OpenOffice.org Extensions Infrastructure

What it is –
What it can –
What is planned

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About the speaker

- started working on the project in 1997
- one of three initial developers who have started to develop the first version of UNO
- today – technical lead at Sun Microsystems and responsible for programmability capabilities in StarOffice/OpenOffice.org
- project lead of the api.openoffice.org project
Excursion to other Applications

• Extension Support – YES
  > Easy and smooth (e.g. drag and drop)
  > Huge extension base

• Extension Support – YES
  > Complete platform to build applications on top of it
  > Rich Client Platform (RCP)
  > Growing extension (modules/plugin) base

• Extension Support – YES
  > Complete platform to build applications on top of it (RCP)
  > Solid extension (plugin) base
Excursion to other Applications

Common Features

- **Versioning**
  - version number and unique identifiers
- **Dependencies**
  - to a specific application version
  - to other extensions or modules/plugins
- **Online Update**
  - manually update checks
  - automatically checks
What makes extensions interesting?

• User view
  > Adjust the applications to personal needs
  > Extend the applications with new functionality
  > Easy to update

• Developer view
  > Easy start with the project
  > No core knowledge required
  > Early feeling of success → motivating
  > Encapsulated working area → programming against stable, documented API's
  > Reuse of existing functionality
  > Integration of connectors/interfaces to other applications
Extensions in OpenOffice.org (StarOffice)

What it is

- Script/Macro Libraries
  - Basic, Python, Java, JavaScript

- Functional enhancements ➔ UNO components
  - Completely new functions with new IDL type definitions
  - Implementation of special Service Provider Interfaces
    - Calc Add-Ins, Add-Ons, Filter
    - ... and more

- Non code content
  - Templates
  - Gallery items
Extensions in OpenOffice.org (StarOffice)

Extension Package Format (since OO.org 2.0.4)

- Zip container (.oxt)
  > Formerly .uno.pkg and .zip
- META-INF/manifest.xml
  > Content description
  > Description of installable items
- description.xml
  > License
  > Dependencies
- Content
Extensions in OpenOffice.org (StarOffice)

Extension Package Format (since OO.org 2.0.4)

Content of an example oxt extension package:

SOCalculatorAddon.oxt

SOCalculatorAddon.uno.jar
description.xml
Addons.xcu
ProtocolHandler.xcu
calculator_16.bmp
calculator_26.bmp
registration/license_en-US.txt
registration/license_en-GB.txt
registration/license_de.txt
META-INF/manifest.xml
Extensions in OpenOffice.org (StarOffice)

Simple License Feature (since OO.org 2.0.4)

- Accept or reject → install or do nothing
- Simply display the content of the license file without any formatting
- Plain UTF8 format
- Support of localized license files
  - Matching algorithm to find the best fitting license
  - Vendor has to define a default as fallback if the matching algorithm failed
- Control flag for user and shared mode
  - User mode → every user has to accept the license
  - Shared mode → only one person has to accept the license when installed in the shared layer
Extensions in OpenOffice.org (StarOffice)

Extension Package Format (since OO.org 2.0.4)

Example Content of a description.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<description xmlns="http://openoffice.org/extensions/description/2006"
    xmlns:xlink="http://www.w3.org/1999/xlink">
    <registration>
        <simple-license accept-by="admin" default-license-id="de">
            <license-text xlink:href="registration/license_de.txt" lang="de" license-id="de"/>
            <license-text xlink:href="registration/license_en-US.txt" lang="en-US"/>
            <license-text xlink:href="registration/license_en-GB.txt" lang="en-GB"/>
        </simple-license>
    </registration>
</description>
```
Extensions in OpenOffice.org (StarOffice)

- OO.org 2.0.4
- OO.org 2.0
- OO.org < 2.0

- OXT
- UNO.PKG
- ZIP
Extensions in OpenOffice.org

(StarOffice)

What is planned in the future

• OpenOffice.org 2.1
  > Online update for extensions
    – Searching for updates
  > Unique identifiers and versioning for extension packages
  > Real dependencies on demand
  > System integration
    – mime type registration
    – double click on oxt file to install
  > renaming of “Package Manager” to “Extension Manager”
  > Improved toolkit
    – New controls
Extensions in OpenOffice.org (StarOffice)

What is planned in the future

• Later
  > Redesign of the extension manager UI (simplification)
  > Signing of extension packages (encryption?)
  > Automatic notification for updates
  > Support of extension options in the Tools → Options dialog
    – New category Extensions + single entry per extension
  > Extendable help
    – Smooth integration of extension help in the existing help system
  > Localization support (maybe earlier)
    – New resource framework – especially for the usage with the toolkit
  > Extended license framework on demand
    – interface (hook) to support existing license frameworks
Vision

... you remember the keyword RCP (Rich Client Platform)

- OpenOffice as a collection of extension packages
- Easy update for small parts of the office
- Small deployments possible (e.g. writer only)
Join the extension project

• to get more info about the ongoing work
• visit the project extensions.openoffice.org
• subscribe to the mailing list dev@extensions.openoffice.org
• subscribe to the mailing list dev@api.openoffice.org
• give feedback
• get started
OpenOffice.org
Extensions Infrastructure

Questions?

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