



MAUS Status

Durga Rajaram

MICE CM 39

June 25th 2014

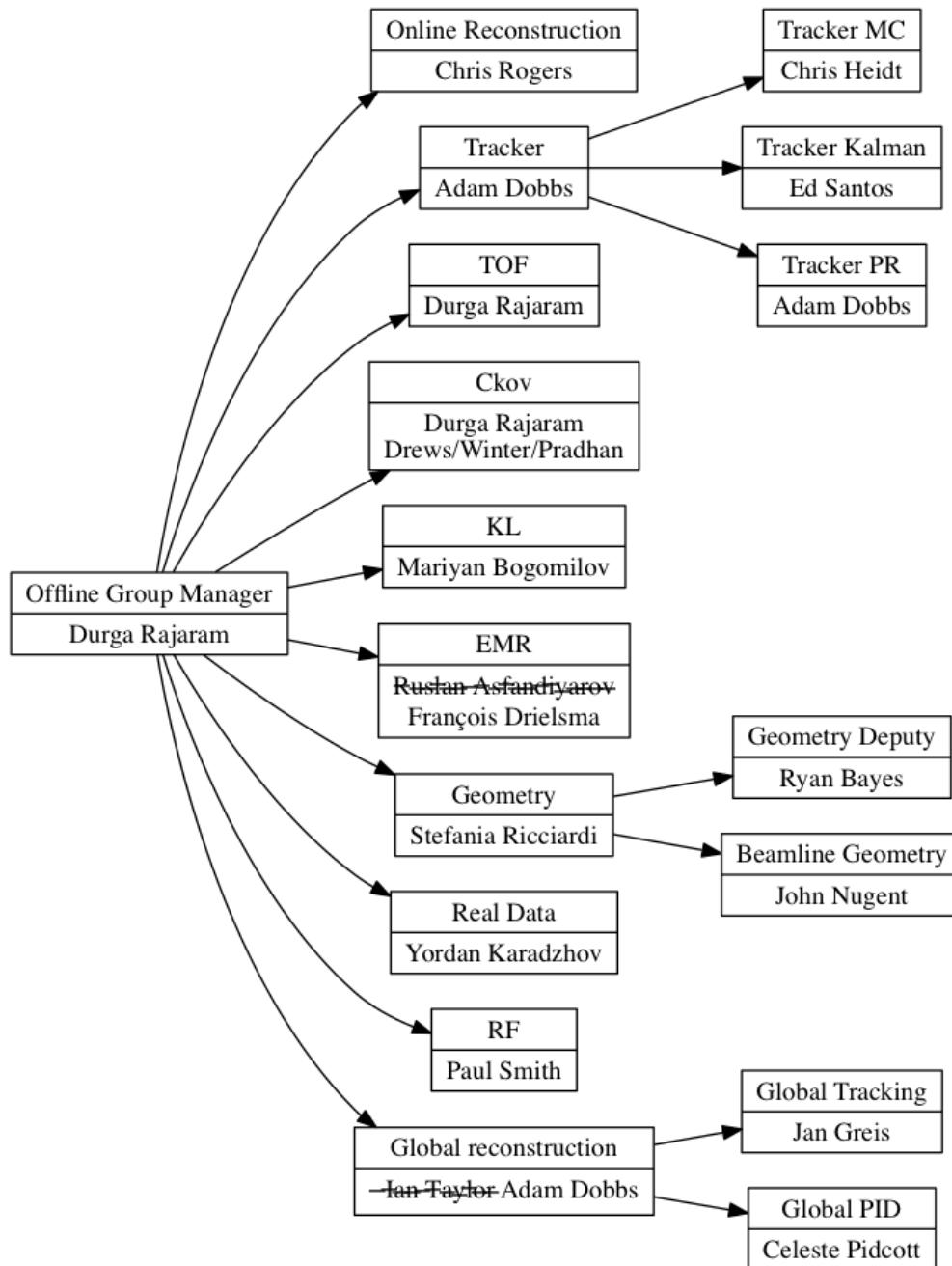


OVERVIEW

- Personnel changes
- Status
- Issues
- Test Coverage
- Schedule
- Summary



ORGANIZATION



Changes since CM38

- EMR
 - Drielsma
- Ckov
 - New Undergraduate students at IIT and UMiss
- Global
 - Jan Greis replaced Peter Lane
 - Adam Dobbs replaced Ian Taylor as head



