CHAPTER-II
PROPERTY MANAGEMENT SYSTEMS-AN OVERVIEW

2.1 PROPERTY MANAGEMENT SYSTEMS-AN OVERVIEW

In the present era, with the adoption of information and technology (PMS) in hotels has become pivotal for the management. Today’s managers are fortunate to get opportunity to do the tasks effectively and efficiently especially front office. They can easily track information such as history of guests, frequency of visits, their preferences regarding rooms and amount of revenue generated on a particular day and the occupancy on a given day and pass this information on to the marketing and sales department in order to better coordinate with them to enhance the revenue. Hence, this chapter focuses on the conceptualization of property management systems used in hotels. The chapter also describes the relevance, functions and importance of property management systems in the hotel industry. Finally, it discusses the problems, issues and challenges in hotel industry.

2.1.1 PROPERTY MANAGEMENT SYSTEMS: MEANING OF PMS AND DIFFERENT PROPERTY MANAGEMENT PRACTICES USED IN HOSPITALITY INDUSTRY.

The hotel industry in India traces its roots to the traditional community feats and the movement of people on pilgrimage thousands of years ago. The people in Indian hotel industry were reluctant to use ICT in hotel operations till the early 1980s. They always carried their day to day work in registers and using traditional methods. This is still in practices especially in small hotel properties in India. The property management system is a new concept used to improve the efficiency viz-a-viz profitability of the business operation. The property management system(s) engages itself in the provision of ICT, mainly to the people who are engaged in daily hotel operations. Today, there is no choice between the usage or non-usage of property management system in the hotel industry. Most of the hotels use software’s now for their day to day operations and have them linked with every department or with other properties.

Murphy, (2007) stated that PMS is often referred to as the single-most important IT
application for hotels by researchers and it is the most important current and future IT application in the hotel industry, followed by ‘point of sale’ (POS) and ‘central reservation systems’ (CRS). He also defined the hotel PMS as a network of various hardware and software applications used to manage an hotel i.e. sales & marketing, night audit, accounting, human resources management, electronic mail, security, reservations, front desk, call accounting, housekeeping, maintenance and food& beverage.

There are many types of PMS operations. They may vary in size, style, location, and the market they are being used. From room division, pre arrival to an exclusive fine dining restaurant of a deluxe hotel where the bills are posted using POS system and from HR department for keeping records of employees. All come under the fold of PMS sector. It is necessary to classify all the PMS sectors for a better understanding of their operations. The Property Management system practices can classified into 1) Front Office Operations and 2) Secondary sectors. The establishments under Front Office Operations are primarily concerned only with the provision of reservations, registration best rates and excellent services to the customers. The examples are using software’s for room reservations, use of CRS and GDS, various types of sms and new offers information being sent to the guests. The establishments in which the use of PMS is not the main activity but a secondary or support activities are called secondary sectors. The examples are use of PMS by housekeeping department and PMS used by F&B Outlets, amusement parks, departmental stores, and institutions and Banks. The primary activity of these units is the provision of better services to the clients. People staying away from home for some reasons depend on PMS now a days for getting more information and also making best use of services. These sectors in a hotel come under the control of IT department. Other than the secure and comfortable accommodation, guest staying in a hotel expect a wide range of information and also a reliable feedback method and a system which is time saving for the customers also. It is the responsibility of IT department of the hotel to provide these services 24 hours to the people who are using PMS and also to the guests. It helps a lot in the major revenue generating department of the hotel. Star category hotel have been spending a lot of amount on the property management systems and giving training to their staff also and telling about the best features of
PMS to their guests also, to satisfy the different palates and needs of the guests. Nambisan and Wang (2000) found the effect of knowledge barriers that exist within organizations to the adoption propensity of an organization.

The geographical location of a hotel would greatly determine the profile of its visitors, the size of its market and the level of competition that it has to face. These three variables have a strong impact on the ICT adoption propensity of a hotel also. Wei et al (2001) identified significant impact of geographical location on the adoption and use of the Internet among hotels. According to a study on use of ICT it was found that thus the location related factors considered in this study are: (i) the percentage of consumers who visit the hotel’s location from high Internet penetration countries, (ii) the overall market size of the hotel’s location, and (iii) the level of competition between the firms in the locality. The size of the hotel is an important factor on ICT adoption propensity. Effective adoption of ICT technologies requires a substantial investment of resources. Lack of resources may affect the inclination of small hotels to adopt costly ICTs and therefore large hotels can be expected to be more inclined to ICTs.

Many scholars were of the view that more customers now purchase tourism products through websites, and perceive that a website’s image and usability directly affects their purchase intentions (Chiang & Jang, et.al, (2006). Yeh et.al. (2005) suggested that business travelers who look for comprehensive IT services in hotels are willing to pay for certain IT services because they understand that hotels have to bear the high costs of implementing such technology. Oronsky and Chatthoth (2007) evaluated the use of technologies and identified the factors that motivate managers to implement new technology. Similarly, Cobanoglu et.al. (2006) stated that managers basically understand that IT can improve organizational efficiency, but believe that there are some barriers to the adoption of new technologies, including the cost of adoption, lack of information sources, and lack of strategy with in management.

Bakos, (1991) opined that innovative organizations, that engage technology in improving their business performance and also appreciate the potential of technology for expanding, can gain several benefits from an enterprise-wide Internet
and e Commerce strategy.

Traditional intermediaries, such as Hotel chain central reservation offices, Global Distribution Systems (GDSs), third party reservation system providers, web sites for reservations and Switch companies have also introduced websites (e.g.hilton.com, Travelocity.com, UTELL, and Pegasus respectively), all with the objective of doing business directly with guests. They have also established electronic links with other players such as on line portals and complementary suppliers, feeding them with content and products. In addition, a new breed of electronic intermediaries (such as Expedia, yatra.com and Lastminute.com) emerged to provide a “one stop-shop” for consumers, propelling reinter mediation and also requiring traditional intermediaries to rethink their strategies. Carroll & Siguaw (2003) showed that the major players involved in distribution, and highlight how economic issues are forcing hotels to provide increasing amounts of inventory to third party intermediaries.

O’Connor and Picolli (2003) showed a similar theme in their retrospective on Emmer et al’s classic 1993 article Marketing Hotels Using Global Distribution Systems. They highlight the strategic threat posed by online intermediaries, the dangers of over-reliance on the merchant model, the need to develop a logical pricing strategy and the need to drive customers to direct websites to help regain ownership of the shopping experience and to gather valuable customer data. Dale (2004) did an analysis explaining why electronic distribution has become so complex. Using strategic network theory, he shows how electronic intermediaries need to form strategic alliances in order to prosper. Dale identifies five categories of relationships: Channel, which enables one company to access the distribution channels of another; Collaborative, where competitors cooperate with each other to achieve goals that would be difficult in isolation; Communicative, where content from infomediaries enriches and adds value to partner websites; Complementary, where companies cross sell products normally bought together (e.g. flights and hotel rooms); and Converse, where the partners distribute unrelated products, thus allowing each one to access the distribution channels of the other in a non-threatening manner.

The property Management system plays important roles in the revenue generation of
a Hotel. According to HVS report the facts prove that the selected five star hotels in Delhi faced the problem like their Average Room Rate was very less (ARR Rs 7000-Rs 10000) as compared to different hotels in the same categorization in the neighboring countries like Singapore and Malaysia. One of the main reasons is the property management system still used by the hotels in Delhi. If the hotels start using better and more advanced property management systems it will enable them to get bookings through GDS and on the better rate that will help them to improve the ARR and total revenue. As more and more customers are getting educated and they prefer using internet for their room reservations and other type of bookings related to their travel and PMS also helps hotels in improving their customer database. Computer applications are central to the front office operations in today’s modern hotels. Computer applications include routinely processing reservations as well as handling registrations, guest charges, guest check outs and the night audit. Interfacing, electronic sharing of data, of hotel departments such as food and beverage and gift sop, spa beauty saloon; maintenance through monitoring of energy and heating and cooling systems and securing the guest keys are a few of its applications.

