## Outline

- What’s Aida
- Architecture
- Motivation and Benefits
- Demo
- Project Plan
- Next Talk
What’s Aida

Aida is an API for data access (get, put and monitor).

Aida provides a uniform API for getting data from any data source:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Data Access Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLC db</td>
<td>da.get(“QUAD:LI05:901.Z”);</td>
</tr>
<tr>
<td>EPICS ca</td>
<td>da.get(“PEPII.Luminosity”);</td>
</tr>
<tr>
<td>Oracle</td>
<td>da.get(“slc:linac:li03:quad:121.maxfield”);</td>
</tr>
<tr>
<td>WWW</td>
<td>da.get(“Ulis_favorite_tune_workingpoint.nu”);</td>
</tr>
</tbody>
</table>
Each name.attribute{.attribute} \(0^+\) maps to a database query in some database (CA, SLC, History etc)
Basic Logical Architecture

Support get/set/monitor any data from/to any source

Application → Aida

- SLC database
- Oracle
- EPICS channel access
- "SLC" history
- EPICS history
- HTML/XML
Detailed Logical Architecture

Support get/set/monitor any data from/to any source

Application → Aida →

- SLC database
- Oracle
- EPICS channel access
- "SLC" history
- EPICS history
- HTML/XML
Detailed Logical Architecture

Support get/set/monitor any data from/to any source

- Application
- Aida
- Generic
- Magnet
- BPM
- Klys
- SLC database
- Oracle
- EPICS channel access
- "SLC" history
- EPICS history
- HTML/XML
Support get/set/monitor any data from/to any source
Detailed Logical Architecture

Support get/set/monitor any data from/to any source
Detailed Logical Architecture

Support get/set/monitor any data from/to any source

AIDA

Application

Da

Generic

Magnet

BPM

Klys

SLC database

Oracle

EPICS channel access

"SLC" history

EPICS history

HTML/XML

SLC db

Oracle db

CA db

SLC HIST db

Archiver db
Support get/set/monitor any data from/to any source

Detailed Logical Architecture

AIDA

Data Services

Generic
Magnet
BPM
Klys

Data Sources

SLC database
Oracle
EPICS channel access
"SLC" history
EPICS history
HTML/XML

Application

Oracle db
CA db
SLC HIST db
Archiver db

SLC db
Difference to CDEV

- NT and VMS as well as Unix
- CORBA network layer, not proprietary
- Multilanguage, Java, C++, C, based on IDL
- Dynamic name mapping, based on Oracle not files
- History data, including history playback
- Structured data access
- Data Services
- Monitors based on push_consumer, not just callback
- Responsibility
Network View

CORBA IIOP over TCP/IP
Program API defined in IDL, so language independent, easily extensible

Application ORB

Da

Generic ORB

Magnet ORB

BPM ORB

Klys ORB

Oracle ORB

PICS channel access ORB

SLC history ORB

PICS history ORB

HTML/XML ORB

SLC database ORB

Oracle db ORB

CA db ORB

SLC HIST db ORB

Archiver db ORB

OCI client ORB

SQLNet over Net8 over TCP/IP
CORBA IIOP over TCP/IP
Program API defined in IDL, so language independent, easily extensible
How does it find where to get what

- Application
- Aida
  - Generic
  - Magnet
  - BPM
  - Klys
    - SLC database
    - Oracle
    - EPICS channel access
    - "SLC" history
    - EPICS history
    - HTML/XML
- Name
- Oracle db
Status

- Infrastructure, cvs, java, CORBA, IDEs, programmer’s guides, get(), Generic Service, SLC data source, EPICS CA data source, Oracle data source, Names database, Error Handling pattern

- Mostly in Java, just moving to C++
## Plan

<table>
<thead>
<tr>
<th>September</th>
<th>October</th>
<th>November</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>Monitor/ca, talk</td>
<td>get() int/char/array</td>
</tr>
<tr>
<td>GW Impl Rep, talk</td>
<td>Basic Arch, Session Persistence, performance</td>
<td>set(), for slc, ca, oracle</td>
</tr>
<tr>
<td>RM</td>
<td>Write jda.jar, applet for probe application</td>
<td>Error logging</td>
</tr>
</tbody>
</table>