



Aalto University
Media Factory

Digital_Fabrication_Studio.02

Projects and Information - managing and retrieving information from databases and objects

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<http://www.slideshare.net/openp2pdesign>





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Today:

- * Content Management Systems
- * Version Control Systems
- * QR Codes
- * Blueprints

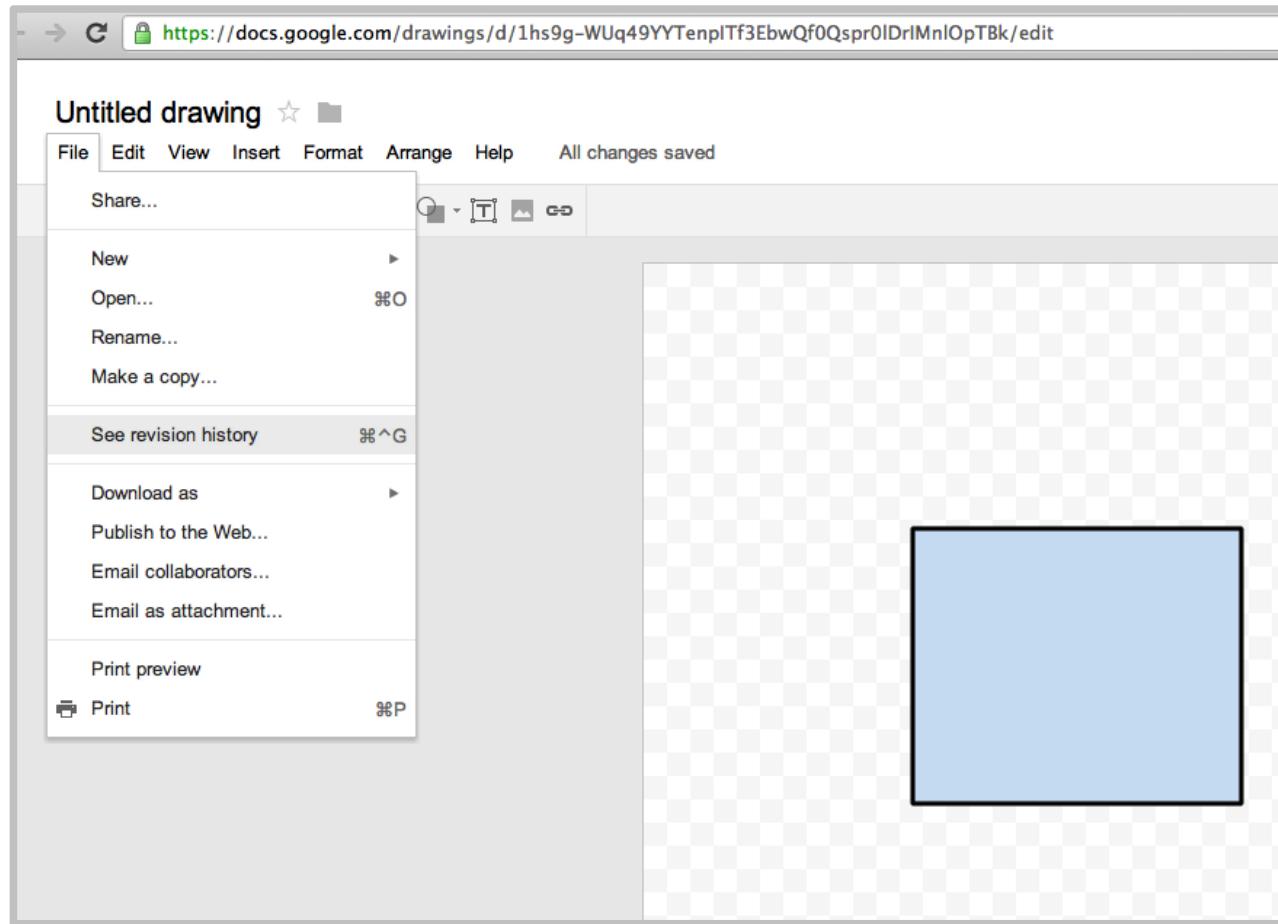


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01.

Content Management Systems: web interfaces to databases

Versioning: you've already seen it on Google Docs...



Even Google Docs has a very simple versioning system available. It is an important mechanism for keeping track of the history of a project.

Blog: Wordpress.org



The screenshot shows the WordPress.org website with a grey header bar. On the left is the 'WORDPRESS.ORG' logo. On the right is a search bar with 'Search WordPress.org' and a 'Go' button. Below the header is a navigation menu with links: Home, Showcase, Themes, Plugins, Mobile, About, Docs, Blog, Forums, Hosting, and a prominent red 'Download' button.

The main content area displays the WordPress dashboard. At the top of the dashboard is a dark header with icons for site status (My Awesome Site), refresh (3), comments (1), and a '+ New' button. The dashboard itself has a light background. On the left is a sidebar with links: Home, Updates (3), Posts, Media, Links, Pages, and Comments (1). The main content area is titled 'Dashboard' and includes a 'Right Now' summary:

- Content
- 2 Posts
- 1 Page
- 1 Category
- 0 Tags

Below this summary is a message: 'Ready to get started? [Download WordPress 3.3.2](#)'. At the bottom of the dashboard area is a yellow footer bar with the text: 'WordPress is also available in [Suomi](#) and [Svenska](#)'.

Wordpress is web software you can use to create a beautiful website or blog. We like to say that WordPress is both free and priceless at the same time.

The core software is built by hundreds of community volunteers, and when you're ready for more there are thousands of [plugins](#) and [themes](#) available to transform your site into almost [anything you can imagine](#). Over 60 million people have chosen WordPress to power the place on the web they call "home" — we'd love you to join the family.

The easiest way to manage content (and a bit of versioning).

Source: <http://wordpress.org/>

Blog: Wordpress.org (+ plugin)

Plugin Directory

Username Password [Log in](#) ([forgot?](#)) or [Register](#)

Extend Home

Plugins [Developer Center](#)

Themes

Mobile

Ideas

Kvetch!

Search Plugins [Search](#)

Popular Tags [More »](#)

- widget (3047)
- Post (2019)
- plugin (1897)
- admin (1542)
- posts (1484)

The Revisions Meta box

Revision Control

Revision Control allows finer control over the Post Revision system included with WordPress

[Download Version 2.1](#)

Description Screenshots Other Notes Changelog Stats

Post Revisions		Author	Actions
Compare	Delete	Date Created	
<input checked="" type="radio"/>	<input type="radio"/>	9 January, 2010 @ 13:31 [Current Revision]	admin
<input type="radio"/>	<input checked="" type="radio"/>	9 January, 2010 @ 13:31	admin
<input type="radio"/>	<input checked="" type="radio"/>	9 January, 2010 @ 13:31	admin
<input type="radio"/>	<input checked="" type="radio"/>	9 January, 2010 @ 13:31	admin
<input type="radio"/>	<input checked="" type="radio"/>	9 January, 2010 @ 13:30	admin
<input type="radio"/>	<input checked="" type="radio"/>	9 January, 2010 @ 13:28	admin
<input type="radio"/>	<input checked="" type="radio"/>	9 January, 2010 @ 13:28	admin
<input checked="" type="radio"/>	<input type="radio"/>	9 January, 2010 @ 13:11 [Autosave]	admin

Requires: 3.2 or higher
Last Updated: 2011-8-19
Downloads: 107,773

Average Rating

 (95 ratings)

FYI
[Other Versions »](#)
[Subversion Repository »](#)

 [Forums Posts](#)

Revision Control allows finer control over the Post Revision system included with WordPress.

Source: <http://wordpress.org/extend/plugins/revision-control/>

Blog: Wordpress.org (+ plugin)

Plugin Directory

Username Password Log in (forgot?) or Register

Extend Home

Plugins

- Developer Center

Themes

Mobile

Ideas

Kvetch!

Search Plugins

Popular Tags [More »](#)

- widget (3047)
- Post (2019)
- plugin (1897)
- admin (1542)
- posts (1484)
- sidebar (1348)
- comments (1056)
- twitter (1024)
- google (1016)
- images (997)
- page (951)
- image (870)
- links (815)

WP Document Revisions

A document management and version control plugin that allows teams of any size to collaboratively edit files and manage their workflow.

[Download Version 1.3](#)

Description Installation FAQ Screenshots Other Notes Changelog Stats

WP Document Revisions is a [document management](#) and [version control](#) plugin. Built for time-sensitive and mission-critical projects, teams can collaboratively edit files of any format — text documents, spreadsheets, images, sheet music... anything — all the while, seamlessly tracking the document's progress as it moves through your organization's existing workflow.

Requires: 3.2 or higher
Compatible up to: 3.4
Last Updated: 2012-4-28
Downloads: 12,309

Average Rating
★★★★★ (22 ratings)

FYI
[Other Versions »](#)
[Subversion Repository »](#)
[Donate to this plugin »](#)

A document management and version control plugin that allows teams of any size to collaboratively edit files and manage their workflow.

Source: <http://wordpress.org/extend/plugins/wp-document-revisions/>

CMS: Drupal.org

The screenshot shows the Drupal.org homepage with a blue header bar containing navigation links: Get Started, Community, Documentation, Support, Download & Extend, Marketplace, and About.

Why Choose Drupal?
Use Drupal to build everything from personal blogs to enterprise applications. Thousands of add-on modules and designs let you build any site you can imagine. Join us!

Sites Made with Drupal
A screenshot of the Symantec Connect website, which is built on Drupal. The page shows a user profile, a news feed, and various community engagement features.

Develop with Drupal
15,814 Modules This week
1,369 Themes 3,743 Code commits
407 Distributions 6,441 Issue comments
17,543 Developers

Drupal Distributions
Distributions are a collection of pre-configured themes and modules for feature-rich web sites giving you a head start on building your site. Build your own online communities, media portal, online store, and more!

Symantec Connect Case Study
Drupal is used by some of the biggest sites on the Web, like [The Economist](#), [Examiner.com](#) and [The White House](#). Read more Drupal case studies.

Get Drupal Security Announcements
Keep your site secure.

Drupal contains basic features common to a cms: user account registration and maintenance, menu management, RSS-feeds, page layout customization...

CMS: Drupal.org (+modules)

You can extend the versioning system of Drupal with these modules:

- * <http://drupal.org/project/revisioning>
 - * http://drupal.org/project/revision_fu
 - * <http://drupal.org/project/revisionreference>
 - * http://drupal.org/project/block_revisions
 - * http://drupal.org/project/diff_revision
 - * http://drupal.org/project/revision_all
 - * http://drupal.org/project/user_revision
 - * http://drupal.org/project/user_diff
-

CMS: Drupal.org -> fablab.aalto.fi

Home FAQ Equipment Activities People Contact

AALTO FABLAB

Find us on Twitter or Facebook,
see our pictures on Flickr, visit us at Arabia or
mail us: fablab@aalto.fi

FabLab (fabrication laboratory) is a small-scale workshop for digital fabrication, started by MIT. In a Fablab you can find machines such as the lasercutter, vinyl cutter, desktop CNC milling machine and 3D printer and electronics prototyping equipment.

FabLabs aim to make this equipment available to everyone, not just students of art, design and engineering - we will host Open Days every week. Just bring your design idea along!



Vinyl cutter



People



3D Printer: 3D Touch

NOW AT AALTO FABLAB
Tuesday 7.5. - NO OPEN DAY
Tuesday 14.5. Open Day 12-18

NO OPEN DAY
Flickr Feed

Our website is based on Drupal...

Wiki: Mediawiki.org

MediaWiki.org logo featuring a sunflower and the word "MediaWiki".

Page Discussion Read View source View history Search

Our updated Terms of Use will become effective on May 25, 2012. [Find out more.](#)

Welcome to MediaWiki.org

MediaWiki is a free software open source wiki package written in PHP, originally for use on Wikipedia. It is now used by several other projects of the non-profit Wikimedia Foundation and by many other wikis, including this website, the home of MediaWiki.

Use the links below to explore the site contents. You'll find some content translated into other languages, but the primary documentation language is English.

For general questions about MediaWiki see the [communication page](#) or ask at the [support desk](#).

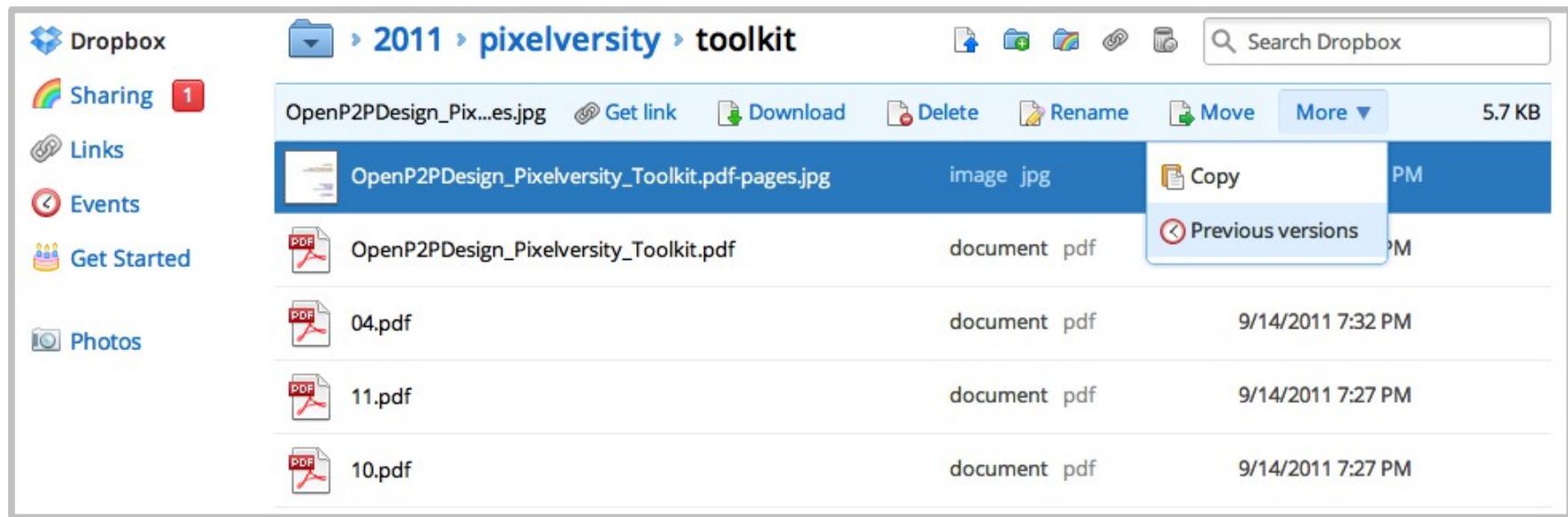
About this site | About MediaWiki | Download | Help and support

Users  What is a wiki? <ul style="list-style-type: none">• Learn how to navigate• Learn how to edit a page• Get more help	System administrators  Install & configure MediaWiki <ul style="list-style-type: none">• Upgrade an existing MediaWiki installation• Add features with third-party extensions• Get more sysadmin help	Developers  Become a MediaWiki hacker <ul style="list-style-type: none">• Learn to use the API and write extensions• Browse the developer docs and class reference• Already a hacker? Visit the developer hub
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

MediaWiki is a free software open source wiki package written in PHP, originally for use on Wikipedia.

