

eFace

XAML for Java

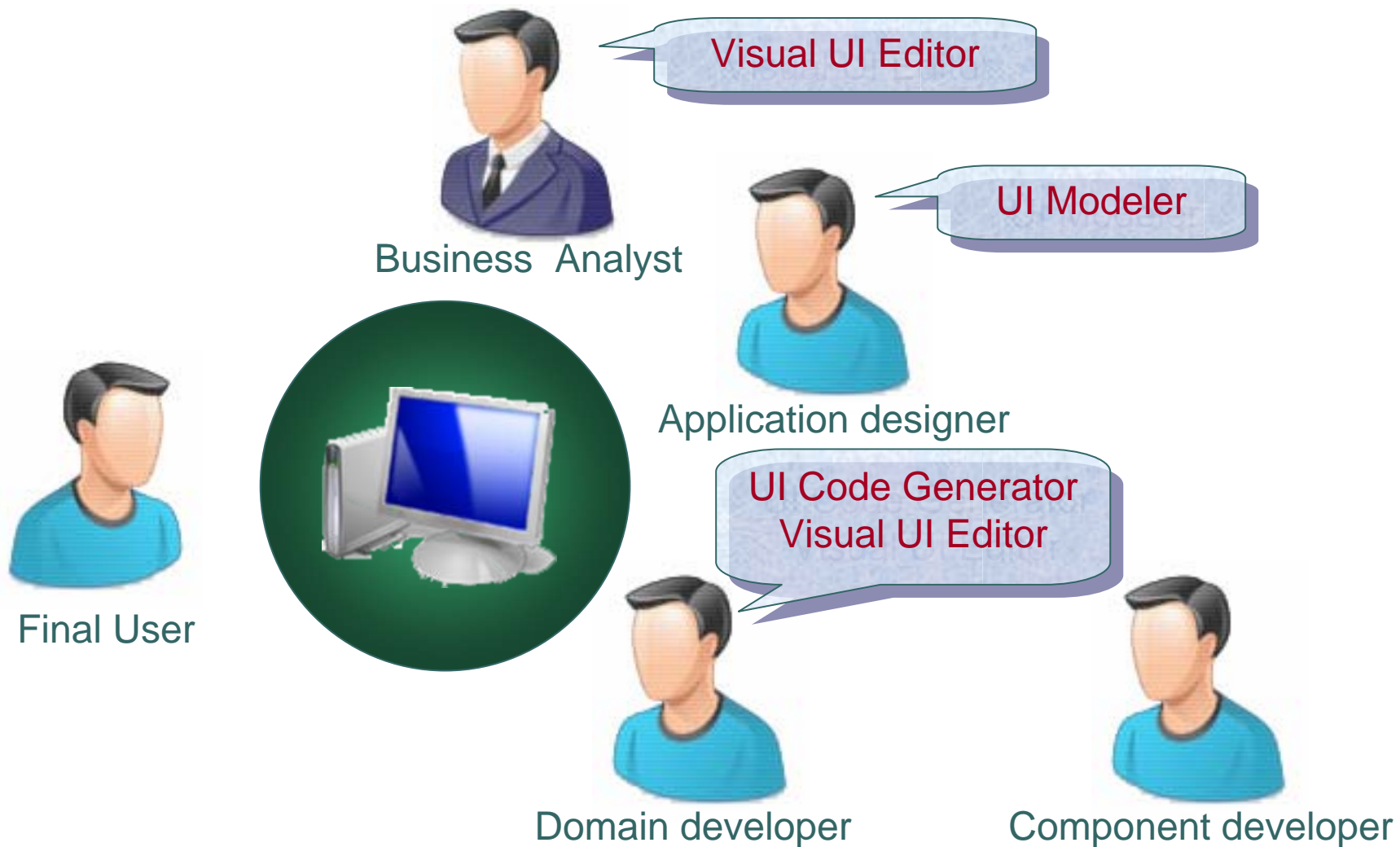


***Declarative UI
Programming***

Soyatec 
Open Solution Company

- ⬢ Needs
- ⬢ Architecture
- ⬢ XAML fundamentals
- ⬢ Data Binding
- ⬢ Presentation Modeling Framework - MDA
- ⬢ Advanced features
- ⬢ Roadmap
- ⬢ Testimony
- ⬢ Q&A

Needs



Needs

- ⬢ Execution environment
 - ⬢ Web/Ajax
 - ⬢ Eclipse
 - ⬢ Swing
- ⬢ Tools
 - ⬢ Visual Editor
 - ⬢ MDA UI Modeler
 - ⬢ Advanced UI Resource Editor
- ⬢ Agile system

