

1. Background

Payments (including electronic) are a daily necessity and the selection of a suitable payment method is dependent on local payment habits and the competitive space. There are two issues to consider in order to satisfy implementing any payment method (1) regulation (if any) and (2) commercial factors including competitiveness/costs. Further, it is well known that Governments are skeptical of new payment networks (lack of transparency and tracing of funds), existing customers need to have a reason for changing their payment habits and regulatory challenges by existing competitors ('banks'). In view of the user, the incentives for changes are lower cost, improved service and higher convenience as compared to the old means of paying (ie through a bank's network). For any Telco, it has to do with competition, profitability, risk and in pursuit of new business opportunity (beyond tunes or wallpaper) as seen by the mushrooming of payment entities/solutions such as M-Pesa (by Safaricom in Kenya), Smart Money, GCash, WIZZIT (South Africa) and even Maxis (Malaysia). Traditionally, the business model for e-payment has been to build and market the service by the Telco bearing all the risk and profitability. What if there is a different model, one that shift the cost/risk to third parties while at the same time co-operating with ones' competitors and still be rewarded with measurable profits ?

2. Current Offerings Vs our Patented Technology (US Patent 7461010) – Also see Appendix A for schematic system diagram.

Our technology cum business model is designed to promote transparency and efficiency by shifting the deployment to an "Intermediary" which clears funds between Telcos and return the Telco to a passive role of managing telecommunication instead of running a payment service. The use of this "Intermediary" could expand payment channels (by co-operating with other telcos without the need to compete in order to expand the payment services market) and improve technology uniformity to minimize confusion/difficulty for majority of users (including branding). Below is a comparative table to show the

differences between popular payment offerings and US Patent 7461010, which is designed to deliver payment services to anyone, on any network, anywhere.

	Smart Money	M-Pesa	US Patent 7461010
Country	Philippines	Kenya	TBA (To be agreed)
Technology	SIM ToolKit (STK) using SMS bearer	STK using SMS bearer	TBA (considering SMS bearer, Internet – WAP)
Development/Implementation Costs	Telco	Telco	‘Intermediary’ adhering to strict rules set by Telcos.
When started	Dec 2003	Trial 2006, launched April 2007	Conceptualized in 2000.
Target (type of service)	unbanked communities (mostly p2p)	unbanked communities (mostly p2p)	backend for Telcos to service the banked and unbanked communities in direct competition with existing payment provider (Visa/Master/AMEX etc) for commercial and payment facilitators (Zong/Paypal).
<i>Players</i>			
Who	Smart Communications as Smart Money	Safaricom, a Vodafone affiliate as M-Pesa	Smartscape.com as facilitator to engage ‘Intermediary’ which actually controls the links to various Telcos.
Which network	Smart only	Safaricom only (transfers can be sent to users of any mobile network as acknowledgement)	Any telco on any network by agreement. Amount is credited directly to user’s telco account (not merely as acknowledgment)
Who are issuers	Banco de Oro; account data is maintained by Smart on its servers	Held by M-Pesa Trust Company of which Vodafone is the trustee	Individual telcos (the balance differences are net off and maintained in a bank account by respective Telco as trustee)

What license does issuers have ? Who manages the reserve or capital requirement	Full Banking License	Unlicensed; 100% of prepaid balances are deposited as a pooled account at a bank.	No license required as the prepaid deposit in each Telco is booked as prepaid telco services. For inter-Telco transfer the amount is transferred to receiving Telco's bank account. For intra-Telco transaction the amount is booked as prepaid Telco services and hence is not a deposit.
Which payment networks are used and who manages them ?	Smart's platform for transactions between users built by GFG; Mastercard for card transactions at POS transaction. Costs of deployment bear by both.	Safaricom's proprietary platform licensed from Vodafone (UK), the later bear the cost of deployment.	Telco's network and Internet linked to 'Intermediary' wherein the technology is deployed. The Intermediary bears the costs of deployment and charges Telcos' a fee.
<i>Account Opening</i>			
Account Registration	User completes form at Smart Wireless Center and show valid ID.	At M-Pesa Agent; users provide valid ID	Over the net/web, validation by SMS and activate by Telco.
KYC: Regulatory obligations for banks to know your customer (KYC) and maintain transaction.	At registration	At agent, at time of sign-up.	Over the net by sending random cents to user's bank accounts and then user is asked to check their account and reply to Telco to confirm same cents. (optional)
Setup for mobile service	New 64K SIM	New SIM preloaded with STK application (Payment Menu)	NA – can simply send SMS with 3 data fields (Payee identifier, Amount, PIN) or a CODE which identifies the Payee and amount)

