MOBILE FINANCIAL SERVICES: SIMPLE TO USE, BUT NOT SIMPLER TO MANAGE

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ABSTRACT

In uncertain market conditions M-commerce is one of the reliable and certain solutions to its consumers. Mobile Financial Services (MFS) has created new business challenges to mobile computing applications at the consistency level. With these M-Commerce implementations Financial System is being shaped for future Mobile Financial Services and M-Business with more facilities, easy to use and simple operative methods for consumers. With these distinguished, exciting and innovative services now being adopted to extend their reach to consumers and enterprises, Mobile computing has become unavoidable part of system but yet still in its nascent stage. The Researcher would like to explore the future challenges to work on for better Mobile Computing Services which should be device independent, network independent, bearer independent and the Interdisciplinary education approach to the mobile computing stakeholders can increase security with existing setup.

Keywords: M-Commerce, Mobile Computing, Financial System, Financial Institution.

1. INTRODUCTION

Mobile brands are trying to implement innovative approaches to provide increased functionality, services and to add value to their consumers. Banks and Financial Institutions also prefer the coupling and automated systems to contact and to disseminate the information through quotes, messages, emails using mobile computing technology.

Mobile Computing can be defined as a computing environment of physical mobility. Mobile computing involves mobile communication, mobile hardware, and mobile software. It is basically Human Computer Interaction which mainly includes mobile devices or similar device components with mobile applications installed to deal with requirements of mobility and such communication. Though these technologies are being adopted it has certain limitations of use, which are challenges to overcome to mobile computing researchers.
Mainly mobile software has found and also will finding in future the challenging task that is to develop the easiest and interactive human interface with the specified device limitations. Security and transmission interferences are other of the challenges which are equally important for financial transaction consistency.

Mobile devices introduced till today like PDA/EDA, Smartphone, Tablet Computer, UltraMobile PC, and Wearable Computers with their different configurations, capabilities and connectivity’s interacts with smallest touch screen which includes number of virtual, able to hide and variety of size of applications which are instantiated on demand as consumers operations/selections of tasks. Mobile devices use variety of mobile operating systems such as iOS (i-phone OS by Apple), Android (Google), Windows (Microsoft), QNX (RIM).

Due technology and reliability impact, number of consumers using mobile devices as main communication tool for business and personal purpose is increasing day by day. At the one side users are willing to use mobile services for such purpose as it provides inexpensive higher speed wireless communication, but on the other hand most of them have fear or risk of information security and consistency while being transferred on such a very limited range, huge and loosely coupled network.

Financial services are the economic services provided by the finance industry and Mobile Network Operator, which encompasses a broad range of organizations that manage money, including credit unions, banks, credit card companies, insurance companies, consumer finance companies, stock brokerages, investment funds and some government sponsored enterprises.

As per the latest report by Telecom Regulatory Authority of India (TRAI), penetration of mobile services has crossed 900 million mobile phone subscribers. This offers an opportunity to reach customers through mobile services. To benefit from this, Mobile financial services (MFS) offerings like mobile money, mobile banking and mobile payment can be used for usual utility bill payments to money transfers and cashless payments. According to BI Intelligence in January 2013, 29% of mobile users have now made a purchase with their phones. Wal-Mart estimated that 40% of all visits to their internet shopping site in December 2012 were from a mobile device. Bank of America predicts $67.1 billion in purchases will be made from mobile devices by European and U.S. shoppers in 2015.

2. METHODOLOGY

2.1 Bandwidth Range Shifting

Mobile Network may be wireline network, wireless network or Ad hoc networks. Mobile Internet (GPRS and EDGE, and more recently HSDPA and HSUPA 3G and 4G networks) are usually available within range of commercial cell phone towers. Such Bandwidth for cellular network, if managed dynamically for its continuous changing location need one can provide logically consistent same virtual range which physically will be constantly moving or inconsistent by changing real time range and shifting the network ranges at real time or by network mobility.
Range also can be predicted if route of mobility is determined in advance, so continuous shifting based on nearby tower stations to route can be managed. As shown in Figure No.1 range for mobile device in Vehicle can be shifted from Tower A to either B or C depending on route predictability policies.

