

Project Definition

For

UC Berkeley System Map

Center for Document Engineering Data Dictionary Project

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Document History

Version	Date	Author	Comments
0.1		Amy Todenhagen	Initial Draft
0.2	1/5/04	Kristine Gual	Revisions
0.3	1/19/04	Amy Todenhagen	Updated with Bob and Helen's comments
0.4	1/24/04	Kristine Gual	Revisions

Note: Version numbers less than 1.0 denote drafts while version numbers of 1.0 and higher denote final documents and subsequent revisions to them.

Project Definition Document Overview

Document Purpose

The purpose of this Project Definition Document is threefold: to introduce the CDE System Map project, to capture the primary project requirements, and to outline roles and responsibilities.

The Project Definition Document is a "living" document. Based on the outcome of one or more milestones and feedback from project stakeholders, changes may be required. As a result the appropriate members of the CDE team will meet with Shel Waggener and Helen Norris to review progress, issues, and successes. Based on these discussions, modifications to the phasing, supporting and requirements may be necessary. The Project Definition Document will be updated to reflect these corresponding changes.

Audience and Distribution

The intended audience for the Project Definition Document consists of project stakeholders and other parties who are involved in the definition, development and/or roll out of the solution.

The audience for the document is as follows:

Name	Department	Contact Information
Shel Waggener	CCS	shelw@uclink.berkeley.edu
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* These individuals are included for awareness purposes.

System Map Project Overview

Goal

Create a breadth-focused System Map that visualizes system metadata and data flow between UCB information systems, and can be updated by UCB IT staff. The System Map project will be the first stage of the Data Dictionary project. (see Data Dictionary Project Description, page 7)

Project Description

The project would create a dynamic System Map of UCB systems, beginning with the cluster of systems used in HR and the Student Data Warehouse and other systems identified by the Data Stewardship Council. The System Map is the first of many tools developed by the CDE that will use a central repository of UCB system data. The project consists of the following components:

Interface Components

1. *System Map interface*

The System Map interface dynamically shows:

- a. UCB systems
- b. System metadata, such as:
 - i. Name, location, description of system
 - ii. System proprietor, custodian
 - iii. System of Record data elements
- c. Data flow: shows connections to other UCB systems which:
 - i. Send out data elements that are imported by the system in question
 - ii. Receive data elements that are exported from the system in question

2. *Data entry interface*

This interface would be used by UCB IT staff to add their systems to the repository for system data. Construction consists of the following components:

- a. Online forms in which users enter data.
- b. Authentication using CalNet – would require working out logic to allow only certain people access to data entry tool.

Note: Because of time constraints, implementation of CalNet authentication may take place after Spring 2004.

Database Components

3. *Repository for system data*

This database stores a collection of high-level system metadata and data flow information.

- a. Oracle 9i database, storing XML objects
- b. The data model for the database will be created in the context of future Data Dictionary project work.

Project Phases and Deliverables

1. *Needs Assessment*

Use competitive analysis, interviews and data collection methods to learn:

- a. User requirements for System Map – for both IT leadership and developers
- b. User requirements for data entry tool – how information should be collected
- c. ***Deliverable: User requirements documents for System Map and data entry tool***

2. *UI Design*

Design user interface for tool.

- a. System Map: Information visualization of System Map and its uses
- b. Data Entry Tool: User interface design of data entry tool.
- c. ***Deliverable: Prototype of tool components to be used for user testing***

3. *Data Collection*

Collect and store information about selected systems.

- a. Design database and data models to serve as the repository for system information used by the System Map.
- b. Conduct interviews with data custodians of the selected systems to gather initial data for the System Map.
- c. Populate database with the results of user interviews
- d. ***Deliverable: Initial repository of system data***

4. *Architecture and Planning*

Based on needs assessment and design, plan architecture for the implementation of the System Map and data entry tools. The technical design for each tool should fill the following requirements:

- a. Be designed in collaboration with CCS to facilitate future maintenance by CCS
- b. Be designed as a foundation for future data modeling efforts by this project
- c. ***Deliverable: Project architecture document***

5. *Development and QA*

The System Map and data entry tools will be built according to the plans in the architecture document. (**Note:** if scope and coordination with campus IT becomes an issue, components of the project, such as CalNet authentication, can be completed at a later date.)

