

### INTRODUCTION

With international travel on a rise globally, mobile data subscribers are increasingly seeking out convenient and affordable ways to stay connected with family, colleagues, and travel hosts while traveling abroad. Constant access to smartphone and tablet apps for email, navigation, chat, and social networking have become essential travel tools.

However, persistent consumer fears of high data roaming charges and bill shock have restricted roaming data usage, forcing travelers to camp out in public WiFi hotspots, to purchase local SIM cards, or to disconnect completely while abroad. Even the U.S. Federal Communications Commission, on its website, suggests these alternatives to using mobile data services globally.<sup>1</sup>

Although high data roaming rates have traditionally produced a high profit margin for operators, the "silent roamers" – subscribers who turn off mobile data roaming, rely on WiFi, or buy a local SIM card – represent an area of lost revenue potential. As leading operators around the world begin to offer more affordable and convenient international data roaming options, they set a new standard for consumer expectations.

As these market trends evolve, operators that take a more modern approach to roaming data monetization stand to gain market share, ARPU, and customer loyalty. In selecting a solution for data roaming monetization, operators should look for the following:

EASE OF	MARKET-	EASE OF	USER
DEPLOYMENT	READINESS	INTEGRATION	EXPERIENCE
<ul> <li>Single platform, pre- integrated solution</li> <li>Plug-and-play deployment</li> <li>IOT with leading network vendors</li> </ul>	<ul> <li>Market-ready use cases for roaming</li> <li>Flexible and rapid service creation</li> <li>High adaptability to future use cases</li> </ul>	<ul> <li>Smooth integration with existing IN</li> <li>3GPP Interface Support (Gx, Gy, S9)</li> <li>Open, modern APIs for CRM integration</li> </ul>	<ul> <li>More convenient than WiFi &amp; local SIMs</li> <li>Usage alerts to avoid bill shock</li> <li>On-the-go purchase and recharge</li> </ul>





## MONETIZING DATA ROAMING WITH ALEPO

With Alepo's **Data Roaming Solution**, mobile network operators can rapidly launch new international data roaming business models without replacements or other costly changes to their existing mobile charging environments. A complete, self-contained ecosystem for data roaming monetization, Alepo's Data Roaming Solution delivers attractive, market-ready use cases and end-to-end functionality for any MNO's data roaming business, including a rapid and flexible service creation environment, product catalogue, real-time policy and charging control, an award-winning mobile app, automated usage alerts and notifications, and real-time reporting and analytics.

With Alepo's Data Roaming solution, MNOs can readily enter the international data roaming market, unlocking new revenue streams and boosting subscriber ARPU and satisfaction. The platform enables MNOs to easily create and launch competitive and differentiated data roaming offers that cater to the needs and lifestyles of their subscribers when traveling. For example, MNOs can offer country or region-specific roaming data passes as well as application-specific data roaming services for popular apps like WhatsApp, TripAdvisor, and Maps. Additional use case examples are listed below.



#### ALEPO DATA ROAMING SOLUTION PLATFORM

Alepo's platform offers ready integration with payment gateways for credit card purchases through the mobile app, SMSc and e-mail server (SMTP) for roaming notifications and usage alerts, and integration with the existing charging environment for charging convergence. For example, a subscriber could use his prepaid mobile account balance to purchase a 7-day data roaming pass for Italy.





#### ALEPO'S MY MOBILE BUDDY MOBILE APP

Alepo's **My Mobile Buddy** Mobile App is a subscriber-facing companion app within Alepo's Data Roaming Monetization solution ecosystem. Using the app, subscribers can instantly purchase a data roaming pass for a specific country, region, or application. In addition, subscribers can selfsubscribe to personalized data roaming usage alerts. Subscribers can also elect to set their own bandwidth speeds for data roaming as a way to manage and even "stretch" their usage.

The Alepo My Mobile Buddy mobile app is fully managed by Alepo, making it a market-ready solution that requires zero maintenance and development on the part of mobile network operators. The app pre-integrates with the Alepo Data Roaming Monetization solution platform so that roaming data pass offers are auto-provisioned from the product catalogue to the app for purchase. The app is available for Android and iOS.

