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Market Trends: CSPs Can Exploit e-SIM Growth to Their Advantage



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Analyst(s): *Wm. L. Hahn | Rishi Tejpal*

Summary

Embedded SIMs are replacing SIM cards in various consumer, enterprise and Internet of Things devices. CSP strategy planners should examine the three scenarios analyzed here and capitalize on their potential to enter new markets and attract more users.



ARCHIVE

This research is provided for historical perspective; portions of this document may not reflect current conditions.

Overview

Key Findings

The e-SIM will create new use cases in the Internet of Things (IoT), particularly those involving multicountry inventory management or mobile endpoints, such as connected cars.

Consumers will be drawn by many new devices and touchpoints to form multiple service provider relationships, including some considered outside of traditional telecom.

Large enterprises, including multinational corporations, will utilize e-SIM to take on many aspects of service provision for their employees, especially around network selection and device refresh cycles.

Recommendations

Explore and strengthen CSP alliances to tap opportunities and support global IoT supply chains through agile domestic participation and activation on your network.

Escape exposure to device subsidies and per-device fees in service plans, increasing your agility to leverage e-SIM-enabled solutions for consumers.

Offer same-price roaming packages and international connectivity support to attract enterprises with staff that travel across borders and currently use multiple SIMs or restrictive, location-dependent pricing.

Introduction

Embedded SIMs (e-SIMs) are subscriber identity modules that are embedded and can hold multiple service provider profiles with over-the-air (OTA) capabilities for postactivation changes. They are expected to appear in significant numbers in 2016 and will grow rapidly as a proportion of the relevant installed base. These new capabilities (including those of Virtual SIMs, which accomplish such functions entirely through the software layer) will become significant in three main areas as described herein.

Market Trend

The Market Will Be Profoundly Impacted by e-SIM in Three Areas

Current-generation SIMs can be embedded or removable and come in a variety of sizes and computing powers. Communications service providers (CSPs) with global activation and support solutions can arrange for preactivation testing of the SIM with various operators under their platform. Compared with this, the e-SIM will wield significant advantages:

Smaller size, down to a few millimeters square.

Generally very good storage/computing capability where needed.

Crucially, e-SIM will be accessible to CSPs both before and after activation, enabling multiple numbers or profiles on the same device.

These capabilities will produce strong impacts for ecosystem players:

Expanding the range of devices available that can be both conveniently small and cellular-enabled (even some with significant compute functions, such as autonomous driving applications)

Providing superior ability for companies to manage SIM-bearing inventory over long distances and reacting efficiently to changing supply and demand, thereby mitigating allocation errors

Introducing flexibility and instability to the service provider relationship (with attendant impact on pricing plans and business models)

The introduction of any next-generation capability into a large, already growing installed base can mean high growth yet gradual total impact. Moving in more closely, of course, there are specific scenarios of e-SIM deployment where certain providers would experience a step-increase in impact and the resulting opportunity. Initial expectations were that e-SIM would be seen primarily in M2M applications, for a variety of improvements in cost and security. Gartner views three distinct scenarios for the growth of e-SIM, with slightly varying effects and yielding significantly differing opportunities.