**Figure 4: SEGMENTS OF PROPERTY MANAGEMENT SYSTEMS**

<table>
<thead>
<tr>
<th>COMMERCIAL SEGMENT</th>
<th>NON-COMMERCIAL SEGMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chain Hotels</td>
<td>• Business / Industry Accounts</td>
</tr>
<tr>
<td>Independent Hotels</td>
<td>• Institute Catering</td>
</tr>
<tr>
<td>Restaurants/ Fast Foods</td>
<td>• Health Care Facilities</td>
</tr>
<tr>
<td>• Catering Firms</td>
<td>Transportation Catering (in-flight catering)</td>
</tr>
<tr>
<td>Banking</td>
<td>• Inventory Control</td>
</tr>
</tbody>
</table>

*Sources compiled from various research studies*

This figure above, illustrates how the property management systems are segmented. The non-commercial segment, or the ‘not-for profit’ operations, consists of the following types of PMS activities: business / industry accounts, Institutes, health care facilities, transportation food service catering and inventory control.
The property management system is organized around the functions needed to assist in delivering service to the guest. The software options listed earlier in this chapter are only a few of the many available to hoteliers. For purposes of this review, assume that the lodging property is equipped with a state-of-the art PMS and that the system is up and running. The software program main menu lists on the screen all the available individual programs (modules) included in the system. These modules lie at the heart of the front office manager and his or her staff’s ability to deliver excellent service to sharing of financial information. The PMS has become so much an essential part of lodging operations that to operate a hotel without one would be very difficult. The front office manager relies on the reservation module almost hourly to check changes that may affect the day’s service and financial operations. The night audit, if completed as it was in previous years tallying columns or using a mechanical audit machine—would take much training and many labor hours. The posting module is another timesaver that produces a much more accurate and efficient-looking guest ledger.

Technologies in hotels can be divided into two broad categories: customer centric and hotel centric. The former refers to all type of technologies visible to the customer, such as in-room guest entertainment, whereas the latter refers to back office applications such as property management systems.

Main menu of a property management system

1. Reservations
2. Yield Management
3. Registration
4. Room Status
5. Posting
6. Call Accounting
7. Checkout
8. Night Audit
9. Inquiries/Reports
10. Back Office
11. Housekeeping
12. Food and Beverage
13. Maintenance
14. Security
15. Marketing and Sales
16. Personnel
17. Electronic Mail
18. Time Clock
Common Modules of a Property Management System:

According to various authors Bardi (2011), Andrews et.al (2009) there are various common modules in Property Management Systems which are as follows:

- The posting module of a PMS often supplies one of the first benefits realized by the front office manager: immediate posting of charges incurred by the guests. Not only is the posting operation streamlined but also accuracy is ensured. A PMS allows the posting to occur at the point of sale in the restaurant, lounge, or gift shop. Similarly, room and tax charges or telephone calls can be posted to the electronic folio in a very short time. Transfers and adjustments of guest charges (with approval by management) to folios are easily made. Charges incurred on behalf of the guest can be posted to the electronic folio by entering room number, amount of charge, department, and transaction type. These data are stored in memory and retrieved after an inquiry, during report generation, or at checkout. The accuracy of these charges still depends on the employee operating the point-of-sale terminal in the restaurant. The inconvenience of guest checkout (long lines, disputes over charges) is greatly reduced with the PMS checkout feature, which prints out an accurate, neat, and complete guest folio in seconds. Disputes over guest charges still occur at the time of checkout, but not as often. The posting of a long-distance telephone call to room 295 instead of room 296 is less likely to occur with a PMS, because the PMS interfaces with the call-accounting system and the phone charge is automatically posted to the guest’s electronic folio.

- Efficiency at time of checkout is also improved when the desk clerk retrieves a hardcopy of the folio and presents it for review to the guest. The guest has already indicated method of payment at check-in. An imprint of the credit card has been made, or prepayment has occurred. The floor limit, a dollar amount of credit allowed by the credit card agency, and house limit, a dollar amount of credit allowed by the hotel, have been monitored by the PMS. These controls help avoid high debit balances; the amount of money the guest owes the hotel. Last-minute purchases of products or services are automatically posted at the point-of-sale terminals. A PMS can generate a paid in advance (PIA) listing,
which monitors guests who paid cash at check-in. The PIA prevents guests from charging products or services to their guest folio.

- Access to the room status module provides information on availability of entry to a guestroom. There are two types of room status: reservation and housekeeping. Reservation status can be open, confirmed, guaranteed, or repair. Housekeeping status can be ready, on change, or out of order. Reservation status is maintained by the reservation department. Guest registration modules have greatly improved the check-in process. Because information has already been captured at the time of reservation, less time is required for registration. The front desk clerk need only verify the guest’s request for room type, location, and rate with room inventory and room status. Provisions for walk-in guests without reservations are similarly handled. Method of payment is also established. The hard plastic key can be issued after the security module has changed the entrance code for the room.

- Guests can avoid checkout lines by using in-room guest checkout, a feature of the property management system that allows the guest to use a guest room television to check out of the hotel. For this process, the night desk staff slips a copy of an updated guest folio under the door the night before checkout. The guest enters a few digits on the television control panel to start the process. After he or she answers questions about multiple guest accounts in the same room, accuracy of charges, and method of payment, for example, the process is complete. The guest can pick up a copy of the folio at the front desk if desired.

- The inquiries/reports feature of the PMS allows management to retrieve operating or financial information at any time. The front office manager may want to check the number of available rooms in the room inventory for a particular night, the number of guests expected to be checked in, the number of guests to be checked out for the day, the current room status from the housekeeping department, or the outstanding balance report, a listing of guests’ folio balances. These reports can be produced easily on a PMS.

- The hotel’s accounting office, known as the back office, uses the accounting module of aPMS, which assists in the overall financial management of the hotel. PMS simplifies the accounting processes, which include the labor-intensive
posting pro-cedure of accounts payable, which is the amount of money the hotel owes vendors; the transfer of accounts receivable, which is the amount of money owed to the hotel, based on the guest ledger and city ledger; compilation and production of the payroll; budget preparation; the production of the profit-and-loss statement, which is an official financial listing of income and expenses; and the balance sheet, which is an official financial listing of assets, liabilities, and owner’s equity at a certain point. For example, financial information concerning a certain vendor is entered once on a terminal located in the back office.

- The food and beverage module reduces paper flow (vouchers) as well as telephone calls from the restaurants and lounges to the front desk. Other features include inventory control and calculation, recipe development, pricing, item profit evaluation, and sales projections files.

- The marketing and sales department makes extensive use of the PMS. This department can retrieve guest histories—information on guests’ previous stays that reveals geographic origin, telephone information, organizational affiliation, credit card usage, room accommodation preferences, and the like—from reservation and registration. The source of the reservation (secretary, group, travel agent), type of accommodation requested, and ZIP code of business office or personal domicile are only some of the. Sales production analysis and labor analysis are also possible with this module. Data that can be obtained from the reservation files. Additional marketing data (newspapers read, radio stations listened to, source of recommendation) can be collected at the time of registration to give the marketing and sales department information on advertising media for target markets. Another PMS application that the marketing and sales department can use is the ability to produce direct mail letters, which are letters sent directly to individuals in a targeted market group. Individual letters advertising certain products and services, together with mailing labels, can be prepared. Weekly function sheets, listings of the daily events in a hotel such as meetings, banquets, and receptions, can be produced by assessing individual banquet sheets, listings of the details of an event at which food and beverages are served.
• The maintenance of personnel files is greatly enhanced by using a PMS. Information concerning job category, date of hire, record of orientation and training, rate of pay, last evaluation date, promotions, pay increases, payroll deductions, and the like assist management in developing a well-operated human resources department. The amount of paper involved in employee recordkeeping can be kept to a minimum. The word processing application is used to generate form letters, job descriptions, reports, employee procedures, and policy manuals.

