

2.3 Information Technology Review of Computerised Reservation of Hotel Rooms in Himachal Pradesh Tourism Development Corporation Limited

Highlights

The Company introduced (1993) software computerised Central Hotel Reservation System for Hotel reservation facility at Central Reservation Office, Shimla. The software was got modified (September 2000) as web enabled software from National Informatics Centre.

Some of the important findings as a result of audit are mentioned below:

No policies relating to computerisation have been framed by the Company.

(Paragraphs 2.3.8)

There was delay in adopting various changes made by the Company from time to time in the rent rates, etc. in the computerised system resulting in faulty reports.

(Paragraphs 2.3.11 and 2.3.13)

The Company failed to recover cancellation charges of Rs.2.42 crore from the customers who reserved the rooms in the hotels at nil advances due to defect in the System.

(Paragraph 2.3.18)

The Company completed (March 2007) Local Area Network (LAN) in three units at a cost of Rs.10.88 lakh but as the System had no provision to upload the data from the online hotel reservation system; the basic purpose of LAN was defeated.

(Paragraph 2.3.20)

Introduction

2.3.1 The Himachal Pradesh Tourism Development Corporation Limited (Company) was incorporated in September 1972 as a wholly owned Government Company with a view to providing a complete package of tourism services including accommodation, catering, transport facilities and sports activities.

The Company introduced (1993) computerised 'Central Hotel Reservation System' (CHORES) for hotel reservation facility only at Central Reservation Office (CRO), Shimla. The CRO reserved the hotel rooms on the basis of requests obtained from various marketing offices/hotels/tourist information offices/general sales agents/travel agents and sent the daily reservation charts of reservation for each hotel at least three days in advance using Company's vehicles, public transport system, fax, telephones, etc. To overcome various

shortcomings of the existing software, the Company got the CHORES modified (September 2000) as web enabled software from National Informatics Centre (NIC).

As on 31 March 2007, the Company had 55 hotels (Hotels, *Yatri Niwas*, Cottages/Log huts) having 1006 rooms and 10 marketing offices for hotel reservation.

Organisational set-up

2.3.2 The management of the Company vests in the Board of Directors consisting of 12 Directors including the Chairman (Chief Minister is the ex-officio Chairman) and Managing Director (MD) who is the Chief Executive. The MD is assisted in his day to day activities by the General Manager. The management of marketing offices/hotels/cafes is under the charge of Deputy General Managers/Assistant General Managers/Senior Managers/Managers and Assistant Managers.

Senior Accounts Officer (IT) is the overall in charge of computerisation in the Company.

Objectives of computerised reservation

2.3.3 The main objectives of switching over to computerised reservation (Internet) from central reservation office are to:

- decentralise the hotel reservation from the centralised booking;
- provide easy access to the customers/tourists to know about the availability position of accommodation in the Company's hotels;
- make the reservation process easier at marketing offices/hotels within and outside the State;
- keep proper track of reservation and cancellation made by the customers and to help them;
- reduce the gap of communication between the customers and the Company's hotels where the customers actually check in;
- increase occupancy in Company's hotels; and
- provide facility to the customers to know about the various tourist spots and Company's properties in the State web site of the Company.

Scope of audit

2.3.4 The IT Audit of records relating to reservation of hotel rooms of five¹ out of 10 marketing offices and 12² out of 55 hotels/*yatri niwas*/log huts in the State was conducted during March - May 2007.

Audit objectives

2.3.5 Objectives of the IT Audit were to evaluate:

- reliability, integrity and authenticity of the data;
- availability of the data;
- safety and security of data; and
- IT environment in various booking centers and availability of related documentation.

Audit criteria

2.3.6 The audit criteria used for the IT audit were:

- The IT best practices; and
- The business rules for the charging of fares.

Audit methodology

2.3.7 The methodology adopted for attaining audit objectives with reference to audit criteria was as under:

- Review of agenda and minutes of meeting of the Board of Directors (BODs) and Committee constituted by the BODs.
- Study of the computerised system.
- Before commencing audit, the audit objectives, criteria and scope were discussed (March 2007) with the General Manager (HPTDC) in an entry conference. The audit findings were discussed (May 2007) with the Managing Director (HPTDC) in an exit conference.

¹ *Marketing Offices: Chandigarh, Delhi, Kullu, Manali and Shimla*

² *Hotels: Holiday Home, Shivalik, Peterhoff, Kunzum, Manalsu, Log huts, Hadimba huts, Beas, Sarvari, Silvermoon, Castle Naggar and Himachal Bhawan*

Audit findings

General

There was no password, backup and Business Continuity Plan policy to ensure security of the System and data.

2.3.8 Though the company decided to go for computerisation in 1993, it has not yet framed any policies relating to computerisation. Some of the important policies which have not been formed include the 'Password policy', 'The Backup Policy', 'The Business Continuity Plan' and above all the company's IT strategy.

Test check of 17 units revealed that trained staff was deployed only in five units for handling advance reservation. In remaining 12 units, either the staff was not trained or computers were not available for online reservation. In the absence of adequate on the job training, users were not able to handle different modules.

The Management accepted (May 2007) the audit observations and stated that efforts would be made to provide in-house training to the officials.

Non-conducting of post implementation review

2.3.9 Post implementation review is necessary to evaluate as to whether the System meets the envisaged requirements. Audit noticed (May 2007) that the Company had not conducted post implementation review on the working of the software.

System shortcomings

Lack of accounting module in the system

The System had no module for accounting purpose.

2.3.10 The System had no accounting module. The System was being utilised for electronic blocking of rooms, confirmed reservation of rooms *vis-à-vis* the availability position of accommodation which was electronically processed by the System. The System also did not produce daily/monthly returns for inter-unit adjustment of reservation amount and calculation of commission of General Sales Agents or Travel Agents. This was being done manually by the accounts officials.

The Management stated (May 2007) that the matter regarding providing of accounting module was under consideration and the needful would be done in the next phase.

System did not show effective rates

2.3.11 Though, the customers can view discount offers, the System gives actual tariff instead of the discounted rates when he enters the reservation

menu and selects for reservation in hotel where discounted tariff is applicable.

It was noticed in audit that:

- the System did not display the room rent with European Plan (EP)³ and Continental Plan (CP)⁴ distinctly;
- in six⁵ hotels, the System failed to ensure the collection of Modified American Plan (MAP)⁶ charges during May and June 2006 as the System did not display the MAP based tariff of rooms. It only reflected room rent on EP or CP basis which was fed in the System;
- the Company decided (November 2005) to allow 30 *per cent* discount on room rent to senior citizens in all hotels during season and additional 10 *per cent* over and above the discount announced in off season. Similarly, the privilege card holders were entitled to 20 *per cent* discount on the charges for accommodation, food and beverages in addition to the discount announced by the Company from time to time subject to a maximum of 50 *per cent*. During test check of computerised system for reservation of rooms in hotels, it was noticed that the System did not contain the facility of providing discount on reservation of rooms in hotels to senior citizens and privilege card holders at the time of on line reservation.

The Management stated (May 2007) that the Company offered various discounts from time to time and the same were shown under a separate icon “Special Offer” and that the matter would be considered for rectification during up-gradation of the System.

Excess deduction of commission

2.3.12 The Company started (May 2006) on-line advance reservation of hotel rooms (through credit card) through HDFC bank at 5 *per cent* commission from May 2006 and 3.5 *per cent* from January 2007 which is deducted by the bank itself.

During audit of computerised reservation system in Marketing Office, Shimla, Audit noticed that the System did not display the discounted rates of rooms rent for monsoon and winter seasons with the result the customers made payment as per actual rent through credit card and commission was deducted by the HDFC on the actual rent instead of on discounted rent received by the Company in its hotel. This resulted in excess deduction of commission of Rs.0.15 lakh by HDFC bank on discount of Rs.3.22 lakh (allowed between May 2006 and March 2007) and resulted in loss to the Company to that extent.

The Management stated (May 2007) that online advance reservation was started from May 2006 through HDFC bank whereas the System was developed in September 2000. It was further stated that the matter would be considered for rectification during up- gradation of the System.

³ *European Plan means tariff of room*

⁴ *Continental Plan means tariff of room includes breakfast*

⁵ *Silvermoon, Sarvari, Beas, Rohtang Manalsu, Kunzum and Holiday Home.*

⁶ *Modified American Plan means tariff of room includes breakfast and lunch or dinner*

The reports generated through the System were incorrect and misleading.

Generation of faulty reports

2.3.13 Test check of reports extracted from the System for 1 April 2005 for occupancy of all hotels revealed that the percentage of occupancy of some hotels was shown as negative.

Various reports extracted from the System revealed that the booking office-wise business reports reflected Rs.158.08 crore as net amount of advance reservation for 2005-06 whereas the final accounts of the Company reflected the total room rent income including booking through the System for the same year as Rs.15.84 crore only. Thus, the reports generated through the System were incorrect and misleading.

