Team MedSoft

Project Charter

Project Name: Korle Bu Teaching Hospital Record and Patient Identification Data System
Document Date: September 16, 2010
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Project Sponsor: Professor Fry
Project Client: Korle Bu CEO
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1.0 Project Goal

The goal of our project is to introduce the Korle Bu Teaching Hospital to a record and patient identification data system (RAPIDS) that will manage and track patient records. This system will replace multiple logbooks that are currently used in patient record creation, inpatient records, outpatient records, the emergency room, and the neonatal intensive care unit. It will reduce the amount of time that it takes for medical records to be retrieved and processed while also allowing for faster communication between departments. We also intend for the system to be scalable so future students at Weber State University can extend the functionality to help improve upon the overall operational efficiency of the hospital.

2.0 Background

The lack of a computer based medical record tracking system at Korle Bu is requiring hospital patients to wait for hours before they can be seen by a doctor. Primarily this is due to an inefficient manual system of locating medical records and patients being required to walk to multiple locations across the hospital complex to complete administrative tasks. Data pertaining to medical record location and patient information is being kept in physical logbooks, which may be lost, damaged, misplaced, or even illegible. Although the logbooks contain vital information about the daily operations of the hospital and its patients, they are extremely time consuming to maintain and in many situations multiple logbooks must be examined to obtain correct information. In addition to daily operations, the logbooks are used to generate monthly reports that are required by the government that provide basic hospital statistics. These reports also require a great deal of manual work to generate.

3.0 Objectives

This project intends to deliver a system that will provide the hospital staff with software that will be capable of updating and retrieving the current location of a medical record with the use of a laser scanner as well as the ability to input basic patient information that is common among various departments as well as information specific to certain departments with a minimum amount of keyboard entry and no redundant data entry. The system will also provide search capability to identify information about a patient and their medical record using the name of the patient or other criteria if necessary. The system will also be capable of generating reports that provide the government with statistical data relating to hospital operations. The hospital can benefit from an increase in operational efficiency, which will allow hospital staff to focus more on the care of patients and less on the manual work involved in keeping physical logbooks. Patients can expect a much better experience from reduced wait times and the elimination of the need to walk across the hospital complex to complete administrative tasks.

4.0 Scope

The system will allow users to input various locations throughout the hospital complex and then allow medical records to be tracked based on those locations. When a record leaves a location or arrives at a location the status of the medical record location can be updated. The system will allow data to be input with the use of a laser scanner and graphical user interface to replace the physical logbooks that are in use in patient record creation, inpatient records, outpatient records, emergency room, and neo natal intensive ward. Based on the data that is entered in the system various reports can be automatically generated. The system will provide search capability that will allow various search criteria to identify the patient's medical record, its location, and any recorded patient data if the unique medical record number is unknown. The system will not replace the physical medical record. Although some basic patient data will be stored by the system, the documents in the medical record will not be digitized or stored in a database at this time.

5.0 Schedule

The project will begin upon the acceptance of the project charter on Monday, September 20. The project will be delivered during Spring break in March 2011 and subsequent support of the project will continue until semester completion at which time the project team will be disbanded. Multiple deliverables will drive the phases of the project:

- Software specification requirements document due October 2, 2010
- Software design document due October 23, 2010
- Prototype 1 due November 8, 2010
- Prototype 2 due November 29, 2010
- Final specification and design due December 6, 2010
- System implemented and tested due March 2011

6.0 Project Team

- Jacob Troxel: Project manager, QA, Programmer
- Austyn Mahoney: Designer, Programmer
- Brian Sneddon: Programmer, Analyst
- Jared Plumb: Designer, Implementation Manager, Programmer
- Peter Litster: Programmer, Change Manager

7.0 Reviews and Meetings

Team members will meet in class on Monday and Wednesday of each week. During the scheduled meetings, a review of upcoming deliverables will take place. Decisions on actions required to meet deadlines and complete deliverables will take place. When necessary, virtual team meetings via Skype will be planned over the weekend when team members are available.

8.0 Assumptions

- Hardware and software of the server and terminals
    - We assume that we will have the hardware and software needed for the server and terminals, such as the operating systems.
- Training
    - We assume that when the software is delivered in March 2011, the staff will be ready for hands on training.
- Special Hardware
    - We assume that the laser scanner will be reliable and simple to interface with the system.

9.0 Constraints

- An accelerated delivery timeline reduces time to implement the software.
- The use of open source or proprietary server software influences development approach.
- The amount of communication with the client will be limited.
- There may be discrepancies in the accuracy of the information provided by the client.

10.0 Dependencies

- The project requires installation of network infrastructure.
- The laser scanner may require software installation on client machines.
- The choice of database software will be based on server implementation.
- The hospital electrical system needs to be reliable.

11.0 Impacts

- Additional loads will be placed on the hospital electrical grid with possible complications including loss of power to the central web and database servers.
- With proper training and use of the system, overall operational efficiency of the hospital should increase.

12.0 Risks

- Possible loss of productivity of team members due to unforeseen circumstances could adversely effect the success of the project
- Hospital staff may be reluctant to adopt the software and use it as intended.
- Communication between team members and the client may be unsatisfactory.
- Requirements may be changed late into the design or development phases.

13.0 Key Deliverables

The first deliverable will be the Software Requirements Specification, detailing the requirements the system must meet. The second deliverable is the System Design Document, describing the way the system will meet these requirements. Then two prototypes will be required, these prototypes will display preliminary functionality of the system. Following the two prototypes will be the Specification and Design document that will combine the SRS and System Design Document into one document and finalize the details. The team website is a key deliverable that will maintain the present status of the project from initiation through completion.

The final version of the software that will be delivered to the client will include a database to persist all relevant data, a user interface for patient data and medical record tracking, report generation, and compatibility with a laser scanner that utilizes thermal labels.

14.0 Communication Plan

Project status will be reported on our website on the "*Status Report"* page. A short status report will be posted on a weekly basis. Each week the project manager will assign a team member to write the status report. The status report page will be available for access by the stakeholders of the project at any time. The weekly status may also include questions for stakeholders that pertain to specific requirements of the system.

15.0 Success Criteria

The project will be considered a success if it meets all the requirements in the Specification and Design document, the system is free of errors, hospital staff are properly trained and able to operate the system, the user interface allows for tasks to be completed quickly with minimal keyboard input, the system is fully adopted by the hospital staff and they are able to see a noticeable increase in efficiency when compared to manual log entry.

16.0 Version History

September 17, 2010 – Initial Draft – Full Group Effort
September 18, 2010 – Grammar revision to section 7 – Jared Plumb