**Figure 5.**

**Different property Management Systems Used Worldwide**

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Name of the PMS</th>
<th>Window Based or Dos Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MICROS</td>
<td>Both</td>
</tr>
<tr>
<td>2</td>
<td>FIDELLIO</td>
<td>Both</td>
</tr>
<tr>
<td>3</td>
<td>OPERA</td>
<td>Window Based</td>
</tr>
<tr>
<td>4</td>
<td>AMADEUS</td>
<td>Window Based</td>
</tr>
<tr>
<td>5</td>
<td>GDS</td>
<td>Window Based</td>
</tr>
<tr>
<td>6</td>
<td>Enablez</td>
<td>Window Based</td>
</tr>
</tbody>
</table>

### 2.1.2. TYPES OF PROPERTY MANAGEMENT SYSTEMS

There are many types of Property Management Systems and various brands of different companies providing these technological solutions to the hotel industry depending on the requirement of the hotels. Few of the major brands offering property management solutions are as follows:

1. **OPERA:**

OPERA enterprise solution is our premier property management software, the OPERA Property Management System (PMS). Designed to meet the varied requirements of any size hotel or hotel chain, OPERA PMS provides all the tools a hotel staff needs for doing their day-to-day jobs — handling reservations, checking
guests in and out, assigning rooms and managing room inventory, accommodating in-house guest needs, and handling accounting and billing. The property management software is configurable to each property’s specific requirements and operates in either single-property or multi-property mode, with all properties in a complex sharing a single database. OPERA Property Management Systems is fully integrated with OPERA Sales and Catering, OPERA Gaming and Comp Accounting, OPERA Vacation Ownership System, OPERA Quality Management System, and the OPERA central systems — ORS, the OPERA Reservation System; and OCIS, the OPERA Customer Information System.

Hospitality System Interfaces: OPERA PMS includes interfaces to hundreds of third-party hospitality systems including yield management, telephone and electronic switching, TV and video entertainment, key lock, restaurant POS, activities scheduling, minibar, and wakeup call systems.

OPERA Xpress: OPERA Xpress offers a scaled-down edition of our property management systems for smaller properties or properties offering limited services.

2. IDS:-

An intrusion detection system (IDS) is a device that monitors network and/or system activities for malicious activities or policy violations and produces reports to a Management Station. Some systems may attempt to stop an intrusion attempt but this is neither required nor expected of a monitoring system. Intrusion detection and prevention systems (IDPS) are primarily focused on identifying possible incidents, logging information about them, and reporting attempts. In addition, organizations use IDPSes for other purposes, such as identifying problems with security policies, documenting existing threats, and deterring individuals from violating security policies. IDPSes have become a necessary addition to the security infrastructure of nearly every organization.

IDPSes typically record information related to observed events, notify security administrators of important observed events, and produce reports. Many IDPSes can also respond to a detected threat by attempting to prevent it from succeeding. They use several response techniques, which involve the IDPS stopping the attack itself,
changing the security environment (e.g., reconfiguring a firewall), or changing the attack’s content.

Statistical anomaly and signature based IDSes:

All Intrusion Detection Systems use one of two detection techniques:

**Statistical anomaly-based IDS**

A statistical anomaly-based IDS determines normal network activity like what sort of bandwidth is generally used, what protocols are used, what ports and devices generally connect to each other- and alert the administrator or user when traffic is detected which is anomalous (not normal).

**Signature-based IDS**

Signature based IDS monitors packets in the Network and compares with pre-configured and pre-determined attack patterns known as signatures. The issue is that there will be lag between the new threat discovered and Signature being applied in IDS for detecting the threat. During this lag time your IDS will be unable to identify the threat.

3. MICROS

**HOTEL PROPERTY MANAGEMENT SYSTEMS AND POINT OF SALE SOLUTIONS**

Whether you are operating a single boutique hotel or an international hotel chain, MICROS hotel property management systems are robust enough to handle all of the elements involved in hotel revenue management with the flexibility you need for your day-to-day operations. Our restaurant point of sales systems integrate with the OPERA Enterprise solution, allowing you to link POS transactions, back office functions, and guest management capabilities in a single system. All of our systems are modular, so you can take the solutions you need without paying for the ones that you don’t.

4. RMS: Reservation Management Systems:

RMS is an Australian software company producing and supporting Online Booking, Channel management and Front Office Systems to the world’s hospitality
industry. RMS has been at the forefront of development of property and reservations management systems for nearly 30 years for the Holiday Park, Caravan and RV Park, Hotel, Motel and Apartment segments with specialty applications for the Mining, Defence, Facility and Shopping Centre industries. The RMS property management system is now complimented with seamless, real time online bookings functionality to receive bookings from a property’s website, the global distribution system and a broad range of third party travel websites. There are over 3,000 properties in 25 countries taking advantage of the unique ability to have online bookings, channel management and a front office system in a single application.

5. **HOST:**

   The-Host Hospitality Management System will transform the way you manage your hospitality business for good. Our powerful, feature-packed, user-friendly hotel management software will empower you and your staff to take complete control of your inn keeping business - no matter the size. Our clients range from busy 300 room Hotels to small cozy Bed & Breakfast retreats. And our onsite-training will always ensure that your staff have the tools and confidence to use the system to its absolute maximum. The-Host Hospitality Management System provides the following: Reservations, real time online web reservations, front desk, back office, guest billing, reporting, point of sale and a lot more .. everything you will need as an hotelier, innkeeper or lodging provider. It is a business management system, not just a reservation system. Feature for feature and buck for buck nothing else comes close. With over two decades of research and development The-Host not only successfully covers every aspect of conventional guest and property management systems, but goes beyond with features only associated with systems costing many times more.

6. **OPTIMA PROPERTY MANAGEMENT SYSTEMS**

   Optima PMS is a state of the art; Windows based Property Management System that incorporates the latest in advanced technology. It is designed to provide all the features of a sophisticated Front Office system linked with other computerized hotel applications on the same relational SQL database.
Optima PMS places all the vital information needed for optimum operation at the manager's fingertips. All information can be viewed on-line, printed in a large variety of reports or shown on graphs. Advanced icons and color-coding give the managers an excellent overview of all hotel operations and allow them to maintain precise management controls. It is a profitable marketing tool, as it captures a wide range of data needed to make the correct marketing analysis. Information analysis is simple, quick and precise, emphasizing revenues, budgets and yearly comparisons in combination with data of occupancy, segmentation and other guest information.

The Optima Property Management System enables maximum performance, utilizing the latest technology. Together with the use of a modern GUI it offers the ultimate system for any Front Desk. Optima is a most powerful and advanced Front Office system based on years of experience and on highly sophisticated development and focus teams, including superior hoteliers, engineers and front office specialists. These teams have researched and 'brainstormed' to meet the highest standards of the hospitality industry for the next century.

EFFICIENT MANAGEMENT

Optima Property Management System places all the vital information needed for optimum operation at the manager's fingertips. All information can be viewed on-line, printed in a large variety of reports or shown on graphs. Advanced icons and color-coding give the managers an excellent overview of all hotel operations and allow them to maintain precise management controls. It is a profitable marketing tool, as it captures a wide range of data needed to make the correct marketing analysis. Information analysis is simple and precise, emphasizing revenues, budgets and yearly comparisons in combination with data of occupancy, segmentation and other guest information.

Optima PMS enhances reservations management, streamlines all accounting and billing, upgrades guest services, boosts staff productivity and improves marketing and sales performance for all types of hotels. It provides the hotels with all the tools necessary to give better, more personal and more efficient service to the guests, the result being an increase in the average price and the occupancy of the hotel, in an environment that is constantly more demanding and more competitive.
EASY, FRIENDLY OPERATION

Optima Property Management System has a unique open architecture as a result of using standard industry development tools such as Power Builder. The Windows Graphical User Interface helps simplify data entry, management inquiries and financial reporting. The simple user interfaces also makes learning and using the system easy and quick, no matter how big your hotel. Using any combination of keyboard, touch screen or mouse, the user can easily enter any data into the system and retrieve all the information easily, quickly and efficiently. Optima is designed for simple operation and maximum flexibility in functionality and performance that creates a profitable and smoother operation.

