

TAISYS SLIMDUET® PLATFORM

The 'silent roamer' solution for MNOs



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The 'silent roamer' solution for MNOs

Mobile network operators no longer have to accept that some subscribers will never pay for mobile roaming services. Taisys offers an MNO-centric solution that allows MNOs to be interconnected globally and deliver cross-boundary and interoperable services to customers.



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“Silent roamers account for up to 90% of mobile users globally, translating into over US\$6 billion in lost revenue annually for mobile operators worldwide.”



How to capture revenue from non-paying roaming customers

Are you looking for ways to generate revenue from customers who have a habit of turning off their mobile phones when travelling abroad? The **slimduet® platform** from Taisys could be exactly the solution you are seeking to unlock roaming revenue from these reluctant mobile roamers.

Mobile roaming has certainly suffered from adverse publicity over the years. The term “bill shock” was coined to describe the phenomenon of excessive mobile data bills following a trip to another country. Now, large segments of the mobile subscriber base will go to considerable lengths to avoid using their domestic SIM card while abroad.

This fear of roaming has created two distinct types of mobile roamers: legacy roamers and so-called “silent roamers”. Legacy roamers tend to roam on their home SIM card when they travel abroad and are willing to pay a premium for the convenience of mobile connectivity. According to Juniper Research, this segment accounts for an average 10%-20% of roamers globally.¹

On the other hand, silent roamers account for up to 90% of mobile users globally, translating into over US\$6 billion in lost revenue annually for mobile operators worldwide. Such users generate no roaming revenue for their home MNOs. Instead, they seek alternative ways to connect their mobile devices that are cheaper or even free of charge. Such methods can include travel SIMs, local prepaid SIMs, WiFi routers, free WiFi in hotels, coffee shops and bars, and others.

However, efforts to turn silent roamers into legacy roamers have not always been very effective. On the contrary, some measures can have an adverse impact on the MNO's bottom line.

For example, MNOs have tried lowering roaming prices to tempt silent roamers to switch on their domestic SIM cards while abroad. Taisys has found that this measure does not create substantial growth in the legacy roamer base. In fact, even these reduced roaming fees are still considered too high by price-sensitive users and thus lack the power to convert silent roamers into legacy roamers.

Furthermore, reductions in roaming charges risk cannibalising existing roaming revenue. The drop in roaming revenue caused by reduced roaming charges cannot be offset by the small conversion of silent to legacy roamers.

A further finding is that roaming price reductions can also jeopardise the equilibrium of the mobile roaming ecosystem: roaming agreements set the cost of roam-in charges between operators. When one operator reduces roaming fees to its customers, other operators also feel the need to reduce roaming charges, thus destabilizing the roaming ecosystem.

It has thus become apparent that MNOs require two separate roaming solutions: one targeted at the legacy roamers who are comfortable with the level of charges and prefer the convenience of using the SIM card supplied by their domestic MNO; and a separate solution that serves the needs of mobile roamers who either significantly limit usage of their home SIM card while abroad or turn their mobile phones off completely.

The offer of two separate solutions would also ensure that roaming revenue is actually increased rather than cannibalised. Roaming revenue that was lost because of the silent roaming phenomenon can now be captured in a far more effective manner, putting MNOs firmly in the driving seat.

¹ *Mobile Roaming: Market Sizing and Forecasts Juniper Research, December 2015*



The Taisys slimduet® platform: an overview



To meet the need for a separate solution to target silent roamers, Taisys Technologies has built the slimduet® virtual SIM over-the-air download platform as an MNO-centric, digitised management and distribution hub for prepaid services. The slimduet® downloading engine is at the heart of this solution, and allows SIM profiles to be downloaded onto all forms of SIM cards: regular SIMs issued by MNOs, thin SIMs, and embedded SIMs (eSIMs).

It is designed first and foremost to enable MNOs to “wake up” silent roamer revenue through SIM cards supplied by the MNO, while keeping legacy roaming pricing and revenue through existing legacy roamers. slimduet® allows MNOs to be interconnected globally in order to deliver roaming services to customers anywhere in the world.

For example, users with a slimduet®-enabled SIM purchase pre-paid packages offered by mobile operators through the slimduet® app. The slimduet® SIM can be reused for future travel in over 200 countries globally.

