# U.S. Atlas Computing: Overview and Management

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# Background

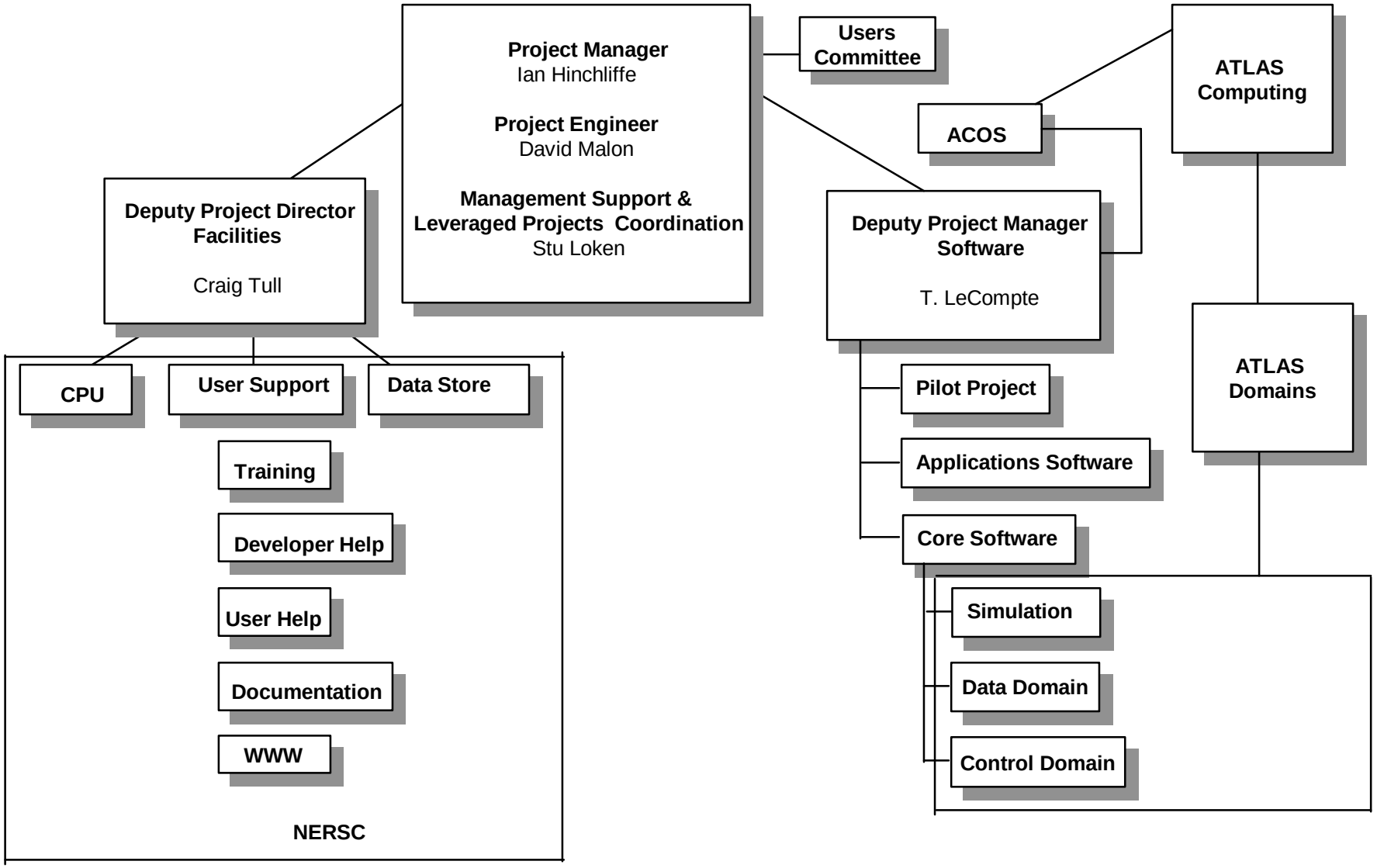
- Task Force formed almost one year ago
- Charge included seeking funds and recommending organization for U.S. ATLAS Computing
- Initial proposal submitted and reviewed in November 1998
- Response by funding agencies was to require an organization before any significant funding
- U.S. ATLAS Management set up a process to define computing organization

# U.S. Atlas Computing

**An LOI was submitted to U.S. ATLAS to be the Lead Lab for Computing (see http://arc.nersc.gov/) A review committee was used by U.S-ATLAS to evaluate the LOI's. It met in Washington Feb 2-3.**

**LBNL was selected by U.S. ATLAS as the Lead Lab for U.S. Atlas computing with Ian Hinchliffe as the Project Manager. ANL shares management.**

**Immediate task is preparation of Proposal for review by DOE/NSF on May 3-4. This will cover the scope and detailed funding request for near term.**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Developer Help
Core Software
User Help
Simulation
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Data Domain
WWW
Control Domain
NERSC

# U.S. Atlas Computing Management

**Deputy Director Oddone is oversight within LBNL.**
**A computing advisory panel will be appointed by him.**
**This panel will review the proposal before it is sent to DOE/NSF.**

**NSF funding is coordinated through U. Chicago (F. Merritt). Funding is directed by project manager.**
**U.Chicago has major ATLAS involvement in hardware and a committement to be involved in software**

# U.S. ATLAS Computing

**Consultation with collaboration underway now in preparation for proposal. This will:**

- **Identify areas of expertise and interest.**
- **Identify areas of ATLAS computing where need and where U.S impact will be greatest.**

**Already good progress in building links to BNL and to key university groups who have been active in ATLAS Computing.**

**Base hardware infrastructure will be at LBNL. Use NERSC as a partner. Leverage their expertise in HPSS.**

**We plan to involve BaBar professionals as they are released.**

# Key Ingredients of Proposal

- Clearly defined set of software deliverables negotiated with ATLAS computing.
- Identification of U.S. personnel and funding needed to meet these deliverables,
- Scope of hardware and support needed in analysis phase.
- Ramp up plan.

# Interim support

- Intend to use PDSF as the facility to provide support for U.S. ATLAS code developers and users.
- NERSC has replaced all the old SSC hardware.
- NERSC/Phys/NSD provides system support
- Need little additional hardware for the next few years.
- Only need limited personnel to support the ATLAS-specific software

# Scope of Analysis System

- Reconstructed data sent from CERN
- ~ 250 TB per year, stored in HPSS
- ~50000 SPECint95 of analysis CPU
- 50 TB of user disk
- ~120 active users
- ~40 intensive users
- Need 10% system in ~2003 for Mock Data/testing.

# Software contributions

- Must exploit areas where U.S. has major expertise on BaBar, CDF, D0, Grand Challenge
- Database is one example.
- Must start now so that these seasoned professionals can be integrated smoothly as they are released by other projects
- Vital to have short term deliverable, get physicists involved now, start training. We have proposed a pilot project.

# Leveraged Projects

- Plan to exploit projects outside ATLAS to prototype critical aspects of U.S. ATLAS Computing model
- These will bring in funding from non-HEP sources such as the DOE-MICS
- On-going projects include HENP Grand Challenge and Clipper
- New proposal being developed for a Particle Physics Data Grid

# Data Grid

- In response to a DOE-MICS call for proposals on NGI
- Total MICS funding of $17M
- Project funding of up to $2M/year
- Partners include Caltech, SLAC, LBL, ANL, BNL and SDSC
- Extends the concept of a “computational grid” to the handling of PByte data samples
- Pre-proposal received encouragement and a full proposal is being developed