FLEXIBLE, CUSTOMIZED CONFIGURATION

Optima PMS has a flexible, open architecture that makes it simple to define according to each individual hotel requirements. The hotel may define its rooms by their features, group them together into different buildings, wings, room types and room categories. It may also define unlimited number of user-defined packages and plans, connected to different prices controlled by a sophisticated rate management. It handles travel agents, tour operators, companies and other kinds of customers each with its own contract and room allocation. Other services can be easily defined in the system including fixed or flexible prices. Accommodation rate tables are as flexible as they can be and can be entered in different formats.

A simple, easy to use set-up allows for rapid implementation in any hotel or resort enterprise. Use of varied definitions such as; room type, room category, wing, and more, are important features of the Optima PMS. Special services are easily defined with guest service in mind using VIP, company, agent and guest profile information. Room rate tables are flexible and may be used in varied formats.

The user may also define an unlimited number of guest packages and plans, in conjunction with prices controlled by a sophisticated rate management module. Contract and room allocation agreements are easily stored in the system guaranteeing a swift reservation process with your all important business and agent accounts.
The unique design and engineering of Optima Property Management System allows this state of the art PMS to be tailored to specific hotel needs and operations.

Optima Property Management System main advantage is that it is designed to meet each hotel's needs and procedures and not vice versa.

2.1.3. FUNCTIONS OF PROPERTY MANAGEMENT SYSTEMS

Various property management systems are used or installed by the nature of the demands they meet or required by the hotel. The following are the functions of major property management systems used in hotels..

FUNCTIONS OF PROPERTY MANAGEMENT SYSTEMS

Reservations: The major function of property management system is orearrival oriness of the guests ie reservation of rooms which are integrated with other functions such as profiles, sending confirmation mails to the guests taking advance payments from them and setting various rate codes as per different sources of reservations. The property management software offers a complete set of features for making and updating individual, group, and business block reservations, including deposit handling, cancellations, confirmations, wait listing.

Rate Management: The Property Management System offers an extensive set of features for setting and automatically controlling rates, for rate quotation, and for revenue forecasting and analysis to create the most comprehensive rate management system in the industry. The property management systems interface with the Revenue Management Systems and other major yield management applications.

Profiles: The Property Management Software also provides profiles - complete demographic records for guests, business accounts, contacts, groups, agents, and sources. Profiles include addresses, phone numbers, membership enrollments, stay and revenue details, guest preferences, and additional data that make reservations handling and many other activities faster and more accurate.

Front Desk: Arrivals and in-house guests are served using the Front Desk features of our property management software. This module handles individual guests, groups, and walk-ins, and has features for room blocking, managing guest messages
and wakeup calls, and creating and following up on inter-department advisories, or traces.

**Back Office Interface:** Revenue transfers, market statistics transfers, daily statistics transfers, and city ledger transfers can be easily made from Property Management System to a back office system. The property management system is also linked to other properties in case of chain hotels as they use same systems in all the properties which in turn helps them in sharing of database.

**Rooms Management:** Property Management System’s Rooms Management features handle all facets of room supervision including availability, housekeeping, maintenance, and facility management. The Queue Rooms feature of the property management software coordinates Front Office and Housekeeping efforts when guests are waiting for rooms which are not immediately available for assignment.

**Cashiering:** Posting guest and passer-by charges (including taxes and other generates), making posting adjustments, managing advance deposits, settlements, checkout and folio printing are a few of the many activities handled by Cashiering. Cashiering accommodates multiple payment methods per reservation including cash, check, credit cards, and direct bill. In multi-property environments, guest charges can be cross-posted from any property in the hotel complex.

**Accounts Receivable:** AR is fully integrated with the Property Management System database and includes direct billing, invoicing, account aging, bill payments, reminder and statement generation, and account research. Old balances from external accounting systems may be entered.

**Commissions:** Property Management Software also offers integrated features for calculating, processing, and following up on travel agent and other types of commission payments, either by check or via EFT.

**Reporting:** Property Management systems offers over 360 separate standard reports. Reports can be customized for each hotel and new reports may be created as needed using software’s built-in Report Writer.

**Fully Configurable:** Choice of different features, system behaviors and priorities, and system-wide defaults are controlled by the property. User permissions determine
which property management software features may be accessed by each user and user group. Many screens may be customized by the property.

**Global Perspective:** The Property Management System supports multi-currency and multi-language features to meet the requirements of global operations. Rates and revenues can be dynamically converted from the local currency to any other currency. The appropriate language for guest correspondence can be automatically determined by the guest’s profile language; country-specific address formats are supported.

**Night Audit:** The property management systems are used for night auditing in the hotels with a distinctive feature for auditing all the sales from room sales to check in, check outs, sales from all revenue generating departments in the hotel. Room rates are also posted automatically with the help of property management systems easily and quickly and also day change in the hotel is done by the help of software used.

**Accounts & Finance:** With the help of property management systems the various reports regarding revenues on daily basis, monthly and yearly basis can be known easily and also record keeping can be done electronically, profit and loss statement can be made with the balance sheet and the payroll system for hotel employees can be obtained.

**Point of Sale:** Another important function used in property management systems is point of sale that means the charges are posted at the time of sale and automatically added in the folio of the guest in case of in house guest and most commonly used by F&B Outlets for cashiering.

**Call Management:**

A distinctive function of property management system is call management. It helps in charging of the calls being made by a guest from his room during the stay. As the charges are automatically added in to his bill whenever he makes any outgoing call. As soon as the guest check outs from the hotel and software his call account is closed automatically.
**Human Resource Management:** A salient function of property management system is human resource management that is efficiently managing employees as the management needs not to make files of employees as they can be make in the software their attendance and time keeping appraisals can be done electronically easily.

### 2.1.4. ADOPTING A PROPERTY MANAGEMENT SYSTEM

The top management of a hotel decides about the right usage and importance of tasks while selecting for the right property management system. It also depends on the budget size of the hotel and also the number of rooms and the revenue generated while selecting the property management system. The needs analysis while selecting for right property management system depends on the flow of the guests in the hotel and the interdepartmental communication requirements. These days a review of reduced paper work is also a considered while selecting an appropriate property management system.

After management has gathered relevant data regarding the operational needs of the hotel and also with a viewpoint of the cost it must objectively determine whether a computerized system will help in providing better guest services and also increasing the revenues with less cost. Another important factor covered in this part is selection of right software which should be easy to use and latest hardware technology. A review of how to use the particular software and hardware the knowledge should be given to the employees or the people who will be using the system. The important factor like adequate power back up for the system and use of back up for the information to be saved in the system should be there. The regular maintenance of the software and regular updating of the property management system should be a consideration while selecting the property management system.

Selecting new equipment may be a computerized system (PMS) is best complete after a complete need analysis of the requirement of the hotel. A need analysis includes flow and information and services in a specific property and in case of chain hotels its linkages with the other properties under the same brand. An example of using the computers is that a problem like lack of information at the front desk at the time of a check in about the rooms from housekeeping department can be
removed. The first area of concern while selecting the property management system in front of hotel owners is the cost factor both at the time of installation and after that while using the software and hardware.

Adopting a new system for a hotel property is best done after a needs analysis is performed. A needs analysis indicates the flow of information and services of a specific property to determine whether the new equipments this case, computers can improve the flow. The bottlenecks that occur at registration or the lack of information from the housekeeping department on the occupancy status of a room can be alleviated by the use of computers at the front desk. Only after the completion of an operational flow analysis can computer applications be developed to improve the situation. As the technology has evolved and the equipment become more common, the cost of computerizing a hotel has decreased and the payback period has shortened. However, even with these lower costs, installing and operating a PMS is not inexpensive, and the cost of installing and operating a system that does not meet the specific needs of a particular property is exorbitant. A system that works well for one downtown hotel may not meet the needs of a down-town hotel in another city or of a motel in the same area. All the technological gadgetry in the world will not impress a guest if the equipment fails to deliver service. The system must meet the needs of the staff as well as the guests. An inappropriate PMS will produce control reports that are not useful to management; the functions of such software there-fore are limited, and the cost of the system exceeds its value. For example, a hotel owner who believes that a PMS will speed registrations and decides to purchase a system that does not allow housekeeping staff to input room status from the guest room phone will be disappointed.

