

ATTACK OF THE D0 ONLINE HOST LEVEL DAQ STATUS

26 JULY2001

Gerald Guglielmo
(FNAL CD/ODS)

B-Movie Preview

- **The Usual Suspects**
Layout of the host level applications for the DAQ
- **THE END?? Or Is It?**
Long range plans for the system
- **A Meandering Plotline**
Current status of applications
- **Plot Devices**
Problems seen or anticipated
- **Way off Script?**
Tentative roadmap

The Usual Suspects

Layout of the host level applications for the DAQ

- **Collector**

Routes events from L3 to Datalogger, Distributor, etc.

- **Datalogger**

Organizes events into files by stream

- **Distributor**

Queues events based on stream or trigger for Examines

- **DSM**

Provides COOR interface to DL, CR, DD, etc.

- **DLSAM**

Requests file stores in Enstore/SAM

- **DLCAT**

Adds event catalog to SAM

THE END?? Or Is It?

Long range plans for the system

- **Sustained High Rate**

12.5MB/s from L3 while 25MB/s to Enstore

- **Stable Reliable System**

Human Intervention should be rare, not every week

- **Multiple Streams Per Run**

Be able to stream to many streams in a run

- **Raise Alarms When Necessary**

Applications should use SES

- **Easy Restart**

Application restart should be easy and consistent

A Meandering Plotline

Current status of applications

- **Low Rates: few MB/s**
Currently L3 provides low data rates
- **Applications Mostly There**
Major functionality there if not used
- **Integrated With SAM/Enstore**
Mature stage, mostly debugging
- **Stable and Reliable on Host**
Applications running well at low data rates
- **Not Talking to SES**
Coded but not enabled

Plot Devices

Problems seen or anticipated

- **Cannot Handle Full Rate**

d00lc CPU limited around 15 MB/s L3 to disk, with Enstore/SAM activity maybe 9 MB/s

- **M2 Drive Problems**

M2 drive problems too frequent at even low rates

- **SAM Server Problems**

Mainly Naming Service crashes

- **Need to Test with SES**

Do not know impact of SES communications on rates

- **Dependent Software Still Changing**

Software versions still changing often

Way Off Script?

Tentative roadmap

- **Polish Applications**
Cleanup and add missing functionality
- **Update Documentation**
Not all documents are up to date
- **Profile Code**
Look for ways to reduce overhead on system
- **Investigate ITC Enhancement**
Shared memory between CR and DL if both on d0lc
- **Distribute Applications**
Move CR and DD to Linux machines
- **Collaborate on Integration**
Continue working with SAM/Enstore people