The Battle of Mobile Payment Schemes

Dr. Fred Mtenzi & MacLean Geofrey

The availability and affordability of mobile phones has provided one of the most disruptive forces that the payments industry has seen in Tanzania. Mobile phones are unleashing profound changes and innovation in the development of simple, personal and always available mobile payment schemes. The advent of mobile payment schemes has led to the emergence of new business models and players, for example, players such as mobile payment providers and aggregators. It is no wonder that consumers throughout Tanzania want to use mobile payment schemes because they are convenient, personal, on demand and are seamlessly integrated into everyday life.

The majority of Tanzanians are and will continue using cash as a way of paying for services for a foreseeable future. However, mobile payment schemes are now feasible ways of reducing the amount of cash which people and the society as a whole carry for paying for services. This is clearly demonstrated by the success of first generation mobile payment schemes such as M-Pesa, TigoPesa, Airtel Money etc. The second generation is a group of mobile payment aggregators consisting of the likes of DataVision International, Selcom Wireless, Maxcom Africa. For example, DataVision International is now offering customised services such as Ada-Lipa. The availability of all these services is providing a fertile ground for further innovation in mobile payment schemes which can be extended using the same aggregation platform; the possibilities are surely endless!

It is interesting and encouraging to witness the emergence of home grown talent leading the innovation in developing mobile payment solutions that address Tanzania needs. The trajectory taken in developing these solutions provides a space to learn and adapt similar initiatives undertaken in other parts of the world. The main reason why these initiatives have not found their way in the new solutions is that they are very expensive to deploy. Examples of mobile solutions being deployed and used in other parts of the world include: Apple Pay (http://www.apple.com/apple-pay/), Google Wallet (https://www.google.com/wallet/), Samsung Pay (http://www.samsung.com/ie/samsung-pay/), Paypal (www.paypal.com), and CurrentC (https://www.currentc.com/).

Security of mobile payment transactions has been one of the major concerns to providers and consumers alike. A lot of efforts have been made in recognition of the security problem at different levels from legislation, standards up to consumers. One of the measures we have been looking/implementing recently at DataVision is to offer strong post-transaction customer experiences that are common place today with traditional bank accounts. For example, mobile payments users can be given assurances that fraud would be minimized, by being contacted when there is suspicious activity on an accounts, and receiving immediate notification when a payment has been initiated and executed among other services. The link between the user and the account activity via messaging offers a reliable awareness solution of all the actions that can happen via an unauthorized access. This continuous monitoring of customers mobile payment account offers a rich source of data for security auditing and provides a reliable baseline for forensic analysis.

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The number of Tanzanians who use mobile payment services is large and will keep growing in the near future. With the mobile devices becoming more normal tools in an average Tanzanian life, the pace is not going to slow down offering huge opportunity to other technology players. It may help further, if consumers who use mobile payment services will be offered discount pricing and/or coupons based on their past usage behaviours. Other offers may include points-based rewards combined with provider's offers, product and fee/service relationship bundling, and tapping into a broader ecosystem of providers to bring customers additional and advice driven services. **To achieve this, service provider will have to employ big data analytics techniques to provide insight on their consumers' usage patterns**. This understanding will provide an opportunity for mobile payments providers to redefine how they can sustainably build customer loyalty. This is a foundation of consumer trust gives providers a clear advantage here because data insight is indispensable for meaningful payments related loyalty and rewards programs.

There is a number of communication technologies employed in mobile payment schemes. These technologies include SMS/Unstructured Supplementary Service Data (USSD) due to its compatibility with any mobile phone and ease of implementation, used mainly in developing countries.

Other communication technologies are near field communication (NFC), Quick Response (QR) codes, Bluetooth Low Energy (BLE), sound wave and Magnetic Secure Transmission (MST).

The mobile payment if used innovatively will guarantee the success of e-government in Tanzania providing another route for government collections such as Tax, Penalty payments etc. The future of mobile payment schemes is littered with new technologies. Some of these hold great promise for example, wearable technologies allow to make payments via an electronic device worn on your body such as a watch. Peer-to-Peer Payments (P2P) consumers can pay people directly via electronic channels, including social media. Virtual currencies allow users to transact with currency based on cryptographic algorithms. Cloud based mobile payment might lead to the development of mobile payment systems using a cloud based architecture.

When it comes to mobile payment schemes today, the consumer rules, which is very different from traditional banking modules. These schemes can respond very quickly to changing customer demands and are scalable. They leverage on technology making them cost effective and able to be rolled to remote areas. In short they are simple, personal and available everywhere.

We at DataVision have implemented a secure and reliable mobile payment information aggregation platform called M Lipa. With this aggregation platform, our partners and clients can use it to receive and disburse payments to different Mobile Money Platforms such as Tigo Pesa, Vodacom M Pesa, Airtel Money and the likes. M Lipa provides everything under one roof making it easy for other players to hook on the same platform and make the most of the technology.

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One of the prominent services that use the M Lipa technology is AdaLipa – A solution designed to assist academic institutions to collect fee payments via mobile money. The service is used by a substantial number of schools allowing parents to pay school fees for their children at the comfort of their sofa. Conventional approaches to fee payment involved a lot of movement and delays but with AdaLipa, DataVision has changed the norms altogether providing freedom to both the academic institution and the parents.

AdaLipa offers a full control of the payments received by providing the academic institution a dedicated interface which shows all the payments and the amounts reducing the paper work and cumbersome reconciliation procedures involved in the conventional methods.

In the following articles we will provide detailed information on other aspects of available mobile payment schemes mentioned in this report. While this series of reports may not offer all the technological details, we at DataVision are always happy to sit down with other stakeholders and assist them in leveraging of our technologies. Our design and development philosophy has always been to design products that are secure and scalable, and M-Lipa is one of them.

ABOUT DATAVISION INTERNATIONAL

DataVision International founded on 27th October 1998 with its head offices in Dar es Salaam is one of the pioneering companies in the Tanzanian ICT field. Ever since the launch, DataVision has being on the leading edge of introducing innovative solutions in the areas of ICT Consultancy, Research and Statistics and Corporate Performance Management having an in-depth experience in working with local and international clients from a diverse of verticals.

Over 15 years, we have assisted different companies reach their potential in a cost effective manner providing solutions which are aligned to their business strategic goals. DataVision International worked with companies from a range of industries with very unique requirements of diverse complexities and we have managed to meet the exact expectations on all the projects.