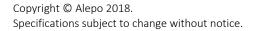
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# ALEPO DATA ROAMING USE CASE EXAMPLES

GLOBAL DATA ROAMING PASS	Differentiate your roaming plans with roaming data passes. In the Alepo My Mobile Buddy app, you can make prepaid roaming data passes available for purchase by credit card or by charging the subscriber's prepaid or postpaid mobile account. It creates a simple and convenient way for subscribers to purchase roaming data services on the go.		
	<ul> <li>750 MB Pass for 7 Days – Single Country</li> <li>2 GB Pass for 14 Days – Multiple Countries</li> <li>2 GB Pass for 30 Days – Global Access</li> </ul>		
	APP-SPECIFIC DATA ROAMING PASS	Sometimes, all you need is one or two crucial apps while traveling abroad. With Alepo's Roaming Data solution, you can create application-specific roaming data passes for popular apps. This carries the potential for revenue sharing and sponsored app models with OTT travel app providers.	
	Use Case Examples:		
	<ul> <li>WhatsApp Only – 1 GB for 7 Days – Single Country</li> <li>TripAdvisor Only – Unlimited for 3 Days – Single Country</li> <li>Maps + Airbnb – 750 MB for 14 Days</li> </ul>		
COUNTRY & REGIONAL DATA ROAMING RATES	Alepo makes it simple to offer Pay-As-You-Go roaming data options with real-time credit control and granular charging rates per country or region. You can even send usage alerts after each data session to notify subscribers of their spending.		
	Examples:		
	<ul> <li>U.S., Canada, and Mexico - \$0.05 per MB</li> <li>Spain, France, Germany, and Italy - \$0.12 per MB</li> </ul>		







An Alepo Solution Brief

SUBSCRIBER- DEFINED ROAMING BANDWIDTH SPEEDS	In the My Mobile Buddy mobile app, subscribers may elect to manage their data roaming pass by selecting their own QoS / bandwidth speed for roaming scenarios. This can help subscribers to budget their data usage while traveling.	
	Use Case Examples:	
	<ul> <li>My normal speed: 6 Mbps, My roaming speed: 3 Mbps</li> <li>After 80% pass usage, I set my roaming speed to 1 Mbps</li> </ul>	
USAGE ALERTS & NOTIFICATIONS TO AVOID BILL SHOCK	Putting fears of bill shock and high data roaming fees to rest, usage alerts and e-mail notifications give travelers confidence and control over their data roaming experience. In the Alepo My Mobile Buddy mobile app, subscribers can self-subscribe to usage alerts and e-mail notifications.	
	Use Case Examples:	
	<ul> <li>Notify me when I have consumed 70% of my data pass.</li> <li>Notify me again when I have consumed 90%.</li> <li>Notify me when 100 MB remains on my data pass.</li> </ul>	
COUNTRY RATES & OFFERS BASED ON WHOLESALE COSTS	With country- and region-specific data roaming rates and offers, you can price your offers according to varying wholesale data costs. In countries with low-cost wholesale data or where you have strong roaming agreements, you can offer free, unlimited, or low-cost data roaming services. Alternatively, in locations with relatively expensive wholesale data, you may elect to set more expensive rates or offer single-app data roaming passes. In any case, the flexibility of the Alepo's solution allows you manage your data roaming revenues intelligently.	
TIERED SERVICES FOR DATA ROAMING	Create tiered data roaming offers that cater to all customer segments, from the budget backpacker to the luxury jetsetter. Tiered services enable you to optimize ARPU across customer segments.	





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	<ul> <li>Use Case Examples:</li> <li>256 Kbps Unlimited Data Roaming - \$12.99 for 7 Days</li> <li>3 Mbps / 5 GB Data Roaming - \$24.99 for 7 Days</li> </ul>
DISABLE DEVICE TETHERING WHEN ROAMING	When subscribers are traveling with family or multiple devices, they may desire the ability to use their smartphone as a WiFi hotspot in order to tether multiple devices. With Alepo, you can disable this ability while roaming and / or offer it as a premium service.
	<ul> <li>Use Case Examples:</li> <li>2 GB Data Roaming Pass - \$16.99 for 7 Days</li> <li>2 GB Data Roaming Pass + Mobile Hotspot - \$30 / 7 Days</li> </ul>
TABLET-ONLY DATA ROAMING PASS	Create device-specific data roaming offers for tablets and other non-smartphone / SIM-enabled devices.
	<ul> <li>Use Case Examples:</li> <li>10 GB iPad Data Roaming Pass – \$45 for 30 Days</li> </ul>

