

Detailed Description: Domestic Mobile Money Interoperability from Airtel Tanzania and Mahindra Comviva

>> The challenge

21 Million unbanked and under-banked Tanzanians (67% adult population of the country) use mobile money services - Airtel Money, Tigo Pesa and Vodacom M-Pesa for meet their financial needs. Mobile money services enable Tanzanians to transfer money to other users within Tanzania (P2P transfer), pay bills, pay merchants, pay taxes to government, get loans, receive salary, financial aid and much more. Domestic remittance or P2P money transfer is the most prominent use case, where an Airtel Money customer can send money to mobile money account of another Airtel Money Customer (on-net transfers). Same services are provided by other operators Tigo Pesa and Vodacom M-Pesa. Mobile money transfers fulfill financial needs of many segments by allowing them to transfer money instantly, securely and conveniently through mobile phone by paying a small service charge – Migrant worker in city send money to family in rural area, parents send money to children studying in other cities, friends and family send money to each other in emergencies, customers pay to merchants for purchase, business men pays to his vendor and many more. Despite wide use of P2P money transfer, these mobile money services were closed-loop few years ago, hence Airtel Money user could not transfer money to Tigo Pesa/M-Pesa user and vice versa, restricting the growth of mobile money and inconveniencing customers.

As a work around, operators introduced off-net transactions. Off-net transactions are used by mobile money providers to send money to consumers on other mobile networks. In this case, when sender sends the money to a recipient on another network, the recipient receives a code via an SMS. Recipient has to show the code to an agent of sender's mobile money service to get the remittance in cash. Off-net transactions are 'wallet to cash' or 'digital to cash' transactions, where recipients have to cash-out full money from agent in 7 days otherwise the money is reverted to sender. In case the recipient wants to use the remittance received in digital format to pay bills or transfer money to someone else, then she has to go to mobile money agent (belonging to her mobile money provider) and do a cash-in into her mobile money wallet. Thus there in an inconvenient process where recipient has to cash-out at senders agent and then cash-in at its own agent. Moreover the cost of off-net transactions are very high for consumers compared to on-net transfers. Off-net transfers are also disadvantageous to operators as the sending operators has pay commission to agent for cash-out. Overall, off-net transactions are inconvenient and expensive for consumers, cost-incentive for operators and defeats vision of cash-light economy.

Airtel Money is powered by Mahindra Comviva's mobile money platform mobiquity Money.

>> Solution: Interoperability Service

To overcome disadvantages of closed-loop nature of mobile money and off-net transactions, Airtel Money interconnected with Tigo Pesa and M-Pesa in Feb 2016 to launch Africa's first domestic

interoperable mobile money service. Today, customers of three services can directly transfer money from one wallet to another that is an Airtel Money customer can transfer money to mobile money account of Tigo Pesa and M-Pesa customer and vice versa. Technical partner Comviva helped Airtel Money to enable interoperability by establishing secure technical integration of Airtel Money with Tigo Pesa and M-Pesa, and aligned customer service, settlement and compliance processes between the three organizations.

Consumer benefits:

- Convenient: Sending/receiving money to/from Tigo Pesa and M-Pesa is now as simple as money transfer with Airtel Money user (one nation, unified service).
- Single cost: Transfer cost to Tigo Pesa, M-Pesa and Airtel Money is now same.
- Cost effective: To transfer TZS 40,000, customer pays TZS 400 in interoperable transaction and TZS 2,650 in off-net transaction. Thus interoperable transaction is 500% cheaper than off-net transaction
- Flexible: In off-net transaction customer has to rush to agent to cash-out within 7 days, otherwise the money is reverted to sender. In interoperable transaction funds remain digital. Customer receives money in his mobile money wallet and can store money in wallet as long as he wants. He can either cash-out at agent or use money in digital form to pay bills/merchants or transfer to others.

Operator benefits:

- Cost saving: In off-net transaction sending operator pays commission to agent for cash-out. In interoperable transaction no cash-out is required, hence operator saves on commission. For receiving operator, incoming remittance is in digital format, hence operators saves on cash-in commission.
- Network effect: Interoperability increases the reach of Airtel Money user from 6 Million Airtel Money users to 21Mn mobile money users (Tigo Pesa and M-Pesa) in Tanzania
- More usage: Interoperability increases transaction on mobile money service
- Customer retention: Interoperability creates level playing field for all operators and prevents customers from drifting to just one major service.
- Improves efficiency: Interoperability improves mobile money platform efficiency by reducing off-net transactions, digital to cash conversion and money reverts.

