Building Business UIs with EMF Forms

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Data is often viewed/edited in a form-based UI
Data model needs to be mapped to UI
Manual coding of these UIs is a huge effort

```java
Shell shell = new Shell (display);
GridLayout gridlayout = new GridLayout (5, false);
shell.setLayout (gridlayout);

Label Vorname = new Label (shell, SWT.NONE);
Vorname.setText ("Vorname");

Text VornameFeld = new Text (shell, SWT.BORDER);
GridData data = new GridData (SWT.FILL, SWT.CENTER, true, false);
VornameFeld.setLayoutData (data);

Label Name = new Label (shell, SWT.CENTER);
Name.setText ("Name");

Text NameFeld = new Text (shell, SWT.BORDER);
GridData data = new GridData (SWT.FILL, SWT.CENTER, true, false);
NameFeld.setLayoutData (data);

GridData griddata = new GridData (SWT.FILL, SWT.CENTER, false, false, 1, 2);
NameFeld.setLayoutData (data);

Label Geschlecht = new Label (shell, SWT.BORDER);
Geschlecht.setText ("Geschlecht");

Text GeschlechtFeld = new Text (shell, SWT.BORDER);
GridData data = new GridData (SWT.FILL, SWT.CENTER, true, false);
GeschlechtFeld.setLayoutData (data);
```
Modeling the UI

Domain Model (XSD, Ecore) + View Model = User Interface

- User Model Instances
  - User View Model
    - HorizontalLayout
      - VerticalLayout Left Column
        - Control firstName
        - Control LastName
      - VerticalLayout Right Column
        - Control gender
        - Control dateOfBirth
    - Control eMails

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Modeling the UI

1. Data Binding with Controls
2. Modeling Structure with Layouts
Demo
Example: Embedding EMF Forms in a SWT UI

- EMF Forms can be embedded on every Composite
- ECPSWTViewRenderer.INSTANCE.render(Composite parent, EObject domainObject);
EMF Forms Features

• Controls to edit data + Layouts to structure UI
• IDE-Tooling
• Many additional view model elements
• Live-Validation
• Rule-based visibility and enablement of controls
• Exchangeable UI Technology:
  • SWT (Production)
  • JavaFX (Development)
  • Browser/Web based on RAP (Production)
  • Browser/Web based on AngularJS (Development)
  • Mobile based on Tabris (Demo)
Rendering technologies
When to use UI Modeling

- Large Domain Model
- Many different Views
- Frequent Domain Model changes
- Homogenous UI
- UI Technology Independence
- Improved Customer Involvement
  - Fast Turnaround + Rapid Prototyping
  - Easy-to-grasp UI concepts
More Information

- Next Release 1.6 Mars
- Roadmap:
  - Improve Renderer SPI
  - Improve Web Renderer based on AngularJS
    http://JSONForms.org

- EMF Forms: http://emfforms.org
- Twitter: #emfforms @EMFFForms
- Meet us at EclipseCon today:
  - Demo Session, Eclipse Foundation Booth, 3:30-6pm
  - Poster Session, Atrium 6-9 pm
  - BOF, Bayside AB, 8-9pm
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