

Past, Present and Future of Apache Camel

Claus Ibsen and Jonathan Anstey

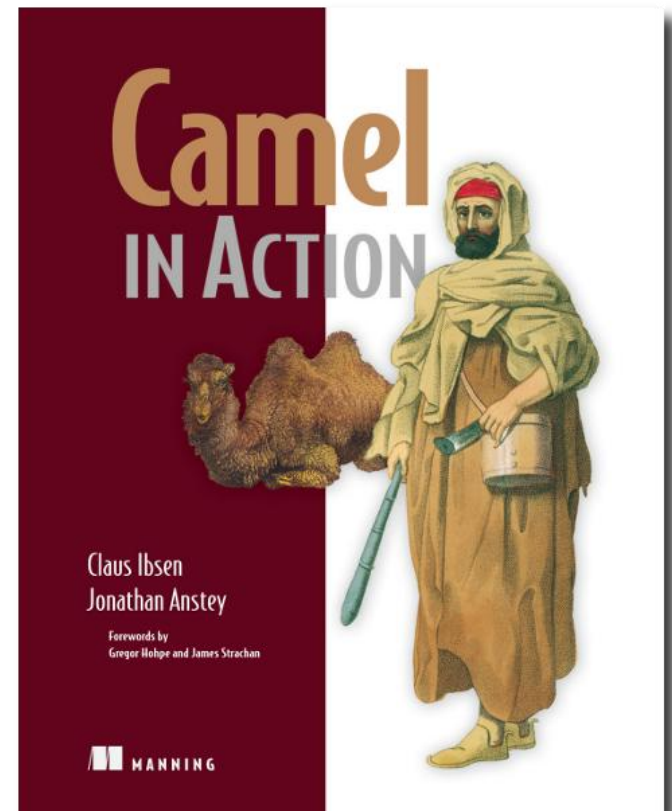
FuseSource

<http://fusesource.com>

FuseSource
integration everywhere

Your Presenters

- Claus Ibsen and Jonathan Anstey
- Principal Engineers at FuseSource
<http://fusesource.com>
- Committers on various Apache projects, most importantly, Apache Camel!
- Authors of Camel in Action



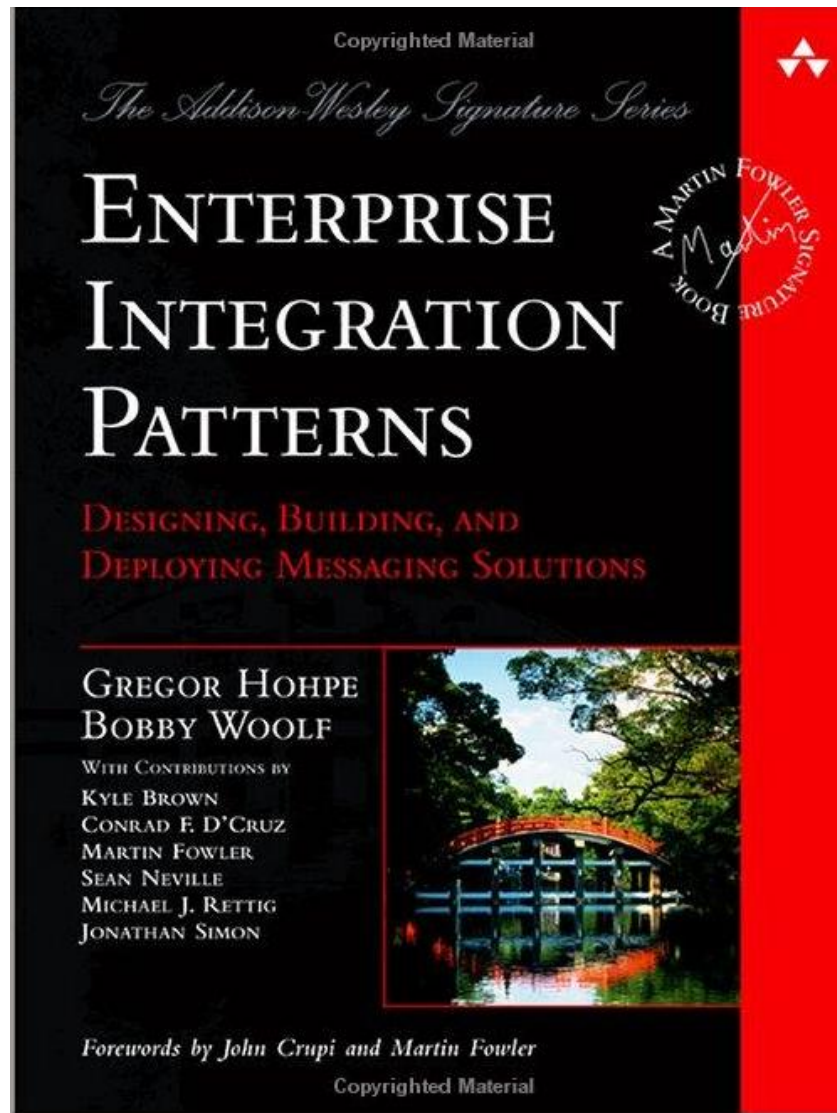
Agenda

- How we got here
- Where Camel is today
- Camel's "cloudy" future

Integration is hard

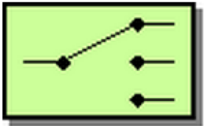

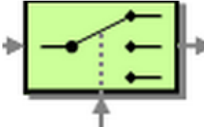
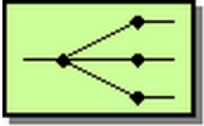
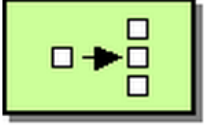

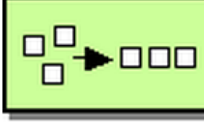
- Multiple **applications** talking over multiple **transports** on multiple **platforms** = PAIN!
- Pain mostly due to
 1. Coming up with good solutions to messaging problems
 2. Coding against specific APIs and transports for each integration point


Enterprise Integration Patterns to the rescue!



Some of the patterns...

Message Routing

	Content Based Router	How do we handle a situation where the implementation of a single logical function (e.g., inventory check) is spread across multiple physical systems?
	Message Filter	How can a component avoid receiving uninteresting messages?
	Dynamic Router	How can you avoid the dependency of the router on all possible destinations while maintaining its efficiency?
	Recipient List	How do we route a message to a list of (static or dynamically) specified recipients?
	Splitter	How can we process a message if it contains multiple elements, each of which may have to be processed in a different way?
	Aggregator	How do we combine the results of individual, but related messages so that they can be processed as a whole?
	Resequencer	How can we get a stream of related but out-of-sequence messages back into the correct order?



But I still have to code the EIPs and connect to all those transports and APIs...

