The Truth About IoT / M2M Cellular Roaming

Aeris White Paper

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INTRODUCTION

No matter what your business, deploying an Internet of Things (IoT) / machine-to-machine (M2M) application is complex. Providing your customers with the most reliable connectivity at the lowest cost is not as simple as it should be. The job becomes even more difficult when your connected devices must regularly cross national borders. You may have negotiated myriad rate plans by geographic region and data needs, but are still suffering under the unexpected costs from roaming.

Why? Despite all the friendly talk, traditional cellular operators around the world make a great deal of money on overages caused by roaming. If you want to protect your company from these perils, you need to know the truth about IoT / M2M cellular roaming.
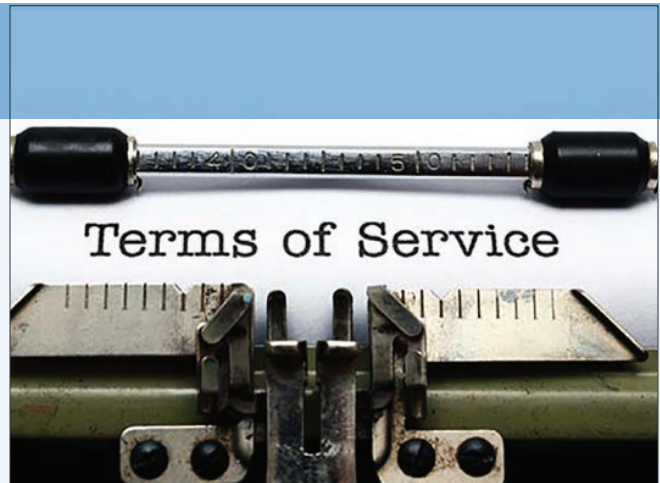
THE GLOBAL STATE OF ROAMING

As billions of new mobile devices connect in multiple countries, easier management tools and more predictable costs are paramount for success. Companies with mobile devices like fleet, asset tracking, healthcare, and remote monitoring applications, in particular, need global rate plans and platforms to manage the entire deployment. They rightfully expect that their devices will always have access to cellular networks regardless of location and without excessive roaming fees. The truth is, however, that very few operators are capable of supporting reliable global IoT / M2M programs with predictable costs.

WHAT TO LOOK FOR IN GLOBAL SERVICE CONTRACTS

When evaluating global service agreements, IoT / M2M solution providers should take a number of considerations into account.

It's important when considering global cellular service to look for seamless coverage and the ability to control your risk and exposure to high roaming charges.

Additionally, you must weigh the cost of entering into multiple relationships with regional carriers that require different SIMs, connectivity management portals, and support organizations, versus the cost of a single relationship that provides global service.

Cellular network operators providing global IoT / M2M services need to be able to manage the IoT / M2M devices and traffic carried over their networks at a reasonable cost with real-time thresholds and alerts that can help avoid any unintentional usage and roaming.

To support IoT / M2M services, operators must be able to offer a variety of rate plans (for geographic regions, different data usage needs, mobile devices, etc.) that can be tailored to meet your specific supply chain and business models without being limited to traditional inflexible rate plans and business rules often associated with carriers that are more accustomed supporting consumer plans and services.

SEAMLESS IOT / M2M CONNECTIVITY FROM AERIS

Aeris offers end-to-end solutions that take the worry out of global deployments. Not only do we offer much simplified rate plans and a global management platform, we have also designed our network to be "carrier-agnostic."

You need no longer worry about strength of signal in remote locations or dense urban areas. The Aeris network delivers the strongest cellular signal, regardless of operator and without unexpected roaming charges.

Aeris provides both US and global GSM and CDMA service, managed through a single connectivity portal, with a single SIM, backed by a worldwide support team that is exclusively focused on supporting IoT / M2M solutions. Aeris is, in fact, the only cellular network designed and built exclusively for machines, and we ensure that your devices have the strongest and most reliable connection regardless of location or operator.

Unlike traditional operators or MVNOs, at Aeris, we give our customers deep network diagnostic insight in real or near real-time. The Aeris has complete IoT / M2M solutions that allow our customers to check the status and troubleshoot the cause of problems regardless of their device location.

The following section will outline the key factors that determine successful global IoT / M2M services.

AVOIDING GLOBAL RATE FLUCTUATIONS

For customers deploying global solutions, unexpected roaming rates can expose them to high roaming and unintentional overage charges, resulting in bill shock.

Most so-called "global" operators offer a single price per country or region, but when your mobile devices leave that area, roaming rates pile up fast. Also, most MVNOs and cellular aggregators cannot provide a single SIM with a single APN, and instead require stocking multiple SIMs, each needing a different APN for a global deployment. Preparing and managing so many different SIMS and APNs is costly and time-consuming.

With the exception of a few selected premium countries, Aeris provides a global service that offers a flat, predictable rate per continent as opposed to providing pricing on a country-by-country basis. This allows customers to ascertain what their rates will be in each part of the world.

As a result, Aeris customers are spared having to master highly complex and fragmented roaming business and billing models.
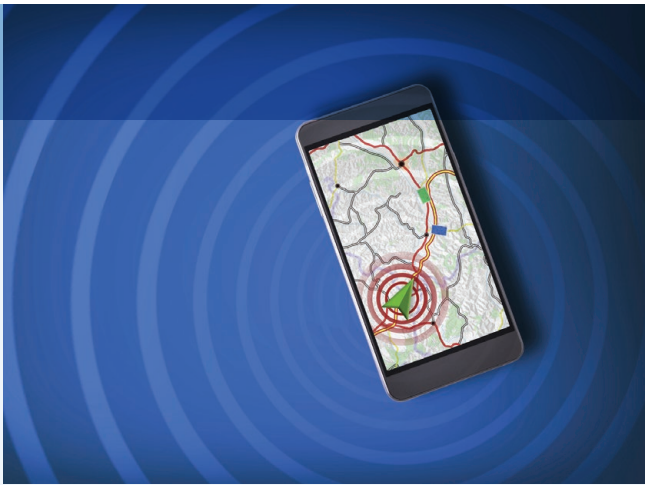
PARTNERSHIPS

Partnerships are important in helping IoT / M2M vendors achieve a level of professional services both for connectivity and billing management. According to Juniper Research, "Global partnerships will play an important role in operators' M2M success, as the lack of M2M roaming is often hailed as a key barrier — there is a need for commercial agreements to be in place for rapid deployment of M2M."

Aeris provides seamless roaming in the U.S. and globally in over 180 countries, with over 500 carriers supported by a single relationship and support organization.

The key to success is technology integration. At Aeris we have integrated our partners' technologies into our platform and network so that our customers can see traffic in real-time. Our customers have real-time or near real-time visibility into devices located anywhere on the planet.

> **Global partnerships will play an important role in operators' M2M success, as the lack of M2M roaming is often hailed as a key barrier – there is a need for commercial agreements to be in place for rapid deployment of M2M. — Juniper Research**

Additionally, should a device get overused, compromised, have a bad firmware download, or exceed a pre-determined threshold, Aeris has the fastest response times in the industry, another way to safeguard our customers from extended downtimes and overages.

Most traditional operators and MVNOs don't have a core network infrastructure that was built from the ground up, and as a result, they rely on carrier detail records (CDRs) to process roaming usage and alerts. Therefore, cost saving alerts and threshold requirements from traditional operators and MVNOs can take up to six days to process, and in the meantime, your devices are not able to collect data, but are running up your bill with constant attempts to reconnect.

DIRECT CUSTOMER SUPPORT

Even with the best underlying operator partnerships, IoT / M2M providers in need of rapid, effective service can benefit greatly from the hands-on support that the Aeris team offers. Aeris' network support engineers have access to systems and data that provide extensive logging and monitoring functionality — optimized for IoT / M2M and unmatched by any MVNO or traditional operator.

We can resolve customer issues proactively and at a speed that MVNOs and carriers cannot match. Our team can ping a device, see if it's provisioned properly on the network, look at packet data that has been transmitted, and force it off and reregister it in minutes. For example, when a customer calls because one of its refrigerated semi-tractor trailers carrying $5 million of temperature-controlled products is off-line, our IoT / M2M experts can diagnose and resolve the issue on the first call.

The Aeris support team provides full support five days a week with five-minute response time and proactive monitoring. Our customers don't speak with untrained call center agents — they get dedicated, expert network engineers, who specialize exclusively in supporting IoT / M2M applications.

CONCLUSION

Contrary to common belief, you don't have to suffer with bill shock from your global IoT / M2M solution. You need an IoT / M2M service provider that was built from the ground up for machines.

ABOUT AERIS

Aeris is a pioneer and leader in the market of the Internet of Things – as an operator of end-to-end IoT and M2M services and as a technology provider enabling other operators to build profitable IoT businesses. Among our customers are the most demanding users of IoT services today, including Hyundai, Acura, Rand McNally, Leica, and Sprint. Through our technology platform and dedicated IoT and M2M services, we strive to fundamentally improve their businesses – by dramatically reducing costs, improving operational efficiency, reducing time-to-market, and enabling new revenue streams.

Our global headquarters is in Silicon Valley (Santa Clara, California). Our European headquarters is near London, UK. Visit www.aeris.com or follow us on Twitter @AerisM2M to learn how we can inspire you to create new business models and to participate in the revolution of the Internet of Things.

Get in touch

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