

W3C Workshop

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Position Paper: Mahindra Comviva

Author: Vidya Chandy, VP, Product Management

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Introduction to Mahindra Comviva

Mahindra Comviva is the global leader in providing mobility solutions. It's a subsidiary of Tech Mahindra and a part of the USD 16.7 billion Mahindra Group. With an extensive portfolio spanning mobile finance, content, infotainment, messaging and mobile data solutions, Mahindra Comviva enables service providers to enhance customer experience, rationalize costs and accelerate revenue growth. Its mobility solutions are deployed by over 130 mobile service providers and financial institutions in over 90 countries, transforming the lives of over a billion people across the globe.

Mobile Financial Services business unit

Mahindra Comviva's Mobile Financial Services (MFS) business unit is a recognized leader with unrivalled experience in the mobile financial technology space, enabling service providers including Mobile Network Operators (MNOs) and financial institutions, globally, to meet the diverse needs of customers in both developed and emerging markets. Its suite of products encompass solutions ranging from digital wallets, mobile money, mobile banking, mobile POS, international remittance and electronic prepaid recharge.

Mahindra Comviva is among the top 3 mobile financial technology providers, with over 120 deployments of PreTUPS™ and mobiquity®, processing a total of \$20+ B payment flows, handling millions of transactions every day and empowering 700+ million consumers globally (across mobile money and subscriber prepaid recharge).

MFS Product Suite:

- Mahindra Comviva's award-winning **mobiquity® money** mobile financial solution embraces the mobile phone as a convenient, cash-free and card-free financial transaction medium, delivering a range of financial and payment services including mobile money, branchless banking, mobile banking and mobile payments, via a single, secure platform. **mobiquity® money** is widely deployed and integrated around the world. It helps service providers offer simpler payment services through a range of services and functionalities that help current and potential customers move up the financial ladder. It is a scalable, flexible, and feature-rich solution that can seamlessly integrate with third party systems fostering open eco-systems and comes with a service assurance.
- **mobiquity® wallet** from Mahindra Comviva is a secure, easy to use and feature-rich digital wallet. To the consumer, it offers a personalized experience, value-added services and multiple payment methods in their purchase journey. To the wallet provider and their partners, it offers a robust and flexible platform combining innovations in payments with attention to human factor, behavior-centered experience design and cutting edge digital technology. It aims to deliver a connected experience to the consumer and is designed to support a large and complex ecosystem. mWallet helps banks, telecom operators & retailers to quickly develop an ecosystem and increase revenues from existing customers and attract new ones. This offers a safe, end-to-end, feature-rich payment solution that supports different technology for different touch points, secure remote & proximity payments, and enhances user experience through geo-location services and minimal data entry to complete a transaction. It helps realize the full potential in a customer's path to purchase from discovery to inducements & loyalty.

- mobiquity® payPLUS** is an integrated payment solution that enables businesses, including small & medium businesses and service professionals, to utilize their mobile phone as a Point-of-Sale (POS) device and drive transaction volumes by letting consumers use card based payment instruments. Replete with a range of payment related services, mobiquity payPLUS works as a one-stop-shop for all requirements of businesses. payPLUS not only equips businesses with an app and a mini card reader to accept secure card payments but also harnesses the power of cloud technology to extend a range of compelling services to support evolving business requirements. With built-in cash register capabilities that can be customized as per the business needs, mobiquity payPLUS fulfills the need for a quick & reliable user interface that supports and simplifies POS, billing and reconciliation related activities. The solution also enables businesses to leverage location based services, to deliver promotional campaigns with offers and discounts, to customers, based on their location / proximity from the business store.
- mobiquity® banking** delivers solutions that are true to both the traditional banking and the fast-evolving mobile segment. It helps banks offer customer-centric mobile banking services through a new channel by enabling different benefits for different customer segments, thereby retaining existing customers and increasing revenues through a three layer security which delivers an experience that is multi-screen, multi-device, and multi-bearer with ready interfaces for faster integration.
- PreTUPS™** is Mahindra Comviva's widely deployed and highly scalable prepaid recharge solution that supports prepaid business requirements of service providers across industries like Telecom, Broadband, and DTH etc. The platform facilitates the prepaid recharge distribution and enables consumers to, either directly top-up their prepaid account through various channels including the web, client app, kiosks, ATMs, STK and USSD, or recharge across the counter through merchants.

