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# The networked forge: new environments for libre software development

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## Forges

- Each libre software project needs its Internet-based infrastructure
- During late 1990s, infrastructure for large projects is put together
- SourceForge: hosting facilities for libre software projects
- The concept of forge is born...
- Forges everywhere: Savannah, Tigris, BerliOS, Launchpad, Google Code, etc.

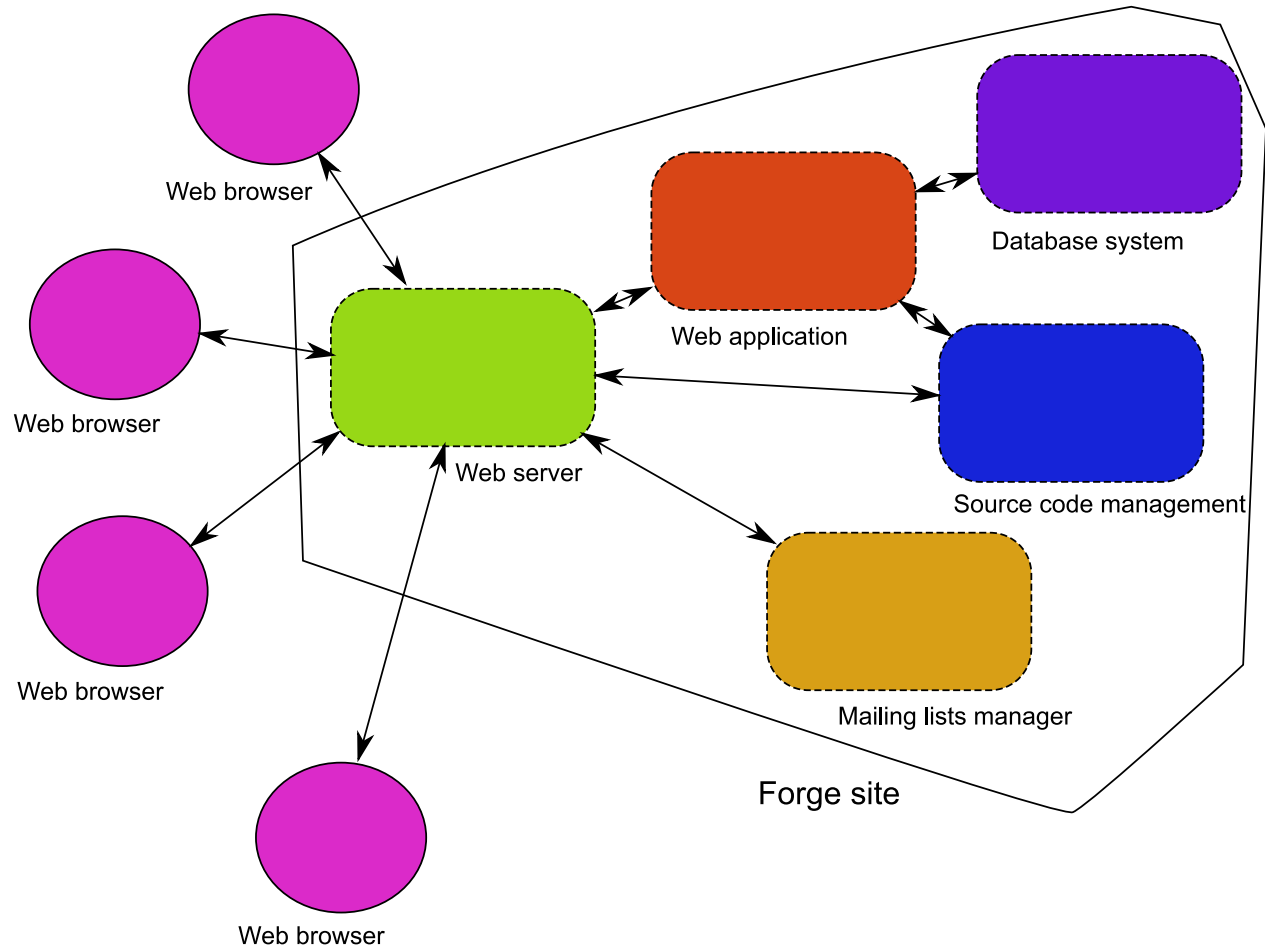
Forge:  
site providing facilities for hosting libre software development

## What's in a forge

- Web site with information about the project
- Source code management (CVS, Subversion, git, Bazaar, etc.)
- Issue tracking system (Trac, Bugzilla, Jira, etc.)
- Mailing lists and forums
- Downloading area
- Other (wiki space, document management, etc.)

