Bus Ticketing Project

An e-Governance Project proposed by
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This is a project proposal for issue and management of bus tickets based on the patent pending Digital Value Imprinted Instrument System of Naavi (DVIIS).

The project can be implemented through e-ISA by Ujvala Consultants Pvt Ltd along with its implementation partners.

The project benefits include

1) Decentralized issue of tickets at a large number of counters managed by authorized agents at their expense
2) Better capacity utilization fleet
3) Prevention of Ticket Cornering
4) Zero Financial Risk for the Government
5) Substantial reduction of cost in Ticket Administration

The Scheme suggested here consists of several individual suggestions integrated for the optimization of the suggested objective. However based on the individual Government/Corporations requirements some elements can be refined at the customization stage.

Upon receipt of the Expression of Interest in the project as proposed, further details can be discussed.

The Details of the Scheme:

The Ticket:

The essence of the scheme is that a "Pre Printed" "Blank Ticket" is issued by the Corporation to the agents or to registered members of public.

The Front face of the ticket would look as follows:

The back side of the ticket would look as follows:

The particulars of this ticket are preserved in a central server of the Corporation against the serial number of the ticket. As a Zero Value ticket issued to the agent.

The Agent:

Each agent on enrolment will be issued an ID Card indicating his agent number.

The agents have to purchase the Blank tickets at a price fixed by the Corporation for the stationery value. Suggested price Rs 0.50 per ticket (Rs 5 for a book of 10 blank tickets).

The agent has to also deposit a sum of his choice at multiples of RS 100 each upto which he can issue tickets to the public against cash.

The agent can make the payment online using a credit card or in cash at the designated counters of the Corporation.

It is envisaged that the agent will hold a number of blank tickets, maintain a minimal balance in his account and make further payments as and when required.

The agents will need to have internet connectivity at their end.

The system can also be extended to members of public directly through a simple registration process on the website.

Ticket Issue:

The public can approach any authorized agent who is having a stock of tickets and enquire for a ticket.

The agent will log on to the designated website, check the availability of the ticket and enter the ticket number for blocking the available seat against the particulars of the travel such as the name, sex and age of the traveler.

The system will issue a transaction reference number which will be entered on the ticket This will be entered on the front face of the ticket and the particulars would be entered on the back side of the ticket along with the signature of the issuing agent.

In a variation of the same system, the ticket may be "Self Issued" by the member of the public who registers with the Corporation, obtains blank tickets and makes a direct online payment whenever required.

The difference between the agent and the direct customer booking would be like the STD booths and private phone where the agent who undertakes to provide the service to the public would get a certain commission while the customer does not get such a commission.

Cancellation of Ticket:

When an issued ticket needs to be cancelled, the agent can log in to the website, and enter the number of the ticket for cancellation. In order to ensure that no ticket is cancelled except by the holder or under his permission, cancellation will require entry of a hidden number that is printed beneath the serial number on the left bottom corner of the ticket which will be revealed on scratching of the surface. The scratching will also ensure that the cancelled ticket cannot be re-issued.

It is envisaged that cancellation of tickets reported lost (Where the hidden number would not be available) will be an exceptional request that can be handled as per the general policy of the department. For example, tickets upto a certain value may not be reissued if reported lost and tickets of higher value may be reissued at a cost and against an indemnity against loss to the department.

The system for handling such requests can be simple and operate in the form of a request received with a deposit of the amount for the re-issue of a conditional ticket and return of a portion of the same less charges after the date of journey.

Status Enquiry:

At any point of time the status of a ticket would be available on the website against the serial number of the ticket. The enquiry can also be enabled through telephone through an automated voice response system.

This ensures the prevention of any fraudulent issue of tickets.

Pre Requisites of the System

The operation of the system envisages that the department also creates a data base of the bus services and the tickets made available in each trip.

In case such a data base is presently not available, the service may be introduced in steps town by town with the creation of a database of all busses leaving the particular place.

Economics of the System

It is envisaged that the cost of printing of the tickets would be marginal and similar to the present tickets issued at most of the computerized booking counters. This cost is directly recovered from the agents or the public who purchase the blank tickets in advance.

The agents can be paid commission as a percentage of the sales and as a percentage of the cancellation charges in such a manner that the total commission does not exceed the cancellation charges collected from the public.

The commission would be payable through credit to the agent's account after the date of journey and can be used for further ticket issue. The agent would also be permitted to withdraw the commission in cash from his account in case the agency is terminated.