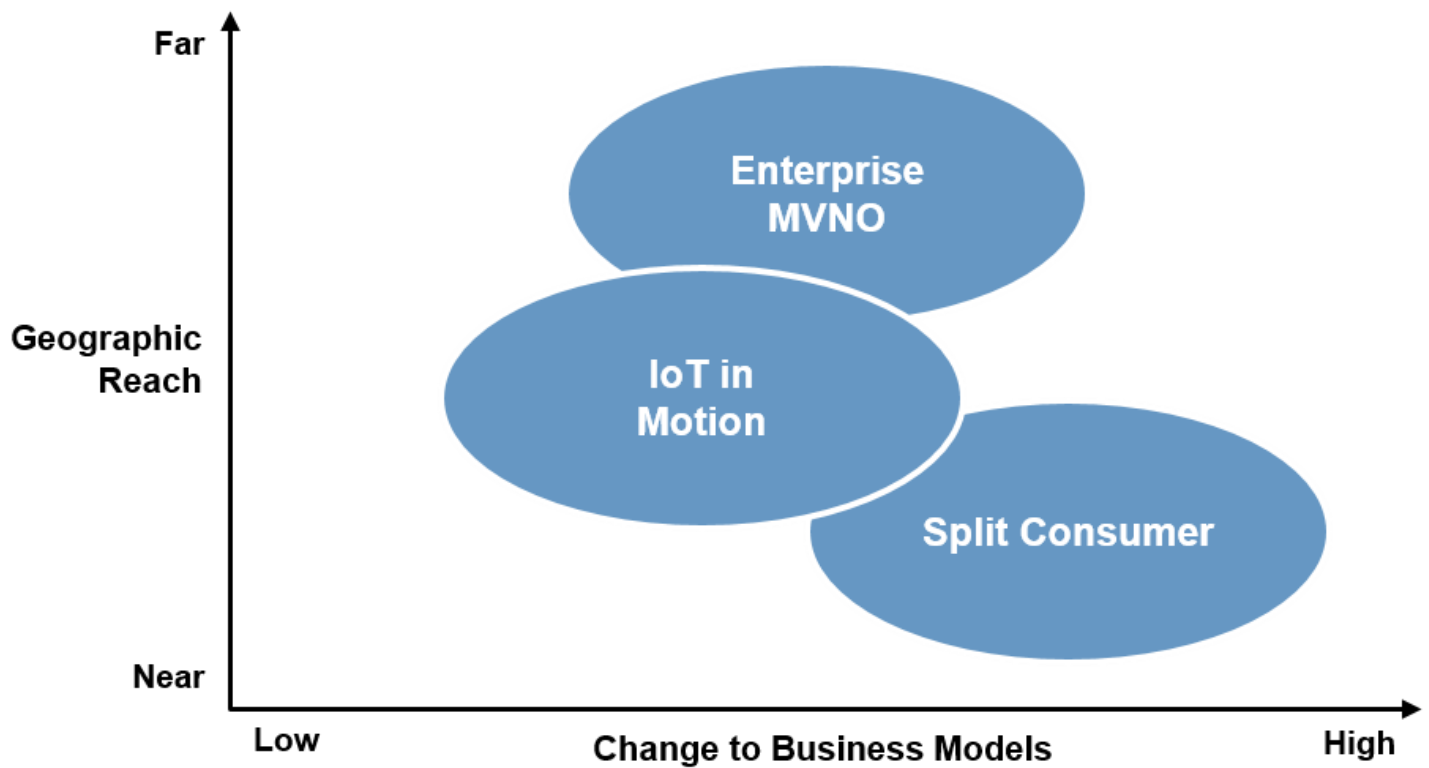
All CSPs should:

Free their pricing plans from per-device fees and similar attempts to guarantee lock-in. With e-SIM, they will have the reverse effect.

Strategize ways to carry their native strengths, such as billing and bundling, across new boundaries — both physical distance and adjacent markets — based on the quick provider transition that e-SIM enables.

The three scenarios of impact are portrayed graphically in Figure 1, which indicates the relative degree of change in device pricing or market reach involved. The consumer sector, for example, will bring the greatest change in new devices and pricing that CSPs can serve, whereas enterprises using e-SIM could extend the opportunity for CSPs to enter new markets.

Figure 1. e-SIM Impact Scenarios for CSPs



MVNO = mobile virtual network operator

Source: Gartner (April 2016)

Scenario: IoT in Motion

As expected, e-SIM will save on physical distribution costs and provide greater flexibility to use cases where global companies are managing multinational inventory, as well as for existing and new cellular-enabled IoT touchpoints that are mobile (such as connected cars, drones and fleet management, as well as wearables, discussed in the next section).

