

Status Report for October 15, 2009

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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 xx/xx/xx

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

*Percent updated in this report

Comments:

Other Activities

- see [MWInfReport101509](#)

Axelrod Tim

Reported xx/xx/xx

ID	Percent	Task	Comments
APP155	0%	data release photometry	<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>
APP96	0%	define input images for coadds	<i>not started</i>
APP56	0%	defining units	<i>not started</i>
APP91	80%	define DC3b goals for SDQA	

APP187	0%	Provide physics needed in <u>ImSim</u>	<i>not started</i>
APP186	0%	Determine Multiple filters and number of images	<i>not started</i>
APP191	0%	Provide special case simulation needs (Axelrod)	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Becker Andy

Reported 08/13/09

ID	Percent	Task	Comments
APP145	50%	move applications code out of stage code	
APP164	50%	modify stage code to conform with new MW API	
APP80	25%	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	
APP76	25%	investigate improving the spatial modeling of the kernel	
APP95	0%	code to measure quality of difference imaging coadds	<i>not started</i>
APP100	0%	test difference imaging coadds	<i>not started</i>
APP123	0%	find CFHT fringe frames and move to NCSA	Need DC3b input data defined

*Percent updated in this report

Comments:

Other Activities

Becla Jacek

Reported 10/15/09

ID	Percent	Task	Comments
APP53	0%	schema updates for all source related tables and object table	discussions started (Oct 6 and Oct 9 DataAcc telecons)
APP54	0%	schema updates for all exposure related tables	<i>not started</i>
APP55	0%	synthetic sources of data	<i>not started</i>
APP56	0%	defining units	<i>not started</i>
APP57	50%*	standardizing names	this is mostly done, need to update formatters and test

*Percent updated in this report

Comments:

Other Activities

See the comments in my Middleware report.

Bickerton Steve

Reported xx/xx/xx

ID	Percent	Task	Comments
APP112	0%	stellar photometry	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Bosch Jim

Reported 10/15/09

ID	Percent	Task	Comments
APP109	*50%	complete API for model fitting with marginalization over calibration parameters	<i>Design is done. Base classes exposing this API have been implemented. API subject to change with code review</i>
APP108	*40%	implement convolved Sersic models	<i>Base classes to support Sersic models are in place. Sersic models themselves are not, yet</i>
APP107	*20%	implement multifit fitter	<i>Design has been prototyped but not finalized</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

Cleveland Matt

Reported xx/xx/xx

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

*Percent updated in this report

Comments:

Other Activities

Connolly Andy

Reported xx/xx/xx

ID	Percent	Task	Comments
APP188	0%	Per CCD qe in <u>ImSim</u>	<i>not started</i>
APP183	0%	Include moving objects in simulation (Connolly)	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Dubcovsky Martin

Reported 10/15/09

ID	Percent	Task	Comments
APP150	0%	move applications code out of stage code	<i>not started</i>
APP168	0%	modify stage code to conform with new MW API	<i>not started</i>
APP109	*50%	complete API for model fitting with marginalization over calibration parameters	<i>Design is done. Base classes exposing this API have been implemented. API subject to change with code review</i>
APP108	*40%	implement convolved Sersic models	<i>Base classes to support Sersic models are in place. Sersic models themselves are not, yet</i>
APP107	*20%	implement multifit fitter	<i>Design has been prototyped but not finalized</i>
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: Multifit is about 3 weeks behind schedule. This is on account of ticket [#905](#) for additional functionality in kernels to allow model convolution

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 xx/xx/xx

ID	Percent	Task	Comments
APP105	0%	PSF for deep detection	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Jones Lynne

Reported xx/xx/xx

ID	Percent	Task	Comments
APP128	75%	evaluate/generate Ops Sim Cadence for use	<i>all available seem equivalent and workable, though only ~65% efficient at pairs</i>
APP185	25%	Input catalog with wider range of SEDs for sim images	<i>data gathered</i>

*Percent updated in this report

Comments:

Other Activities

Krughoff Simon

Reported xx/xx/xx

ID	Percent	Task	Comments
APP146	0%	move applications code out of stage code	<i>not started</i>
APP165	0%	modify stage code to conform with new MW API	<i>not started</i>

APP84	0%	apply fringe frame correction	<i>not started</i>
APP83	0%	develop camera state classes (CCDinfo and Ampinfo)	<i>not started</i>
APP82	0%	develop calibration products database classes	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Laher Russ

Reported 10/16/09

ID	Percent	Task	Comments
APP152	0%	move applications code out of stage code	<i>not started</i>
APP169	0%	modify stage code to conform with new MW API	<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>

*Percent updated in this report

Comments:

Other Activities

- Worked on unit test for ATpy
([?http://lsstdev.ncsa.uiuc.edu/trac/wiki/AstronomicalTablesUsingPython](http://lsstdev.ncsa.uiuc.edu/trac/wiki/AstronomicalTablesUsingPython))

Levine Deborah

Reported 10/20/09

ID	Percent	Task	Comments
APP90	0%	implement SDQA tool functionality to support DC3b goals	<i>started</i>

*Percent updated in this report

Comments: Main activity at this point is to iterate with Tim to focus on desired functionality to support evaluation the software against the data quality goals set. Worked with both Tim and Gregory on an initial response, commented on Tim's goals page. Need to set up a meeting with Tim in Tucson.

Other Activities

- attended most weekly Apps, DC3 meetings
- attended ADASS meeting in Sapporo; some 3D data vis techniques may be promising for summarizing SDQA data at a human-scannable level.
- Worked with Suzy on Ops Plan feedback.

