UML to 'VO' Transformer
XSLT Pipeline

International Virtual Observatory Alliance Interoperability Workshop
Trieste – 19-23 May 2008
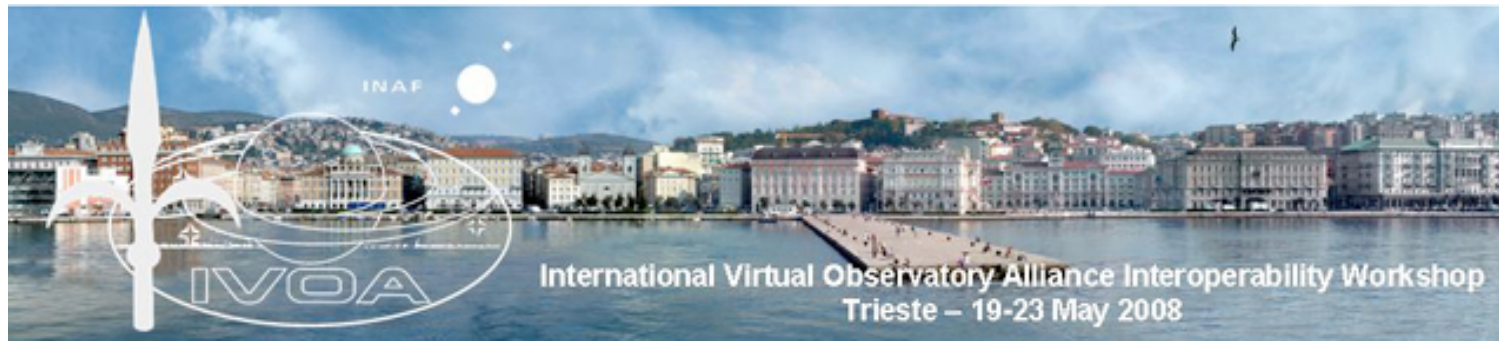
IVOA InterOp 2008 Meeting, Data Models 3. Friday 23, Trieste, 23/05/2008

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Transformation Pipeline 1/2
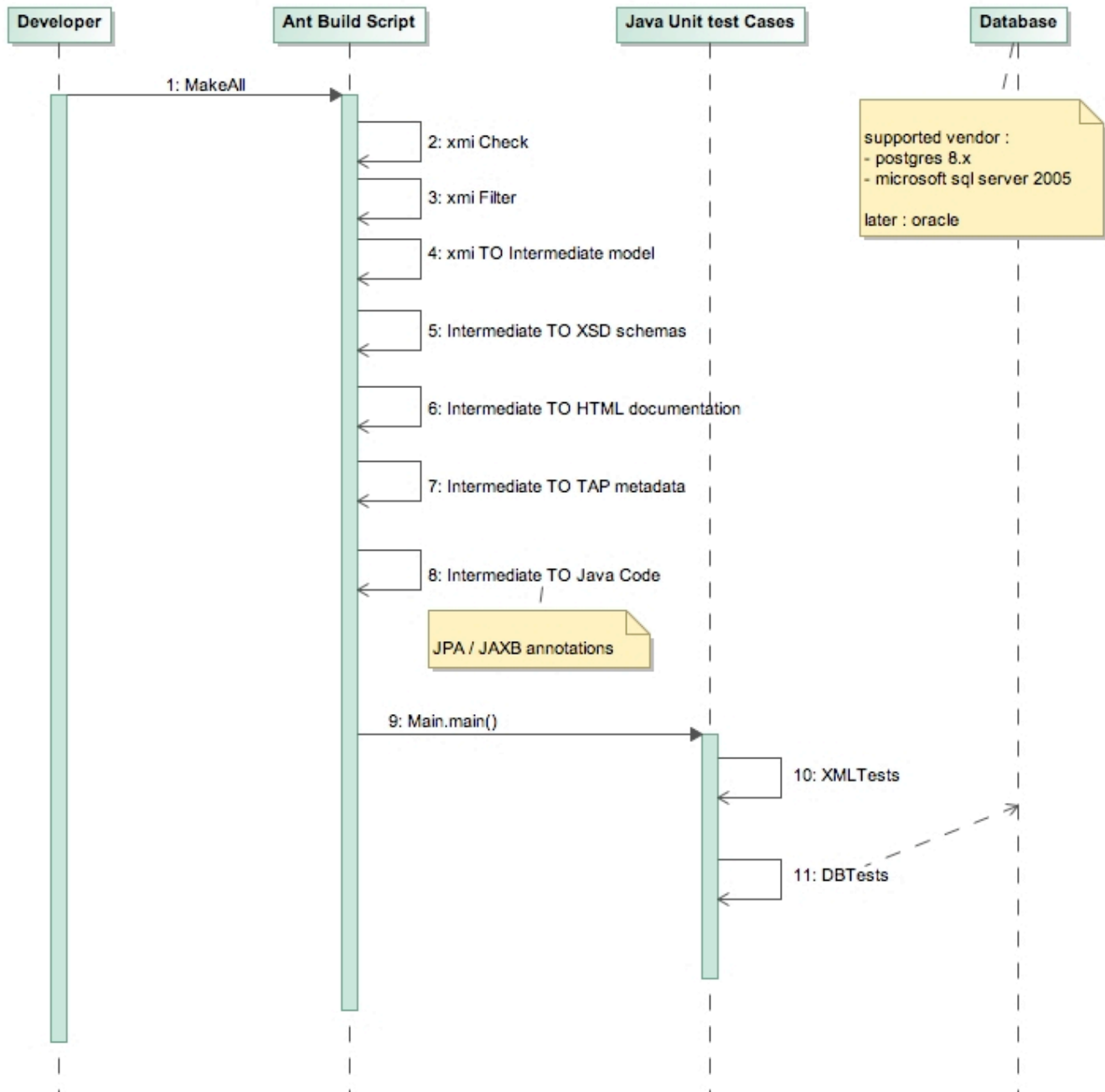
Open Source Tools / Libraries :
- Apache Ant (cross platform build tool)
- Saxon 9 (XSLT 2.0)

- JPA 1.0 (ORM) = eclipselink implementation, former full oracle top link commercial product (EclipseCon 2008, SANTA CLARA, CA – March 17, 2008)

- JAXB 2.1 (XML Bindings) = sun Reference Implementation 2.1.6

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interaction XSLT Pipeline[Sequence]

Developer   Ant Build Script   Java Unit test Cases   Database

1: MakeAll

2: xmi Check

3: xmi Filter

4: xmi TO Intermediate model

5: Intermediate TO XSD schemas

6: Intermediate TO HTML documentation

7: Intermediate TO TAP metadata

8: Intermediate TO Java Code

supported vendor :
- postgres 8.x
- microsoft sql server 2005

later : oracle

JPA / JAXB annotations

9: Main.main()

10: XMLTests

11: DBTests

Conclusion

- UML can stay simple (profile) and is useful for Data model design
- Derived items :
  - XML schemas (xsd)
  - Documentation
  - Java Code (JPA, JAXB decorated)
  - DDL / SQL scripts (postgres or microsoft SQL Server, maybe oracle later)
  - Test code to validate generated code

- First release soon (asap) : June 2008
- Contributors are welcome

- Questions ?