CSPS WITH ADVANTAGE:

Will have global platform capabilities and existing relationships with industry verticals in manufacturing, automotive and transportation

Can gain advantage over ecosystem players such as IT services and system integrators that lack strength in direct networking and will be less able to differentiate on multiprovider relationship management

RECOMMENDATIONS FOR CSPS:

Strengthen alliances with CSPs across important global markets to offer unified activation procedures, local regulatory compliance and operational support for smooth inventory management and go-to-market strategy.

Offer bundled or converged solutions across multiple IoT devices to end users. For instance, bundle service for a connected watch and vehicle under one contract with interworking features as a value-add.

Scenario: Split Consumer

The influx of new personal technology devices will be driven, in part, by the ability of e-SIM to enable service provision from vertical players with noncommunications business models (healthcare, for example). Consumers may keep the CSP for their phone and tablet but acquire service from another company (either paid or free to the user) for a wearable, media or security device. They may also utilize e-SIM and Virtual SIM capabilities to partition the same device for bifurcated accounts (business and personal) or even to enable separate profiles for different members of a family on one device. Traditional horizontal entrants can aggregate carrier networks and services under their competing brand, utilizing several cellular and Wi-Fi networks during the same call, while retaining the brand relationship.

CSPS WITH ADVANTAGE:

Will have a large consumer subscriber base, a broad portfolio of connected consumer service offerings and limited exposure to device subsidy plans

Can gain advantage over less developed domestic competitors by serving vertical customers in the B2B2C value chain, or by winning wholesale business with aggregators at lower costs

RECOMMENDATIONS FOR CSPs:

Evacuate standard device subsidy plans in favor of third-party financing and leases, and limit exposure to monthly per-device fees in service pricing.

Audit your retail channels as e-SIM becomes more prevalent; optimize them to take advantage of shifts in device ownership and provide incentives for customers of rival CSPs to seamlessly switch.

Scenario: Enterprise MVNO

Multinational corporations and large companies whose employees cross domestic network boundaries will be able to take over many aspects of provider choice and service plan selection, functioning as a virtual operator for their employees.

CSPs WITH ADVANTAGE:

Will have strong international interconnection agreements and network assets, and developed managed mobility services and managed services capabilities

Can gain advantage over local rivals and consumer-only providers with offers that supply the needs of enterprise MVNO clients across their multinational infrastructure

RECOMMENDATIONS FOR CSPs:

Exploit the ability to change providers and create "roam like home" services for high-travel enterprise customers; beat the ease of multi-SIM use by an order of magnitude.

Craft billing, customer care and other operational support packages to businesses acting as service providers for their employees; help multinational customers achieve economies of scale across national boundaries and share the benefits and savings in flexible cobranded service.

Vendors to Watch

CSPs with global platforms, such as **AT&T**, **Vodafone** and **NTT Docomo**, may face incremental changes from e-SIM capabilities as they compete for multinational business in new areas and regions.

BlackBerry has a partnership with Movirtu to offer Virtual SIM in several variants, including split billing and/or multiple numbers and profiles on a single device. Will number-oriented service plans make headway in formerly data-only devices, such as tablets, with some customer segments?

The **Samsung** Gear S2 smartwatch can now receive messages, including voice calls, even when the smartphone whose number it shares is absent or turned off. Will this innovation around Virtual SIM capabilities address a significant need among consumers, providing improved satisfaction and boosting retention?

Gartner Recommended Reading

"Market Trends: Top Five Disruptive Trends for CSPs, Worldwide, 2016-2021" (<https://www.gartner.com/document/code/295675?ref=ggrec&refval=3278518>)

"Forecast: Internet of Things — Endpoints and Associated Services, Worldwide, 2015" (<https://www.gartner.com/document/code/290510?ref=ggrec&refval=3278518>)

Evidence

Gartner interviewed key industry players and select service providers to inform its analysis of the potential for the e-SIM impact on CSP market opportunities. We base our outlook on the expectation that key elements of the GSMA standard will be accepted, especially the tenet that e-SIMs can never have the status "locked." The term "Virtual SIM," already used in some branding efforts, refers to the ability to accomplish SIM functions and updates completely through the software layer. For the purpose of our analysis, this is the same capability as e-SIM, though it would carry distinct technology and security challenges.

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