Abstract

The passenger flow in the western division of Mumbai Suburban Railway system is multiplying day by day. The existing ticketing system is causing a considerable increase in the travel time due to a major drawback- 'long queues', which absorbs a significant portion of the travelling time. On an average, a commuter spends around 15 minutes in the queue at the suburban booking office windows of Mumbai. In this study we aim to explain the use of mobile services by looking at an area where it has been quite successful; that is, mobile ticketing in public transportation. Firstly, this paper provides a brief glance at ATVMs (Automatic Ticket Vending Machines) and (CVM) Coupon Validating Machines; technologies which are already implemented in the Mumbai Suburban Railways, along with a statistical insight of its drawbacks. Later it provides an insight into our proposed technology ATVMS (Automatic Ticket Vending via Messaging Service) which uses SMS (Short Messaging Service) as a medium to issue tickets. We provide a comprehensive description of our proposed architecture models along with the possible hurdles in our endeavour, and also real time solutions to it. The scope of this paper is particularly for the Mumbai Suburban Railways (MSR) where cost effectiveness is of paramount importance. The challenge was to design a system that would be least costly, as
MSR is massively used by middle class people who cannot afford even the slightest of increase in the ticket price. Hence something beyond NFC (Near Field Communication) and Automated Fare Collection (AFC) system (through contactless smart card technology) was needed. The concept and implementation of ATVMS put forth by the authors is completely "new and original".

References

- Western Railway archives, available from: http://www.wr.indianrailways.gov.in/view_detail.jsp?lang=0&id=0,4,268&dcid=351&id=13087486985628AD8309F37A4A5595E3625AB2F628BB0.web103
- Stefano Leviaidi Ghiron, Serena Saposato, Carlo Maria Medaglia, Alice Moroni, &quot;NFC Ticketing: a Prototype and Usability test of an NFC-based Virtual Ticketing application&quot;, 2009 First International Workshop on Near Field Communication.

Index Terms

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