ICT Banking for the Illiterate Rural Customers
Introduction

• Majority of the Indian population lives in rural areas, there is an urgent need to deliver citizen services to them in a cost effective way with assured quality.

• Banking is one of the most important services that play a crucial role in the economic development of the rural area.

• The banking industry is growing at a very fast rate in India with a number of foreign banks joining the Indian market.
Not So Bright Side???

• Rural population of about 780 million still has limited access to financial services
• Still 500-600 million people do not have bank accounts (Around 50% of the Total Population)
• However a high proportion of rural lending is from informal sources
• This informal credit amounts to Rs.3500 billion
• Commercial Bank branches cover only 7% of rural sector and large market is still untapped.

• The Reserve Bank of India’s Handbook of Statistics on the Indian Economy (2006-07) shows that there were 30,639 rural branches of Scheduled Commercial Banks (SCBs) in India in 2007. That is, 4,750 less than the number in 1993.

• In other words, an average of 26 bank branches shut down each month, or one every working day.

• This directly points towards the sustainability problem in the rural banks with lack of customers.
Population of India

- Rural: 72.3%
- Semi Urban: 7.7%
- Urban: 8.5%
- Metropolitan: 12%

Number of Bank Branches

- Rural: 35%
- Semi Urban: 22%
- Urban: 22%
- Metropolitan: 21%
Why Banks are Not Sustainable??

- Huge volumes on infrastructure are required for less number of customers in the rural area.
- Things are opposite in the urban area.
Challenges Faced by The Villagers…

A survey on 500 villagers over 10 villages in the Yamunanagar district in Haryana State to get the real insights…

• Lack of documentary evidence for the property / identity

• Literacy problems in complying with the documentation (Filling up Forms, Carrying Transactions etc.)

• Fear of privacy breach / fraud in view of educational lack

• Inability to use the technology

• Communication boundary for the regional / native languages
## Rural-Urban Literacy Rate
*(Literate to Document)*

<table>
<thead>
<tr>
<th>Sector</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>57.9</td>
<td>30.60</td>
<td>44.70</td>
</tr>
<tr>
<td>Urban</td>
<td>81.1</td>
<td>64</td>
<td>73.0</td>
</tr>
</tbody>
</table>
Technology in Indian Banking

• ‘Anywhere banking’ through Core Banking Systems.
• 24/7/365 delivery channels such as Automated Teller Machines (ATMs)
• Internet and Mobile Banking
• Real Time Gross Settlement (RTGS) System in compliance with the International Settlements
• Electronic Clearing Systems (ECS) for fast money transfers
Biometric ATMs

- Verify people's identities based on their unique physical characteristics
- Scanning fingerprints or irises to verify an ATM customer's identity
- Public sector majors such as Union Bank of India, Dena bank, Central Bank of India are using the Biometric ATMs on pilot basis
The Biggest Hurdle.....

• Computer Interface Fever among the villagers
• Fear of Privacy Breach / Fraud
Proposing The Solution??
Regional Languages

• 22 Official Regional Languages
• More than 70 languages and dialects are used by people in general
• Rural people find it difficult to work in English or Hindi
Natural Language Processing in India

The Department of Information Technology initiated the TDIL (Technology Development for Indian Languages) with the objectives:

- Developing Information Processing Tools and Techniques to facilitate human-machine interaction without language barrier
- Creating and accessing multilingual knowledge resource
- Integrating them to develop innovative user products and services
- Solutions are available for almost 22 regional languages
The Proposed Framework.....

Biometric Scanning + Language Processing

USER

Bank Network
Conclusion

The banking services in India are moving with a speedy rate with a lot of new private banks as well as international players coming into the market. However, the rural India is still in the olden days crying for a viable solution. Illiterate rural folks are the one suffering with the operational problems. A combination of the biometrics and natural language processing appears to be the most viable solution for the privacy enhanced banking of rural people. The proposed framework should certainly start a new era in the rural banking with advance technology support. However, the real benefits can only be seen after the pilot testing.
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