



Mobile Money API Specification 1.2.0 Introduction

Document Summary

Official Document Number, Document Title and Version Number	Mobile Money API Specification 1.2.0-beta - Introduction
Official Document Type	Non-binding Permanent Reference Document
Security Classification	Non-confidential

© GSMA © 2021. The GSM Association (“Association”) makes no representation, warranty or undertaking (express or implied) with respect to and does not accept any responsibility for, and disclaims liability for the accuracy or completeness or timeliness of the information contained in this document. The information contained in this document may be subject to change without prior notice. This document has been classified according to the GSMA Document Confidentiality Policy. GSMA meetings are conducted in full compliance with the GSMA Antitrust Policy.

Document History

Document Version	API Version	Date	Brief Description of Change	Editor / Company
0.1	1.2.0-beta	Aug 2020	<ul style="list-style-type: none">Initial draft of document	GSMA
0.2	1.2.0-beta	Nov 2020	<ul style="list-style-type: none">Added registration of mobile money customers (RFC 2020-8)	GSMA

Other Information

Type	Description
Document Owner	Mobile Money API Working Group
Editor / Company	GSMA

Table of Contents

1	Introduction	4
2	API Quick Start Guide	5
3	Definitions of Terms	6

1 Introduction

The Mobile Money API is an initiative developed through collaboration between the mobile money industry and the GSMA, and provides a harmonized API Specification for mobile money use cases which is both easy to use and secure. Using best practices from the technology industry in API design and security, it aims to simplify and accelerate integration with mobile money platforms and stimulate the growth of the ecosystem.

The key design principles of the API include the use of REST architectural principles, the use of the JSON data format, and the provision of a set of well-defined objects that are abstracted from the underlying object representations held in different mobile money systems. The API also defines a standard set of enumerations, uses ISO international standards for enumerations such as currency and country codes, and provides support for supplementary properties specific to individual mobile money providers.

The Mobile Money Developer Portal (<https://developer.mobilemoneyapi.io>) provides access to the Mobile Money API Specification and a full suite of documentation and tools to support developers implementing the specification, whether they are Mobile Money Providers or Service Providers building solutions for the mobile money ecosystem.

The API specification comprises of the following documentation set:

- API Fundamentals and General Behaviour, including:
 - API and property naming standards
 - Common header definitions
 - API versioning guidelines
 - Standard API sequence flows
 - API error handling
- Master API Specification containing a detailed definition of each Mobile Money API, including API request and response property definitions
- Use Case specifications. Provides specific guidance for the following use cases
 - Bill Payments
 - Merchant Payments
 - Person to Person Transfers
 - International Transfers
 - Disbursements
 - Recurring Payments
 - Account Linking
 - Agent Services - Cash-in / Cash-out and Customer Registration

For further reading, please refer to the following documents:

- **Mobile Money API Fundamentals.** Specifies the design principles, behaviours, and error handling of the Mobile Money API.
- **Mobile Money API Master Specification.** Documents the Mobile Money API endpoints, fields, objects, and enumerations.

2 API Quick Start Guide

I am a...	I want to...	Use Case Specification
Service Provider	Accept bill payments	Mobile Money API Specification 1.2.0-beta - Bill Payments
	Set-up a mandate to debit a mobile money customer	Mobile Money API Specification 1.2.0-beta - Recurring Payments
Merchant	Accept mobile money payments	Mobile Money API Specification 1.2.0-beta - Merchant Payments
Financial Institution (Bank or MFI)	Allow person to person transfers to and from mobile money	Mobile Money API Specification 1.2.0-beta - Person to Person Transfers
	Allow customers to link their bank account to their mobile money account.	Mobile Money API Specification 1.2.0-beta- Account Linking
An NGO	Disburse aid to mobile money customers	Mobile Money API Specification 1.2.0-beta - Disbursements
An Employer	Pay salaries by mobile money	Mobile Money API Specification 1.2.0-beta - Disbursements
A Government Agency	Accept payments from citizens for public services	Mobile Money API Specification 1.2.0-beta - Disbursements
	Disburse social payments to citizens	
International Financial Service Provider	Transfer international remittances to and from mobile money customers	Mobile Money API Specification 1.2.0-beta - International Transfers
Mobile Money Agent	Allow mobile money customers to deposit and withdraw from their accounts	Mobile Money API Specification 1.2.0-beta – Agent Cash-in - Cash-out and Customer Account Services
	Register new mobile money customers	

3 Definitions of Terms

These terms are used across the Mobile Money API documentation set.

