

Apps Status Report for November 15, 2009

Guide on Reporting Percentage Completed:

For software development tasks,

- use 0% if the solution is still being designed;
- use 25% if the solution's design is completed;
- use 50% if the solution is implemented and tested within the Ticket branch;
- use 75% if the implementation review is complete, the Ticket branch has been merged onto the Trunk branch, and the Ticket is closed.
- use 100% if the affected Trunk packages are tagged and released.

For other tasks, still use these increments, but apply their meaning as best as possible.

Note: Please place an asterisk (*) after the percent if you updated this value in this report.

Allsman Robyn

Reported 19 Nov 2009

ID	Percent	Task	Comments
APP204	0%	identify scientists to analyze stage output	<i>not started</i>
APP200	0%	validate initial integration run successfully completed	<i>not started</i>

*Percent updated in this report

Comments: Last month the request for volunteer analysts was taken to Zeljko's Science meeting.

The rest of my efforts are reported in the MW Progress report.

Other Activities

Axelrod Tim

Reported xx/xx/xx

ID	Percent	Task	Comments
APP155	0%	photometric self calibration	<i>not started</i>
APP159	0%	evaluate tools and make selection	<i>not started</i>
APP158	0%	configure and test for HEALpix projection	<i>not started</i>
APP161	0%	configure and test for display of full focal plane LSST image	<i>not started</i>
APP56	0%	defining units	<i>not started</i>
APP91	80%	define DC3b goals for SDQA	
APP191	50%	Provide special case simulation needs (Axelrod)	

*Percent updated in this report

Comments:

Other Activities

Becker Andy

Reported 11/19/09

ID	Percent	Task	Comments
APP145	*50%	move applications code out of stage code	
APP80	*50%	adapt PSF spatial cell model for ip_diffim	
APP79	*50%	implement sum-of-gaussians (Alard-Lupton) kernel basis	
APP78	*50%	investigate regularizing delta function kernels	
APP95	*50%	code to measure quality of difference imaging coadds	
APP100	*25%	test difference imaging coadds	
APP123	0%	find CFHT fringe frames and move to NCSA	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Becla Jacek

Reported 11/19/09

ID	Percent	Task	Comments
APP53	75%*	schema updates for all source related tables and object table	<i>design almost done, note that implementation is covered by MWI680</i>
APP54	25%*	schema updates for all exposure related tables	<i>started</i>
APP55	0%	synthetic sources of data	<i>not started</i>
APP56	0%	defining units	<i>not started</i>
APP57	50%	standardizing names	

*Percent updated in this report

Other Activities

- storage spreadsheet updated (major updates, including ForcedSources, number of templates, number of sources per visit)
- disk IO model discussed, spreadsheet reviewed
- reviewed Science Book, aligning estimates from Science Book with DM
- preparing docs for the NSF review (db risks, map/reduce vs dbms, db scalable arch)
- started discussions on compression, organizing meeting with compression expert
- Organized six DataAccWG telecons, discussions include mops partitioning, star count, RapidTransientSource, schema, template images, EvaluatedModel table, covariances, reference catalog

- Statement of Work for the LSST DM slac-based team (lots of paperwork)
- updated trac page with schema
- clarified naming conventions for various types of errors
- scalab architecture: testbed planning, arranged access to LLNL cluster
- planning how to store reference catalog, see [DbStoringRefCat](#)
- XLDB
 - ◆ xldb report (almost done)
 - ◆ collecting input for science benchmark
- SciDB
 - ◆ handled logistics of the developers meeting at slac (20 people), incl website updates, catering
 - ◆ attended the developers meeting
 - ◆ discussions about SciDB corp strategy and funding
 - ◆ discussions with Persistent Systems
 - ◆ providing input for slac upper management and lawyers

Bickerton Steve

Reported xx/xx/xx

ID	Percent	Task	Comments
APP112	25%	stellar photometry	

*Percent updated in this report

Comments:

Other Activities

Bosch Jim

Reported xx/xx/xx

ID	Percent	Task	Comments
APP109	50%	complete API for model fitting with marginalization over calibration parameters	
APP108	40%	implement convolved Sersic models	
APP107	*25%	implement multifit fitter	
APP117	0%	implement constrained models for forced photometry	<i>not started</i>
APP116	0%	create LSST stages for photometry	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Cleveland Matt

