# Storage Task Force (STF)

# STF - the beginning

- Question to HEPiX @ GridKa (Spring 05)
- Context grows rapidly
  - numerous sites have similar questions
    - what hardware for which profile
  - requested by HEPiX and GDB chairs
- finally formed in June 17
- (tentative) members:

  Roger Jones (chair), Andrew Sansum, Andrei Maslennikov, Jos van Wezel, Helge Meinhard, Peter Malzacher, Vincenzo Vagnoni, Martin Gasthuber

# STF - the mandate

- Examine the current LHC experiment computing models.
- Attempt to determine the data volumes, access patterns and required data security for the various classes of data, as a function of Tier and of time.
- Consider the current storage technologies, their prices in various geographical regions and their suitability for various classes of data storage.
- Attempt to map the required storage capacity to suitable technologies.
- Formulate a plan to implement the required storage in a timely fashion

**report to HEPiX and LCG via GDB**

# STF - what happens so far

- one Face2Face meeting + numerous phone confs, fragmented by holidays
- two subgroups
  - technology
  - computing models
- lots of mail
- report due - October HEPiX @SLAC

# How (slide from J.v.W.)

- Define hardware solutions
  - storage block with certain capacities and capabilities
- Perform simple trend analysis
  - costs, densities, CPU to IO throughput
- Follow storage/data path in computing models
  - only ATLAS and Alice used at the moment
  - assume input rate is fixed
  - estimate inter T1 data flow

# Deliver (slide from J.v.W.)

- Type of storage fitted to the specific req.
  - access patterns
  - applications involved
  - data classes
- Amount of storage at time $t_0$ to $t_{+4\ years}$
  - what is needed when
  - growth of data sets is ??
- Tape access and throughput specs.
  - relates to amount of disk
  - involves disk storage for caching
- Determination list for storage at Tiers
  - IO rates via connections (ether, scsi, i-band)
  - Availability types (RAID)
  - Management, maintenance and replacement costs