Beulah Works LLC

Software Configuration Management Plan (SCMP)
Version 1.1

UML Sequence Diagram File Generator

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Approvals:

Title	**Signature**	**Date**
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Revision History

Date	Revision	Description	Author
02/11/2019	0.10	Created skeleton SQAP document using IEEE 730-2002 standards.	Isis Curiel
02/17/2019	0.12	Created rough draft SQAP document based on skeleton SQAP document, began cover page.	Dhyey Patel
02/20/2019	0.20	Added header and page numbers, made a few minor changes, added some missing information, and updated the document's style to match the others.	Jesse Primiani
02/20/2019	0.21	Added "UML" to acronyms	Bruno Hnatusko III
02/21/2019	0.22	Matched spacing/indent and numbering style to other documents.	Brayden McCoy
02/21/2019	0.23	Cleaned up sections	Isis Curiel
02/22/2019	0.24	Reviewed full document fix minor mistakes	Dhyey Patel
02/22/2019	0.30	Added File Naming Conventions along with a couple minor changes.	Jesse Primiani
02/22/2019	1.0	Updated to 1.0 and submitted	Dhyey Patel
04/24/2019	1.1	Updated to new file directory structure	Jesse Primiani

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1 Introduction

This Software Configuration Management Plan (SCMP) describes how the artifacts for the UML Sequence Diagram File Generator are to be managed.

1.1 Definitions

Approved CI's	Configuration items signed off by project management.
Artifact	A final or interim product of the project (e.g., documents, source or object code, tests).

1.2 Acronyms

CI	Configuration Item; an item tracked by the configuration system.
CM	Configuration Management; the process of maintaining the relevant versions of the project.
CMM	Capability Maturity Model
SCMP	The Software Configuration Management Plan (this document)
UML	Unified Modeling Language
CR	Change Request

2 SCM Management

2.1 Organization

This section assumes the description of the organizational structure for UML Sequence Diagram File Generator in Section 4.2 of the SPMP. A specific engineer will be designated as the "configuration leader" for the duration of the project.

2.2 SCM Responsibilities

2.2.1 Configuration Leader

The configuration leader shall be responsible for organizing and managing configuration management (CM). Whenever possible, the configuration leader shall discuss CM plans with the development team prior to implementation. He or she will maintain this document (the SCMP). The configuration leader is responsible for the installation and maintenance of the configuration management tool(s) specified in Section 3.2.3 of this document.

The SCM leader shall be responsible for: acquiring, maintaining, and backing up all configuration tools used. He or she shall also develop a plan of action if tools become unsupported (e.g., by discontinuance of the vendor). Additional responsibilities of the configuration leader are stated in Sections 3.1-3.6 of this document.

2.2.2 Project Manager

The project manager will take over the configuration leader's function only under exceptional circumstances. They are responsible for knowing all the relevant means of access to documents throughout the life of the project. The project manager shall ensure that archiving is performed in accordance with the policies in Section 2.3 of this document. Additional responsibilities of the managers are stated in Sections 3.3 and 3.4.

2.2.3 Engineers

It is the responsibility of each engineer to abide by the configuration manager’s guidelines that are laid out by this document. Additional responsibilities of engineers are stated in Section 3 below.

2.3 Applicable Policies, Directives, and Procedures

- All current and previously released versions of CIs, via Git, will be retained.
- CM passwords should be changed and set in accordance with typical security practices, with the following addition: No password shall be changed until the project manager and the rest of the team have all been notified and have acknowledged the notification.
- The project manager and other team members are to have complete access to all documents under configuration at all times.
- This project will use Bitbucket and Google Docs as the primary configuration management products.

3 SCM Activities

3.1 Configuration Identification

3.1.1 Identifying Configuration Items

The project manager shall be responsible for identifying all CIs. Engineers wishing to propose CIs shall secure his or her agreement, via e·mail or otherwise. If the project manager is unavailable for one business day following the engineer’s e·mailed proposal for inclusion, the configuration leader shall have the authority to accept or reject the proposed item.

3.1.2 Naming Configuration Items

The project manager and configuration leader shall have the responsibility for labelling all CIs. The file naming conventions shall be as follows:

- Drafts of documents that are currently being worked on will be appended with the text “ Rough Draft”.