AT THIS CM

- Tracker (Dobbs) + Tutorial (Dobbs)
- TOF (Rajaram)
- Ckov (Rajaram)
- EMR (Drielsma)
- Global
 - Tracking (Greis)
 - PID (Pidcott)
- KL MC (Bogomilov/Nugent)
- MAUS Online
- Grid & CDB (Martyniak)
- MC Beam (Nugent)
- Geometry (Bayes)
- Joint Analysis/Software parallel
 - Readiness for MC production
 - Software-analysis interface



STATUS & ISSUES

- Since CM 38
 - KL Digitizer has been added
 - EMR geometry finalized & true hits added
 - G4BL added as an third party option to generate MC beam
 - Major API changes for data type conversions
 - Tracker updates & improvements
 - Progress on Global PID framework
 - Geometry updates & improvements
 - Progress on EMR reconstruction
 - Progress on Ckov reconstruction
- Issues
 - Memory leak
 - Holding up GRID reconstruction, also likely affects online reconstruction



Test Coverage (Python)

Module	Coverage
CallG4BL	6%
MapPyBeamLineSimulation	5%
MapPyScalersDump	45%
ReducePyCkovPlot	61%
ReducePyKLPlot	54%
ReducePyTOFPlot	2%
ReducePyTofCalib	54%
docstore.DocumentStore	69%
framework.input_transform	36%
framework.merge_output	65%
geometry.GDMLtoMAUSModule	16%

- Overall line coverage: 68%
 - need to get this up



Test Coverage (C++)

Module	Coverage
common_cpp/API	33%
common_cpp/DataStructure	27%
common_cpp/DetModel/EMR	2%
common_cpp/DetModel/SciFi	62%
common_cpp/JsonCppStreamer	57%
common_cpp/Recon/Bayes	52%
common_cpp/Utils	67%
input/InputCppDAQData	52%
input/InputCppDAQOfflineData	69%
input/InputCppDAQOnlineData	2%
map/MapCppTrackerDigits	48%
map/MapCppGlobalReconImport	43%
map/MapCppKLMCDigitizer	2%
reduce/ReduceCppPatternRecognition	67%