Source: <http://www.mediawiki.org/wiki/MediaWiki>

Backup: DropBox



The screenshot shows a Dropbox interface with a sidebar on the left containing links for Dropbox, Sharing (1), Links, Events, Get Started, and Photos. The main area displays a folder structure: 2011 > pixelversity > toolkit. A file named "OpenP2PDesign_Pix...es.jpg" is selected, and a context menu is open over it, showing options like Copy and Previous versions. Other files in the folder include "OpenP2PDesign_Pixelversity_Toolkit.pdf-pages.jpg", "OpenP2PDesign_Pixelversity_Toolkit.pdf", "04.pdf", "11.pdf", and "10.pdf". The "OpenP2PDesign_Pixelversity_Toolkit.pdf-pages.jpg" file is highlighted with a blue bar.

File Name	Type	Size
OpenP2PDesign_Pix...es.jpg	image jpg	5.7 KB
OpenP2PDesign_Pixelversity_Toolkit.pdf-pages.jpg	image jpg	5.7 KB
OpenP2PDesign_Pixelversity_Toolkit.pdf	document pdf	5.7 KB
04.pdf	document pdf	9/14/2011 7:32 PM
11.pdf	document pdf	9/14/2011 7:27 PM
10.pdf	document pdf	9/14/2011 7:27 PM

DropBox has a limited versioning system, that goes back to 30 days only.

Backup: ownCloud

The screenshot shows the ownCloud web interface. At the top, there's a navigation bar with links for News, Support, Developer, Contact, Commercial, and a green 'Try it out!' button. Below the navigation is a search bar and a toolbar with icons for New, Up, and Delete.

The main area displays a file list:

Name	Size	Modified
Music	65.5	10 minutes ago
Shared	0	years ago
Demo Code - C++	< 0.1	10 minutes ago
Demo Code - PHP	< 0.1	10 minutes ago
Demo Image - Laser Towards Milky Ways Centre	0.3	10 minutes ago
Demo Movie MOV - Big Bug Bunny Trailer.mov	10.5	10 minutes ago

A file named 'Demo Movie MOV - Big Bug Bunny Trailer.mov' is selected, showing its details: Size 10.5 MB, Last modified 10 minutes ago.

On the left sidebar, there are links for Files, Music, Contacts, Calendar, Gallery, and Bookmarks. A banner at the bottom of the interface reads: "ownCloud 3 Your files, music, calendars and more. Wherever you are."

The bottom section of the page contains three main calls-to-action:

- Contribute**: ownCloud is open source software, built by a vibrant community of people like you!
 - Write code
 - Report problems
 - Help others
 - Translate
- Get started!**: Sign up with a provider for a free plan!
 - OwnCube
 - GetFreeCloud

The above providers are recommended because it is easy to sign up and they have a free plan. Other providers are [cloudbay](#), [nxServer](#), [Hostingbase](#) (German), [Black Point Arts](#) (German), [AIXPRO](#) (German). If you provide a public instance, [contact us](#)!

Got a server? [install your own!](#)

Then connect your devices with the [sync clients](#)
- Company support**: ownCloud is perfect for use inside your company. Your data on your servers, under your control.

ownCloud Inc offers Business and Enterprise editions with extensive support.

An open source version of DropBox, in case you have a server available.

Source: <http://owncloud.org/>

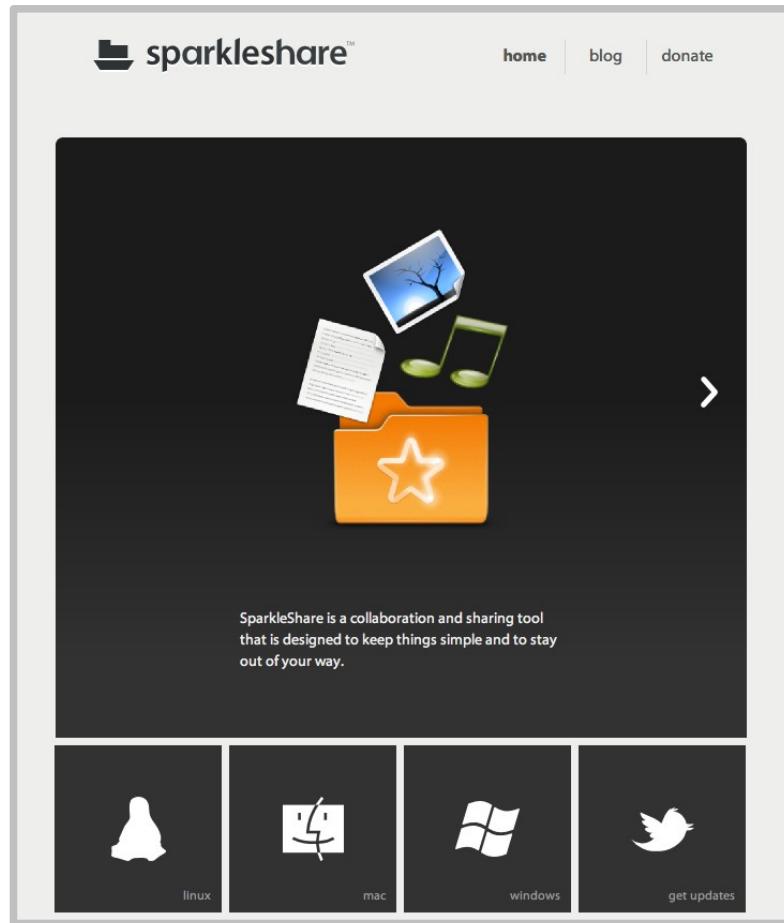
Backup: ownCloud (with versioning)

The screenshot shows a GitHub repository page for 'craig0990 / ownCloud'. The repository is described as a 'Personal clone of ownCloud, containing an in-development versioning app (I would seriously advise against cloning and pulling from this repository at the moment) — [Read more](#)'. Below this, there's a link to <http://owncloud.org>. The page includes standard GitHub navigation tabs: Code, Network, Pull Requests, Issues, Wiki, and Graphs. Under the 'Code' tab, there are download options (Clone in Mac, ZIP, HTTP), a Git Read-Only link (<https://github.com/craig0990/ownCloud.git>), and a 'Read-Only access' button. The main content area shows the 'files_versioning' branch. A commit message from 'craig0990' is visible, dated 3 days ago, fixing a minor new folder bug. Below this, a table lists recent commits:

name	age	message	history
.tx	7 months ago	integrated and updated calendar translations [Jan-Christoph Borchardt]	
3rdparty	a month ago	Added Granite library v0.2.0 to '3rdparty/' [craig0990]	
apps	3 days ago	Fixed minor new folder bug [craig0990]	
config	a month ago	make it possible to connect to other ocs appstores and other ocs know... [Frank Karlitschek]	
core	a month ago	Merge commit 'refs/merge-requests/102' of git://gitorious.org/ownclou... [CBiX]	
files	a month ago	webdav needs to load authentication apps [Arthur Schiwon]	

“Personal clone of ownCloud, containing an in-development versioning app (I would seriously advise against cloning and pulling from this repository at the moment)”

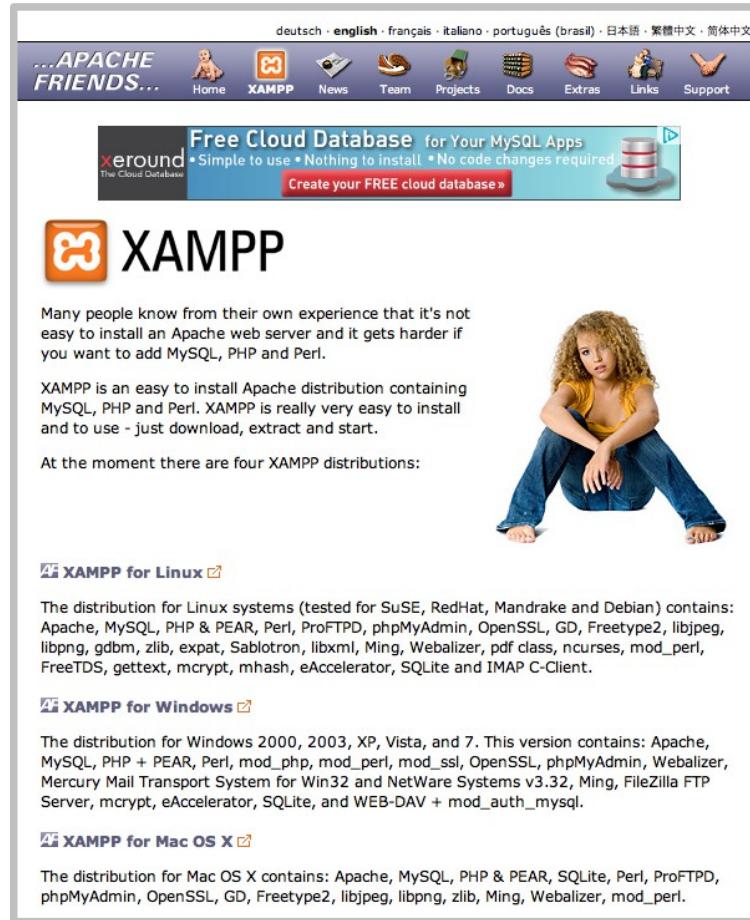
Backup: Sparkleshare



An open source version of DropBox, in case you have a server available (based on Git!).

Source: <http://sparkleshare.org/>

Need a local server? XAMPP

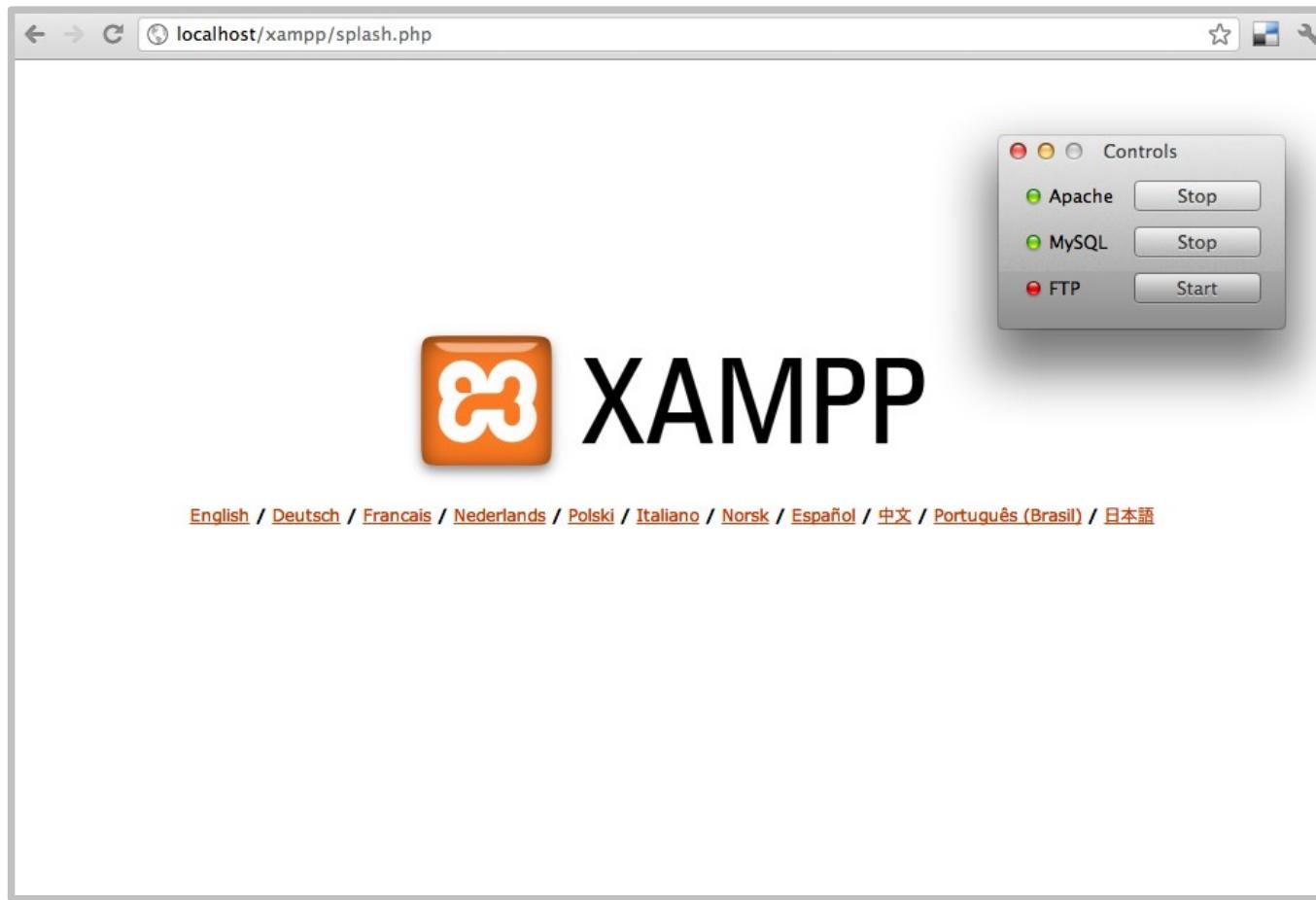


The screenshot shows the Apache Friends XAMPP website. At the top, there's a navigation bar with links for Home, XAMPP (highlighted in orange), News, Team, Projects, Docs, Extras, Links, and Support. Below the navigation, there's a banner for 'xeround' featuring a MySQL database icon and text about a free cloud database for MySQL apps. The main content area has a large orange XAMPP logo. It includes a paragraph about the difficulty of installing an Apache web server, followed by a section about XAMPP being an easy-to-install distribution containing MySQL, PHP, and Perl. There's also a photo of a woman sitting cross-legged. Below this, there are three sections for different distributions: 'XAMPP for Linux' (which contains a detailed list of included software like Apache, MySQL, PHP, etc.), 'XAMPP for Windows' (which lists software like Apache, MySQL, PHP, Perl, etc.), and 'XAMPP for Mac OS X' (which lists software like Apache, MySQL, PHP, SQLite, Perl, etc.).

