

Zeroing in on Branchless Inclusive Rural Banking:

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QUICK FIX: Villagers in Mizoram queue up with their smart cards to transact micro banking business using the zero mobile system.

Hundreds of villagers in Warangal district in Andhra Pradesh have, for the first time during the first week of October 2007, received payments under the National Rural Employment Guarantee Act (NREGA) through a cutting-edge disbursement method that would be deemed “tomorrow’s technology” in many developed nations. The recipients have been given smart cards fuelled by the Radio Frequency Identification (RFID) technology and incorporating what is known as a

“biometric” scan of their fingerprint. The disbursing official carries the entire bank system on a special mobile phone that has been enhanced by a chip developed by the European semiconductor company NXP, (originally founded by Philips), with key contributions made at its Indian development laboratory in Bangalore.

The chip enables secure data communication between the phone and RFID smart cards, using contact less Near Field Communication (NFC) technology co-invented by the NXP. A

scanner to read the recipient’s thumbprint, or a printer to issue receipts, can also be attached to the phone. The application using the NXP chip is the work of the Mumbai-based technology developer, A Little World, who fashioned it into the “Zero” mobile platform for inclusive banking. They are partnering with the non-profit agency Zero Micro-finance and the Savings Support Foundation (ZMF) in taking it, on a pilot-plant basis, to Uttarakhand, Andhra Pradesh and the North Eastern States.

Director, A Little World Ltd., Mumbai

The project had already gone live in Warangal district for social security pensioners. For the first time, payments were made on Saturday to beneficiaries using the Zero solution. It had been tried out successfully in remote areas around Aizawl in Mizoram and Pithoragarh in Uttarakhand, which did not have a bank branch. The NFC technology used in the Zero application harnesses the same chip that is embedded in the electronic Mumbai passport that is being implemented in over 35 countries. The NFC-enhanced phones used in the Indian micro-banking project are sourced from Nokia and Motorola.

A Little World Pvt. Ltd. (ALW) (www.alittleworld.com), the technology solution developer and provider provides managed services to multiple banks for deploying an end-to-end scheme with the brand name 'ZERO'. The brand ZERO appears on all cards issued by all participating banks and at all Customer Service Points and devices. ZERO is positioned as a new generation payment system which is more versatile, more secure and carries no baggage compared to incumbent systems like VISA and MasterCard. ZERO is positioned as a secure solution that will reduce cost and complexity and increase portability, scalability and ease of use. ALW has leveraged new generation technologies, mobile networks and a last mile local entrepreneurship ecosystem to integrate a micro-banking model with a brand-new multi-bank payment network (ZERO) for inclusion of the vast un-banked population into

mainstream banking. Unlike the presently established payment networks which have come to prominence with a top down approach, ZERO is building its foundation on commercial deployment at the bottom of the pyramid. ZERO collaborates with leading banks, banking regulators and Government to identify opportunities, gaps and bring about broad consensus on standards and processes for "Financial Inclusion" in India.

The company works closely with the ZERO Microfinance and Savings Support Foundation (a not-for-profit Section 25 Company in India) to deliver results on the ground. ZERO-Mass Foundation (ZMF) provides field operations for ZERO in a not-for-profit model, as a Business Correspondent to multiple banks. ZMF is presently a Business Correspondent to seven banks. ZMF manages the field force, card issuance, appointment of Customer Service Points, management of cash and all other logistics at the last mile. ZERO-Mass in turn collaborates with strongly placed local organizations, district and State administration to ensure smooth deployment and operations.

The technology focus of ALW is on biometrics based ID, RFID smart cards (Java, PKI) and NFC (Near Field Communication) mobile phones as acceptance and enabling devices (with merchants, field forces of MFIs and as cashless ATMs). The technology and business vision is to be able to reach the un-banked through human networks with technology deployed to maximum

advantage. ALW also focuses on ordinary consumer mobile phones linked to the RFID card for providing a range of value added information services linked to the ZERO payment system.

Over 250 million people are targeted across India under the "Financial Inclusion" initiative. ALW and ZMF are also project partners with six banks (State Bank of India, Union Bank of India, Axis Bank, Andhra Bank, State Bank of Hyderabad, Andhra Pradesh Grameen Vikas Bank) in a unique collaborative project with the Government of Andhra Pradesh and Reserve Bank of India to deliver basic banking services to villages through its ZERO platform for branchless banking. The project has gone live in the Warangal District of Andhra Pradesh. The target groups are social security pensioners and wage seekers under the National Rural Employment Guarantee Act (NREGA).