## Current architecture of forges

- Web server (front-end)
- Web application (e.g. GForge)
- SQL database (permanent storage)
- Specific integrated components (Subversion, Mailman, etc.)
- Most of the services accessible through the web application



## What's wrong with current forges

- Project-centric instead of developer- or user-centric
- Monolithic approach (and everything server-side)
- Isolation (except for limited federation facilities)
- Poor integration (separated components glued together)
- No fine-grained coordination between subsystems
- No support for “views”
- Little attention to collaborative knowledge sharing

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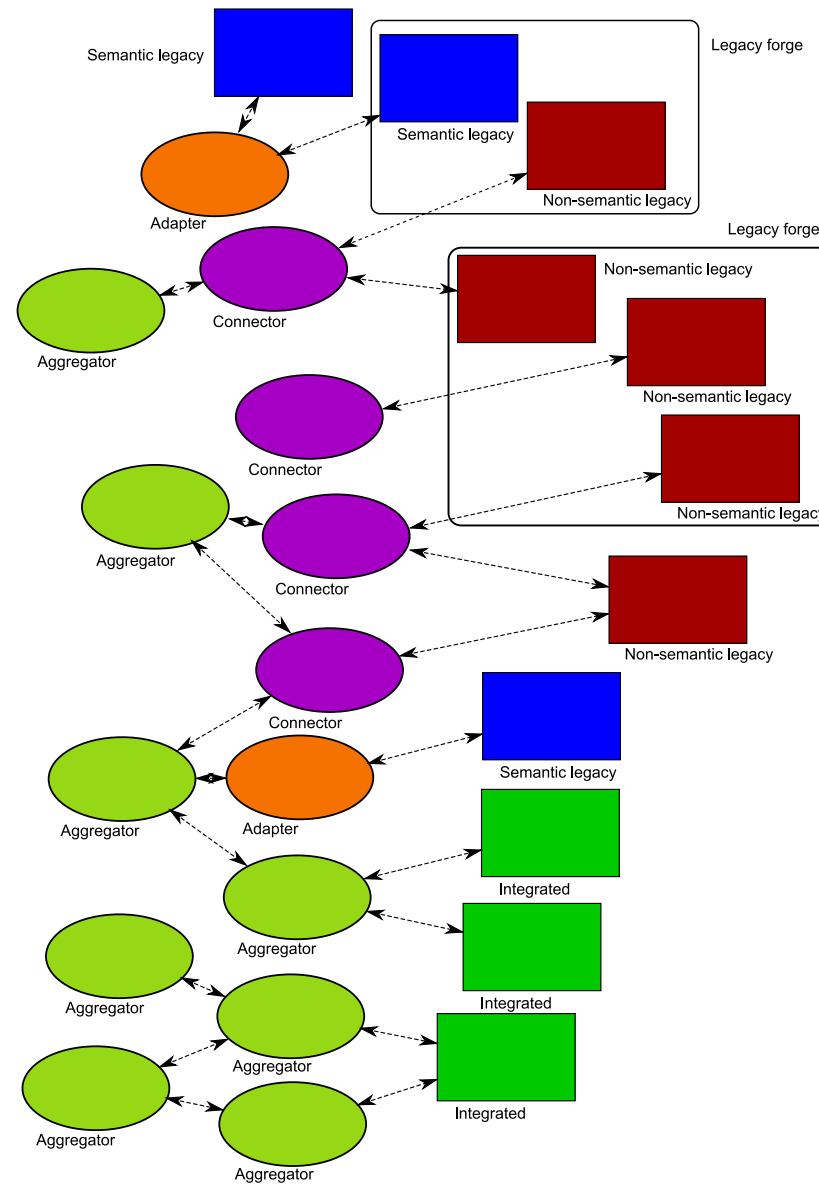
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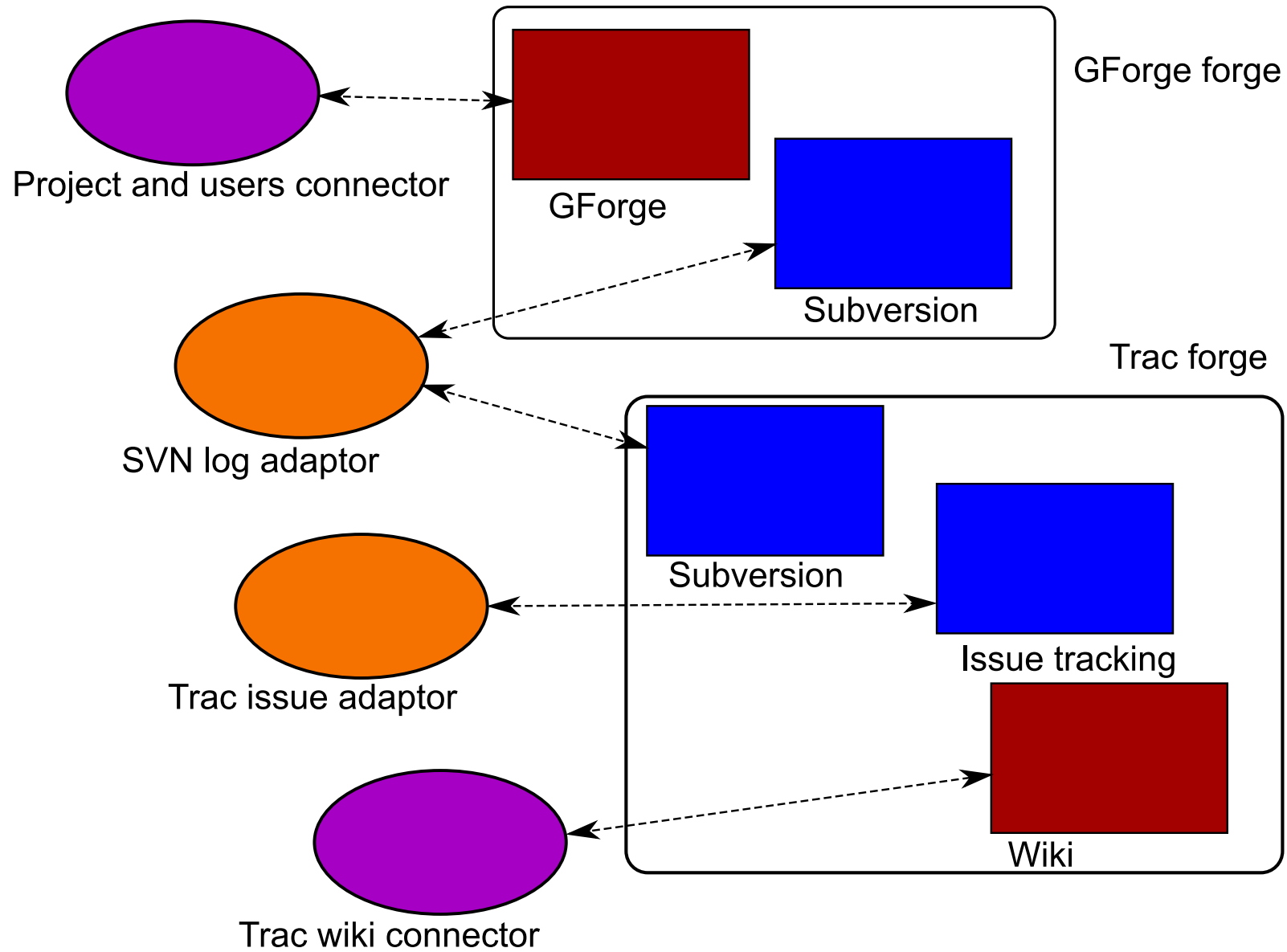
## The networked forge

