

SOCS Detailed Workplan

This page details the SOCS workplan.

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SOCS Release v0.1 ([SIM-1283](#))

Release Date: 2015-09-30

Statement of Work

- Release OpSim Requirements document
- Design SOCS independant of OpSim
- Define and initiate SOCS code modules in SE Simulations repository
- Prototype and benchmark Communications using current release of DDS-SAL-Python

OpSim Requirements Document ([SIM-1267](#))

Statement of Work

- Write OpSim requirements document
- Ensure Scheduler requirements document reflects necessary interface

Design and Prototyping for SOCS ([SIM-1268](#))

Statement of Work

- Create repository for new SOCS code
- Create repository for DDS testing scripts

SOCS Release v0.2 ([SIM-1284](#))

Release Date: 2015-12-27

Statement of Work

- Implement SOCS structure with interface
- Implement simulation kernel with time simulator
- Refactor and integrate observatory model
- Implement observatory telemetry simulator
- Implement simulation sequencer with targets handling
- Refactor and integrate observations DB
- Integrate with Scheduler
 - SOCS topics: telemetry for time and observatory conditions
 - Scheduler topics: next target from scripted proposal

Implement SOCS interface structure ([SIM-1276](#))

Statement of Work

- SAL communication layer
- Driver scripts
- Configuration parameter system
- DB interaction layer

Implement SOCS Observatory Model ([SIM-1277](#))

Statement of Work

- Inherit from Scheduler Observatory Model
- Implement interface for variational model
- Implement observatory telemetry broadcast via DDS topics
- Implement configuration parameter handling
- Implement DB interaction for state record keeping

Implement SOCS Simulation Kernel ([SIM-1278](#))

Statement of Work

- Implement Time Handler interface
- Implement Time Handler communication via DDS topics
- Implement Sequencer interface
- Implement Sequencer behavior for DDS topics on requested targets
- Implement Sequencer behavior for handling observations
- Implement Sequencer communication of observations (visits) via DDS topics
- Implement DB interaction for recording visit information

Integrate and test with Scheduler v0.2 ([SIM-1279](#))

Statement of Work

- Checking ability to run Scheduler from SOCS driver
- Checking observatory telemetry communication between SOCS/Scheduler
- Checking observation (visit) telemetry communication between SOCS/Scheduler

Implement production tools v0.2 ([SIM-1280](#))

Statement of Work

- Design layout of post-processing reorganization
- Create new repo and structure for tools
- Refactor the current conversion tools
- Implement functionality needed from v0.2 of SOCS
- Setup structure for production pipeline

Cadence Studies v0.2 ([SIM-1319](#))

Statement of Work

No description provided.

SOCS Release v0.3 ([SIM-1285](#))

Release Date: 2016-05-20

Statement of Work

- Refactor and integrate Astronomical Sky
- Integrate Observatory Model slew and track behavior for observing visits
- Implement observing behavior in simulation sequencer
- Integrate DB storage of targets received and visits performed
- Integrate and benchmark performance with Scheduler
 - Test multiple AD proposals survey with slew time cost and sky brightness
 - Test repeatability
 - Test speed under simulation

Implement SOCS Astronomical Sky ([SIM-1302](#))

Statement of Work

- Assist Scheduler developer in using sims_skybrightness package for Scheduler classes
- Inherit from Scheduler classes
- Implement interface for variational model
- Implement sky conditions telemetry broadcast via DDS topics
- Implement configuration parameter handling
- Implement DB interaction for record keeping

Enhancements for Observatory Model ([SIM-1304](#))

Statement of Work

- Implement slewing and tracking behavior to simulate a visit

Enhancements for Sequencer ([SIM-1305](#))

Statement of Work

- Add communication between Sequencer and Observatory Model for visit
- Implement DB interaction for visit record keeping (targets and observations)

Implement Proposal Interface ([SIM-1307](#))

Statement of Work

- Work with stakeholders to help Scheduler developer define necessary behavior
- Implement configuration parameter passing via DDS topics

Integrate and test with Scheduler v0.3 (SIM-1308)

Statement of Work

- Ensure that SOCS/Scheduler still work together
- Initial benchmarking of SOCS/Scheduler performance
- Begin testing repeatability of SOCS/Scheduler system

Cadence Studies v0.3 (SIM-1320)

Statement of Work

No description provided.

