EclipseSource

Building modeling tools based on EMF

Jonas Helming

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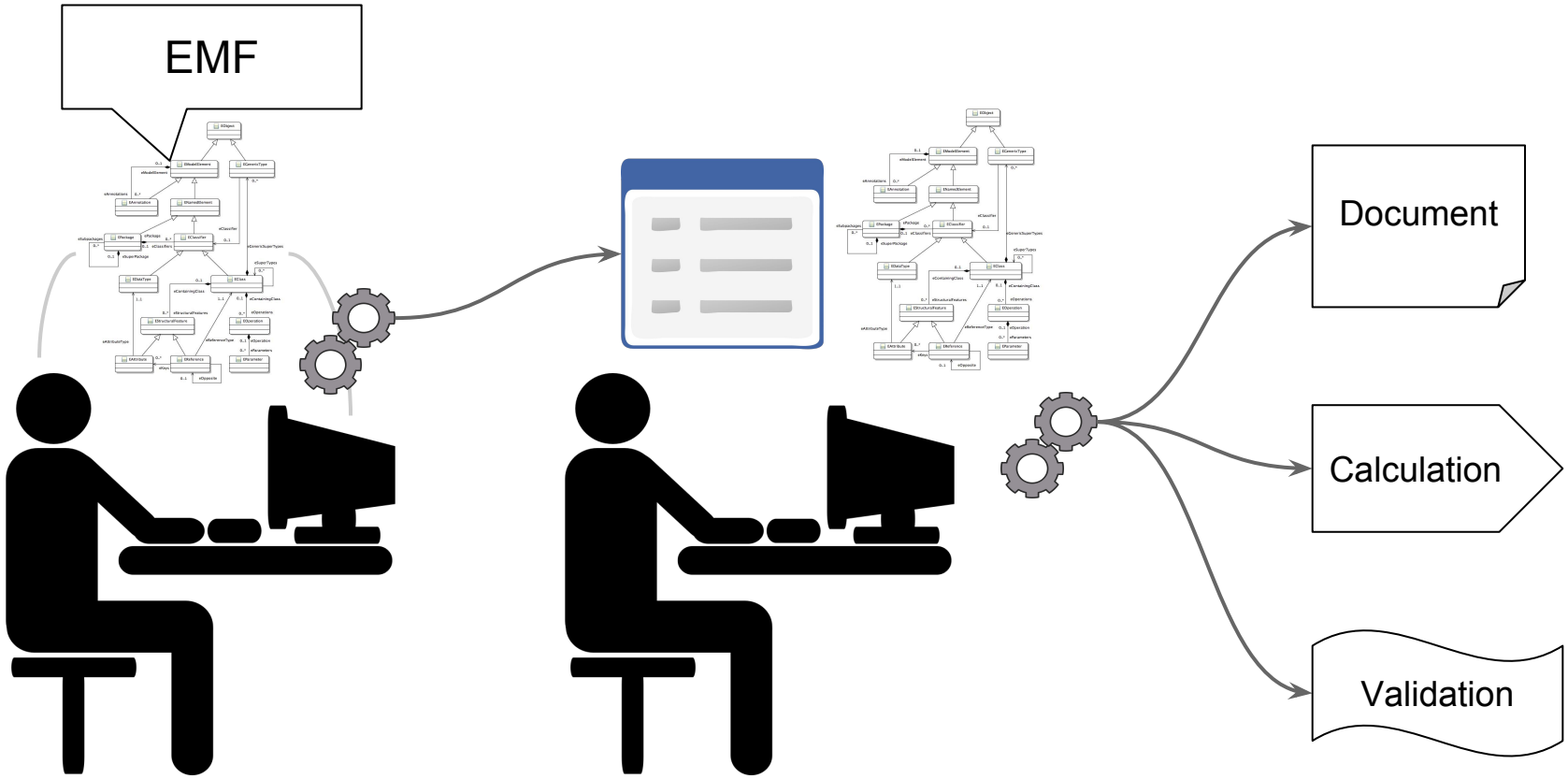
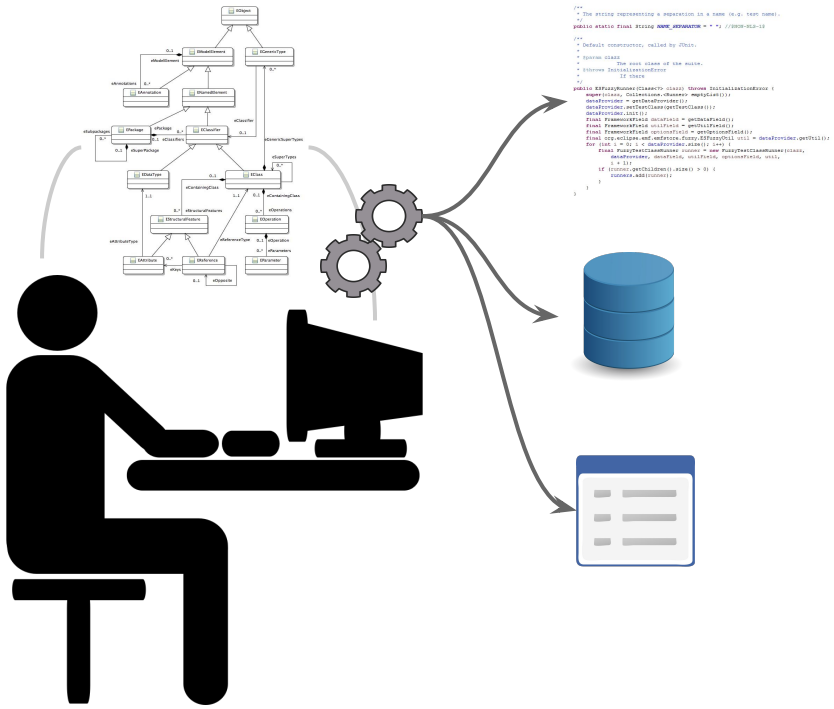
Tools for engineers