- a. ***Deliverable: Version 1.0 of Dynamic System Map***

System Map Project Benefits

As the first deliverable of the Data Dictionary Project, a dynamic System Map of UCB computing system offers the following strategic benefits to the UCB IT community:

- Allows the Data Dictionary Project team to explore several diverse system sets, answering a concern of the Data Stewardship Council
- Creates a central repository for campus system information
- Is closely aligned with the needs of the Enterprise Data Warehouse and Student Data Warehouse projects. (Documentation of the data flow between systems across campus is a critical need for these projects.)
- Gives campus IT staff a tool with a simple value proposition that resolves a major pain point, facilitating IT buy-in to the Data Dictionary project.
- Gives IT/business leadership a tool to facilitate decision-making about areas for further analysis.

In addition, a System Map is the necessary first step in building a Data Dictionary tool:

- Developing a data dictionary without an audit of diverse set of systems and the information flow between them could result in data definitions that are incorrect, or only reflect a portion of the campus needs.
- The System Map will help to insure first Data Dictionary Project initiative is a success because data at the macro level is less likely to change and therefore more likely to be relevant to the end user.

Issues to be Addressed

In order to ensure that the project is a success, members of CCS will need to work closely with the CDE to help resolve the following issues:

- Access to data proprietors and custodians of system data - the target users of the System Map.
- System Map maintenance strategy to ensure that the data contained in the system is accurate.
- System Map data entry component's integration with CalNet to ensure the data proprietor is able to maintain the System Map and that only authorized people can view and/or edit System Map information.

System Map and the Data Dictionary Project

The Data Dictionary project is a multiyear project sponsored by the Data Stewardship Council of UC Berkeley, and staffed by CDE researchers and UC Berkeley IT staff members. The Mission of the Data Dictionary project is to bring measurable improvements to the management and flow of data around the university.

The goal of the Data Dictionary project is to:

- develop a robust methodology for capturing reliable information about systems and data elements
- develop models for systems and data elements using Document Engineering practices
- create a data dictionary for systems and data elements that can be used for the integration of existing systems and as an architectural foundation for future application development using the developed data models

To manage the scope and timing of the project, the project has been broken down into several phases. The System Map project is the first of several project phases that lead to the building of a data dictionary for UC Berkeley information systems.

Roles and Responsibilities

The following roles and responsibilities have been outlined for the System Map project team. In order to maintain schedules and complete deliverables, DSC and CCS team members understand that some assistance may be required to ensure questions and issues raised by the CDE group are addressed in a timely manner.

Roles and responsibilities are as follows:

Department	Representative	Role	Responsibilities
Data Stewardship Council (DSC)	Helen Norris	Project Sponsor	Project sponsor. Ensure the project is aligned with the work of the DSC.
	Jill Martin	DSC liaison	Attend weekly System Map project meetings and advise the group on the project. Liaison between System Map project group and DSC.
Central Computing Services (CCS)	Shel Waggener	Project Sponsor	Project sponsor. Ensure that the project meets the overall campus IT objectives.
	Gaelyn Chappel	CCS/EDW liaison	Attend weekly System Map project meetings and advise the group on campus computing resources, interview subjects, and best practices in developing systems for the campus community.
	Patrick McGrath	CCS liaison	Ensure System Map project deliverables meets the necessary security requirements to be smoothly transferred to CCS.
Center for Document Engineering	Kristine Gual	Project Manager	Manage project schedule and progress as well as coordinate communication with the project sponsors. Also responsible for overall project architecture and design components.
	Amy Todenhagen	UI Designer	Focus on needs assessment and UI design for System Map project deliverables.
	Kate Ahern	Technical Architect	Focus on architecture and planning as well as implementation of XML solutions.
	Carolyn Cracraft	Technical Architect	Focus on database methodologies and architecture.
	Lisa Chang	Technical Architect	Focus on technical implementation issues.
	Dr. Bob Glushko	SIMS Advisor	Advise the System Map project team on direction and scope.

Signoff

Signoff Procedures

One of the primary goals of this document is to facilitate communication and approval of the Data Stewardship project. Signoff indicates the following:

- Reflection that both parties have reviewed the proposed project approach.
- Confirmation that the CCS, Data Stewardship Council and CDE project teams agree on the project scope of the System Map project.

The following signoff point is intended to minimize misunderstandings around what the project was initiated to do and how it will be managed. In addition, the contents of this document and subsequent signoff will contribute toward an orderly milestone review process.

Signoff

The following signatures indicate that the CCS, Data Stewardship Council and CDE have agreed to the project as described in the final version of this document.

Document Version/Date: 0.4 / <Date>

Project Sponsor CCS

Date

Project Sponsor Data Stewardship Council

Date

CDE

Date