Reported xx/xx/xx

Other Activities

ID	Percent	Task	Comments
APP154	0%	develop distributed linkTracklets implementation	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Dubcovsky Martin

Reported xx/xx/xx

ID	Percent	Task	Comments
APP150	*75%	move applications code out of stage code	<i>done</i>
APP168	*75%	modify stage code to conform with new MW API	<i>skeleton stage implementations are complete</i>
APP109	50%	complete API for model fitting with marginalization over calibration parameters	
APP108	40%	implement convolved Sersic models	
APP107	*25%	implement multifit fitter	
APP118	0%	implement multifit pipeline which leverages multifit API and image access framework	<i>not started</i>
APP119	0%	implement pipeline stage for extracting ellipse parameters, flux, and bounding box from detections	<i>not started</i>
APP117	0%	implement constrained models for forced photometry	<i>not started</i>
APP116	0%	create LSST stages for photometry	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Grav Tommy

Reported xx/xx/xx

ID	Percent	Task	Comments
APP134	0%	generate PS-SSM catalog for LSST	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Jarvis Mike

Reported 11/20/09

ID	Percent	Task	Comments
APP105	25%	PSF for deep detection	I have converted most of my DES version of the code to the required LSST style. I will be trying to keep to two pieces of code as much in sync as possible so that any bugs we find in the testing of the DES code can be easily ported over to the LSST version as well. (And vice versa.)

*Percent updated in this report

Comments:

Other Activities

Jones Lynne

Reported xx/xx/xx

ID	Percent	Task	Comments
APP128	90%	evaluate/generate Ops Sim Cadence for use	Done.(100%*)

*Percent updated in this report

Comments:

Other Activities

Krughoff Simon

Reported 11/20/09

ID	Percent	Task	Comments
APP146	25%	move applications code out of stage code	
APP84	0%	apply fringe frame correction	<i>not started</i>
APP83	50%	develop camera state classes (CCDinfo and Ampinfo)	
APP82	25%	develop calibration products database classes	

*Percent updated in this report

Comments:

Other Activities

- Completed design review of Camera geometry classes
- Resolved several outstanding issues with ip_isr.
 - ◆ Tests were failing
 - ◆ buildbot was failing

Laher Russ

Reported 11/23/09

ID	Percent	Task	Comments
APP212	0%	Update SDQA package to confirm with C++ standards	<i>not started</i>
APP90	0%	implement SDQA tool functionality to support DC3b goals	<i>not started</i>
APP89	0%	query metadata and package in C++ container	<i>not started</i>
APP88	0%	implement threshold comparison	<i>not started</i>
APP211	25%	WCS verification code	
APP210	50%	ATpy evaluation	

*Percent updated in this report

Comments: Spent most of last month on development for PTF.

Other Activities

- Reviewed Trac pages [CreateStageImplementation](#) and [PythonCodeStandards](#)
- Worked on skeletal stage for `sdqaWcsCheckFailureRateStage.py`
- Implemented Ticket [#1007](#): Add database clean-up prior to running persistence test in `SdqaRatingFormatter_1.py`
- Cut new `sdqa` release 3.0.4 to fix nightly-build failure

Levine Deborah

Reported xx/xx/xx

ID	Percent	Task	Comments
APP90	0%	implement SDQA tool functionality to support DC3b goals	<i>not started</i>

*Percent updated in this report

Comments: Still iterating with Tim on priorities for DC3b. Updated proposed response with Gregory and presented to Tim. Hoping to plan a visit to Tucson for team, per Tim probably after review.

Other Activities

Supported various weekly telecons. Working on documentation.