Selecting software, the computer programs or applications that process data such as guest information and aid in financial transactions and report generation, is more important than selecting hardware, or actual computer equipment such as central processing units, keyboards, monitors, and printers. The effectiveness of a PMS depends on selecting software that allows management to increase guest satisfaction and to access financial and informational data for control purposes. The information obtained from the needs analysis provides a framework for evaluating the numerous
software packages on the market today. Each software package offers numerous features; it is important to choose one pack-age that is most appropriate for your needs. Software on the market today includes guest service, accounting, and information options that are standard in the hotel industry. Investigate the guest service features, accounting options, and information applications to determine which PMS is best for your property. Software vendor personnel will discuss with you the options that fit the size of your hotel and the needs of the guests. Hoteliers should also look forward and think of expansion and growth of their property, or per-haps change in the mix of their market. For example, one hotel may plan to add 200 rooms to the same market, while another hotel may not add any rooms but have a shifting guest type from 20 percent family and 80 percent business to 80 percent family and 20 percent business. Now the family market is doing much more dining in the restaurant (indicating a need for a point-of-sale system that interfaces with the PMS), purchasing more in the gift shop, (another need), and indicating more gift purchases for day-trip packages (yet another need).

Examples of how the PMS modules can be applied include the following. The marketing and sales department in any size hotel will clearly find that computerization of client files, meeting room information, and guest history is useful. Preparation of direct mail for a smaller property perhaps would best be outsourced, while a larger property may make better use of a PMS module. The travel agent mode for maintaining a database of travel agents and processing their fees is useful to any size property. The night audit is almost a universal necessity to properties of all sizes. The former eight hours of labor overbalancing the guest ledger and city ledger are replaced by a few keystrokes, in some cases. The front desk module, with its applications for check-in, check out, room status, postings to guest accounts, advance deposits, and cashier options, are also acceptable at both small and large properties. The call accounting system is an option that found its way into the hotel’s front desk (even at smaller hotels because of the deregulation of telecommunication systems in the U.S.) before some of the other modules, such as the point-of-sale in the restaurant. A maintenance module is more appropriate for a large hotel, whereas a small hotel can rely on an in-house email system, telephone, or paper mail system. These examples, as any other technologies that are developed,
should always be evaluated against goals of the hotel, the needs of guest, and a budget.

The front office manager must be aware of the operational capabilities of the PMS. Computer texts and trade journals can help you understand the hardware options available; Personal Computer PC magazine, in particular, is helpful for keeping up to date with hardware configurations and software applications. Visits to hospitality industry trade shows also help keep you informed on state-of-the-art systems. The ability to interface among computer databases (sharing or networking of information) is very important. This concept must be designed into the PMS for it to contribute to the effective delivery of hospitality to the guest and to generate a return on its investment. As computer applications become more sophisticated, sharing databases inessential. For example, the information secured at the time a reservation is made can be used by the marketing and sales department to generate more business. The point-of-sale data captured in the restaurants can be reviewed by front office staff to check how they can sharpen their hospitality delivery skills for guests on arrival. For example, if the staff knows a guest likes to order a certain Italian pastry as part of his meal, and then they can perhaps use that as part of the welcoming chat upon arrival. Or if a review of a guest folio reveals that she played a particular sport during her previous stay, the staff could mention the opportunity to set a start time for that sport. All of these ideas help make the guest feel important and help make a positive return on the investment for the PMS.

Purchasing or leasing a PMS for hotel use is a major financial decision. Such an investment can tie up cash flow. If the costs and benefits are not realistically projected, profits may be in jeopardy. The first part of this chapter stressed the importance of performing needs analysis. Hotel properties that match computer applications with needs by going through this process will achieve the most realistic assessment of costs versus benefits when adopting computers. The controller of a lodging property usually prepares a budget in consultation with the general manager. Sales of room-nights, food and beverages, and other products and services are projected. Considered with these projections are the related costs of producing those goods and services. The controller is usually aware of the specific costs in each
department—the amount of overtime pay required at the end of the month to produce the monthly inventory in the food and beverage department, the extra part-time help required to staff the front desk for a busy checkout or check-in, the cost to produce a direct mail piece for the marketing and sales office, and the fee charged by the outside accountant to produce a monthly profit-and-loss statement. This knowledge is helpful in determining how much money can be saved if a PMS were to be introduced.

The decision about whether to purchase or lease must also be made. The outright cost of purchase, related finance charges (if applicable), discount for cash, and depreciation are only a few of the points to review if the hotel decides to purchase. These considerations must be weighed against continuance of cash flow, application of lease payments to the purchase price, and tax advantages of leasing. Remember that the adoption of a PMS includes the management of all guest services and accounting functions. While the needs of the front desk alone for a call-accounting system or the rental of a reservations system may not justify the expense of a PMS, the needs of all departments can make such a system cost effective.

2.1.5. The Importance of Property Management Systems in Hotel Industry

Historically hotels (accommodation and other food & beverage services) were provided simply to maintain a standard of guest service, even if they did not show a profit. Today, hotel rooms and food and beverage departments can be very successful and contribute to hotel profitability. For this study, we examined the role of property management systems used and their impact on guest loyalty.

Reservations: The results showed that the procedures in reservations section of a hotel have seen a lot of improvement in efficiency and increase in business with the use of property management systems. The guest information, advance, confirmation of reservation, cancellation of reservations can be done spontaneously.

Reception: For any guest reception is the centre point of interaction and where the guest registration and check out is done, now a days the guests preferences can be retrieved easily as being stored in the systems and while check out also they can
view their bills in their rooms on TV screens as they also being linked to the property management systems.

**Restaurants:** The importance of the restaurants in a hotel is more significant for Luxury and Upscale hotels than for the other industry segments. However, a better-quality hotel restaurant will have a system showing service delivery time to the guest, and can have feature of the bill being posted directly in to his account or master folio.

Overall, loyalty club members and guests who paid higher rates tended to rate their stay experiences higher than other guests, these systems now a days helps make reservations from their mobile phones, in case they have concerned application of PMS in their phones. For more information about this study, please contact Market Metrix.

The Market Metrix Hospitality Index is a quarterly report of customer satisfaction with hotel, airline and car rental companies based on 35,000 in-depth consumer interviews. It ranks top hospitality brands by industry and, for hotels, by categories such as luxury, midprice and economy (Barsky, 2006). Dubé et al., (2000) stated that innovations in ICTs will thus be expected to increase customer satisfaction and long-term profitability. Connolly et al., (1998) According to his study from the hotel’s perspective, this approach (use of ICT) is expected to bypass legacy systems such as Global Distribution Systems, and to result in faster and more cost efficient bookings by the direct-to-consumer channel.

**2.1.6. PMS: THE LATEST PHENOMENON**

As the world is being ushered into the information age, adoption of the information and communication technology (ICT) is rapidly increasing in India also. Internet has transformed the world into a global village that can be navigated at the click of a mouse. It provides potential guests with immediate access to textual and visual conformation on hotels throughout the world. The Internet has also become an essential tool in business to business (B2B) and business to consumer (B2C) transactions, the distribution of products, networking of business partners, and is an instantaneous means of accessing knowledge on all kinds of information including
hotel and destination information. The PMS can be accessed through mobile telephones, cable-television, fixed telephones using traditional personal computers and laptops. Information is readily available 24/7 and the resulting cost transparency enables consumers to make more informed choices (Sinha, 2000).

