**Project Charter For Underguard 2.0 E-Commerce System**

Capstone Section 701, Group 2

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**PURPOSE**

This Project Charter presents the preliminary findings of the authors’ (hereafter “we” / “our”) investigation into the feasibility of the project to automate the business processes of Underguard 2.0 (hereafter “you” / “the company” / “the client”). This report also outlines our proposal of the procedures and schedule to be followed during this project. If you find any discrepancies or misconceptions, please bring them to our immediate attention.

**PRELIMINARY FINDINGS AND ANALYSIS**

After a brief, preliminary investigation of the system being studied, we offer the following observations and initial analysis.

**Project Description**

This section of the report describes the history that led to this project and the proposed project scope.

History Leading to this Project Proposal

Underguard 2.0 manufactures made-to-order safety-standards-compliant work wear. The company has numerous problems with the current system where record-keeping is done by hand and orders for materials are made by phone. The company would like to establish a much more responsive and more automated system.

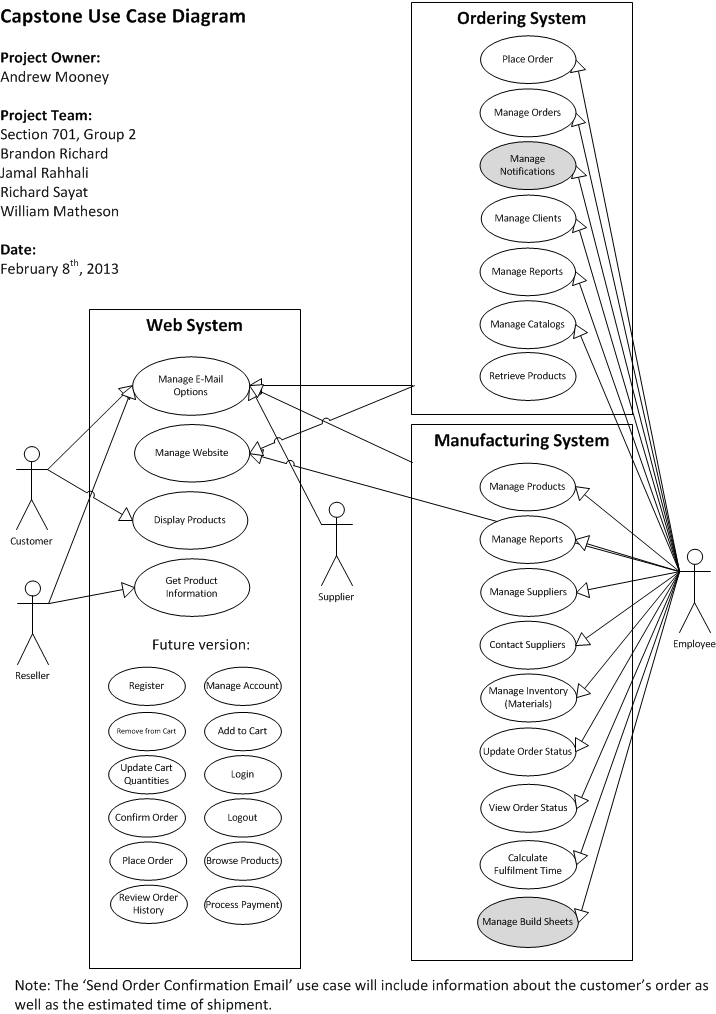
Scope of this Project

In the coming weeks, we will be carefully analyzing the project’s scope to define a reasonable target and schedule. In the meantime, our preliminary definition is as follows:

1. The application needs to give the company the ability to instantly make customers aware of new products, as opposed to the current catalog-style of product display.
2. As the company is legally bound to time frames in regards to orders being shipped, a system must be implemented to give customers an accurate time estimate.
3. The project will include a desktop application for the sales team to use for accessing and creating customer information and saving it to a database.
4. Information regarding the products themselves is to be stored in a database and the desktop application will provide a means for product creation, viewing, updating, and deletion.
5. An ordering system will include entering and changing customer information and placing orders (an employee might enter information while on a phone call).
6. A manufacturing system will include calculating the time to fulfil an order and finding the parts and quantities of parts needed, as well as maintaining “inventory” of materials and adding/editing products. Order statuses will be recorded in this system: It will start with an order that tells what products are to be made, and then go through materials and the timeframe, basically recording the entire process of garments being made.
7. The company’s customers have the expectation of quality and accountability and you expect this not to be lost by the change in technology.

**Project Environment**

This section of the survey describes the project environment in terms of project stakeholders, problems and opportunities to be addressed, and project constraints that will or may limit eventual solutions. Figure 1 represents a context diagram of the current system proposal.



*Figure 1 - Current System Proposal*

Project Stakeholders

To date, we have identified the following list of stakeholders for this project. Please inform us of any potential omissions.