Users are able to pick a service plan depending on the region they plan to visit, buy a prepaid service plan, and switch to that plan when they reach their destination. Upon returning home, they simply switch back to their domestic service plan on their usual SIM card.

The slimduet® business model for MNOs: complete solution for inbound and outbound silent roamers

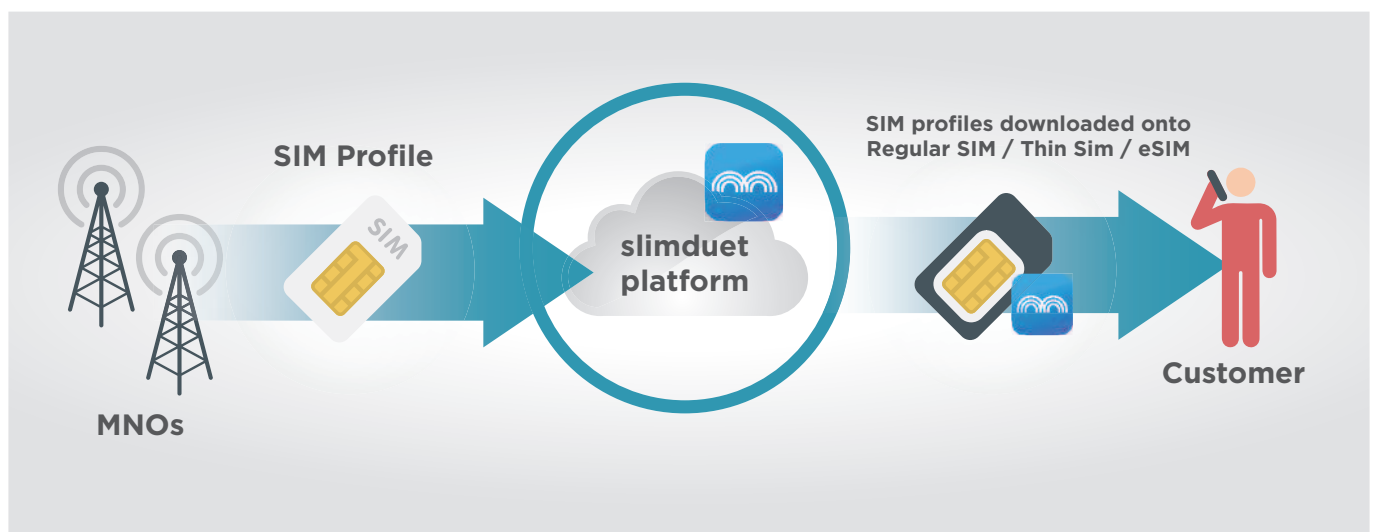
The slimduet® platform builds an ecosystem to allow MNOs to cross-sell services from each other and eliminate national boundaries. The MNO can benefit in the following ways:

Inbound silent roamer:

- MNO offers its competitive local package on the slimduet® platform and increases prepaid market share.
- Expand point of sales overseas before traveler arrives.
- Online KYC solution provides efficient user registration process.
- MNO prepaid package is distributed and delivered digitally worldwide via the slimduet® platform, saving costs on logistics, warehousing, distribution channels, and more.
- Leverage global distribution and alliance network with minimal opex required.

Outbound silent roamer:

- MNO benefits from easy adoption of slimduet® solution with slimduet® applet on MNO SIM.
- Platform adoption with zero capex involved.
- Offers postpaid & prepaid subscribers slimduet® enabled SIM as alternative roaming service.
- MNO issued SIM that captures both legacy and silent roamer revenue.
- MNO collects silent roaming revenue.
- Market segregation – MNO’s second brand.



End-user benefits of slimduet®

1. No SIM swapping.
2. Ability to purchase in advance a prepaid package based upon the country to be visited (multiple countries if required), anytime, anywhere.
3. Able to advise friends and family of the local number before setting off.
4. Local number at destination for ease of local communication.
5. ICF/IP call forward functionality to ensure uninterrupted connectivity with home SIM.
6. Avoid language barriers with a user-friendly interface.
7. No queuing at the airport or reseller to buy a local SIM card.
8. Register “know your customer” (KYC) if required on the application before departure.
9. Select and buy a package suitable for the intended stay.
10. Activate the package upon arrival.
11. Once set up, slimduet® can be reused for years to come.