If you want to use Wordpress, Drupal, MediaWiki
locally on your computer.

Source: <http://www.apachefriends.org/en/xampp.html>

Your local server, `http://localhost/`



Look for the `htdocs` folder in your XAMPP application, all the files accessible through `http://localhost` should be there.

Your local database, <http://localhost/phpmyadmin>

The screenshot shows the phpMyAdmin interface for MySQL localhost. The top navigation bar includes links for Databases, SQL, Status, Variables, Charsets, Engines, Privileges, Processes, Export, and Import. The left sidebar lists databases: cdcoll (1), django, drupal (171), information_schema (28), mysql (23), openp2pdesign (153), test, and wp (20). A message says 'Please select a database'. The main content area has sections for Actions (Create new database, MySQL connection collation set to utf8_general_ci), MySQL (Server: Localhost via UNIX socket, Server version: 5.1.44, User: root@localhost, MySQL charset: UTF-8 Unicode (utf8)), Web server (Apache/2.2.14 (Unix) DAV/2 mod_ssl/2.2.14 OpenSSL/0.9.8l PHP/5.3.1, MySQL client version: 5.1.44, PHP extension: mysql), and phpMyAdmin (Version information: 3.2.4, Documentation, Wiki, Official Homepage, [ChangeLog] [Subversion] [Lists]). A yellow warning box at the bottom left says 'The additional features for working with linked tables have been deactivated. To find out why click [here](#)'. A red error box at the bottom right says 'Your configuration file contains settings (root with no password) that correspond to the default MySQL privileged account. Your MySQL server is running with this default, is open to intrusion, and you really should fix this security hole by setting a password for user ".root".' A link 'Open new phpMyAdmin window' is at the bottom right.

You can easily create a database with PhpMyAdmin (but you will probably have to change the password for installing MediaWiki).



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02.

Version Control Systems: managing the history of a project

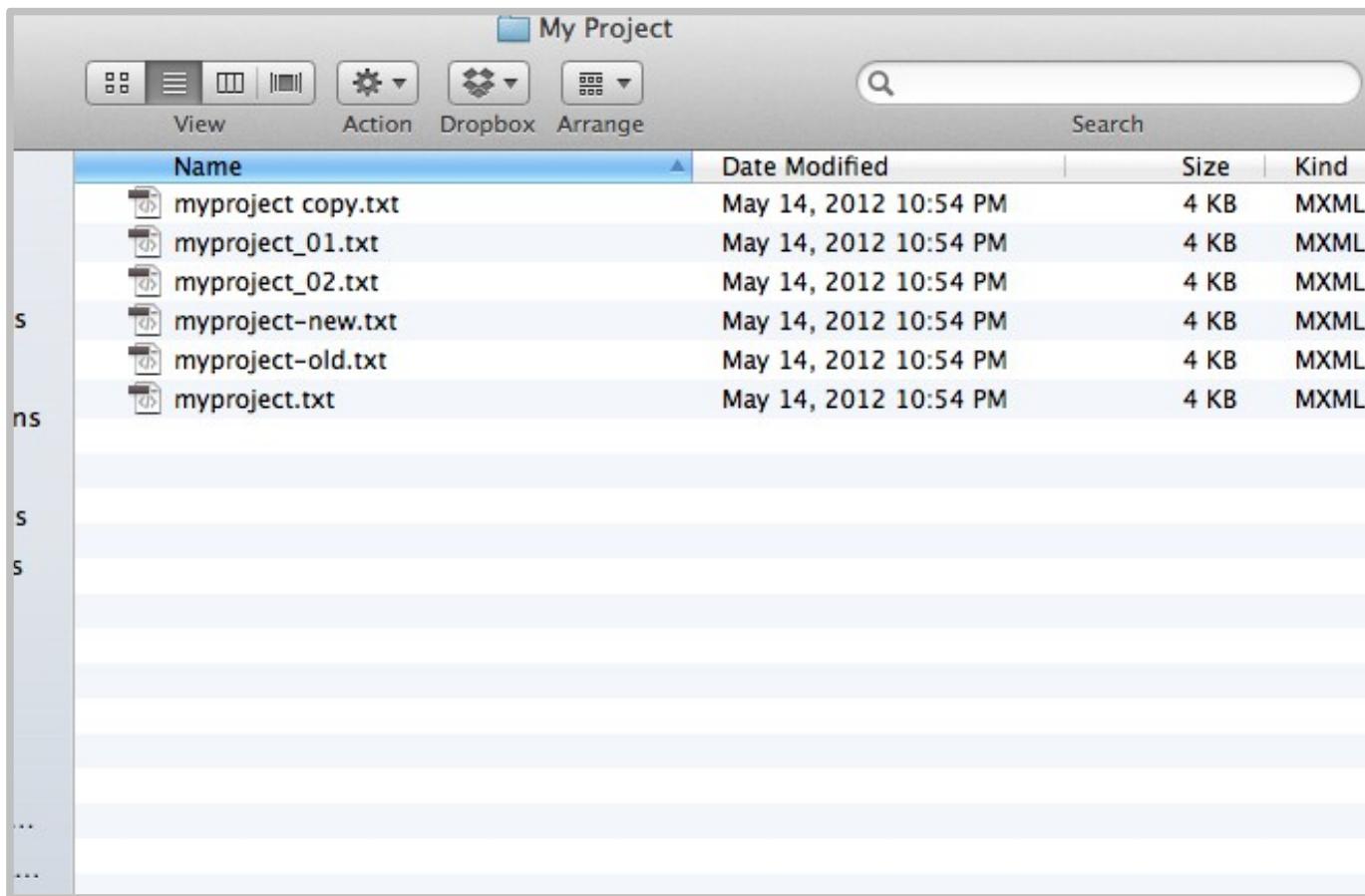


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02.01

Version Control Systems: Subversion (SVN)

Control? Organization?



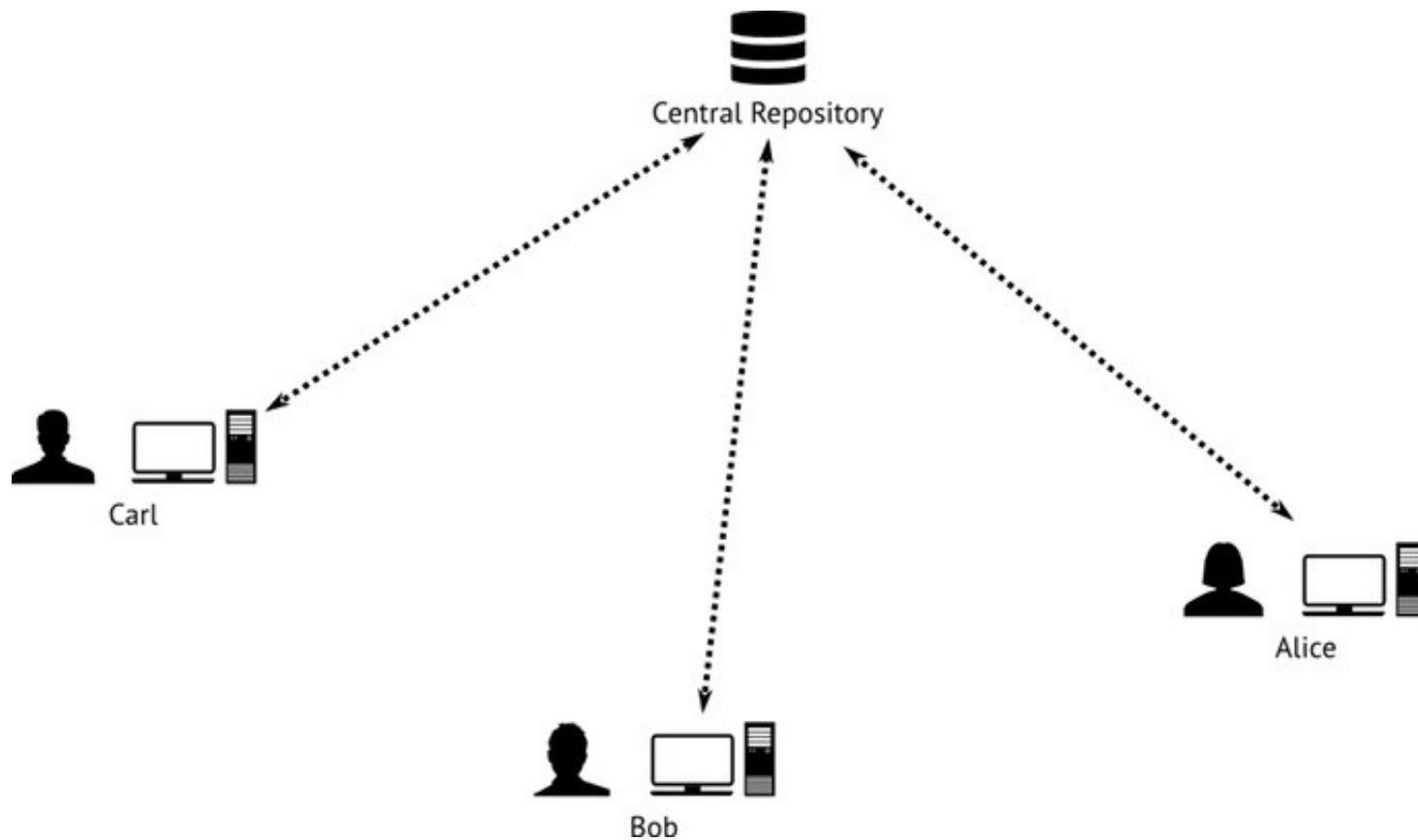
Something very common, that I don't want to see in this course!!

Version Control Systems

A version (or revision) control system is a system that **tracks incremental versions (or revisions)** of files and directories over time. It allows you to explore the changes which resulted in each of those versions and facilitates the arbitrary recall of the same.

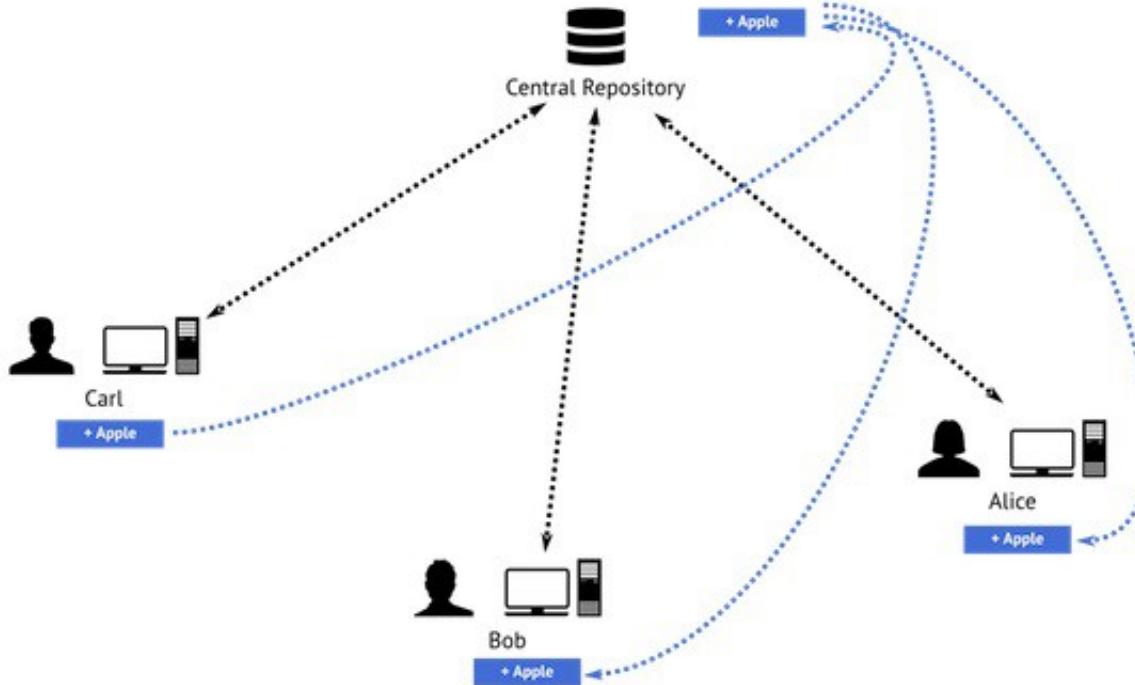
- * Backup and Restore
 - * Synchronization
 - * Short-term undo + Long-term undo
 - * Track Changes
 - * Track Ownership
 - * Branching and merging
 - * not in real time!
-

