The Plan

- The Year in Review

- The Big Picture

- Short Term Plan & Balloon

- Manpower issues
The Year in Review (1)

- Just over a year on the job for me
  - Initial conditions
    - AO response in prep
    - TB99 underway
- Early decisions
  - Time to address GlastSim infrastructure first
    - Code build & management
    - Architecture
    - I/O
    - Flexible geometry
  - Move to GEANT4
    - Try first on balloon
  - Support 3 operating sys only
    - WindowsNT, Linux, Sun
  - Try out Root in TB99
  - Science Analysis S/W subgroup
- Manpower Issues
  - Jose Hernandez, Sawyer Gillespie, Jeff Silvis move on
    - No TKR expertise
    - ACD hit
    - Core group down to 2.5 FTE
  - Did manpower projection
    - Need 10-12 FTEs for core development
    - Need new TKR folks
  - Approval to hire SciProg at SLAC
    - Karl Young, starts 2/1/2001
  - Hired 2nd UVic CoOp student
    - Ian Gable, started 9/2000
  - Worked on expanding effort to Italy and Japan
    - Riccardo Giannitrapani & Masanobu Ozaki
The Year in Review (2)

- Decisions Implemented
  - Break up code into packages
  - Separate Sim + Recon
  - CMT for code management and build
  - GAUDI for architecture
  - See core review for details on Gaudi & CMT
  - Root I/O used for TB99
    - Root → IDL converter
    - Direct Root analysis
  - G4 in use for Balloon
  - Big effort on documentation
  - Moved cvs repository to SLAC
    - Industrial strength server
    - Ditto for software web

- Consequences
  - GlastSim has been “in the shop” for a year…
  - TB99, turnover and small core group resulted in slow progress
    - CMT ready; cvs repository moved to SLAC in Summer
    - Gaudi work started for real in Fall
  - Made it difficult to try new things for GTOCC, CAL and ACD studies
    - Used AO version of GlastSim
The Year in Review (3)

- Science Analysis
  - Led by Seth & Jay
  - Lively sessions at all the workshops
  - Identified big ticket tools that need to be implemented and rough idea of manpower req’d
  - Ready to start apportioning initial tasks

- TKR support
  - Tracy Usher and Leon Rochester on board and coming up to speed
  - Expect to have strong group
    - SLAC, UCSC, Italy
  - See TKR review

- Communications/Groupware
  - Software workshops quarterly
    - 2 Subsystems reviewed each time
  - Weekly software meetings on vrvs
    - CAL and Core now have their own weekly vrvs meetings
  - ICQ has pockets of popularity
    - Those who use it really like it
    - Windows + Linux
  - MS Project schedule and Workplan document developed, maintained
    - Available from software home page

http://www-glast.slac.stanford.edu/Software/
## Timescales

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<tr>
<th>What</th>
<th>Description</th>
<th>Start/Due</th>
<th>Responsible</th>
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<tr>
<td>Sources</td>
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<td>Hiroshima + TBD</td>
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<td>yesterday</td>
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<td>Eduardo</td>
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<td>Auto-server, RDB</td>
<td>Mark I Due early 2002</td>
<td>SLAC</td>
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<td>Event Display</td>
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<tr>
<td>Release Man/Verify</td>
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<td>Karl Young</td>
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<td>Performance Monitor</td>
<td>Due end 2001</td>
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<td>Steve</td>
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<td>Database Devel</td>
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<td>Seth &amp; Jay</td>
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<td>Analysis Platforms</td>
<td>Ongoing/balloon</td>
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Timeline

2001

Balloon

GlastSim/G4
Event Display
Release Manage

Performance Tuning,
Tracking

2002

Data Production Facility

Calibrations

2003

Science Tools, DB, Analysis Platforms

2004

+ monitoring

2005

2006

------------- Polishing & maintenance + post-launch panic

R.Dubois
Science Data Production

Ground Station

MOC

IOC

Ops

PACOR in box

HSM

Photon DB

Photon DB

Event DB

Recon

Calibrations

MC

Proc Server

RDB

Level 0

High-level monitoring

Level 1

Level 2

HEASARC

WWW - code, algorithms

IOC

SSC

Access to Data

Access to Data

PI Teams

Guest Obs

IOC

SOC

HSM = hierarchical storage manager
RDB = relational database

R.Dubois
Short Term Plan

• Balloon
  – Now have raw format from JJ et al
    • Heather will write converter to digi classes
  – Once prototype is together
    • Time to hand over subsystem code
    • Start testing with G4 and hopefully Gismo
  – More in Balloon session

• See Core, TKR reviews, CAL & ACD status talks for activities
  – CAL has program of sim/recon upgrades for 2001
Organization

- Code Architect: T. Burnett (UW)
- Manager: R. Dubois (SLAC)
- Sim/Recon: T. Burnett (UW)
- Calibrations: E. Do Couto e Silva (SLAC)
- Science Analysis: J. Norris, S. Digel (GSFC)
- Analysis Tools: H. Kelly (GSFC)
- Infrastructure: Karl Young (SLAC)
- TKR: Tracy Usher (SLAC)
- CAL: E. Grove (NRL), A. Djannati-Atai (France)
- ACD: H. Kelly (GSFC)

- use cvs for distributed code development
- use web conferencing tools for meetings
- use instant messenger tool for quicky discussions
- software team is integrated
- subsystem folks are matrixed between subsystem and software group
  - part of same development process as other components of software

R. Dubois
Manpower Issues

- There are always manpower issues!
- I still recall Jonathan Ormes’ statement a year ago
  - “We low-balled software by a factor of 3 in the AO Response”
  - OK, so what do we do about it?

  **Recruit!**

- We are presuming Toby will get his NSF grant
  - SciProg + grad student in mid 2001?

- French management issues stalled CAL software
  - Hopefully behind us now and progress will resume

- Karl Young starts in 2 weeks
  - Should make a big difference to core team

- We are hoping to get help from Italy on
  - TKR simulation
  - GEANT4 czar
  - GEANT4 geometry
  - Event display

- We are hoping to get help from Hiroshima on
  - Sources

R. Dubois
Outlook

• We are starting to cook with gas!

• BUT we are still left with big open areas needing immediate attention
  – Performance optimization and monitoring
  – Background rejection
  – Trigger analysis
  – Root expertise

• Data Production Facility is looming...

• The plan is to have the new GlastSim “complete” by Fall 2001

• Then start shifting attention downstream
  – Calibration
  – Science/analysis tools
  – DPF
Workshop Goals

• Bring people up to date on code migrations
  – TKR, Core reviews, status talks

• Balloon software status and directions

• Science analysis
  – Start getting down to business

• Calibrations
  – Construction databases
  – Start organizing subsystems

• Bring Italian group on board

• Group input on directions