

Accumulator

More Than a Simple Feed-Reader

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Introduction

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 - RSS-Feeds are often broken
 - Readers have limited input options
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Introduction

- Common Feed-Readers have shortcomings
 - RSS-Feeds are often broken
 - Readers have limited input options
 - Feeds are only presented as they are
- The Accumulator is meant to solve some of these
 - Filters can fix some feed's problems
 - We can read more than the common feed formats
 - Feeds can be tagged and shared



Demo

Qwertial Aphasie

Show all Show unread

Add Feed
Edit User
Show All Items
Logout

xkcd
comics

Qwertial Aphasie

Edit Feed Remove Feed

<http://xkcd.com/>

2009-07-01T04:00:00+00:00

Idiocracy

Edit Feed Remove Feed

<http://xkcd.com/>

2009-06-29T04:00:00+00:00

Overstimulated

Edit Feed Remove Feed

<http://xkcd.com/>

2009-06-26T04:00:00+00:00

Game Theory

<http://xkcd.com/>

Agenda

- Goals
- Development Process
 - Iterations
 - Xtreme Programming
- System Overview
- Requirements
- Conclusions



Goals

- Read from different sources (RSS, Atom, IMAP, Monticello, Git, ...)
- Filter sources to ease focus on the things that matter
- Be extensible: allow easy integration of new sources and filters
- Be open: do not force users into the web-frontend, offer RSS output