Server/client-based Version Control System



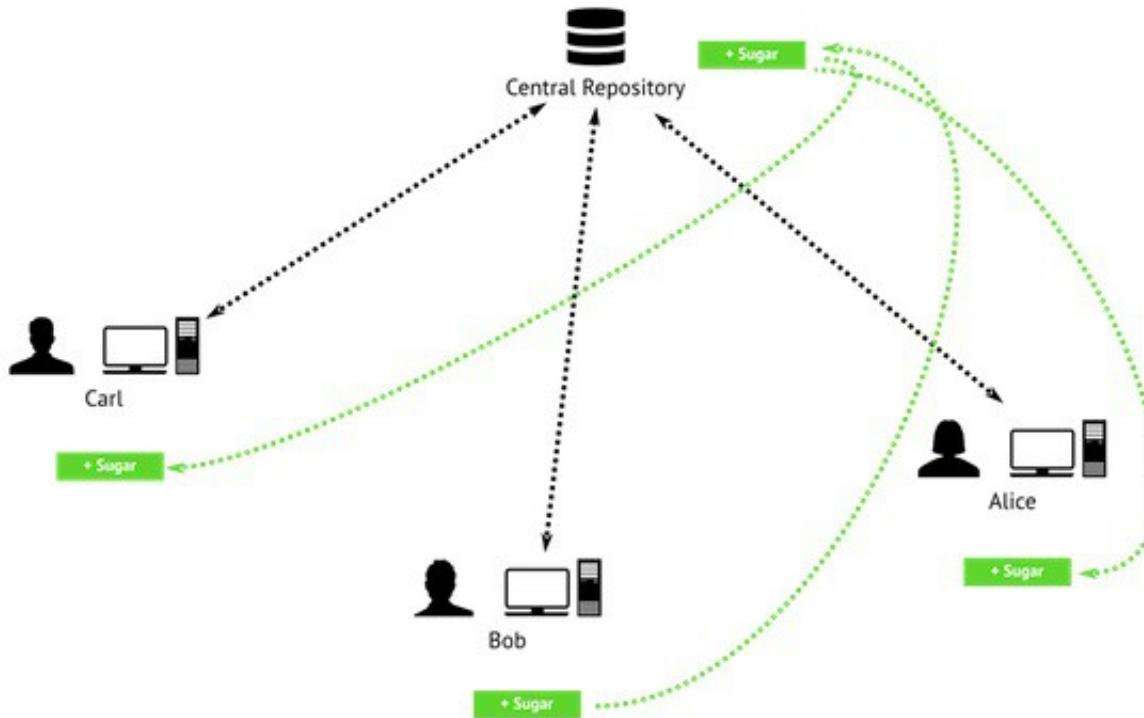
The first architecture to appear, you need to be connected and you need a server (unless you want to work alone on your computer).

Server/client-based Version Control System



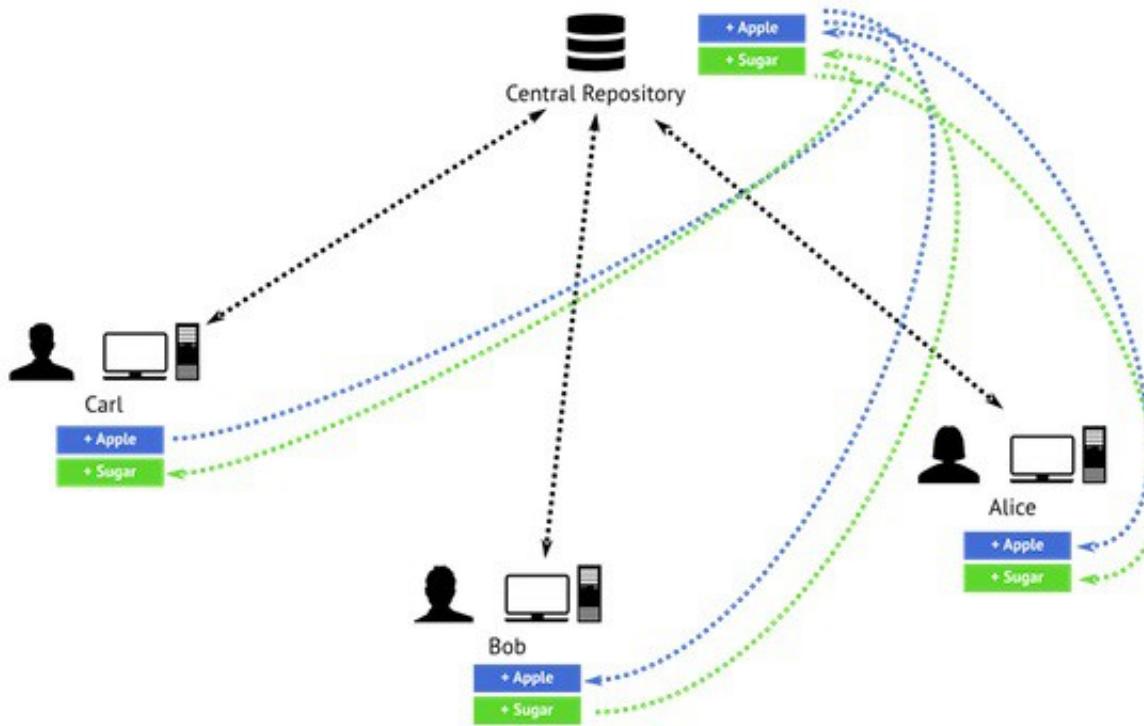
The first architecture to appear, you need to be connected and you need a server (unless you want to work alone on your computer).

Server/client-based Version Control System



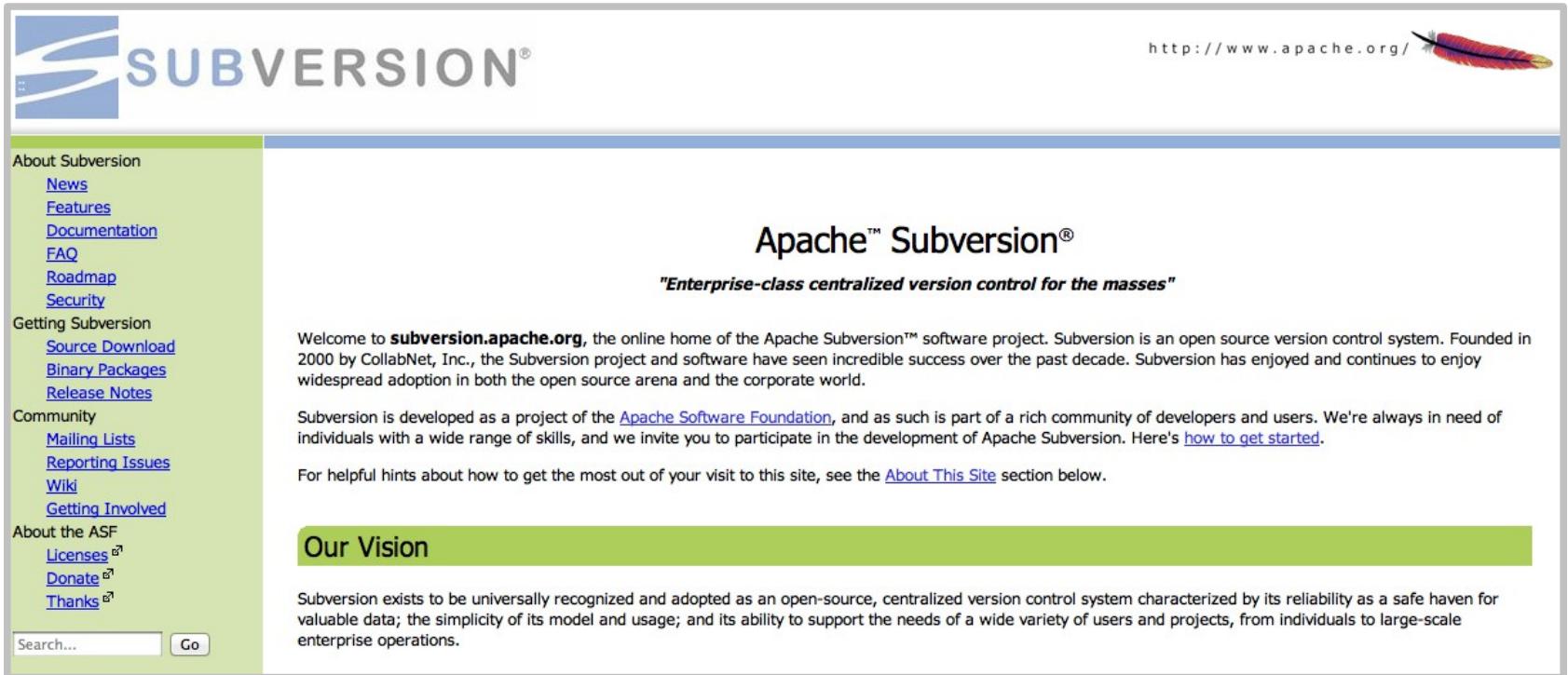
The first architecture to appear, you need to be connected and you need a server (unless you want to work alone on your computer).

Server/client-based Version Control System



The first architecture to appear, you need to be connected and you need a server (unless you want to work alone on your computer).

Version Control System: Subversion (SVN)



The image shows the official website for Apache Subversion. At the top left is the Subversion logo, which consists of a stylized blue 'S' icon followed by the word 'SUBVERSION' in a bold, sans-serif font with a registered trademark symbol. To the right of the logo is the URL 'http://www.apache.org/' and a small red feather icon. The main content area features a large title 'Apache™ Subversion®' and a subtitle 'Enterprise-class centralized version control for the masses'. Below this, there's a paragraph about the project's history and success, followed by text encouraging participation and a link to 'About This Site'. A green sidebar on the left contains links for 'About Subversion', 'Getting Subversion', 'Community', and 'About the ASF', along with a search bar.

About Subversion

- [News](#)
- [Features](#)
- [Documentation](#)
- [FAQ](#)
- [Roadmap](#)
- [Security](#)

Getting Subversion

- [Source Download](#)
- [Binary Packages](#)
- [Release Notes](#)

Community

- [Mailing Lists](#)
- [Reporting Issues](#)
- [Wiki](#)
- [Getting Involved](#)

About the ASF

- [Licenses](#)
- [Donate](#)
- [Thanks](#)

Search...

Apache™ Subversion®

"Enterprise-class centralized version control for the masses"

Welcome to **subversion.apache.org**, the online home of the Apache Subversion™ software project. Subversion is an open source version control system. Founded in 2000 by CollabNet, Inc., the Subversion project and software have seen incredible success over the past decade. Subversion has enjoyed and continues to enjoy widespread adoption in both the open source arena and the corporate world.

Subversion is developed as a project of the [Apache Software Foundation](#), and as such is part of a rich community of developers and users. We're always in need of individuals with a wide range of skills, and we invite you to participate in the development of Apache Subversion. Here's [how to get started](#).

For helpful hints about how to get the most out of your visit to this site, see the [About This Site](#) section below.

Our Vision

Subversion exists to be universally recognized and adopted as an open-source, centralized version control system characterized by its reliability as a safe haven for valuable data; the simplicity of its model and usage; and its ability to support the needs of a wide variety of users and projects, from individuals to large-scale enterprise operations.

Subversion manages files and directories, and the changes made to them, over time. Think of it as a sort of “time machine” of changes.

Source: <http://subversion.apache.org/>

An introduction to SVN

The Standard in Open Source Version Control

Version Control with

Subversion

Introduction

This is the home of [Version Control with Subversion](#), a [free](#) book about the ubiquitous [Apache™ Subversion®](#) version control system and written by some of the developers of Subversion itself.

As you may have guessed from the layout of this page, we are quite pleased that some versions of this book have been [published](#) by O'Reilly Media. You can certainly [buy](#) a traditionally published print copy of the book if you'd like to, but you'll always find the most recent versions here on this site, available in both HTML and PDF formats.

Online Versions of the Book

Versions of this book use a numbering system designed to match those used by the Subversion software itself—version 1.7 of [Version Control with Subversion](#) covers Subversion 1.7, for example. Here are the latest versions of the book which are available online:

For Subversion 1.7

- View the [multiple-page HTML edition](#) of the book. [[tar.bz](#)]
- View the [single-page HTML edition](#) of the book. [[tar.bz](#)]
- View the [PDF edition](#) of the book.
- View the book's [DocBook XML sources](#).

An open source book about using SVN.

Version Control System: the vocabulary (01)

- * **Change**: A change (or diff) represents a specific modification to a document under version control.
- * **Checkout** : A check-out (or co) is the act of creating a local working copy from the repository. A user may specify a specific revision or obtain the latest. Also refers to the same files.
- * **Commit** : A commit (checkin, ci) is the action of writing or merging the changes made in the working copy back to the repository. Also refers to the same files.
- * **Head** : The most recent commit.

Version Control System: the vocabulary (02)

* **Conflict**

A conflict occurs when different parties make changes to the same document. A user must resolve the conflict by combining the changes, or by selecting one change.

* **Merge**

A merge or integration is an operation in which two sets of changes are applied to a file or set of files.