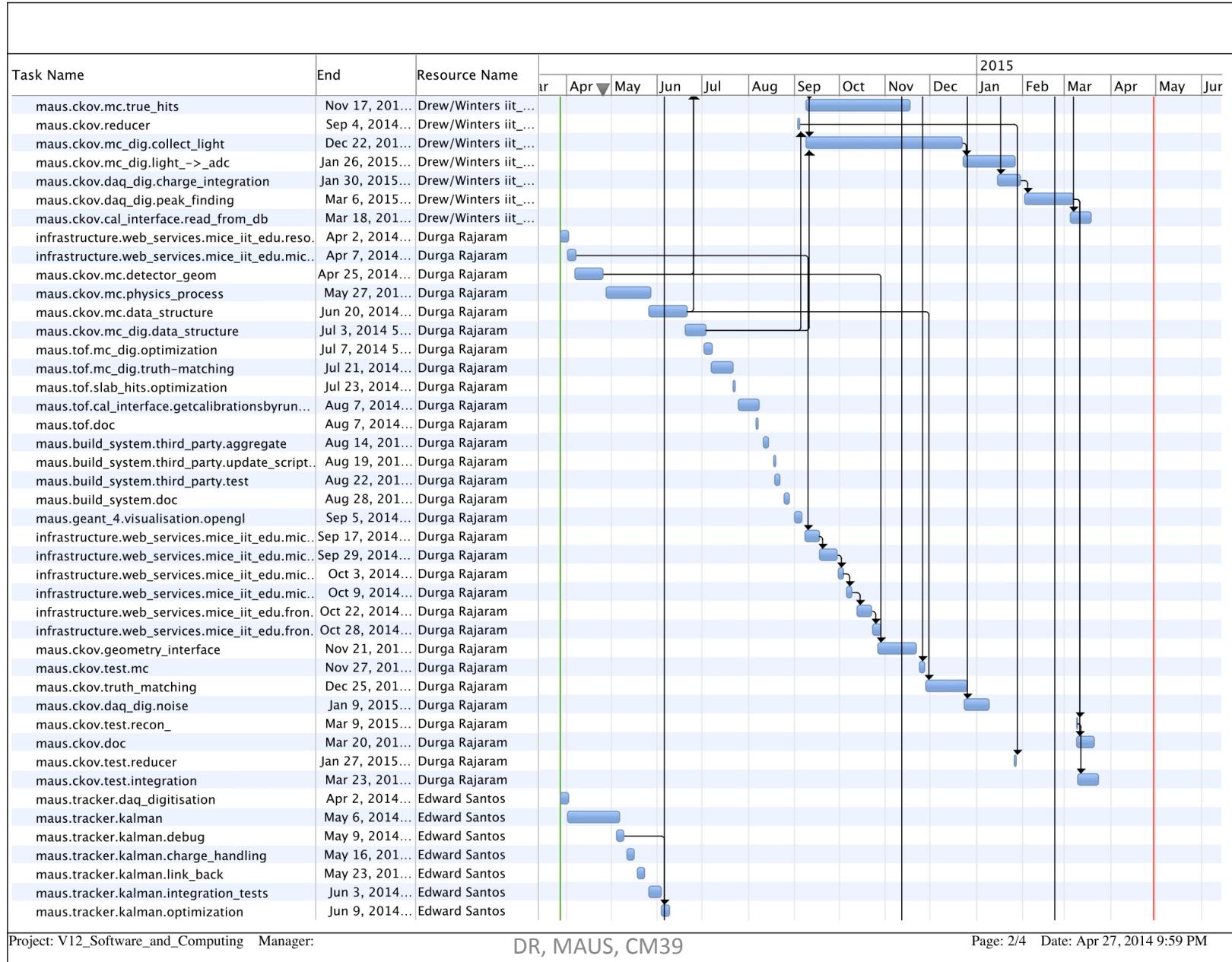


SCHEDULE

Task Name	End	Resource Name	Year	2015													
				Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
maus.tracker.reducer	May 30, 2014...	Adam Dobbs	2014														
maus.tracker.reducer.framework	Jun 3, 2014...	Adam Dobbs	2014														
maus.tracker.test	Nov 18, 2014...	Adam Dobbs	2014														
maus.tracker.doc	Feb 17, 2015...	Adam Dobbs	2015														
maus.tracker.pattern_recognition.optimization	Mar 25, 2015...	Adam Dobbs	2015														
maus.tracker.pattern_recognition.integration	Apr 29, 2015...	Adam Dobbs	2015														
maus.global.inputs_total	Apr 24, 2014...	Celeste Pidcott	2014														
maus.global.global_particle_id.framework	May 20, 2014...	Celeste Pidcott	2014														
maus.global.global_particle_id.single_variable	Jun 13, 2014...	Celeste Pidcott	2014														
maus.global.global_particle_id.documentation	Aug 8, 2014...	Celeste Pidcott	2014														
maus.global.hypothesis_construction	Sep 23, 2014...	Celeste Pidcott	2014														
maus.global.reducer	Oct 13, 2014...	Celeste Pidcott	2014														
maus.global.global_track_reconstruction.collection	Nov 11, 2014...	Celeste Pidcott	2014														
maus.global.global_particle_id.multivariable	Feb 27, 2015...	Celeste Pidcott	2015														
maus.global.global_particle_id.integration_with_mc	Mar 26, 2015...	Celeste Pidcott	2015														
maus.tracker.mc	Jun 5, 2014...	Chris Heidt	2014														
maus.tracker.mc_digitisation	Jun 27, 2014...	Chris Heidt	2014														
maus.tracker.calibration_interface	Dec 12, 2014...	Chris Heidt	2014														
maus.tracker.geometry	Dec 19, 2014...	Chris Heidt	2014														
maus.tracker.geometry.data_held	Jan 1, 2015...	Chris Heidt	2015														
maus.tracker.geometry.interface	Jan 8, 2015...	Chris Heidt	2015														
maus.geometry_and_fields.detectors.tracker	Jan 22, 2015...	Chris Heidt	2015														