The hotel and catering industry is considered to cover everything with the provision of rooms, food and beverage and other facilities required by travellers like housekeeping, business center, this will naturally include use of property management systems. In other words, property management practices are simply one element of a broader hotel and catering industry. In conceptual terms, this raises few problems except possibly with small hotel establishments where in some cases the PMS may be taken as a cost factor even though it is prepared and installed with features as per their budget. In practice, however, there are a number of difficulties in considering the hotel and catering industry as far as use of property management systems as the hotels still are not making best use of the technology. This arises because, following a number of official attempts at definition, the hotel and catering industry is often considered to have a much narrower scope. The use of property management systems forms a substantial part of the activities of the hotel and catering industry. Outlets include private and public sector establishments and range from small privately owned concerns to large international organizations and chain hotels having hotels in different locations from catering establishments in the most luxurious hotels and other departments in the hotel may be non revenue generating departments. The hotel and catering industry as a whole ranks as about the third largest employer in Great Britain, employing 2.4 million of the total workforce. Accommodation enterprises can, for example, rely on profits from their room rates to cross-subsidize use of PMS if necessary. Stand-alone restaurants often need profits to compensate for the tight operating margins involved in using of a better point of sale system. The 1990s was the breakthrough decade for hotel food and beverage specially in India, placing you either at your home making your room booking in a hotel from your home or when you dine in a restaurant you can know how long will it take in your food to be delivered. The attitude of hotel owners and operators towards property management systems is one of two extremes; make a serious go of it, or limit your operations to meet the minimal needs of your guests,
employees and your operations. The days are of chain hotels, brands, break-even restaurants and lounges are history. A quick look at current hotel development reports shows the diversity of operations at hotels these days. The vast majority of hotels use their websites or other websites for their reservations and send sms and emails to the guests for latest offers and feedbacks about their stay. Even those properties that fall into the traditional mid-market, full-service category are either limiting their operations to the use of property management softwares as per their operational requirements.

During the 1990’s the use of property management systems grew up not only in India but across the world, with the growing use of computers and internet the changing world has also changed the hotel industry and with the use of computers these automated systems are more commonly used now a days. Earlier hotels use to have emails and sms send to the guests about updates now a days the hotels softwares are linked with the sites of other travel companies which facilitate in reservations automatically with a better rate.

While room revenues have consistently been on the rise, the use of ICT has increased revenues from other areas which used to generate less revenues and even the ARR also increased with more advanced property management systems in use.

During recent past property management systems (software’s) have emerged an important aspect in the international hospitality industry. In fact ICT sector has generated huge revenue and employment opportunities in developing counties and India is no exception in this context. Thus, it has become pivotal for the service providers to understand customer expectations and perceptions as well as the factors that influence their evaluation and satisfaction with the provided service. The enormous changes have been noticed during the recent years in hotel operations in terms of information technology, organizational structure, revenue, innovativeness and etc, of this information technology has dramatically affected the environment of hotel operations practices worldwide and India is no exception to this. Today, the nature of hoetl industry has changed entirely to cope with the diversity of changes in requirements of guests such reservation from phones, checking bills on phone in rooms on TV screen, etc. For the last few decades, the hospitality industry has been
identified as a key driver in the growth of the service industry, which in turn, is one of the three main industrial components of a developed and/or developing economy. Olsen and Connolly (2000) focused that the use of IT can place knowledge and information at the core of a hospitality organization’s competitive profile. Gamble (1988), found that lack of intention of hotels to use ICT causes the hospitality industry to lag behind other industries in IT applications.

2.1.7. THE PRESENT ERA IN PROPERTY MANAGEMENT SYSTEMS

The present era is marked by the revolutionary changes in the service sector especially property management practices. A vast variety of services ranging from pre-arrival, welcoming and checkout guests have become part and parcel of today’s hospitality industry. Further, property management systems practices and procedure used helps to determine the financial soundness of the hotel operation. It is not only service that attract guests now a days but also repeat them and how effectively and time saving operations the hotels are using and use of ICT also helps providing better services as the guests are also more dependent on internet now a days. Thus, it has become imperative to explore right type of property management practices to use and to ensure more guest wiz-a-wiz revenue. Being such a dominant sector makes the industry a useful research site for this investigation. In light of the above, the decision to target the Indian hotel organisations reflects desire to add exploratory data to the emerging property management practices in Indian hotels (Chain and Independent Hotels) especially in National Capital Region (NCR). The enormous changes have been noticed during the last ten years in service operations in terms information technology, software’s and organizational structure, revenue, innovativeness etc, of these information technology has dramatically affected the environment of hotels operations worldwide and India is no exception to this. The present era is marked by the use of not only internet but also use of mobile applications by the users which help them to access and choose best services on their fingertips. The Property Management System (PMS) is the central data infrastructure of the hotel, handling the administration of all of the guests, their profiles and bookings, as well as their stay, the revenues generated, etc.
Law and Jogarathlan (2005) stressed that many hotels fail to exploit data in their business strategies. Most hotel operators are unaware of the wealth of data, related to both customer and management that are available from the software that they use every day and lack not only “a single data view” of the customer but also a “single view of operations”. Buhalis (1998) evaluated this trend to both the rapid advances in technology as well as the increasing demands of the customers who look forward to flexible, specialized, accessible and interactive products and communication with principals.

2.1.8. FINANCIAL PERFORMANCE IN PROPERTY MANAGEMENT SYSTEMS

Hotels are widely considered to be under-performing assets and hotel companies have sought to improve their financial performance in a number of ways including using property management systems. The findings reveal five key dimensions to the outsourcing relationship: core competencies, brand compatibility, organizational culture, operational tension, and systems of review, evaluation and control. It is concluded that, whilst there is evidence that the outsourcing of hotel property management systems can offer substantial benefits for hotel, it is important that the relationship is treated as more than merely the contracting-out of support services. The provision of software and proper training is an important and integral part of the hotel product and the complexities of the relationship between the partners, particularly in terms of issues such as user interface, organizational culture and operational, should not decline. The impact on consumer perceptions of the hotel product and consumer satisfaction should also be considered carefully (Nigel Hemmington, Christopher King, 2000).

2.1.9. PROPERTY MANAGEMENT PRACTICES IN INDIAN HOTEL ORGANISATIONS

Today, the nature and functions of property management systems have changed entirely to cope with the diversity of changes in requirements of guests and employees using these software’s. The multifunctional influences and guest habits in this sector have led to substantial focus on new systems.
Kasavana & Cahill, (2003) stated that for most hotels the key technology is the Property Management Systems (PMS) which is defined as “a set of application programs that directly relate to hotel front office and back office activities e.g. revenue management, reservation management, room and rate assignment, check-in & out management, guest accounting, folio management, account settlement and room status management”.

The PMS collects significant amounts of data that may be used to improve operational, tactical and strategic decision making. Additionally, hotels gather data from other sources e.g. customer relationship and loyalty programs, electronic point of sales (EPOS) at food and beverage outlets, online from their websites and those of 3rd party distribution websites. Data management is critical for both customer facing activities and internal management. Kokaz & Murphy (2008, 2009) have stated that almost all hotels have a property management system however the data used by the PMS is not always “visible” or available for cross functional activities and requires a level of investment in interfaces to fully maximize the benefits of the PMS data, and related data sources e.g. Central Reservation System (CRS), and other relevant data sources.

