

HOTEL SECURITY AND MANAGEMENT SOLUTION

Hotel's security is one of the most important issues; in practice one security system might not be enough to provide the security to a hotel. Thanks to the new advanced technologies in computer networking, sensors, digital video, communication, and electronic tagging make it possible to implement all these technologies into one solution. Figure (1) illustrates in block diagram an ideal configuration of aspects needed for hotel's security. These aspects are related to operations, monitoring, controlling and business management. Solution should include all or part of the following systems based on hotel size and budget:

- Small business computer network system
- Digital video surveillance system (DVR)
- Access control system (ACS)
- Car park management system (CPMS)
- Building management system (BMS)
- Fire and intruder alarm system (FAS)
- Automatic mailbox notification system (AMN)
- Laundry tracking system (LTS)
- Assets tracking and management (ATM)
- Staff attendance and management system (SAM)
- Hotel management software: reception, billing, reservation and accounting (HMS)
- POS software for room services, restaurant, bar, room based mini-bar, gift shop, coffee shop and car-rental. (POS)
- Online hotel reservation system (HRS)

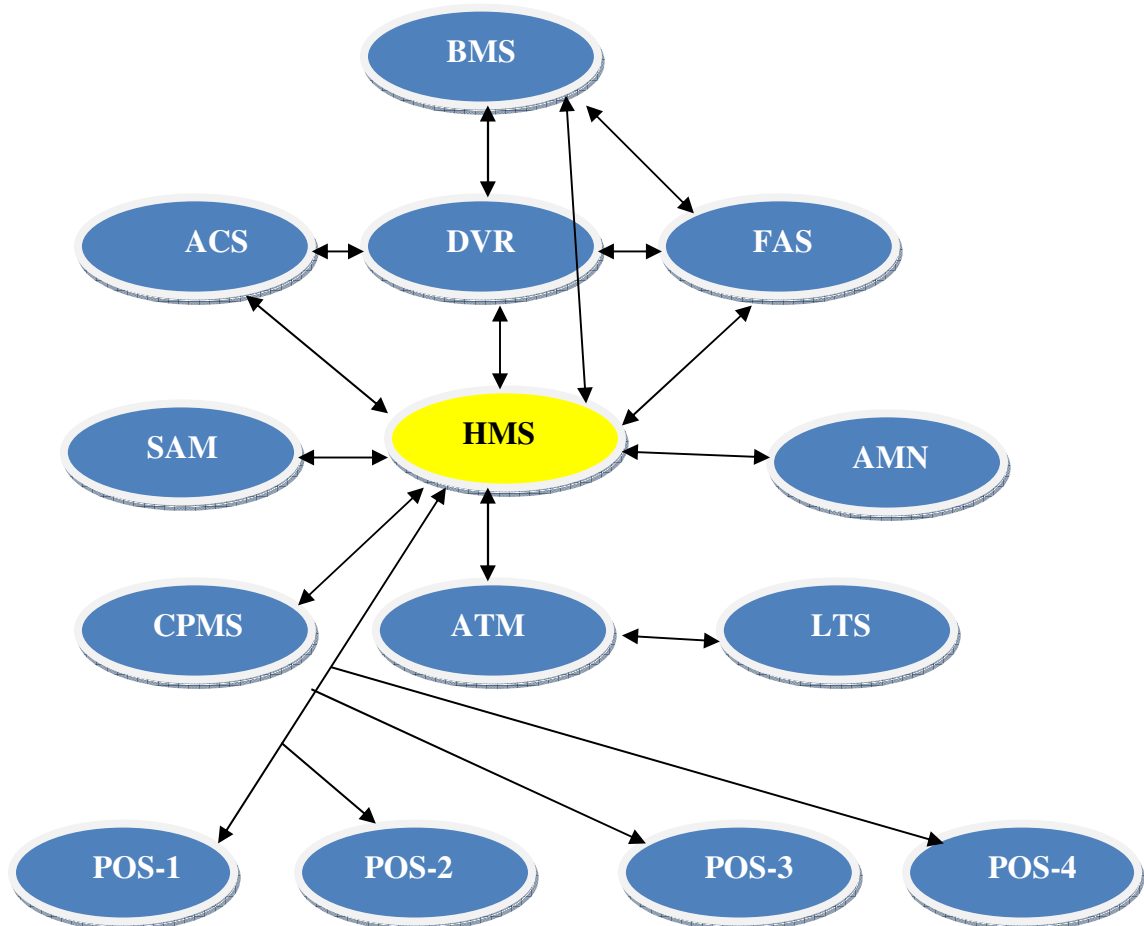


Figure (1) Hotel's security hierarchy



The Hotel's security solution is an integrated, multipurpose and computer-based system, which automates and takes control of hotel's buildings and management operations in the most efficient way possible for the staff, within the constraints of the installed equipments. The systems allows a number of proprietary systems to work independent of each other, but still share a common set of operator workstations and some limited data. This system provides an open and competitive environment for future expansion, while relying on network skills common to all experienced network controls system integrators. This method of integration enables cost-effective, manageable and maintainable integration among inherently different systems.

Hotel's network computer can be chosen as the server-based computer network as shown in figure (2) which is suitable for small business application. A number of workstations to be used to serve different hotel activities such as: reception, back office, restaurant, bar, coffee shop, room service and manager. Deferent application software package will reside at network server to achieve hotel management's needs. Events are reported automatically to central monitoring stations, private telephones of your choice and even to a pager. You may access the system from a remote telephone and Arm/Disarm it or receive system status information.

Access control system suitable for hotels is the system that based on Radio Frequency Identification (RFID) technology for the purposes of room entry and staff and customers identification.