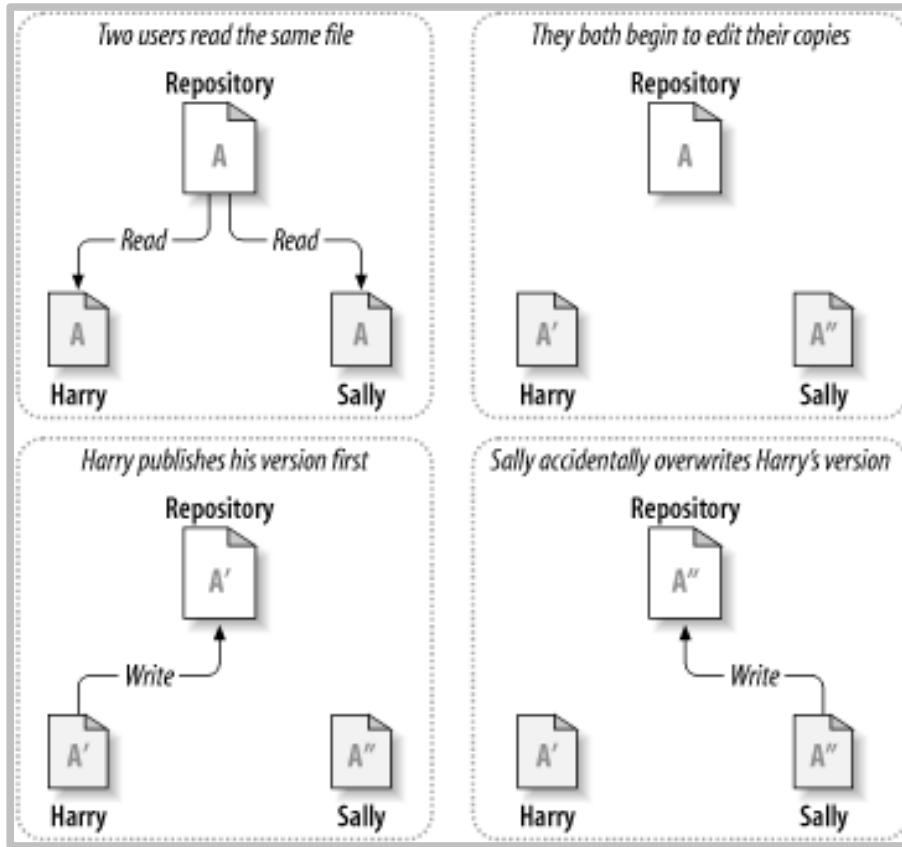
* **Update**

An update (or sync) merges changes made in the repository (by other people, for example) into the local working copy.

* **Working copy**

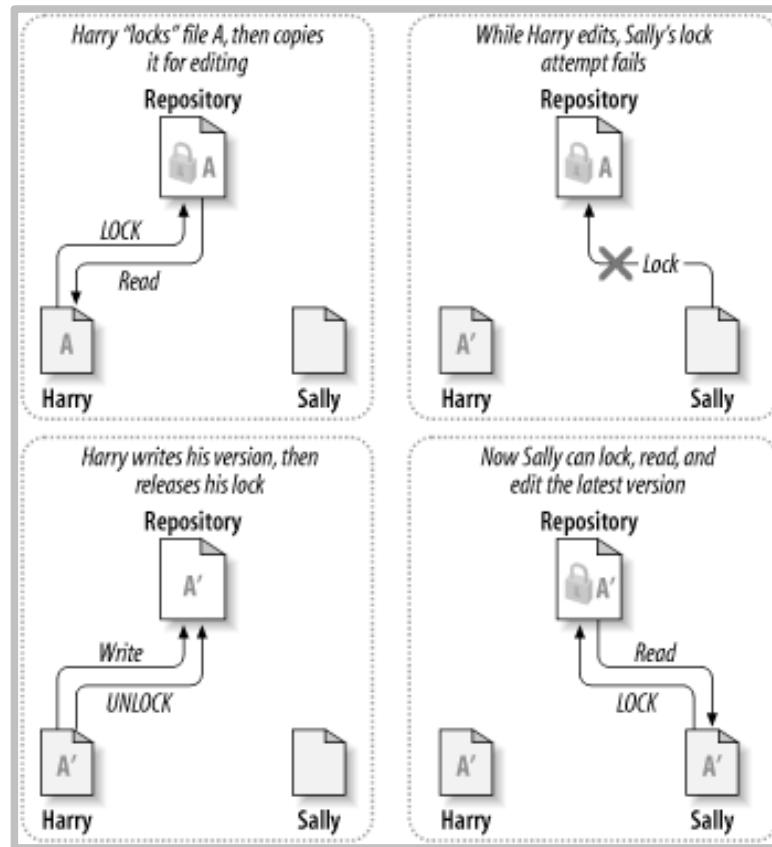
The working copy is the local copy of files from a repository, at a specific time or revision. Conceptually, it is a *sandbox*.

Versioning: the problem



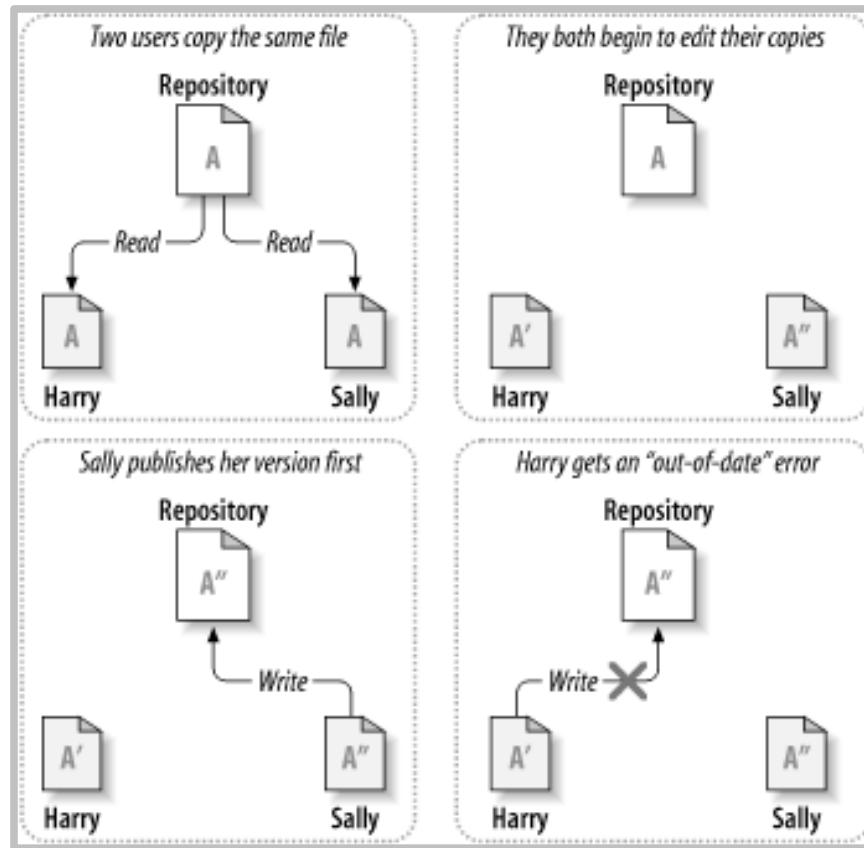
How will the system allow users to share information,
but prevent them from accidentally overwriting?

Versioning: the lock-modify-unlock solution



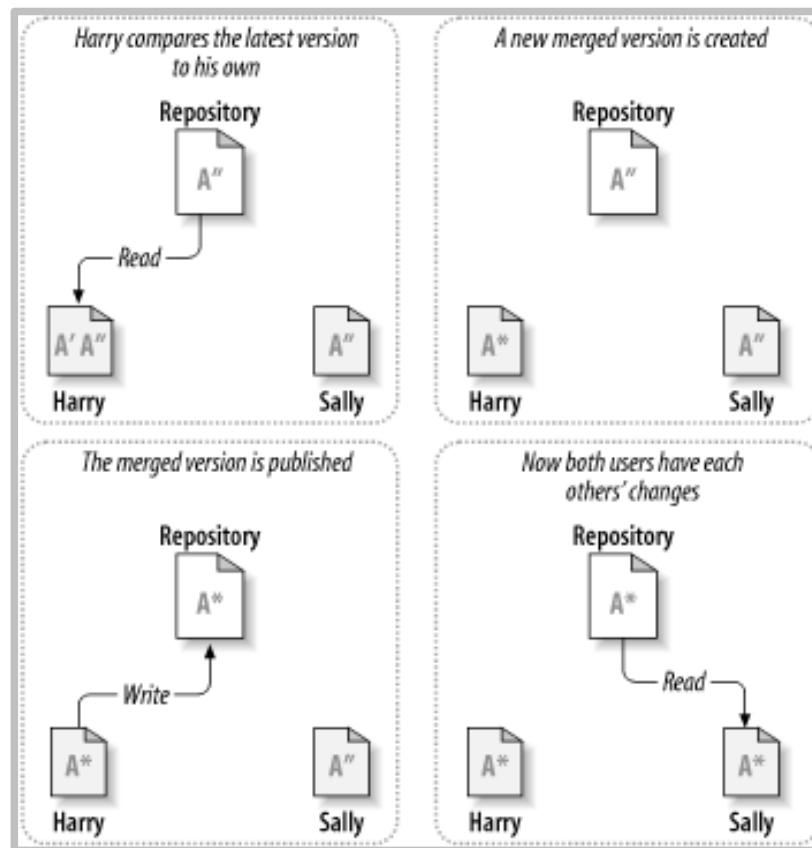
In this model, the repository allows only one person to change a file at a time, by locking it.

Versioning: the copy-modify-merge solution (01)



In this model, each user's client contacts the project repository and creates a personal working copy. The private copies are merged together into a new version.

Versioning: the copy-modify-merge solution (02)



In this model, each user's client contacts the project repository and creates a personal working copy. The private copies are merged together into a new version.

Diff: how to understand the changes

The screenshot shows the Kompare application interface. At the top, there are tabs for 'File', 'Difference', 'Settings', and 'Help'. Below the tabs are several icons for file operations. The main window has four panes: 'Source Folder' (set to '/home/robamler/Documents/'), 'Destination Folder' (set to '/home/robamler/Documents/'), 'Source File' (set to 'hitchhiker-040624'), and 'Destination File' (set to 'hitchhiker-current'). A table titled 'Difference' lists the changes between the two files:

Source Line	Destination Line	Difference
32	48	Changed 1 line
38	56	Changed 1 line
51	69	Changed 1 line
57	75	Inserted 2 lines
59	79	Deleted 1 line

The 'Source File' pane contains the content of 'hitchhiker-040624', and the 'Destination File' pane contains the content of 'hitchhiker-current'. The text is color-coded to highlight differences: red for deleted text, green for inserted text, and blue for changed text. The 'Difference' table also uses these colors to indicate the nature of each change.

```
hitchhiker-040624
52
53 [[Neil Gaiman]] has written ''[[Don't Panic: The Official Hitchhiker's Guide to the Galaxy]]'', a
54
55 A novel, ''[[Douglas Adams's Starship Titanic]]'', based on the book, was also written by Adams.
56
57 Two collaborative [[Internet]] projects were inspired by the book, including the official website and a fan site.
58
59 ==Characters==
60
61 * [[Arthur Dent]]
62 * [[Ford Prefect (HHG)|Ford Prefect]]
63 * [[Trillian]]
64 * [[Zaphod Beeblebrox]]
65 * [[Marvin the Paranoid Android]]
66 * [[Vogon]]s
67 * [[Deep Thought]]
68 * [[Concepts and minor characters from The Hitchhiker's Guide to the Galaxy|Places in The Hitchhiker's Guide to the Galaxy]]
69
70 ==See also==
71
72 * [[Places in The Hitchhiker's Guide to the Galaxy|Places in The Hitchhiker's Guide to the Galaxy]]
73 * [[Infinite Improbability Drive]]
74 * [[Total Perspective Vortex]]
75 * [[The Answer to Life, the Universe, and Everything]]
76 * [[Dirk Gently]] -- another [[Douglas Adams]] creation
77 * [[SEP field]]
78 * [[Hitchhiking]]
79 * [[Sirius Cybernetics Corporation]]
80 * [[H2G2]]
81 * [[42 (number)|42]]
82

Comparing file file:/home/robamler/Documents/hitchhiker-040624 file file:/home/robamler/Documents/hitchhiker-current | 1 of 23 differences, 0 applied | 1 of 1 file
```

