LHC Computing Grid Project

Coordination proposals

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www.cern.ch/lcg

Background

- we have >6K CERN users, plus regional centre staff, plus grid technologists , plus ...

  and so – there is a vast flux of new ideas and developments, many (correctly) exploring different ways of solving similar problems

  we should not be trying coordinate this (and we do not know how to)

  but we should try to benefit from all of this

- vast number of coordination meetings, email lists, project meetings, ...

  many people are on many of these bodies

- we should complement rather than duplicate existing coordination bodies

The LHC Computing Grid Project

Goal –

Prepare and deploy the **LHC computing environment**

- **applications** - tools, frameworks, environment, persistency

- **computing system** → evolution of traditional services
  - cluster → automated fabric
  - collaborating computer centres → grid

- **global analysis environment**

- **build grid prototypes**
  - **reliable, predictable environments**
  - **built for data & analysis challenges**
  - **usable for "production" work**

- We are not going to do all this without coordination
  - sharing of ideas, plans and experience
  - taking decisions – choices, common planning, commitments

- We cannot coordinate all of this through global level workshops like this

Applications

This was covered by Torre on Tuesday

He is proposing

- Weekly applications-wide meeting reviewing overall status, and project meetings on same schedule

- Regular workshops covering project activities and planning

Grid Technology

There are many existing coordination bodies, and the HICB (HENP Intergrid Collaboration Board) was set up specifically to ensure

- coordination between the projects with major HENP associations
- but the experiments are not formally represented

Significant presence of the LCG community within existing bodies

LCG must ensure that these coordination bodies are aware of the LCG requirements and experience – especially outcome of LCG RTAGs

Do we need to do more?

Fabrics and Grid Deployment

- Mostly involves the same people within the Regional Centres

- Most of the "fabric" decisions are the business of the regional centre
  - but should be taken with full knowledge of what is going on elsewhere

- While "grid deployment" needs common agreements on many issues - including

Fabrics – information & technology selection

- Fabrics – technology, practice, experience
    - HEPiX
        - has been acting as an information exchange forum
        - is attended by many regional centre services people
        - organised a large cluster workshop at FNAL last year
        - experiments are NOT present
    - Can HEPiX become the forum for information exchange and technical discussion of fabric issues important for LCG?

- New technology survey (PASTA)
    - organised during the next 6 months, convenor David Foster
    - experts from regional centres (including CERN)

Fabric and Grid deployment – decision making
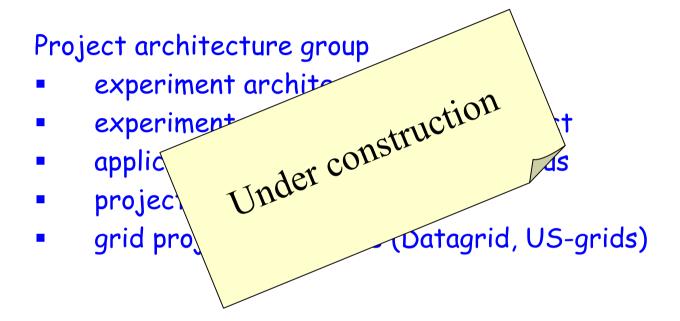
- Must be able to make practical, binding community agreements
    - experiments
    - regional centre management

    resources, schedules, security, usage policies, ….

    software environment (op.sys., data services, grid services, ….)

    operating standards, procedures ….

    operation of common infrastructure

- This needs a **working** group/committee/board

    Membership
    - experiment data & analysis challenge coordinators
    - regional centre delegates (but not one per regional centre!)
    - fabric, grid technology, grid deployment area coordinators

    Reporting
    - strategy and planning presented to SC2 for agreement

    Members responsible
    - for the planning and operation of the resources in their area of delegation

Project Architecture

Project architecture group

- experiment archite
- experiment
- applic
- projec
- grid pro (Datagrid, US-grids)

Under construction

Already too big