Benefits of using EMF to create a tool

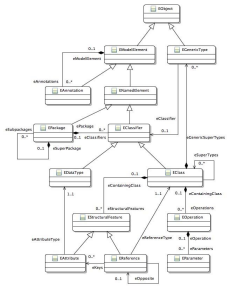


- Src Code
- Persistence
- Undo/Redo
- Model Instance Migration
- Tree-based UI
- Form-based UI
- Table-based UI
- Versioning (Compare)
- Reflective API
- Graphical UIs?

Modeling a coffee machine

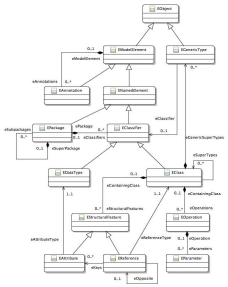
- Machine XPX 3001
  - Control Unit 0
    - Processor
    - RAM 0
  - Dip Tray 0
  - Brewing Unit 0
  - Water Tank 0

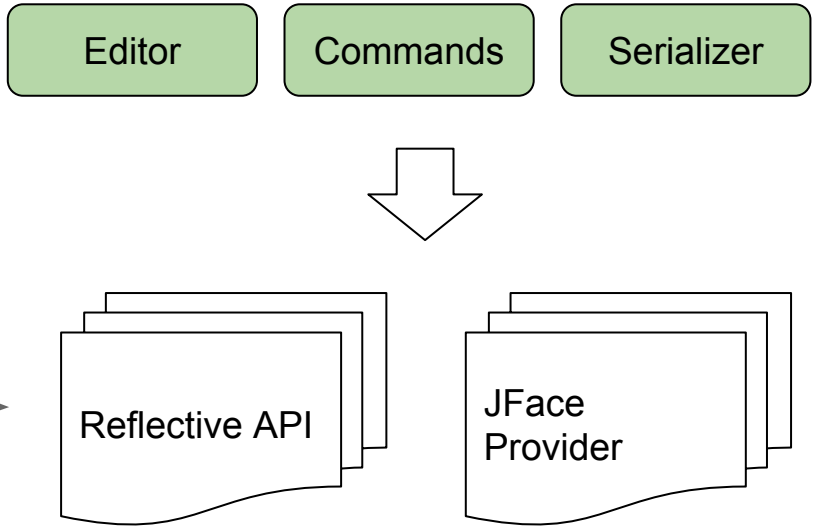
Modeling in EMF



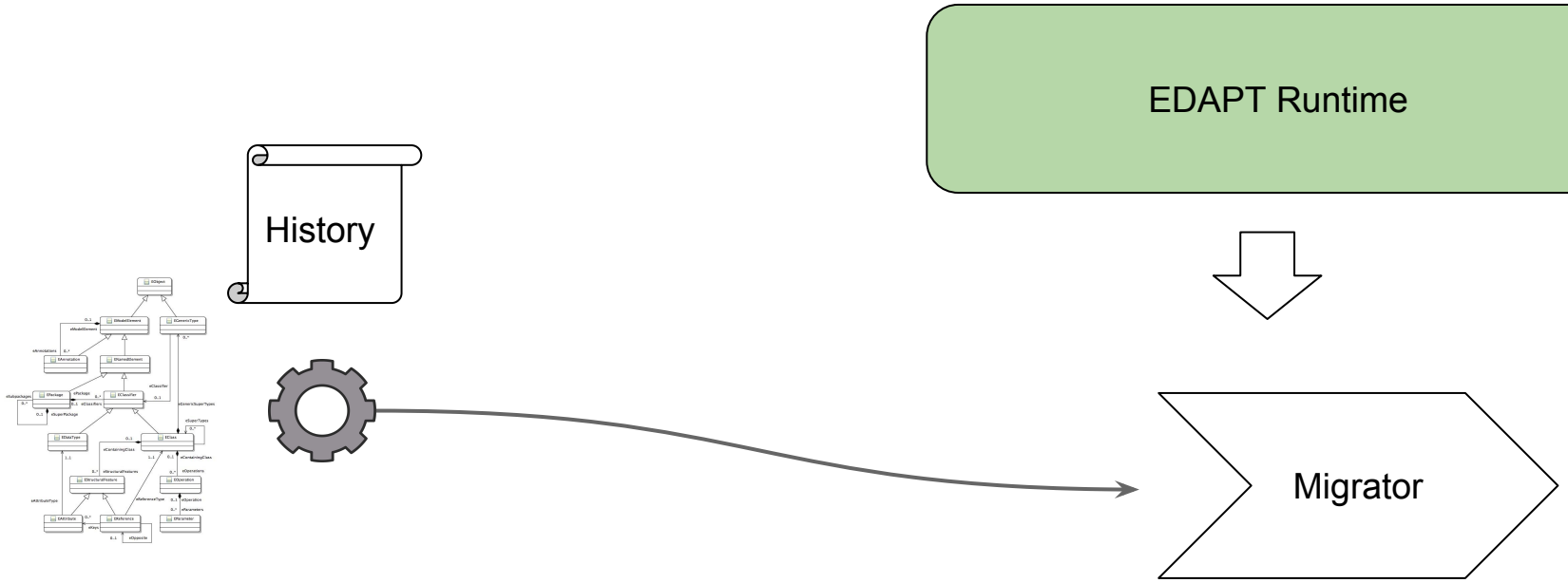
```
Shell shell = new Shell (display);
GridLayout gridLayout = new GridLayout (5, false);
shell.setLayout (gridLayout);

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 Trennlinie = new Label (shell, SWT.SEPARATOR);
data = new GridData (SWT.FILL, SWT.CENTER, false, false, 1, 2);
Trennlinie.setLayoutData (data);

Label Titel = new Label (shell, SWT.NONE);
Titel.setText ("Titel");
data = new GridData ();
data.horizontalIndent = 10;
Titel.setLayoutData (data);

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

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

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

Label Geschlecht = new Label (shell, SWT.NONE);
Geschlecht.setText ("Geschlecht");
data = new GridData ();
data.horizontalIndent = 10;
Geschlecht.setLayoutData (data);

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

shell.pack ();
```

