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
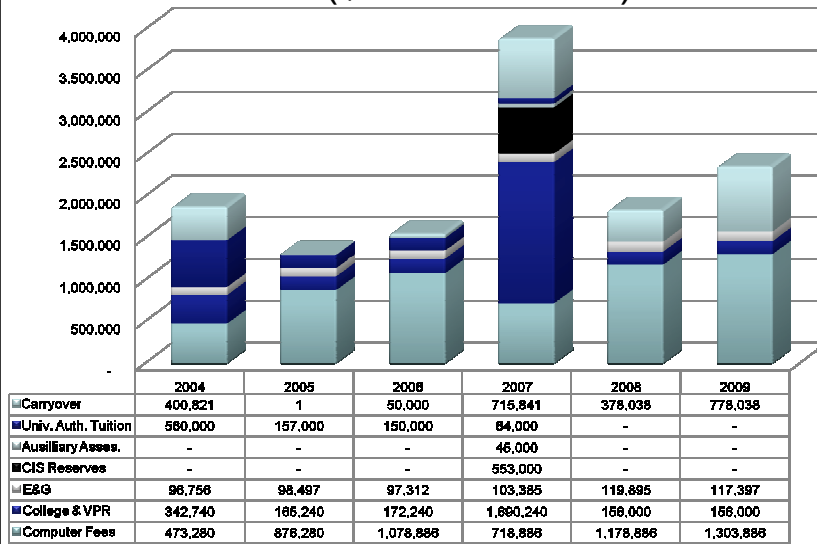 – Spiros Vellas, Assoc Director, Supercomputing Facility

Important Issues

University Support of HPC
Partnerships
Faculty Involvement

Issue 1: HPC Support
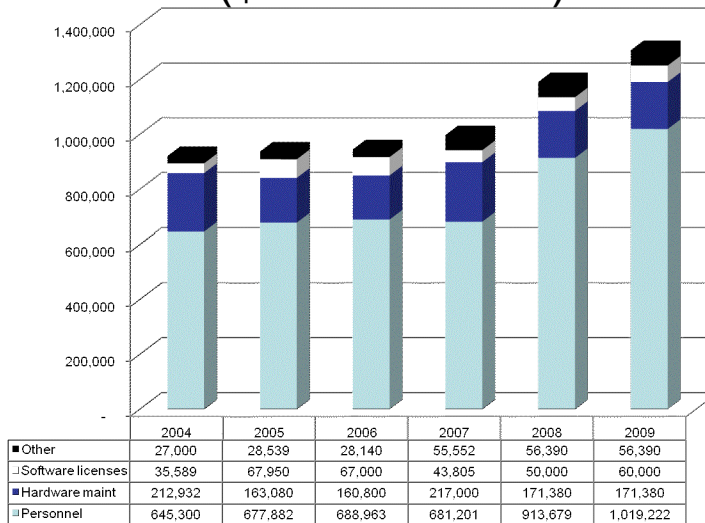
- Funding of infrastructure for HPC at TAMU is incommensurate with goals of
  - many faculty (especially with reinvestment additions)
  - Vision 2020

- 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)

	2004	2005	2006	2007	2008	2009
Carryover	400,821	1	50,000	715,841	378,038	778,038
Univ. Auth. Tuition	580,000	157,000	150,000	84,000	-	-
Auxiliary Asses.	-	-	-	46,000	-	-
CIS Reserves	-	-	-	553,000	-	-
E&G	96,756	98,497	97,312	103,385	119,895	117,397
College & VPR	342,740	166,240	172,240	1,690,240	156,000	156,000
Computer Fees	473,280	876,280	1,078,886	718,886	1,178,886	1,303,886

Operating Expenses
($1.3 M in 2009)

	2004	2005	2006	2007	2008	2009
Other	27,000	28,539	28,140	55,552	56,390	56,390
Software licenses	35,589	67,950	67,000	43,805	50,000	60,000
Hardware maint	212,932	163,080	160,800	217,000	171,380	171,380
Personnel	645,300	677,882	688,963	681,201	913,679	1,019,222