MFS Statistics

mobiquity®

Powers 2 of the top 5 and 5 of the top 10 mobile money deployments in the world

Experience in over 500 unique integrations across all our deployments

Scaled from less than 50K transactions/month to 40 million/month in a span of 2 years

Replaced mPesa in two markets

Handling transactions of over \$200 mn per month for an operator in Africa in a single country

Managing over 35 Mn transactions per month on a single platform

1st international remittance service in North Africa, South Asia and Latin America

PreTUPS™

9% of world population's prepaid subscription is recharged using PreTUPS™*

Handled transactions over 214.97 million in a single deployment

Supported over 100Mn subscriber recharges on a single instance

13 million transactions/day for a South Asian operator

1 Position Statement

Comviva's suite of products range across consumer segments and varying ways to pay: stored value account (**mobiquity® money**), credit/debit cards (**mobiquity® wallet, mobiquity® payPLUS**), bank account (**mobiquity® wallet**) as well as operator billing (**PreTUPS**). Our position will accordingly be given in the context of each of these products.

Mobile Money for the unbanked/under-banked

The primary way to pay using a mobile money account is via the mobile handset however there is **growing interest** amongst payment providers (mostly telecom operators) in tapping the potential opportunity of online payments.

All our major operator customers have begun to develop this or show interest in using mobile money as a means to pay for online purchases. They are currently at **varying levels of maturity** in terms of rolling this out directly (though there are a few payment processors who already support this). Comviva will be facilitating that via a **public SDK offering** in order to speed innovation around payment acceptance not only for e-Commerce but also for a range of other services/goods beyond retail eg: insurance, agri-business, health, lifestyle, cash management, etc.

The intent is also to extend this **beyond web to mobile-based purchases via app, SMS, STK, IVR or USSD** to cater to all consumer segments and varying levels of technology-comfort and literacy.

Without standardization, merchants and processors will find it difficult to integrate across operators to provide a seamless and reliable payment checkout experience to their customers. The approach should be to provide a means to empower processors and merchants to **offer alternative payment methods using open SDK and systems rather than be limited to operators' proprietary methods**. From a business perspective, exclusivity could also be a deterrent to growth and it remains to be seen if mobile money issuers (largely telecom operators) will ask for this in monopolistic markets or otherwise.

It is also our view that an **independent certification process via an autonomous body** is required that sets security and fraud-control guidelines for handling of mobile money account information and secure transmission of sensitive information. Such an approach will build trust and reduce the total cost of payment acceptance for mobile money as the avenues and volumes of payments increase further.

There is **little standardisation governing mobile money at a global or even regional level** barring per-country regulations which vary across geographies. This adds to the complexities inherent in the mobile money industry especially with the growth and maturity the industry has seen. Currently, **mobile money services do not inter-operate with each other and in the most cases, neither with national payment systems. This is a challenge** and impacts growth, ease of remittances and merchant payments. The World Bank has pressed for telecom operators to formally interoperate and at least one regulator in Africa viz the Central Bank of Kenya has taken steps to address this in their recent payments regulation draft. When it comes, inter-operability will bring a shift in the industry as it may challenge the intrinsic value of customer loyalty that mobile money offers and may dilute operator investment in building a quality agent network that is so key to its success – the shift will be interesting to watch out for.

Based on our experience with mobile money deployments in emerging markets, regulations around mobile money, and keeping in mind the target consumer segments, we suggest some additional considerations when designing standards to cater to **mobile money acceptance for online payments**:

- Low-friction payment will be key to uptake
- Low value vs High value transactions require differentiated experience
- High prevalence of micro-payments requires differentiated experience
- Bulk disbursement from organizations to individuals (salaries, loans, insurance payouts)
- mPIN acceptance & secure transmission requires security standards and certification
- 2-factor authentication for online payment may be required for parity or due to regulations
- Category of goods/services being purchased could be restricted by the type of account held (also relevant for operator billing)
- Payment completion online versus on the mobile may both need to be supported
- Mobile use of web is a rising trend and requires due attention
- Varying access channels on the mobile need to be considered for payment completion - SMS/USSD/IVR/STK/app (via GPRS or encrypted SMS)
- Variability in network reliability may need to be factored in (handling dropped / interrupted transactions)
- Several available platforms and issuers, with no interoperability, industry standardisation or homogeneity
- Economic factors and consumer demographics: Multi-currency, Multi-language, Varying literacy levels

In Africa, **Safaricom's mPesa has recently gone live** with such an offering direct to merchants. **Payment processor 3G Direct Pay** also supports online payment via several mobile money account brands by integrating into each operator's platforms. Mobile money accounts are also being **linked with Mastercard/Visa branded virtual/physical companion cards** to leverage a wide acceptance network (both physical and online). Comviva has partnered with MasterCard to offer **mobiqity® Connect**, a hosted Service Manager, to facilitate such offerings.