Term	Description
ATM	Automated Teller Machine. Enables customer to be able to perform financial transactions without the need for a human cashier. For mobile money, the ATM machine can be considered as an automated agent, allowing withdrawals and some case deposits from and to the customer's wallet.
Agent	A person or business that is contracted to facilitate transactions for users. The most important of these are cash-in and cash-out (i.e. loading value into the mobile money system, and then converting it back to cash again); in many instances, agents register new customers too.
API Service	An API Service comprises of a URI which when combined with a HTTP method (GET, PATCH, POST) enables a specified operation to be conducted on a specific resource or set of resources.
Application Programming Interfaces (APIs)	In computer programming, an application programming interface (API) is a set of routines, protocols, and tools for building software applications. An API expresses a software component in terms of its operations, inputs, outputs, and underlying types.
Authentication	Confirms the identity of the entity that is requesting the service by verifying supplied credential(s). In this document, the requesting entity is typically referred to as the initiator or sender.
Authorisation	Authorisation provides an authenticated identity with access to the system resources/services to which they are entitled. In the context of this document, the requesting entity (initiator) is provided with a defined set of services and functions that they can perform over API.
Business	Describes an entity such as a public limited or limited company that uses mobile money as a service. This includes taking bill payments, making bill payments, and disbursing salaries.
Client	Describes the calling system/party that initiates and interacts with the API service. The Client may or may not be the debit or credit party.
FSP	Financial Service Provider, offering financial services including international transfers, mobile money accounts, bank accounts and microfinance saving accounts.
HTTP	Acronym for Hyper Text Transfer Protocol. HTTP is the foundation of data communication for the World Wide Web. HTTP is the protocol to exchange or transfer hypertext.
ISO	International Organisation for Standardisation. A number of ISO standards are used with the Mobile Money API.
ITU	International Telecommunications Agency. ITU MSISDN format standards have been adopted for the mobile money API.

JSON	Acronym for JavaScript Object Notation. Used to transmit data objects containing attribute/value pairs. One of two protocols (the other being XML) considered as the basis for a Data Exchange format for mobile money API harmonisation.
Merchant	A retail merchant that accepts e-Money from mobile money customers in exchange for goods and/or services.
MMP	Mobile Money Provider. A type of financial service provider that offers mobile money accounts and services.
MSISDN	A number uniquely identifying a subscription in a GSM or a UMTS mobile network. Analogous with a mobile phone number.
Object	An object holds a set of properties. Objects can be combined or used in isolation to provide a representation of a resource.
Organisation	Describes a non-business entity such as a charity or government department that uses mobile money as a service. This includes taking bill payments, making bill payments, and disbursing salaries.
Provider	Hosts the Mobile Money API services (or subset of).
Resource	A resource is the target for an API operation as identified in the API request. Resources are conceptually different from the representations that are returned to the client.
REST-based API	<p>In computing, Representational State Transfer (REST) is the software architectural style adopted by many organisations that offer APIs. REST stipulates that interacting systems exhibit the following characteristics:</p> <ul style="list-style-type: none"> • Client-Server. Responsibilities between clients and servers are explicitly defined. • Stateless. No context is stored between client and server during communication. • Cacheable. As on the World Wide Web, clients and intermediaries can cache responses. • Layered System. A client cannot ordinarily tell whether it is connected directly to the end server, or to an intermediary along the way. • Uniform Interface. A uniform interface simplifies and decouples the architecture, which enables each part to evolve independently.
URI	Acronym for Uniform Resource Identifier. The URI is a string of characters used to identify a resource (such as an account, for example). In APIs a URI is represented in the form of a URL which is generally used to identify the service to invoke.
UUID	Universally Unique Identifier. UUIDs are usually stored as 128-bit values and are used for as the datatype for correlation IDs in the mobile money API.
Wallet	Term used in this document to describe the store of value that identities (customers, agents, merchants, and businesses) use to store e-Money.

This document is produced by the GSMA with input from the GSMA Mobile Money API Working Group. It is our intention to provide a quality product for your use. If you find any errors or omissions, please contact us with your comments. You may notify us at support.mmapl@gsmal.com.