

OO DRMAA Language Bindings

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Actual State

- Java language binding v0.42
 - nearly complete
 - SGE SPI/API implementation available
- .NET binding v0.2
 - need comments
 - Mono implementation on the way
- Do we need a separate OO-mapping document for DRMAA ?

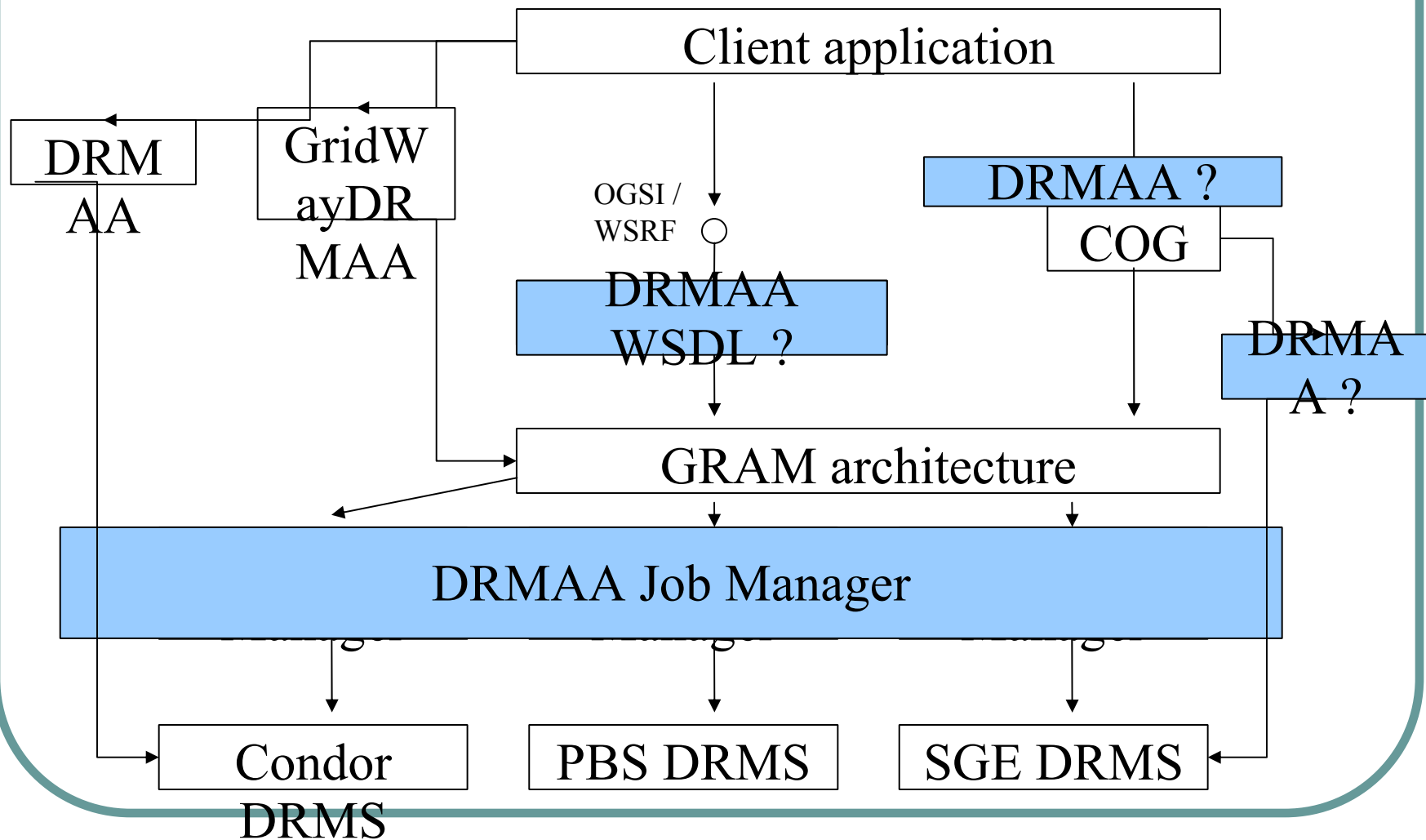
Results of OO Mapping Comparison

- Language-dependent issues
 - Namespace name
 - Enumerations vs. integer constants
 - Time limits as native data type
 - Job list for *drmaa_synchronize*
- Language-independent issues
 - Factory pattern for sessions
 - Exception handling (next slide)
 - Partial time stamp support
 - Abstract job identifier vs. strings
 - Deleting job templates
 - Attribute accessors
 - Job finish information / job finish status
 - Version information

Open OO Issues: Exceptions

- Exception hierarchy
- `InconsistentStateException` vs. direct error code mapping
- `UnsupportedAttributeException` vs. `InvalidArgumentException`
- `InvalidJobTemplateException` vs. `InvalidArgumentException`
- Throwable exception declaration vs. JDBC approach

DRMAA & Globus



DRMAA Pluggability

- No problem in Java spec (factory pattern)
- Discussed in .NET spec
- Dynamic linkage in the C-spec ?!?
 - Library name
 - Do we want LD_LIBRARY_PATH ?
- Maybe a meta library
 - Partial timestamp implementation
 - Change library at runtime (Cluster GUI)
- Avoid re-programming, or re-compilation, or even application restart?