

# Creating content types and workflow with ArchGenXML

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- <http://zestsoftware.nl/>



# Started by a lazy Austrian prince



# ArchGenXML

- Generates Plone products from a UML model
- Limited support for pure python

# Handy for what?

- “Bookkeeping” code
- Content types
- Workflow



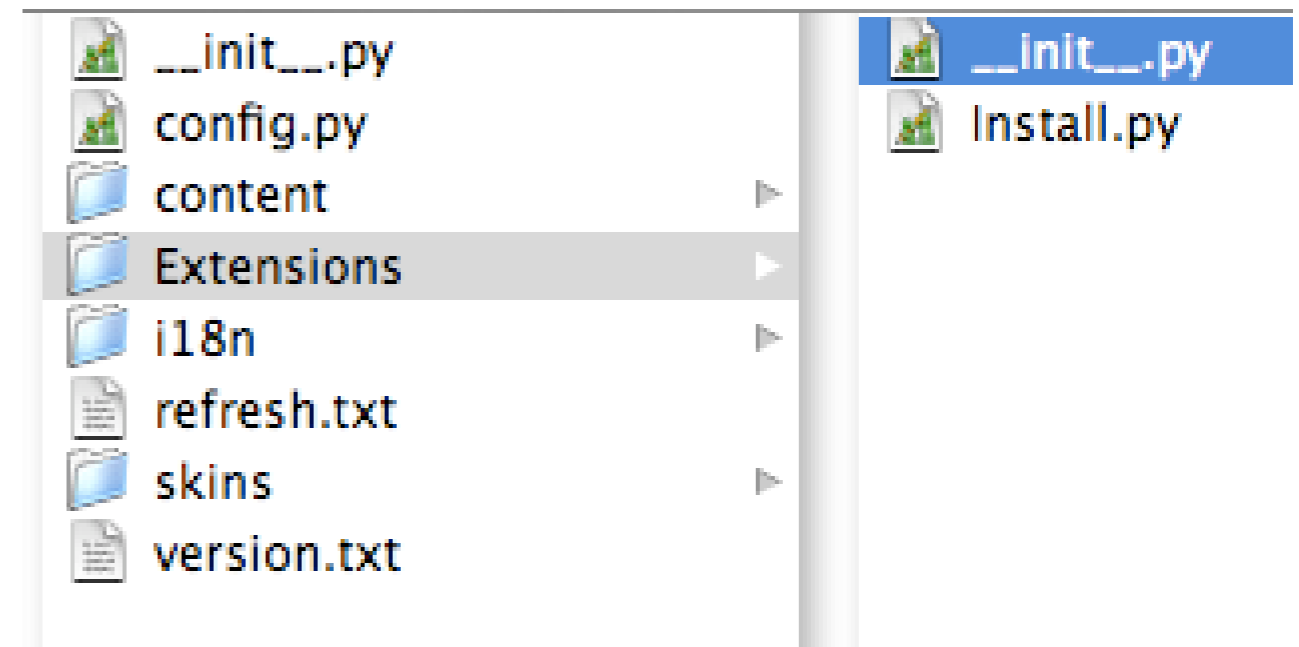
# Bookkeeping code

- You get most done for you for free
- Remember: we're lazy!
- Quick start, gets you over the initial hurdle as a first-time developer

