



Interview with Mr.Mehul Desai,COO, C-SAM on Mobile Banking.

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Mobile banking is the next big thing to happen. Your views?

MD: C-SAM has been providing secure mobile commerce, mobile transactions, and mobile value added services to Banks, Telcos or Mobile Carriers, and Merchants, for over ten years. As a Company, we were incorporated in the US back in 1998, with a presence today in Chicago, Tokyo, Beijing, Mexico City, and Mumbai; we have evolved over the years from providing Products to secure web-service based Platform to Solutions, which enable our customers to provide their mobile phone users with services ranging from Mobile Banking to Bill Payments to Stock Trading to Money Transfer to Person-to-Person Payments to Micro-payments / Micro-finance to Insurance to Prepaid Top-Up to Ticketing to Coupons to Loyalty to Advertising to Parking to Transit, and so on; we provide both vertical solutions as well as aggregated or bundled solutions enabling large infrastructure providers to offer secure transaction services.

C-SAM's solutions provide users with a single and simple interface, across all mobile phones and networks, to securely conduct transactions over-the-air and in the real world using Near-Field-Communication or NFC. Our first patent was filed in the US in 1994, and since then we have ten patents issued in the US and Europe, and over 20 pending applications in several markets including India. C-SAM's founder, Sam Pitroda and I, have just finished writing a book titled "March of Mobile Money", which chronicles our journey over the past 15 years, and in which we have presented our views of the impact on all stake holders when more than 3 Billion people start spending and transacting in bits and bytes over mobile phones worldwide; the book will soon be available for your readers in India.

With the above background, you can well appreciate the fact that we have been at the fore-front of the mobile commerce revolution; we have witnessed several false-starts over the years, but firmly believe that the current wave of deployments led by mobile banking and person-to-person payments are here to stay and will continue to evolve. In our experience banks have been trying to leverage the growing number of mobile phones for several different reasons – to offer another channel in addition to their existing branches, ATMs and online banking services, to acquire new customers especially in markets where users have more mobile phones than bank accounts, and to eventually use the mobile phone as an instrument to replace cash. Most banks today have a strategy in place to ensure that they do not lose out on the mobile revolution, as some of them feel they did when intermediaries created web-based cash-replacement products or merchant-based closed loop cash-replacement products, which eventually eroded the banks' deposits or cut into their settlement margins.

For many years now, banks across different markets have been experimenting with different technologies to securely enable mobile phones to act as payment instruments, first for virtual or over-the-air transactions and eventually for real world or proximity transactions. It is safe to say that the technology to enable secure payments over mobile phones is in place today, and hence the next steps



for ensuring user adoption is to aggregate different services that will leverage the mobile phone for payments and build scalable business models across the entire ecosystem, where all three major stakeholders – banks, telcos, and merchants or service providers – are incentivized to ensure that they collectively deliver true value to the consumers.

Hence in summary, the current deployments for mobile banking and payments are definitely a much needed step in the right direction, but there is still a lot of work to be done with regards to aggregation of services and building local but scalable business models across the ecosystem, to truly ensure that all of us as consumers use our mobile phones as instruments for secure real time transactions.

Your solutions for banks have tasted success. Any particular USP?

MD: Banks use C-SAM’s platform to provide a secure mobile phone based channel for various banking services, to aggregate and offer various non-banking services, and to acquire new banking customers.

C-SAM has been focused from the very beginning on creating a true leather-wallet metaphor on the mobile phone; many people are not aware of the fact that Sam Pitroda is the inventor of the Digital Diary in which we store our names, addresses, calendar, etc., this digital diary was popularized by the likes of Casio, Sharp, Texas Instruments and others, who paid a royalty to Sam for his patent in the US back in the 1970s and 80s, and set the stage for PDAs and eventually smart phones. In some ways, following up on the concept of the Digital Diary, we started working on digitizing the leather wallet in the early 90s, pioneering the concept of the Digital Wallet, which eventually morphed into the M-Wallet or Mobile Wallet.

Consequently, from the very onset, we ensured that our technology and solutions delivered the same simple and intuitive user interface consumers are used to in their leather wallets – keeping the branding and imagery intact; we ensured that providers could offer multiple payment methods and aggregate multiple services, for the virtual and real world, through a common interface; and we ensured that every service provider could implement their own security scheme, so despite various services being aggregated, no provider would have to take the risk related to another provider’s transaction.