2.2 Increasing range bandwidth

Automated range control system at operator side which can detect transmission interferences like weather, terrain, range from nearest signal and if any such case occurs automated system will proportionally increase the range with moving location to overcome the interferences range problem by providing use based strong services. But it can be costly also in average consumption period.

2.3 Maximum Stability of Network

As WiMax provides interoperability and wireless data over long distances at different ranging links, similarly there is need of improved stability of network in mobile network. Maximum stability of Network will always provide efficient services. Need and competition among financial service providers is forcing them to seek different strategies for value added services so as they can pull the customer for their service consumption.

2.4 Specializing financial group of Communication Network

Specialized financial network group to provide reliable functionality, security, connections, encryptions, as if point to point network provides that can improve the communication and dependability on communication network.
Figure No. 2

Specialization of MFS group network can ensure that consumer will have contact with those in only financial services access, so increases security by restricting access to other mobile computing application users as shown above in Figure No. 2. And Specialization will also improve operative efficiency.

2.5 Clustering VPN

Clustering VPN with inter related group which are mostly requested for connection or for similar kind of needs of customers, region based clusters. As shown below in figure no. 3, clustering of VPN can satisfy similar needs and demands of students, marketing groups, businessman, marketing group or the specific region.

Figure No. 3

2.6 Stat Based Intelligent Investigative Service Network Shape

Applying statistical observation to maintain frequently connected mobile financial service network. Central tendency measures can predict the need from specific line of communication to strengthen the network communication. The average range and number of users need may change with time, so the central tendency average investigations can be used to provide and classify occasional needs of mobile connections to provide needful range by using intelligent network policies.
As shown below in Table No. 1 Reasons behind using services creates frequent or time based or area based need of access of services. By applying statistical programmatic automated system to compute, classify and regulate the classified network, the researcher can classify MFS as

- Location based MFS
- Time based MFS
- Customer Type based MFS

<table>
<thead>
<tr>
<th>Region</th>
<th>Reasons</th>
<th>Need/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chennai</td>
<td>Festival Shopping</td>
<td>To provide location based MFS</td>
</tr>
<tr>
<td>Bangalore</td>
<td>Admissions Periods</td>
<td>To provide Time Based MFS</td>
</tr>
<tr>
<td>Mumbai</td>
<td>Airways Payments</td>
<td>To Provide Customer Type Based MFS</td>
</tr>
</tbody>
</table>

Such classification can also help to strategic department to formulate timely and all time scheme offers for their customers.

### 2.7 Interdisciplinary approach to education

Stakeholders of Mobile computing involves different peoples, operators, logic developers, suit designers, device manufacturing engineers to develop the interdependent solutions. Presentation approach can show the consistent interaction with buffer management, signal delay tolerance policies management, strongly encrypted communication base, common APIs and standards for different vendor specific apps.

Mobile Applications cannot view most of the applications as in computers. So generalized intelligent conversion system and application package which will convert the specific applications file systems to mobile device viewing file system can be the next generation need for downloads using mobile computing.

### 3. CONCLUSION

In this paper, different strategies to manage and improve mobile computing technology will also make it simple to manage as it is simple to use. Mobile computing till today have addressed numerous challenges by providing services, information anywhere, anytime with any device that may moving also. In future research of mobile computing with different emerging technologies like Multimedia Services, Intelligent Networks and Next Generation Networks has increased scope for API developers at user end applications to provide value added services. MFS can be driving force from Information Technology for future innovations and business opportunities.

Above methods discussed can help at different layers of Mobile architecture to strategically manage the mobile communication channel to provide stability or by implementing automated control system to improve the efficiency of network.
REFERENCES