The Management stated (May 2007) that the error had been brought to the notice of the NIC and the same would be corrected in the software of hotel reservation system.

Faulty generation of customer Identification number (ID)

2.3.14 The System generates unique customer ID for each customer at the time of reservation. The test check of data, however, revealed that the System generated 58 duplicate customer IDs. Such situations may create problem to the Company as well as to the customers. If two customers have the same customer ID and one of them approaches for cancellation of reservation, the System may cancel the reservation of other customer too who has the same customer ID.

Test check of the data revealed that the System had not generated 1,089 customer ID numbers during September 2000 to March 2007. The missing customer IDs might have posed problem to the Management as well as to the customers at the time of check in.

The Management stated (May 2007) that such mistakes happened sometimes due to technical snag in web server.

Change Management

Less realisation of advance room rent

2.3.15 The Company revises tariff of hotel rooms from time to time after analysing the occupancy or after providing extra facilities in the accommodation. The Company generally revises tariff from 1 April each year.

During test check of reservation of rooms through computer System in three⁷ hotels, it was noticed that the tariff of rooms in the System was not linked with the date from which the tariff was effective and changed tariff simply over wrote the existing rates. This resulted in less realisation of advance room rent

⁷ *Beas, Kunzum and Sarvari*

of Rs.0.06 lakh during 2007-08 for reservation made up to March 2007. It deprived the Company of the benefit of enhanced advance room rent to the above extent.

The Management stated (May 2007) that the difference of room rent was collected by the concerned unit at check out time and that the matter would, however, be considered for rectification during up-gradation of the software.

Failure to club different category of rooms through the System

2.3.16 There are different categories of rooms in Company's hotels. The Company changes the category of rooms from time to time after providing extra facilities.

During test check of the System of online hotels reservation, it was noticed that after deletion of one category of rooms from the System and merger of the same with other category, the rooms of earlier category remained in the data file though they were shown as merged with the other category in the master file as the System updates the added category of rooms. Thus, the deleted category of rooms is available in the merged category for further reservation.

To cope with the problems, the booking officials first extracted the reservation chart of that hotel and after merging/deleting the one category of rooms and again confirmed this reservation in the System in the merged category at nil advances manually. This should have been done through the System to avoid clerical mistakes.

Other points of interest

Non-releasing of unoccupied reservation from the System

2.3.17 As per Company's policy, 100 *per cent* of the room rent for the first day and 50 *per cent* for subsequent days are to be received for advance reservation of rooms in Company's hotels.

Test check of arrival charts extracted from the System of different hotels for 2006-07 revealed that confirmed reservations were made at nil advances for regular/ selected customers but the customers failed to check in the hotels on the scheduled dates. The concerned hotels failed to cancel the reservations from the System where such reservations were made for more than two days. Due to non-releasing of such reserved rooms from the System, the Company could not reserve these rooms for other customers.

The System does not release unoccupied reserved rooms. Thus, the Company fail to reserve such rooms even though the same are not occupied.

The table below indicates the position of reservations made against nil advances during 2002-07 and consequences thereof:

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07
Total transaction reserved	19,051	23,579	26,426	29,638	35,903
Total transaction cancelled	3,692	4,155	2,366	2,568	4,199
Transaction cancelled out of reservation made against nil advances	2,928	3,460	2,219	2,441	2,910
Transaction cancelled out of reservation made as per applicable rates	764	695	147	127	1,289
Percentage of cancellation out of reservation made against nil advances to total cancellation	79.31	83.27	93.79	95.05	69.30
Percentage of cancellation against reservation made as per applicable rates to total cancellation	20.69	16.73	6.21	4.95	30.70

The percentage of cancellation of reservations made against nil advances to total cancellation ranged between 69.30 and 95.05 which was very high in comparison to percentage of cancellation against reservation made as per applicable rates to total cancellation. It indicated that the persons who were allowed to reserve rooms against nil advances took undue advantage of the facility and cancelled the reservation at will without keeping in mind the loss to the Company.

Loss of cancellation charges

2.3.18 As per Company's policy for cancellation of reservation, 80 *per cent* of the advance is refunded in case request for cancellation is received before seven clear days or more before the scheduled date of check in. If the request for cancellation is received between four to six days before the date of check in, 50 *per cent* of advance is refunded. No refund is given if the request for cancellation is received less than four days before the date of arrival.