			and PIN although SIM preloaded with payment menu can help.
<i>Merchant Transaction for cash or Purchase of Goods</i>			
Device	Mobile	Mobile	Any Communicator device such as a Mobile Phone
Who initiate purchase	Merchant	Payer	Payer
Who initiate cash transaction deposit	User filled deposit slip and shows ID, merchant sends SMS request	Similar to P2P transaction; no paper receipt	Payer
Who initiate cash withdrawal	User filled withdrawal slip and shows ID	User gives mobile number to agent and shows ID, user selects withdraw cash from STK menu, enters agent number, cash value, and PIN, handset prompts user with summary of transaction, for user confirmation	Withdrawal is by Telco's user intimidating to Telco to make a transfer to designated bank account or at Telco's agent.
Transfer Fee at Merchant	1% amount through agent or free using prepaid card.	Free	TBA
Withdrawal Fee at Merchant/Agent	ATM charge PHP 3 –11	KES 25-170 depending on size	TBA
Bill Payment	YES	NA	YES
International Remittances	YES	NA	YES via partnering Telcos
Buy Air Time	Min Top up of PHP 30	Free	Free
<i>Electronic Transfer of Money (Basic P2P)</i>			
How user initiate a transaction a transaction ?	User selects transaction type from STK menu on phone; handset prompts user for necessary data (phone number, amount, PIN) and then presents transaction summary by sender before sending by SMS	Same	Same need at least 3 data (payee's number, amount and PIN). Can be sent via any device (wireless or fixed line over any network).

Who authorized the transaction and how is user authenticated ?	Smart Money and is done by checking payer data at Smart Money	Same by Safaricom	‘Intermediary’ check payer and payee data with Telcos (by confirmation) after approval by Telcos authorized transactions.
Who monitors and report suspicious transaction ?	Smart Money in delegation from the issuing Bank	Safaricom	‘Intermediary’
Fee	PHP 2.5	KES 30 (standard SMS costs)	TBA (could be merely SMS costs)
Who keeps float (funds transferred but not withdrawn)	Issuing bank keeps float	Safaricom keeps float	NA as only net balance is settled between Telcos at agreed periods.
<i>Transacting to/from nonusers and other bank accounts held by others</i>			
Can users send money to nonusers	No	Yes by cashing out at a retail outlet (either agent or such as Western Union)	Yes on any mobile network.
Can users receive money from nonusers	Yes (Domestic Padala Service); PHP 10 fee	No	Yes on any mobile network into their own Telco account.
Allow payments to third-party bank account	No	No	Yes to any bank (fee involved)

3. Our Offering-Proposition (in brief)

Our goal is to provide an alternative payment facility in competition to VISA/Master/AMEX and to target users with roaming when they are overseas or paying online with the additional feature to pay anyone, anywhere on any network which the plastics can't compete. To provide faster deployment on a global scale, will use ‘intermediaries’ to manage the payment transfers between two or more telcos. (See Appendix A) Traditionally the telcos’ would collaborate (delegated by) with a financial institution (eg Smart Money) or uses a customised system such as deployed by Vodafone (eg M-Pesa) peppered with Agents to front the deposits and withdrawal. The current methods have the drawback that the funds with not be credited into a non-user telco’s account (which means it is dependent on agent – bank).

The concept of an ‘intermediary’ is not new and in fact is already being adopted by Payforituk.com (a new payment service, started jointly by Vodafone, Orange, 3, T-Mobile etc in UK and designed to make it easy to pay for low cost services on the mobile phone) in 2006. The Payforit scheme provides a safe, trustworthy environment for mobile content purchases. Similarly, in line with our patented technology¹, using the concept of an “intermediary”, this will enable any user with a communication device to make payment to anyone on any network in any country simply by inputting the payee’s identifier/amount/PIN or a code (in lieu) to identify the payee, item and amount.

