

# Streaming Evaluation Tools

Adam Lyon

6/18/2002

Analysis Tools

# How to evaluate streaming

---

- ◆ Assumptions:

- ❖ Analyses are trigger based
- ❖ Commissioning triggers and special runs will not intermingle with physics streams

- ◆ Evaluation:

For a given set of triggers (representing signal or background):

- ❖ Fraction of the total data that needs to be processed
- ❖ Fraction of the data in stream(s) from those triggers
- ❖ Fraction of tapes that need to be mounted

# Difficulties

---

- ◆ Current data do not represent “normal running”
  - ❖ Will we ever reach “normal running”?
- ◆ Current trigger lists do not represent “normal running”
- ◆ Tape usage would need to be simulated (try out file families)
  
- ◆ Two solutions:
  - ❖ Things are the way they are – evaluate streaming within current conditions with data and trigger lists we have now
  - ❖ Simulate future conditions (e.g. use offline objects to guess at trigger decisions – since we care about primal objects, this wouldn't be too inaccurate). But we still don't have all data objects correct (e.g. missing central muons)

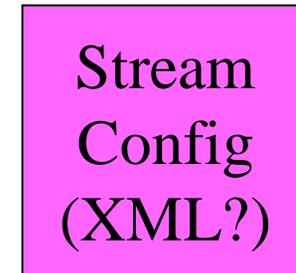
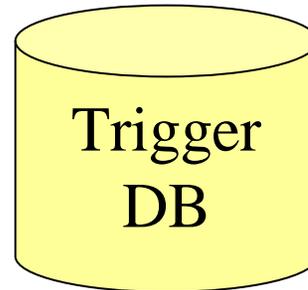
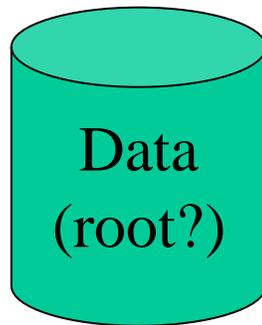
# Implementation

---

- ◆ Michael Begel already has code to determine primal streams for an event
- ◆ With the primal streams, run Jon's tree algorithm with the configuration under evaluation to determine physical stream
- ◆ Determine event make up of physical streams
  - ❖ Keep track of event's triggers that go into the streams

# Implementation

---



1. Determine triggers for event
2. Determine primal streams for triggers
3. Determine primal streams
4. Determine physical stream (needs to be written)
5. Determine file family (needs to be written)
6. Accumulate statistics
7. Handle queries

# Plans

---

- ◆ Would like tool to be available to physics groups at Workshop
- ◆ I don't think this will be too difficult to do