

Science Project Charter

This charter was developed in accordance with the [Eclipse Development Process](#) and outlines the mission, scope, organization, and development process for the Science Project. This document extends the [Eclipse Standard Top-Level Charter v1.1](#), and includes the required content and overrides which follow. It is anticipated that as the standard charter is updated, this charter will incorporate the changes and make adjustments as seen fit by the PMC, and with approval from the EMO and board of directors.

Overview

This document is the charter for a top level project (TLP) in accordance with the Eclipse Development Process. This charter outlines the mission, scope, organization, and development process for projects under its domain. The name for this TLP will be the Science project.

Mission

The Science top-level project provides a central clearinghouse for collaborative development efforts to create software for scientific research and development. These efforts strive towards the common goal of enabling reusable components across a wide variety of technologies. These components are implemented in different languages and operate across a diverse set of computing environments.

Scope

Interoperability is essential for scientific research and development. To address this issue, Science strives to collaboratively develop well defined interfaces, models, definitions, algorithms, and reusable software libraries, services, and applications. Specifically, Science projects provide artifacts such as libraries, user interfaces, frameworks and workflow engines that enable scientific applications and services. The nature of this work is scoped as follows:

- Standard descriptions and definitions of scientific data.
- Processing and management of n-dimensional data data including both structured and unstructured grids.
- Plotting and visualizations of data in multiple dimensions.
- Workflow algorithms and their visualization.
- Machine learning, artificial intelligence, data mining, text mining and statistics.
- Modeling and simulation projects related to the physical sciences, including but not limited to physics, chemistry, biology, geology, and hydrology; and to the social sciences, including but not limited to sociology, psychology and economics.
- The collection and analysis of sample survey and experimental data from the same.
- Applied mathematics projects such as common math libraries and mesh management tools and with the exception of cryptography.
- Infrastructure to support scientific computing, such as tools for job launching and monitoring, parallel debugging, and remote project management.
- Control systems for analytical hardware.
- Tools and software to support data provenance

Licensing

Approved licenses for projects under Science include EPL, EDL (aka. 3-clause BSD), MIT, and ALv2 with preference given to the EPL and EDL. In some cases, ST projects may dual license using approved licenses. ST projects may use third party dependencies licensed under the LGPL. This list may be amended from time to time by the ST PMC subject to approval by the Eclipse Foundation Board of Directors.