

Cisco Connected Mobile Experiences for Service Providers: Engage Customers with Personalized Services

Keeping your existing customers and attracting new ones is the lifeblood of any business. The expansion of the mobile Internet and mobile devices has made it easier than ever to connect with those customers. But connection without context is just noise. Today's customers demand content and services more closely tailored to their needs and preferences. That relevance is what turns a random communication into a valued message - and a sale.

Cisco® Connected Mobile Experiences delivers Wi-Fi-enabled communications that provide context and value for service providers and their customers.

Built upon Cisco Unified Access and powered by innovative new services, Cisco Connected Mobile Experiences lets providers change their Wi-Fi network from a place for simple mobile data offload from the macro cellular network into a highly personalized and direct customer communications tool. By providing content and services that match customers' real-time needs and preferences, providers engage their customers in a more context-rich experience that leads to improved loyalty and increased sales.

Customers Are Key

Customers continually evaluate whom they do business with. The organizations that provide greater value - either through better products and services or better pricing - are the organizations that rise to the top of the customer's preferred list.

By allowing customers use the service provider Wi-Fi network to connect with highly customized and personalized experiences, providers open a direct channel of communications that lets them better understand and deliver the services and content their customers want.

- Through Next Generation Hotspot technology, Wi-Fi users are transparently authenticated onto the network.
- Once the customers are in the Wi-Fi network, their location, dwell time, and other context-based information can be captured in real time, so that providers can more fully understand what those customers want at that moment.

In addition, by applying the location analytics and customized services built into Cisco Connected Mobile Experiences, providers can analyze a customer's profile and current location to determine the most relevant content or service the customer needs at that moment. This real-time relevance is essential. Studies have shown that consumers who receive location-based content find that content valuable 90 percent of the time. And more importantly, nearly 50 percent of those customers act upon that content. That means service providers deliver greater value to their customers, building loyalty and increasing sales opportunities.

When service providers more effectively engage their customers, they can:

- Increase loyalty of existing customers, reduce the cost of acquiring new customers, and extend the relationship with current customers
- Deliver a more attractive experience for new customers by providing them with a personalized experience not available through competitors
- Increase point-of-sale opportunities by providing key information at critical decision points in the purchase process
- Reduce potential for “show-rooming” by co-opting the perceived online pricing advantage when the customer is still in the venue
- Increase customers’ satisfaction by helping them make a decision more aligned with their needs

Service Provider Challenges

Operators are continually incorporating small-cell solutions into their network plans to address the projected growth in mobile data traffic. According to Cisco research, mobile data traffic is expected to increase 18-fold over the five years between 2011 and 2016. Coupled with this growth in traffic is the lack of available new spectrum and the difficulty for operators to quickly and cost-effectively add new macrocell sites. In this environment, small-cell solutions become very attractive.

Across the operators’ network, distinctions between consumer and business services on mobile devices have become blurred. Small cells can help deliver those services transparently across third- and fourth-generation (3G and 4G) cellular networks and Wi-Fi. At the same time, wireless usage is shifting indoors. Network analytics show that the majority of mobile data usage—close to 80 percent—is indoor and nomadic, rather than truly mobile.

All of these trends point to an opportunity for service providers to use the indoor Wi-Fi network to not only address mobile data traffic, but also to engage directly with the end users through innovative services. Operators can build monetization services by using the intelligence inherent in the Wi-Fi network, including policy, hyperlocation, context, application, and device information, thus changing the small-cell solution from a simple offload network to a place for business innovation. Businesses can use this information to engage with their customers in new ways, including through augmented experiences, location-based content, and personalized loyalty programs.

Platform for Service Innovation

Cisco Connected Mobile Experiences is built upon new and existing technologies from Cisco and our partners, now more tightly integrated to power a new type of solution.

- Using the Cisco Service Provider Wi-Fi (SP Wi-Fi) solution, part of our integrated small-cell architecture, Cisco helps service providers capture the Wi-Fi opportunity with solution for mass-market deployments. Cisco can offer providers a truly carrier-grade, end-to-end Wi-Fi infrastructure that is scalable enough to support exponential traffic growth from millions of users, is able to deliver a transparent mobility experience for the end user, and is built on open standards, so that service providers can count on it working with the network in place today, as well as the network of the future.

