The Recent Reliable Advancements In The Indian Railway Ticketing System

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Abstract: Indian railway is the second largest railway network of the world. Daily many passengers travel in the railway to handle this large crowd, the ticketing system of the railway must be very good.
Generally, it is observed that at the big stations people wait for too long in the long queues to get the ticket. Many initiatives have been taken by the Government of India to improve the ticketing system of the railway. In this paper, the author presents the recent advances in the ticketing system of the Indian railway.
Keywords: Indian railway, Ticketing system, Government of India, Big stations

1. Introduction

As the Indian railway is the second largest railway network of the world. Many passengers travel from one station to another using these trains. In India for getting ticket one has two options one is to go to the railway station and book your ticket or get the general ticket from the ticket window or using ATVM machine other one is to use online mode to book the ticket. Using online mode is quite convenient for the passengers but using online mode passengers cannot book the general ticket. Some applications have been developed and some new mode of purchasing the ticket have been given by the researchers in their research which makes the ticket distribution system really very efficient yet it still needs further improvement. The two modes of purchasing the ticket is presented in the following diagram.
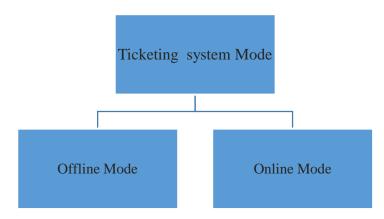

Figure 1: Ticketing system Mode

(a) **Offline mode**: The traditional method for purchasing the ticket is to go to the railway station and get the ticket from the ticketing window. This is quite cumbersome because one may have to wait in the queue for a long time. In this passenger sometimes miss their train or they may reach late at their destination. Sometimes

passenger also breaks the queue to get the ticket due to this other passengers object to it and there may be a clash between the passengers. Despite all these problems railway authorities have not given thought to improve the window ticketing system. Another method is there are some railway agents' center in every city. The passenger may go there and easily get the ticket but in this, he has to pay 5 or 10 rupees extra charge on per ticket. But still, it is convenient. Passengers can also purchase the ticket using AVTM at the railway station. Government of India has spent a huge amount to install the ATVM at the railway stations. Using this machine one can purchase the ticket on his own without anyone's help. This machine can dispense 3000 tickets per day. Generally, to buy the ticket using ATVM one has to get the card from the ticketing window and get it recharged by paying money. After this passenger inserts the card in the ATVM. ATVM process the card and the process of purchasing the ticket starts. A passenger may select a suitable language using the touch screen monitor. After the selection of the language, the passenger enters the route and destination and number of passenger who want to travel with him, after entering all the detail machine automatically calculate the fare and the fare is deducted from the card. Then the ticket is printed automatically, the passenger takes the ticket and travel on the train. It has also been observed some people don't know how to use these machines for purchasing the ticket and they don't use the machine. For the proper utilization of the machine, railway authorities must deploy their employees which help the passengers to purchase the ticket using AVTM. The benefit of this machine is that this may work for 24/7. But it has been observed by the author that the machine remains out of order at the railway station. Railway authorities must pay attention to the proper working of the machine.

(b) **Online mode**: For long-distance journey, passengers generally book their ticket online mode. Using this mode passengers can book their ticket sitting at home using an internet connection and computer or laptop or smartphone. Generally, passenger has to get himself registered on the website   portal. After registering himself he can easily purchase the ticket online using a debit card, credit card or e-wallet. There are a number of e-wallet available these days Paytm, epay etc. Passenger can also go to the internet café or private railway agent to get their online ticket book.

2. Literature review

Generally, for travelling long-distance journey, passengers book their ticket using various websites or applications but for the short distance, passengers don't book the ticket. As of now, the following researchers have given their suggestions to improve the ticketing system of Indian railway. Patel et al. [1] presented the benefits of buying the ordinary ticket online. For this user just need an internet connection. If buying the ordinary tickets becomes online passengers can easily purchase the ticket from anywhere and the change is not required to purchase the ticket as the fare is deducted from the customer bank account. But this research has a few drawbacks also as the internet connection is not easily available in the backward areas and some even don't have smart phone and some even don't know how to operate the smart mobile phone. Chatterji and Nath [2] discussed daily 1 million people travel in the reserved compartment and 16 million people travel in Ordinary compartment. They suggested UID-based technology, with this technology reserved ticket can also be booked using the ATVM machine. Methew and P [3] suggested the existing ticketing system can be substituted with the smart card system. The passengers may travel using these cards

and once the amount gets finished in the card they can again recharge it. He suggested this recharge in the card can be done on a monthly basis or on a quarterly basis. Khan et al. [4] proposed the SMS ticketing system. The passenger who wants to travel sends one SMS then in return he gets back message from the system which can be checked by the ticket checker using handheld device. This helps in saving the paper also. In this research, he didn't discuss how to book multiple tickets in just one go. Majumder et al [5] suggested RFID ticketing system for the passenger. This RFID card can be collected from the railway station after paying some amount. Whenever passenger wants to purchase the ticket he touches the RFID with the card reader and the amount is deducted from the bank account. Zongjiang [6] introduced an efficient railway ticketing system in which he also introduced the additional features like ticket enquiries, cancellation of ticket and refund of the money and booking the ticket online. Mohod et al. [7-9] proposed the digitalized ticket checking system. This system reduces the major checking task of the T.T.E. When any passenger sits on his seat he receives a message and can easily check how many seats are unoccupied. This helps him to allot the seat to those passengers who could not book their seat in case they ask for it. The various applications have been developed to book the ticket. Venugopal and Vyas [10-12] presented in their research paper made the comparison of the various features of the application like Ixigo, Makemytrip, Cleartrip and Irctc. Each application has some advantages and disadvantages. Budhkar and Das [12] presented the trend of the selling of the railway tickets. He presented that during the rush period train booking are full within 2-3 days. Generally, the booking of the train starts 60 days prior to the date of travel. This booking is closed by the railway 12 hours before the travel of the train. It is always better to book the ticket early to avoid the last-minute rush.

4. Conclusion

Each research discussed above has its own advantages and disadvantages. As railway is the cheapest mode of transport in India therefore we need to have the best railway ticketing system so that the people of India don't have to stand in the queues for too long. Author of the paper still feels that many steps need to be taken in the ticketing system especially in ordinary ticket to make the Indian railway ticket system more efficient so that people of India don't wait more than 1 or 2 minute in the queue. The railway authorities must pay heed to improve the present ticketing system.
This will help the every citizen of India.

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