- Web-side:
  - integrated systems
  - legacy systems (via connectors/adapters)
- Client-side: Client components (mashup, IDE, etc.)
- Anywhere: aggregators, locators, catalogues

## The networked forge

- Simple services, simple interfaces
- REST servers
- The forge is the composition of services
- Interconnection via tubes in a mashup
- Interconnection via semantic channels (RDF, JSON, etc.)
- Configuration via locators and catalogues





## Some scenarios

- Personal forge: all the projects of a developer
- Corporate forge: all the projects of a company
- Legacy-like forge
- Global forge: all the projects found in the Internet
- Distro forge: all software in a given distribution (including upstream)

## Current implementation: EzForge

- Part of the Vulcano project
- Adapters for GForge (projects, users, etc.)
- Adapters for Mailman
- Connectors for Subversion / Trac
- Some simple aggregators
- Client-side: on top of EzWeb (libre software mashup)

The screenshot shows the EzWeb web application interface. At the top, there is a navigation bar with the EzWeb logo and a welcome message for 'libresoft'. Below this, there are tabs for 'Projects', 'Mail List', 'Subversion', and 'Wiki'. A status bar indicates 'Vulcano' and '1 error'. The main content area is divided into two windows:

**Project List (2)**

Id	Name
prj_wiki	<a href="#">Wiki project</a>
EZFORGE_TECH_VER	<a href="#">EzForge Technical Version</a>
ezforge	<a href="#">EzForge</a>
mas	<a href="#">MAS</a>
test4	<a href="#">Test 4</a>
test5	<a href="#">Test 5</a>

**Create Project (1)**

**New Project Form**

Id (\*):

Name (\*):

Description (\*):

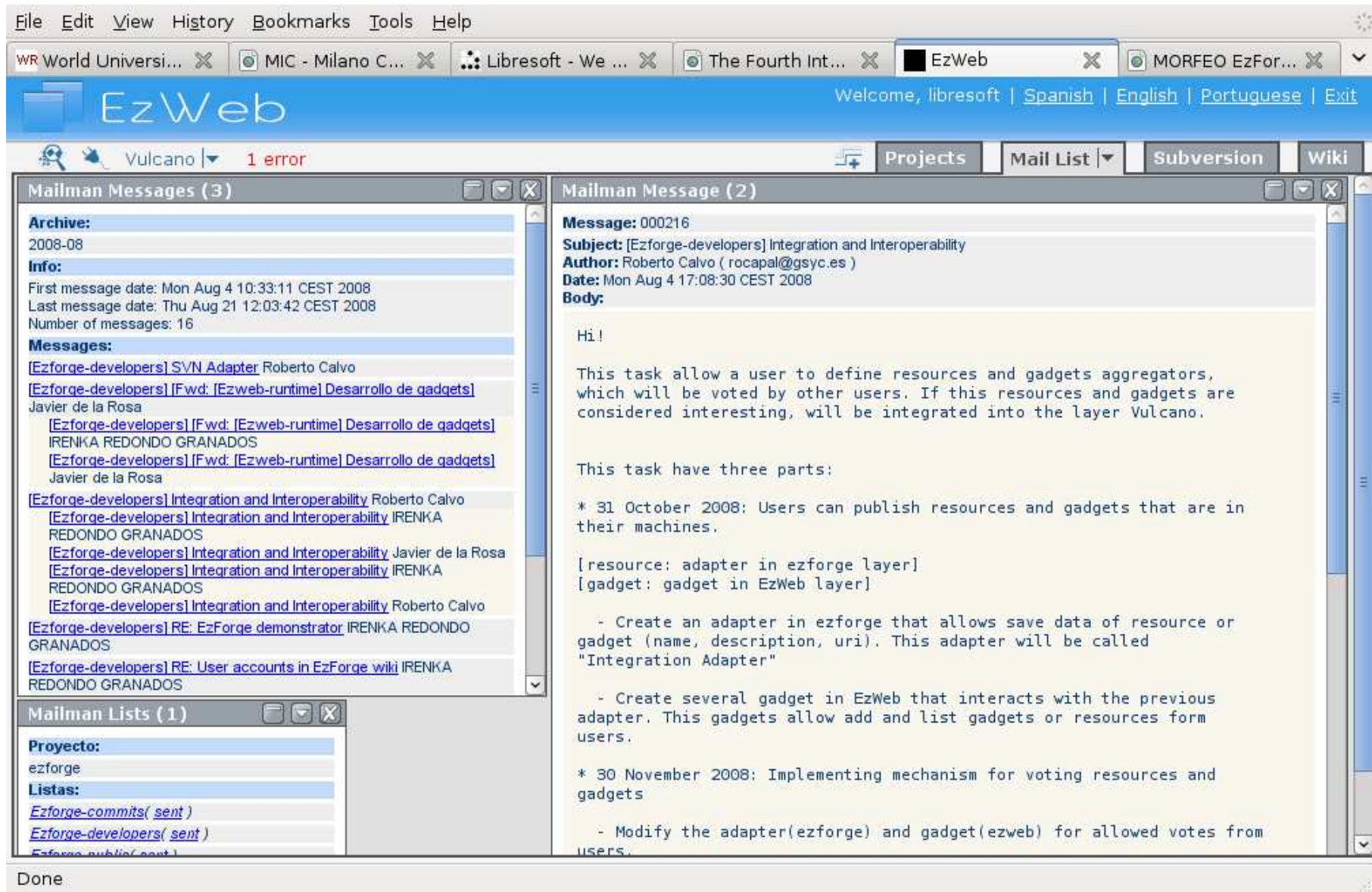
Categories (\*):