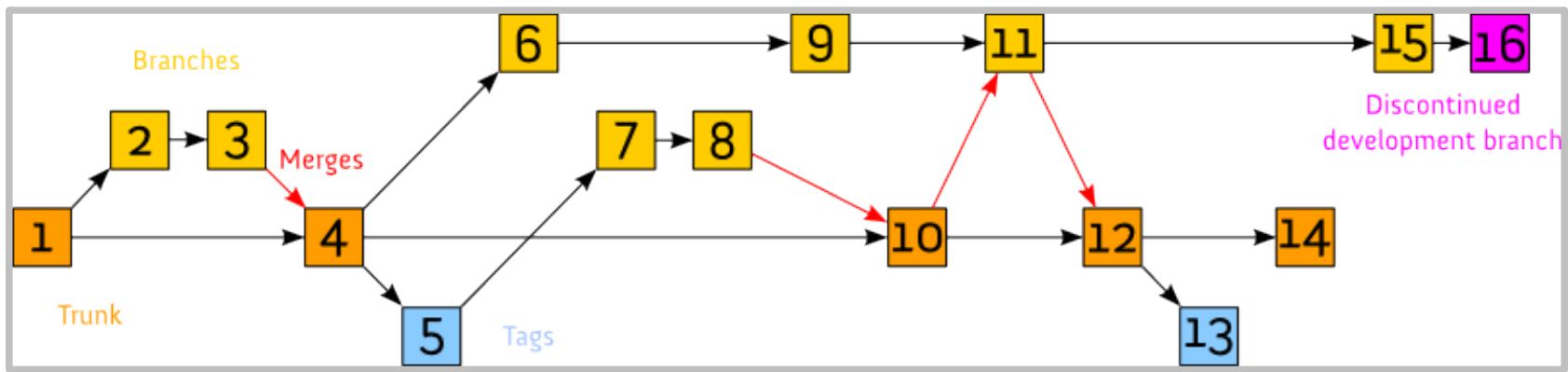
hitchhiker-current
66 * ''[[So Long, and THANKS FOR ALL THE FISH!]]'' ([[1994]])
67 * ''[[Mostly Harmless]]'' ([[1992]])
68
69 A short story was also written, ''[[Young Zaphod Plays It Safe]]'', which was later included in the book.
70
71 [[Neil Gaiman]] has written ''[[Don't Panic: The Official Hitchhiker's Guide to the Galaxy]]'', a
72
73 A novel, ''[[Douglas Adams's Starship Titanic]]'', based on the book, was also written by Adams.
74
75 Nowbagger the Infinitely Prolonged, a character from ''[[The Restaurant at the End of the Universe]]''.
76
77 Two collaborative [[Internet]] projects were inspired by the book, including the official website and a fan site.
78
79
80 {{HitchhikerBooks}}
81
82
83 ==See also==
84
85 * [[Dirk Gently]] -- another [[Douglas Adams]] creation
86 * [[Hitchhiking]]
87 * [[H2G2|h2g2]]
88
89 ==External links==
90
91 * [http://www.bbc.co.uk/cult/hitchhikers/ "The Hitchhiker's Guide to the Galaxy"]
92 * [http://www.hitchhikersmovie.com "The Hitchhiker's Guide to the Galaxy (film)"]
93 * The [http://www.cinescape.com/0/editorial.asp?obj_id=3000] article about the film.
94 * [http://www.imdb.com/title/tt0371724/ The film's status on IMDB]
95 * [http://www.abovethetitle.com/content/programmes/hitchhikersguide.html] review of the film.

The best way of understanding what has changed is to compare different revisions with a diff software.

Source: <http://en.wikipedia.org/wiki/Diff>

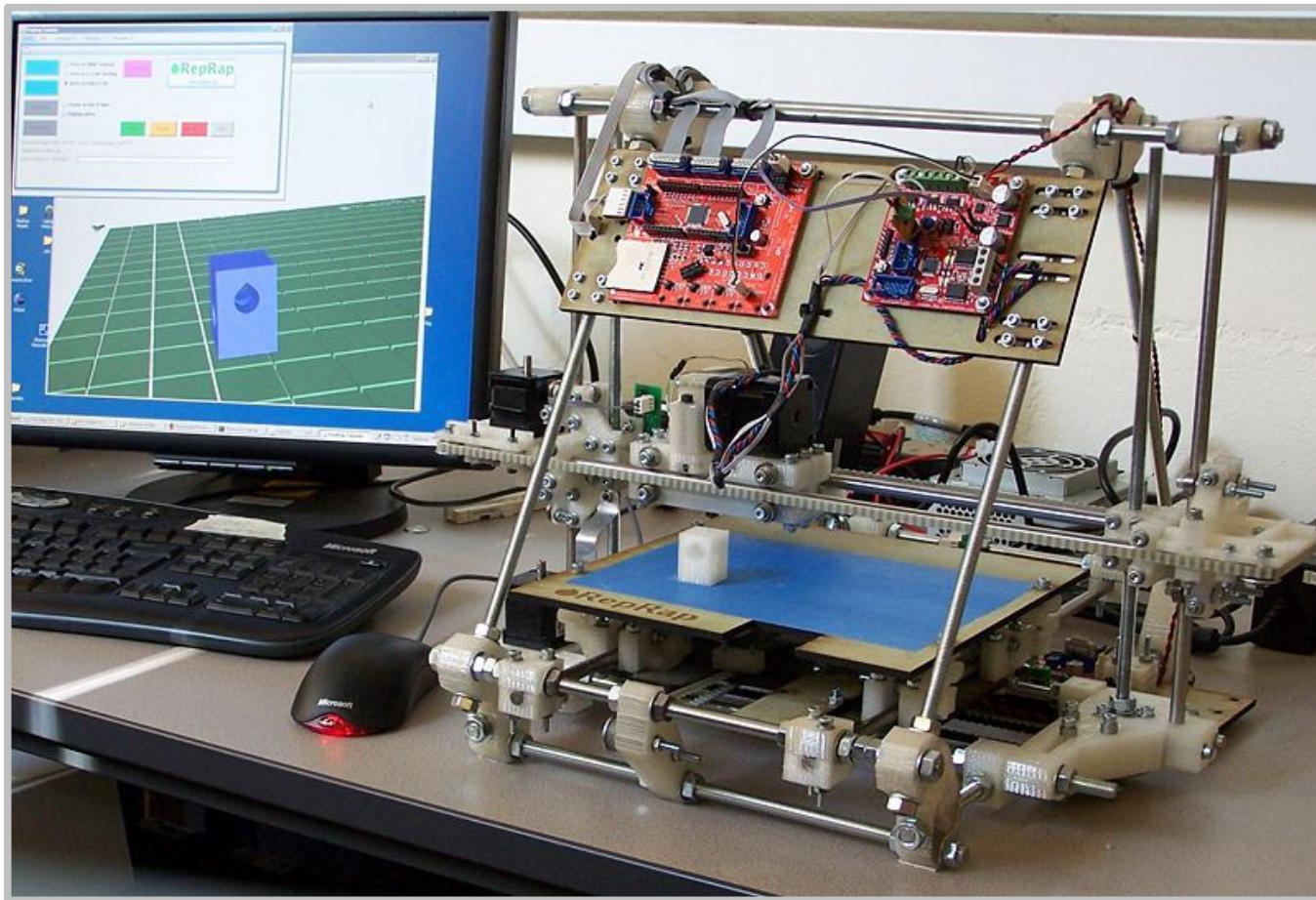
<http://en.wikipedia.org/wiki/Kompare>

A typical SVN project



Development happens in *trunk*, testing alternatives in *branches* and storing good versions (1.0, 1.1,...) in *tags*.

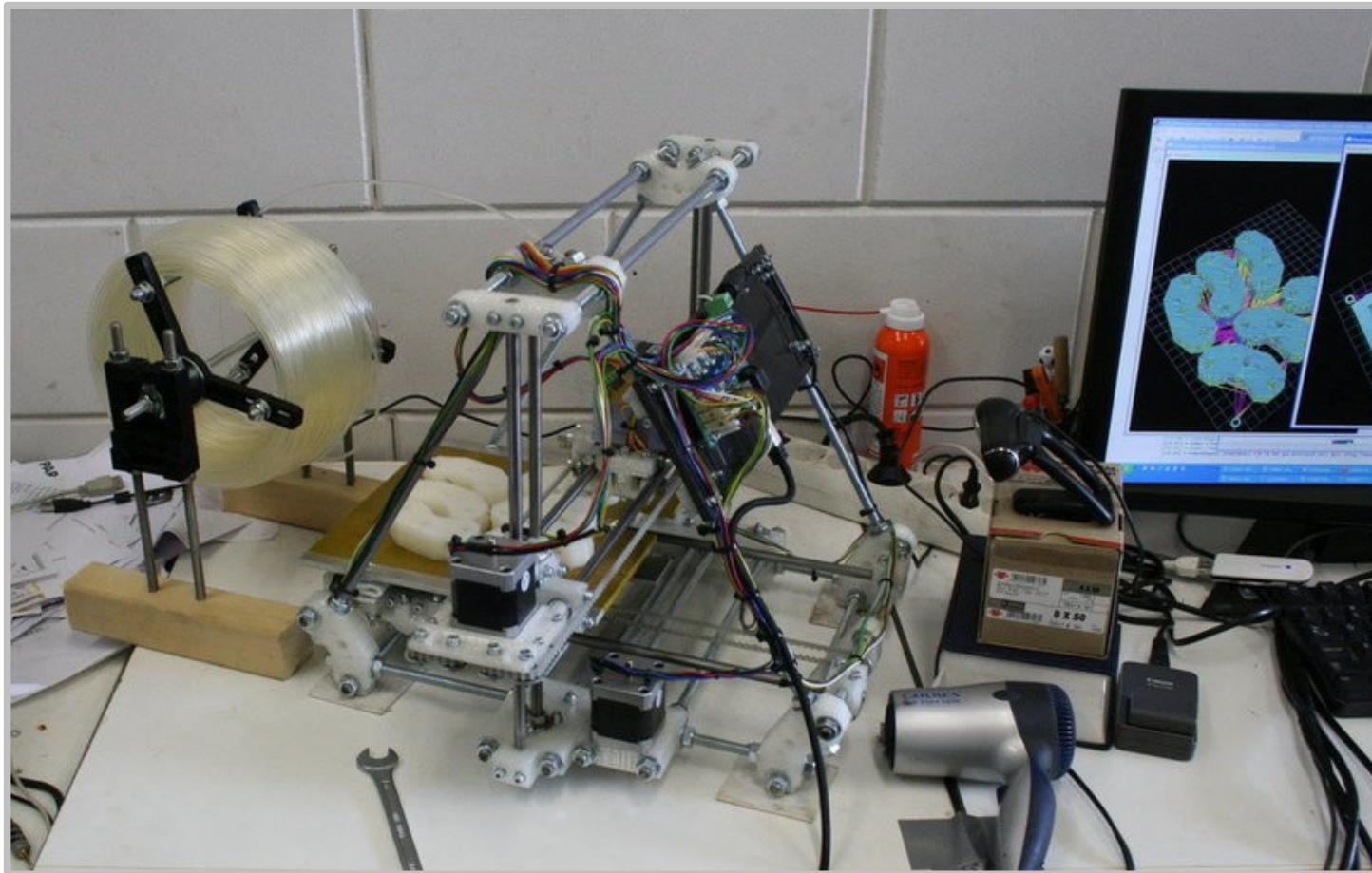
Example: a spool for the RepRap Mendel



The second version of the RepRap, the first to be easier to build and calibrate.

Source: <http://reprap.org/wiki/Mendel>

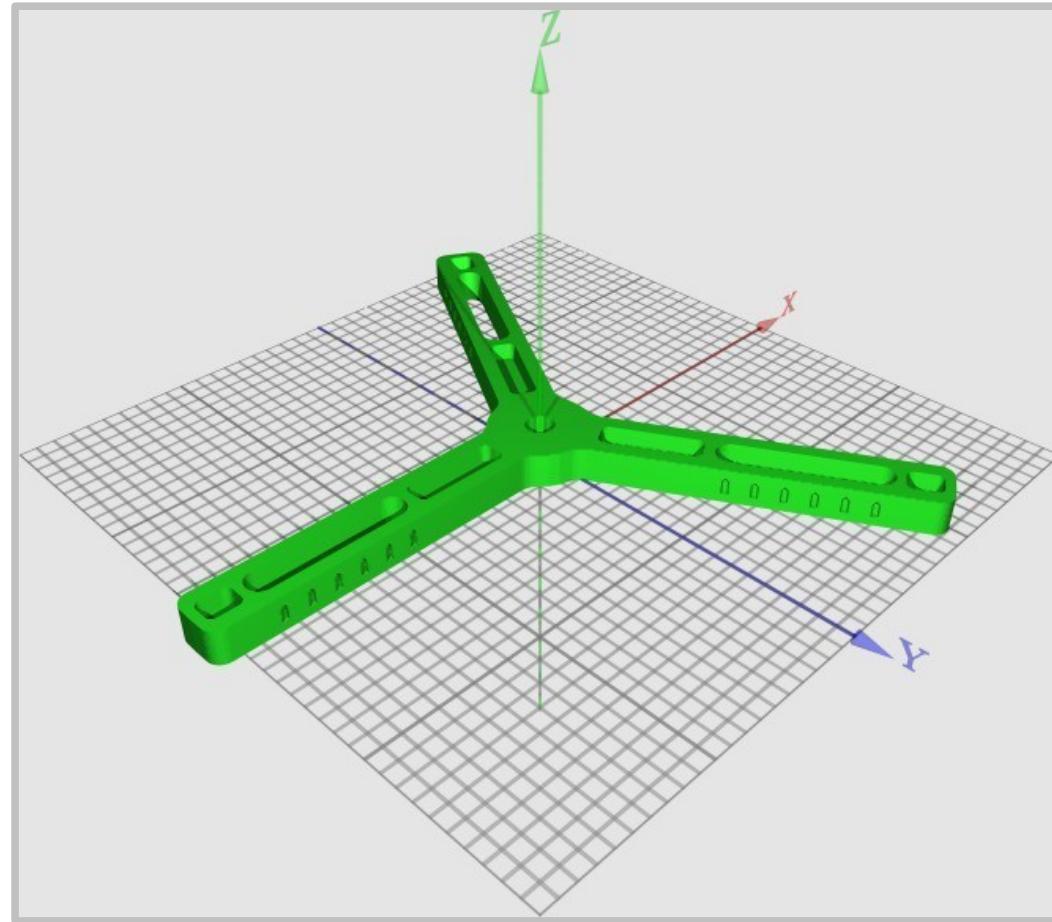
A spool for the RepRap Mendel: an improvement



A spool added for handling the plastic wire and published on Thingiverse.

