



**MOBILE : MOBILE MESSAGING EXCHANGE**

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# **EXTENDING THE REACH OF TWO-WAY TEXT MESSAGING AND VOICE**

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## THE BACKGROUND

There are two key conditions necessary for communications networks to function efficiently. First, as many end points as possible should be connected to the network. Second, multiple networks must be able to connect with each other. Global, inter-connected communications networks enable multiple individuals to inter-connect. Generally, their connections can be completed regardless of the originating or terminating network, its geography and the type of handset used at both ends of the link. The arrival of new communications methods enabled by over the top (OTT) service providers challenges this model. These services take a more 'closed community' approach that does not provide for connectivity across the broader global communications environment.

## THE PROBLEM

These OTT-enabled services have resulted in communication options that are more fragmented than they were ten years ago – with individuals often communicating within a closed community of similarly connected users. The fact that OTT apps for voice and messaging services are generally free to use is an attractive proposition. However, the service is only free if one user is sending a message or having a voice conversation with another user via the same application.

Each OTT messaging or VoIP app requires all users who wish to communicate with each other to be on the same app. If not, the user experience is compromised. OTT apps bypass the Public Switched Telephone Network (PSTN) so they do not require users to have telephone numbers to terminate the message or call.

While OTT apps for messaging and voice services are undeniably attractive from a cost perspective, and provide a rich, contextually relevant user experience, this also creates a challenge. How can users combine multiple methods to break-out and communicate with the broader telecoms eco-system?

OTT app adoption and usage have grown dramatically in the last few years, alongside that of smartphones. It is easy to identify and download the apps, which are generally free to use, offer significant cost savings and even usability benefits over equivalent services provided by Mobile Network Operators (MNOs). These OTT apps can deliver a combination of services, including group and picture messaging, video calls and social network interaction – all via one convenient medium. While this may be ideal for customers who regularly communicate with a small group of the same people, it's less suited to the user who wants to connect via their OTT app to a broader range of people or communications services. This is particularly true if they want to be able to send and receive normal SMS and make phone calls to friends and colleagues in the off-net telco world.

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## THE OPTIONS

There's no doubt that communication users have an appetite for OTT apps. However, there's also significant and justifiable concern among MNOs that OTT app adoption and usage is resulting in significant revenue loss. According to information released by trade analyst company Analysys-Mason<sup>1</sup>, OTT IP messaging had already surpassed traditional SMS during 2013 (based on total messages sent). OTT IP messaging is the driver behind the lion's share of growth in P2P messaging from 2013 – and likely to be so through to 2018 – while analysts expect traditional SMS to decline rapidly over the same period.

Increasingly in the MNO community there's a consensus that the way forward is more co-operation between MNOs and OTT app providers, rather than mutual suspicion. New models need to be identified that can help to establish this co-operation for mutual benefit. So what are the choices?

One option – obviously unattractive – is for the status quo to remain, with rather fragmented OTT services continuing to offer little or no inter-connectivity with the MNO world. For OTTs this is an immediate limiting factor for the usability of their services. While MNOs are launching their own OTT-like services, including mobile VoIP. With the advent of long-term evolution (LTE) this option becomes more relevant and Tata Communications has responded by releasing a mobile platform enabling MNOs to launch their own branded mobile VoIP app. It is, however, still too early in the business cycle to know whether such services will have a significant impact on market dynamics.

Another possibility is to establish inter-connection between on-net OTT apps and off-net telecoms. Such a model blends the rich user experience and ease and convenience of OTT app usage, together with the reach and service quality of the telco environment. This approach is a logical next step for the communications environment, outlining what they should be capable of delivering. It retains the new generation user experience and maintains the role of the MNO as provider of quality, carrier grade communications connectivity.

