



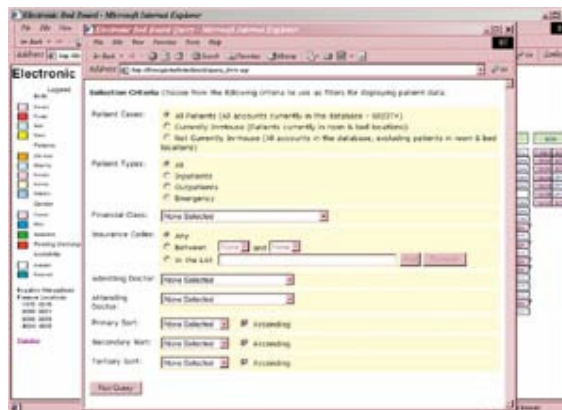
# **WHITE PAPER ON FACILITIES MANAGEMENT SYSTEM FOR HOSPITALS**

Prepared By  
PROFICIO GeoTechnologies Pvt. Ltd.

## Overview

Facilities Management System assimilates an environment's infra-structural functions and processes, defining scheduled approaches towards the optimization of resources, in turn, promoting efficiency and simplifying complex decision making for any organization. Facilities and equipment need to be controlled and monitored. All facets of utilization have to be described and tracked. This includes acquisition and disposition information and associations between different pieces of equipment to pinpoint operational dependencies. Facilities Management System (FMS) on PC is to sync the complaints, pending tasks and breakdowns that occurred regularly in the building on to the PC by Technicians. Technician can update the status of the maintenance activities, material used for each activity on site so that by the end of the day data can be updated by syncing back to server. This application also handles Stores in the Engineering Department to view the status of the existing materials, generate material requisitions by technician. The schematically and pictorial views of all the areas with all systems are also user interactive. The following features would help the best for any organization to manage their facilities.

The science of medicine and physician care deals in many realms: highly skilled doctors, nurses, and hospital staff; groundbreaking advances in research and treatment; high-tech medical equipment; preventative treatment and medicines; and much more. With the latest 21st century advances in technology, the efficient management of the reams of information associated with all forms of hospital functions is now proving to be a key component in providing the best patient care.



**The query function allows doctors to view specific information on their patients and to provide a means of preparing physician rounds reports.**

## **Patient Care and Room Management**

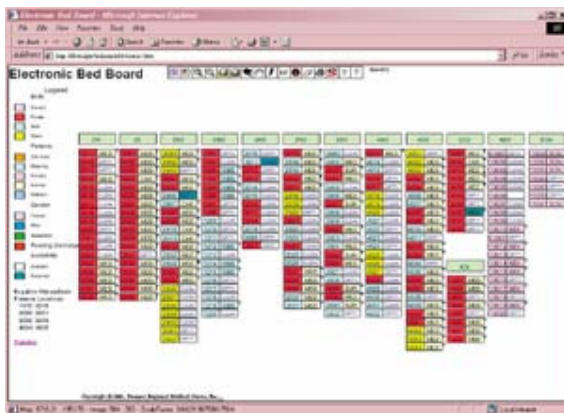
The application that leverages digital maps, analysis, and visualization for a better solution to how it assigns patients to

rooms, monitors patient care, and quickly prepares rooms for new patients.

The patient management process--specifically, patient care and room management--is a large, complex, multilayered system. For patients checking in, switching rooms, checking out, and moving from in-hospital to outpatient care, a vast array of information is captured, logged, managed, and analyzed.

GIS will replace manual data tracking, providing a single, enterprise information flow. Using location as an integral data component, various data sets were combined so that hospital personnel could turn to one digital location for information retrieval. With information centralized, automated, and networked via computers, data accuracy can be vastly improved and retrieval speed tremendously enhanced.

GIS can scrutinize patient flow and analyzing a way to improve processes and provide better services to patients as they move through the hospital, from the point of entry through the billing process.



The admitting view comprises three sections within each nursing unit, identifying vital information.