Needs

XAML



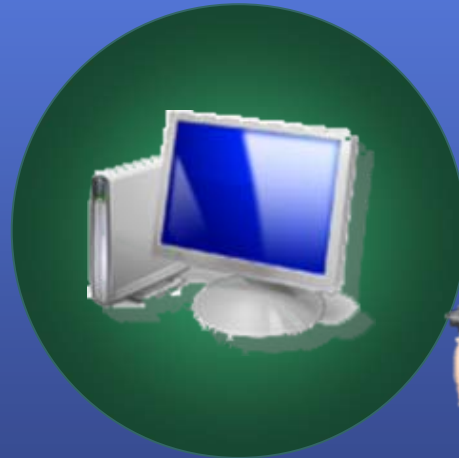
Visual UI Editor

Business Analyst



UI Modeler

Application designer



UI Code Generator
Visual UI Editor



Final User

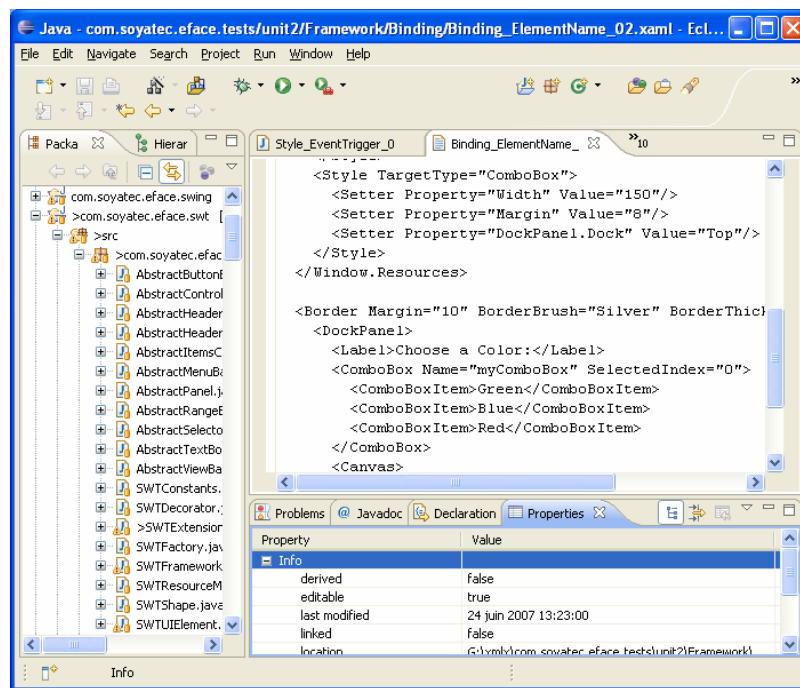


Domain developer



Component developer

Architecture



XAML Files

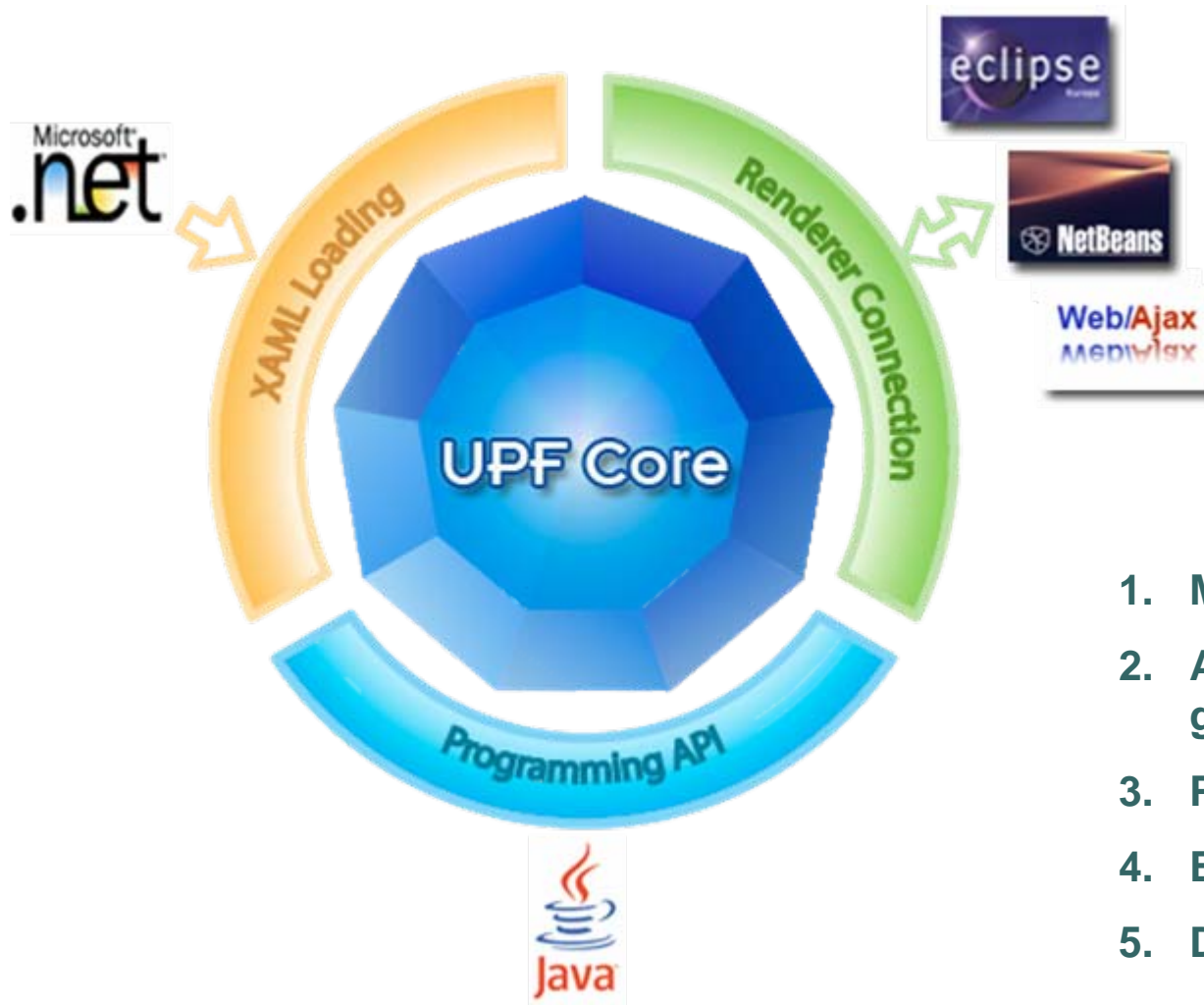
GUI Ressource

Event / Action

Java

Dynamic GUI

Architecture



1. Meta model
2. Abstract and generic model
3. Programming API
4. Event management
5. Data binding

XAML Fundamentals

Hello, world!



```
<Window
  xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
  Title="Appearance">
  <Button FontSize="20" FontWeights="Bold">Hello world!</Button>
</Window>
```



```
Window window = new Window();
window.setTitle("Appearance");

Button button = new Button();
button.setFontSize(20);
button.setFontWeights(FontWeights.BOLD);
window.getChildren().add(button);
window.show();
```



XAML Fundamentals

Event Handling

XAML

```
<Window
  xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
  x:Class="tutorial.event.handling.Handler"
  Title="Event handling">
  <Button Click="onClick">Click here!</Button>
</Window>
```

Java

```
package tutorial.event.handling;
import com.soyatec.eface.upf.actions.RoutedEventArgs;

public class Handler {
    public void onClick(Object sender, RoutedEventArgs args) {
        System.out.println("Hello world!");
    }
}
```



Data Binding

- ⬢ Event notification
 - ⬢ Control event
 - ⬢ Data event
- ⬢ Data context management
- ⬢ Data Binding expression
- ⬢ Data conversion
- ⬢ Data validation
 - ⬢ Regular expression
- ⬢ Customizable error handling
- ⬢ Automatic update in two directions
 - ⬢ Data source object to GUI
 - ⬢ GUI modification to data source object

