iCEM: A complete view of the customer

To overcome the challenges of decreasing margins from voice services, whilst catering for high cost network investments due to high data consumption, operators need to improve network optimization, service quality improvement, and focused subscriber management. Most importantly, they need to bring together the domains of network-centric data and customer-centric data and focus on the customer experience.

To achieve a truly 360 degree view of the customer, the operator should combine the information from the multiple domains - network, device and subscriber and be able to do this in real-time.

What is Accanto’s iCEM?

Accanto iCEM brings together real-time customer, network, and device-centric data to enable Quality of Experience (QoE) monitoring and analytics for each individual subscriber. Using a sophisticated analytical algorithm, and its real-time big data analytics platform, iCEM provides business value to Service Providers by identifying and prioritizing network problems to ensure the least disruption to customer experience, discouraging churn and maximizing Operator revenues. It provides a unified view of the customer and the quality of all their communication services. iCEM then provides recommendations, in order of priority, based on the business impact that fixing, or not fixing the problems, will have.
iCEM benefits:

- **Real-time and Big Data Analytic** platform capable of handling tens of millions of subscribers.
- Analysis of the quality of **every** call and **every** data session for every subscriber across location, time and type of service.
- **Proven QoE data models** find more hidden QoE issues and subscribers than traditional tools.
- **Combines data** from Network, Device and Customer to create the best view of the Customer Experience.
- **Prioritizes network issues** by ROI rather than the amount of users alone.
- **Vendor independent** and agnostic.
- **One solution** for voice and data.
- **Dynamically segments** the subscribers.
- **Wide range of tools** for network optimization, predictive analytics, segmentation, marketing, maintenance, customer care, and planning purposes.

**Customer Driven Operations**

**Customer Driven Operations**. Business-value based prioritization, decision-making assistance and optimization of the network based on the QoE.

**Customer Driven Operations** serves a multitude of user groups and use cases by providing capabilities for Quality of Experience Index (QoE Index) calculation for all deployed services and for each subscriber. The visualization layer of iCEM comprises of a QoE reporting package for service quality and customer experience analysis.

It provides capabilities to use calculated customer experience metrics for prioritization of operations and maintenance work, optimization of network investments to better serve the most important customers and follow the progress of activities and their impact on customer experience.

**Network Analytics**

**iCEM Network Analytics**. Analysis of network trends, traffic patterns, KPIs, correlations and customers for troubleshooting and network performance improvements.

iCEM Network Analytics leverages real-time big data to help Service Providers cope with rapidly-changing subscriber behavior and the adoption of new consumer devices. Sometimes the data needed to make an informed decision exists, but is spread between so many systems. iCEM Network Analytics combines and correlates various data input sources, protocols, and reports, and in doing so, facilitates issues recognition, issue location and detailed trouble-shooting.

With actionable insight in-hand, network operators can define and implement network policies to make data-driven decisions that achieve business and operational objectives to increase revenue and decrease costs. The wide range of tools that are available include KPI and customer segment monitoring, event explorer, dynamic filtering, correlate data between domains, and provide alarms and reports.
**Customer Analytics**

**iCEM Customer Analytics.** Advance segmentation and timely insights in customer behavior.

The **iCEM Customer Analytics** application on top of iCEM’s customer centric data model provides a flexible tool for micro-segmentation and Quality of Experience analysis. Combining this with a QoE Index calculation enables sophisticated analysis of customer experience over various customer segments.

The deeper your understanding of customers’ buying habits and lifestyle preferences, the more accurate your predictions of future buying behaviors will be – and the more successful you will be at delivering relevant offers that attract, rather than alienate customers.

**iCEM Customer Analytics** is able to answer questions like: How are services used by specified customer segments? How did the service quality experience differ between these segments? Where, when and with what device were the services accessed? How do the devices impact service quality?

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**Customer Care**

**iCEM Customer Care.** Customer-oriented trouble-shooting with peer-group and root-cause analysis.

The **iCEM Customer Care** application is a customer-oriented troubleshooting tool which can be used on its own to investigate customer service usage, experienced quality, and potential reasons for degraded service experience. iCEM can also be integrated with existing customer care toolsets to provide valuable information on customer experience and to existing processes.

With **iCEM Customer Care**, customer experience information can be queried for individual subscribers. As a result, the operator receives comprehensive status and usage analysis for the subscriber. This includes geographical locations, terminal devices used, services accessed and quality experienced over time. When degradations are identified, Root Cause Analysis can be performed and recommended actions are given by the iCEM system.

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**iCEM Mobile**

**iCEM Mobile.** Enables the accurate measurement and reporting of real-time customer experience on their devices.

Located on the end-user device, iCEM Mobile enables the accurate measurement and reporting of real-time customer experience. It collects detailed customer experience and quality metrics directly from the end user’s terminal such as radio frequency strength, service outage, dropped calls, cell handovers, throughput per application and more. iCEM Mobile mediation and analytics platform then combines this into valuable information, KPIs, reports and data for the Operator customer care and operations departments to optimize their network.

In addition, it provides and new smart way for improving two-way communication between the subscriber and the Operator related to subscriber quality issues.
Use Cases

iCEM offers a number of different use-cases to enable customer-centric operations. From the Service Operations Centre and Account Management and Network Planning, Accanto has identified some of the most common problems and offers a solution with iCEM.

**Super SOC**
**Objective:** To make the NOC/SOC proactive, customer-centric and to operate in real-time

**Customer Experience and SLA monitoring**
**Objective:** To enable proactive account management and customer communication

**Business optimized Network Planning**
**Objective:** Issue prioritization and faster decision making

**Advanced monitoring and trouble-shooting**
**Objective:** To provide a flexible monitoring and troubleshooting tool with end-to-end visibility of service session

**Defence Against Rogue Base Stations**
**Objective:** Identify rogue base stations (a.k.a. IMSI catchers) attacks

**Predictive Business Analytics**
**Objective:** To improve advanced decision making

**Prioritized incident management**
**Objective:** To provide customer experience information to operational personnel in order for them to be aware of customer quality impacts caused by network issues thus including customer experience as an integral part of operations prioritization

**Roaming management**
**Objective:** To improve visibility and control over roaming subscribers

**Mobile Data Offload Management**
**Objective:** Analyze the user behavior on WiFi zones and prevent revenue leakage due to unnecessary data offload from 4G to WiFi

**Billing and revenue assurance**
**Objective:** Billing verification for mobile voice, data, inbound roaming, SMS, VoIP and other communication services

**Proactive Customer Care**
**Objective:** Automate and enhance customer service communication

**Real time Big Data management and analytics**
**Objective:** Manage critical customer information in near real time to be proactive in their key processes like SOC

**Customer behavioral analytics**
**Objective:** Manage big data from different sources and use it to provide valuable insight and dynamic segmentation

**MVNO**
**Objective:** An easy-to-deploy tool that enables them to receive detailed network and customer quality information
About Accanto Systems

Accanto Systems provides Customer Experience Management (CEM) and advanced analytics solutions to Service Providers.

By analyzing network performance and customer satisfaction, Accanto’s iCEM platform calculates the QoE (Quality of Experience), creating a single-view of the customer. Accanto then provides recommendations to improve the QoE in order to achieve an optimized ROI for each customer segment.

Headquartered in Lahti, Finland, Accanto Systems has 30 customers worldwide.

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