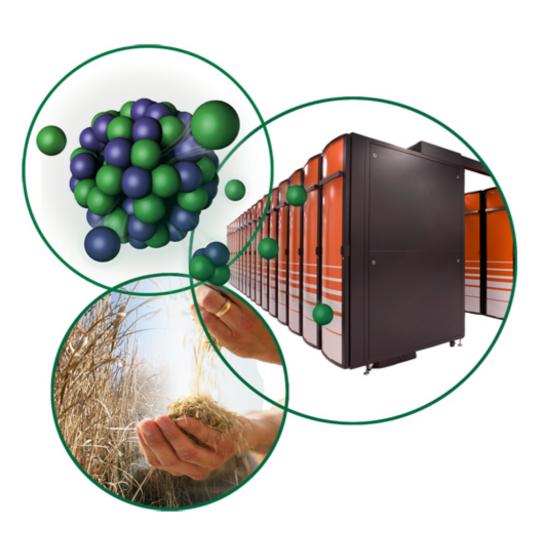
Current XAL Challenges



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Top Challenges

- Managing External Jars
- Lattice Generation Layer
- Online Model Channel Access
- Collaboration Challenges

Managing External Jars

- Distribution rights
 - Some Jars cannot be distributed publicly with XAL
- API Compatibility
 - Latest XML RPC not compatible with XAL
 - Latest JMDNS can hang XAL on termination



Lattice Generation Layer

- Lattice Generator needs to be replaced
- Needs to be streamlined for performance
- Adding new device types is complicated

Channel Access feeding Online Model

- Blocking connections can cause long waits
- Performance can be improved by using nonblocking get requests



Collaboration Challenges

- Coding Standards and Quality Control
- Source Code Management
- Site Specific Support
- Migration Path

Coding Standards and Quality Control

- Doorkeeper(s) for code
- Coding Standard document
- Automated tests

Source Code Management

- Open Source Repository (Source Forge)
- Separate Branches for each site
 - -How are changes merged?
 - -Who polices licensing issues for third party code, media, etc. regardless of branch?
 - Who can commit code to the repository?



Site Specific Support

- Unique Devices and Variations
- Unique Device Attributes
- Unique applications
- Need to avoid hard coding to specific accelerator
 - Identify and fix existing problems
 - –What about scripts?



Migration Path

- XAL is currently in stable, production use at SNS
- Need migration path to new version
 - Incremental Migration
 - Parallel XAL versions
- What do we want XAL to be?



Tasks

- Fix Launcher bug for Windows
- SCORE Snapshot Comparison
- CA Transforms Logging State with Data
- Replace Lattice Generator
- Online Model Improvements
- Improve Live Model Synching Performance
 - non-blocking connections
 - non-blocking batch get



Tasks (Continued)

- Create Examples
- Automated Tests
- Platform Specific Guides
- Source Code Management
 - -Pick a Home
 - Pick a tool (Subversion, etc.)
- Document External Jars



Tasks (Continued)

- Solver
 - Add more algorithms
 - -API improvements
- Site Customization
 - -what needs customization?
 - what needs to be made generic?
 - organization of site specific configuration files
- Localization Support
- Replace XML-RPC with JSON-RPC