Product Description

The ZERO platform offers cardholders facilities to perform a range of transactions such as cash deposit, cash withdrawal (including cash disbursement for pensions, EGS wages), transfer, cashless payments, balance enquiry, statement generation and balance synchronization at Customer Service Points (CSPs). CSPs are located in villages as authorized agents of Business Correspondents, enabled with tele-connectivity and a transaction ready mobile device (or a PC or any suitable embedded device if it is available for any other reasons)

with the ZERO application software.

Applications are installed in a central data center with multiple server configurations. Interfaces have been developed, tested and implemented between a range of front end devices (NFC phones, PCs, embedded devices) and the central server.

The ZERO platform is designed as an application service provider (ASP) model to be used by multiple banks, utility service providers and Government departments. The platform is based on open systems at both back-end and front-end to cater to issuance and transaction management for tens of millions of customers with addition of appropriate hardware. The product platform is multi-tiered and modular with use of several types of front-end devices communicating with an array of back-end applications managing banking and telecom systems using multiple modes of communication

Multiple Applications

Using the common ID profile of the cardholder, the ZERO framework allows the following categories of applications to be activated on the customer card :

- Secure ID profile (including fingerprints and photographs)
- Micro-Savings (no-frills pre-paid account)
- Micro-Credit (including Kisan Credit Cards, GCC)
- Micro-Insurance
- Cash withdrawals
- Cashless payments to merchants
- SHG saving-cum-credit accounts and attendance systems
- Salary disbursements for schemes like Employment Guarantee Scheme
- Passbook
- Loan EMIs
- Government benefits
- Utility payments
- Coupons, vouchers and tickets

Transaction Model

- * CSP keeps working capital in an account with the Business Correspondent and available cash at the outlet.
- * Business Correspondent keeps an online settlements account in the bank.
- * Customer's funds are parked in a central pool account with the bank. Accounts may be held by a system within the bank or at the MiFOS host operated by ALW.
- * Transactions can be made online as well as offline. Small transactions will generally be offline and will be settled in

batch mode.

- * All online transactions and the batch settlement of offline transactions both result in settlement between the account of the customer and the settlement account of the Business Correspondent (credit of one account and corresponding debit of the other).

- * Business Correspondent in turn settles with the CSP account.

- * The net positions are, therefore, always balanced and settled at all times.

- * The CSPs maintain an account in the nearest core-banking branches of the bank to deposit or withdraw cash based on the net transaction volumes at their outlets being cash positive or cash negative.

- * The branches, therefore, have reduced transaction loads, and no settlement or collection risk is carried by the bank.

- * Full traceability and audit trail of the transaction is maintained.



Progress Made So Far

- * Implementation with SBI in collaboration with ZERO MASS Foundation as a BC for SBI in one district each in Mizoram, Meghalaya and Assam (North-East), three districts in Andhra Pradesh, and five districts in Uttarakhand
- * Implementation with SBI in collaboration with Department of Posts (IPO) as a BC to SBI in 17 districts in Maharashtra, Andhra Pradesh, Jharkhand, Tamilnadu and Karnataka
- * Implementation with Axis Bank in Warangal in Andhra Pradesh and Delhi & Muzzafarpur (with Basix / IGS as BC) for money transfer
- * Implementation with Union Bank of India in Warangal in Andhra Pradesh, Nalgonda with SKS Microfinance
- * Implementation State Bank of Hyderabad, Andhra Bank and APGVB in Warangal in Andhra Pradesh
- * Implementation with Nainital Bank (subsidiary of Bank of Baroda) in Champawat in Uttarakhand
- * Implementation with DCB Bank for money transfer between Surat in Gujarat to 3 districts of Orissa (Puri, Nayagarh and Khurdha)
- * Implementation with Canara Bank in Bangalore rural in Karnataka
- * Common network acceptance mark ZERO accepted by all participating banks
- * Requests for deployment in other countries: Host of African Countries, Philippines, Pakistan, Bangladesh, Sri Lanka