1. Management - Direct Users or Managers of the System  
   a. Employee(s)
2. Other People or Departments Affected by, Interested in, or Interfacing to the System  
   a. Customers  
   b. Resellers  
   c. Suppliers

Problems and Opportunities

We have compiled the following list of problems and opportunities to be addressed in the project. The list is not final. In the coming weeks, we will modify the list and provide you with a detailed analysis of problems, opportunities, and solutions. At any time during this project, you should feel free to add to, subtract from, or expand upon this preliminary list.

1. Current record keeping is done by hand and orders for materials are placed over the phone. This project provides a significant opportunity to make current business processes faster and more reliable through automation of routine tasks.
2. Currently the company’s products are displayed in a catalog format, which does not give customers up to date information on the current products. This project provides the opportunity to inform the customers of new products immediately via the website.
3. Currently the company has no way of creating a solid estimation of when a product will be shipped, and since they are legally obligated to ship products for the quoted date this can be a problem. This project will provide the ability to calculate a solid estimation depending on what products are ordered.

Project Constraints

Project constraints are limitations, good or bad, that will or may constrain any solutions that we might propose. Constraints can be technical, monetary, time, or political. To date, we have identified the following preliminary list:

1. The client is legally bound to deliver his products within a quoted time frame which is generated depending on the order, and faces penalties for late orders.
2. The company doesn’t carry inventory (everything is made to order), but does carry materials (with established minimums of each: say it is 10,000 grommits, once there are 999 or fewer grommits, an order is placed for 10,000 more).
3. The company’s customers have the expectation of quality and accountability and all parties expect this not to be lost by the change in technology.

**Preliminary Solutions and Ideas**

Our project approach will eventually examine numerous alternative system solutions, and it would be premature to commit to any solution at this time. However, it is never too early to begin brainstorming and cataloging ideas.

Client's perceptions of what they want or expect

The client has requested that the software be developed into three parts, a web system and two desktop systems, all tied together by a database. The web system will feature an E-commerce website (.NET), providing information about products and also including the ability for customers to order online.

The first version of the web system will only be information going out - e.g. product information, but later we will integrate a full e-Commerce system into this application. Michael Crocker will be our team lead for the e-Commerce portion of the project. Among the other things that will be defined, the users will be able to create accounts on the site.

The web system will also generate e-mails, including order confirmations for customers, new product notifications for resellers, and material requests for suppliers: Order confirmations will list what was ordered along with a timeline for manufacture. When new products are added, resellers will be notified. When new materials are needed, e-mails are sent to suppliers to initiate orders of materials.

There will be two desktop systems, an Ordering System and a Manufacturing System, working closely together:

* There is simply one “employee” user who can access both systems. There is no login in the first version, as only the Client will be using it.
* The Ordering System will be used by the sales team to create, modify and access customer records. The application will also be used to record information about products, as well as to develop accurate estimation times for orders. It will include entering and changing customer information as well as placing orders (an employee might enter information while on a phone call).
* The manufacturing system will include calculating the time to fulfil an order and finding the parts and quantities of parts needed, as well as maintaining “inventory” of materials and adding/editing products. Order statuses will be recorded in this system: It will start with an order that tells what products are to be made, and then go through materials and the timeframe, basically recording the entire process of garments being made.

Finally the database will contain all of the customer information, as well as information regarding products such as their materials, material suppliers, etc.

The analyst’s perceptions of possible solutions and ideas

It was suggested that:

* We will need a way to tell the system what parts are needed for products. There will need to be a join table joining parts and materials since that is a many-to-many relationship.

It was clarified that:

* There is a minimum parts inventory and that the suppliers need to be e-mailed to order parts.
* The hardware necessary to implement our system should be assumed to already exist.

Other items:

* Our project analyst expects that we will be creating a XAML version of the UI in the coming weeks. In the meantime, we need to have the current UI in a as-close-to-working state as possible delivered by Februrary 22nd at the latest, and the UI needs to include validation.

Analyst History and Qualifications

1. Andrew Mooney  
   (902) 999-9999  
   Instructor, NSCC-IT  
   MBA, M.Ed., SAAD-SME (Systems Analysis and Design Subject Matter Expert)  
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**PROPOSAL**

This section outlines the phases of work, the structure of the schedule and timeline, and remarks on the necessary budget.

**Work Phase Overview**

(All dates 2013.)

1. **Design**
   1. Initial Meeting

Meet with the client to inquire about their business and application needs.  
*Delivered*: January 10th and a follow-up / clarification meeting on January 17th

* 1. Use Case Diagram  
     Provide a high-level visual overview of system-user interactions.  
     *Delivered*: Initial draft January 15th, latest draft February 8th
  2. Full Use Cases  
     Provide detailed treatments of selected system-user interactions (“Use Cases”): Manage Notifications and Manage Build Sheets   
     *Delivered*: Initial drafts February 1st, latest drafts February 8th
  3. Class Diagrams  
     Model properties (things stored) and methods (possible actions) of programmable entities (things in the database like Products and Materials).  
     *Delivered*: Initial drafts February 5th, latest drafts February 7th
  4. Business Layer  
     Model code behind entity objects and entity models (definitions of how program entities and database entities interact and a place to apply business rules).  
     *Delivered*: February 15th (Scaffolded with Entity Framework)
  5. Forms  
     Model visual appearance of desktop user interface (for Ordering and Manufacturing Systems) and verify that all necessary functionality is accounted for.  
     *Delivered*: Windows forms February 15th, XAML forthcoming
  6. Project Charter  
     Present preliminary findings of project feasibility and outline a process for project delivery.  
     *Delivered*: Initial draft February 15th