In essence, the slimduet® platform provides an MNO-centric marketplace for both roaming and local prepaid packages, and delivers the packages over-the-air to a user’s mobile phone.

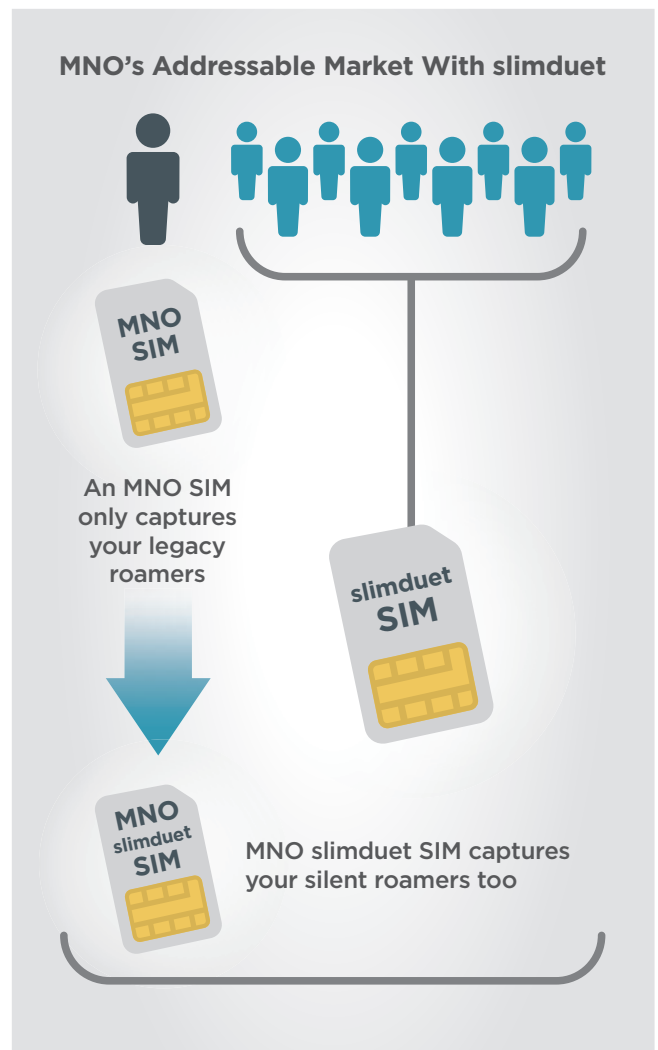
The platform also offers policy controls that enable MNOs to prioritise and/or select packages visible to their customers. This function allows an MNO to promote packages or even mask a competitor’s package.

MNOs may even choose to cross-sell packages from other MNOs in countries where they do not have coverage, setting their own prices for all the packages their subscribers are able to buy. Furthermore, the slimduet® application can be customised by the MNO. For example, an operator may wish to use its own logo to enhance brand loyalty amongst subscribers.

Above all, MNOs can be assured that the slimduet® service it provides to its subscribers will not cannibalize existing roaming revenue. The distinct market segmentation achieved through the implementation of a separate platform directly meets the needs of an MNO’s more price-sensitive customers, and in this way turns a formerly non-revenue generating segment of its subscriber base into a more profitable area.

In summary, slimduet® is a convenient alternative roaming service that is very easy to set up and keeps the MNO in control of a far greater slice of customer spend. All the user needs to do is download the application and activate the SIM card. MNOs can provide a special rate for call forward to the foreign number to ensure home SIM voice connectivity. The other alternative is IP call forwarding, which is enabled through the slimduet® APP.

A typical silent roamer is generally more than willing to make the extra effort required to avoid running up larger bills. A typical legacy roamer, on the other hand, is more likely to be discouraged from using the slimduet® service precisely because of these extra steps. In the case of legacy roamers, however, an MNO is not under pressure to reduce roaming fees because this customer segment is less price-sensitive than silent roamers.





Background: the evolution of the mobile roaming market

The slimduet® solution provides a highly sophisticated way to resolve many of the challenges faced by MNOs today. Mobile roaming has been an important and valuable source of revenue for many years, but revenue generated by roaming fees is declining or growing very slowly depending on the operator and market.

