MLKMC Electronic Healthcare System

Project Charter

Date: 18-Sep-2010
Project Manager: Ryan Olson
Team: Tyler Bradovich, Cameron Harp, Matthew Kimber, Ryan Olson
Sponsor: Professor Fry
Client: Martin Luther King Memorial Clinic
Website: http://kaizen.matthewkimber.com/

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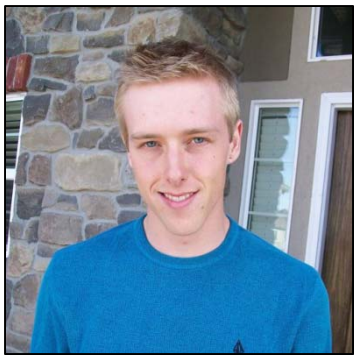
1. Project Goal & Background

The Martin Luther King Memorial Clinic is a small medical practice, located in Ghana, Africa, where the staff is currently using paper processes for managing information. Some forms of this information are patient records, billing, and the management of the inventory of drugs and supplies.

We propose to create an Electronic Healthcare System (EHS) that maintains a limited medical history of each patient, manages an inventory of pharmaceuticals, generates reports for administrators and improves communication between physicians and nurses. With this system, the process of seeing each patient will be accelerated, communication errors reduced and the overall quality of service to patients will be improved.

2. Project Team

Ryan Olson

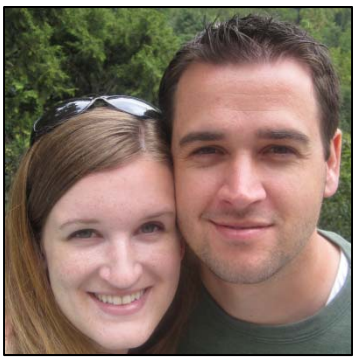


Assigned Jobs:

- Project Manager
- Programmer
- Implementation Manager

Bio: Ryan has been working with computer development since high school. He has since worked as a Network Administrator and is currently self-employed developing Android applications. Strengths include: application development, UI design, management, deployment and SQL.

Matthew Kimber



Assigned Jobs:

- Designer/Architect
- Programmer
- Implementation Manager
- Change Manager/Toolsmith/Webmaster

Bio: Matthew has worked off and on in the software industry beginning in 1999 when hired to develop web software using ASP and VB COM objects for the local newspaper. He currently works as a Network Administrator/Software Developer creating in-house applications and maintaining the computer infrastructure for a family owned business. Strengths include application design and architecture, implementation, deployment, as well as user experience and user interface design.

Tyler Bradovich

Assigned Jobs:

- Quality Assurance
- Programmer
- Implementation Manager

Bio: Tyler began studying computer science at Weber State University in 2008. Prior to this he had little experience working with computers. Very quickly though, he discovered that he loved doing it and he excelled in his coursework. Tyler is a strong programmer, and also strong with UML, database design/queries and designing user interfaces.

Cameron Harp

Assigned Jobs:

- Analyst/Customer Liaison
- Programmer
- Implementation Manager

Bio: Cameron has been working with computers for the last 3 years, when he became interested in the field of computer science. He has worked mainly with C++ but is trying to gain an understanding of ASP.NET and databases to help his knowledge grow in computer science. His strengths include UML design, database design, management, and being a liaison/facilitator to the customer.

3. Objectives

The Martin Luther King Memorial Clinic will be delivered an electronic healthcare system to take the place of paper forms for the information management of most day-to-day activities.

The benefits will include:

- More complete, more accurate and better structured clinical data and documentation.
- Relevant information is displayed to the physician, while caring for a patient, to improve and assist in decision making.
- Quickly access and update patient records.
- Fewer dangerous medical mistakes which typically result from poor handwriting or order-entry errors.
- Potential cost savings (reduction of errors in inventory, billing, and patient care).
- Help prevent redundant tasks for all employees, and help prevent duplicate records.

Once the system is complete and implemented into the practice we hope to see an overall improvement in efficiency. Common operations that once took more time should be sped up considerably and be easier to perform.