Category description:

Category functionalites:

	Id	Name	Description
<input checked="" type="checkbox"/>	cms	Code Management System	Management of source code versions
<input checked="" type="checkbox"/>	mailing	Mailing List	Mailing list management

Done



The screenshot shows the EzWeb web interface. At the top, there is a navigation bar with the EzWeb logo and language options (Spanish, English, Portuguese, Exit). Below this is a menu with 'Projects', 'Mail List', 'Subversion', and 'Wiki'. The main content area is divided into three panes:

- Mailman Messages (3):** A list of messages with details like 'Archive: 2008-08', 'Info: First message date: Mon Aug 4 10:33:11 CEST 2008', and a list of message subjects such as '[Ezforge-developers] SVN Adapter Roberto Calvo' and '[Ezforge-developers] Integration and Interoperability'.
- Mailman Message (2):** A detailed view of a message with the following information:
  - Message:** 000216
  - Subject:** [Ezforge-developers] Integration and Interoperability
  - Author:** Roberto Calvo ( rocapal@gsync.es )
  - Date:** Mon Aug 4 17:08:30 CEST 2008
  - Body:**

Hi!

This task allow a user to define resources and gadgets aggregators, which will be voted by other users. If this resources and gadgets are considered interesting, will be integrated into the layer Vulcano.

This task have three parts:

    - \* 31 October 2008: Users can publish resources and gadgets that are in their machines.

[resource: adapter in ezforge layer]  
[gadget: gadget in EzWeb layer]

    - Create an adapter in ezforge that allows save data of resource or gadget (name, description, uri). This adapter will be called "Integration Adapter"
    - Create several gadget in EzWeb that interacts with the previous adapter. This gadgets allow add and list gadgets or resources form users.
    - \* 30 November 2008: Implementing mechanism for voting resources and gadgets
    - Modify the adapter(ezforge) and gadget(ezweb) for allowed votes from users.
- Mailman Lists (1):** A small pane showing project and list information, including 'Proyecto: ezforge' and lists like 'Ezforge-commits( sent )' and 'Ezforge-developers( sent )'.

The status bar at the bottom of the browser window shows 'Done'.

## To probe further...

- Do you want to try EzForge?
  - Install EzWeb (you need Python, Django, MySQL, little else)
  - Ask for a demo account
- EzWeb:  
`http://ezweb.morfeo-project.org/`
- EzForge:  
`http://ezforge.morfeo-project.org/`