**Software Configuration Management Plan**

**Introduction**

While the project is in development, we will be making changes to our code base. This SCMP is developed so that we can better identify changes, control the changes, and make sure the plan is implemented correctly while making sure we report the changes to others. As a team, we have agreed to utilize GitHub as our main repository store.

**Scope**

The SCMP is made to assist with making, reporting, and tracking any changes made to the original codebase. Throughout the software development process, it will help us keep track of all changes and assist in going through and making the changes.

SCMP activities are defined as

* Identifying a change
* Control a change
* Ensure the change is being properly implemented
* Also have a way to document a change
* Configuration auditing
* Configuration status reporting
* Release management and delivery

**Configuration Identification**

**Baselines**

Defining of baselines is crucial to the development lifecycle. Various versions of the development will include updated and/or removed codebase. These changes and edits will be contained to a specific versioning system and will be the baselines of our software.

**Configuration Control**

**Version/Change Control**

Using GitHub, we will utilize the branching ability to checkout and check-in code updates. Primary development for the various parts of the project will be completed in their own branches. Once development for functionality is finished, a merge request will be pushed, and reviewers not associated with the development will review the developer’s code. Our builds will be mainly focused on the deliverables for the project: Skeletal, Minimal, and Target. Each will be given their own branch and stored in the repository for version control purposes. Depending on specification, documentation may be needed to state why the change is required.

**Configuration Audits**

A software audit is “and independent examination of a software product, software process, or set of software processes by a third party to assess compliance with specification, standards, contractual agreements, or other criteria”. For our purposes, we will be acting as the third party internally. While we have leads for the software architecture and GUI design, every member will be able to perform software audits on each other to confirm our product is still within specifications.

**Configuration Status Reporting**

Configuration status reporting supports the development process by sharing the necessary information concerning the software configuration. Other parts concern the raw data, this includes the extraction, arrangement, and formation of reports according to requests. Such information could include name and version of CIs, approval history of changed CIs, software release contents and comparison between releases, number of changes per CI, and average time taken to change a CI.

**Release Management and Delivery**

Our releases will be structured around the deliverables. Our first release will be the Skeletal version on 07/19, the proceeding release will be the Minimal version on 08/09, and the final release will be the Target release on 08/23. Throughout the development lifecycle of this project, we will unlikely have any other major releases but may have a few simple minor releases that will be stated as such “Skeletal v2” meaning this version is based of the Skeletal release but with some updates from v1 and not quite up to date with the Minimal release.