Image source: www.3gdirectpay.com website

Background on merchant payments via mobile money in Africa (Data taken from our deployments in Africa)

Africa is leapfrogging the rest of the world in the use of innovative technologies such as mobile money transfers and phone banking. The lack of payment alternatives to cash in many countries has opened a unique opportunity to monetize part of these transactions with a secure, easy-to-use mobile payments service. Currently **mobiquity® money** powers financial services for 31 MNOs in 26 African countries. Given here is some background on merchant payments (physical) that we have seen in Africa.

Merchant payments and bulk payments are registering an extremely high growth rate, albeit from a small base, however the contribution to total transactions remains below 1% (reference data in tables below). One of the **primary reasons that person-to-merchant payments is not taking off** as expected is the **high-friction experience at the counter**. The typical consumer and merchant payment journey involves several steps and has become a barrier to use. Several operators are grappling with this problem and looking at innovative ways of overcoming it. **This could potentially be a problem to overcome for online payments as well.**

Surging transaction volumes

-- 320% growth in transaction volume between 2011 and 2012

	Cash-in	Cash-out	Airtime top-up	P2P transfers	Utility payments	Merchant payments	Bulk payments	Total
2011	18.3 mn	10.4 mn	37.5 mn	5.8 mn	1.5 mn	0.07 mn	0.3 mn	73.9 mn
2012	66.3 mn	59.6 mn	128.8 mn	46.5 mn	7.7 mn	0.54 mn	1.0 mn	310.5 mn
2013 (Jan-May)	48.2 mn	53.4 mn	106.6 mn	36.5 mn	6.8 mn	0.83 mn	1.8 mn	254.1 mn
Growth 2011-12	262%	473%	243%	702%	413%	671%	233%	320%

- Foundational services such as P2P transfer are on a strong growth trajectory
- Wide services availability, increasing familiarity and trust and lower transaction costs (30 to 50%) than traditional bank services are driving P2P adoption
- Merchant payments have shown strong growth but are hampered by high-friction experience

Source: Operator, Mahindra Comviva

Digital Wallets for the High-Consumption Segment

Mahindra Comviva's digital wallet product **mobiqurity® wallet** targets banks, retailers and telecom operators who wish to offer an end-to-end, safe, secure, feature-rich payment solution to retain & increase revenues from existing customers and attract new ones. Digital wallets are well placed in breaking down the barriers to card usage online as they address concerns of security and ease of checkout.

A Comscore study done jointly with Paypal in November 2011 shows that Paypal Express Checkout users were 115% more likely to complete their online purchase than those who did not use express checkout. Comscore deduces from this that other digital wallets could also help drive conversion. Essentially, MasterCard and Visa are both aiming to solve the same issue of shopping cart abandonment (which may run at 20-40% of potential transactions) and simpler checkout experiences through their digital wallet offerings Masterpass and V.me. The offerings are largely similar barring one major deviation in terms of where the responsibility for PCI compliance lies but more importantly, both offerings are open and support their competitors. Currently, card authentication is still excluded from the experience and in our view this should be linked to digital wallet authentication.

From a bank's, merchant's or partner's perspective, the decision as to which to support is not easy. Further, purely from a standardization perspective, these are interestingly not offered by a neutral body but by rival card network companies and though this is currently open, the question remains as to whether there will be some change to this in the future. On other fronts such as tokenization standards, there is active collaboration between MasterCard, Visa and American Express with the goal of enabling consumers to use digital tokens for purchases instead of having to enter their card numbers. In our view, the digital wallet and checkout experience may also benefit from a collaborative rather than competitive approach, and aligned to the progress on the tokenization front.

Superceding the card network brands, other digital wallets such as Paypal have huge early-mover advantages and MasterCard and Visa will be challenged in overcoming that. The digital wallet space becomes even more crowded and fragmented with MCX (Merchant Customer Exchange in the US) disallowing its partner members from working with third-party wallets. Apple's anticipated foray into digital payments, may result in a disintermediation of banks' brands at the least and a certain shift in the industry. Thus, there is a growing need for an industry body that is equally represented by issuers, acquirers, card networks, retailers, payment processors, security experts, digital wallet players, regulators and others in collaborating to formulate standardization and homogenization around online payment acceptance via digital wallets.