XWT

Eclipse XML Windowing Toolkit

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Agenda

- What is XWT?
- Architecture
- XWT Fundamentals
- Demo 1
- Binding and Data Binding
- Demo 2
- Product overview
- Q&A

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What is XWT?

XWT stands for XML Windowing Toolkit. It is a XML based UI declarative solution for eclipse.

XWT targets to be a UI Presentation Foundation for eclipse by providing:
- A common infrastructure that enables UI tools to work together
- Component assembling application development environment
Architecture

UI Presentation is to handle an interaction between users and data.
- Reusable and Embeddable
- Clear separation between public description and implementation

A presentation unit consists of 4 aspects
- UI views - XML
- Controllers - Java
- Metadata
- Data context
XWT Fundamentals

Hello, world!

XML

```xml
<Shell xmlns="http://www.eclipse.org/xwt/presentation"
   Text="Appearance">
   <Shell.layout>
   <FillLayout/>
   </Shell.layout>
   <Button Text="Hello world!">
</Shell>
```

Java

```java
Shell shell = new Shell();
shell.setText("Appearance");
Shell.setLayout(new FillLayout());
Button button = new Button(shell, SWT.PUSH);
Button.setText("Hello world!");
```
XWT Fundamentals
Event Handling

<Shell xmlns="http://www.eclipse.org/xwt/presentation"
   xmlns:x="http://www.eclipse.org/xwt"
   x:Class="ui.Handler"
   Text="Event handling">
  <Shell.layout>
    <FillLayout/>
  </Shell.layout>
  <Button SelectionEvent="onClick" Text="Click here"/>
</Shell>

package ui;
import org.eclipse.swt.Event;
public class Handler {
   public void onClick(Event event) {
      System.out.println("Hello world!");
   }
}

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Demo 1

- UI Development
- Event management

Purpose of this demo
- Get overview of XWT concept
- familiar with XWT development environment
Binding & Data Binding

- XWT Binding Expression language
  - Data binding
  - Element binding
    - Reference between element by name
- Based on Eclipse Data Binding engine
  - Data conversion
  - Data validation
  - Automatic update in two directions
Data Binding

<Shell
xmlns="http://www.eclipse.org/xwt/presentation"
Title="Data binding">
<Shell.layout>
    <GridLayout numColumns="2"/>
</Shell.layout>

    <Label Text="First name:"/>
    <Text text="{Binding Path=FirstName}"/>
    <Label Text="Last name:"/>
    <Text text="{Binding Path=LastName}"/>
</Shell>
Component & Data Context Management

```xml
<Composite
    xmlns="http://www.eclipse.org/xwt/presentation"
    xmlns:x="http://www.eclipse.org/xwt"
    xmlns:j="clr-namespace:ui">
    <Composite.layout>
        <GridLayout numColumns="2"/>
    </Composite.layout>

    <Label Text="Company name:="/>
    <Text Text="{Binding Path=Name}"/>

    <Label Text="Manager:="/>
    <j:PersonView dataContext="{Binding Path=Manager}"/>
</Composite>
```

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Demo 2

- Data Binding
- e4 Contact demo
Product overview

XWT

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Abstraction

Implementation

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