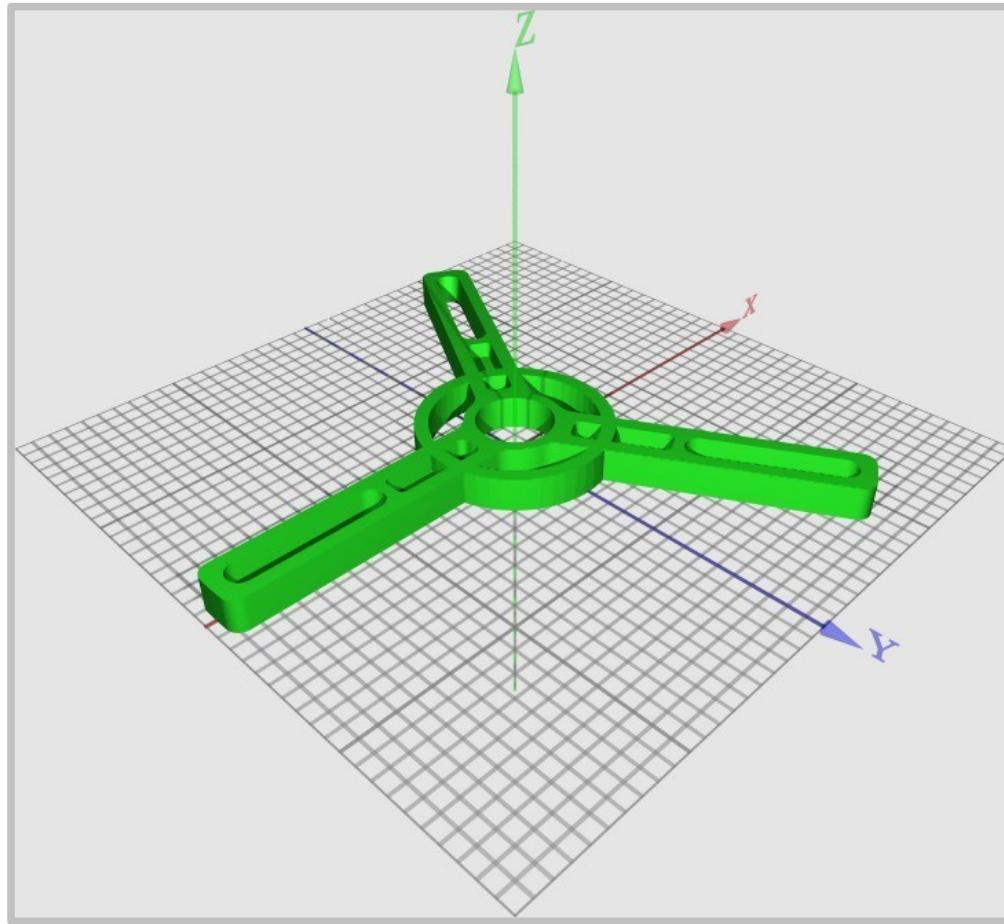
Source: <http://www.thingiverse.com/thing:3866>

A spool for the RepRap Mendel: an improvement (01)



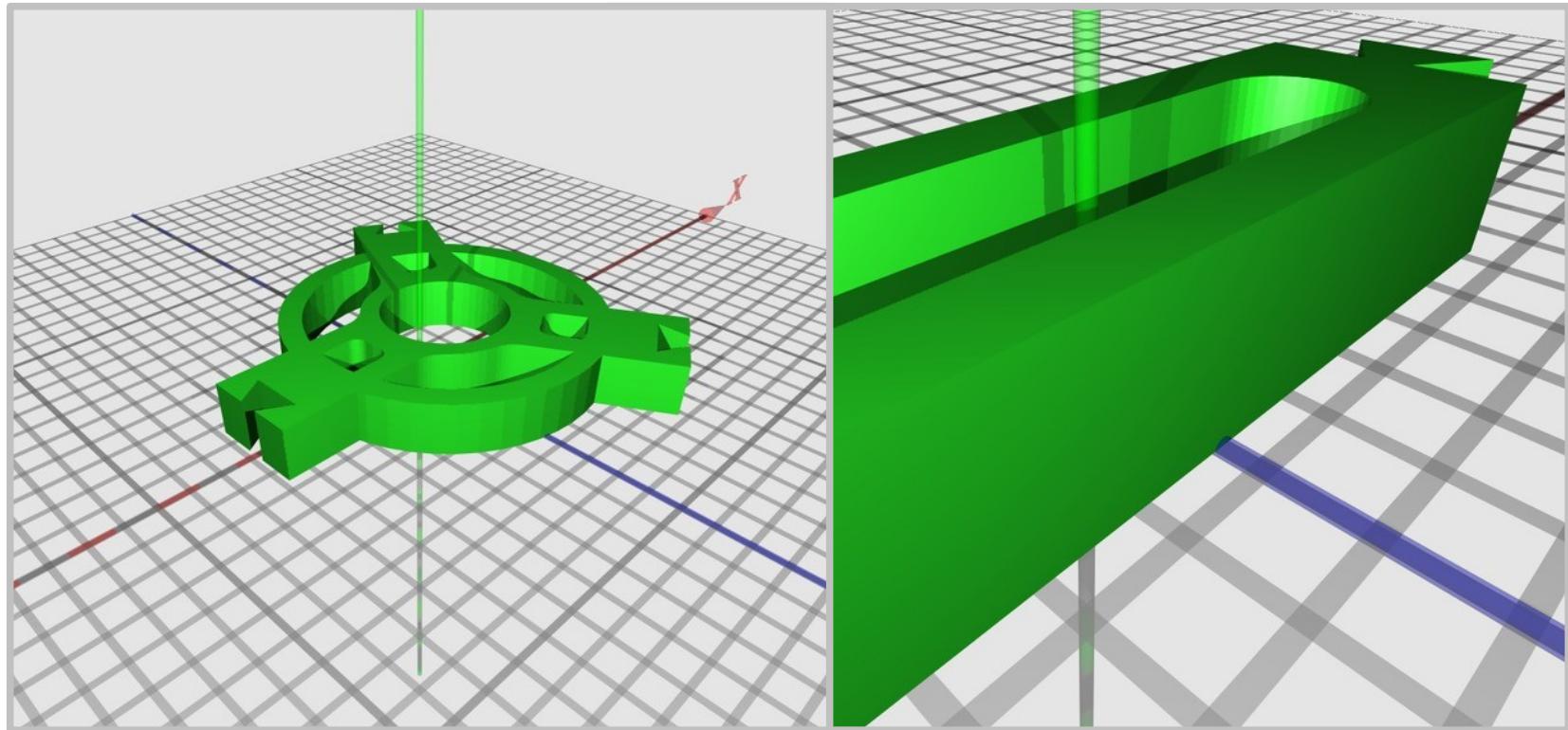
“Well i wanted to have a very simple, but bearing based spool system.” Camiel

A spool for the RepRap Mendel: an improvement (02)



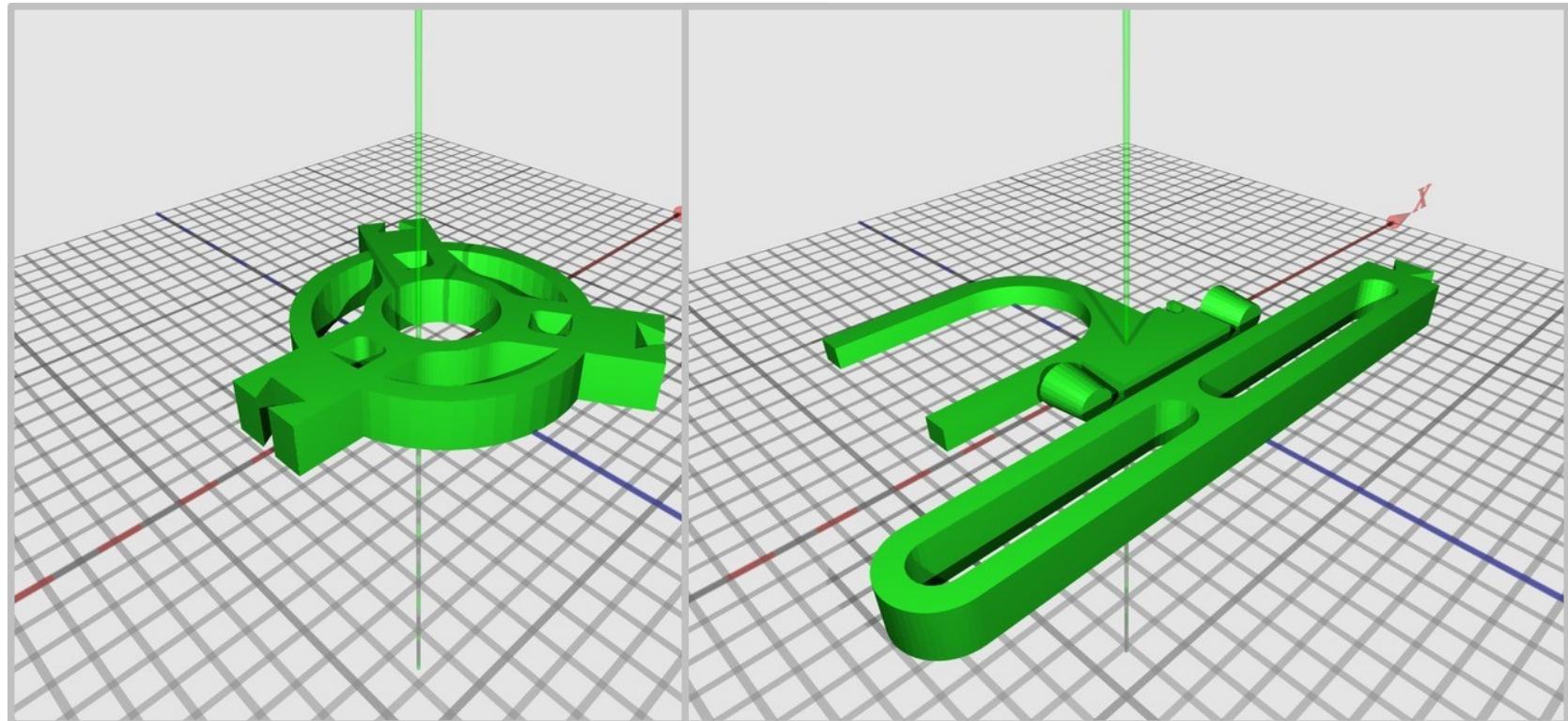
"I have changed the design to put the bearings in the spool itself. This way you can be more flexible in what you use to support the axle." Brokentoaster

A spool for the RepRap Mendel: an improvement (03)



"I liked BrokenToaster's idea of a bearing-driven filament spool holder, but that version was too big to fit on a Makerbot print bed. [...]" Randyy

A spool for the RepRap Mendel: an improvement (04)



"This takes advantage of the larger print area on RepRaps by printing the arm as one piece, [...] also saving material." Fil

SVN Client + File comparison: TortoiseSVN (Win)

TortoiseSVN *the coolest interface to (Sub)version control*

Home Donate Downloads Translations Support/Docs Other tools



TortoiseSVN

About TortoiseSVN

TortoiseSVN is an easy-to-use SCM / source control software for Microsoft Windows and possibly the best standalone Apache™ Subversion® client there is. It is implemented as a Windows shell extension, which makes it integrate seamlessly into the Windows explorer. Since it's not an integration for a specific IDE you can use it with whatever development tools you like.

New version of grepWin

Posted on September 4, 2011

Subversion Client Windows

Download Now! Windows, Linux, OSX Subversion Repository Browser
www.aquafold.com

AdChoices ▾

A new version of [grepWin](#) is available. This new version contains a few bugfixes and enhancements.

List of completed [issues](#)

Download from [here](#)

Release candidate of TortoiseSVN 1.7

Posted on September 1, 2011

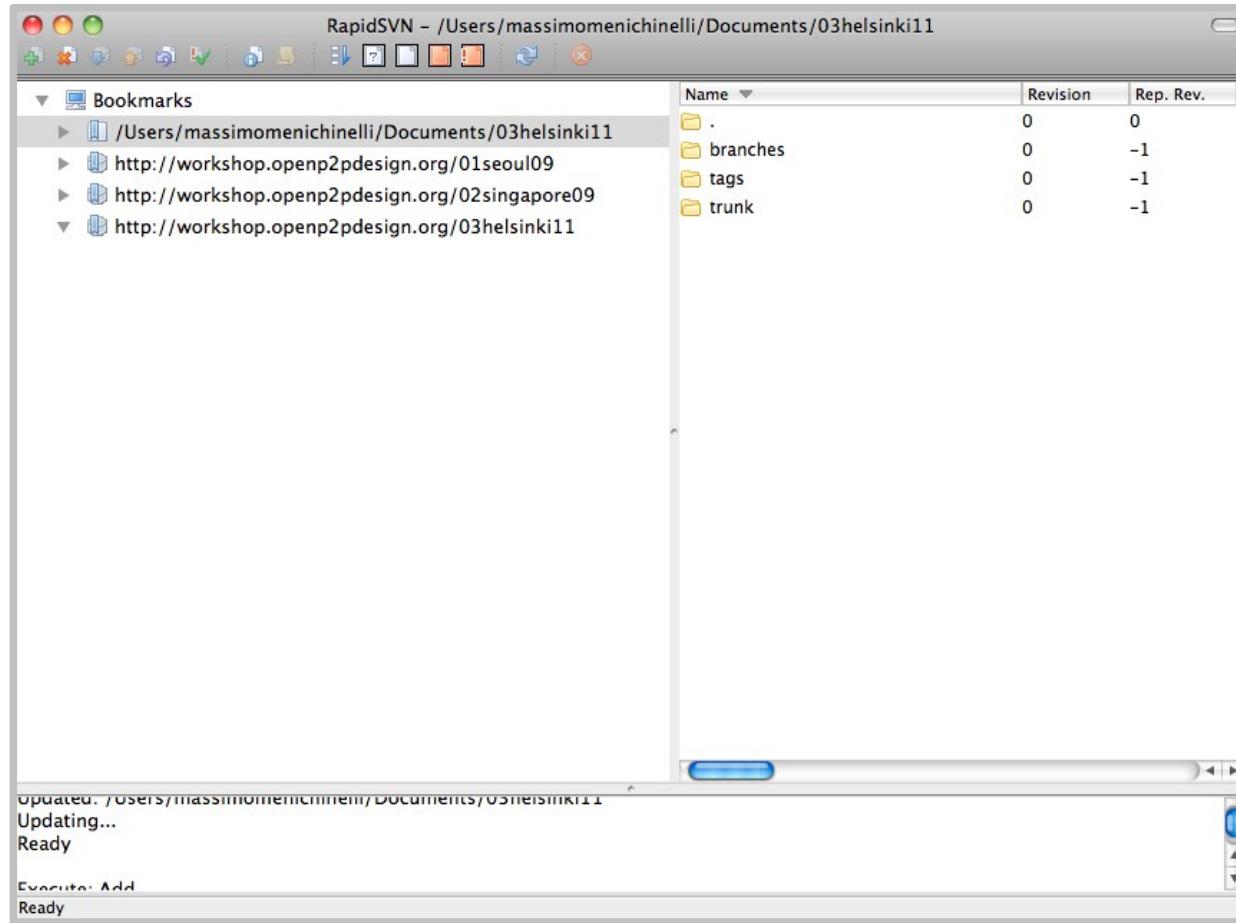
Info

[News](#)
[News archive](#)

The most popular SVN client on Windows, it can also compare images.

