SpaceGRID

ESA GRID Infrastructure
SpaceGRID
ESA GRID Infrastructure

• which Users?
  – Engineers
  – Scientists
  – Application Developers
  – Application Managers
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• across sites/applications/projects/groups
• which purpose?
  – science
  – engineering
  – R&D
  – application development and management
  – e-collaboration
  – outreach?
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• which model?
  – Tier model from CERN
    • explicit interface with national and international nodes
  – SETI@home
  – LCMPP
  – HPC
  – Scalable Virtual Organisations
  – GRID Portals
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• where to start?
  – companion projects e.g.
    • DataGRID
    • NASA’s IPG (http://www.ipg.nasa.gov/)
  – available/planned hw
    • Linux clusters available at ESRIN and ESTEC
    • Archive Management System 5Tbytes EO data
  – available/planned sw: Globus (and extensions)
• heterogeneous computing environment
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- available/planned TLC
  - ESTEC: 34 Mbps connection to Surfnet
    - (Dutch NREN) in the process of being established
      (target date: November 1st), for exclusive usage of
      GRID-related projects.
  - ESRIN: 2 Mbps connection to GARR-B
    - for EEM-related projects (this can be increased
      based on specific GRID-related requirements)
  - input from other projects
    - e.g. EODIS-Generic Communication Infrastructure
      for Earth Observation Data Distribution??
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- how R&D will shape the infrastructure?
  - 10 Gigabit Ethernet?
  - multimedia satellite communication?
  - nomadic access to GRIDs?
  - ESA@home?
  - netputing??
  - ...

Pier Giorgio Marchetti
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• what the GRID infrastructure will allow that is not possible to do today?
• which are the external nodes of the ESA GRID?