Getting introduced to URE
Agenda

- Introduction
  - Who am I?
  - What is the URE?
- Creating a first application
  - How it works
  - The difficult points
- Eclipse integration
  - Presentation
  - Efforts needed
Who am I?

- OpenOffice.org community member
  - For ~2 years
  - FR and API projects
- Happy Google Summer of coder 2005
  - Started the integration
  - Discovered the community
- Interested in UNO
  - Converted some friends to UNO
  - Created some docs about UNO & URE
What is the URE?

What is UNO?
- OpenOffice.org component model
- Distributed objects
- Cross-languages calls (through bridges)
- API Specification & Implementation separated

And the URE?
- Subset of OpenOffice.org
- Giving UNO features to another application
Getting introduced to URE

How it works

Specification & Implementation

UNO Runtime Environment

UNO-IDL Specifications

Component

Implementation
C++ / Java / Python

UNO-IDL Specifications

Component

Implementation
C++ / Java / Python
**How it works**

**SDK tools**

- *idlc*: UNO-IDL file compilation
- *regmerge*: merging urd files into a rdb file
- *javamaker*: Java types definitions generation

![Diagram showing the flow of tools and file types](diagram.png)
The difficult points

Learning UNO
- Specifications & Implementation not easy
- No major problem for people knowing CORBA, ICE...

Tutorials for real beginners
- Explaining main new concepts:
  - Implementation
  - Proxy objects
  - The build chain
- How to create a new component from scratch
Eclipse integration

- Started by a Google Summer of Code 2005
  - Step 1: creating a general component
- Continued during the 2006 year
  - Step 2: making better code
    - Code refactoring
    - Code documentation to complete
    - Writing plugin developer documentation
  - Step 3: building the component
    - Generating an implementation skeleton
    - Generating services.rdb
    - Running a URE application from Run command
Eclipse integration

Efforts needed

• Step 3: Fully integrate uno-skeletonmaker
  - Adding new wizard to create Calc, chart addins
  - Adding wizards to create all kind of IDL types
  - Removing the “New IDL file” wizard

• Step 4: Adding other languages
  - C++, Python
  - French, German...
  - Writing more user and developer docs
Bibliography

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  - Chapter 4 – Writing UNO components
- OpenOffice.org Coding Guidelines
  - tools.openoffice.org/CodingGuidelines.sxw
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