maus.tracker.mc_digitisation.adc_smearing	Feb 5, 2015...	Chris Heidt	2015														
maus.tracker.mc_digitisation.noise	Feb 12, 2015...	Chris Heidt	2015														
maus.tracker.code_profiling	May 26, 2014...	Chris Hunt	2014														
maus.tracker.pattern_recognition.efficiencies	Jun 23, 2014...	Chris Hunt	2014														
infrastructure.configuration_database.hepln...	Apr 4, 2014...	Chris Rogers	2014														
infrastructure.configuration_database.hepln...	Apr 7, 2014...	Chris Rogers	2014														
maus.online.gui.gui_test_script	Apr 7, 2014...	Chris Rogers	2014														
maus.online.doc.documentation	Apr 8, 2014...	Chris Rogers	2014														
maus.online.optics_tool.backend_modification	Apr 10, 2014...	Chris Rogers	2014														
maus.online.optics_tool.gui	Apr 22, 2014...	Chris Rogers	2014														
maus.online.doc_store.networking	May 1, 2014...	Chris Rogers	2014														
maus.online.multiprocessing.manager	May 8, 2014...	Chris Rogers	2014														
maus.online.reducer_gui.outputter	May 12, 2014...	Chris Rogers	2014														
maus.online.reducer_gui.reducer_modification	May 16, 2014...	Chris Rogers	2014														
maus.online.reducer_gui.socket	May 20, 2014...	Chris Rogers	2014														
maus.online.reducer_gui.gui	May 29, 2014...	Chris Rogers	2014														
infrastructure.configuration_database.postgr...	Apr 7, 2014...	David Adey	2014														
infrastructure.configuration_database.server_...	Apr 25, 2014...	David Adey	2014														
infrastructure.configuration_database.python...	May 15, 2014...	David Adey	2014														
maus.ckov.daq_dig.unpacking	Apr 4, 2014...	Drew/Winters	iit...	2014													
maus.ckov.cal_interface.insert_in_db	Apr 18, 2014...	Drew/Winters	iit...	2014													
maus.ckov.mc.sensitive_detector	Sep 8, 2014...	Drew/Winters	iit...	2014													

