



# ZEUS and the Grid

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# General Interest in the Grid

- Essential for the LHC
- In HERA experiments, there have been grid applications for a long time
  - Example: ZEUS funnel system for MC production
    - produced 240 M events in 2002 on computers scattered around the world
    - taps resources in >20 institutions without spending DESY money
    - grid-based systems for MC production (e.g. MOP in CMS) do not look much different, but use standardized middleware and authorization schemes
- At time of Tesla startup, grid tools will have become a way of (scientific) life
  - sets expectations of DESY's future partner institutions (e.g. universities)

# Thinkable Grid-Benefits for ZEUS

- Grid-enabled MC production
  - access to resources in **national tier centers** (UK, Italy, Russia, US ?...)
  - complement to present funnel system
- Distributed data analysis
  - benefits from modern high speed networks
  - **seamless collaboration-wide access** to ZARAH analysis facility (based on LSF batch) with standardized methods
  - logical extension of present **job entry system**, which is restricted to on-site clusters
  - DESY as tier-1 center
  - Virtual Organization
  - possibly integration with other institutions (data replicas)?
  - worldwide database access essential

# More Thoughts on the Grid

- Any grid effort is added on top of well-motivated existing activities & necessities
- The amount of person-power “burnt” in other labs on grid activities is huge
  - can DESY become competitive just out of the “normal budget”?
  - do “everything” with “nothing” ?
- Additional resources are required for a well-coordinated and visible effort
  - national grid initiatives in other countries are organized that way
  - why not D-GRID
- More political work necessary