Bed management can be an area where GIS could improve both the processes and the services. This information updates the bed management system in real time and refreshes the view.

#### Automating the Patient Bed Management Process

A work flow system can be designed for the entire bed management process. From the time a patient is

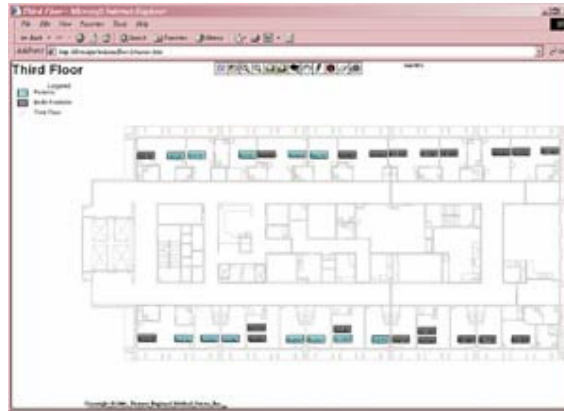
admitted to the time the patient is discharged, key element points can be tracked so that the system can be optimized and quantifiable goals can be set and achieved.

One especially nice aspect of the system is its visual design. Many hospitals manage beds using a large board showing rooms and patient beds, with paper forms and information; bed management personnel could view on the board which rooms were occupied, then pull up paper documents associated with each patient in each room. The new automatic system takes the concept of that board and renders a digital map.

Patients are checked in at many different points throughout the hospital. Wherever the location, hospital administrators use the same system. Accessing the GIS, a user can view a floor plan illustrating rooms and the patients occupying each room.

Users can look at a floor view showing rooms and beds, click on a bed, and instantly get patient information.

Types of data available to the user from the admitting and registration system include demographic information as well as insurance, physician, diagnosis, and other information. This is managed in the large relational database management system.



**The floor view indicates whether or not the bed within each room is empty or full.**

### **How It Works**

Using intuitive, information-packed digital maps, a nurse can view occupied beds for a particular floor. The nurse can then select the floor plan theme to view rooms with beds color-coded by type of patient stay. In addition, type of visit, age, gender, and attending physician are used to refine the search criteria. Each of these criteria can be valuable for patient care and room management. Perhaps most important, treatment is used as a criteria to refine the room selection. Pairing patients with similar treatment to the same room provides an optimized, comfortable room setting.

The system also helps doctors more easily move from patient to patient because the patients are now grouped together by attending physician. The doctor can begin the workday by quickly pulling up the GIS application and generating a patient list mapped by floor plan.



## **Key Features**

- Interactive drawings with facilities management system
- Scheduling of Preventive Maintenance Activities and Annual Maintenance Activities
- Registering Complaints
- Managing Assets
- Facilitating Communication Support
- Tracking Pending activities
- Technician-wise Job tracking
- Managing Manpower
- Controlling Tools and Equipments
- Managing Materials
- Managing item and vendor databases (inventory)
- Generating historical data on Plant & Machinery
- Generating Logs and Reports
- Analysing Consumption Patterns

The Interactive Drawings will help the management and the front office to view

- The plan of the Hospital
- No of Beds occupied/empty
- Status of the Operation theatres
- The Doctors cabins
- Display of wards with respect to specific classification  
Outpatient ward, ICU, Utility

The engineering Department will be able to view

- The equipment details
- The pictorial representation of Hot water pipe, Cold water pipe,
- AC Ducts, Sewer Lines etc, Fire extinguishers, Smoke Detectors
- The pictorial representation of Oxygen Pipes



These pipelines are represented in different colours, which will enable them to track problems and fix them more effectively.

### **Advantages**

- Tracking of pending problems more effectively.
- Tracking of electrical disorders
- Tracking of Plumbing disorders
- Effective scheduling of Annual Maintenance
- Faster Detection of a hazard.
- Better management and information of Assets
- Better manpower management
- Better management of material
- Tracking of material request
- Better information about the hospital infrastructure to Patients and the Visitors