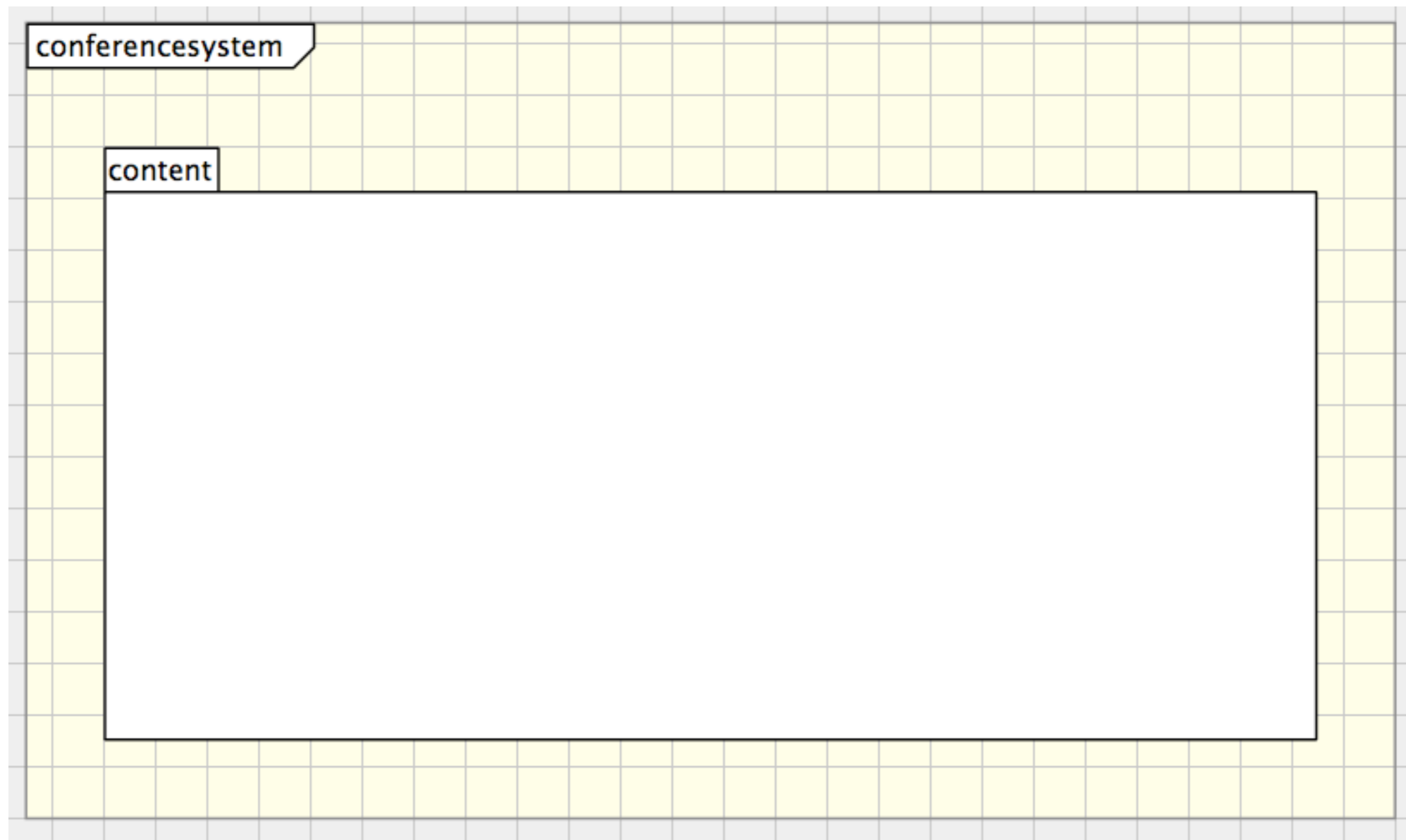


# What you get

- Initializing your content types
- Skin directory registration
- Quickinstaller
- i18n basic stuff
- More time to enjoy a good glass of wine