The shift to using independent ‘intermediary’ rather than the operator centric payment system (common with all existing mobile payment – M-Pesa), means accountability and transparency between TWO or more telcos effecting transfers between their respective clients. There is also less burden on the participating Telco’s on regulatory (say privacy, bank license) and security. This was clearly the message in Payforituk.com and this will be increasingly important in the future where money laundering and tax haven issues are thrown into the spotlight. For example when Vodafone’s M-Pesa tried to introduce an international payment service in India, it hit a snag for failing to be licensed (as a bank)². In our offering, traceability is not an issue as long as the funds remains in the respective telcos’ network or system since most clients would be identifiable. Using our patented system’s double book entry for inter-telcos’ transaction, there is no 'deposit' (as with banks) or ‘float’ (as with Telco) because the funds are actually 'paid' by another Telco (after netting) through the regular financial system.

4. Value Proposition.

4.1. Telco’s Cost

¹ US Patent 7461010

² <http://www.medianama.com/2009/02/223-m-banking-vodafones-m-pesa-hits-regulatory-roadblock/>

There is minimal cost involved (such as Licensing to be negotiated and Preliminary Implementation below) but the majority will be borne by “Intermediary”.

4.2. Telco’s Benefit

Any fees to be charged is to be negotiated between the participating telcos and the intermediaries.

4.3. Preliminary Implementation Issues/Costs

Firstly there is a one-off requirement with respect to Telco-operators, which is to engage co-operation with other operators (nationally) and later internationally and to come up with a draft criteria to streamline the payment protocol between each other and with the participating intermediaries. For example in the areas of:

- the agreed rules for transfers;
- the routing mechanism (network) and account addresses (ie say using mobile number);
- message, security protocol and other standards;
- the inter-telco settlement method for settlement to channel the outstanding balances; and the intra-telco settlement method.

(see Appendix B)

Secondly, to identify a set participating rules to solicit and deploy ‘intermediaries’ acting between the various telcos. Thirdly, to identify a set of criteria to benchmark in order to advance and transfer the knowledge to franchisee such as:

- faster,
- cheaper,
- more secure,
- easier to send and receive (interface efficiency) and
- better integrated to customer systems and processes.

5. Current Regional Development.

Closer to home, Maxis (Malaysia) introduced person to person payment in May 2007 (without cash out) by adopting M-Money (collaborating with Malayan Bank) to see transaction worth RM 500 mio per annum by 2010. A 50 sen fee was charged per transaction ³. In April 2009, Maxis followed up with “contactless mobile payment” named Maxis Fastap and using Near Field Communication (NFC) technology. The service is offered with the Nokia 6216 Classic phone that is embedded with an NFC chip to enable secure, contactless payments and transactions, as well as to able to read and download information with Visa payWave ⁴. Also see the poor man alternative to NFC by Tagattitude.fr which relied on modified hardware/software (existing).

6. European Development

The recent harmonisation and standardisation of European payment services via the SEPA (Single Euro Payments Area) initiative, developments in ICT and payment technology, standardisation and changes in user habits and banking strategies taken as a whole mean a considerable reshaping of the payment methods in use from 2010 onwards posing a competitive landscape in Asia. Further also see the Payment Service Directive (2007/64/EC) introduced a new type of financial institutions called Payment Institutions with the license for providing payment services clearly in direct competition with the Banks. Currently there is no country in Asia seriously considering restructuring its regulatory and competitive technology to meet the European’s advances.

7. Conclusion

Our proposition provides for minimum cost (as there is no significant hardware or software to be deployed at the telco level) and maximum (fee) profit sharing by co-operating with competitors and by franchising to others (‘intermediaries’) as compared to

³ <http://biz.thestar.com.my/news/story.asp?file=/2007/5/8/business/17656075&sec=business>

⁴ http://www.btimes.com.my/Current_News/BTIMES/articles/20090409134408/Article/index_html and <http://www.thesundaily.com/article.cfm?id=32281>

