

# CSU's CIT Grid Computing Equipment Grant

---

- invited presentation given at CIT's "Catalyst 2004" conference, Friday, April 16, 2004
- in the session "Colorado Institute of Technology Innovative Awards"
- title: "The Colorado Grid Computing (COGrid) Initiative - Use of CIT Sponsor Donated Equipment in Colorado Education"
- presented by: Professor H.J. Siegel – Colorado State University



# Colorado Grid Computing Initiative Equipment Grant

---

- Awarded to Colorado State University's Information Science and Technology Center (ISTeC) [istec.colostate.edu]
- Grant Co-Principal Investigators
  - H. J. Siegel, Prof. ECE, Prof. CS, Director ISTeC
  - Pat Burns, Prof. ME, Director Acad. Comp. & Net. Services
- Lead Scientist (and interface to statewide COGrid effort):
  - Edwin Chong, Prof. ECE, Prof. Math
- System Development: Mark Ritschard, Director Eng. Net. Services
- Application Development: Chuck Anderson, Prof. CS
- Long term goals
  - elevate level of IT infrastructure and shared availability in CO
  - improve skills in using state-of-the-art grid technologies
  - increase IT enrollment and opportunities for research



# Grant Award and CSU Plans

---

- May 1, 2004 start date for equipment and \$50K for support staff
- Expected equipment
  - 2 Sun Enterprise 6800's - 24 processors & 48GB RAM each
  - Hitachi Data Systems Thunder 9500 Storage ~ 2.7TB
  - Oracle 10g database licenses, discount on training
- CSU plans
  - Develop high-performance computing node that is accessible via the Web and can be integrated into a statewide grid
  - Develop prototype portal and policies for statewide grid
    - operational model, user support model, security design, access model
    - portal supports inter-grid coordination –
      - ▶ initially Sun/HDS, CSU NREL & Eng. Sun grids
  - Joint projects with industry & gov't in GS 511 course

# CSU Courses to be Enhanced with Grid Content

- GS 510 & 511: High-performance Computing I & II
  - Seniors, MS, PhD, ~15 students in the past
  - Major reformulation to focus on grid computing
  - I: Fundamentals; II: Complex App's (from industry and gov't)
  - Exploring video Internet delivery, external presenters
- CS 518: Distributed Software System Development
  - Seniors, MS, PhD, 15-30 students in the past
- CS 551: Distributed Operating Systems
  - Seniors, MS, PhD, 10-15 students in the past
- ECE/CS 674: Heterogeneous Computing
  - MS, PhD, ~20 students in the past
- ECE 549: Radar Systems and Design
  - Seniors, MS, PhD, 10-25 students in the past
- PH 451 & 452: Intro. to Quantum Mechanics I & II
  - Juniors, Seniors, 10-15 students in the past

# Long Term Vision for Statewide COGrid

---

- First COGrid workshop held May 2003 [cogrid.colostate.edu]
  - Sponsored by CSU ISTE C
  - ~75 attendees from academia, industry, and gov't
- Initial plans for statewide “COGrid Council” at workshop
  - Key people from workshop are organizing strategic planning committee (SPC) to define Council and future of COGrid
  - SPC will have reps from CO academia, industry, and gov't
  - Interested in joining SPC:  
email HJ@ColoState.edu and I will pass it along
  - CSU will be just one member of collaborative statewide SPC
- CIT and CSU ISTE C plan to co-sponsor 2<sup>nd</sup> COGrid workshop in the late Fall 2004 – open to public
  - SPC will present proposed plans to all interested
  - Opportunity for all to be involved in COGrid's future