S. Dodd, R. Cutri, L Armus

Reported 10/19/09

- Completed and are tracking Apps schedule for DC3b. Waiting on Jeff to integrate into overall schedule and due resource loading across DM.
- Provided comments to Dave Silva on version 4 of LSST Operations Plan drafts
- Finalized FY10 LSST funding for IPAC with Jeff
- Attended DC3, Applications, SAT, MOPS and DM Management telecons.
- Lee Armus and Suzy talked with Tim about science validation needs for DC3b. Lee will review the Science Requirements Document and make suggestions on how best to test for these requirements.

19. Dodd: Plans for next month

- Track and Update Apps Plan as inputs come in. Work with Jeff and David to get integrated DC3b schedule published.
- Hold at least one Applications software Design Review
- Support Final Design Phase review as needed
- Continue review of LSST Operations Plan drafts

Other Activities

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	50%*	translate overall production into pipeline , stages, and policies	Initial draft in Trac and checked into datarel package

*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	0%	code to measure quality of difference imaging coadds	<i>not started</i>
APP100	0%	test difference imaging coadds	<i>not started</i>
APP149	0%	move applications code out of stage code	<i>not started</i>
APP167	0%	modify stage code to conform with new MW API	<i>not started</i>
APP101	0%	simplified background estimation	<i>not started</i>
APP121	0%	adapt astrometry code for DC3b use	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Monet Dave

Reported xx/xx/xx

ID	Percent	Task	Comments
APP121	0%	adapt astrometry code for DC3b use	<i>not started</i>

*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%	characterization of and improvements to association cosmic ray rejection performance	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Mullally Fergal

Reported xx/xx/xx

ID	Percent	Task	Comments
APP86	0%	implement improvements for WCS	<i>not started</i>
APP151	0%	implement stage structure for support astrometry code	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Myers Jon

Reported xx/xx/xx

ID	Percent	Task	Comments
APP140	0%	integrate MOPS stages with new C++ KD-Tree tools	<i>not started</i>
APP132	0%	identify cluster to perform LSST-MOPS runs	<i>not started</i>
APP129	0%	run DayMOPS with solar system model	<i>not started</i>
APP141	0%	write linkTracklets and unit tests	<i>not started</i>
APP128	0%	evaluate/generate Ops Sim Cadence for use	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Owen Russell

Reported xx/xx/xx

ID	Percent	Task	Comments
APP77	0%	fix ticket #873	<i>not started</i>
APP148	0%	move applications code out of stage	<i>not started</i> None of my code requires this fix.
APP166	0%	modify stage code to conform with new MW API	<i>not started</i> No existing stage code yet.
APP94	0%	code to warp images to/from sky pixel representation	<i>not started</i>
APP98	25%	code to create PSF-matched difference imaging coadds (no outlier rejection)	<i>not started</i>
APP95	0%	code to measure quality of difference imaging coadds	<i>not started</i>

APP104	25%	code to create chi-squared deep detection coadds (no outlier rejection)	<i>not started</i>
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*Percent updated in this report

Comments:

Other Activities

- Merged afw ticket [#833](#) to trunk: "Add a 'normalize' flag to convolveLinear"
- Acted as a guinea pig for the first automated test of software on this merge, providing feedback to make the reports more useful.
- Got coadd_psfmatched running. It seems to produce good coadds. Remaining work:
 - ◆ Add a pipeline stage implementation (needs collaboration with K-T Lim)
 - ◆ Remove hacks once ticket [#912](#) is fixed
 - ◆ Call a full psf-fitting routine from ip_diff once one is available
 - ◆ Add outlier rejection, if this is in scope for DC3b
- Enhanced coadd_utils, adding functions for coadd_psfmatched and improving the API
- Resolved ticket [#936](#): Fix type names in Kernel to meet standard

which included various cleanups including getting rid of unnecessary class KernelList? and removing a bunch of hard tabs in afw.
- Implemented first cut of coadd_chisquared. No unit tests or stage code yet. I am getting odd results from AB's psf-matching software and I need to resolve that before I can evaluate the quality of the coadd.

18. Owen: Plans for next month:

- Improve PSF matching (this is AB's code, but at the moment I don't know if my problems are user error or bugs in his code).
- Test chisquared coadd, e.g. plot histogram of pixel values against plot of standard chisquared distribution
- Test psf-matched coadd, e.g. try to measure the improvement in S/N
- Work on some of the coadd_psfmatched issues mentioned above
- Work on afw tickets such as [#930](#): Please add clone method to Kernel, Function1 and Function2 classes

Peterson

Reported xx/xx/xx

ID	Percent	Task	Comments
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APP184	0%	Telescope rotation and site information in image generation	<i>not started</i>
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*Percent updated in this report

Comments:

Other Activities

Pierfederici Francesco

Reported xx/xx/xx

ID	Percent	Task	Comments
APP131	0%	integrated DayMOPS into LSST framework	<i>not started</i>
APP130	0%	incorporate <u>OpenOrb</u>	<i>not started</i>

*Percent updated in this report

Comments:

19. Dodd: These task were complete Aug 15, 2009

Other Activities

Resource_Names

Reported xx/xx/xx

ID	Percent	Task	Comments
Text2	Percent_Complete	Name	

*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>
APP201	0%	identify tools to analyze science data quality of stage output	<i>not started</i>
APP199	0%	validate science quality of initial integration run	<i>not started</i>
APP174	0%	imsim catalog generation	<i>not started</i>
APP190	0%	Add atmospheres based on the OpSim? outputs	<i>not started</i>
APP189	0%	Simulate galaxies for deblending testing	<i>not started</i>

*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.