DATA WAREHOUSE 2.1

PROJECT REPORT 1

OUTLINE OF PROJECT GOALS AND REQUIREMENTS

CHRIS ALDERSON – TRELLO MANAGER

MATTHEW CIBULKA – DEVELOPER

OLIVER COOK – LEAD QUALITY ASSURANCE

ANDRIJA JOVANOV – DEVELOPER

BENJAMIN KATZNELSON – PROJECT MANAGER

DAN ROBINSON – SCRUM MASTER

SARAH SHEPHERD – QUALITY ASSURANCE

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BUSINESS GOALS

WHAT MUST BE DELIVERED TO PROVIDE VALUE

This project will provide for CCS a means in which to store and categorize the large amount of data that is collected.

In order to meet the needs expressed by CCS we will be providing the following:

- Real-time data available to managers for review and analysis
- Historic and trending data available for planning and development purposes
- Customer-facing data that demonstrates service levels and CCS's contribution to business outcomes
- The ability to retrieve data from a common interface

PROJECT SCOPE

FEATURES THAT WILL OR WILL NOT BE INCLUDED IN THE PROJECT

THE PROJECT WILL INCLUDE:

- Information gathered from all 3 sources (Big Brother, FootPrints and user surveys) in a consistent format
    - Completed when all sources that are available to us are available for use by the system
- We are required to have a description of a system to collect all of the data and prepare it for storage and a working model for one of the data sources.
- Store information from all 3 sources (Big Brother, FootPrints and user surveys) in a centralized data warehouse
    - Completed when all gathered data is stored and available for future retrieval in the data warehouse.
- Information stored in the centralized data warehouse must be accessible for retrieval
    - Completed when all stored data is readily available for retrieval in a consistent manner
- Provide retrieved data from the data warehouse in a consistent format
    - Completed when all data retrieved from the data warehouse will be in a consistent format

THE PROJECT WILL NOT BE INCLUDING:

- Generate data to store in the data warehouse
- Implementation of Data Mart/Data Warehouse

RISKS

LIST OF POTENTIAL PROJECT RISKS AND POSSIBILITIES OF ELIMINATION OR MINIMIZATION

GENERAL RISKS

Time Constraints

Given the busy schedules of CCS members and development teams, difficulties may arise with scheduling.

Solution: Organize the work by prioritizing a list of tasks

Non-Completion

There exists the risk that we will not be able to finish the project within the semester

Solution: Adhere to an iteration schedule and continue working on the project past this semester

Miscommunication between development teams and client

A discrepancy between what the client wants and what we are making

Solution: Regular communication between clients and teams to any ambiguity is clarified with the teams involved (e.g. client or other development teams)

Excessive data loss

Large data centers run the risk of environmental incidents that might damage the system.

Solution: Scheduled backups to ensure data protection

PROJECT GOALS

OBJECTIVES THAT THE PRODUCT WILL ACHIEVE

The goal of this project is to provide CCS with all of the tools, information and technical requirements to implement a working Data Mart.

The following are the objectives of the project:

- Choose one data set from each of the following: Big Brother, FootPrints, and survey data as a representative sample for the student group to work with.
- Provide a detailed report to CCS MT containing best practices and industry standards with respect to how these data are maintained traditionally with the appropriate level of granularity for historical purposes.
- Provide a variety of templates for a dashboard-style display of data sets for review by CCS MT
- Provide a detailed report to CCS MT itemizing the various data storage solutions available for our data sets and the benefits and drawbacks, financial, technical and other implications of each possible solution.
- Provide CCS MT with all of the technical, financial and human resources requirements to implement a working Data Mart
- Provide CCS MT with a template that can be used when assessing the storage and retrieval needs of future data sets housed in these systems or frameworks.

HIGH LEVEL FEATURES

REQUIRED FEATURES OF THE PROJECT

The final project will contain the following features:

FUNCTIONAL REQUIREMENTS:

- A working model of:
    - A data warehouse/data mart storage of data
    - Method to retrieve the data
    - Method to get rid of the old data (garbage collection)
    - Method of adding new data

NON-FUNCTIONAL REQUIREMENTS:

- Generating metrics and generating data
    - Document outlining:
        - Best practices and suggestions for storage options
        - Technical requirements for implementing the storage solution
        - Template for adding future data sets to the system

DOMAIN REQUIREMENTS:

- One domain to host the server which supports all online viewing needs
- Always must be accessible to clients at all times

HIGH-LEVEL TASKS

WHAT WE NEED TO DO TO COMPLETE THE PROJECT

- Completed Detailed analysis of best practices of data mart / data warehouse
- Design and development of databases
- Design an API to extract data from the data mart / data warehouse

DELIVERABLES

WHAT IS THE END PRODUCT AND/OR DELIVERABLES OF THE PROJECT

WE WILL BE PROVIDING:

- A detailed report containing best practices and industry standards
- Detailed report itemizing all of the technical, financial and human resource requirements for implementing a working Data Mart / Data Warehouse
- A Dashboard template with proposed specifications for display of data and access restrictions based on CCS feedback/approval
- A Data Mart / Data Warehouse prototype for storing sample data that is provided
- Technical requirements for pulling data from three very disparate areas to store, retrieve, analyses and discussed what we thought it entailed. Discussed what we thought it entailed.
- Research including industry best practices and standards for the storage, retrieval and reporting of IT related data in an academic environment
- Needs and expectations of users and customers with respect to access to data
- Tools and roadmap to move to implementation stage

TECHNICAL REQUIREMENTS

WHAT TECHNOLOGY WILL BE REQUIRED TO COMPLETE THIS PROJECT

- Web & database server
- Remote backup server

SCRUM PROCESS

OUTLINE OF THE REQUIREMENTS GATHERING PROCESS

The first step in the process involved gathering the project requirements and gaining an understanding of the project as a whole. Many of the requirements were laid out in the project description, which each member read individually and then brought their thoughts to the group. The questions that arose were recorded to ask Cort Egan. Speaking with management (Deb Stacey) helped clarify the major requirements, and gave us a big-picture view of the scope of the project. From then, we were able to draft a document stating our understanding of the task. This was written as a group, with each member taking a part that they felt they could accurately describe. Finally, two members read through the document to ensure that it was cohesive and an accurate representation of the ideas the group discussed.