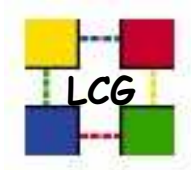# LCG Project Status

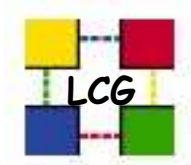## WP4 Meeting Presentation

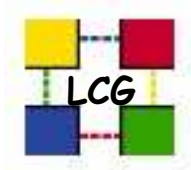## David Foster IT/LCG

20 June 2002

Some Initial Observations

- Little experience around in running a production Grid

- Many issues to be addressed
  - problem determination/tracking/resolution, user support, update policies, grid operations.
  - Big Fabrics, where human intervention is the last resort

- Some complete unknowns
  - How well it will work as a complete system
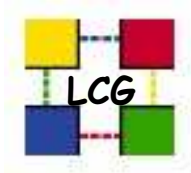 - TCO, MTBF,QOS

LCG High Level Objectives

- Provide the Computing Solution for LHC
  - Regional Center Model
  - Grid Technologies
- Phase 1
  - Complete end 2004 Fully functional prototype of 1/2 the final capacity for one experiment
- Phase 2
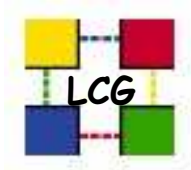 - Complete 2006 Production System

Overall Approach

- Starting now with testbeds to generate early thoughts on how to:
  - Build, manage and maintain a production grid.
  - Provide user support.
  - Define and create an acceptable service quality.

- Basically get all the problems "on the table" including the issues which are not obvious yet !
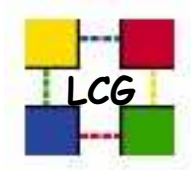
2002

- ## Applications
  - Software Process and Infrastructure
  - Common software agreed approach
  - Prototype of Hybrid event data store

- ## Fabrics
  - Production Testbed
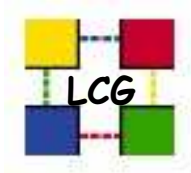 - Demonstrate all elements of Fabric Management

2002 (Cont.)

- **Grid Technology**
  - Work with the GLUE initiative.
  - Recommend interoperable technologies (Europe and the US).
  - Address software quality issues.
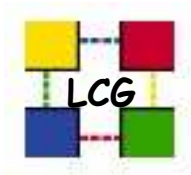   - Management of the software process
    - Testing and validation

David Foster LCG
WP4 Meeting 20th June 2002

2002 (Cont.)

- ## Grid Deployment
  - Establish Certification Process
  - Establish the Grid Deployment Board
  - Understand what is needed for a "Production Grid Service" and establish the teams.

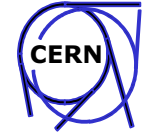- ## Establish a more complete plan for 2003-2005 by the end of 2002
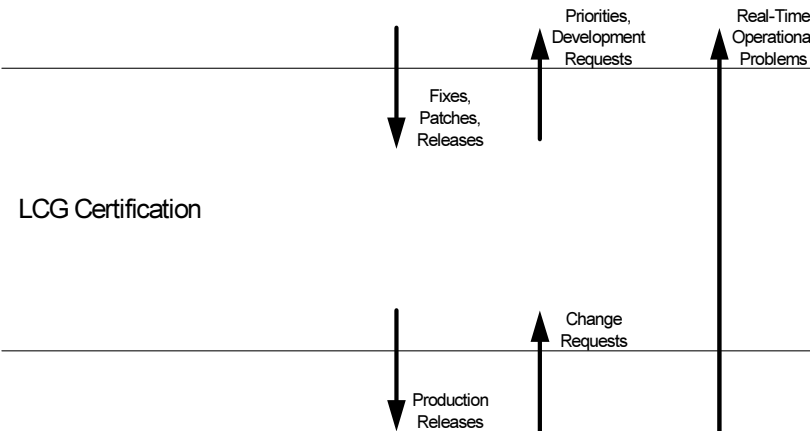
Early Thoughts

- Need to define the processes involved
  - Version Releases, Certification
  - Problem Tracking and Resolution
- Need to understand the handover relationships
  - EDG, LCG
  - ITeam, Testing Team, Certification, Call Center etc etc.

LCG Infrastructure and EDG Activities

CERN

EDG Integration and
Development Activites

Priorities,
Development
Requests

Real-Time
Operational
Problems

Fixes,
Patches,
Releases

LCG Certification
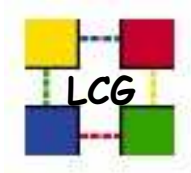
Change
Requests

Production
Releases

LCG Operations

CERN Fabric
Capacity Planning
Construction
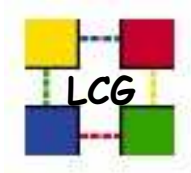Maintenance
Monitoring
Performance Analysis

Call Center
Staffing (24x7)
Training
Management

**Grid Infrastructure
Operations**
CA Management
Information Services
Registration
Accounting
Monitoring

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WP4 Meeting 20th June 2002

2003 Goals

- ## LCG Production Service

  - Small number of sites in at least the US, Europe and Asia

  - 24x7 Operations

  - Call center details are to be worked out.

    - Central, distributed or both ?

    - Escalation procedures

    - Funding/Staffing ?

Comments

- ## What LCG Needs …
  - To get something working now.
  - Realistic technology releases and what is released should work
    - 1.2 Release must have bugs fixed
  - Simple technology, not all "bells and whistles"
    - First LCG production probably based on 1.4
  - Problems and resolution should be well structured to avoid developers being pulled in all directions.