The entire cost of operation of the service can be either absorbed by the department from its revenue or operated on a BPO model by an external trusted agency at a commission on sales.

In view of the decentralization of the ticketing operations, the load on the main ticketing counter would be grossly reduced and limited to the handling of the agents and stray walk in customers.

Kiosks that can print out tickets against an online credit card payment can also be installed at main bus stands so that the need for manual attention is reduced to the minimum. The existing staff can then be re-deployed for the back end operations including data base creation and maintenance with necessary training. Hence no additional cost is expected to be incurred by the department for the purpose of introducing the scheme.

Since the blank tickets would be bought by different agents and members of the public, the cost of printing of tickets would be shifted from the department to the agents/public. This would bring about a saving in existing cost structure.

Since the agents are expected to make a deposit amount equivalent to the amount of tickets they would like to sell, the revenue would start flowing to the Government in advance. Interest on float money would be an additional revenue for the department.

Small agents may replenish their accounts each day by remitting cash at the counters every day or as soon as their limits get exhausted. Those who have the facility will make the payment through online credit cards. If the department so wishes, the cost of such payment can be shifted to the agents.

The commission payable to the agents should be sufficient to absorb the credit card processing charges which may be around 5 % to 7 %. This cost can be brought down if the transfer of money from agents to the department can be made through a designated bank which can either allow the their customers to transfer money from their accounts to the department at no cost or receive payments on behalf of the department at their counters and make online credit instantaneously. If the Bank is offering online Banking service this would be part of their existing services. Under such an arrangement all agents would open online Banking accounts with the Bank and use the direct transfer facility so that the commission payable to them is remunerative.

The service provider for BPO operations if such an arrangement is used will have to be fixed on a negotiated basis.

Additional Comments

The online ticketing of the Indian Railways is considered a success both from the point of view of customer service and revenue generation. Hence the suggested system is also likely to succeed at the level of revenue appropriate to the market base.

The Railways system has a cost of "Ticket Delivery" which is substantial for small ticket amounts. The scheme has succeeded despite this burden. In the suggested system there is no "Ticket Delivery" Cost since the tickets are pre delivered at the cost of the agent/customer.

If the department can get a good deal for payment gateway charges, it may be possible to absorb this cost within the departmental costs and the public would find the scheme irresistible.

Implementation:

The scheme is recommended for implementation town by town so that the data base creation and staff training is reduced to the minimum. The essential system development would have a low gestation and is not expected to be more than 3 months from zero date.

Security Issues

The zero value tickets are a low security risk and unlike value tickets that are issued by the department to the conductors, they need not be accounted and re-accounted every day. If the tickets are lost, they can be disabled in the system and rendered useless.

Every ticket issued at the zero value stage to any agent or a registered member is tracked by the system from the date of its issue by the department and the booking at the agent's place and to cancellation if any.

If the tickets are issued with a counterfoil and the original can be collected by the conductor and surrendered to the department, the usage can also be tracked.

Any ticket that is not in the system that is turned in at the journey time would create conflict of reservation in case the journey is double booked. Even otherwise such incidents come to the notice of the system when the used tickets are entered into the system and can be separately investigated to find the origin of such tickets and the underlying fraud.

Any other type of fraud that involves double booking of tickets can be traced to the IP address of the transaction and origin located for further action.

The ticket inventory can be monitored at various points and any abnormal usage pattern such as a ticket number ostensibly issued to an agent X is reported for booking by Agent Y would immediately be recognized and can be disallowed.

Any attempt by an agent to book tickets beyond the amount of deposit held by him can be instantly recognized and either disallowed or treated as an overdraft with appropriate limits and charges. Hence there is zero collection risk.

Certain State Governments have already been operating a system of decentralized ticket booking where the reservation cost is paid at the agent's place and the ticket amount is paid at the time of journey. In such systems there is a possibility of cornering of tickets particularly during peak time such as festival times. The suggested system envisages the name of the traveler, Age and sex to be recorded so that the possibility of misuse is limited.

In the event any agent issues a ticket by filling up a dummy name on the system without filling up the back side of the ticket and allows the user to change the name of the traveler, this can be unraveled when the usage of the ticket is monitored and the offending agent can be black listed or punished as per the rules to be set for the purpose. This can also be done through a sample audit of tickets collected by the conductors and surrendered to the department with the information available in the database.

PS: The above system is based on a patent pending in the name of Na.Vijayashankar and the implementation of the scheme would be subject to necessary license for use of the Patent.