User's Meeting 2005-12

Observation Control System
Hardware / Software

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New Hardware

- Summit computing platform lease ends 2008/02. These machines are the platforms for the summit Observation Control System (OCS).
- Current systems are slower/older generation machines and should be replaced.
New Software

- Current software is Generation-1 OCS. Gen1 succeeded in bringing Subaru Observatory from construction phase into operation phase, however:
- A Second Generation OCS is needed to meet the requirements of a mature observatory.
- Present SOSS codebase is not suitable for a Second Generation system.
Some Gen2 Improvements

- Higher Reliability; Faster Upgrades & Fixes
- High level Observing Tool
- Observation Plan editor well integrated to
  - Data pipeline
  - Service Observing
  - Q'd observing?
- Improved Quicklook analysis tool
- Improved Status & Telemetry
Gen2 Internal Improvements

• Greatly improved maintainability, greatly simplified, much smaller codebase

• Proper software maintenance tools: built in testing, regression tests, source-code control, regular builds

• Easier modification, faster upgrades, fast prototyping

• Better monitoring, trend analysis and failover.

• = more reliable software that is more responsive to User's needs.
Design Process

• Spiral Model development & rapid prototyping - NOT Big-Design-Upfront Waterfall.

• Subaru Scientists determine broad Gen2 requirements and have continuous input over the development cycle

• Continuous design & evaluation
Hardware/Software Strategies

• How best to manage 2008 OCS hardware challenge AND need for Gen2 software?
• Continuity of operations must be guaranteed.
• The time to 2008 is short.
• Choice of Gen2 hardware should not be constrained by present systems.
One Possible Target

- One possible solution to Hardware/Software challenges: Deliver core services to new platforms by 2008 deadline

- Milestones:
  - 2006/2  External interfaces complete
  - 2006/8  “Star to STARS”
  - 2007/2  Alpha test core system
  - 2007/8  Beta test
  - 2007/11  Gold. Final testing
Suggested Hardware/Software Strategy

• DECOUPLE Hardware/Software Deadlines
• Retain an ambitious Gen2 Software delivery date BUT:
• Negotiate retention of present OCS hardware through 2008 (via purchase or donation - present systems have very little value)
• Maintain hardware with in-house sys-admin group. (not difficult)
Questions ?