

OpSim Scheduler/Simulator Pair Development Roadmap				
Activity	Time Period			
Duration of Work	Sep -Dec 2014	Jan - May 2015	Jun - Aug 2015	Sep 2015 - Aug 2016
Fiscal Year	FY15	FY15	FY15	FY15/FY16
Design telemetry interfaces and the pub sub model (ICDs)	<ul style="list-style-type: none"> * Hire new developer * Identify & establish point of contact & coordination with T&S/OCS * Identify SE deliverables alongside T&S/OCS deliverables * Establish Scheduler Requirements document as a Change Controlled Document * Identify the (6?) ICDs for Simulator/Scheduler pair & document * OCS Review (Sep 2014) 			
Modify OpSim to produce telemetry inputs	<ul style="list-style-type: none"> * Implement interfaces (VERIFY): <ul style="list-style-type: none"> - Control (Mode, Downtime, Degraded) - Telemetry (Observatory conditions, Environment conditions, Forecast) - History (Past observations DB, current observations) - Parameters (System, Scheduling, Survey) - Scheduling Telemetry * Validate * Document 			
Workshop on optimization of telescope schedules	<ul style="list-style-type: none"> * Define objective & LOC * Identify Invitees * Prepare materials 			
Complete planned improvements and bug fixes to OpSim	<ul style="list-style-type: none"> * Resolve bugs currently identified in detailed plan (current developers) * Validate (create simulations) and release as v3.2 * Orient new developer to codebase * Create benchmark sets of simulations (publish) * Documentation 	<ul style="list-style-type: none"> * Implement improvements as identified in detailed plan (new developer) * Validate (create simulations) and release as v3.3 * Create benchmark sets of simulations (publish) * Documentation 		
Implement V1 of scheduler in the OCS and sequencer using the current OpSim greedy algorithm		<ul style="list-style-type: none"> * We need to identify what needs to be done and who will do it 		
Validate algorithm against OpSim		<ul style="list-style-type: none"> * Define and execute validation process creating a benchmark set of simulations 		

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Release OpSim to community (installation and running)		<ul style="list-style-type: none"> * Establish requirements from the Community * identify what is needed for OpSim to meet minimum "portability" standards * Evaluate method of distribution (facility or code access) and level of support * Implement required tasks * Assist in Workshop to orient Community 		
Release v1 of validated scheduler (meeting SRD)			* identify scope of work needed to complete "V1" and prepare for "V2" (e.g. lookahead)	
Implement metric functions as delivered by the science collaborations			* evaluate how to collect and maintain and/or implement suggestions by the community	
Implement V2 of scheduler logic	* assess methods and strategies for optimizing the scheduler as stimulated by the Workshop	* define functionality needed by Simulator to accommodate range of scheduling strategies	* design code changes needed for the Simulator to adapt to new strategies	<ul style="list-style-type: none"> * implement code needed to explore alternate scheduling algorithms * validate codebase and create benchmark set of test classes * create benchmark set of simulations * documentation

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Details

Release v3.2
Convert slalib to palpy (work with Scott)
rare code crash in TransSubSeqProp.py
transient subsequence proposals 'randomly' dieing
overflow does not work
filter changes - heat and number of changes
Camera Shutter Model - what are specs needed
Change visit collection algorithm to optimize for the number of visits per unit time.
Release v3.3
Determine how to declare versions for SSTAR v4.0 and OpSim v3.0 in JIRA and close/release appropriately (work with Francisco) - publish protocol to Confluence
Assess, define, publish a process for a version release cycle (software cycle)
implement new camera filter change model in Instrument.py
Add a tag to proposal files that identifies that proposal for post-processing (WFD, Rolling, DD)
Correct visitTime and visitExpTime (could be coupled with OPSIM-147)
Parameterize all components of visit-time (shutter, readout, nexp, exptime)
Add capability to specify more than 2 visits/night
Plan code to do three/arbitrary visits (assess, design, implement, test, release)
Post v3.3 as time permits
Implement new Standby or idle-time strategy
Debug deterministic lookahead for WeakLensing type proposals
Implement deterministic look-ahead for sequences