Development Process

- Xtreme Programming

- Planning game

- **Pair programming**

- Small releases

- On-site customer

- **Test-Driven-Development**

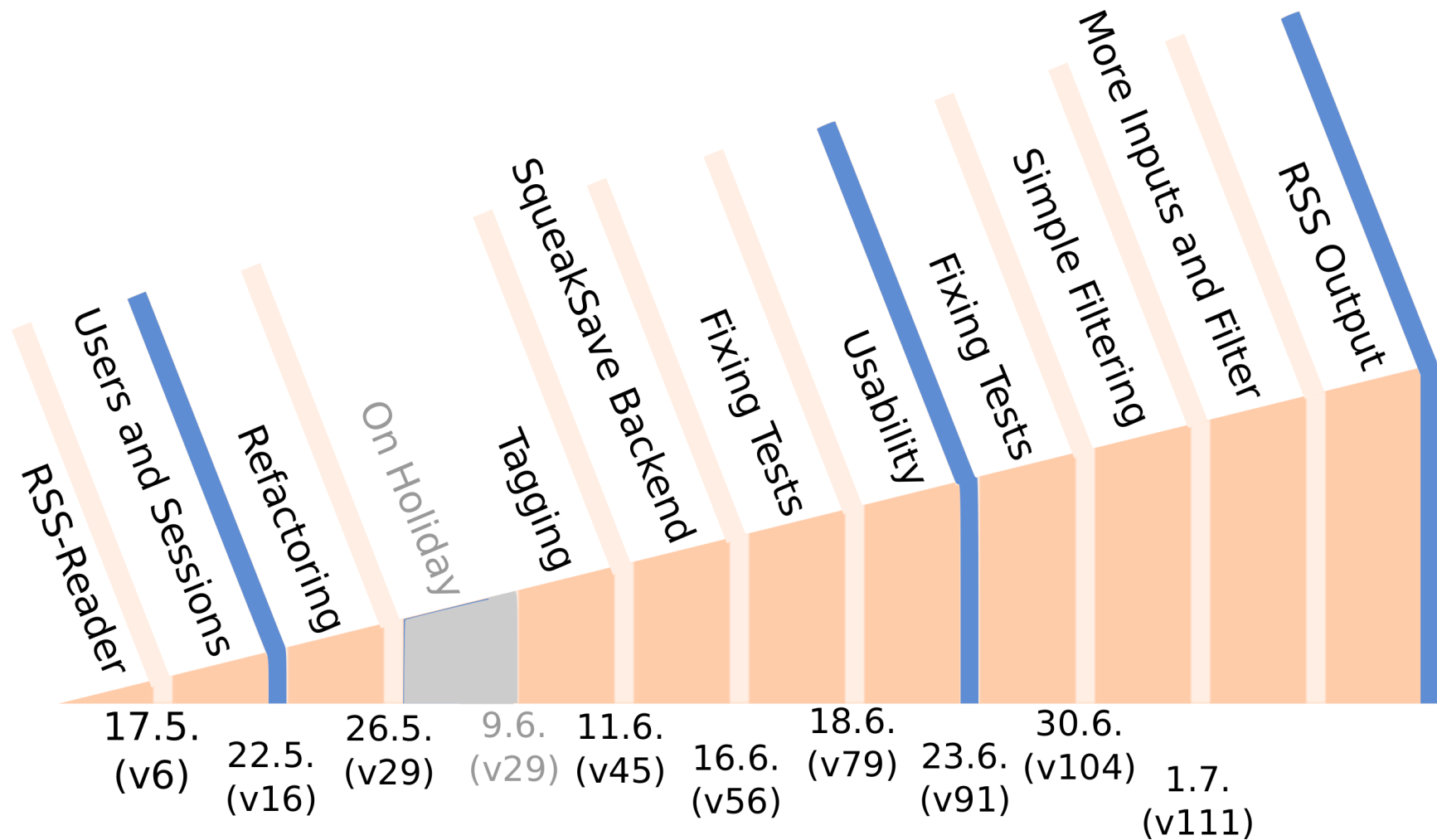
- **Refactoring**

- Coding Standards

- Simple Design, Metaphor

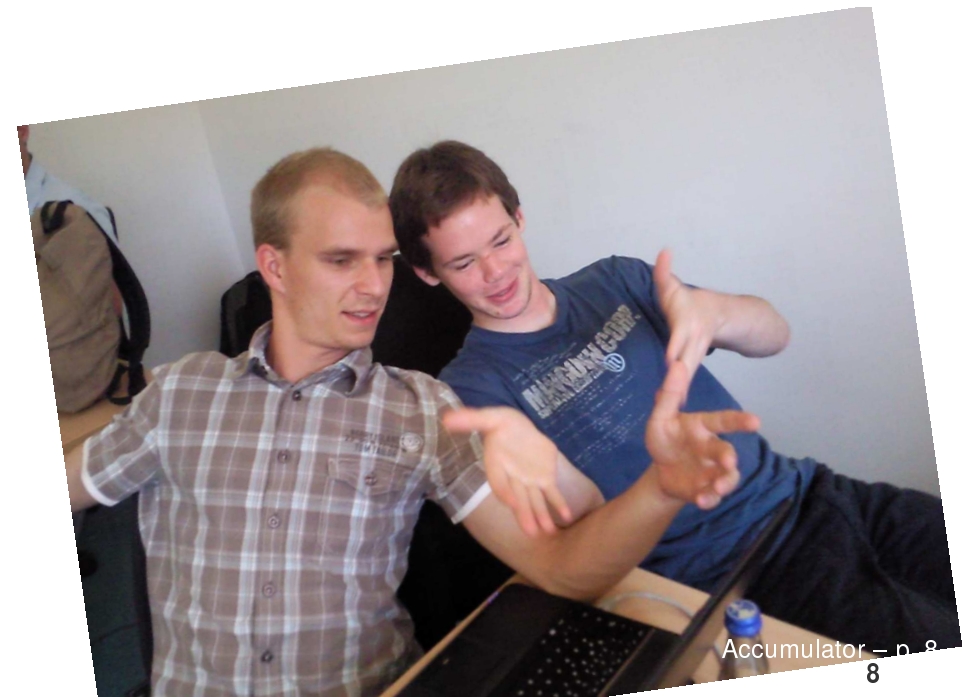


Iterations and Milestones



Development Process (contd.)

- Pair Programming
 - Working in two's or three's
 - Two or three teams working alongside on different parts of the system
 - Working in one room, each team on two or more monitors
 - “Development by smoke-break”



Development Process (contd.)

- Planning Game and Small Releases
 - Once every week
 - Bring everyone up-to-date with the latest changes
 - Discussion of last-weeks changes
 - Assignment of user stories to new pairs

