - Analysis by prepay recharge (top-ups) value.
- Product ownership.

Identify key factors influencing churn
- Churn analysis by offer payment mode, sales channel and acquisition mode.
- Churn variance over previous period.
- Profiles by gender, age, marital status, occupation, demographics, income and tenure.
- Usage analysis by call type (voice, messaging and data).
- Recharge (top-ups) analysis of churned customer.
- Revenue analysis of churned customers.
- Churn analysis by ARPU (annualized).
- Churn analysis by customer profitability (annualized).
- Churn drivers (disconnect reason) across churn propensity segments.
- Complaints analysis by disconnect reason.
- Disconnect reason and call center traffic relationship analysis.
- Potential churn customer's analysis by customer type.
- Potential churners by type of business.
- Usage analysis by call counts across propensity to churn segments.
- Usage analysis by call duration and volume across propensity to churn segments.
- Revenue analysis of customer across propensity to churn segments.
- Churn propensity segments analysis by subscription tenure.
- Churn propensity segments analysis by ARPU bands.
- Churn propensity segments analysis by profitability bands.
- Churn analysis across offers.

Technical Requirements

Client environment

Microsoft Windows (x86-32): Windows XP Professional, Windows Server 2003 family, Windows Server 2008 family, Windows Vista*, Windows 7**

Microsoft Windows(x64): Windows XP Professional for x64, Windows Server 2003 for x64, Windows Server 2008 for x64, Windows Vista* for x64, Windows 7** for x64

Server environment

- AIX: 5.3 and 6.1 on POWER architectures

- HP-UX Itanium: HP-UX 11iv2 (11.23), 11iv3 (11.31)

- HP-UX PA-RISC: HP-UX 11iv2 (11.23), 11iv3 (11.31)

- Linux for x64 (EM64T/AMD64): RHEL 4 and 5, SuSE SLES 9, 10 and 11

- Microsoft Windows (x86-32): Windows XP Professional, Windows Server 2003 family, Windows Server 2008 family, Windows Vista*, Windows 7**

- Microsoft Windows on x64 (EM64T/ AMD64): Windows XP Professional for x64, Windows Server 2003 for x64, Windows Server 2008 for x64, Windows Server 2008 R2 for x64, Windows Vista* for x64, Windows 7** for x64

- Microsoft Windows (on Itanium): Windows Server 2003 and 2008 for Itanium-based systems

- Solaris on SPARC: Version 9, 10

- Solaris on x64: Version 10

Supported Web browser

- Internet Explorer 7 on Windows XP Pro, Windows Server 2008 and Windows Vista*

Web tier

- BEA WebLogic 10gr3 on: AIX, HP-UX Itanium, Linux RHEL 5 (x64), Solaris (SPARC and x64)

- IBM WebSphere 6.1 and 7 on: AIX, Solaris (SPARC and x64), Windows Server 2008

- JBoss EAP 4.2 and 4.3 on: AIX, HP-UX Itanium, Linux RHEL 4 (x64), HP UX PA-RISC, Solaris (SPARC and x64), Windows 2003 Server, Windows Server 2008

 *NOTE: Windows Vista supported editions are: Enterprise, Business and Ultimate.

 **NOTE: Windows 7 supported editions are: Professional, Enterprise and Ultimate.

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