Implement production tools v0.3 (SIM-1365)

Statement of Work

Continued work on Production tools

Ensure post-processing tools work
Begin exercising production pipeline
Develop any new MAF metrics for SOCS/Scheduler validation

SOCS Release v1.0 (SIM-1286)

Release Date: 2016-10-27

Statement of Work

- Refactor and integrate Environment Model
- Simulate weather telemetry, clouds and seeing
- Incorporate filter swaps during new moon
- Incorporate downtime simulator
- Implement Scheduler configuration via commands
- Integrate with Scheduler
 - Test with complete survey
 - Test repeatability
 - Test execution speed

Simulate weather telemetry, clouds and seeing (SIM-1340)

Statement of Work

No description provided.

Incorporate filter swaps during new moon (SIM-1341)

Statement of Work

No description provided.

Incorporate downtime simulator (SIM-1342)

Statement of Work

No description provided.

Implement Scheduler configuration via commands (SIM-1343)

Statement of Work

No description provided.

Integrate and test with Scheduler v1.0 (SIM-1344)

Statement of Work

No description provided.

Refactor and integrate environmental model ([SIM-1388](#))

Statement of Work

No description provided.

Cadence Studies v1.0 ([SIM-1389](#))

Statement of Work

No description provided.

Implement production tools v1.0 ([SIM-1390](#))

Statement of Work

No description provided.

SOCS Release v1.1 ([SIM-1287](#))

Release Date: 2017-04-18

Statement of Work

- Support for previous release
- Support Development for Area Distribution Look Ahead in Scheduler 1.1
- Implement non deterministic weather simulator
- Implement non deterministic downtime simulator
- Integrate and test with Scheduler
 - Test survey with Area Distribution proposals and Look Ahead
 - Test speed performance
 - Test repeatability

Support Development for Area Distribution Look Ahead in Scheduler 1.1 ([SIM-1345](#))

Statement of Work

No description provided.

Implement non-deterministic weather simulator ([SIM-1346](#))

Statement of Work

No description provided.

Integrate and test with Scheduler v1.1 ([SIM-1347](#))

Statement of Work

No description provided.

Implement non-deterministic downtime simulator ([SIM-1348](#))

Statement of Work

No description provided.

Cadence Studies v1.1 ([SIM-1392](#))

Statement of Work

No description provided.

Implement production tools v1.1 ([SIM-1393](#))

Statement of Work

No description provided.

SOCS Release v1.2 ([SIM-1288](#))

Release Date: 2017-08-24

Statement of Work

- Support for previous release
- Support Development for Time Distribution Look Ahead in Scheduler 1.2
- Integration and test with Scheduler

Support Development for Time Distribution Look Ahead in Scheduler 1.2 ([SIM-1350](#))

Statement of Work

No description provided.

Support for previous release v1.1 ([SIM-1414](#))

Statement of Work

No description provided.

Cadence Studies v1.2 ([SIM-1416](#))

Statement of Work

No description provided.

Implement production tools v1.2 ([SIM-1417](#))

Statement of Work

No description provided.

SOCS Release v1.3 ([SIM-1289](#))

Release Date: 2018-01-07

Statement of Work

- Support for previous release
- Evaluate and implement performance enhancements

Evaluate and implement performance enhancements ([SIM-1352](#))

Statement of Work

No description provided.

Support for previous release v1.2 ([SIM-1418](#))

Statement of Work

No description provided.

Cadence Studies v1.3 ([SIM-1419](#))

Statement of Work

No description provided.