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- [Cisco Mobility Services Engine \(MSE\)](#) uses Cisco access points to capture contextual information. The context includes indoor location, dwell time, and other environmental metrics. The captured contextual information is analyzed using base location services and advanced location services supported by the Mobility Services Engine. The resulting data can then be routed by Cisco Mobile Concierge to trigger the delivery of content and services through applications developed by Cisco and our growing ecosystem of third-party application developers.
 - Through our APIs and the Cisco Mobile Concierge Software Development Kit (SDK) powered by Meridian, third-party applications are able to use the Cisco MSE-supplied context to deliver a wide range of mobile applications and services. The scope and types of services are limited only by the providers' imaginations.

Power of Analytics

By helping you better understand how end customers actually behave while onsite, Cisco Connected Mobile Experiences helps you maximize the impact of a venue's floor plan. Using Cisco MSE and its newly integrated ThinkSmart Location Analytics, the solution is able to track all Wi-Fi signals within the venue and document their movement throughout the venue. The movements are anonymous, aggregated, and analyzed to determine historical traffic patterns, including footfalls and dwell times, to determine which locations see the most traffic and at what times of day.

With this improved insight, service providers can:

- Determine the most trafficked location to help businesses better position products or services, or to price store or product location
- Work with venues and businesses to optimize traffic flow in periods of high use
- Help enterprises to staff service locations based on customer flows and time of day
- Evaluate the impact of floor plan adjustments and in-person operations

Powering Context-Rich Services and Applications

Cisco Connected Mobile Experiences consists of technologies that address four key infrastructure elements: the cellular and mobile infrastructure outside your venue, your onsite Wi-Fi network, context analytics, and mobile services and applications.

Cellular and Mobile Infrastructure

Cisco Technology

- **Hotspot 2.0:** This Cisco-developed standard allows mobile device users to automatically shift from 3G and 4G connectivity to Wi-Fi connectivity based on roaming credentials administered by service providers.

Partner Technology

- **Qualcomm:** Qualcomm has introduced a smartphone chipset with embedded Cisco Mobile Services Advertisement Protocol.

Wi-Fi Infrastructure

Cisco Technologies

- [Cisco Aironet® Access Points](#) and [Aironet 1550](#): Cisco Aironet Access Points provide comprehensive wireless performance and optimized performance.
- [Cisco Wireless Controllers](#): Cisco Wireless Network Controllers support large and small wireless deployments.
- [Cisco Prime™ Infrastructure](#): Cisco Prime Infrastructure provides complete wired and wireless network management from a single “pane of glass.” It functions as the interface for the Cisco Mobility Services Engine.

Context Analytics

Cisco Technologies

- [Cisco Mobility Services Engine](#): Cisco Mobility Services Engine captures the current state, or context, of all devices and access points on your Wi-Fi network.
- [Location Services](#): Location services embedded in the Mobility Services Engine can capture, track, aggregate, and store all device data, including location, from your Wi-Fi network.
- **Advanced Location Services**: Advanced location services, powered by [Cisco ThinkSmart](#), provide the tools to turn Mobility Services Engine location information into actionable content. Cisco Mobile Concierge acts as the command center for the Connected Mobile Experiences solution. It analyzes the data, uses northbound and southbound APIs to communicate to smartphones and applications, and then takes the resulting, context-aware content, services, and advertising and sends it back to the smartphone.

Mobile Services and Applications

Cisco Technology

- [Cisco Mobile Concierge SDK Powered by Meridian](#): The development kit, part of the Mobility Services Engine advanced location services and powered by proven Meridian mapping technology, provides an easy-to-use approach to developing applications and services that use the Mobility Services Engine and provide content that is highly personalized for the individual and the context.

Partner Technology

- [Application Partner Ecosystem](#): This rapidly growing ecosystem provides access to applications and services developed by third parties for use with the Mobility Services Engine.

Cisco Advanced Services

To build an effective solution, your deployment should reflect your industry, your business, your customers, and your existing network infrastructure. The unique characteristics of each deployment requires a high degree of collaboration. Professional and technical services from Cisco and our partners can address the three key phases of an effective Connected Mobile Experiences deployment: plan, build, and manage. Whatever level of assistance you need, you can talk to your partner services or Cisco representative to tailor a solution for your needs.

For More Information

Visit <http://www.cisco.com/go/spwifi>.




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