

Sumerian Project  
Vision and Scope Document  
CS 491

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### Revision History

Revision	Description	Date
1.0	Initial Document	5/14/2014

# 1 Business Requirements

## 1.1 Background

Assyriologists study Ur 3 period Sumerian tablets from CDLI database. An important area of research involves building Sumerian social network for that time period. Current tablets contain corrupted dates which makes it difficult to do named entity recognition, a vital part of recreating a Sumerian social network. Difficulties include corrupted dates, as well as an unclear year naming system in the Sumerian language which leads to ambiguous year identification. Current need for Assyriologists studying Sumerian texts is a software solution that attempts more accurate date retrieval from tablets using machine learning techniques combined with Assyriologists' input.

## 1.2 Business Opportunity

Our solution will focus on creating an interface and algorithm for identifying the dates in the tablets. We hope to identify previously unknown or mislabeled dates. The current system has a naive algorithm for determining dates while ours will use a more accurate and less naive algorithm.

## 1.3 Business Objectives and Success Criteria

**BO-01** Increase accuracy

**SC-01** Significant Improvement

## 1.4 Customer or Market Needs

1. Interface for non-technical users
2. Integrate with current system

# 2 Vision of the Solution

## 2.1 Vision Statement

For Assyriologists who study Ur period Sumerian tablets, the date extrapolator is a year identifying tool that extracts year information from corrupted Sumerian tablets and assigns year ranges as well as allowing expert users to add new tablets and confirm the suggested dates of the tablets.

## 2.2 Major Features

**FE-01** Has interface which allows expert users to correct the algorithm results.

**FE-02** Uses expert users input to update and refine algorithm.

**FE-03** A way to tweak algorithm

**FE-04** Show statistics for each algorithm

**FE-05** Have an algorithm that pulls dates out of the tablets

## 2.3 Assumptions and Dependencies

**AS-1:** Experts input is noncontroversial and correct

**AS-2:** There is enough time

**AS-3:** Pattern exists in Sumerian date to create efficient algorithm

**DE-1:** Depending on work of previous groups work

## 3 Scope and Limitations

### 3.1 Scope of Initial Release

Release 1 will be:

**FE-01** Not implemented

**FE-02** Not implemented

**FE-03** Implement way to tweak algorithm for our specific algorithm

**FE-04** Basic web page that displays statistics information

**FE-05** A simple implementation of a semi-naive algorithm

### 3.2 Scope of Subsequent Releases

Release 2 will be:

**FE-01** Provide webpage that displays algorithmically-chosen dates from text for confirmation,

**FE-02** Adds confirmed dates to database and tweaks algorithm

**FE-03** No update

**FE-04** Give the statistics a better GUI for webpage

**FE-05** Improve implementation/ statistics for our algorithm

Release 3 will be:

**FE-01** Tweak and improve

**FE-02** Tweak and improve

**FE-03** Tweak and improve

**FE-04** Tweak and improve

**FE-05** Tweak and improve

### 3.3 Limitations and Exclusions

- Currently striving to only improve current algorithm by 60
- Not working with other time periods
- Not manipulate previous group's database

## 4 Business Context

### 4.1 Stakeholder Profiles

- Assyriologists - Primary users
- Dr. Garfinkle - Primary contact and software recipient
- Aran Clauson - Project Advisor who defines general project requirements
- Yudong Liu - Primary contact for technical consult

## 4.2 Project Priorities

Dimension	Driver (state objective)	Degree of Freedom)
Schedule	<ul style="list-style-type: none"><li>• Release 1 by December 5, 2014</li><li>• Release 2 by February 11, 2015</li><li>• Release 3 by March 13, 2015</li></ul>	$\pm 10$ days
Features	in release document	
Quality	gets 60% of dates correct	between 50% to 100% correct

## 4.3 Operating Environment

- Web based
- Open source software
- Other details TBD