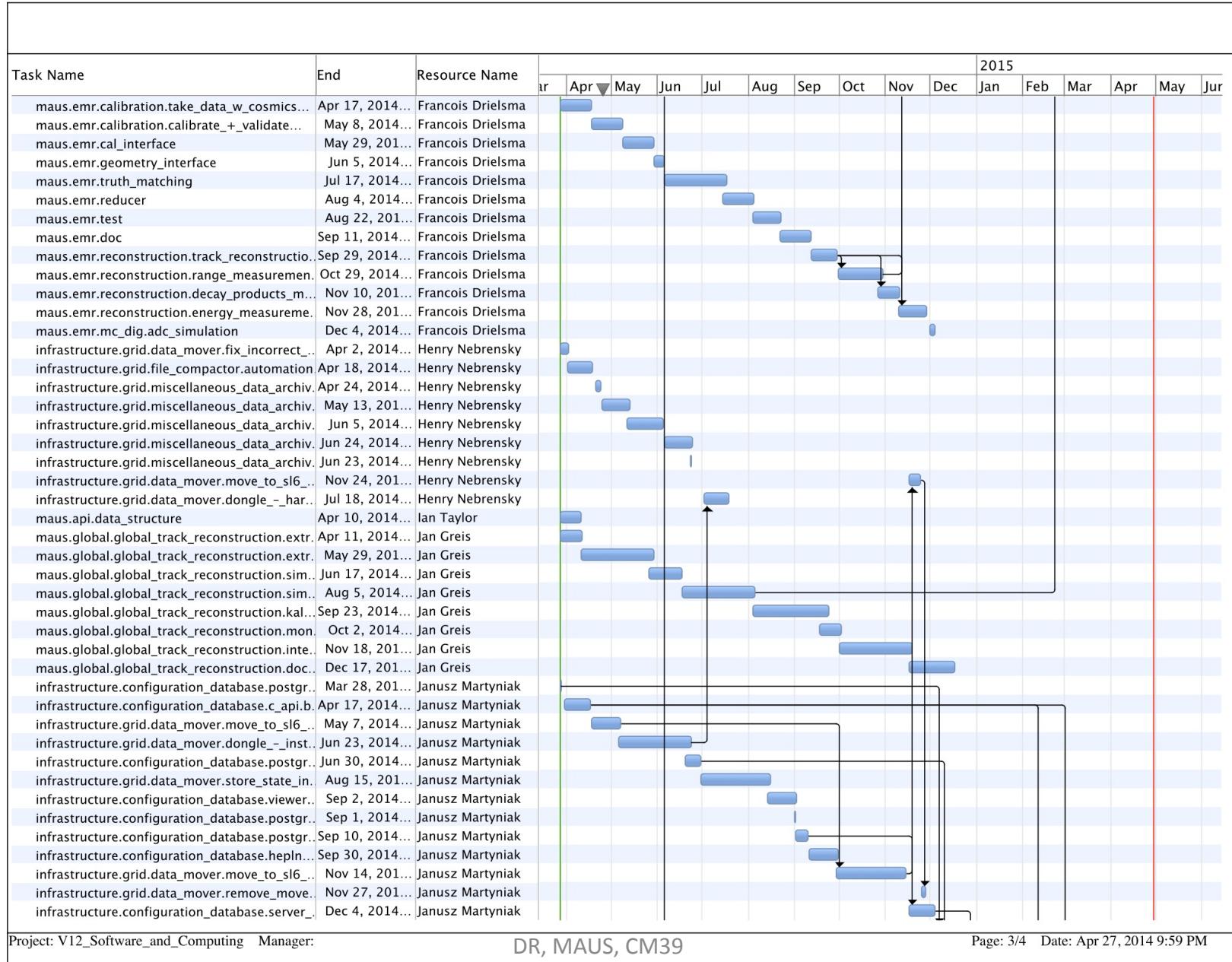


SCHEDULE



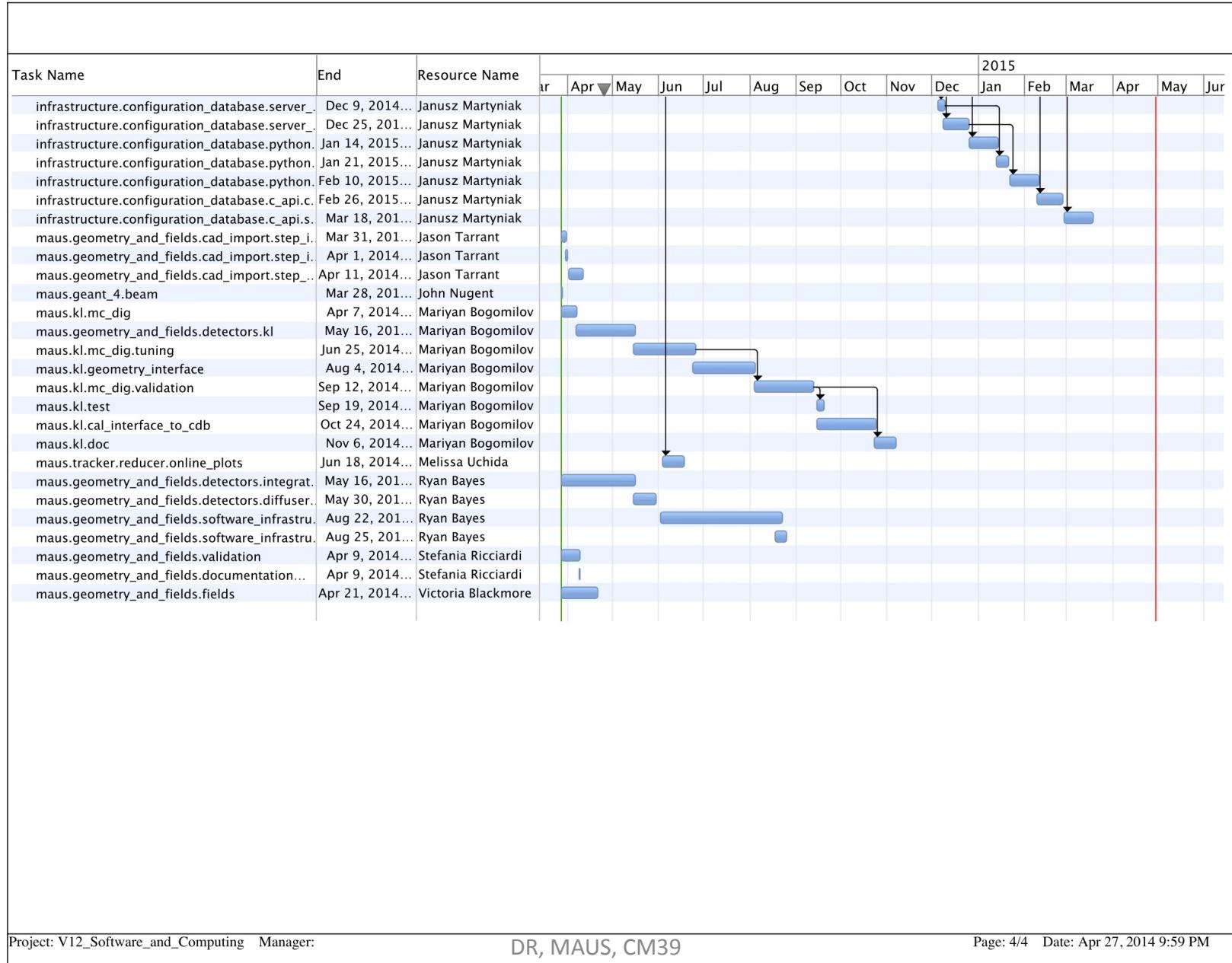


SCHEDULE





SCHEDULE





SUMMARY OF CAPABILITIES

- Detector reconstruction
 - have: TOF, SciFi, KL, Ckov, EMR (hit)
- Global
 - Don't have: Global Tracking
 - Have: Global PID framework
- MC
 - have: digitizers for TOF, KL, SciFi
 - Don't have: digitizers for Ckov, EMR