

## Top Technology: CEM Innovations

By Jesse Cryderman

Before the dawn of microscopy, medical science was pretty barbaric. Lacking insight into the world of germs and cells, humans created all sorts of bizarre explanations for health problems and wacky methods for curing ailments, like blood letting via leech. For centuries the makeup and functioning of the body was described by the four humors, and treatments prescribed in accordance with this theory.

The advent of the microscope changed all of this, enabling access to the hidden worlds of activity that moved beneath perception and activated disease and recovery. Yet the mere existence of microscopes didn't reform science overnight. Microscopes only reveal a part of the picture; if five scientists are looking only at the cells that exist in five different parts of the body, their explanatory power over pathology is minimal.

Today, carriers possess numerous microscopes trained on their networks, but don't necessarily have the scientific method in place to create a big picture. Service providers engage in effective ER following trauma, but haven't modeled an end-to-end picture of health needed to create a proactive plan for wellness.

Brian Carroll, CEO of Arantech, explained the situation. "Currently, the majority of operators that have deployed CEM use the system to 'find and fix'



potential issues on their network...this is only one use case for CEM; it can provide operators with much more than an 'early warning system' to identify network issues and device faults."

This is where the true concept of CEM steps in: as the mythical Dr. House who can discern Adrenoleukodystrophy from Multiple Sclerosis and prescribe an appropriate course of action, and as the snow bearded Dr. Andrew Weil, who can translate meta-analysis into longevity diets. CEM is both. And while no one is arguing that CEM will save lives, as an applied concept, it can certainly save time and money for both operator and subscriber.

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As we've discussed elsewhere in this issue, the acronym CEM has been used prolifically to describe all sorts of solutions, from improved relationship management, to end-to-end experience management suites, to an entirely new way of perceiving a communications network. Some vendors have simply re-badged CRM modules while others have essentially made CEM and service management synonyms. And that's inherently the problem. To understand what is innovative in CEM—or more importantly why CEM is innovative—the discussion must drift from toolkit and implementation to concept and perception.

### A New Perspective

While carriers are hip to differentiate themselves in the market and always looking to reduce churn, they are hardly known for rapid shifts in culture. Historically, carriers have been narrowly focused on network elements as the primary components of their business. You don't have to look too far for this to become apparent, as the evidence lies in the naming schemes used for key modules in a service provider's architecture. As Sanjay Mewada, VP of Strategy at Netcracker pointed out, "there's a reason the center is called a Network Operations Center, and not a Service Operations Center."

What is innovative about CEM is the new perspective it embodies, the new way of interconnecting perceptions from myriad data sources. Drew Rockwell, of MDS, agrees. "CEM to a certain degree is also a mindset for operators to think about what customers need and how to ensure continued customer stickiness, as requirements are continuously changing."

### What's Driving Innovation?

Aside from the need to unify data from disparate domains, there are new market dynamics driving innovations in CEM. Yossi Zohar, director for Customer Management at Amdocs, assembled a list of the most important trends in the market and how they relate to CEM:

- **Device Proliferation:** The dramatic increase in the introduction and adoption of new connected devices (smart phones, tablets, telematics, mobile health, etc.), resulting in three or four connected devices per subscriber. As more complex smart devices hit mass markets, service providers' sales and support representatives will need better knowledge and tools to scale up to provide efficient and effective service for all these products.
- **Diversification of Sales Channels:** The number of different channels that will sell and support the connected products is exploding (e.g., consumer electronics retailers, car dealerships, pharmacies). This will put customer experience in the hands of external (3rd party) representatives. The key challenge for service providers will be maintaining brand loyalty without having direct control of the customer interaction.
- **Application Explosion:** The dramatic increase in the number of applications offered, some of which posing "over the top" competition with the service providers' "bread and butter" (e.g., Netflix threat on "On Demand" Pay TV, Viber's threat on mobile voice with free phone calls and SMS messages over a data connection). Service providers will need to work hard to find a way to cope with this reality and differentiate their service to maintain the customer experience vs. becoming a "dumb pipe".
- **Social Media Interaction:** The exponential adoption of social media as an interaction channel. Service providers will need to find a more scalable and automated way to leverage social media to better sell and support their customers. Today, most service providers are still handling this emerging channel in a sub-optimal and manual manner that cannot scale and therefore they are exposed to the negative influence that social media brings with it.