Enter serial project creator, James Strachan



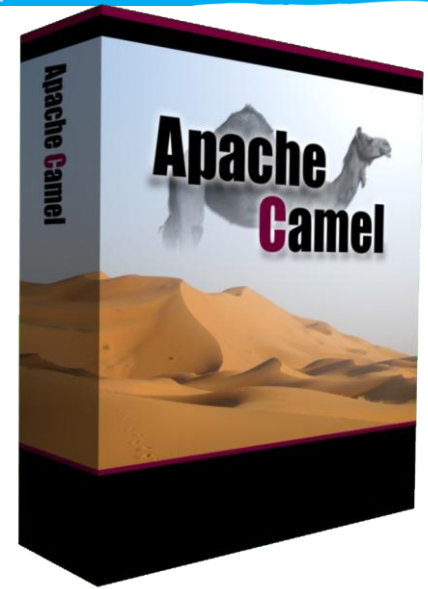
1st commit

- 1st Camel commit, James Strachan:

r519901 | jstrachan | 2007-03-19 - Initial checkin of Camel routing library

Introducing Apache Camel

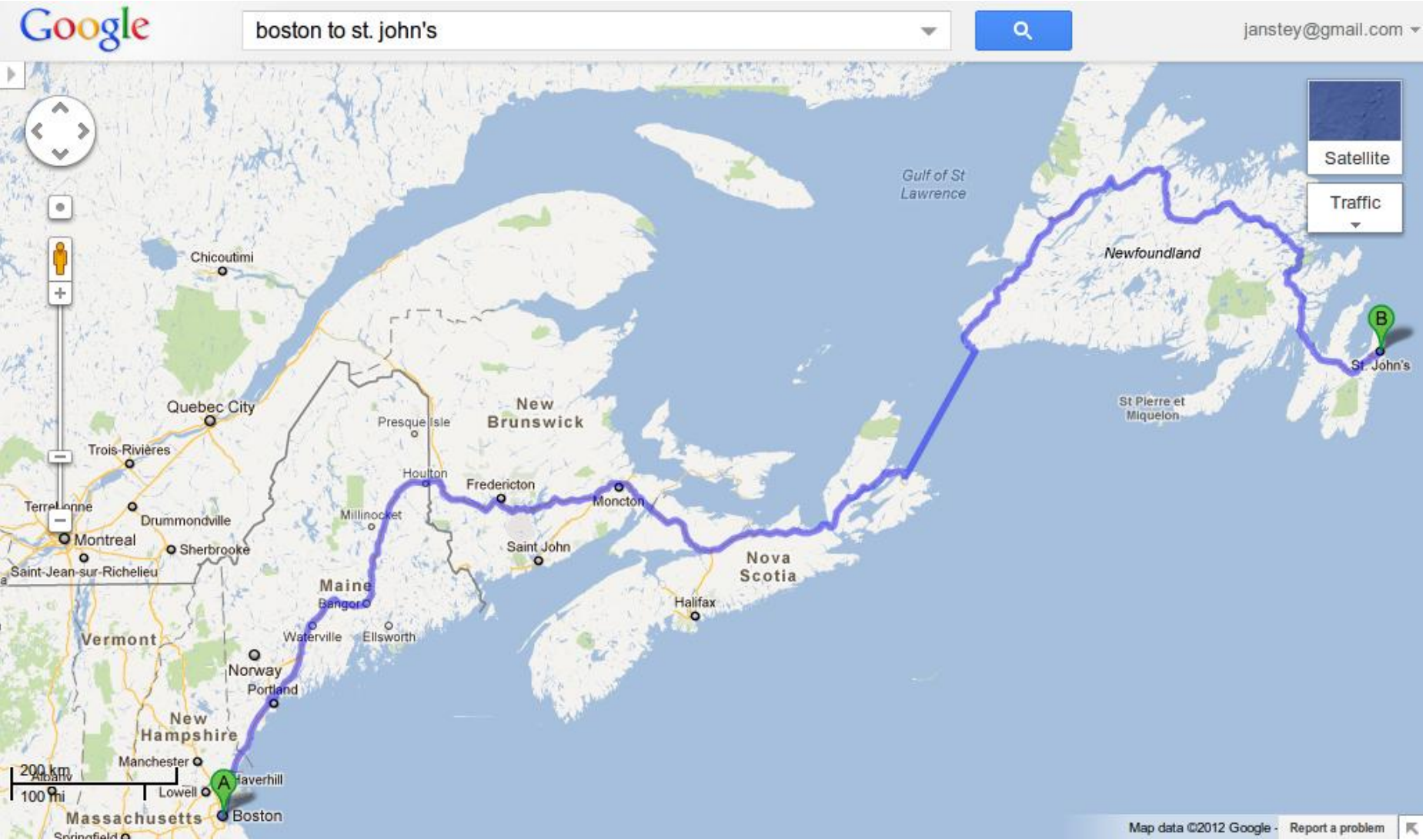
- Open source integration framework that makes integration easier by having:
 - Implementations of the Enterprise Integration Patterns (EIPs)
 - Connectivity to many transports and APIs
 - Domain Specific Language (DSL) to wire EIPs and transports together





How we got involved...

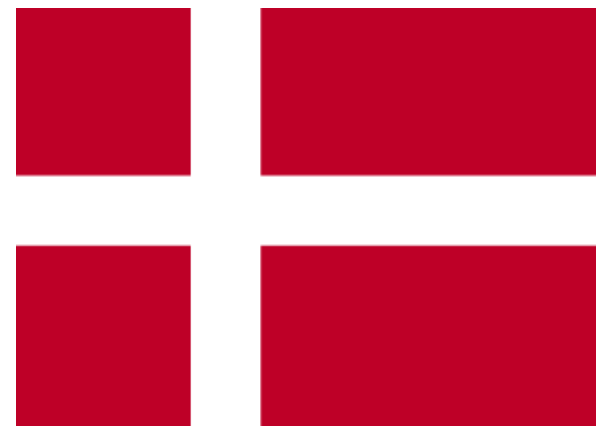
Developer in St. John's, Newfoundland



Drinking the open source kool aid



Patient with integration pain...



... a Silver bullet to the rescue



Easier integration as medicine



Proof of Concept

Looking at various products...



One product stood out...





We were hooked...