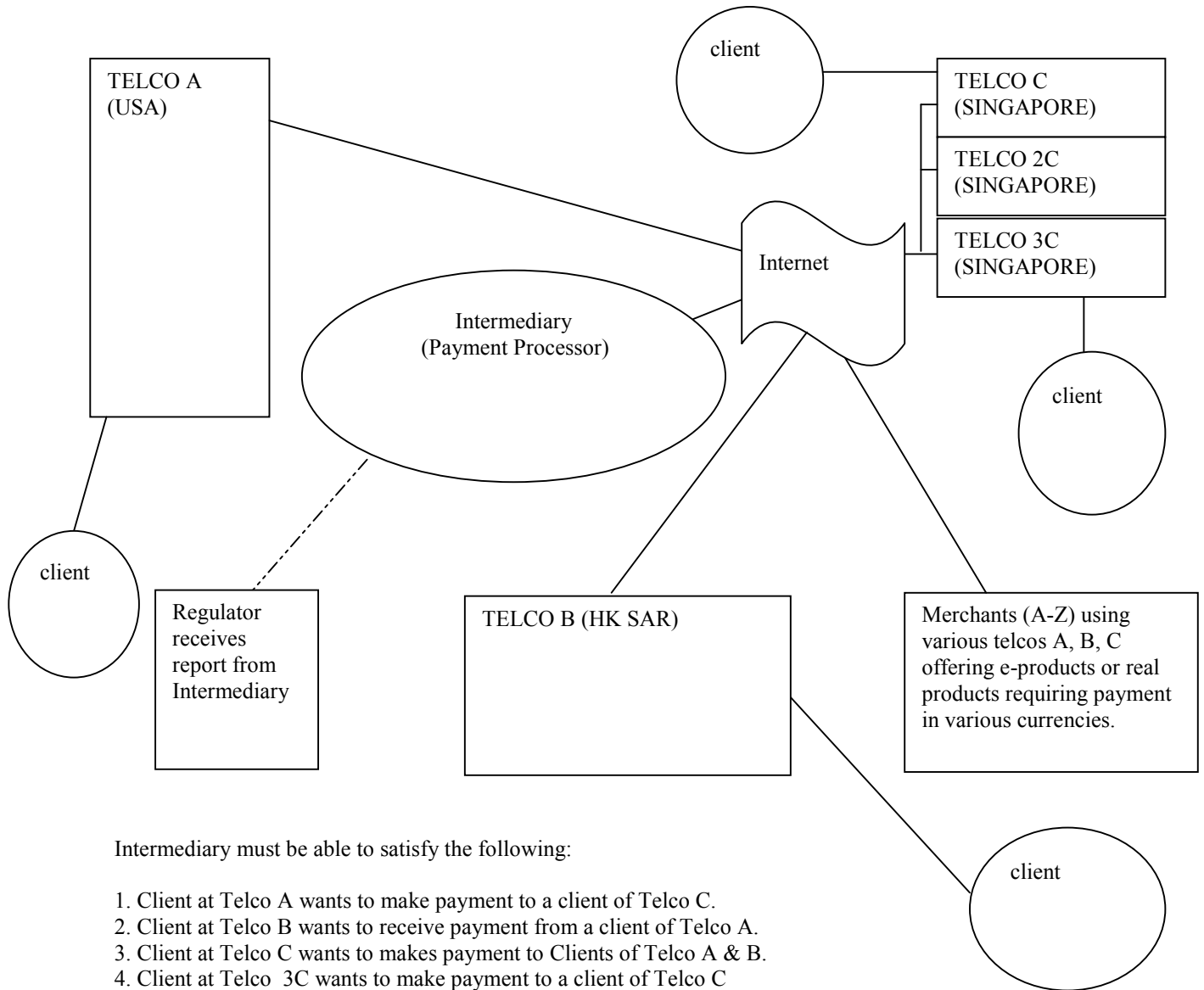
deploying own proprietary system. This is perhaps the one singular reason to work together to diversify the systematic risks while developing an alternative, highly secure and transparent Telcos centric e-payment network over plastics.

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APPENDIX A



Intermediary must be able to satisfy the following:

1. Client at Telco A wants to make payment to a client of Telco C.
2. Client at Telco B wants to receive payment from a client of Telco A.
3. Client at Telco C wants to makes payment to Clients of Telco A & B.
4. Client at Telco 3C wants to make payment to a client of Telco C
- 5 Client at Telco B wants to make payment to Merchant A (having account with Telco A)
6. Merchant Z (having account with Telco B) wants to receive payment from Client at Telco C
7. All clients use a mobile device via PSTN.
8. All Telcos to settle their net differences via a Banking Network (not shown here).

APPENDIX B