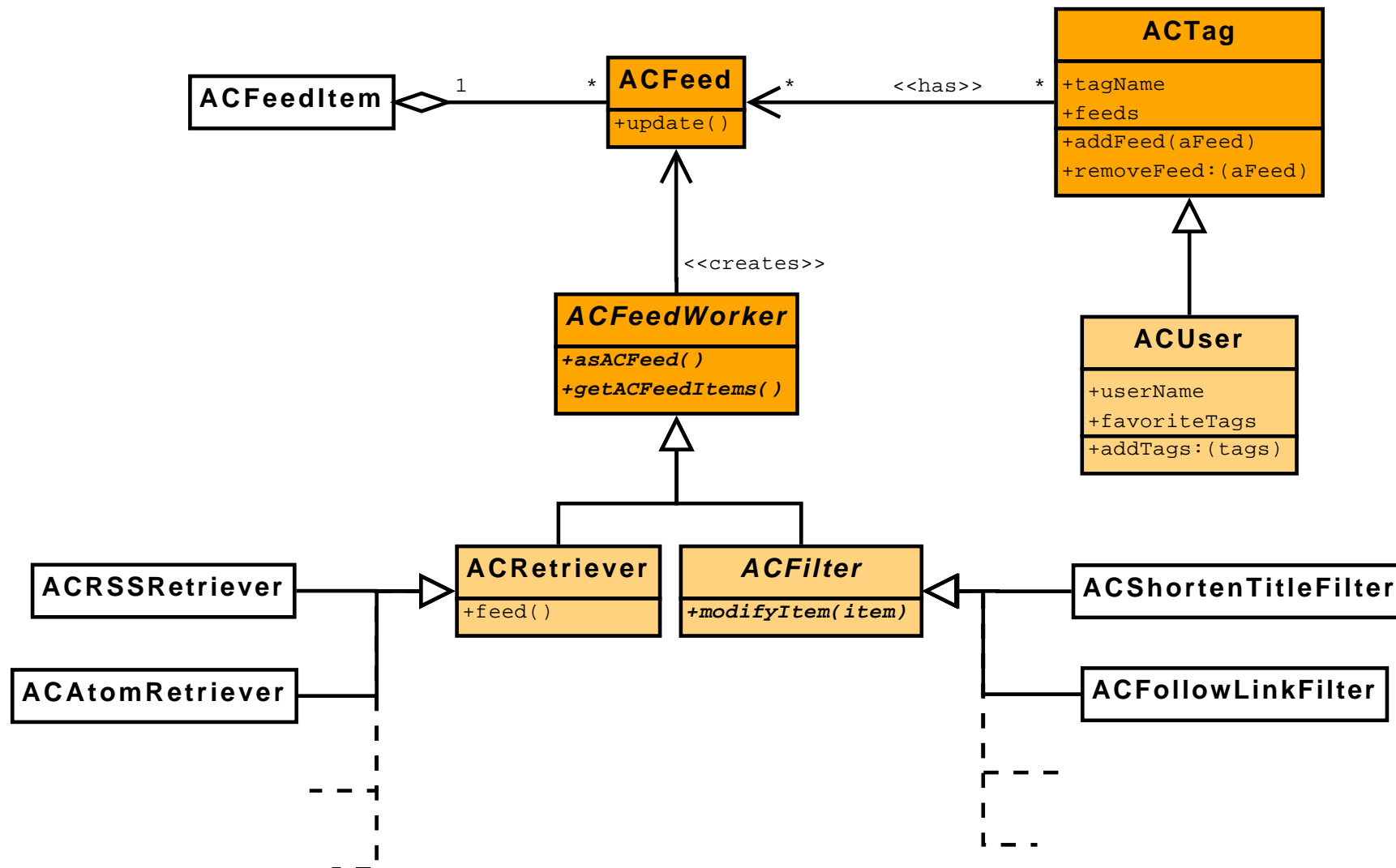


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- Run Tests
- CodeSight Test Runner
- 47 run, 41 passes, 6 failures, 0 errors,
- TestCase
- ACTestHelper
 - ACControllerTest
 - ACApplicationController
 - ACItemControllerTest
 - ACLoginControllerTest
 - ACTagControllerTest
 - ACDatabaseTest
 - ACFeedItemTest
 - ACFeedTest
 - ACFeedWorkerTest
 - ACFilterTest
 - ACFollowLinkFilterTest
 - ACSimpleFilterTest
 - ACRetrieverTest
 - ACAtomRetrieverTest
 - ACRSSRetrieverTest
 - ACSessionTest
 - ACTagTest
 - ACUserTest
 - ACViewTest
 - ACItemViewTest
 - ACLoginViewTest
 - ACTagViewTest
 - ATestCase
 - AlgerTest
 - AllTests
 - AmbTest
 - AnnouncerTest
 - AnyClassTests
 - AnyTests
 - ArbitraryObjectTest
- KernelTests-Chronology
- KernelTests-Classes
- KernelTests-Methods
- KernelTests-Numbers
- KernelTests-Objects
- KernelTests-Processes
- KernelTests-Contexts
- CollectionsTests-Abstract
- CollectionsTests-Arrayed
- CollectionsTests-Sequence
- CollectionsTests-SkipLists
- CollectionsTests-Stack
- CollectionsTests-Streams
- CollectionsTests-Support
- CollectionsTests-Text
- CollectionsTests-Unordered
- CollectionsTests-Weak
- Exceptions-Tests
- Files-Tests
- GraphicsTests-Primitives
- GraphicsTests-Text
- GraphicsTests-Files
- MorphicTests-Basic
- MorphicTests-Kernel
- MorphicTests-Text Support

Development Process (contd.)