*If this is the new
corporate attire,
I'm quitting!*

*This pillow is
a surprisingly
comfy hat*



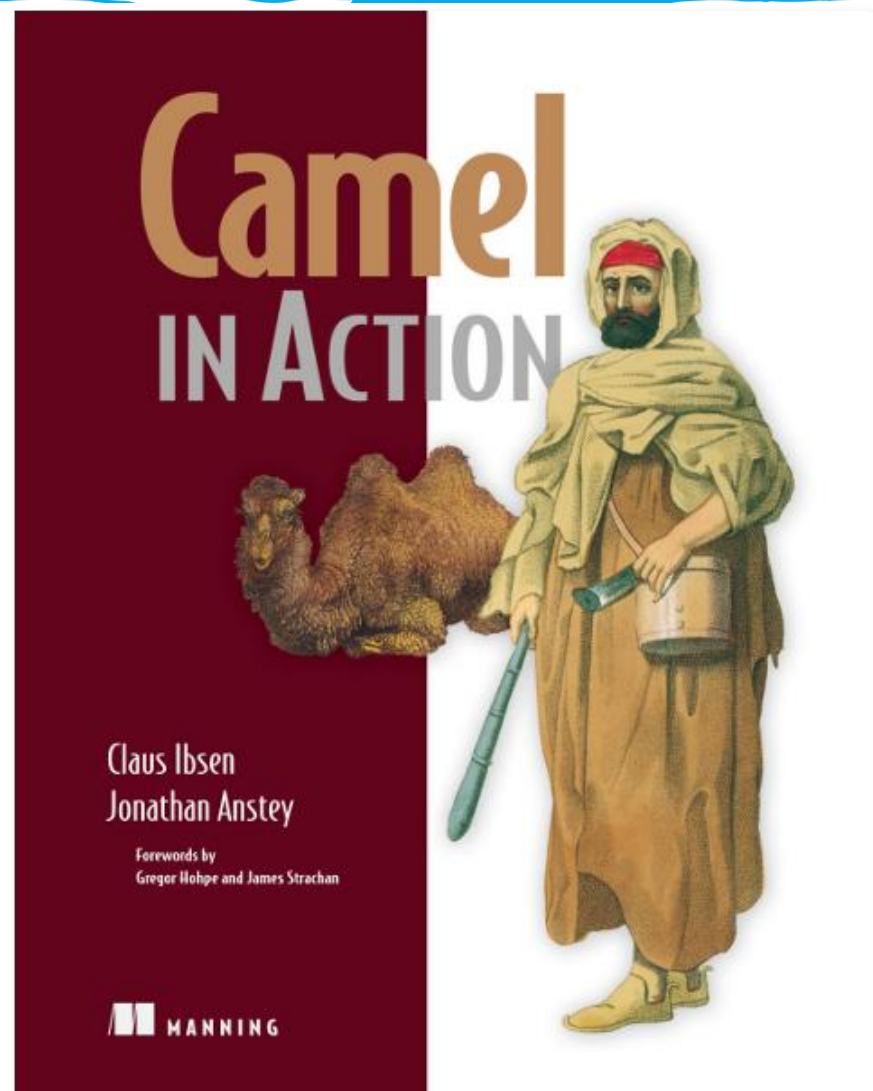
1st commits

r640963 | davsclaus | 2008-03-25 - Added unit test for mistyped URI

r693569 | janstey | 2008-09-09 - CAMEL-887 - Update to release version of Google Guice

Camel in Action

- Growing Camel community needed a resource for beginners and experts alike
- Started mid 2009
- Finished Dec 2010
- 552 pages



Discovering drawbacks of the name



camel book - Google Search

https://www.google.ca/search?hl=en&output=search&client=psy-ab&q=camel+book&oq=camel+book&*

+You Search Images Maps Play YouTube News Gmail Documents Calendar More

Google camel book

Search About 63,600,000 results (0.29 seconds)

Everything [Programming Perl, 3rd Edition - O'Reilly Media](#)
shop.oreilly.com/product/9780596000271.do
 8 Jun 2011 – Any Perl **book** can have a title, but only this **book** is affectionately known by all Perl programmers as "The **Camel**." This third edition of ...

Images

Maps

Videos [Programming Perl - Wikipedia, the free encyclopedia](#)
en.wikipedia.org/wiki/Programming_Perl

News Programming Perl, best known as the **Camel Book** among programmers, is a book (ISBN 978-0-596-00492-7) and ebook (ISBN 978-1-4493-9890-3) about ...

More

[Images for camel book - Report images](#)

St. John's, NL
Change location

The web
Pages from Canada

https://www.google.ca/setprefs?safeui=images&sig=0_sl4MZBDosSX58oFoo0UcgTEXo9k%3D&prev=https://www.google.ca/s

From Slashdot book review

Camel Book (Score:5, Informative)

by Anonymous Coward on Wednesday May 25 2011, @02:47PM (#36242204)

There is only one [Camel Book](#) [oreilly.com]

Programming Perl (Score:4, Informative)

by buglista (1967502) on Wednesday May 25 2011, @03:09PM (#36242452)

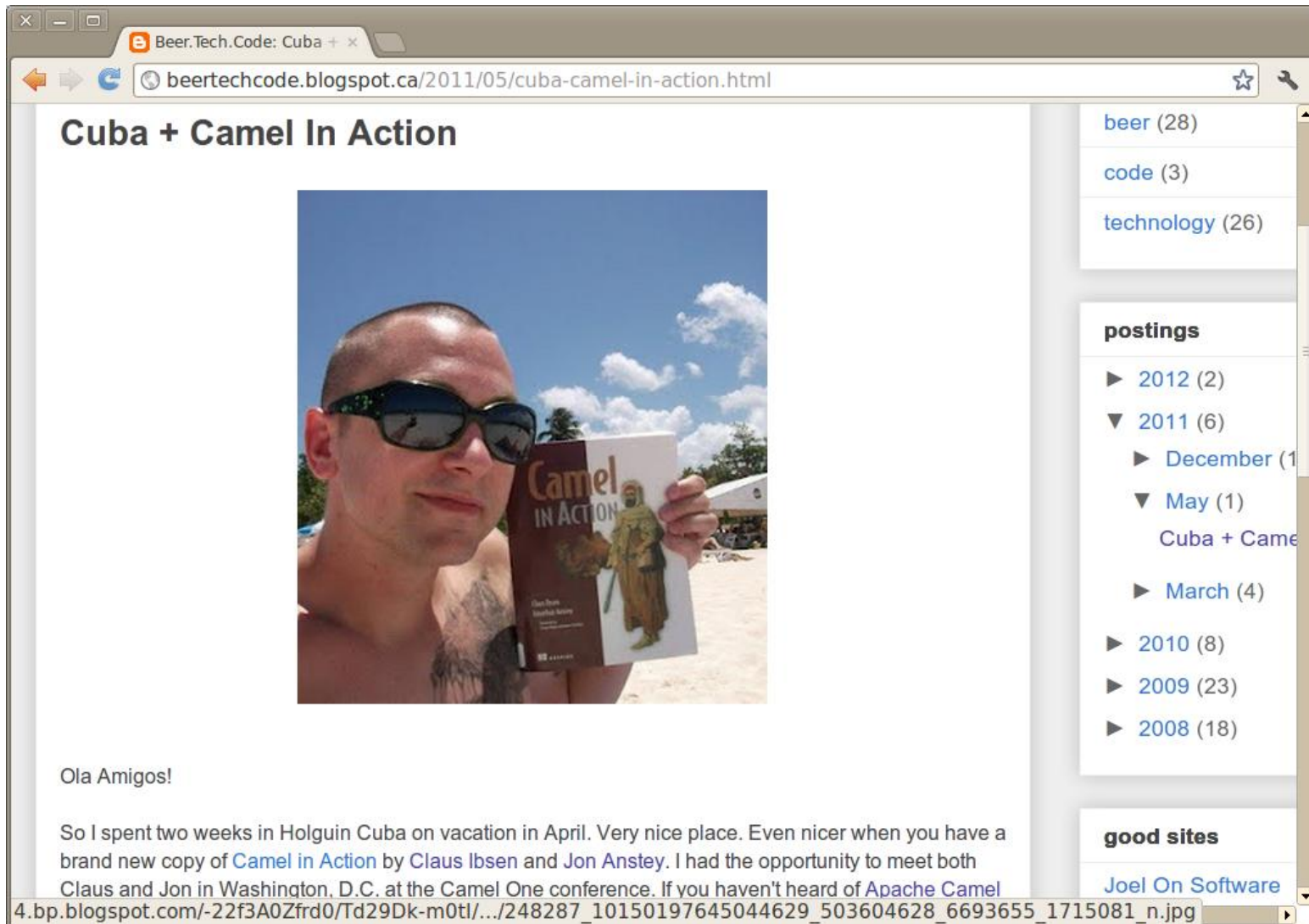
has been "the Camel book" since at least 1997, which is when I acquired my copy. Now get off my lawn.