4. Scope

Below you will find the various functional features covered and not covered in the EHS to be developed:

In Scope:

- Electronic Patient Records
    - Medical History
    - Prescription History
- Patient Management
    - Scheduling
    - Billing
    - Prescribing
- Business Management
    - Inventory Management
- Reports
    - Monthly Clinic Statistics
    - Pharmacy

Out of Scope:

- Full accounting processes.
    - Accounts Payable
    - Accounts Receivable

    - Etc.
- Insurance charges and interoperation.
- Storage, retrieval, and management of digital lab results (including X-rays).
- Inter-operation and integration with government and/or other medical institutions.

5. Schedule/Deliverables

We will follow the waterfall method of software engineering. Each activity will have a different deliverable created during that time.

- Requirements analysis and definition:
    - SSRS Requirements Document *(2-Oct-2010)*
- System and Software Design
    - Software Design Document *(23-Oct-2010)*
    - Final Specification and Design Document *(6-Dec-2010)*
- Implementation and Unit Testing
    - Demo 1 *(15-Nov-2010)*
    - Demo 2 *(6-Dec-2010)*
    - Testing Reports
- Integration and System Testing
    - Beta System *(21-Feb-2011)*
    - Testing Reports
    - Final Electronic Heath System *(27-Apr-2011)*
- Operation and Maintenance
    - System Installation *(5-Mar-2011)*
    - User training *(6-Mar-2011)*

6. Estimated Cost

The software will be provided absolutely free of charge. There may be some hardware costs however. An application server, a printer, and a magnetic stripe reader may or may not be needed for the system. Most of the hardware has already been donated by Weber State from the last few years. However, depending on availability the cost of project dependencies could exceed $1,000.00 USD.

7. Customer Involvement & Responsibilities

The customer will be expected to participate in business decisions, design, document acceptance and review, and testing the user interface and functionality of the end product. The customer will also be responsible for reviewing any web updates and answering questions via e-mail or telephone call (Skype).

8. Assumptions

- There will be a central computer acting as a server.
- All computers will be using Microsoft Windows XP or greater.
- All computers will be connected by CAT-5 cable.
- There will be a printer for receipts, prescriptions, and reports.

9. Constraints

- Amount of networking infrastructure needed.
    - Switches
    - Cable
    - Misc. networking hardware.

- Ability to network all the computers together.
- Computer speed and video card capabilities.
- The project must finish by April 2011.

10. Dependencies

- Network
    - Cabling
    - Infrastructure (i.e. router and switch)
- Computer Acting as the Server
- Standard Printer / Thermal Printer
- Magnetic Stripe Reader (possibly)
- MySQL Database

11. Client Impact

During installation the system and people that are installing said system may briefly interrupt service to patients.

The receptionist, nurses, and doctors will need training on how to use the new computerized system. It will also be necessary that IT, or those that are in charge of the computer infrastructure, will need training on how to run and maintain the system.

12. Risks

- The required hardware might not be available.
- Communication may breakdown.

13. Communication Plan

We will be communicating about the project every class period Monday and Wednesday mornings. Our project websites are also used to communicate specific project details as needed.

Weekly status reports will be posted on the project wiki at http://kaizen.matthewkimber.com. Ryan Olson, as project manager, will be responsible for writing and posting it weekly. It will be available for viewing by anyone curious about our progress, including stakeholders at the Martin Luther King Memorial Clinic and the professor.

14. Success Criteria

We will know that the project is done once we have a final product--that is thoroughly tested and has all the key components required. The stakeholders will decide if the final deliverable is satisfactory once they have reviewed it and have a feeling that it fits their requirements. A feasibility test will be used, at the end, to see whether the product is ready to be distributed to our client.

15. Version History

13-Sep-2010 – Initial Draft – Full Team

18-Sep-2010 – Final Submitted – Full Team

22-Sep-2010 – Layout Revision – Matthew Kimber

25-Sep-2010 – Revised Content – Matthew Kimber

27-Sep-2010 – Added Pictures – Matthew Kimber

Signatures

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Dr. O. A. Duah

Project Manager: Ryan Olson