Tree-based UI
Undo/Redo
Persistence

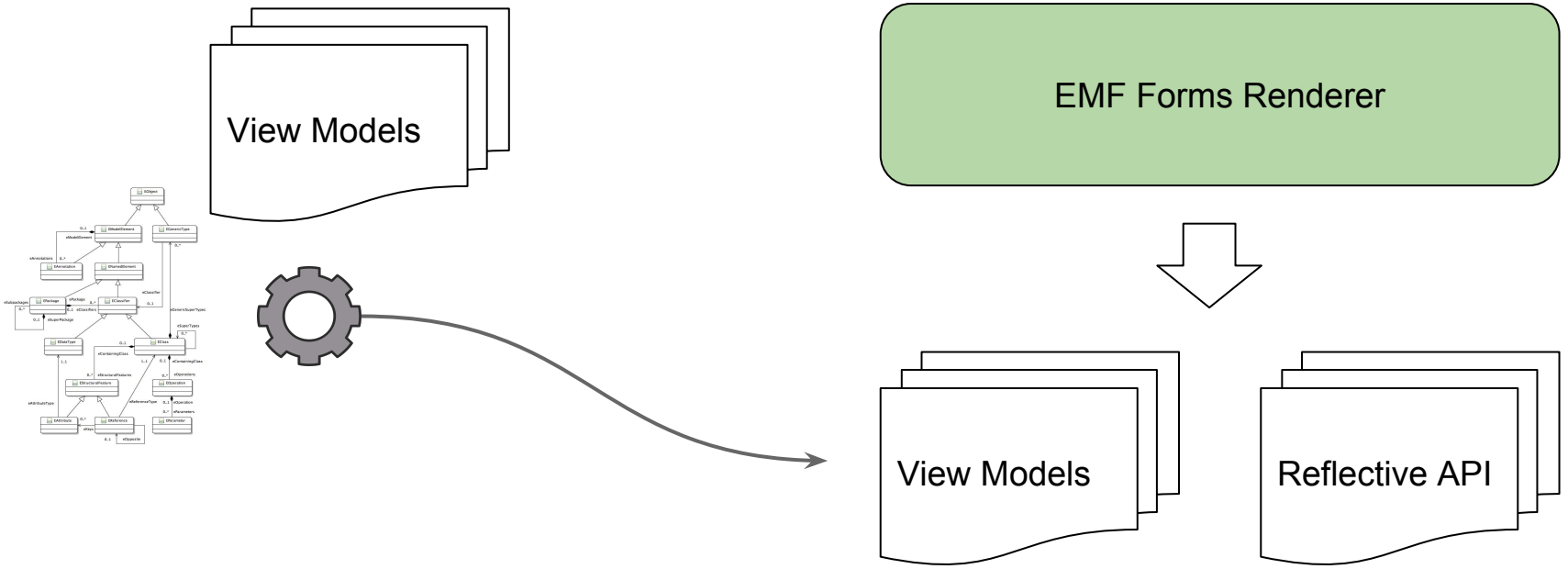




Instance Migration

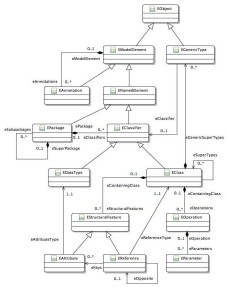


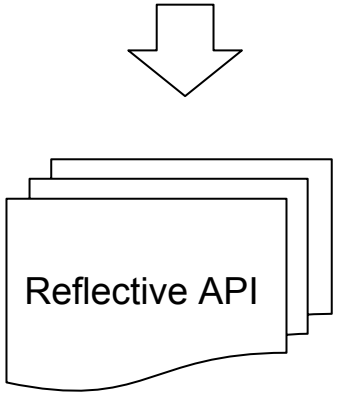
Form-based UI
Table-based UI



Versioning

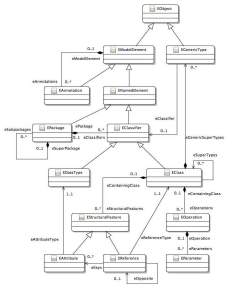
EMF Compare

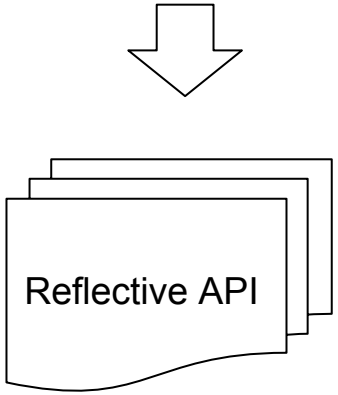




Reflective API

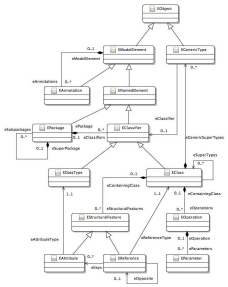
Your custom code

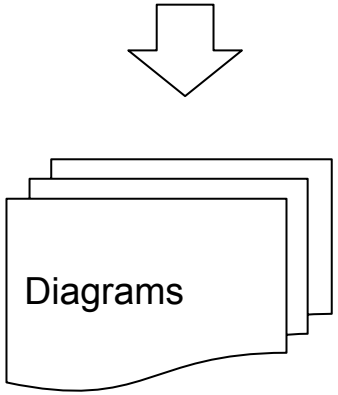




Graphical UI

GEF / GMF / Sirius / Papyrus





More Information

eclipse.org/emf

eclipsesource.com/emftutorial

eclipse.org/edapt

Emfforms.org

eclips.org/emfcompare

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