Re:Programming Perl (Score:1)

by Mindcontrolled (1388007) on Wednesday May 25 2011, @04:31PM (#36243490)

Indeed. We have some positively heretic ████ going on here. Burn em at the stake!

Camel in Action – Great Holiday Reading!



The screenshot shows a web browser window with the address bar containing the URL `beertechcode.blogspot.ca/2011/05/cuba-camel-in-action.html`. The page title is "Cuba + Camel In Action". The main content features a photograph of a man wearing sunglasses and holding a book titled "Camel IN ACTION". Below the photo, the text reads: "Ola Amigos! So I spent two weeks in Holguin Cuba on vacation in April. Very nice place. Even nicer when you have a brand new copy of [Camel in Action](#) by [Claus Ibsen](#) and [Jon Anstey](#). I had the opportunity to meet both Claus and Jon in Washington, D.C. at the Camel One conference. If you haven't heard of [Apache Camel](#)". To the right of the main content is a sidebar with a category list (beer (28), code (3), technology (26)), a "postings" section with a tree view for years and months (2012 (2), 2011 (6) with sub-items for December (1) and May (1), and Cuba + Camel; 2010 (8), 2009 (23), 2008 (18)), and a "good sites" section listing "Joel On Software". The browser's status bar at the bottom shows a file path: `4.bp.blogspot.com/-22f3A0Zfrd0/Td29Dk-m0tI/.../248287_10150197645044629_503604628_6693655_1715081_n.jpg`.



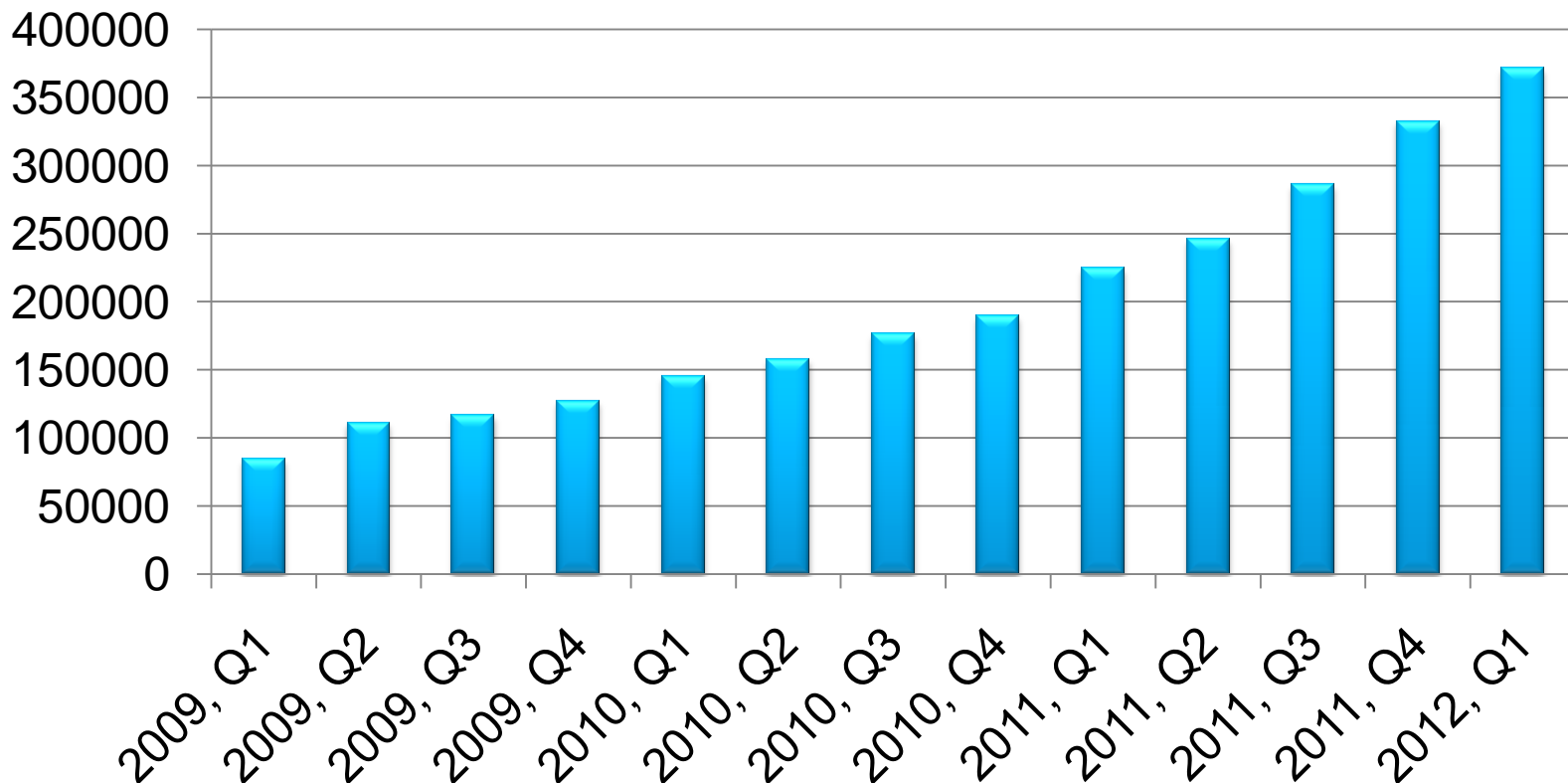
Apache Camel: Current state of the beast