Achieving government's vision:

- Interoperable transaction is also good for government's vision of cash-light economy as it allows money to remain in a digital form.

>> The key differentiator and USP of the service

The unique technical approach: To enable interoperability a costly switching infrastructure and team to manage the switch is required. No party was ready for this, hence a unique solution was devised where

each operator has a bilateral agreement with other operator. Changes were made in the mobile money platform software of the operators (Airtel Money mobile money software is provided by Mahindra Comviva). Technically, in Airtel Money's platform a master account/wallet for Tigo Pesa and M-Pesa was created. Similarly in Tigo Pesa platform a master account for Airtel Money and M-pesa is created. When a customer sends money from Airtel Money to Tigo Pesa customer then following happens:

- Transactions in Airtel Money platform (completing credit and debit)
 - Airtel Money customer's (sender's) account is debited
 - Tigo Pesa's master account in Airtel Money platform is credited
- Transactions in Tigo Pesa platform (completing credit and debit)
 - Airtel Money's master account in Tigo Pesa platform is debited
 - Tigo Pesa customer's (recipient's) account is credited
- Later the balance of master account in both platforms is analyzed and based on which settlement between Airtel and Tigo is made

This simple but innovative and efficient approach helped to launch interoperability rapidly at low cost compared to using switching infrastructure.

>> Synergy and collaborations between competitions

To provide a superior consumer experience, Airtel Money collaborated with Tigo Pesa and M-Pesa to launch Africa's first mobile money transfer interoperability service creating a multi-level synergy:

- **Synergy in domestic remittance:** For the first time in Africa 3 competing mobile money services came together proactively (without any government mandate) to launch interoperable mobile money service. Interoperability service enabled direct money transfer between mobile money accounts of Airtel Money, Tigo Pesa and M-Pesa benefiting 21 million unbanked/under-banked Tanzanians who use mobile money. This synergy simplifies cross-network remittances, preventing customer from reverting to cash and displaying multi-SIM behavior. Mobile money digitizing cash in remittance ecosystem and interoperability retains it in digital format.
- **Synergy in user experience:** Across operators, experience of sending money to users of own network and other networks is similar (on both USSD and app). This helped in faster adoption of interoperability service and accelerated the growth of mobile money remittance transactions exponentially.
- **Synergy in pricing:** Customer pays same service charge while transferring to Airtel money user or to competing M-Pesa/Tigo Pesa user. All operators adopted this pricing strategy to ensure interoperability is readily adopted without any pricing barrier. Moreover, interoperable transactions are priced 500% cheaper than off-net transactions benefiting consumers.
- **Synergy in marketing:** To spread awareness and promote interoperability operators launched joint campaign 'Taifa Moja' meaning 'One Nation'
- **Synergy in efficiency:** In off-net transactions, recipient gets a code, which he shows to sending operator's agent to get cash remittance. If recipient does not cash-out in 7 days, money is reverted to sender. Sending operator pays commission to agent for cash-out. Interoperability improves platform efficiency by reducing off-net transactions, digital to cash conversion and money reverts. It brings savings by reducing cash-out commission. Moreover, recipient operator

gets digital money directly into system, bringing cash-in commission savings. A win-win for both sending and receiving operator.

>> Phenomenal uptake of interoperability at Airtel Money:

- Over 2 million interoperable mobile money transfers (sending and receiving) are processed by Airtel Money every month
- Before interoperability, out of total P2P send transactions, 11% were off-net transfers and 89% were on-net transfers. Now off-net transactions are just 4%, 48% are interoperable transactions (to Tigo Pesa and M-Pesa) and remaining 48% are on-net transactions to Airtel Money users.
- Thanks to interoperability, the Airtel Money's P2P send transactions have increased by 104% in just 2 years.
- After success in Tanzania, we deployed interoperability in Madagascar

>> Enhancing user experience

Interoperability enhances mobile money users experience in many ways:

- **Easy to use:** Sending money to customers on other networks is as simple as sending money to customers on own network.
- **Quick:** Money is instantly received by recipient in his mobile money account and he can use it in digital format immediately to pay bills, pay merchant or transfer to other
- **Transparent and easy to understand pricing:** Customer pays same service charge while transferring to Airtel money user or to competing M-Pesa/Tigo Pesa user.
- **Cheaper:** interoperable transfers are 500% cheaper than off-net transfers
- **Peace of mind:** Unlike off-net transfers, there is no rush to cash-out in 7 days. Recipient can store money digitally as long as they want.
- **Impacts consumer-behaviour:** Interoperability simplifies cross-network remittances, preventing customer from reverting to cash and displaying multi-SIM behavior