Lim KT

Reported xx/xx/xx

ID	Percent	Task	Comments
APP6	0%	interslice communications	<i>not started</i>
APP7	0%	post spatial matching (stretch goal)	<i>not started</i>
APP192	0%	translate overall production into pipeline , stages, and policies	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Lupton Robert

Reported xx/xx/xx

ID	Percent	Task	Comments
APP139	0%	integrate HEALPix into software stack	<i>not started</i>
APP95	40%	code to measure quality of difference imaging coadds	
APP100	0%	test difference imaging coadds	<i>not started</i>
APP149	80%	move applications code out of stage code	
APP167	0%	modify stage code to conform with new MW API	<i>not started</i>
APP101	75%	simplified background estimation	
APP121	50%	adapt astrometry code for DC3b use	

*Percent updated in this report

Comments:

Other Activities

Monet Dave

Reported xx/xx/xx

ID	Percent	Task	Comments
APP121	50%	adapt astrometry code for DC3b use	

*Percent updated in this report

Comments:

Other Activities

Monkewitz Serge

Reported xx/xx/xx

ID	Percent	Task	Comments
APP144	0%	move applications code out of stage code	<i>not started</i>
APP162	0%	modify stage code to conform with new MW API	<i>not started</i>
APP6	0%	interslice communications	<i>not started</i>
APP7	0%	post spatial matching (stretch goal)	<i>not started</i>
APP74	0%		<i>not started</i>

	characterization of and improvements to association cosmic ray rejection performance	
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*Percent updated in this report

Comments:

Other Activities

Mullally Fergal

Reported xx/xx/xx

ID	Percent	Task	Comments
APP86	60%	implement improvements for WCS	
APP151	25%	implement stage structure for support astrometry code	

*Percent updated in this report

Comments:

Other Activities

Myers Jon

Reported 11/24/09

ID	Percent	Task	Comments
APP140	25%	integrate MOPS stages with new C++ KD-Tree tools	
APP132	100%*	identify cluster to perform LSST-MOPS runs	
APP129	25%	run DayMOPS with solar system model	
APP141	75%	write linkTracklets and unit tests	
APP128	100%*	evaluate/generate Ops Sim Cadence for use	

*Percent updated in this report

Comments:

Other Activities

Developed initial hardware requirement estimates for DayMOPS using OOrb rather than JPL.

Worked with Jacek and Lynne Jones to help estimate DayMOPS database requirements.

Worked closely with Mikael Granvik to build, test and validate f2py-based wrappers to OOrb based on our needs. These will hopefully replace or augment existing wrappers to OOrb, which have been found to cause occasional mysterious memory errors.

Ran a series of benchmarks on various configurations of nightly ephemeris stored in a database.

Used a sample of PS-MOPS asteroid catalog to find amount of error generated by the nightly linear approximation of NEO paths compared with hourly true ephemeris.

Using knowledge from above database experiments, discussed and planned (with Lynne Jones and Simon Krughoff) a new asteroid ephemeris generation utility to be used for generating MOPS input catalogs and asteroid locations for the ImSim catalogs. Unlike PanSTARRS tools, ours will keep nightly ephemeris in a database from simulation to simulation, avoiding the need to calculate new ephemerides. This code is planned to serve as the basis for a slightly cleaner, OOrb-based NightMOPS as well.

Owen Russ

Reported xx/xx/xx

ID	Percent	Task	Comments
APP77	0%	fix ticket #873	<i>not started</i>
APP94	0%	code to warp images to/from sky pixel representation	<i>not started</i>
APP209	0%	implement outlier rejection	<i>not started</i>
APP98	50%	code to create PSF-matched difference imaging coadds (no outlier rejection)	
APP95	40%	code to measure quality of difference imaging coadds	
APP104	50%	code to detect chi-squared deep detection coadds (no outlier rejection)	

*Percent updated in this report

Comments:

Other Activities

Pierfederici Francesco

Reported xx/xx/xx

ID	Percent	Task	Comments
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*Percent updated in this report

Comments:

Other Activities

TBD

Reported xx/xx/xx

ID	Percent	Task	Comments
APP103	0%	create a set of chi-squared deep detection coadds	<i>not started</i>
APP102	0%	code to measure quality of deep detection coadds	<i>not started</i>
APP208	0%	define CFHT images to be used for coadd	<i>not started</i>
APP201	0%	identify tools to analyze science data quality of stage output	<i>not started</i>

Other Activities

APP199	0%	validate science quality of initial integration run	<i>not started</i>
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*Percent updated in this report

Comments:

Other Activities

Major Accomplishments

Significant breakthroughs, issues resolved.

Objectives for the Next Period

What you expect to accomplish.

Problems Encountered and Solutions Being Pursued

Budget or schedule variance, technical issues, management issues.