<sup>1</sup> Analysys-Mason, OTT communication services worldwide: forecasts 2013–2018

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## A SMARTER, MORE POWERFUL SOLUTION

Tata Communications has developed a solution by acquiring local number ranges from its MNO partners in multiple countries, and working with OTT service providers so they can assign a local telephone number to app users. So they can message anyone with a telephone number with SMS and voice calls using SIP/RTP<sup>2</sup>. Tata's Mobile Local Number Service (LNS) means anyone dialling the assigned phone number of an OTT app can reach them locally. While the Tata platform enables an OTT app user to dial a number and reach anyone in the telco world just as they would using a telephone – rather than limiting communications to others in a closed app community.

This approach interconnects the on-net OTT app and off-net telecom world<sup>3</sup> (not just the mobile communications network) with billions of telephone numbers and users. So an OTT service provider can equip its customers with two-way voice and local phone numbers, allowing them to receive and make voice calls and exchange SMS with traditional telco users. This provides an extended service option for customers while helping providers take advantage of the strong and continuing growth in social messaging and smartphone adoption to increase revenue.

Providing customers with local phone numbers for SMS and voice services bridges the application and telco worlds, enabling providers and users to:

- Extend voice service reach to new countries and markets
- Use any mobile phone, tablet or computer to exchange SMS and voice calls with the countries supported by the service
- Assign multiple numbers to a single device for international communication (virtual numbers are not associated to SIM cards)
- Leverage the more general benefits of mobile VoIP applications

OTT users are not faced with a closed community – one that feels like a walled garden. They can use their OTT app to reach anybody in the telco world where the service is active and they can be contacted using a conventional telephone number.

This is a win-win result for OTTs and MNOs. They can both satisfy customer requirements and establish the foundation for additional creative co-operation. Otherwise, the 'walled garden' situation means that an OTT app customer cannot send a simple SMS to any of the ~5 billion global mobile telecoms subscribers.

Tata's Mobile Messaging Exchange brings positive changes – benefiting not only OTTs, but their customers and the MNOs too. As well as expanding OTT service options, it can also turn traditional devices such as tablets into functional mobile phones by providing a telephone number. Tata's Mobile Local Number Service (LNS) enables an OTT app user to receive local calls and SMS, while through Tata's Mobile Messaging Exchange platform they can send SMS to the telco world – all while connected to the internet by 3G, 4G or Wi-Fi. This creates a whole new category of devices from which users can access core MNO services.

<sup>2</sup> Session Initiation Protocol and Real-Time Transport Protocol are IP network protocols

<sup>3</sup> Refer to the separate list of available countries

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Tata Communications Mobile LNS keeps OTT customers engaged, develops the app user base, boosts loyalty and helps expand service offerings. It means users can:

- Use their OTT app to keep in touch with social networks
- Receive updates from the OTT platform
- Receive text messages and voice calls at local rates, as well as send text messages and talk with friends and family

The result is a shift in the relationship between OTT provider and MNO community - from fiercely competitive to cooperative. And, in turn, that will enable more service usage for both OTTs and MNOs.

### THE OPPORTUNITY

Let us imagine the case of WiPE - a fictional OTT mobile app provider. Its app provides a range of messaging and communications services. These include unified communications, a social networking portal, messaging and IM, as well as VoIP applications.

Mary is a WiPE mobile app customer in the USA. Using the WiPE portal, she subscribes to the 'Mexico Local Number' service and has the number 52 15 5130 ZZZZ. Carlos, Mary's brother, lives in Mexico where he has a regular mobile phone subscription with MNO1 and the number 52 55 5130 XXXX

The example below shows how Mary is able to associate her assigned local phone number to her OTT app. Carlos, in the off-net telco world, can text that number and reach Mary who is on-net, and vice versa. The scenario shows how mobile messaging is terminated through Tata Communications Mobile Messaging Exchange.