Audit noticed (May 2007) that in case of those customers who reserved the rooms in hotels at nil advances but cancelled their reservation prior to the scheduled date of checking in the hotel, the Company could not recover the cancellation charges of Rs.2.42 crore at the minimum rate of 20 *per cent* from

Due to reservation of rooms at nil advances, the Company could not recover cancellation charges of Rs.2.42 crore.

the customers due to reservation made at nil advances as detailed below:

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Reservation amount of internet booking (in lakh)	369.53	438.67	519.33	598.88	754.12	2,680.53
Number of units (rooms) reserved	36,137	44,156	46,850	52,669	64,835	244.647
Reservation amount per unit (Average) (rupees)	1,023	993	1,109	1,137	1,163	5,425
Units cancelled of nil advance (numbers)	7,553	12,467	24,041	28,111	36,211	1,08,383
Reservation amount to be taken (in lakh)	77.27	123.80	266.61	319.62	421.13	1,208.43
Minimum reservation amount to be cancelled at the rate of 20 per cent (in lakh)	15.45	24.76	53.32	63.92	84.23	241.68

It was noticed that the cancellation of reservation was being done manually instead of through the System. The System should have automatically calculated the refund admissible and released the reservation. Audit further noticed that though the booking officials cancelled the reservation from the System, the amount refunded was not entered in the System in most of the cases. Thus, the reports generated for analysing the booking office-wise business for the specific period did not reflect the correct reservation (net) amount and defeated the very purpose of generation and analysis of various reports.

Test check of expected arrival chart of customers of seven⁸ hotels/huts for March 2007 also revealed that the booking officials of various marketing offices/hotels/tourist information centres reserved the rooms through the System at nil advances. The customers neither cancelled the reservation nor checked in the hotels on the scheduled date resulting in loss of cancellation charges of Rs.3.81 lakh.

Failure to use transport reservation system software

2.3.19 The web site of the Company shows the accessibility to the particular place and also the transport facility available in Company's vehicles but the reservation in the Company's vehicles is not available online. The Company also got developed (March 2002) a transport reservation software at a cost of Rs.0.75 lakh from National Informatics Centre Services Inc.

⁸ *Holiday Home, Peterhoff, Kunzum, Hadimba Cottage, Rohtang Manalsu, Log Huts and Beas*

(A Government of India Enterprise under NIC) for advance booking in Company's vehicles to increase the occupancy.

The transport reservation software developed at a cost of Rs.0.75 lakh was not being used.

During test check of records of transport reservation system, it was noticed that advance booking of Company's vehicles was being done manually even after lapse of five years of the development of software for reservation resulting in wasteful expenditure of Rs.0.75 lakh. The Head Office of the Company had issued (July 2003) three computers to transport wings for transport reservation but the same were being utilised by the transport wings for typing and accounts works.

The Management stated (May 2007) that as the booking of passengers in contract carriages during off season was less than the seating capacity of the buses and it had to ply light vehicles instead of Company's buses, the System could not be implemented. The reply is not acceptable as the Company was aware of this situation prior to development of the software.

Non-inter-linking of the local area network with online hotel reservation system

2.3.20 The Company completed Local Area Network (LAN) in three⁹ units up to March 2007 at a cost of Rs.10.88 lakh and work of LAN in two¹⁰ units was in progress.

Audit noticed (May 2007) that the System had no provision to upload the data from the online hotel reservation system. The inter unit adjustment of advance rent of reservation was also being fed manually by the accounts section in the System. Thus, the basic purpose of LAN to make the work easy, reducing manual intervention was defeated.

The matter was reported to the Company/Government in July 2007; their replies are awaited (September 2007).

Conclusion

Though, the Company had done a tremendous job of creating web site and providing facility of online reservation in its hotels, there were various defects in the System such as overwriting of existing tariff on revision of tariff, non-linking of tariff to date, packages like various discounts and MAP, AP and New Year tariff. The System also did not generate the desired reports viz. permits issued to customers, daily cash statement, linking with hotel LAN system, etc. which were necessary for effective management information system and internal control.

⁹ Hotel Holiday Home, Head Office and Hotel Peterhoff

¹⁰ Himachal Bhawan, Chandigarh and Hotel Pinewood, Barog

Recommendations

- **The Company should connect each hotel with one another and also with the Corporate Office for effective monitoring and internal control.**
- **The Company should review the System with a view to incorporate all the business rules for tariff charging of hotel rooms. This would avoid loss to the Company on account of non-realisation of advance room rent.**
- **The Company should incorporate accounting module in the System to facilitate generation of reports for inter unit adjustment of reservation amount and calculation of commission of General Sales Agents and travel agents.**