Implement production tools v1.3 ([SIM-1420](#))

Statement of Work

No description provided.

SOCS Release v1.4 ([SIM-1290](#))

Release Date: 2018-06-25

Statement of Work

- Support for previous release
- Implement warm start DB interface for Scheduler
- Implement image quality feedback simulator
- Implement degraded operational modes simulator
 - Constrained limits and/or speeds for mount, rotator, dome, optics.
 - Constrained availability of filters
- Integrate and test with Scheduler
 - Test resuming partial surveys
 - Test variable image quality feedback
 - Test degraded modes

Implement warm start DB interface for Scheduler ([SIM-1353](#))

Statement of Work

No description provided.

Implement image quality feedback simulator ([SIM-1354](#))

Statement of Work

No description provided.

Implement degraded operational modes simulator ([SIM-1355](#))

Statement of Work

No description provided.

Integrate and test with Scheduler v1.4 ([SIM-1356](#))

Statement of Work

No description provided.

Support for previous release v1.3 ([SIM-1421](#))

Statement of Work

No description provided.

Cadence Studies v1.4 ([SIM-1422](#))

Statement of Work

No description provided.

Implement production tools v1.4 ([SIM-1423](#))

Statement of Work

No description provided.

SOCS Release v1.5 ([SIM-1291](#))

Release Date: 2018-11-17

Statement of Work

- Support for previous release
- Implement spatial distribution for weather simulator
- Integrate and test with Scheduler
 - Test dithering in Scheduler

- Test spatial distribution for weather in a survey

Implement spatial distribution for weather simulator (SIM-1357)

Statement of Work

No description provided.

Integrate and test with Scheduler v1.5 (SIM-1358)

Statement of Work

No description provided.

Support for previous release v1.4 (SIM-1424)

Statement of Work

No description provided.

Cadence Studies v1.5 (SIM-1425)

Statement of Work

No description provided.

Implement production tools v1.5 (SIM-1426)

Statement of Work

No description provided.

SOCS Release v2.0 (SIM-1292)

Release Date: 2019-04-12

Statement of Work

- Support for previous release
- Support Scheduler Implementation for publication of future targets schedule
- Integrate and test with Scheduler

Support Scheduler Implementation for publication of future targets schedule (SIM-1359)

Statement of Work

No description provided.

Integrate and test with Scheduler v2.0 (SIM-1360)

Statement of Work

No description provided.

Support for previous release v1.5 (SIM-1427)

Statement of Work

No description provided.

Cadence Studies v2.0 (SIM-1428)

Statement of Work

No description provided.

Implement production tools v2.0 (SIM-1429)

Statement of Work

No description provided.

SOCS Release v2.1 ([SIM-1293](#))

Release Date: 2019-08-17

Statement of Work

- Support for previous release
- Implement weather forecast
- Integrate and test with Scheduler

Implement weather forecast ([SIM-1361](#))

Statement of Work

No description provided.

Integrate and test with Scheduler v2.1 ([SIM-1362](#))

Statement of Work

No description provided.

Support for previous release v2.0 ([SIM-1430](#))

Statement of Work

No description provided.

Cadence Studies v2.1 ([SIM-1431](#))

Statement of Work

No description provided.

Implement production tools v2.1 ([SIM-1432](#))

Statement of Work

No description provided.

SOCS Release v2.2 ([SIM-1294](#))

Release Date: 2020-01-10

Statement of Work

- Support for previous release
- Support Scheduler implementation of generic interface for optimization algorithms
- Support Schedule Incorporation community provided optimizations

Support Scheduler implementation of generic interface for optimization algorithms ([SIM-1363](#))

Statement of Work

No description provided.

Support Scheduler incorporation of community provided optimizations ([SIM-1364](#))

Statement of Work

No description provided.

Cadence Studies v2.2 ([SIM-1434](#))

Statement of Work

No description provided.

Implement production tools v2.2 ([SIM-1435](#))

Statement of Work

No description provided.