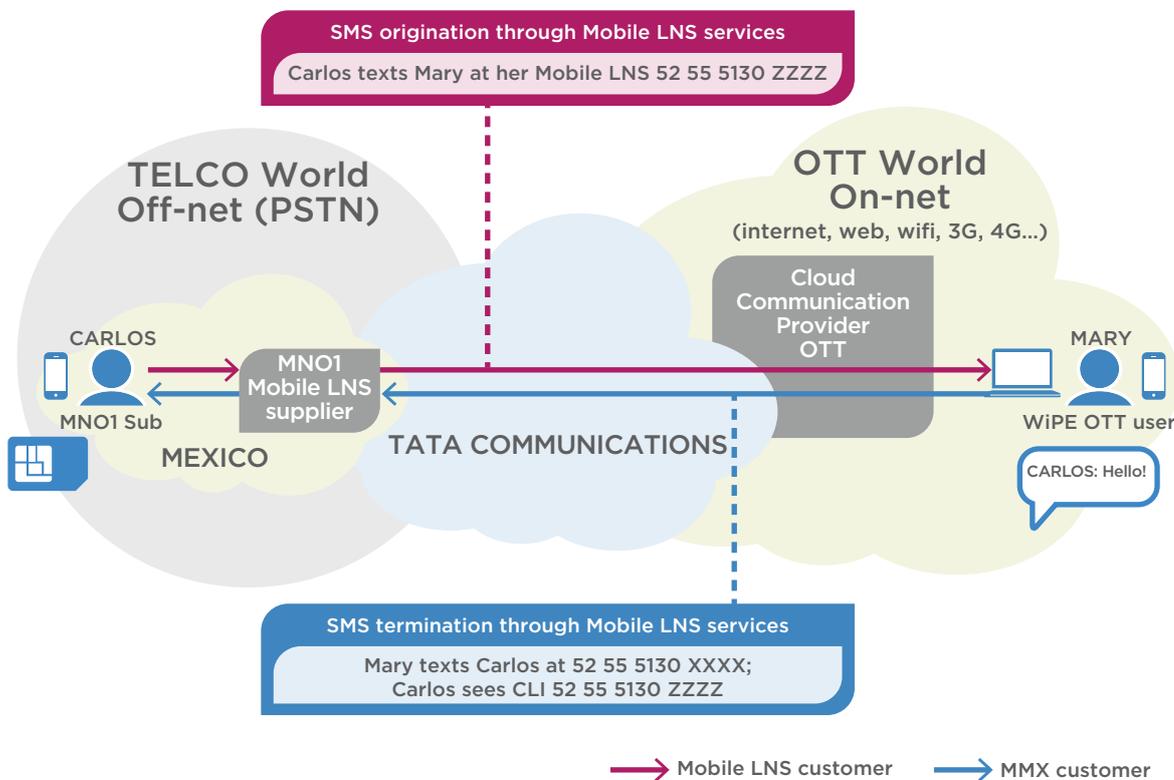


Figure 1: Mobile messaging is terminated through Tata Communications Mobile Messaging Exchange

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## WHY TATA COMMUNICATIONS' MOBILE LNS IS A GAME CHANGER

For 15 years Tata Communications has run local access services, providing and handling large volumes of numbers. Today, Tata Communications works with a range of MNOs to source local number ranges. And manages regional regulatory processes and relationships with local network operators for order numbering, delivery and activation.

Our turnkey solution includes sourcing local numbers from operators in each country where the service is supported for voice and text, supporting two-way communication. It presents the fastest path to a truly global service footprint. And it streamlines and accelerates access to international and emerging markets, allowing partners to scale their international business.

## CREATING A NEW WORLD OF COMMUNICATION™ THROUGH INNOVATION

Tata Communications is a leading global provider of New World Communications™ to multinational enterprises and service providers, including: voice, data, and mobility solutions; network services; managed security; content management; media and entertainment services; and cloud and data centre services. It has offices in 31 countries, 7,750+ employees working across five continents and 44 subsidiaries in 33 countries.

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