Did you ever code a rich client application:

- without EMF?

- with EMF?
What is EMF?
From Models...
...to Java Beans
On Steroids
More about the Steroids
Observer Adapter

Observer notifies Observable Notifier

Observer registers Observable
Notification

Message from the Observable to the Observer
Stop Delivering Notifications
For **all** model elements

In Genmodel

Set «Model / Suppress Notification» to false

For **one** model elements

On EObject instance

call #:eSetDeliver(false)
EContent Adapter
Listener of Containment Tree
EContent Adapter
Listener of Containment Tree

eAdapters().add(EContentAdapter)
EContent Adapter
Listener of Containment Tree

eAdapters().add(EContentAdapter)
3... 2... 1... Action!
Code available

https://gist.github.com/mbarbero/18e16fe13da40ba825ce

https://gist.github.com/mbarbero/e8aafb2c0754dccdd45b
Notify Framework

Command Framework

Change Recorder
What is a command?
Executability
Executability

Undoability

command
Affected Objects
<table>
<thead>
<tr>
<th>Result</th>
<th>Affected Objects</th>
<th>Label / Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
High-level Commands

- Create Child
- Drag & Drop
- Paste from Clipboard
- Cut To Clipboard
- Copy to Clipboard
- Delete
Command Stack
3... 2... 1... Action!
Code available

https://gist.github.com/mbarbero/77c81a93b5f63c441207
Notify Framework

Command Framework

Change Recorder
CHANGE AHEAD
Change Model

Bird view

```
ChangeDescription

apply()
applyAndReverse()

Map<EObject, Changes>

objectChanges [*]

EObject (from ecore)

key

EObject (from ecore)

referenceValue

FeatureChange

dataValue : String

EStructuralFeature (from ecore)

feature

value [*]
```
Change Recorder
Listener of Containment Tree
Change Recorder
Listener of Containment Tree
Change Recorder
Listener of Containment Tree

Change Recorder
Listen to

Creates

Change model
Change Command
Change Command

Execute
Change Command

Execute

Change recorder
Change Command

- Execute
- Undo
- Redo

Change recorder
Change Command

Execute

Undo

Redo

Change recorder

applyAndReverse
3... 2... 1... Action!
Code available

https://gist.github.com/mbarbero/6ffe6b88ee61ce7e2e57
What you should remember
What you should remember
Adapter + ChangeModel = ChangeRecorder

What you should remember
Adapter + ChangeModel = ChangeRecorder

Command + ChangeRecorder = ChangeCommand

What you should remember
Steroids for Your App

What you should remember

Adapter + ChangeModel

Command + ChangeRecorder

ChangeCommand + ChangeRecorder

ChangeRecorder + LAD

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Thank you!
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