This is in spite of the fact that people are travelling more. Juniper Research forecasts that the number of global mobile roamers will approach the 1 billion mark in 2020, increasing from just over an estimated 634 million in 2015.

ROCCO, a research and consultancy firm that specialises in roaming and interconnect, uses an analogy to describe the emergence of the silent roamer phenomenon: in the same way that elephants apparently never forget directions and places, mobile subscribers that have experienced bill shock because of roaming - especially data roaming - are reluctant to take the same risk again².

As the company points out, bill shock is also an unwelcome development for MNOs as it undermines their position as a service provider. The outcome of unexpectedly high bills is that MNOs lose subscribers to competitors with bespoke roaming solutions, or see subscribers opt for alternative solutions. In other words, a potential legacy roamer can turn into a silent roamer if roaming has proved to be a costly experience.

As already mentioned, the more reluctant roamer will often go to extraordinary lengths to avoid using their mobile phones when abroad. Such non-MNO centric alternatives include renting a MiFi device — a portable broadband device that allows multiple end users and mobile devices to share a 3G or 4G mobile broadband Internet connection and create an ad-hoc network.

However, these devices often rely on remote SIM

authentication technology via SIM box in the backend. It's been found such devices raise frequent fraud alert in the MNO network when the same IMSI is logged into different HLR at the same time. Others may rely on free or paid-for WiFi services in hotels, but of course they are then unable to access data on the go.

In terms of revenue, Juniper Research estimates that total roaming revenue reached \$51 billion in 2014, equating to 5.4% of global operator billed revenues. The company expects this to increase at an average annual growth rate of 1% to reach \$60 billion in 2020. It noted that this forecast is significantly lower than its previous estimates as a consequence of new European Union (EU) regulation and revised roaming adoption in emerging markets such as India and Africa.

Recent quarterly reports from several European MNOs already reflect the impact of EU regulation that has reduced retail roaming surcharges within the EU. The maximum additional fee they can add to a voice call is now 0.05 per outgoing minute, while the cap on data roaming charges is 0.05 per megabyte (MB). As of 15 June 2017, retail roaming surcharges on calls, texts and data are set to be scrapped completely in the EU to achieve “roam like at home” services, although the EC has recently adopted fair use rules to ensure that operators can take measures to prevent abuses of the system. However, discussions are still ongoing with regard to wholesale roaming caps between the MNOs.

As roaming costs come down, more users will use their mobile device while roaming, leading to increased usage and revenue growth. However, as noted by ROCCO, roamers are not always persuaded that it is safe to roam and many are also not aware that roaming charges have been reduced. This is especially relevant in the case of data roaming services that tend to generate higher bills

² *Roaming Bill Shock: Silent Roamers and Elephants* ROCCO, October 2015

Conclusion

Taisys Technologies has built the **slimduet® platform** to enable MNOs to directly capture silent roamer revenue through the domestic SIM card. By downloading “virtual” prepaid SIMs, subscribers in this category are given far greater control over their mobile bills when they travel to another country. In this way, MNOs are able to turn formerly silent roamers into paying customers without jeopardising their existing roaming revenue.

By providing a local package for travelers to download, they are able to “play global, but pay local”. Travelers benefit from being able to access a local mobile network at their ultimate destination, ensuring a low cost and high-quality experience.

Taisys will be demonstrating the slimduet® platform at Mobile World Congress in Barcelona, Spain from 27 February to 2 March 2017. Please contact us if you would like to book an appointment.



Contact us

If you would like to book an appointment:
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Taisys Technologies

Taisys Technologies Co. Ltd., member of GSMA and ETSI, is a world leader in providing mobile interconnectivity and vertical integration solutions to various industries. Taisys' solutions enable telecom, financial industries and government organizations to extend innovative mobile services in a secure and convenient manner.

Building on our core technology, SIMoME® (thin SIM), our dedication to R&D brings products, services, and platforms that aim at expanding revenue and retain customers for our clients.

Since our establishment in 2005, Taisys has expanded presence to 5 continents and services over 20 million users worldwide.

Visit <http://www.taisys.com/index> for further information.

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