

# Gemini Program Platform

## Orientation for Reviewers

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## Welcome

Thank you for participating in the conceptual design review for the Gemini Program Platform (GPP). Your support is critical to the success of the project. This document provides a brief introduction to the GPP, specifies the charge to the reviewers, and suggests a reading order for the remaining documents.

## What is the Gemini Program Platform?

The GPP provides the software foundation that modernizes Gemini's observatory control system and replaces its principal user interface applications. Its purpose is to keep Gemini competitive in the era of extremely large telescopes and sky surveys. The main highlights include:

- A combined web-based Phase I and II Tool that is oriented toward science goals and automation rather than low-level instrument configurations.
- An automated scheduler to relieve the queue planning burden and efficiently handle interrupting time domain astronomy observations.
- A new observing database built with standard relational database technology to improve query access.
- A collection of secure web APIs to all services to facilitate advanced user tasks, reporting, and automation.

## What isn't the Gemini Program Platform?

The GPP is an ambitious project that aims to replace or modify much of the existing high-level software. Nevertheless to keep its scope in check a number of related projects are not included. In particular the following high-profile items are out of scope:

- Proposal evaluation support for "queue filling" (ITAC, LP, FT, etc.).
- MOS mask design and visualization (Gemini MOS Mask Preparation Software replacement).

- Long-term scheduling for making recommendations on instrument swaps, classical runs, etc.

More information about the top-level vision for where high-level software is going may be found in [5]. These projects will all take advantage of the software model and services provided by the GPP.

## What are we reviewing?

While the software group has been prototyping and experimenting with technologies that will be pivotal to the success of the GPP for some time, we are logically at the conceptual design phase. The goal of this stage is to review, agree upon, and baseline:

1. the high-level scope,
2. the operational concept,
3. the proposed software design, and
4. the proposed verification process.

The charge to the review committee is to address the following questions:

1. Is the high-level scope of the GPP complete and ready to be baselined?
2. Does the operational concept and its proposed software design meet the stated goals?
3. Is the verification process for GPP adequate?
4. Is the project staffing and management plan sufficient to carry out the proposed work?

Any comments or questions you might have should be added directly to the google documents so that they are available to all readers and may be addressed in context. We will compile all the feedback received in this spreadsheet.

## What should I read first?

We suggest the following reading order for the other documents in this package.

1. Start with the **Operational Concept Document**, which describes the institutional goals that are driving this project, limitations in current software systems that prevent us from

meeting these goals, and proposed remedies. The ideas in this document are the core subject of this review; other documents are in support of this one.

2. The **Software Conceptual Design** builds on the Operational Concepts Document, providing a logical design for a set of software services that implement the proposed remedies, along with a proposed deployment strategy.
3. The **Project Plan** describes the plan to build the software components that will implement the proposed system, including an initial project schedule, resources and key milestones.
4. Readers who are not familiar with current Gemini software may wish to refer to the **Legacy OCS and Operations Concepts** which describes Gemini software as it is today. The intent of this document is to provide clarifying context for the limitations and proposed remedies introduced in the Operational Concepts Document.
5. The **OCS Upgrades Program Top-Level Vision** places GPP in the context of a long-term vision of Gemini software. The intent of this document is to give a view of proposed future work that is outside the scope of this project.
6. The **List of Acronyms and Terms** may be consulted to resolve any unfamiliar acronyms.

## Documents for the Review

1. The Agenda
2. The Slides