The Building management system BMS is a computer based control system that controls and monitors the building's mechanical and electrical equipment such as air handling heating and cooling systems, lighting, power systems, fire systems, and security systems. Computer calculates the pre-set requirements of the

building and controls the connected equipments to meet those needs. Its inputs, such as temperature sensors and outputs, such as on/off signals are connected into outstations around the building. Programmes within these outstations use this information to decide the necessary level of applied control. The outstations are linked together and information can be passed from one to another. In addition a modem is also connected to the system to allow remote access.

The solution proposed systems using common database which reside on network server and can be accessed from any computer within the network in a secure environment.

All critical areas within the hotel premises will be monitored from a centre location, using a digital video surveillance system. The capacity of the system is proposed to be 32 wired and wireless cameras.

One central control room will be used for the purpose of remote monitoring and control and to house the server. This room will be equipping a large screen for displaying images and information.

An Assets Tracking and Management (ATM) System may be used to track hotel assets on site. This system allows you to know where an asset is, who has access to it and the condition it is in.

A Laundry Tracking System (LTS), which enables the process of tracking the flow of laundry from intake to return delivery. The system is based on Radio Frequency Identification (RFID) technology in remotely identifying items of clothing. The RFID tag is embedded inside a heat- and chemical-resistant token such that it can withstand frequent laundering and abuse. The tag is specifically designed for the laundry industry; the memory chips of laundry tags store a unique serial number that allows to unmistakably identifying the transponder throughout its entire life cycle.



Hotel management software package is a comprehensive software suite consisting of integrated modules for various aspects of hotel

management. This package will include functions such as booking room or restaurant's table, billing, analysing sales and more.

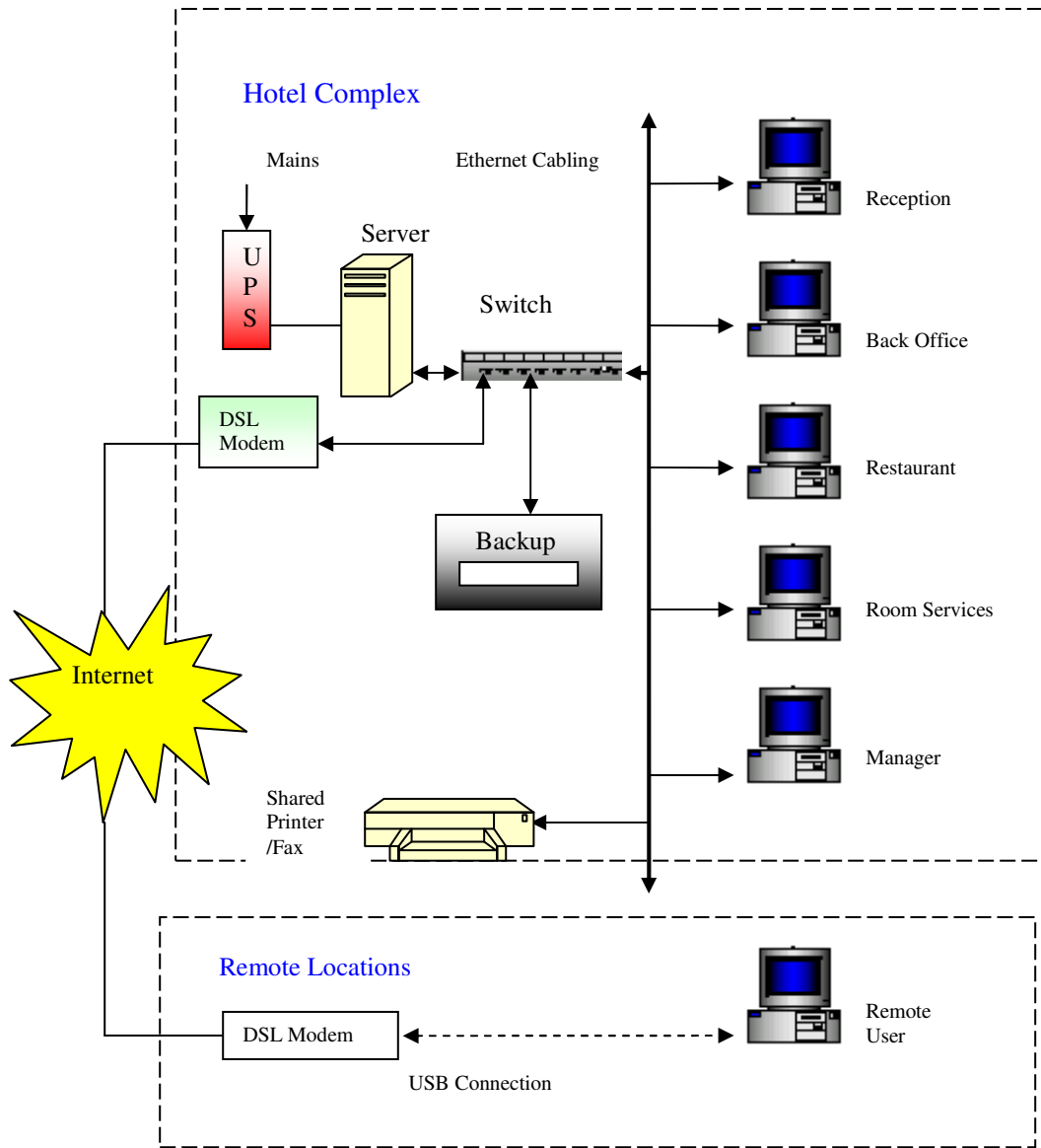


Figure (2) Hotel's Computer network system