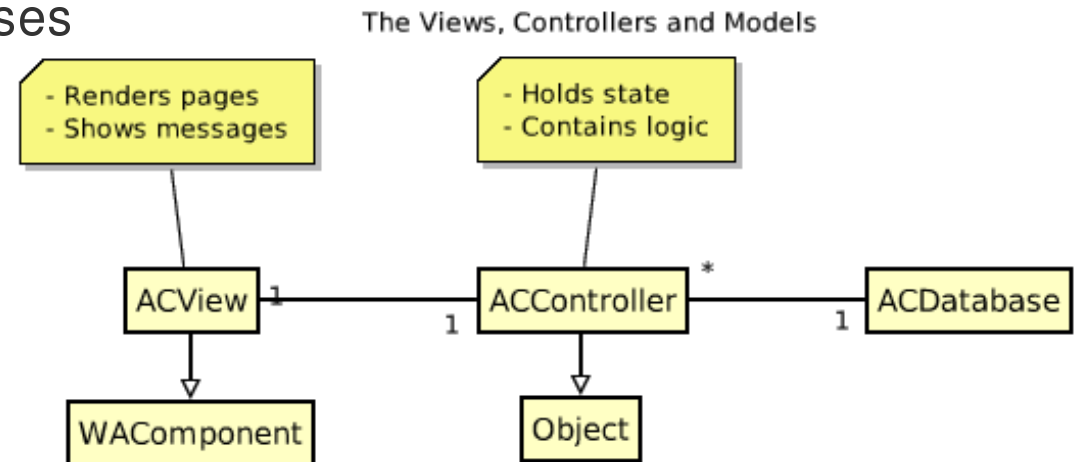
- Coding Standards and Refactoring
 - Always have a running version
 - After each change: run the test suite
 - Each commit should (within reason) be usable
 - Non-local commits should always add a feature or fix a bug
 - Breaking commits should be local

System Overview



Working the Code

- Convention over Configuration
 - MVC Pattern
 - Convenience method aliases
- Magritte
- Testing with mutations



Requirement Tracing: Filters

“Carl-Maria is pretty annoyed with Fefe’s RSS-Feed. He would like to have it’s title properly displayed in the content area, and at the same time shorten the title to only show the beginning of the first line. To do this, he adds two simple filters to the feed”

Requirement Tracing: Filters

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- Offer a set of simple, well-defined filters
- Allow chaining of those filters to offer powerful filtering
- Create test-cases as contract for the I/O requirements
- Write the filter functionality and make it pass the tests
- Expose the filter through the frontend

Requirement Tracing: Tagging

“Johannes feels, directory hierarchies do not account for the diversity of information available in feeds. He’d much rather assign topics to feeds and be able to select feeds by topic. If at it, he would also love to be able to read what other people read on this topic”

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- Use tagging instead of directories
- Feeds can have arbitrary tags - by selecting tags, the user gets a selection of feeds which belong to all selected tags
- A user is just a tag himself - when removing the user from the tag selections, tags from other users can be shown

Prospect

- Asynchronous updates
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 - Controller check for new Tags and Feed-Items regularly
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- Interface polishing
 - Better registration process
 - General user interface cleanup
- I/O Options
 - OPML import
 - RSS output
 - More input sources

Looking back. . .

What we think we did well. . .

- Steady workflow
- Balance between “Get that feature in” and “Code cleanup”
- Keeping the test-suite ahead of the code
- Keeping the system in working order

... and looking ahead

What we would like to do differently...

- Spend more time on bug-fixing
- Better iteration planning (or at least some planning at all)
- Keeping the test-suite ahead of the code
- Use a better version-control-system (MC2, Git, ...)

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 - Never used code markup, rather discussed that in the meeting
- SqueakSave
 - A great step up from configuring GLORP
 - Nice concepts (Object»save, Connection pools)
 - Some loose ends and not too helpful error messages
 - ⇒ Database reset was a frequent “Do it”

References

- [1] Yehuda Katz: 6 Steps To Refactoring Rails (for Mere Mortals).

<http://www.engineyard.com/blog/2009/6-steps-to-ref>
(2009)

- [2] Perscheid, M., Tibbe, D., Beck, M., Berger, S., Osburg, P., Eastman, J., Haupt, M., Hirschfeld, R.: An Introduction to Seaside. Software Architecture Group (Hasso-Plattner-Institut) (2008)

- [3] Renggli, L.: Magritte—meta-described web application