# UML starting point

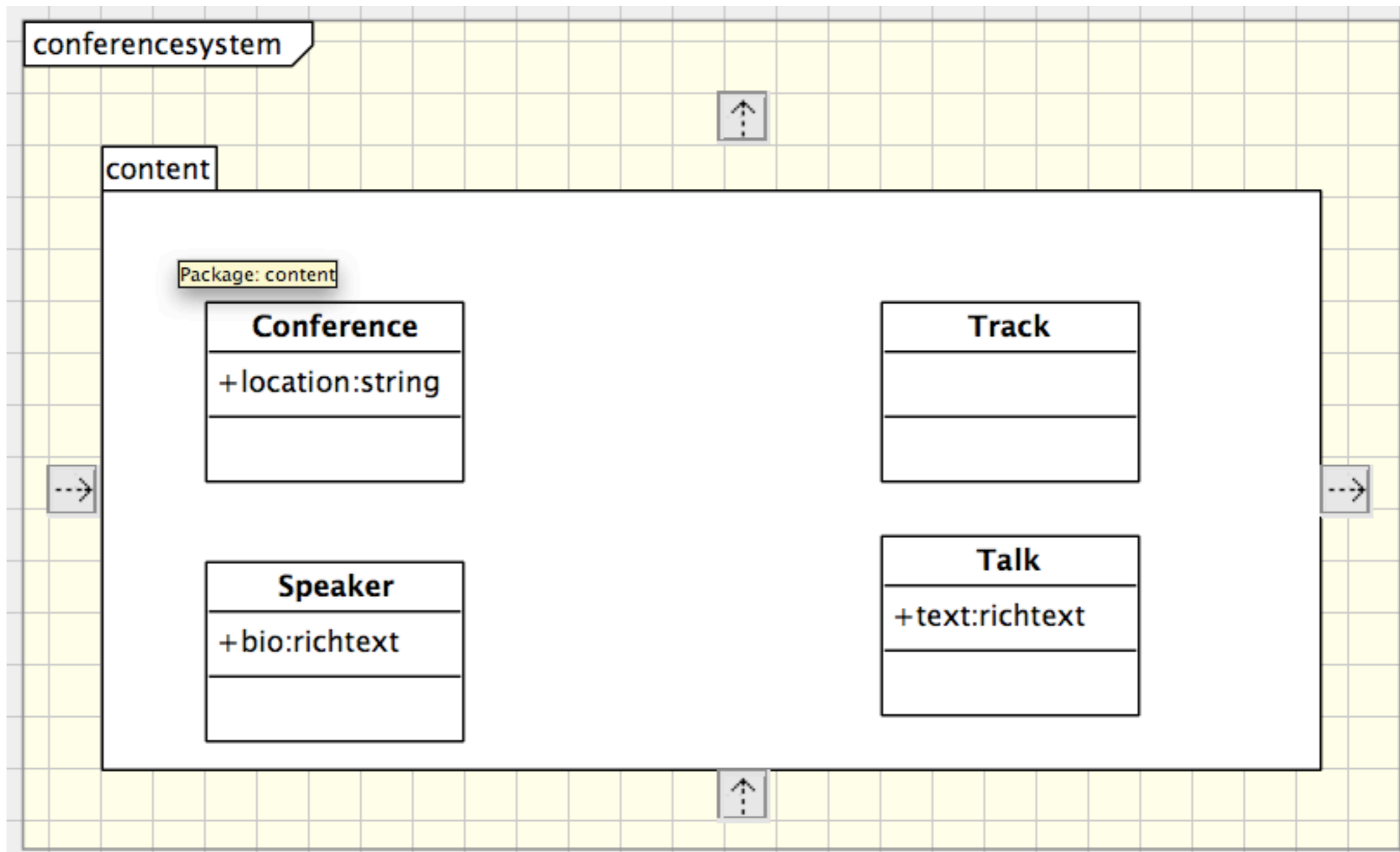


# Content types

- Let's build a conference system
  - Conference
  - Track
  - Speaker
  - Talk



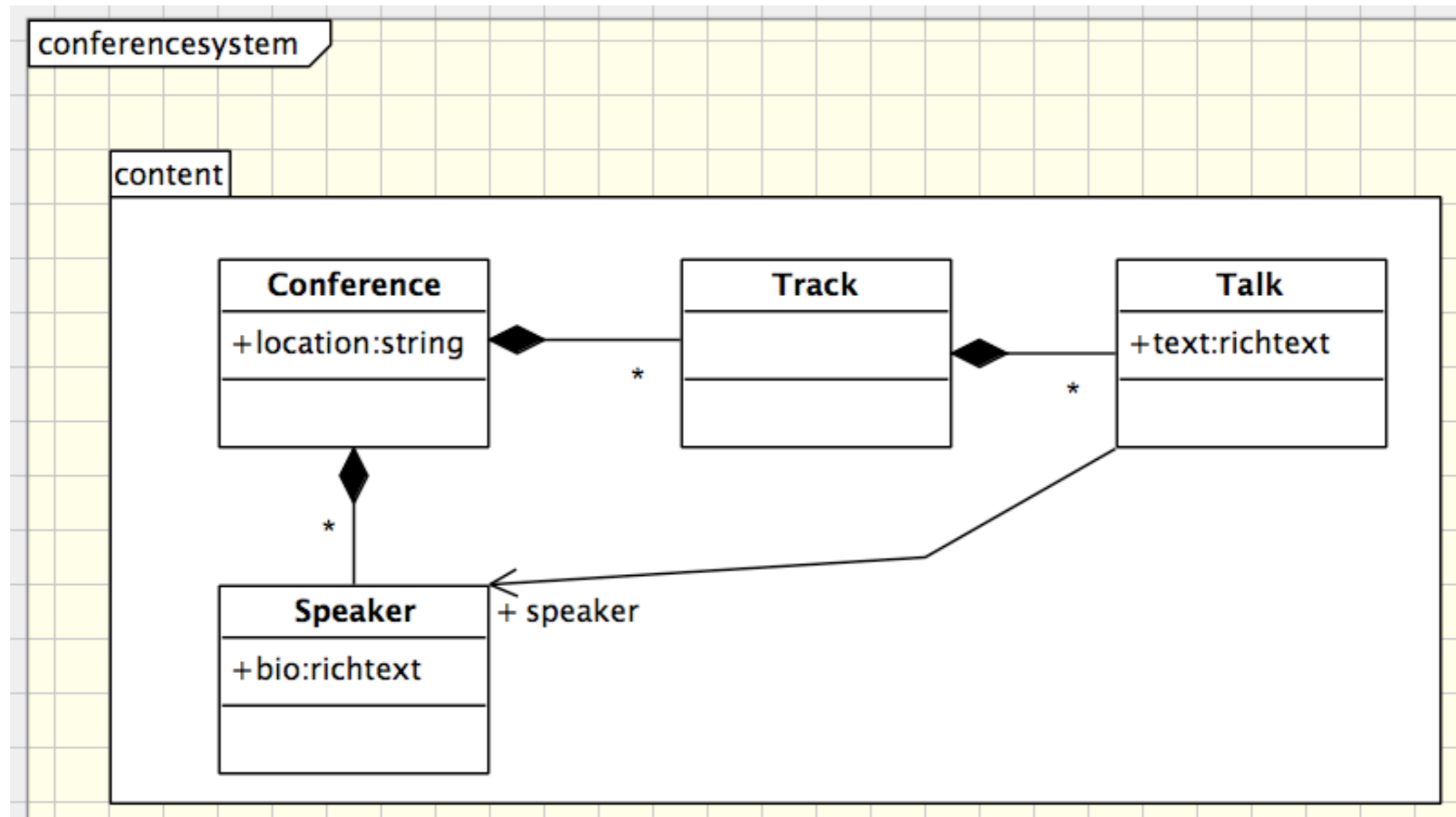
# UML classes



# Classes

- Classes are turned into content types
- Attributes end up as archetype schema items
- Methods end up as... methods
- You can relax, the magic incantations are done for you

# Relations between the classes



# Results so far

The screenshot shows a web browser window titled "Europython — plone" with the URL "http://localhost:2006/plone/europython/base\_view". The browser's address bar includes navigation buttons and a search engine (Google). The page features the Plone logo and a search box. A navigation menu includes "home", "members", "news", "events", and "europython". A user profile bar shows "reinout" with options for "my folder", "preferences", "undo", and "log out". A breadcrumb trail indicates "you are here: home → europython".

The main content area displays a folder view for "Europython" with a toolbar containing "contents", "view", "edit", and "properties". The "add item" dropdown menu is open, showing options for "speaker" and "track". The folder details include the name "Europython", the creator "reinout", and the last modified date "2006-07-02 16:21". The location is listed as "Cern". A message states, "There are currently no items in this folder." A calendar for July 2006 is visible on the right, with the 2nd highlighted.

**navigation**

- Home
- Members
- News
- Events
- Europython**

**recent changes**

- Europython  
2006-07-02

**Europython**  
by [reinout](#) — last modified 2006-07-02 16:21  
**Location:**  
Cern

There are currently no items in this folder.

July 2006

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

# Workflow

- Workflow consists of states, transitions and permissions
- Looking at it in the ZMI is pretty hard
- You (and especially your customer) needs a picture
- Why not start with one?

# Workflow in the ZMI

Properties States Transitions Variables Worklists Scripts

 Workflow Transitions at  
[/plone/portal\\_workflow/plone\\_workflow/transitions](/plone/portal_workflow/plone_workflow/transitions)