A community still growing

- 2nd annual CamelOne conference
- 80-100K artifact downloads per month
- 120K website views per month
- 1000 user mailing list posts per month
- Multiple companies offering commercial Camel support

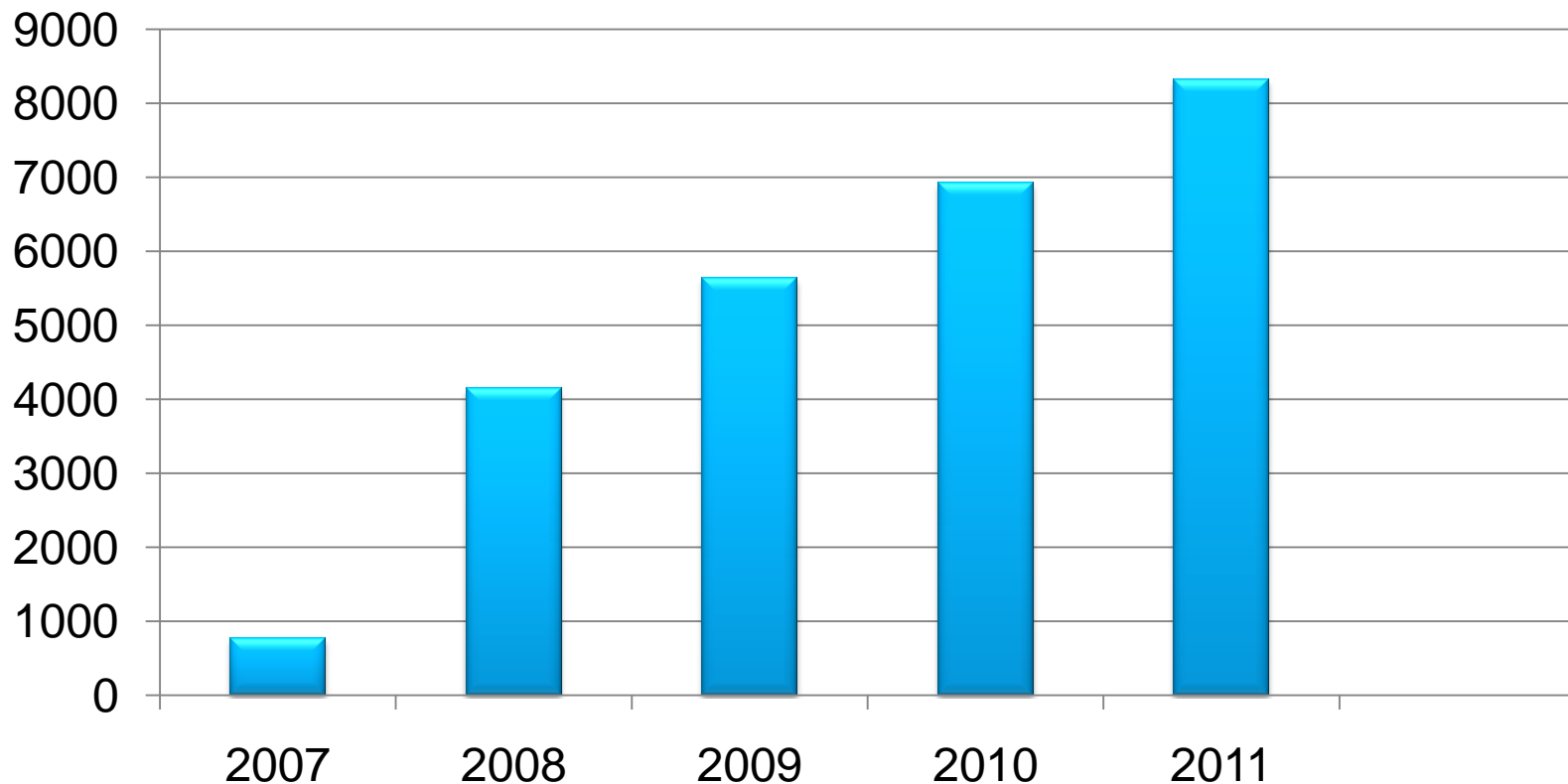
Quarterly website visits

Website visits



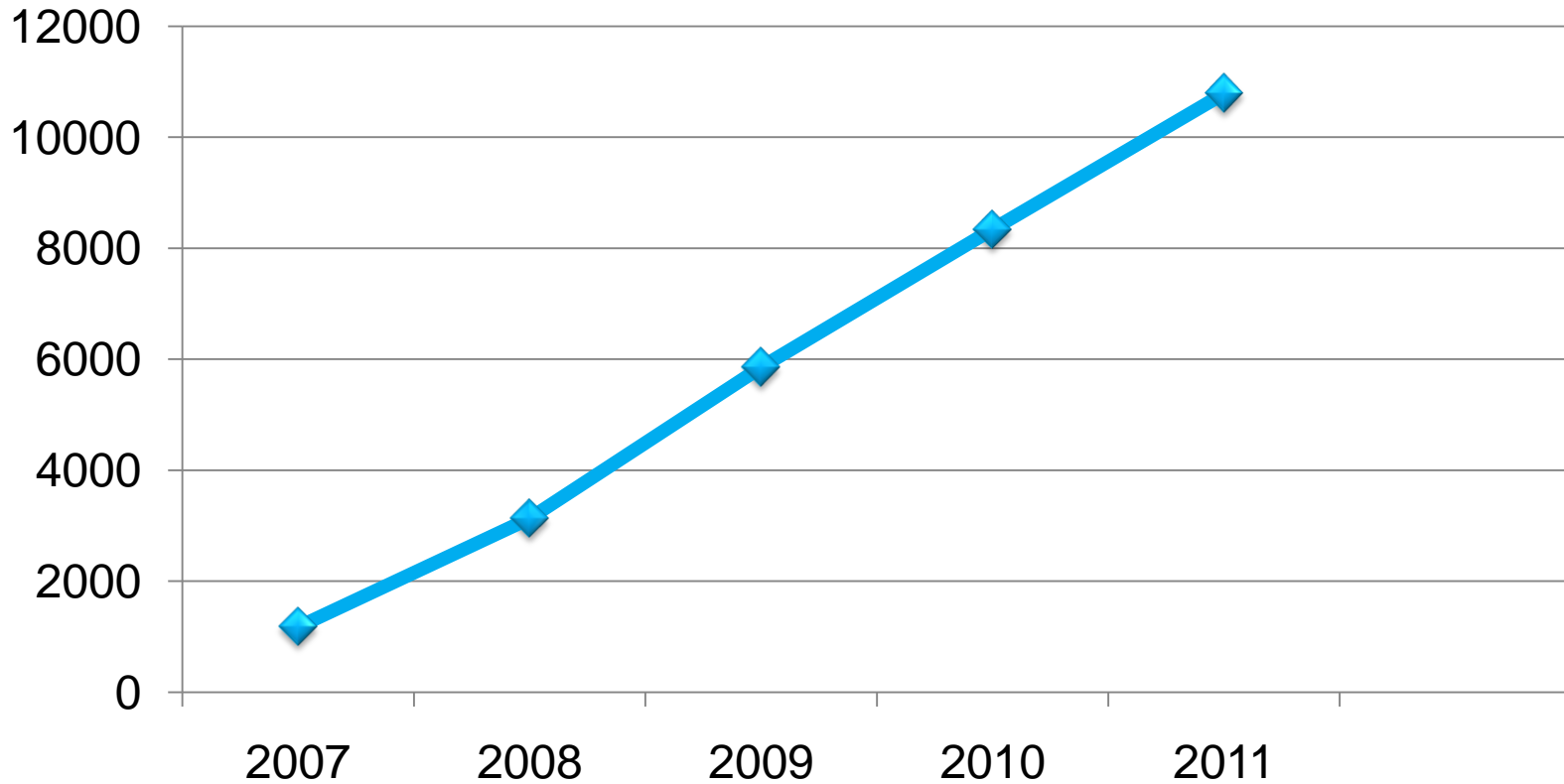
User list posts

User posts



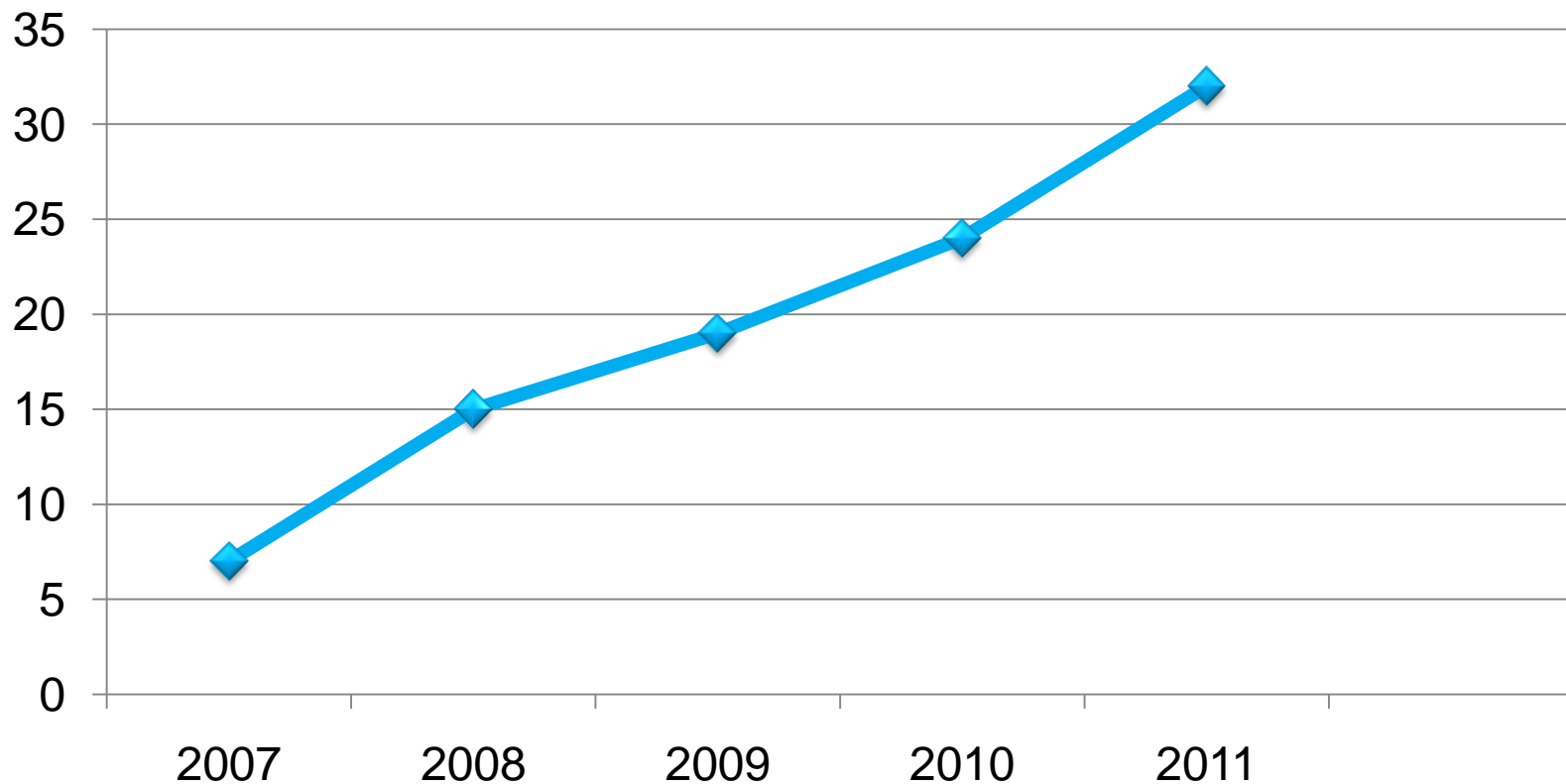
Commits