Effectively, these guiding principles have now become strong USPs for C-SAM, where we are unique in that we have a secure web-services based carrier-grade Platform built over 10 years, which incorporates our learning’s accumulated across markets around the world, and is supported by highly specialized and domain-centric Solutions. This unique Platform enables a bank to start by offering their users Mobile Banking, which in itself is the most comprehensive in the industry with over 40 unique services available across all channels including secure SMS, USSD and Rich Clients; once the bank launches a basic mobile banking and payment solution, C-SAM’s platform will enable it to further scale and aggregate non-banking services from different providers, both for the virtual and real world, to effectively drive more transactions over their existing settlement networks, to ensure their customers continue to keep their funds in the bank as opposed to using other intermediaries like stored value providers, and to ensure that they can acquire new banking customers using various non-banking services.



While your question is directed to banks, I would like to stress the fact that C-SAM's platform and solutions also cater to telcos and merchants, and our commercial deployments testify that all three stakeholders are critical to the adoption of mobile value added services, and that there is truly a common platform that can cater to all of their requirements.

How and why did you tie up ICICI bank?

MD: C-SAM filed its first patent in the US in 1994, built its first generation platform in Scandinavia in 1999, launched its first pilot in Japan in 2001, and has been actively working in the Indian market for several years now. I remember conducting a workshop at ICICI Bank many years ago, when the term mobile commerce, let alone mobile banking, was not even in vogue; that goes to prove the fact that ICICI is one of the few banks that has continuously pushed the envelope to ensure that it delivers the most value to its customers and partners. Hence in many ways the association with ICICI Bank was a natural fit; C-SAM pioneered the concept of the Digital or Mobile Wallet and associated services like Mobile Banking, and ICICI has continuously strived to adopt new technologies that continue to give it the edge in the Indian and global market. We are proud of our association with ICICI, where we continue to work with them to further scale the C-SAM platform beyond basic mobile banking services.

There was a lot of talk of "wallet" phone or e-purse a few years back. What happened?

MD: Over the years we have seen many experiments world over, most of which have not scaled, that started with providing mobile phone based access to server wallets and at some point involved two SIM cards on the same handset – one to store the telco's subscriber information and the other to store the bank's payment credentials. Even with some of the recent regional successes in parts of Africa and Asia, we have yet to see a truly scalable model – both in terms of technology and supporting business model – which will enable mass market adoption worldwide. While NTT Docomo in Japan has had the most comprehensive vision, backed by significant investments in technology as well as partnerships, even their solution does not allow all stakeholders to operate independent of each other, which in our opinion is critical for mass-market adoption.

As consumers, our requirements are pretty straightforward – we would like to use our existing payment instruments – credit cards, debit cards, bank accounts, postal accounts, and so on – we would like to conduct various financial as well as non-financial transactions in real time, in the real world where most transactions still take place as well as in the virtual world – and we would like to get value added services given the growing capabilities of mobile phones coupled with Internet access.

As providers – banks, telcos, and merchants – their requirements are also pretty straight forward – they would like to leverage the growing mobile channel, initially to offer their existing services, whether it is related to mobile banking or mobile prepaid top-up or mobile ticketing, and eventually to cross-sell based on existing co-branding arrangements, all the time ensuring that they can leverage their existing risk management capabilities developed over years for this new and emerging mobile channel.



Hence as much as the promise of using mobile phones ubiquitously for payments has been around for a long time, we have yet to see a true leather wallet metaphor on mobile phones, where as a consumer I can conduct secure transactions in the real and virtual world, for banking as well as non-banking services, all through a single and simple user interface that aggregates my existing payment instruments and applications, generating digital receipts through which I can then receive opt-in profile driven value added services; in our opinion, C-SAM is the only Company that can provide all of this on a scalable and robust platform.

How do you compare mobile banking vis-à-vis Internet banking?

MD: In its most basic sense, mobile banking offers another channel in addition to the bank's existing channels like their branches or ATMs or IVR system or Internet Banking. With that said, by lieu of being mobile and supported by real-time connectivity and Internet access, mobile banking has unique advantages over all the other channels, including Internet Banking, where it can truly become an always-on secure window for various banking as well as non-banking services, enabling the user to conduct transactions both in the virtual world as well as the real world – however small and nimble laptops become you will never waive it at a point-of-sale to pay for a cup of coffee – at least not if your mobile phone lets you do the same.

Hence Mobile Banking has started by being comparable with Internet Banking, in that most if not all the services you can access thru Internet Banking are available thru Mobile Banking; the next step will be to add other time and location sensitive services to Mobile Banking given the advantages of mobility and real-time access; and finally Mobile Banking will evolve into a true Mobile Wallet, aggregating both financial as well as non-financial services, facilitating virtual as well as real world transactions. While mobile phones, browsers and bandwidth have continuously improved over the years, given the requirements related to security, risk management, aggregation of services and real-world transactions, native mobile applications will always be preferred over browser based services.