**hide** Member makes content private

Destination state: private

Trigger: User action

Requires role: owner

Adds to actions box: Make private

**publish** Reviewer publishes content

Destination state: published

Trigger: User action

Requires permission: Review portal content

Adds to actions box: Publish

**reject** Reviewer rejects submission

Destination state: visible

Trigger: User action

Requires permission: Review portal content

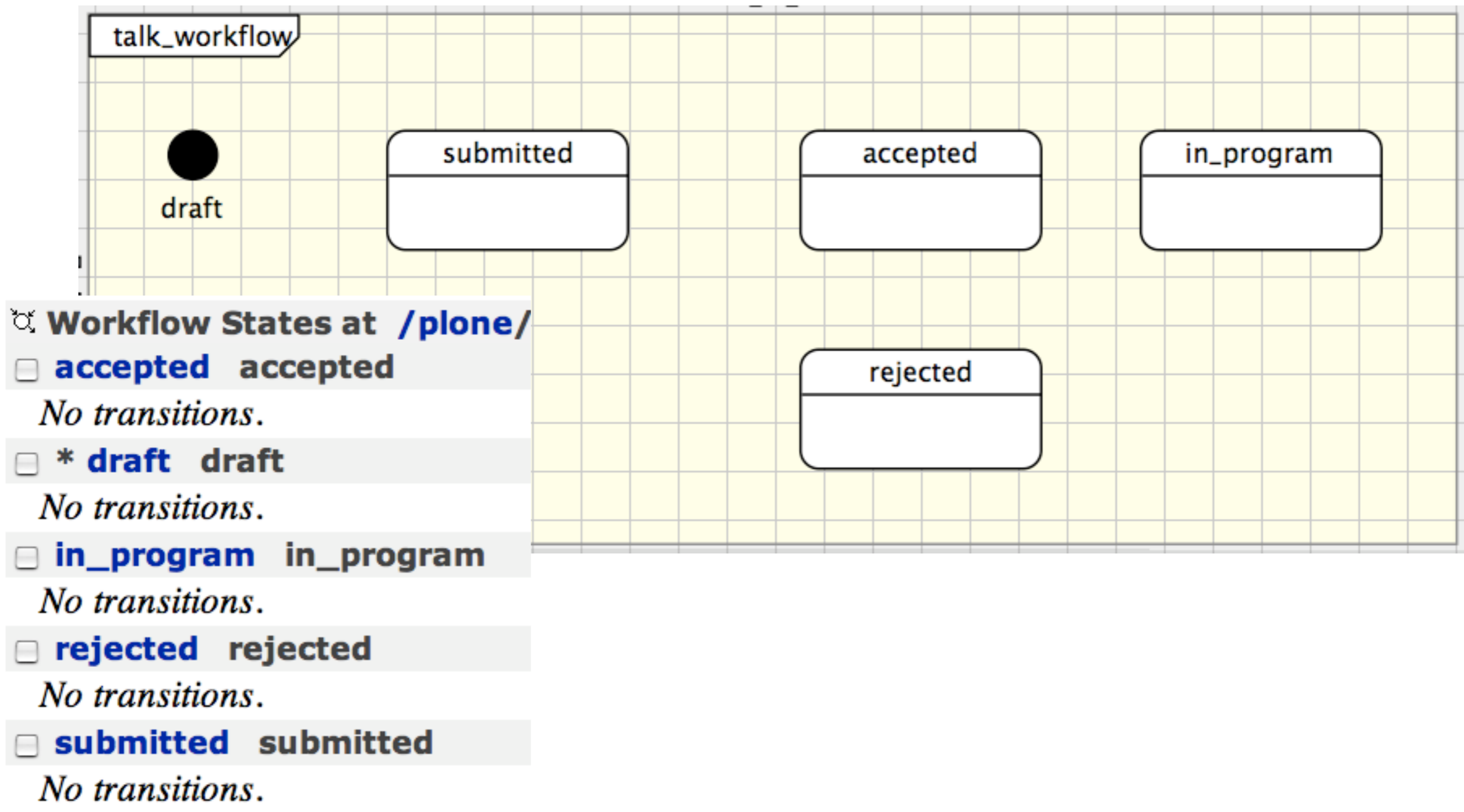
Adds to actions box: Reject

**retract** Member retracts submission

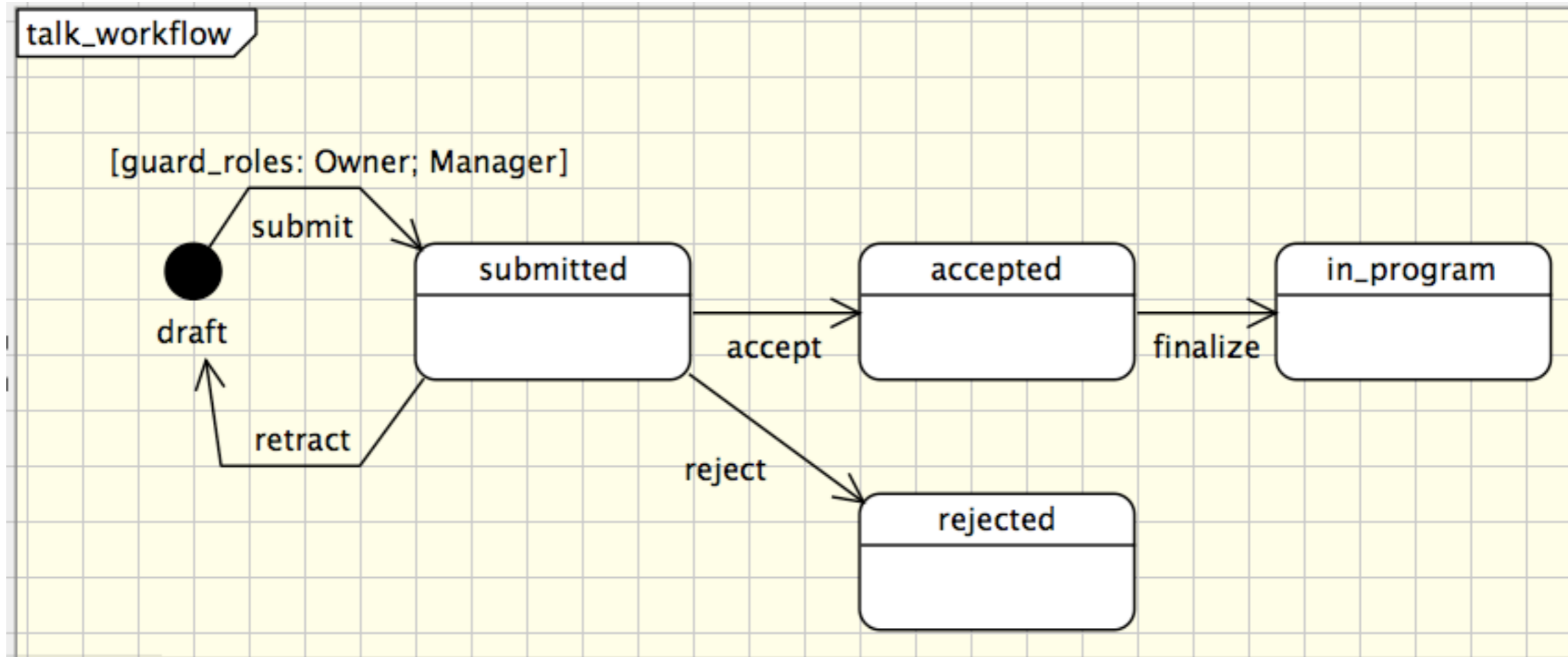
Destination state: visible

Trigger: User action

# State diagram for “Talk”



# Adding transitions





# Workflow result

The screenshot displays a Plone CMS interface. At the top, the Plone logo is visible on the left, and 'site map' and 'access' links are on the right. A navigation bar contains buttons for 'home', 'members', 'news', 'events', and 'europython'. Below this, the user 'reinout' is logged in, with 'my folder' and 'p' visible. A breadcrumb trail reads 'you are here: home → europython → web frameworks → archgenxml'. The main content area shows a 'view' tab selected, with sub-tabs for 'edit' and 'properties'. A dropdown menu is open, showing options: 'accept', 'reject', 'retract', and 'advanced...'. The content area displays the title 'Archgenxml', the author 'reinout', and the last modified date '2006-07-02 17:13'. The text content includes 'Text: This is a test heading', 'Some content.', 'Some more.', and 'Speaker:'. On the left, a 'navigation' sidebar lists 'Home', 'Members', 'News', 'Events', 'Europython', 'Web frameworks', 'Archgenxml', and 'Agile'. At the bottom left, a 'recent changes' section is partially visible.

# Didn't mention this yet:

- You can set the permissions attached to a state
- You can add workflow scripts (that are called when a particular transition is triggered)

# Adaptation of generated code

- Not everything can be generated
- Some things can, but are impractical
- Small tweaks
- The actual methods

# Methods

- Methods in your classes are preserved
- Period
- Methods unknown to ArchGenXML get sorted to the end of the file



# Tweaks

```
from AccessControl import ClassSecurityInfo
from Products.Archetypes.atapi import *
from Products.conferencesystem.config import *
```

```
##code-section module-header
#fill in your manual code here
##/code-section module-header
```

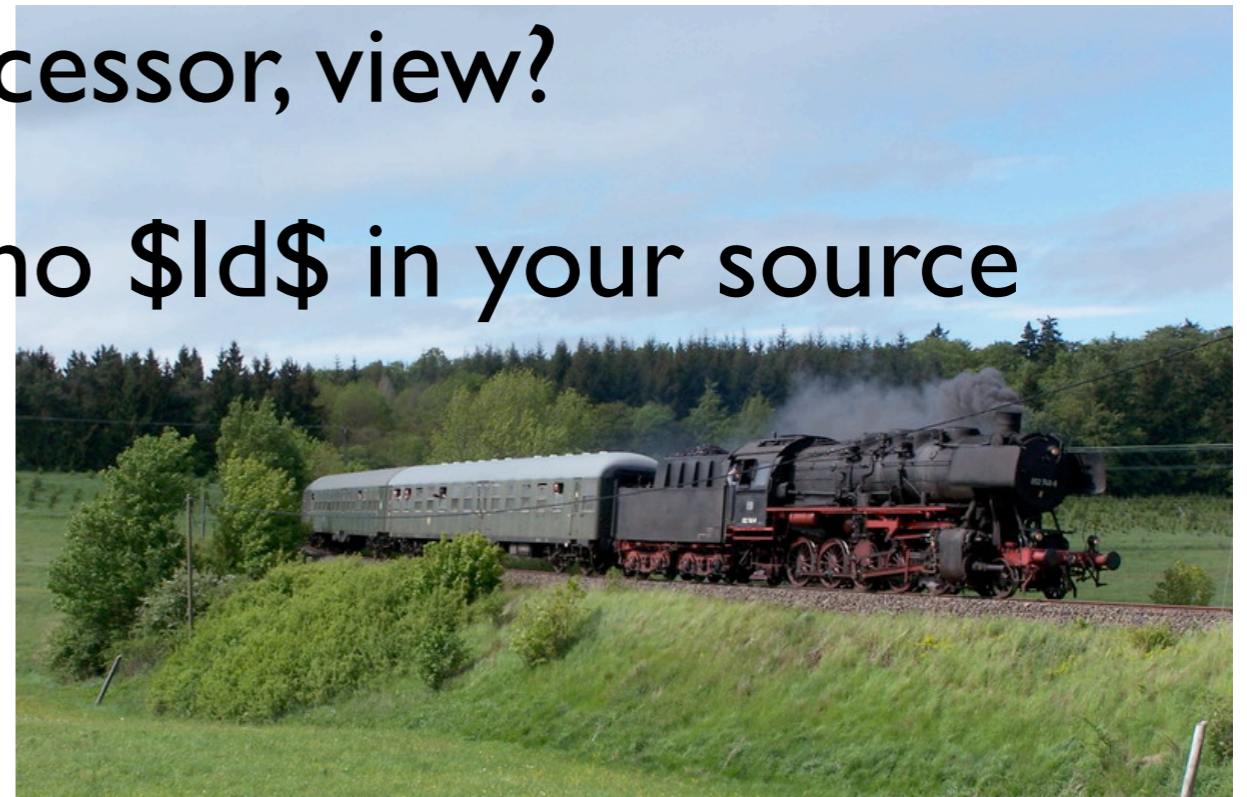
```
schema = Schema ( (
```

# Installation/config

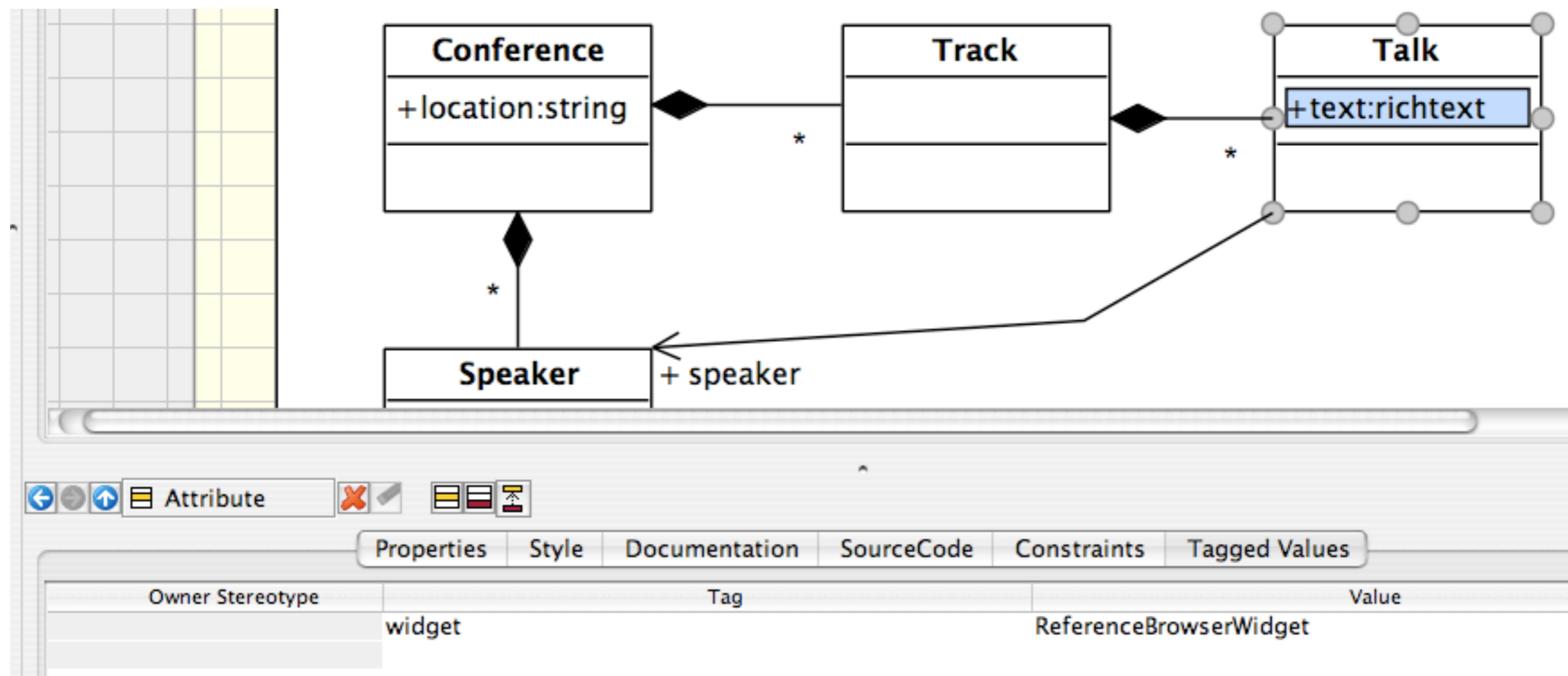
- Common config stuff is in `config.py`
- All your heart's desire can be poured into `AppConfig.py`
- Same with `Extensions/Install.py` and `Extensions/AppInstall.py`

# Tagged values (TGVs)

- Little tweak paradise
- Different widget on a field?
- Extra import line?
- Non-default label, accessor, view?
- Config options (yes/no `$Id$` in your source file, for instance)



# TGV: changing a widget





# Result

Archgenxml — plone

http://localhost:2006/plone/europython/web-frameworks/archgenxml/base\_edit

home | m

you are here: ho

navigation

- Home
- Members
- News
- Events
- Europython
  - Web framework
    - Archgenxml
  - Agile
    - Reinout van Rees
    - Guido van Rossum

back | close window

## Speaker

Search

**Search terms**

**Added reference to: Reinout van Rees**

Home → [Europython](#)


<a href="#">Web frameworks</a>	Track	
<a href="#">Agile</a>	Track	
<a href="#">Reinout van Rees</a>	Speaker	<a href="#">insert</a>   <a href="#">view</a>
<a href="#">Guido van Rossum</a>	Speaker	<a href="#">insert</a>   <a href="#">view</a>

back | close window

## Speaker

Reinout van Rees

te: submitted ▾



# ArchGenXML makes you lazy

- Lazy is good, more time for interesting stuff
- Handy for beginners: gets you started, gets you over the initial hurdle, FAST
- Handy for experienced developers: still FAST and by now you've learned to be lazy
- (Don't when you want to hand-tweak everything or with many devs+branches)