Commits



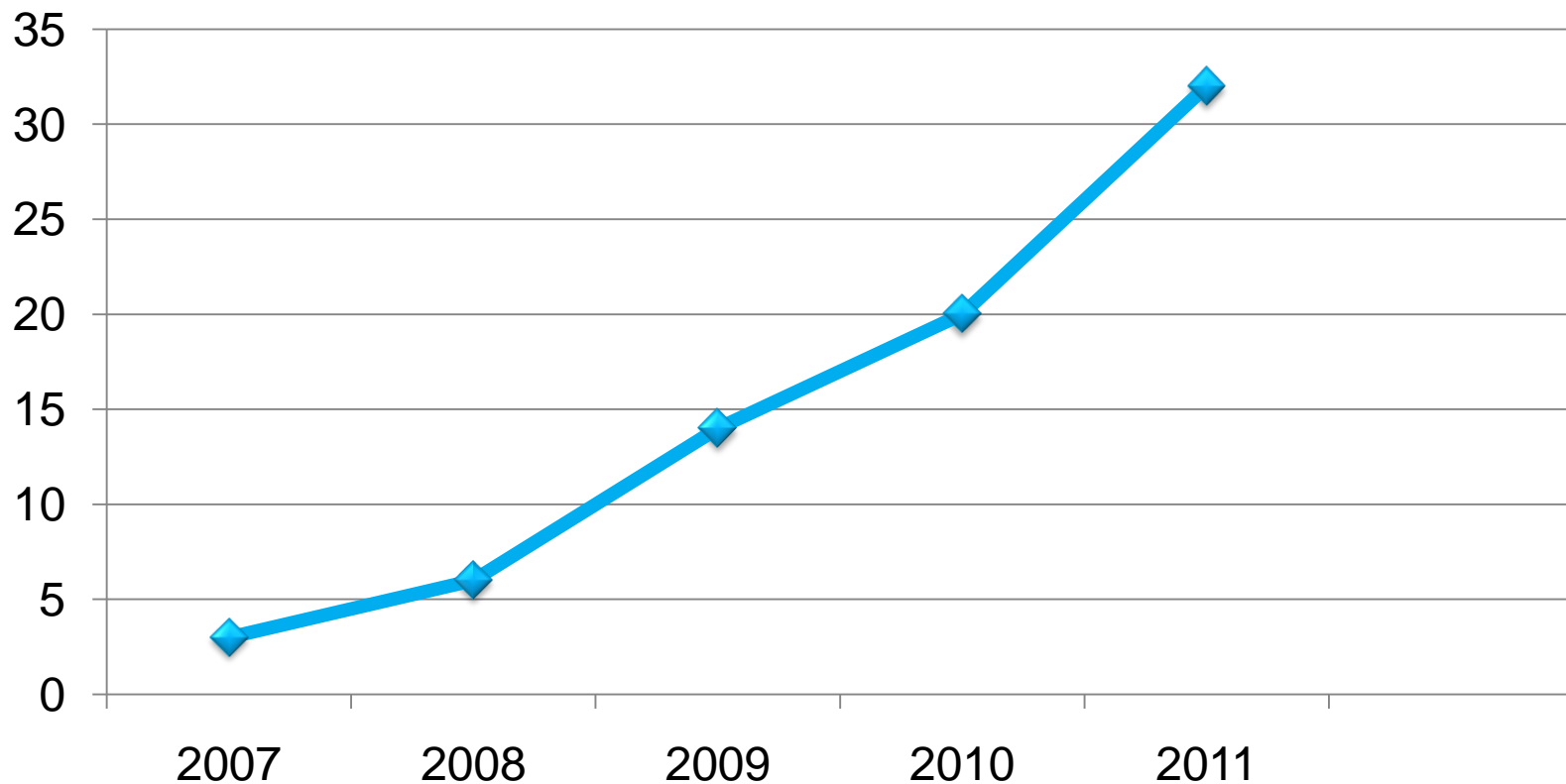
Committers

Committers



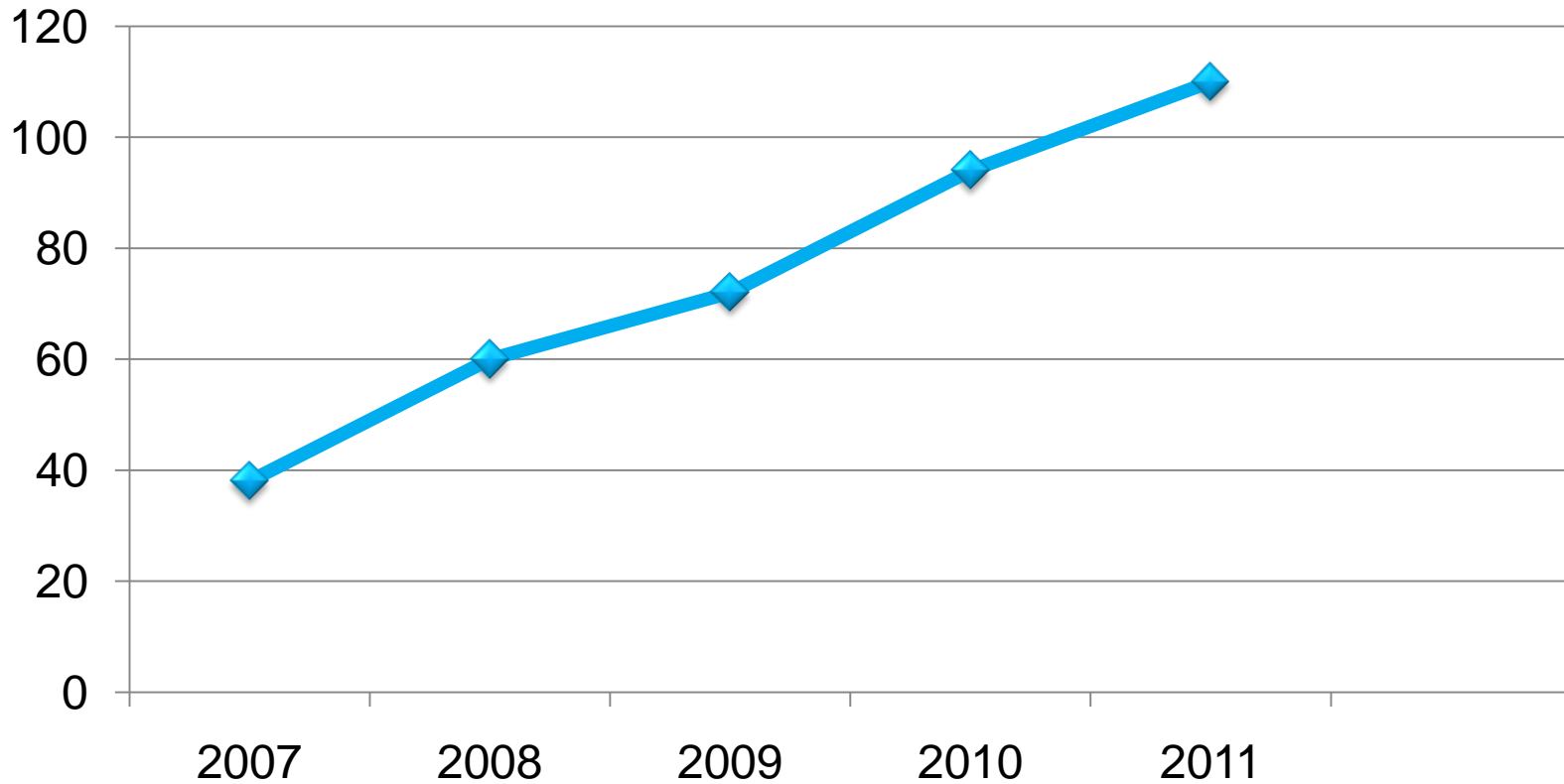
Releases

Releases



Components

Components



Fuse IDE

The screenshot displays the Fuse IDE interface with a menu bar (File, Edit, Navigate, Search, Project, Run, Routes, Window, Help) and a toolbar. The main workspace shows a Camel blueprint design for a file named *blueprint.xml. The design consists of three nodes connected by arrows: an `activemq:quote` node, a `filter(xpath{/quo...` node, and a `wmq:quote` node. A palette on the right side of the workspace lists various components, including Select, Marquee, Endpoints, Routing, Aggregate, Choice, DynamicRo..., Filter, Idempotent..., LoadBalance, Multicast, Control Flow, Transformation, and Miscellaneous. The bottom status bar shows the current file path as `blueprint/camelContext/#text`.



