

E907 DAQ Report

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for the E907 DAQ group

- Status Report from E907 DAQ Meeting
- DAQ Chain Test
- Near Term Plans

Report from E907 DAQ Meeting

- See Ron's talk from discussion of classes and schedule
- bi-weekly meeting minutes at http://ppd.fnal.gov/experiments/e907/Meetings/daq_"date"
- Other Important Items
 - Java/XML Run Control
 - Message Logger, MPS message passing system
 - Progress on Database

Java/XML Run Control

- Goal of FNAL ODE group is to provide a generic tool that can be used for any experiment - maximally configurable
- We are working with FNAL group to implement E907 specific features
- Most recent release ode_rc v0_3 - See diagram
 - 2 types of Actions
 - * <Action Type="Begin" Method="PrintRCAction">"Entering State RUN"</Action>
 - * <Action Type="Begin" Method="SendMessageRCAction">subject:SIMPLE_MACHINE.SUBJECT, label:"Entering State RUN"</Action>
 - Configure server in XML file
 - * <MPSServer Host="fnods.fnal.gov" Port="2917"/>
 - * <MPSServer Host="192.168.1.2" Port="2917"/>
- These features are sufficient for the DAQ chain test

Message Logger, MPS

- Current version is Merlin v3_0_2
 - Send simple message in c (already c++ and java)
 - Yet to be tested on PPC - Problem here is that Merlin/Elvin wants to put an MPS message inside and MPS message and have this embedded message contain a float (integer or string would be okay)
- Current version is ode_mps v0_0_3
 - easier/possible for user to modify/recompile java ode_rc
 - MPS works on PPC and we use ode_rc uses ode_mps and
- These features are sufficient for the DAQ chain test

Database

- postgres server installed on e907daq
- security is a primary issue as access to database does not require login/password
 - online - database will be on private subnet
 - offline - security is an issue - postgres + Kerberos 5 test planned for next month
- access routines
 - online - java access routines, to written
 - offline - existing c++ routines “should work”
- Database is NOT currently in DAQ chain test

DAQ Chain Test (Vertical Slice)

- elvind (message passing) server running on DAQ Intel box.
- ode_rc running on DAQ server
 - modified XML to use elvind server at LLNL
 - modified “start” transition to include a sendmessage ACTION with a unique subject to start e907r2dm client on PPC and e907rdm server on Intel box.
 - modified test receiver running on Intel box to listen for start message from RC
 - Upon receiving start message e907r2dm server will start
- On PowerPC
 - Modified the test Receiver routines to listen for start message from ode_rc
 - Recall that DAQ teststand include PPC+VME+CESS8210+CAMAC+ADC+TDC
 - Upon receiving start message client “events” will readout from ADC+TDC and sent via sockets to e907r2dm server and the server will write these events to a binary file

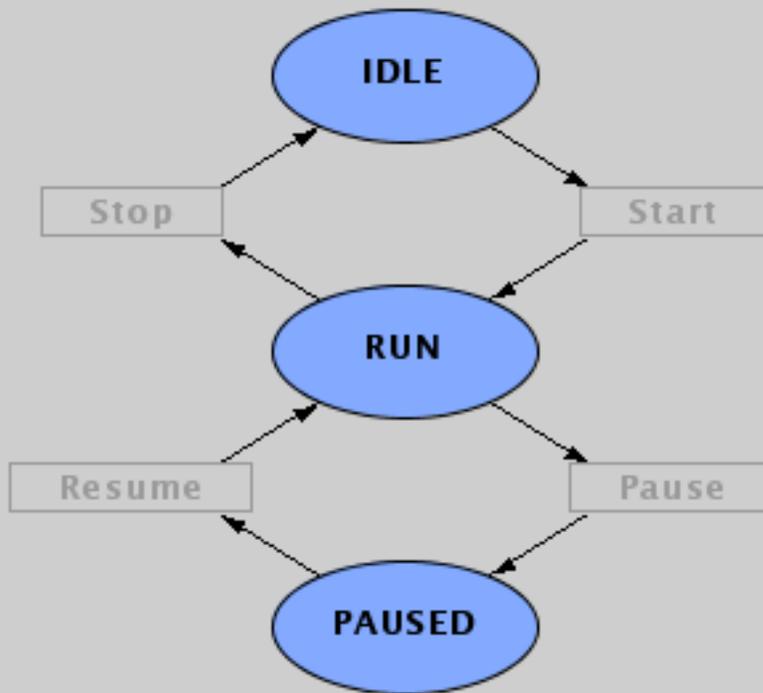
- **Successful chain test**

Near Term Plans

- Incrementally upgrade chain test as packages are updated and classes are written
- with the new classes, the Chain test will serve as a template for the beam cerenkov, chambers, cerenkov and tof detectors
- upcoming Java/XML features
 - New ACTION - Sendmessage and Wait
 - Receiver (or Listener) within Run Control
 - RC Actions to Read/Write from Database
 - Need configurable pull down menus
- upcoming MPS features
 - e907r2dm client to send MPS message
- Database
 - postgres + Kerberos 5 test
 - Detector systems need to define set of tables that will be in database
 - Need versioning for these tables
- Other items on the radar - Interface with ACNET, Slow Control

File Enable Parameters Partitioning

Use "Enable" menu to select desired State Manager

**Run Control Status**

No state information yet
UNDEFINED
No error conditions

Nothing has happened yet
No Events (L2A) yet
No Calib Events yet
No Events (L3A) yet

Inhibit Status

TS Status:

RunType:

TriggerType:

 Error SiL1TO L2TO

DataType: