

Experience with **XAL**
@ LCLS

XAL Out-of-the-box

Website, good instructions

JDK 1.5

Download XAL binaries, *untar*, etc.

Configure components (e.g. JCA)

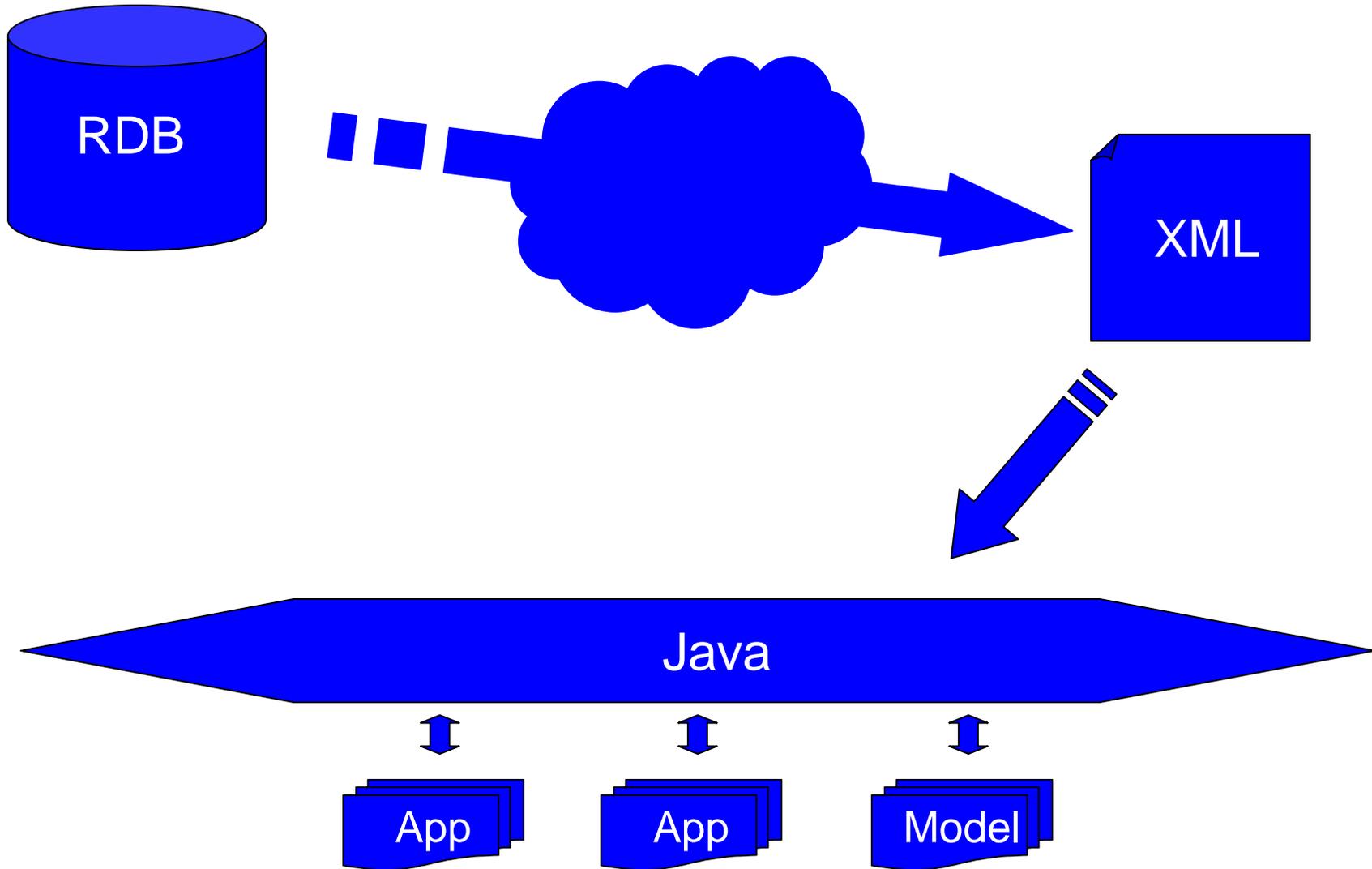
Install portable CA server

=> Run XAL applications that use SNS machine
and 'fake' channels (*demo mode*)