Camel's “Cloudy” Future

Camel's "Cloudy" Future

- We envision Camel being used for integration everywhere
- In the cloud, in the data center, and on the devices of the future

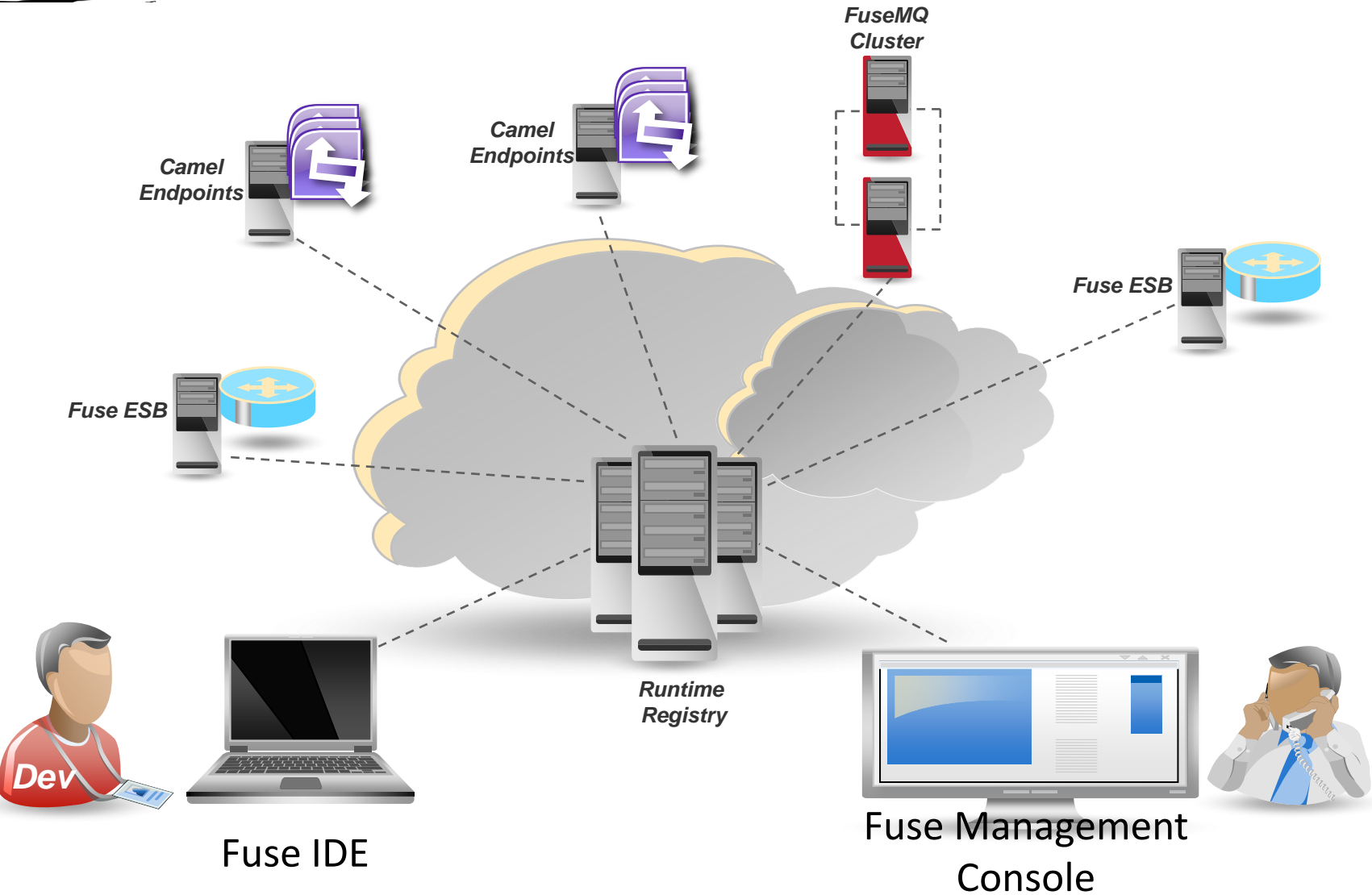
Enter Fuse Fabric



Fuse Fabric

- Apache licensed open source software – built by the FuseSource team
- Provides a framework for configuring, provisioning and running Fuse and Apache integration software on any number of machines

Fuse Fabric



Camel Fabric Discovery & Loadbalancing

- Exposing Camel endpoints into the fabric
 - `from("fabric:myName:jetty:http://0.0.0.0:8181").to("bean:foo1");`
 - `from("fabric:myName:jetty:http://0.0.0.0:8182").to("bean:foo2");`
 - ...
- Invoking a remote Camel endpoint
 - `from("direct:bar").to("fabric:myName");`

Fuse management console

The screenshot shows the Fuse Management Console web interface. The browser address bar displays `localhost:8107/index.html#/containers`. The page header includes the FuseSource logo, the title "Fuse Management Console", and navigation tabs for "Containers", "Profiles", and "Users". The user is logged in as "admin".

Under the "Containers" tab, there are buttons for "Create Fuse Container", "Migrate Containers", "Stop", "Delete", "Add Profiles", and "Details". A table lists the containers:

Name	Active	Provisioned	Version
FuseManagementConsole	●		1.0
camel1	●	●	1.0

The "camel1" container is selected, and its details are shown in a panel on the right:

- Type:** Managed Container
- Profiles:** camel
- Location:**
- Local IP:** 192.168.2.13
- Local Hostname:** 192.168.2.13
- Public IP:**
- Public Hostname:**
- Manual IP:**
- Resolver:** Local Hostname
- Provision Status:** Success

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5th birthday of Camel

- The Apache Camel project turned 5 in March 2012



Useful references

- FuseSource - <http://fusesource.com>
- Fuse IDE - <http://fusesource.com/products/fuse-ide>
- Fuse Management Console
 - <http://fusesource.com/products/fuse-management-console>
- Apache Camel – <http://camel.apache.org>
- Camel in Action - <http://manning.com/ibsen>
- Fuse Fabric - <http://fuse.fusesource.org/fabric>



Any Questions?

No vendor lock-in

Free to redistribute

Enterprise class....

FuseSource
integration everywhere