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Properly envisioned, CEM touches virtually every element in the network, from ordering and provisioning, to service delivery, quality and billing. Addressing and attempting to define and manage the experience from just one of these touchpoints misses the bigger picture. (This is important to note, because as we uncover the innovations that are a part of a migration to a experience-focused culture, we are not advocating specific components, but merely highlighting the types of innovation that enable CEM culture transformations).

### Multi-Layer Unification

Analytics that are filtered through the five domains at a typical carriers are like the five microscopes focused on disparate elements of a unified body. Each one can reveal a piece of the puzzle, but alone, none advocate a holistic view of the customer experience. Sanjay Mewada listed the layers that a CEM transformation unifies: “One good way to look at CEM is that it now pulls together these domains: CRM, BSS/Billing, SA, Analytics, and OSS. In the past these domains have lived in isolation.”

The problem, of course, is how to do it. As Jeff Parker, CEO, Monolith explains, “One of the biggest things in the industry today is that carriers want the ability to monitor across the entire cellular infrastructure. The problem is most are operating with disparate classes of tools accumulated through merger and acquisition activity.”

There is ample room for debate over the best methodology for delivering multi-layer unification, but one tactic is to collect data from existing systems to create higher-value KPIs. This is known as meta-metrics (think meta-analysis). Another option is to re-engineer the core architectures, to achieve on a common platform with open APIs. Regardless of the process, every innovative CEM implementation requires multi-layer unification.

### Multi-Channel Customer Interaction

The customer of today interacts with a carrier through many channels: a web portal, a kiosk, a handheld device, a third-party retailer, an ATM machine, a net-enabled television, social media, and the expensive call center. Innovative CEM values each touchpoint equally, and is capable of collecting, managing, analyzing, and leveraging data from every interaction. In this manner, unique users can experience greater personalization. For instance, if I use a Spanish-language browser to review my billing statement, my top-up text message should default to Spanish. If there is a service outage in my area

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and I have an active Twitter account, I should receive a tweet informing me of the problem. Neil Lilley, Director of Marketing, Operations Solutions, Telcordia Technologies, echoed the need for personalization. “The most innovative approaches to CEM employ advanced, integrated monitoring techniques that enable understanding of the customer experience and customer behavior at the individual customer and device level.”

A customer who must indicate a language preference at the beginning of every interaction won’t feel unique. Likewise, the network should be aware of the devices a customer owns and the preferred method(s) of interaction for each customer.

### Advanced Analytics

To further re-focus the previous microscope metaphor, today’s carriers now have electron microscopes—they can drill down to the individual customer, device, and even social level. They can track social trending at large, utilize text analytics, or apply the science of social network analysis. There are many innovations occurring in this area, such as the churn prediction modeling from Ildiro, which ranks customers as influencers, and can predict a customers likelihood to churn based on social connections with a high degree of accuracy. While only one part of CEM, advanced analytics can grant carriers a measurable competitive advantage and are an innovation worth mentioning.

### Culture Change

For a carrier to truly implement an end-to-end CEM solution, it’s not enough to just purchase software. That’s like buying a weight-loss pill to cure obesity without the concomitant change in diet and exercise. Yuval Brisker, CEO, TOA Technologies, understands the culture change that must occur to enable CEM:

“Customer Experience Management (CEM) is not just the latest buzzword – it reflects a complete sea-change in the way companies think about and approach every interaction with their customers. CEM reflects an understanding that every customer

interaction is important, and that every customer interaction is unique. From the moment the customer first makes contact with a company through purchase and delivery of goods or services and beyond, every touch point is critical to maintaining customer loyalty. These are all opportunities to strengthen the bond that customers feel for the brand.”

### **Becoming Proactive**

Ultimately, the experience-driven carrier of the future is the product of a migration from “an event-based architecture to a metric/KPI-based architecture, from a reactive to a proactive culture,” Jeff Parker, Monolith Software’s CEO adds. Reaction without prevention is expensive over time, especially when it concerns today’s multi-service subscribers. “Customer churn is a huge issue because it’s much more costly to lose a customer today than it was in the past,” continued Parker. “If I lose a customer, I lose three services.”

While some vendors continue to tout everything under the sun as CEM, there are some very real innovations occurring that enable a transformation to an experience-focused service delivery architecture. Multi-layer unification, multi-channel interaction, advanced analytics, and a culture change are essential elements of innovative CEM strategies. It’s not enough turn to the skies when illness strikes and pray that the leeches will drain the bad blood. The carrier of the future will embrace a new model of wellness that combines advanced microscopy with a scientific method, and for all intents and purposes, we can use the umbrella of CEM to capture that paradigm.

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