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
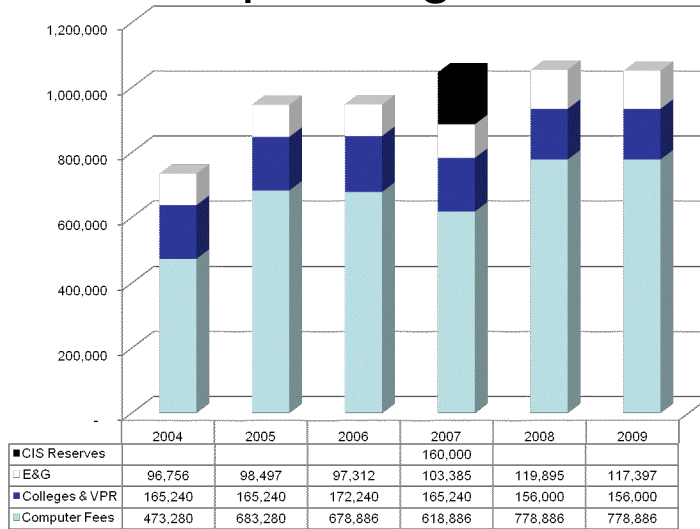 - College of Geosciences $200 K

Issue 3: Faculty Participation on Steering Committee
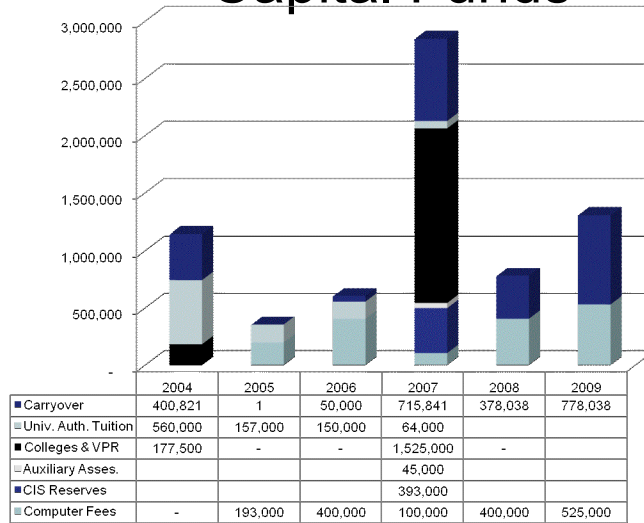### We seek members actively involved in HPC aspects of

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

- Engineering
  (Nuclear, Mechanical, Aero, …)

- Science
  (Physics, Astronomy, …)

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Operating Funds

	2004	2005	2006	2007	2008	2009
CIS Reserves				160,000		
E&G	96,756	98,497	97,312	103,385	119,895	117,397
Colleges & VPR	165,240	165,240	172,240	165,240	156,000	156,000
Computer Fees	473,280	683,280	678,886	618,886	778,886	778,886

Capital Funds

	2004	2005	2006	2007	2008	2009
Carryover	400,821	1	50,000	715,841	378,038	778,038
Univ. Auth. Tuition	560,000	157,000	150,000	64,000		
Colleges & VPR	177,500	-	-	1,525,000	-	
Auxiliary Asses.				45,000		
CIS Reserves				393,000		
Computer Fees	-	193,000	400,000	100,000	400,000	525,000

Operating Funds
($1.03 M in '08)

	2004	2005	2006	2007	2008
☐ Univ. Auth. Tuition	96,756	98,497	97,312	98,997	104,710
■ Colleges & VPR	165,240	165,240	165,240	165,240	165,240
☐ Computer Fees	473,280	683,280	683,280	703,280	833,280

Capital Funds
($400 K in '08)

	2004	2005	2006	2007	2008
☐ Carryover	400,821	1	50,000	500,000	-
☐ Univ. Auth. Tuition	560,000	157,000	150,000	150,000	150,000
■ Colleges & VPR	177,500	-	-	-	-
☐ Computer Fees	-	193,000	400,000	380,000	250,000