Government of India (Bharat Sarkar)
Ministry of Railways (Rail Mantralaya)
(Railway Board)

No.2005/C&IS/Vending Machine/Pt.I PPP New Delhi, dated 31.8.2007

The General Manager,
Southern Railway,
Chennai.

The General Manager,
South Western Railway,
Hubli.

Sub: Report of the subgroup appointed by Railway Board to plan and execute the installation of ATVMs.

*****

Please find enclosed a copy of the report of the sub-group to plan and execute the installation of ATVMs on Indian Railways. It is requested to work in close co-ordination with CRIS for launching the pilot project.

(Chhatrasal Singh)
Director (C&IS)

DA: As above.

REPORT OF THE SUB-GROUP

APPOINTED BY RAILWAY BOARD

TO PLAN AND EXECUTE THE

INSTALLATION OF

AUTOMATIC TICKET VENDING

MACHINES

1.0 Background

Railway Board had constituted a Sub Group to plan and execute installation of Automatic Ticket Vending Machines (ATVMs) consisting of the following: -

(i) Executive Director (PM), Railway Board

(ii) Executive Director (C&IS), Railway Board

(iii) Executive Director (Accounts), Railway Board

(iv) Executive Director (Traffic)/PPP Cell, Railway Board

(v) Group General Manager/PSA, CRIS/Chanakyapuri

The order constituting the Committee and the Terms of Reference of the Committee is at Annexure-I.

2.0 Introduction

On an average Indian Railway sells 16.5 million tickets per day. The vast majority of the tickets are for unreserved passengers. With installation of Unreserved Ticketing System (UTS), the sale of such tickets has been greatly streamlined. However, the problem of long queues persists at the counters at several stations. This often results in potential passengers not buying tickets. This is especially the situation at the busy suburban stations. Automatic Ticket Vending Machines are the answer to the problem.

2.1 ATVMs can be installed departmentally or through PPP route. Departmental provision would imply that the capital cost has to be incurred and requisite infrastructure needs to be created for maintenance/replacement of these machines in future. On the other hand, provision through PPP is likely to be almost a zero cost option for the Railways. Furthermore, if conditions are favourable, some additional revenue may accrue to the Railways in addition to the ticket revenue in some situations.

3. Essential requirements to achieve the objectives set for ATVMs

ATVMs must fulfill the following requirements to serve the intended objective of ease of use and catering to large volumes:

(i) These machines must be strong and robust to survive in the kind of environment that exists at different railway stations.

(ii) The machines must have easy-to-understand and easy-to-operate touch screens. These should be easily operatable by illiterate users also. These should have multi-lingual capability and must display regional, English and Hindi languages.

(iii) The design of the machine's exterior must comply with the norms of aesthetics as may be laid down by the Railway Board. When installed it must not consume too much of space. The machines should add to the charm of the stations without occupying any prime space.

(iv) The machines must comply with the hardware and software specifications specified by the Railway Board.

(v) The machine should be capable of operating with cash/coins of prescribed denominations and pre-specified smart cards.

(vi) The operating system devised by CRIS shall be used on the machine. It should be installed under the supervision of CRIS. There should be no other operating system in the machine, which can overwrite, invalidate or interfere with the system approved by CRIS.

(vii) The ATVM would be connected to the UTS network. It should have foolproof security safeguard so that the UTS network cannot be breached nor can there be any tampering, or under reporting done through the machine.

(viii) Machines must have limited capacity to work off-line (without connectivity to UTS) and without power on UPS on specific situations to be enumerated by Railway Board.

(ix) ATVM must be capable of dispensing tickets at the rate/rapidity to be specified by the Railway Board.

(x) The machine must perform reliably at such uptime as may be fixed by the Railway Board.

3.1 CRIS shall lay down the hardware and software specifications for the ATVMs (mandatory technical specifications) that must be met by all prospective vendors at the EOI stage.

4.0 Allocation of work between Railways and the private vendor in the event of PPP

In case the PPP option is to be exercised, responsibilities may be divided between the Railways and private vendor in the following manner: -

4.1 Railways would be responsible for the following: -

(i) Provision of space, power and connectivity: Railways will provide space (standardized to say 2m x 3m x 3m) for each ATVM. Power will be provided from the station power supply as provided to conventional UTS terminals, at the normal charges. Network connectivity shall be provided at the nearest UTS switch, and the vendor shall have to provide LAN extension up to the kiosk.

(ii) Railways will ensure that adequate protection is given in the power supply to ensure proper earthing of the supply. However, surge suppression and harmonics-free waveform might not be possible

all the time; the equipment should be able to continue to perform normally in mild conditions.

(iii) Railways shall approve all the hardware, software and design aspects of ATVMs. The kiosk design pertaining to passenger movements near the ATVMs will be approved by the Railways.

(iv) Railways shall provide as much protection to the ATVM equipment as is provided to other public property of similar value in the station premises.

4.2 The private vender would be responsible for the following: -

(i) Civil works and installation of the machines.