Data Binding

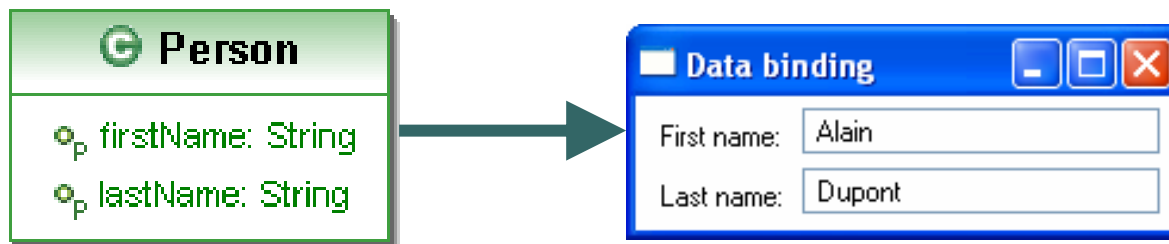


```

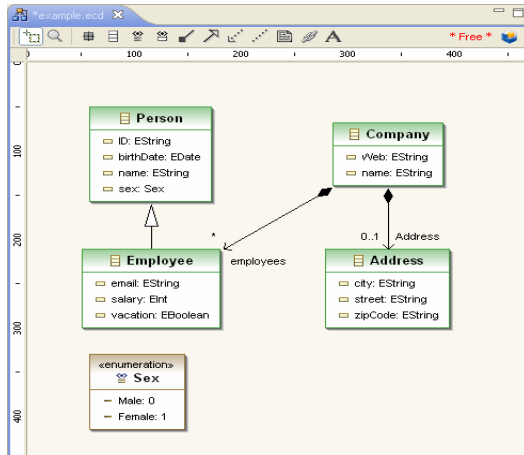
<Window
  xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
  Title="Data binding" Width="235" Height="90">

  <Canvas>
    <Label Canvas.Top="5" Canvas.Left="5" Content="First name:" />
    <TextBox Canvas.Top="5" Canvas.Left="70" Width="150"
      Text="{Binding Path=FirstName}" />
    <Label Canvas.Top="30" Canvas.Left="5" Content="Last name:" />
    <TextBox Canvas.Top="30" Canvas.Left="70" Width="150"
      Text="{Binding Path=LastName}" />
  </Canvas>
</Window>

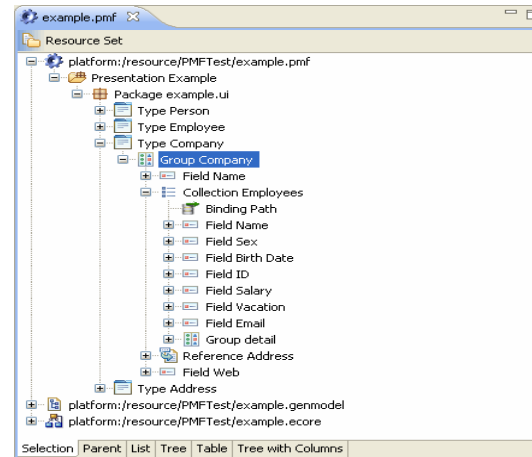
```



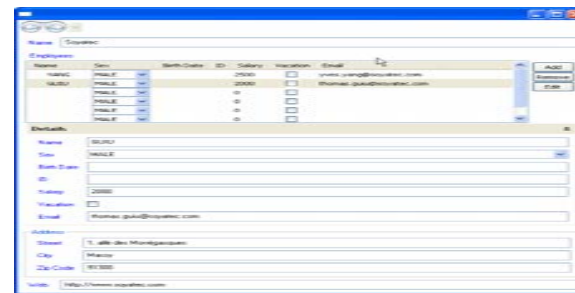
Presentation Modeling Framework – MDA



1. EMF Business modeling



3. Generation and execution



2. Data Presentation modeling



Component Templates on JET2

Presentation Modeling Framework – MDA

Extensible and high productivity MDA solution
for EMF

- ⚙ Customizable template mechanism
- ⚙ Flexible component-based architecture
- ⚙ Separation of Data Presentation Modeling
with UI framework
- ⚙ Executable code generation

Demo

<http://www.soyatec.com/eface/webdemo#PMF>

Advanced Features

- ⬢ Default value resolution – Dependent Property
- ⬢ Style
 - Named Style and Style override
- ⬢ Data binding
 - Binding, MultiBinding and PriorityBinding
- ⬢ Trigger
 - DataTrigger, EventTrigger and MultiTrigger
- ⬢ Template for dynamic GUI
 - Control template and Data template
- ⬢ Collection View
 - Sort and filter
- ⬢ XAML Editor on top of Eclipse XML editor
- ⬢ Eclipse RCP integration

Roadmap

- Q2 2008
 - EMF PMF - V1
- Q3 2008
 - Visual Designer V1 – VEX for eFace
- Q4 2008
 - Advanced Eclipse integration – V1
Wizard, Property sheet, Preference, editor,
etc.

Our project manager/designer mastered very quickly the framework and made our application very user friendly in no time! Above my expectation, the end user experience was fluid, easy and intuitive. This tool is already becoming a significant productivity tool in our environment.

Denis Gautier

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