Welcome to the Annual Users Meeting
TAMU Supercomputer Facility
May 1, 2008

Please Fill Out the Meeting Questionnaire!

Faculty Steering Committee for Supercomputer Facility

• Responsibilities
  – Present views and needs of TAMU faculty and students involved in HPC
    (fill out the meeting questionnaire!)
  – Accordingly set policies regarding Facility access and use
  – Review requests for “large research” allocations
  – Guide operations (broadly), make recommendations on new acquisitions
  – Advise Provost, through Associate Provost for IT, on issues concerning support
    and development of HPC at TAMU

• Membership
  – Lee Panetta (Committee Chair), Professor, Atmospheric Sciences
  – Guy Almes, Director, Academy for Advanced Telecommunications and Learning
    Technologies
  – Pierce Cantrell, VP and Associate Provost for IT, Elec. & Comp. Engineering
  – Tahir Cagin, Professor, Chemical Engineering
  – Michael Hall, Professor, Chemistry
  – Steve Johnson, Analyst, Institute for Scientific Computing
  – Pete Marchbanks, Director, Computing and Information Services
  – Paul Roschke, Professor, Civil Engineering
  – Lawrence Rauchwerger, Professor, Computer Science
  – Spiros Vellas, Assoc Director, Supercomputing Facility
Important Issues

University Support of HPC
Partnerships
Faculty Involvement

Issue 1: HPC Support

• Funding of infrastructure for HPC at TAMU is incommensurate with goals of
  – many faculty (especially with reinvestment additions)
  – Vision 2020

• TAMU $1.5 M /yr, UT-Austin > $7 M /yr

• Deans are key: they must be made aware of
  – current HPC needs of faculty in your department
  – your department’s plans for expansion in computationally intensive directions
    (recruitment!)
Total Funds Available
($2.2 M in 2009)

<table>
<thead>
<tr>
<th>Category</th>
<th>2004</th>
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<th>2006</th>
<th>2007</th>
<th>2008</th>
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<tr>
<td>General Operating</td>
<td>400,000</td>
<td>490,000</td>
<td>410,000</td>
<td>440,000</td>
<td>560,000</td>
<td>770,000</td>
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<tr>
<td>Tech-All. Teaching</td>
<td>159,000</td>
<td>154,000</td>
<td>60,000</td>
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<td>Medical Affairs</td>
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<td>-</td>
<td>6,500</td>
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<td>GSA Reserve</td>
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<td>EBM</td>
<td>88,760</td>
<td>59,987</td>
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<td>College 8-PPF</td>
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<td>172,240</td>
<td>1,090,000</td>
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<td>Computer Repair</td>
<td>475,000</td>
<td>671,000</td>
<td>1,070,000</td>
<td>748,000</td>
<td>1,170,000</td>
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Operating Expenses
($1.3 M in 2009)

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<td>Software licensing</td>
<td>35,630</td>
<td>67,950</td>
<td>67,000</td>
<td>43,850</td>
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<td>Hardware maint</td>
<td>212,932</td>
<td>183,080</td>
<td>160,000</td>
<td>217,000</td>
<td>171,360</td>
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<td>Personnel</td>
<td>646,300</td>
<td>677,682</td>
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<td>661,391</td>
<td>913,079</td>
<td>1,010,222</td>
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Important Issue 2: (Strength in Numbers)

• Partnerships can
  – Provide priority access to contributed nodes
  – Allow others to benefit from idle time
  – Result in maintenance and staff savings
  – Provide savings on AC
  – Raise profile of HPC at TAMU

Example: Hydra cost $2.9 M
(IBM p5-575+ cluster + DDN disk array + AC)

Partnership Contributions

• Inside CIS:
  – Supercomputer Facility Capital Fund $750 K
  – Other CIS funds $630 K

• Outside CIS
  – VPR’s Office $900 K
  – Computer Science Department $410 K
  – College of Geosciences $200 K
Issue 3: Faculty Participation on Steering Committee

We seek members actively involved in HPC aspects of

• Agriculture and Life Sciences
  (Bioinformatics, Computational Biology, …)

• Engineering
  (Nuclear, Mechanical, Aero, …)

• Science
  (Physics, Astronomy, …)

Please Fill Out the Meeting Questionnaire!
Operating Funds
($1.03 M in ‘08)

Capital Funds
($400 K in ‘08)