(ii) Collection and remittance of the proceeds of ticket sale on such periodicity that may be fixed by the Railways. The vendor shall maintain a deposit as may be prescribed with Railways and collect cash from each ATVM at the intervals prescribed and his running balance will be adjusted with Railways according to the formula as may be prescribed.

(iii) Advertisement and collection of revenue therefrom on the non-front exterior of the machine.

(iv) Installation and maintenance of the equipment at the stations throughout the duration of the concession.

(v) Replenishment of the ticket stationery and maintaining an appropriate level of currency notes and coins or change in the ATVMs.

(vi) Ensuring that each ATVM is securely connected to the UTS system at the application level unless there is a disruption in the connectivity.

(vii) Replacement of existing ATVMs and addition to the number of ATVMs as and when necessary to avoid delays and queues at all times.

5.0 Process to be followed for selection of the vendor

Since technical compliance with the mandatory specifications would a necessary pre-requisite, technical pre-qualification based on such compliance and some evidence of performance in the field would be necessary. For this purpose, it is proposed that following steps would be followed:-

5.1 Stage-I – Expression of Interest (EOI)

EOI calling for registration of vendors wishing to participate in the scheme would specify the technical standards and specifications to be complied with by the machine as well as the criteria for technical/financial capacity to be met by the firms.

(a) Criteria for Financial Capacity

(i) Vendors can bid on their own or in a consortium with other vendors. In case of consortium, there must be a lead bidder backed by at least one expert partner. Each partner must have at least 26% equity in the venture.

(ii) The sole bidder, or the lead bidder in case of a consortium, must be based in India, and must be of sound financial standing. Annual turnover in each of the last two financial years must be more than [Rs.50 crores]. Net worth of the sole/lead bidder must exceed [Rs.25 crores].

(iii) The lead bidder of a consortium shall stand guarantee for the actions of the other members of his consortium throughout the period of concession.

(iv) The expert partner may be based outside India, but with an annual turnover exceeding the equivalent of [Rs.25 crores] in the last financial year.

(v) The sole bidder, or the expert partner in case of a consortium, must possess experience in at least one of the following areas, in India or abroad.

(a) Operation and maintenance of a multi-location automated ticketing system for large passenger transport utilities.

(b) Operation of other high-volume multi location automated ticketing system

(c) Operation and maintenance of a large number of vending machines in public places.

(vi) In addition, the sole bidder, or one of the partners in case of a consortium, should possess experience of software development and implementation, network installation and management, and hardware deployment, management and operations. Each of the members of the consortium must have a turnover of more than [Rs.25 crores] in the preceding year and a networth of [Rs.15 crores].

(vii) The qualification criteria must be backed by documents, client credentials and references.

(viii) The EOI submitted should be signed by duly authorized persons from each of the organizations participating in the partnership/consortium. Documentary evidence should be provided to substantiate that the authorized person has been empowered with the power of attorney in this regard.

5.2 Stage-II – Lab Test of Prototypes

The vendors, who meet the financial and experience criteria, may be short listed and requested to present the prototypes of machines for lab testing by CRIS. Those short-listed vendors whose prototypes qualify on the basis of successful test results in CRIS would be requested to install specified number of machines for pilot trial to be conducted.

5.3 Stage-III – Pilot Trial

It is recommended that in the first instance, a pilot trial may be conducted at Chennai and Bangalore with two machines from each vendor. The trial could be conducted over a period of two months from the date of commissioning and the performance of the machines may be judged by a team to be nominated by the Railway Board. The team would take into account the actual experience of commuters' vis-à-vis the specifications by taking the feedback from them and the divisional authorities. Monitoring of the performance of ATVMs would be done in the presence of the representatives of the vendors. The vendor whose machines are adjudged to have successfully performed in the pilot stage would be pre-qualified for participation for tenders by Zonal Railways.

5.4 Stage IV – Financial Bids

The bids may be invited on the basis of maximum revenue being offered by the vendors for installation of the machines in the Railway premises (or in certain cases on the least cost to the Railways). The concession period would be decided in consultation with CRIS on the basis of the durability of the machines before the bidding is announced.

5.5 The pre-qualification of vendors would be valid for an initial period of two years. Meanwhile new entrants may also be added to the list by following the same process of lab testing by CRIS and feedback by commuters and zonal railways so that competition is expanded. The list of qualified vendors would be periodically updated by the Railway Board.

6.0 The detailed EOI (RFQ) and RFP documents may be drafted by CRIS duly assisted by a Commercial and a Finance Officer to be nominated by Board and submitted to the Committee. For this purpose, CRIS may also engage a Consultant, if required. Board's approval may also be sought for authorizing the Committee to approve the EOI and RFP document so that the same could be provided to Zonal Railways for use in the selection process.

7.0 The above framework may be submitted for the approval of the Board.

(V.A. Chopra)
GGM/PSA
CRIS

(S.K. Mishra)
Exec. Director Traffic (PPP)
Railway Board

(Rakesh Kr Tandon)
Exec. Director (PM)
Railway Board

(Amitabh Lal)
Exec. Director (C&IS)
Railway Board

(Shivaji Rakshit)
Exec. Director (Accounts)
Railway Board