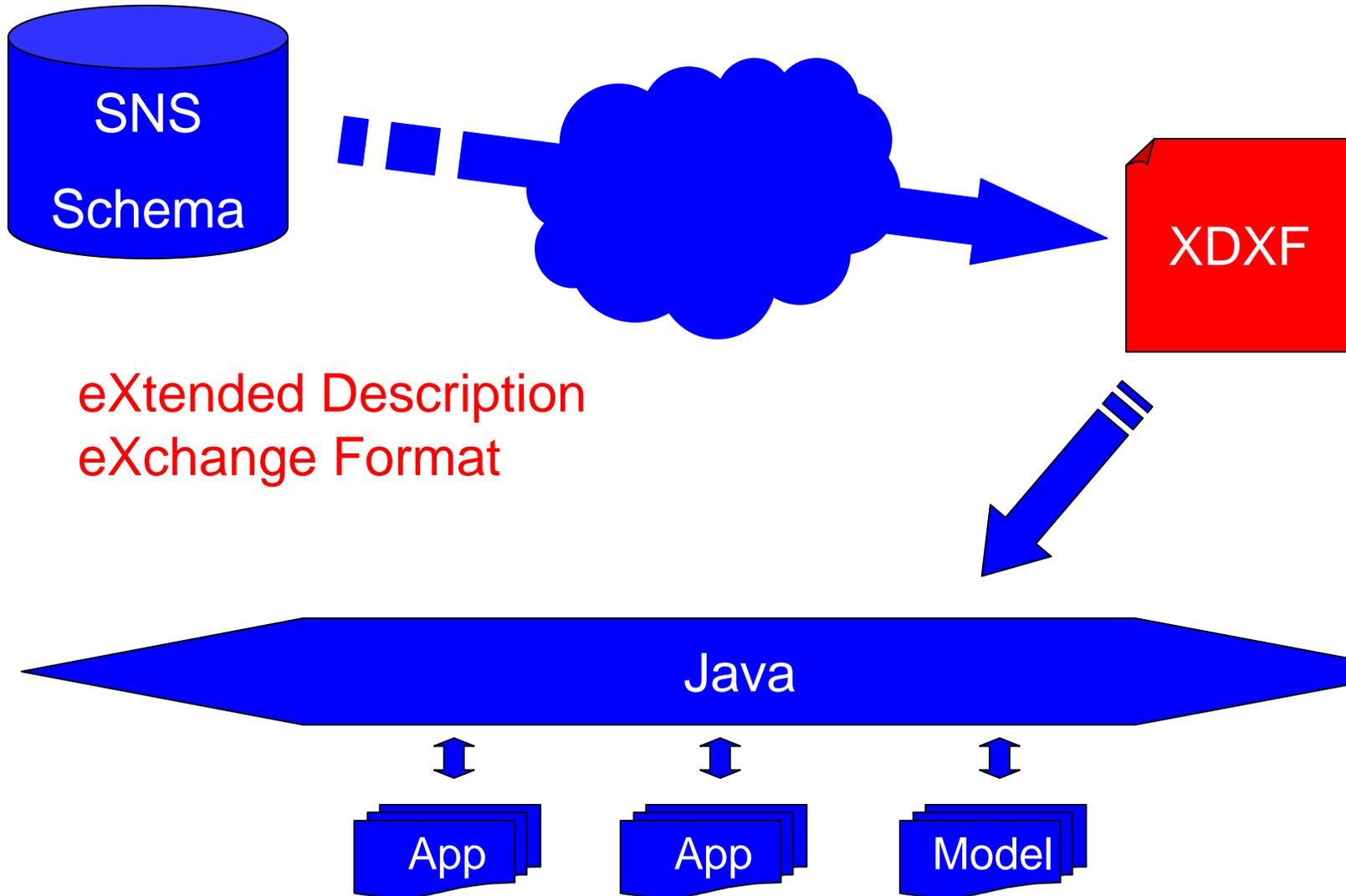
Lab-dependent Tasks

1. Loading accelerator geometry
 - Devices and their 'static' attributes
2. Running online model

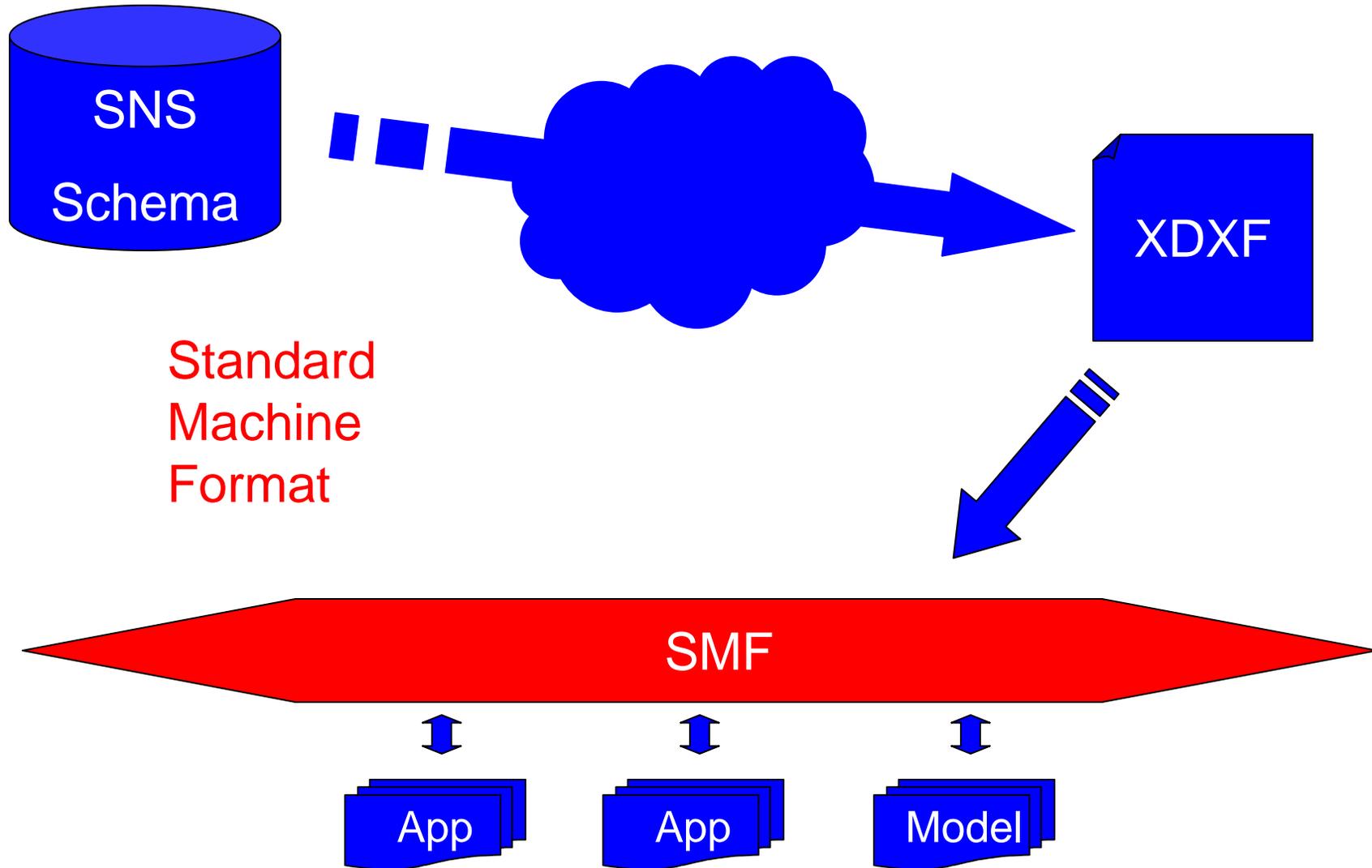
XAL & Accelerator Geometry (abstract)



XAL & Accelerator Geometry (formats)



Accelerator Geometry (formats)



LCLS vs. SNS

Should we reuse SNS schema?

- Committee
- PEP II experience
- Administration
- Computer science => loose coupling

Answer

No, we are going to use LCLS resources.

Loading data from LCLS Schema

Queries on SNS schema hard-coded into the XDXF instance creator

=> Rewrite, use standard libraries, make **generic** and configurable

(statistics: 2000 lines of code; creates 30000 lines of XML)

Problems with XDXF definition

=> DTD from 2002, not fully documented

Understanding XDXF

“Extract” XDXF from SNS’ accelerator file

- XML instance => XML schema
- Generic tools available

SMF classes for tweaking

- JavaDoc, code

Paul Chu’s visit

Generic Accelerator Schema => XDXF

RDB schema => XML schema, lots of tools

Our solution: externalized queries

- Based on internationalization
- Simple, flexible

Implementation not finished

- But, hand-edited SNS accelerator file

Online Model

SMF classes

- Device types (BPM, Magnet, etc.)
- Redefine, extend, create new
- Model new device types

“Straightforward”

Paul Chu’s visit

Summary

Excellent support

- Email, phone, conference calls, visits

=> thanks again, guys!

Great resources at the highest level

- Papers, diagrams, installation instructions

Great resources at the lowest level

- JavaDoc, clean code, snippets

Extending resources in the 'middle'

- Documentation of XDXF and other components
- Class/ sequence diagrams for SMF

The End

Thank you