Law and Jogarathan (2005) highlight that many hotels fail to exploit data in their business strategies. The hotel industry in India is going through an interesting phase after a turbulent and difficult year. One of the major reasons for the increase in demand for hotel rooms in the country is the growth in sectors like information technology, telecom, retail and real estate. Rising stock market and new business opportunities are also attracting hordes of foreign investors and international corporate travellers to look for business opportunities in the country (Financial Express, 2010). Similarly, the Government of India’s ‘Incredible India’ promotion campaign and the ‘Atithi Devo Bhavah’ campaign have also helped the growth of domestic and international tourism and consequently the hotel industry. The government’s decision to treat convention centers as part of core infrastructure has also fuelled the demand for hotel rooms. There are some 1,980 hotels approved and classified by the Ministry of Tourism, Government of India, with a total capacity of about 110,000 hotel rooms (Ministry of tourism, Govt. of India, 2010).
Within the rapidly changing hospitality business environment there has been a resurgence of interest among researchers regarding the importance and application of food and beverage service practices. The literature to date has focused on some large scale hotels mainly in western counties. It has been noticed that services literature has grown significantly over the last decade, reflecting the increased contribution of hospitality industries to the national economy. But the limited literature on service importance and adoption remains fragmented. The majority of researches (Congram, 1994) have concentrated on the financial, insurance and other service sectors, and one of the largest industries world-wide, the hospitality industry, has not been specifically investigated. According to World Travel and Tourism Council (WTTC, 2009) travel- and tourism-related activities account for over 230 million jobs, or 8.7 per cent of jobs worldwide. Similarly, the hospitality industry is the largest and rapidly growing industry in India, employing over 20 million people, accounting for 8.5% of the total workforce, and generating over 5.9% of GDP (Ministry of Tourism, Government of India, 2010). However, hotel organizations and managers face real challenges in attracting and retaining tourist and in offering a high-quality ‘service’ to the increasingly demanding and discerning tourists.

Law and Jogaratnam (2005) further marked that IT can transform the nature of tourism and hospitality products, processes, businesses, and competition, and that tourism and hospitality organizations that have failed to master the right IT systems would find difficult to direct and manage their information-intensive business damaging their competitiveness. Singh and Kasavana (2005) have said that future IT applications will probably rely on wireless infrastructure, and that online purchasing with cashless payments will become more commonplace.

Therefore, Buhalis and O’Connor (2005) suggested that e-tourism in the future will be focused on consumer-centric technologies, and that organizations need to adopt IT to be able to offer this level of service and remain competitive and innovative. Outside of hotels exists the Global Distribution Systems (GDS) such as Sabre and Galileo. These systems include not only hotels but airlines, car rental and other travel resources and are commonly used by professional travel agents. In many cases
these are allocated a block of rooms within the hotels PMS systems but bookings from the GDS do not automatically update the PMS and must be entered manually.

As far as the small and medium hotel organizations are concerned the managers are still reluctant in using new property management systems in view of large investment in Cost. Beaver (1995) and Connolly, et.al (1998) in their study have evaluated that many hotel managers (SME) remain skeptical about the value of investment in IT and argue that their main failing is in not realizing the genuine length of time it takes to see actual results.

During recent past property management systems have emerged an important aspect in the hospitality industry globally. In fact, property management systems has helped in generating huge revenue and employment opportunities in developing counties and India is no exception in this context. Thus, it has become pivotal for the service providers to understand customer expectations and perceptions as well as the factors that influence their evaluation and satisfaction with the provided service. The enormous changes have been noticed during the recent years in service operations in terms of organizational structure, revenue, innovativeness and information technology etc, of this information technology has dramatically affected the environment of food and service practices worldwide and India is no exception to this. Today, the nature of hotel industry has changed entirely in terms of use of information technology to cope with the diversity of changes in requirements of guests such as self check in. For the last few decades, the hospitality industry has been identified as a key driver in the growth of the service industry, which in turn, is one of the three main industrial components of a developed and/or developing economy (Kotler and Keller, 2006). In this increasingly competitive market, one of the most important tenets for a service organization is to maintain an ongoing relationship with their customers in order to protect their long term interest (Power and Barrows, 2006).

The present era is marked by the revolutionary changes in the service sector especially front desk operations. A vast variety of services ranging from welcoming and checkout guests have become part and parcel of today’s hospitality industry. Edvardsson and Olsson (1996) state that service is an activity or series of activities,
which take place in interactions with a contact person and provides guest satisfaction. In fact, service is a term that is used to describe the manner and method in which food is served to guests in foodservice operations (Meiren and Burger, 2010). Further, service methods and procedure have to use to determine the financial soundness of the hotel operation. It is not only service that attract guests but also repeat them. Thus, it has become imperative to explore right type of food and beverage service practices to use and to ensure more guest wiz-a-wiz revenue.

In light of the above, the decision to target the Indian hotel organisations reflects desire to add exploratory data to the emerging property management practices in Indian hotels and resorts. During the recent past numerous studies have been appeared in the field of ICT to explore and application of property management practices in different countries. In other words, these studies have identified some of the property management practices in a broader sense which are widely used globally such as Front Desk Services. Adams, (2001) has found that many hoteliers are offering free-to-guest services such as High-speed Internet Access (HSIA), premium channels on the TV in order to stay competitive in their market segment. This strategy has led, in some hotels, to an increased occupancy, potentially higher ADR, and in helping satisfy guest needs.

Adams, (2004) also found that another IT system in place is the newly emerging kiosk technology. This technology has also evolved through the times and through several industries has found its way in to the Hotel industry. Hotel check-in kiosks need to be able to not only process the check in or check out but also print a receipt and dispense keys – preferably within a short amount of time. Tim Kearns,Marketing Director for MontegoNet is quoted as saying, “Hotel check-in kiosks are more complex than informational kiosks because they have to tie into a back-end reservation system, accept payment from the guest and dispense a key card.”

Many scholars viewed that IT systems are expected to prioritize and help improve guest services, increase employee productivity and enhance revenue generation (Siguaw, J.A et.al (2000). But, it is important to achieve the goal of improved guest services, IT systems have to be customized and guests have to be educated in the use
of the IT systems. While these systems are in place in many hotels and assist employees to work efficiently, they may not function correctly all the time.

In a study, IT systems at Hyatt Place hotels were observed for a period of three months. Hyatt Place hotels were designed to cater to the needs of the individual business traveler. This segment has traditionally relied on the availability and the adoption of information technology in all walks of life. They expect the same when they travel and stay at hotels. Therefore, it was recognized early with the design of this brand of hotels that, high-technology will be an important aspect of these hotels. However, the problems and issues in the practical applications of IT in day to day business operations were not fully anticipated. In this study Three IT systems at the Hyatt Place Fremont were observed for this case study: PMS system, self-service kiosk system and the HSIA. Guest satisfaction surveys for the first three months of 2010 were collected and analyzed in order to measure any differences in guest scoring. PMS System is the backbone of any hotel IT system – it allows for recording and dissemination of guest data – every other hotel system is, generally, interfaced with this system. Self-service kiosks are used in Hyatt Place hotels for two different purposes. 2 kiosks are available at the entrance to facilitate guest check in and check out processes. One self-serve kiosk is also available in the Guest Kitchen area where the guests can browse and place food and beverage orders – with or without assistance from one of the employees. Since Hyatt Place hotels are select-service hotels, meaning, they offer limited services to guests, this self-serve option takes on a whole new meaning. Due to the non-existence of a full-service restaurant type of setup, guests have to be made aware of the self-serve kiosk and then encouraged to use it whenever they want to place a food or beverage order.

(Gilbert & Powell Perry, 2000) found in their study that the hotel chains have been quick to capitalize on new technology and the same can be said of Web technology, with most major chains having a presence and booking ability on the Internet.

(Buhalis, et.al, 2000) during their study found that technology is underutilized in SMHOs in most European destinations, such as the Aegean islands, England, Wales, and Alpine French resorts. In these studies it was revealed that less than 50% of hotels use IT at all and those that do tend to concentrate on operational and
insignificant tasks, such as word processing and accounting. O’Connor & Frew, (2001) have stated that hotels may have cooperated with each other in the past and relied on traditional channels of distribution, the Internet has introduced more intermediaries into the arena, with hotels having their own Web sites, using specialist ISPs to distribute their product, destination management systems (DMS) providing online booking, and various other links and sites.

If we talk about property management practices, the most important task performed in hotels is the effective use of information and communication technology. In relation to ICT in the hotel industry as measured by three concerns (Front Desk, Back Office and F&B). Hotels in the United States have a higher degree of involvement in information and communication technology use in hotels and restaurants, which have the most significant effect on consumers’ willingness to stay in those hotels again and again as use of these practices makes their stay more comfortable. In contrast, hotels in India are on a initial stage in terms of involvement in use of pms practices in hotels than hotels in the United States.