1. **Implementation (Desktop Phase)**
   1. Database Construction  
      Create and test a system for storing business data.
   2. Forms Linking  
      Link the user actions on the forms and the form display elements to business entities and entity models. In turn, the entity models link to the database.
   3. Acceptance Testing  
      Present functioning desktop application to client and obtain approval and/or implement changes as determined by client as conditions for approval.
2. **Implementation (Web Phase)**
   1. TBD  
      The E-commerce web site will be defined at a later date.

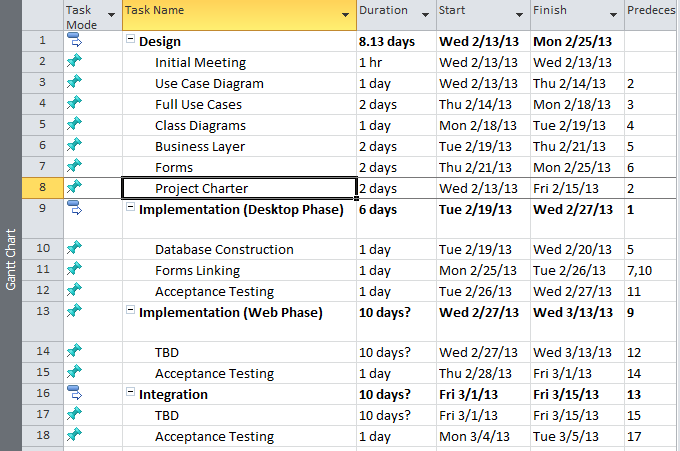
Acceptance Testing  
Similar to Desktop Phase Acceptance Testing, but for the Web System.

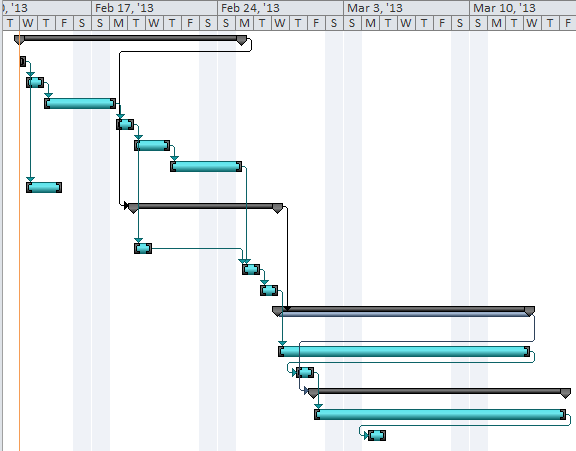
1. **Integration**
   1. TBD  
      The integration of the Web System with the Ordering and Manufacturing Systems will be defined at a later date.
   2. Acceptance Testing  
      Similar to Desktop Phase Acceptance Testing, but for the Web System.

**Project Schedule Overview**

The following overall project approach and schedule is proposed:

Project Tasks



Project Timeline

**Project Budget**

This section of the report covers the estimated costs for this project. It should be emphasized that these figures represent mere estimates, estimates that are based on a minimal background information. These estimates will continually be revised as the project progresses.

The hardware required to run the services we will build is outside of our scope and will be prepared in advance.

Project Costs

The budget for this project will consider the following costs:  
  
*Labor*: Average cost of $20 per developer per hour. (~34 work-days of development, 4 developers, 8 work-hours per day)

Estimated cost: $21,760

*Analyst’s Fees*: Average cost of $100 per hour. (15 weeks, 1 hour per week, 1 analyst)

Estimated cost: $1,500

*Software Licensing*: SQL Server 2008 R2 Enterprise Edition (25 Client Access Licenses) Estimated cost[[1]](#footnote-0): $13,269.95

Therefore, we estimate the cost of this project to be approximately **$36,600**.

**CONCLUSION**

Delivering the Underguard 2.0 E-Commerce System will be non-trivial and an ambitious challenge. Through working closely with each other and you, our client, we will craft a highly-customized business solution that will be uniquely yours, through your input and its suitability to your company.

We expect to deliver a solution that will make Underguard 2.0’s business mechanisms more reliable and efficient, making the company more profitable as routine processes are automated, freeing up resources; a world where making existing and prospective customers aware of the latest product offerings is only as challenging as designing the products.  
  
Thank you for your time in reading and considering this report. We look forward to your feedback!

1. - <http://www.microsoftstore.com/store/msstore/pd/SQL-Server-2008-R2-Enterprise-Edition-25-Client-Access-Licenses/productID.221628500/vip.true> [↑](#footnote-ref-0)