- The aggregated version of these collected documents will be copied from these rough, or in-progress, drafts, and the text " Rough Draft" will be removed whenever a new aggregated version is created, and their name then appended with the text "_x_x", where x.x is the latest version of the document.
- No specific file naming conventions for code will be as used other than that given in Java's official documentation.
- The folder and file structure of this project is as given below:
    - The root of this repository contains some information used by Git and Eclipse.
    - The root buglist.txt contains a list of all known bugs in this library and the input SDM library.
    - The root Aspose.Diagram.lic is a license for Aspose.Diagram that is used by this library.
    - The Documentation folder contains, inside subfolders for different file types, all the documentation and UML diagrams used in the development of this library.
    - The doc folder contains all the Javadoc files for this library.
    - The releases folder contains this library's compiled jar file.
    - The libs folder contains the latest version of the umltranslator library, as well as a previous stable version.
    - The src folder's subfolder, SDMfileGenerator, contains all the source code for this library.
    - The src folder's subfolder, VisioMasters, contains code used in the development of this library that was used to combine and read Visio master files.
    - The root VisioMasters folder contains MasterSDM.vssx, which is the masters file that is needed by Aspose to generate a sequence diagram. All other master files in this folder were either used to create this file, or are backups of these files in different file formats.

3.1.3 Acquiring Configuration Items

Engineers requiring CIs for modification shall check them out using Bitbucket's checkout procedure, or modify them directly on Google Drive. Anyone requiring a CI that is currently checked out should negotiate with the current owner of the CI to transfer control to them. A read-only version of the CI is available to all engineers. A branching and merging process may be used if multiple engineers are required to work on a CI in parallel.

3.2 Configuration Control

3.2.1 Requesting Changes

After a change is made to a local version of a CI, it will be sent to the project manager and the rest of the team for review before implementing the change on the shared CI.

3.2.2 Evaluating Changes

The project manager and team will evaluate all proposed changes. The project manager must also specify the required quality standards for incorporation.

3.2.3 Approving or Disapproving Changes

The project manager must approve proposed changes. If the project manager is unavailable for three business days following submission of a proposed change then the configuration leader shall assume command and accept or reject the proposed change.

3.2.4 Implementing Changes

Once a CI is approved to incorporate into the baseline, the configuration leader shall be responsible for coordinating the testing and integration of the changed CI. This should be performed in accordance with the regression test documentation described in the Software Test Documentation. In particular, the configuration leader shall coordinate the building of a version for testing. Version releases must be authorized by the project manager.

3.3 Configuration Status Accounting

The configuration leader shall provide the configuration summary to the team at least once a month.

3.4 Configuration Audits and Reviews

The project manager shall schedule a review by the CM leader of the configuration at least once every month, preferably as an agenda item for a regularly scheduled weekly project meeting. The CM leader shall review CM status, and report on the proposed detailed procedures to be followed at code and integration time

3.5 Interface Control

The CM system interface is Git and Bitbucket, as well as Google Docs. This interface will be managed by the configuration leader and project manager.

3.6 Subcontractor/Vendor Control

The configuration leader shall track upgrades and bug reports for any tools used. He should be prepared with a backup plan in case the maintenance of any of these tools are discontinued.

4 SCM Schedules

Implementation of a SCM plan shall begin as soon as it is approved by the project manager. The minimum key events in the CM implementation phase are as follows:

- Establish roles required for the project.
- Write the SCM procedures which complement this plan, according to the specified requirements by Beulah Works LLC.
- Establish the project CR database and customize it with a CR form that meets the requirements specified in the SCM plan.
- Establish the project repository. All project CIs will be controlled within the same repository (see section 3.1.3).

The SCM plan will include any project specified implementation events. At this point, a solid environment has been constructed for performing the CM activities of the project plan. Plans that do not deviate greatly from the basic approach of this plan should be capable of reusing existing SCMP product customizations. Any additional customization must be complete before designing begins.

The example table below displays the periodic CM activities on a calendar representing a standard month. These activities are mandatory elements of this SCM plan template. SCM plans will reproduce and expand this calendar if they add other control activities.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6 • Weekly project meeting	7
8	9	10	11	12	13 • Weekly project meeting	14
15	16	17	18	19	20 • Weekly project meeting	21
22	23	24	25	26	27 • Weekly project meeting	28
29	30	31				

Example Generic Calendar Displaying Periodic CM Activities

5 SCM Resources

The configuration leader will require an estimated average of two hours a week to maintain the system configuration for the first half of the project, and four hours a week for the second half. We have chosen not to call out separately the time spent by the other team members on configuration management.

6 SCM Plan Maintenance

Due to the importance of a stable SCM plan, all changes to this document must be approved by the entire CM team.

In view of the software development organization's goal to attain CMM level 5, the configuration leader will do the following for the CM process improvement sessions:

- Review the effectiveness of this plan.
- Quantify losses due to defects in planning.
- Investigate the literature for new CM methods; quantify the costs and benefits of improvements.
- Investigate new CM tools.
- Suggest specific improvements to this CM process.
- List the benefits of improvements.