Use of ICT has proved to reduce costs, increase productivity and increase revenues, especially, in the hospitality industry (Siguaw, Eng & Namasivayam 2000). Mamaghani, (2009) found that as technology is being slowly but surely adopted in Hotels, there are still some issues with how this technology is being applied to get best results. “The success of a travel or tourism business is largely dependent on how well they make use of the technology that is available and developing.” If information technology does not serve the end goal of customer satisfaction and delight, hotels will always hesitate to adopt new technologies. For example, usually property management systems are stand-alone systems that are interfaced with other electronic systems such as electronic locking systems, telephone accounting systems and central reservation systems. When one of these systems is down and there is not enough advance notice to the employees, it causes a hiccup in the service delivery process. Usually the wait time for the guest increases and due to the inability of the employee to explain the wait, quality of guest experience is diminished. Namasivayam, Enz and Siguaw (2000) have found in their study that hotels have adopted guest service related technologies at a lower rate than they do productivity-
and revenue-oriented technologies. Connolly, D.J., (2000) observed in his research that luxury hotel segment, despite the many opportunities through IT, continues to resist greater automation for the fear of depersonalizing service. Ham S et.al (2005) have concluded in their study that that hotel organizations are benefiting from information technology applications.

There can be self-service IT (PMS) systems in place that guest can use throughout the hotel stay process. For example, guests may be able to use web or phone check-in process before getting to the hotel, or use the kiosk check-in once at the hotel. These systems also need to function correctly for the guest to have the best experience possible. These days’ hotels adopt a technology in which hotels can view their bills in their room and also check in through their mobiles.

Freed, (2008) was of the view that PMS software is being customized, so front-desk clerks can offer guests a choice of which style of room and what amenities they want in that room at boutique hotels. While hotels in India are now also coming up with new property management systems which help them in increasing their revenues and making their guests have memorable stay in their hotels. With more and more chain hotels coming up in India as they are willing to invest in Indian market they are also coming up with the use of advanced information and communication technology practices with property management practices. But hotels in India face a constraint in installing property management system is the cost factor associated with the use and installation of integrated property management system. But IT Companies providing these property management systems to the hotels in India are also now providing software’s as per the requirement of the hotels as their are more and more budget hotels coming up in India.

2.1.10 PROPERTY MANAGEMENT PRACTICES AND HOTEL PERFORMANCE

The hotel performance always depends upon room sales and food and beverage service practices. The practices used by front office and food and beverage service department now a days in terms of use of property management systems contributes in hotel performance, by increasing guest turnover, providing extra facilities to the guest, understand guest needs etc. According to the American Hotel & Lodging
Association (AHLA), Washington, D.C., Tia T. Gordon, manager of media relations for the AHLA, says hotels can impact their bottom line via catering, restaurants, lounges and other food and beverage (F&B) operations.

In recent years, the industry has witnessed a few notable trends, including:

- Increasing emphasis on in-house development of guest retention
- A new focus on ICT in the select service segment (Hyatt Place, Aloft, Indigo, Courtyard)
- An explosion of partnerships with other companies and link them with PMS

To support the focus on ICT development, many companies are expanding expertise in this area by increasing the number of corporate staff members or adding senior level positions where none existed before like Manager IT and EDP Managers. This buttressing of corporate talent has occurred not only at some of the world's biggest hotel companies such as Starwood and Marriott, but also at some smaller companies such as Destination Hotels and Resorts, which have EDP managers and IT Departments that solely are responsible for the smooth functioning of property management systems, a newly-created position for the organization.

O’Connor, (2001) suggested that innovative use of ICTs can improve quality and productivity, strengthen distribution channels and provide competitive advantage through cost and differentiation advantage. Prior to the early 1990s, only linear relationships existed between principals and intermediaries. Alford, (2000) suggested that this can increase the efficiency of internal operations and allow hotels to reduce internal transaction and processing costs. Other benefits relate to enhanced data capture about customers. (Sheldon, et.al 2000). Stressed that the World Wide Web was quickly recognised as an ideal tool for a new form of distribution.

Over the past decade, the Property Management System practices in hotels have transitioned significantly. Hotels with restaurants continue to improve their room revenues, Front Desk Operations, from expanding facilities within reach of guests and menus to creating unique offerings for guests. On the other end of the spectrum, hotels without restaurants primarily focus on maximizing profit in the rooms department through the use of property management practices. However, it is not
surprising that one of the fastest-growing segments of hotels under development is “select-service;” hotels that fall in the middle between full-service and limited-service operations. Hotel companies are aware that room division operations are not just revenue generators, but increasingly important to the bottom line.

2.1.11. PROPERTY MANAGEMENT SYSTEMS & CUSTOMER SATISFACTION

Customer satisfaction/dissatisfaction began to emerge as a major topic in the field of customer research in late 1970s. Andreasen, et al (1977) indicated that customer satisfaction is a result of what customer thinks will happen (expectations), interacting with what customer things did happen (perceptions). When a purchase expectation is perceived to have been rewarded as a result of the purchase of customer receives satisfaction. Berkman et al (2004) has stated that the hotel as an arena for a multidimensional experience. Hotel staff must be ensure that perfect services should be provided to our respective guests as per their expectations by effective use of property management systems they are using. Early SPC conceptualizations and tests were focused on retention and revenue maximization with no explicit consideration of the cost of service quality efforts (Heskett et al., 1994). Thus the objective was to increase sales and revenues. Customer satisfaction is considered a key short-term measure that is a lead indicator of long term performance (Anderson and Sullivan, 1993; Hauser et al., 1994). Some features of PMS have been linked to satisfaction or service quality to profitability and not just revenue. For instance, Ittner and Larcker (1998) found that satisfaction is positively related to retention and revenues but not to margins. As an organization creates strategy maps a long-term historical records of the guests are needed. So we adopt both of the behavioural variables, occupancy rate and average sales per customer (Banker et al., 2000), instead of questionnaire (Lipe and Salterio, 2000; Banker et al., 2004).

Additionally, hotels gather data from other sources e.g. customer relationship and loyalty programs, electronic point of sales (EPOS) at food and beverage outlets, online from their websites and those of 3rd party distribution websites. Data management is critical for both customer facing activities and internal management.
2.1.12. IMPORTANCE OF EDP DEPARTMENT IN A HOTEL

EDP or IT department is responsible for maintaining and updation of the property management system the hotels are using as that is connected to each and every department in the hotel and even every room now a days as e-keys are used and guests can use IVR for complaints from rooms etc.

EDP or IT department is responsible for the maintenance of the software’s and hardware , updations, threat from viruses and also to maintain high level of data storage in the servers

Practically EDP serves:

- Installs PMS in computers
- Give the rights to use as per the requirement of the user
- Training to the employees
- Give updates about the new software’s
- Maintain and keep the data safe (Storage in servers Guest history)

2.1.13. PROPERTY MANAGEMENT SYSTEMS INCREASING HOTELS’ REVENUE

If the hotel industry is seeing a transition that is supported by the use of the property management practices and this particular segment doesn’t remains far behind? Not quite. In fact, according to industry estimates, in the last couple of years, ADR have increased substantially with the increasing use of property management systems. As a matter of fact, with global and preferences changing rapidly, most hotels have realized that it's the ICT systems which hold the key to both occupancy and better experience to a guest as a result, revenues. As hotels are using may be small or luxury , chain and independent hotels are using property management systems as it helps them increasing revenues and providing guests a remarkable experience without any delay in services in the hotel.
REFERENCES


Bardi, James A. Hotel front office management/ James A. Bardi.—3rd ed.


Murphy, H. (2007), An investigation of the relationships between technology partners and the hotel sector:Identifying and measuring the “value-added”


Electronic References:

www.micros.com
www.ids.com
www.opera.com
www.yatra.com
www.expedia.com