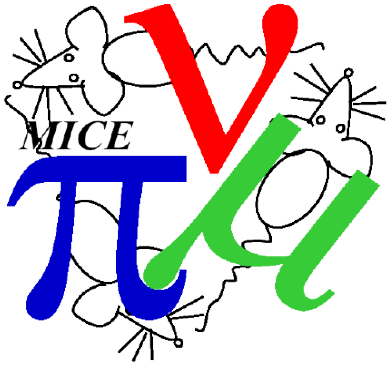
MAUS - Overview



Chris Rogers,
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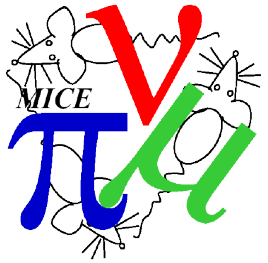
Overview

- The usual overview talk
- MAUS online
  - April cosmics test
- MAUS offline
  - Batch production
- Unit test coverage
- Documentation and Integration Testing
- Others will cover also
  - Global reconstruction
  - Detector reconstructions

Responsibility/Block Diagram



Project management
Rogers

Build system
~~Rogers~~ Rajaram

QA + Release
~~Rogers~~ Rajaram

Documentation
~~Rogers~~ Rajaram

Geometry + fields
Ricciardi/Bayes

Geant4 Simulation
Rogers/Bayes/Middleton

Data flow/API/Online
Rogers/~~Richards~~

TOF
Rajaram

Tracker
Dobbs/Santos et al

Ckov
Cremaldi/Pradeesh?/ ~~Kafka~~

KL
Bogomilov

Data Unpacking
Karadzhov

EMR
Karadzhov/Ruslan

RF
TBD

Detector Integration
Taylor/Lane

Accelerator physics analysis
Rogers/Lane

MAUS online

- Before the last CM
  - Online code was running okay
- Since then
  - Installed 0.5.4 in MLCR
  - Implemented reasonable deployment procedure
  - Fixed some bugs
  - Added integration tests – check that we can reconstruct a single run
  - No integration test to check end of run functionality
    - This is quite fiddly, need a test here
  - Can't check against cosmics as DAQ non-functional
  - Unit tests are still lacking

MAUS offline

- Successful batch reconstruction run against a limited dataset
  - Attempted to reconstructed runs
    - 04006, 04100, 04222, 04302, 04442, 04556, 04600, 04748, 04898
  - Some reconstruction jobs failed (MAUS bugs)
  - Some reconstruction jobs failed (batch script bugs)
  - Aim to make a full reconstruction run
    - Look at reconstruction and discover what is successfully reconstructed and what is not
    - Some script to pull down the reconstructed data sets and count the number of e.g. space points reconstructed – compare with expected values
    - Fix the bugs where they come up
- Monte Carlo batch job blocked by
  - Geometry
  - SciFi MC issues
  - Ckov MC issues

Test coverage - python

ReducePyTOFPlot	3%	Durga Rajaram
MapPyTOFPlot	12%	Durga Rajaram
framework.merge_output	27%	~~Alex Richards~~
framework.input_transform	34%	~~Alex Richards~~
MapPyScalersDump	45%	~~?~~
docstore.MongoDBDocumentStore	55%	~~Alex Richards~~
ReducePyCkovPlot	61%	?Gene Kafka?
docstore.DocumentStore	68%	~~Alex Richards~~
Calibration.get_tof_cabling	73%	Durga Rajaram
framework.utilities	77%	Chris Rogers

- Alex Richards → Chris Rogers
  - These online components are buggy and do need attention
  - Spent some time setting up integration tests
- Overall unit test (line) coverage is stable at 75%

Test coverage - C++

src/common_cpp/API	51%	~~Alex Richards~~
src/common_cpp/DetModel/SciFi	53%	Chris Heidt
src/common_cpp/JsonCppStreamer	59%	~~Alex Richards~~
src/input/InputCppDAQData	63%	Yordan Karadzhov
src/common_cpp/Utils	67%	Durga Rajaram
src/input/InputCppDAQOfflineData	67%	Yordan Karadzhov

- Overall test (line) coverage is stable at 69%
  - Including legacy code
- Not keen for this to dip any lower