PROJECT CHARTER

NASA/JPL project

September 30th, 2022

Revision History

**Charter Revision Register:** This section is used to document any changes and serves to control the development and distribution of revisions to the project charter. It should be used together with a change management processes as appropriate, and housed in the formal project repository. *Note: Best practice is to save the original baseline version as a separate file so that an accurate history of the original document remains available for comparison.*

| Change Description | Approved by | Date of Revision |
| --- | --- | --- |
| Initial iteration of the charter, describing the objectives and the assignments of each member. |  | 9/27/2022 |
|  |  |  |

Approval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Accountable Executive/Project Sponsor

Executive Summary

**Project Name:** Space Mission Visual Trajectory Analysis

**High-level Objective Statement:** The space mission trajectory analysis will display a 3D model of the solar system and show a trajectory of the mission based on geometric operations.

**Background Information:** We can do this through the program SPICE, which will allow us to make 3D models in C.

**Successful Outcome Statement:** This will allow for curious people to study the paths that prior NASA/JPL missions took.

**Strategic Alignment:** This will help other people deepen their understanding with space travel.

**Key Initiative Alignment:**All members will have SPICE set up on their work machines. All members will correspond via email or discord.

| **Primary Project Contacts** | | | |
| --- | --- | --- | --- |
| Role | Name/Title | Phone | Email |
| Project Sponsor | Marcel Llopis |  | marcel.llopis@jpl.nasa.gov |
| Accountable Executive | David Baines |  | david.baines@colorado.edu |
| Project Manager | Wayne Mak | 4088051527 | wayne.mak@colorado.edu |

Project Scope & Stakeholders

**In-Scope Statement:** Our project will deliver a fully functioning rendering simulation environment in 3D that is web browser compatible. This renderer will take coordinates via a kernel using the SPICE NASA/JPL integration software to interpret the kernel data into renderable coordinates and velocities. This will appear to the user as an animated model of their inputs. We will be using a front end, back end, unit tests, and integration API.

**Out-Of-Scope Statement:** We are excluding from scope any additional features to the user beyond critical use for rendering until we have that done and then will collaborate with our stakeholders to prioritize ‘fluff’ features.

**Assumptions:** Input is a kernel compatible with SPICE software interpreter. Input is within the solar system and contained by our solar system.

**Project Stakeholders:**

David Baines(our TA), Marcel Llopis(our project sponsor), all team members, and NASA/JPL engineers as our customers.

Impacted Measures & Improvement Targets

**Impacted Performance Measurement Families:**

Hours tracked, Meeting objectives finished, Tickets/Tasks completed

**Success Measures:**

| **Measurement Family** | **Targeted Improvement** | **Target Results Date** |
| --- | --- | --- |
| Tickets/Tasks | Consistent, even distribution among members | Every Week |
| Weekly Hours Sheets | Steady burn down rate | Every Week |
| Weekly meeting summaries | Steady, consistent attendance | Every Week |

Schedule

**Schedule Time Box:**

| **Project Phase:** | **Deliverables/Milestone:** | **Baseline Time Box Dates** | |
| --- | --- | --- | --- |
| **Plan** | * Complete Project Charter * Conduct Project Kickoff * Develop Detailed Requirements * Develop Detailed Test plan * Develop Detailed Training Plan * Complete Detailed Risk Analysis * Develop Work (Schedule) | **Start** | **Finish** |
| 9/19/2022 | 10/7/2022 |
| **Execute** | * Finalize detailed requirements * Complete Test Plan * Complete Training Plan * Finalize Implementation Plan * Complete Testing * Complete Training * Complete Implementation | **Start** | **Finish** |
| 10/7/22 | 03/1/2023 |
|  |  |
| **Close** | * Validate Measures of Success * Ensure operational controls are in place * Obtain business sign-off on deliverables * Receive approval to close project | **Start** | **Finish** |
| 03/1/2023 | 04/20/23 |

Key Roles & Responsibilities

| **Project Sponsor**  Marcel Llopis | * Has ultimate authority * Approves changes to the scope and provides whatever additional funds those changes require * Approves budget-related deliverables * Controls the business aspects of the project * Assists in developing the project charter and project plans * Executes formal reviews and management reviews |
| --- | --- |
| **Accountable Executive**  David Baines | * Disposes of issues and change requests * Makes user resources available * Approves work products * Assists in tracking action items and budgets * Executes formal reviews and management reviews * Is responsible for the functional quality of the solution |
| **Project Manager**  [Wayne Mak](mailto:Wayne.Mak@colorado.edu) | * Controls the day-to-day aspects of the project * Develops/maintains the project charter and project plans * Executes formal reviews and management reviews * Tracks and disposes of issues; helps resolve issues * Tracks action items and budgets * Is responsible for the quality of the product or service |
| **Team Leader**  [Wayne Mak](mailto:Wayne.Mak@colorado.edu) | * Manages one or more functional aspects of the project * Helps project managers with formal reviews and management reviews * Helps research issues and change requests * Helps the project manager create the work breakdown structure for his or her functional area * Helps the project manager develop the scope and estimates for his or her functional area * Maintains scope, estimates, and work plans for his or her area * Tracks action items related to his or her functional area * Ensures the proper reporting of status by his or her team members |
| **Architect**  Wayne Mak  Samuel Mast | * Documents and maintains architecture of project |
| **Test Lead**  Tiger McDaniel | * Ensure thorough unit and integration testing on code. |
| **Back END**  Kevin Loaiza  Tiger McDaniel | * Deals with server, an application, and a database. A back-end developer builds and maintains the technology that powers those components which, together, enable the user-facing side of the website to even exist in the first place |
| **SPICE Integration**  Niketh Gorla  Albert Tamayo | * Integrates the SPICE program into the overall Project |
| **Front End**  Samuel Mast  Albert Tamayo  Kevin Loaiza | * Ensure that website visitors can easily interact with the page. They do this through the combination of design, technology and programming to code a website's appearance |
| **Project Requirement Tracker**  Niketh Gorla | * Records and tracks all project requirements * Ensures team is fulfilling requirements |