# PaygOps
Last-Mile Management System

What are the Telco integrations?

What are the options?

General Description

The "Telco integration" is the general term by which we describe the way by which the PAYG platform is able to send and receive SMS and receive mobile payment. There are two sub parts, the "SMS integration" and the "Mobile Money integration".

The schema below describes the overall options, a table further below discusses the details of the 3 options available. For receiving payments and SMS, all options can be active at once, while for sending SMS only one of the option can be selected.

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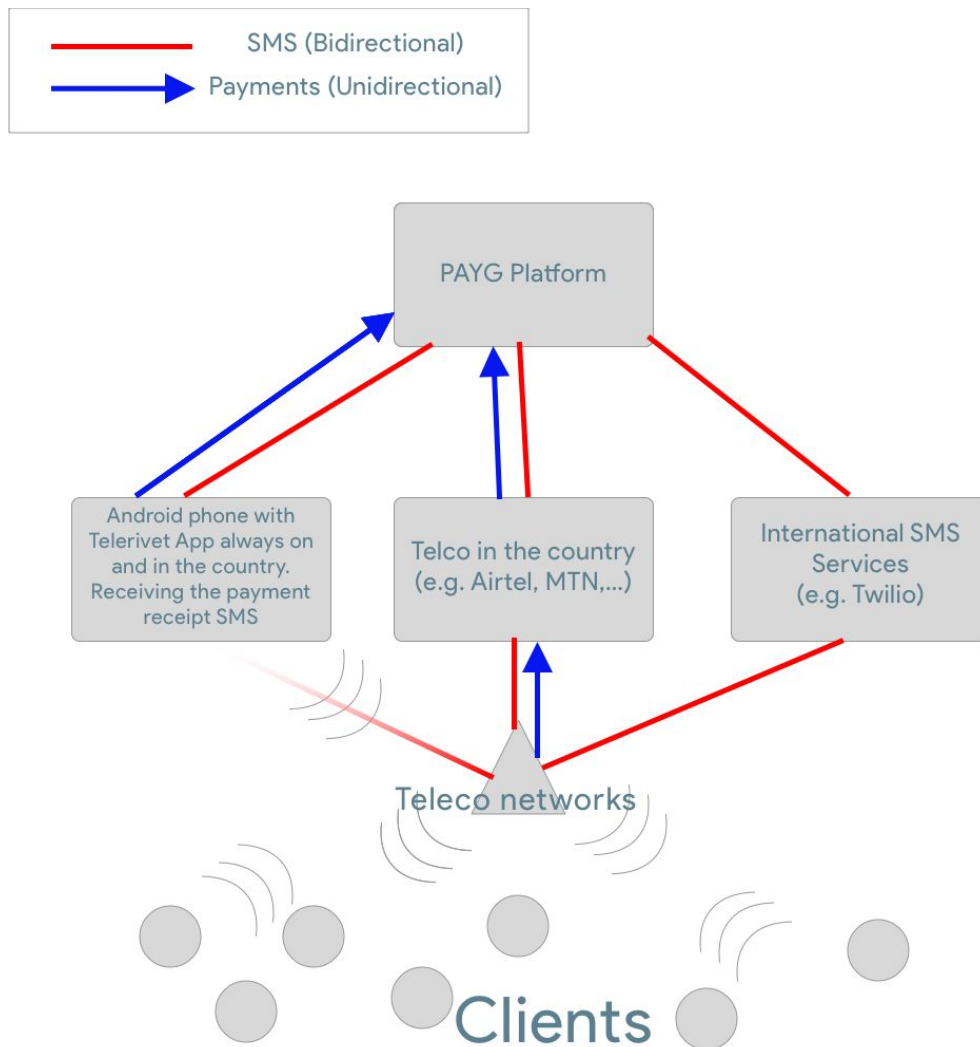
"Quick Mobile Money integration" (also called "Telerivet")

What is it: With this option, we use a mobile phone, running a specific app called Telerivet. The phone is always ON and always has credit and is in the same country as the clients.

How it works: With this option, when the phone receives an SMS, the app on the phone will send the SMS data to the platform via internet (WiFi or 3G/4G). When the platform wants to send a message, the app on the phone will regularly check on the platform for new messages to be sent and send them through the mobile network. If the SIM card in the phone has a mobile money account associated to it, then when a payment is received by the account, the phone will receive an SMS with a payment receipt containing the payment information. If setup properly, the app will recognized the payment receipt from that particular telco and send the payment data to the platform.

Pros: Very quick to deploy, usually cheap, local phone number

Cons: Limited by the quality of the network where the phone is located and by the speed of the phone. We recommend to not use this option for more than 2000 SMS sent per month although it can support a bit more than that (up to ~250/day). Some telcos might limit the total number of SMS that you can send per day or month or forbid the sending of SMS on a scale that is too large.

"Local Telco integration"

What is it: With this option, the "distributor" will get an agreement with a local Telco (for example Airtel, MTN, Vodacom, etc.) and get one contract for having a "Business Mobile Money Account" as well as a "Business SMS Account" (sometimes called "Bulk SMS", "XML2SMS", or other commercial name). In some cases several contracts are needed for receiving payment, receiving SMS and sending SMS. The local Telco will provide an API documentation describing how to receive payments and how to send and receive SMS via the Internet. In some cases, there are several separate API documentation for those services.

How it works: An integration services company (either Solaris or an external integration company) will make an application that connects to the local Telco via the internet following the

documentation provided by the local Telco and that also connects to a specific instance of the Solaris Platform. When a payment or SMS is received by the Telco, it will automatically send it to this application that will forward it to the Solaris platform. When the Solaris platform wants to send an SMS it will send it to that application that will then forward it to the Telco.

Pros: Usually cheap, local phone number

Cons: Requires a lengthy contracting process with the telco, requires a long and complex integration process

"International SMS Service"

What is it: With this option, the "distributor" creates an account with an international SMS service (e.g. Twilio or MessageBird). It creates a phone number (usually in the US or Europe) with that provider and signs up a to an SMS plan. The international SMS services has a public API for using their services.

How it works: An integration services company (either Solaris or an external integration company) will make an application that connects to the service provider (if not already integrated) to the Solaris platform. When an SMS is received by service, it will automatically send it to this application that will forward it to the Solaris platform. When the Solaris platform wants to send an SMS it will send it to that application that will then forward it to the service.

Pros: Quick to deploy (if it is a common service)

Cons: Only work for SMS (not payment), high cost per SMS (e.g. 0.065$/SMS in Uganda)