RBI has come out with new guidelines. Your opinion?

MD: Without commenting on the specific recommendations, the RBI guidelines essentially indicate that only a bank can be a bank, and a non-banking entity cannot become a bank by lieu of the growing mobile channel. This is consistent with the position most other regulators have taken in other parts of the world, and also with the position RBI has taken when faced with emerging channels in the past. Hence we are not surprised by the guidelines released by RBI, and have reached out to all our banking customers in India, as well as telco and merchant customers, stressing the fact that C-SAM's platform is not only compliant with RBI's guidelines, but is also the only platform that will allow them to truly leverage the mobile channel to offer secure banking, transaction, and value added services under the auspices of RBI for their own domains as well as for aggregating services from other domains.

The biggest hurdle in the success of mobile banking is security. How is C-SAM different in this regard?



MD: C-SAM has built a lot of technology over the years to ensure that sensitive data is secured from end-to-end, between the host system and the user's mobile phone. Along with security industry experts, we have identified several vulnerability points, and have built specific solutions to address each one – as one can imagine, this can be as simple as securing a password on a mobile phone to thwarting man-in-the-middle attacks to ensuring that a sleeper or rogue agent on a mobile phone cannot launch a systemic attack across a large group of users.

Beyond such physical security solutions, which in many ways now have become a prerequisite for any mobile commerce technology, we also enable our customers to configure the overall security preferences and risk management at deployment time. When it comes to managing risk, not all users are equal, and hence banks in particular, as well as telcos and merchants, require an infrastructure platform that allows them to migrate their existing risk management capabilities across the mobile channel – C-SAM's platform is one of the few to provide this capability, which is a critical to ensure scalability.

Last but not least, aggregation of services, as explained earlier is the next critical step in the evolution of mobile banking towards increasing user adoption, will require that such a platform enable each individual provider to implement their own security scheme – credentials, algorithms, risk management practices, etc. – and ensure that the aggregating platform, whether it is the telco or the bank or the merchant, does not have to take the risk associated with their partners' services and transactions. Plainly put, if your wallet contains 50 cards and tokens, which are issued by 50 different providers, you need 51 different security schemes – C-SAM's platform is the only platform to provide such a capability for secure mobile transactions.

What are your major products/solutions?

MD: C-SAM provides solutions for Mobile Banking, which includes bill payments, micro-finance, m-commerce, etc. – Mobile Insurance, for providers and consumers – Mobile Ticketing, for travel and events – Mobile Money Transfer, for cross-border remittances and person-to-person payments – Mobile Coupons and Advertising, which includes applications for Loyalty and Stored Value – and several large infrastructure solutions for Cities, Universities, Postal Systems, and Rural Broadband Networks.

C-SAM's solutions, which are built on a secure web-service based infrastructure platform, have been commercially launched across several markets. Additionally, the platform also supports tools, which enable our customers, especially telcos, to create a community of developers that can build their own applications leveraging our secure transaction platform. In addition to mobile phones, the C-SAM platform will soon support other channels such as IPTV and set-top boxes, essentially allowing our customers to offer a common secure transaction interface across different access channels. We have also launched widgets for social networks, and will soon release a unique solution that will leverage the growing Open Social alliance.

What verticals do you cater to?



MD: C-SAM's customers include Banks, Telcos, Merchants, and large Infrastructure Providers. We also have a well structured partner program, with several large global re-sellers and regional partners. Additionally, we have built solutions in the past for health, education and government services, and hence will soon enhance our current Banking / Telco / Retail footprint to Health / Education / Government verticals.

What about your technology expertise?

MD: C-SAM is a pioneer in secure transaction technologies, with a focus on secure mobile commerce and mobile value added services. We have ten issued patents in the US and Europe and over 20 pending applications.

Over the years we have built a lot of unique technology, to ensure that our solutions seamlessly work across all phones and networks; to securely provision tokens, applications and services over-the-air; to conduct remote as well as proximity transactions; to manage multiple payment and non-payment credentials over NFC and Felica; to manage multiple security schemes and risk management practices; to provide profile driven value added and matching services; and to provide tools for creating a community of developers.

Who are your major Technology Partners?

MD: Over the years, C-SAM has worked with several partners – one of our first partners was Hitachi, with whom we continue to collaborate to jointly reach out to customers in Japan. Today we have (separate) global re-seller agreements with Motorola and Sybase, and have several regional partners in China. We have a strategic partnership with MGL, which is a global IT solution provider based out of India, who re-sells our solutions as well as helps scale C-SAM's delivery capabilities. For additional information please visit our website at www.c-sam.com.