Source: <http://tortoisessvn.net/>

SVN Client: RapidSVN (Windows, Mac, Linux)



Open Source and multi-platform, but without file comparison.

SVN Client: Versions (Mac)

The screenshot shows the official website for Versions, a Subversion client for Mac. At the top, there's a dark header bar with navigation links: SOFA (with a sofa icon), Home (with a globe icon), Release Notes (with a star icon), Support (with a book icon), Buy (with a shopping cart icon), and Download (with a downward arrow icon). Below the header is a large, stylized image of a green lotus flower with a yellow center, growing out of a mound of green grass against a dark background. The word "VERSIONS" is written in large, white, sans-serif capital letters, with a small yellow badge containing "1.1" positioned above the letter "S". Below "VERSIONS" is the text "SUBVERSION CLIENT FOR MAC" in a smaller, gold-colored font. On the left side of the main content area, there's a block of text describing the product: "Versions offers the best way to work with Subversion on the Mac. Thanks to its clear-cut approach, you'll hit the ground running." To the right of this text are two prominent buttons: a green "Download Now" button with a download icon and a blue "Buy for €39" button with a shopping cart icon.

Free trial for one month...

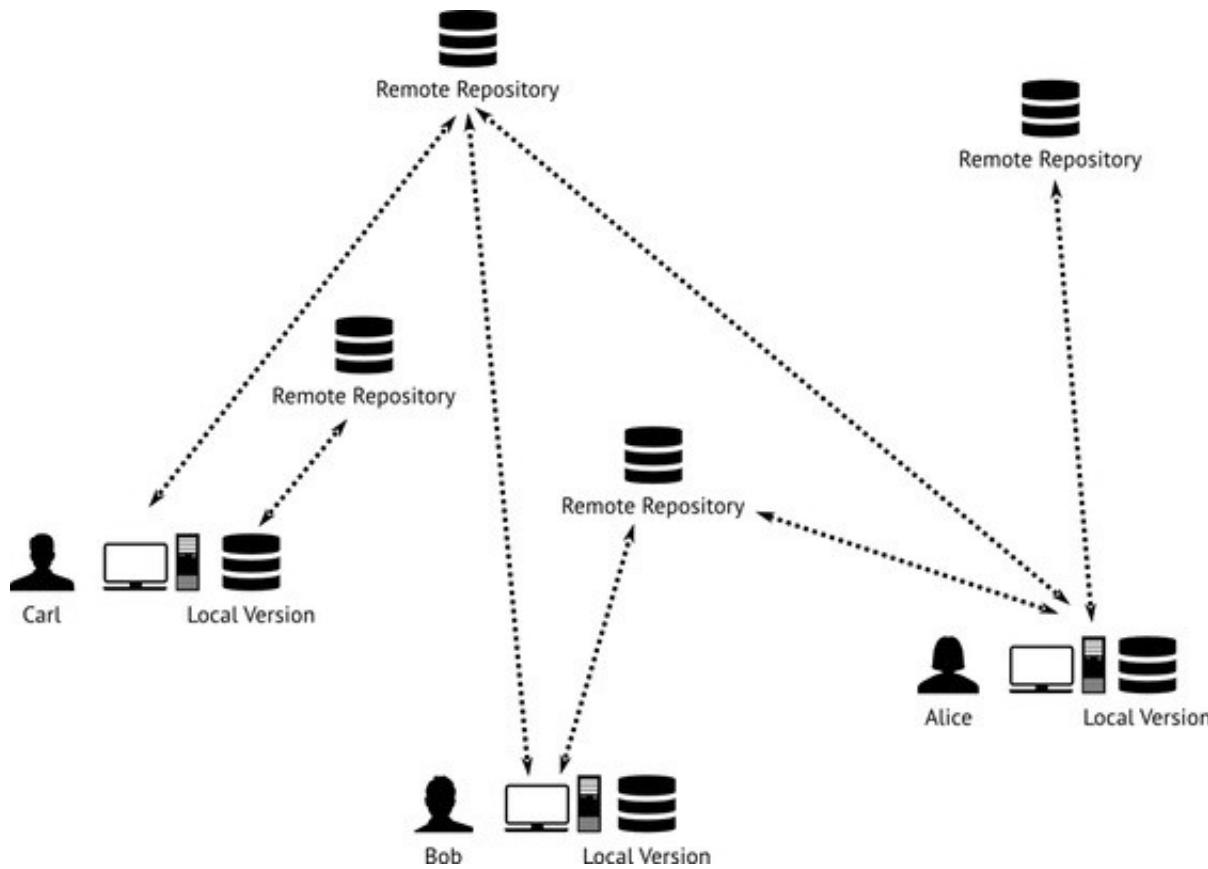


Aalto University
Media Factory

02.02

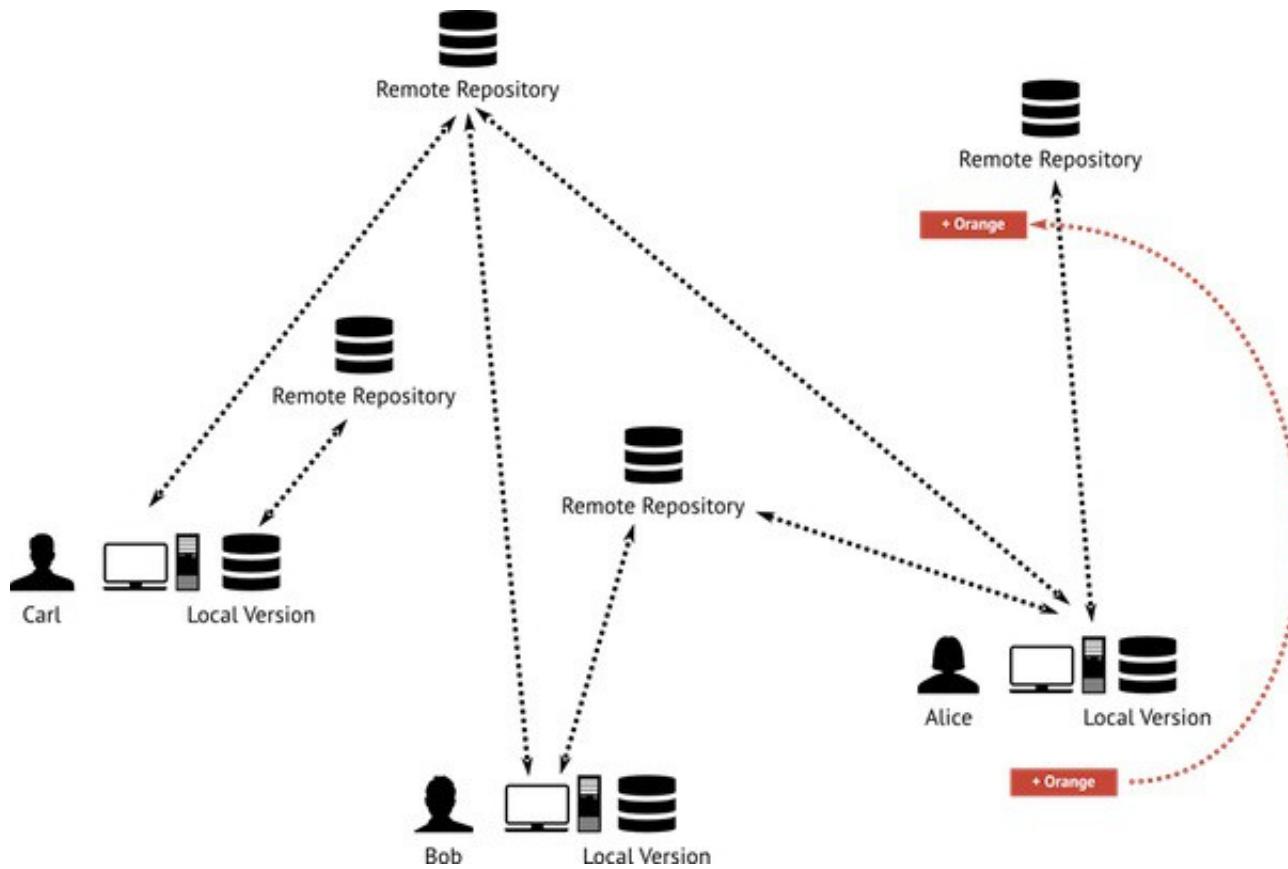
Version Control Systems: Git and Mercurial (Hg)

Distributed Version Control System



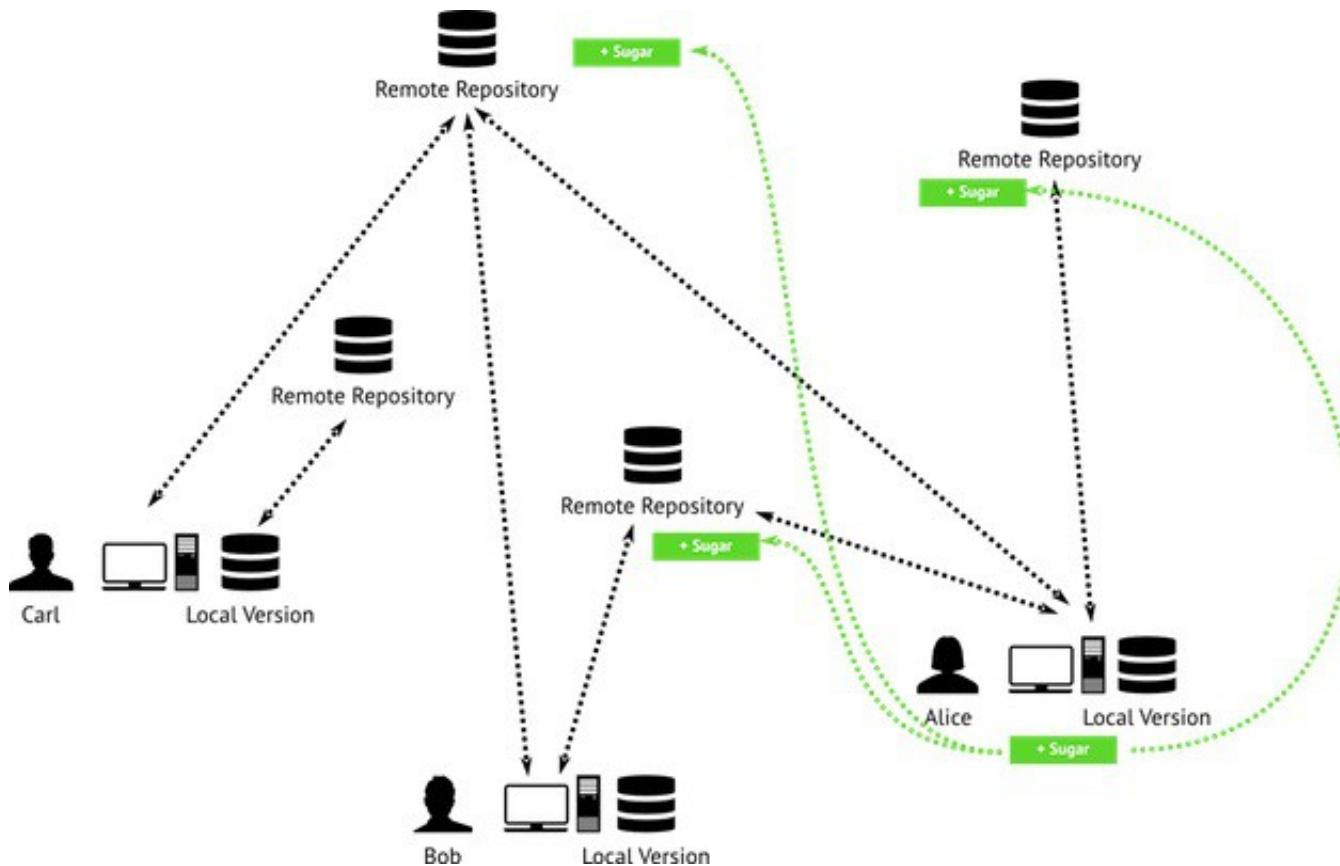
A more recent architecture, more evolved and popular. It usually tracks the state of the files, not just the changes.

Distributed Version Control System



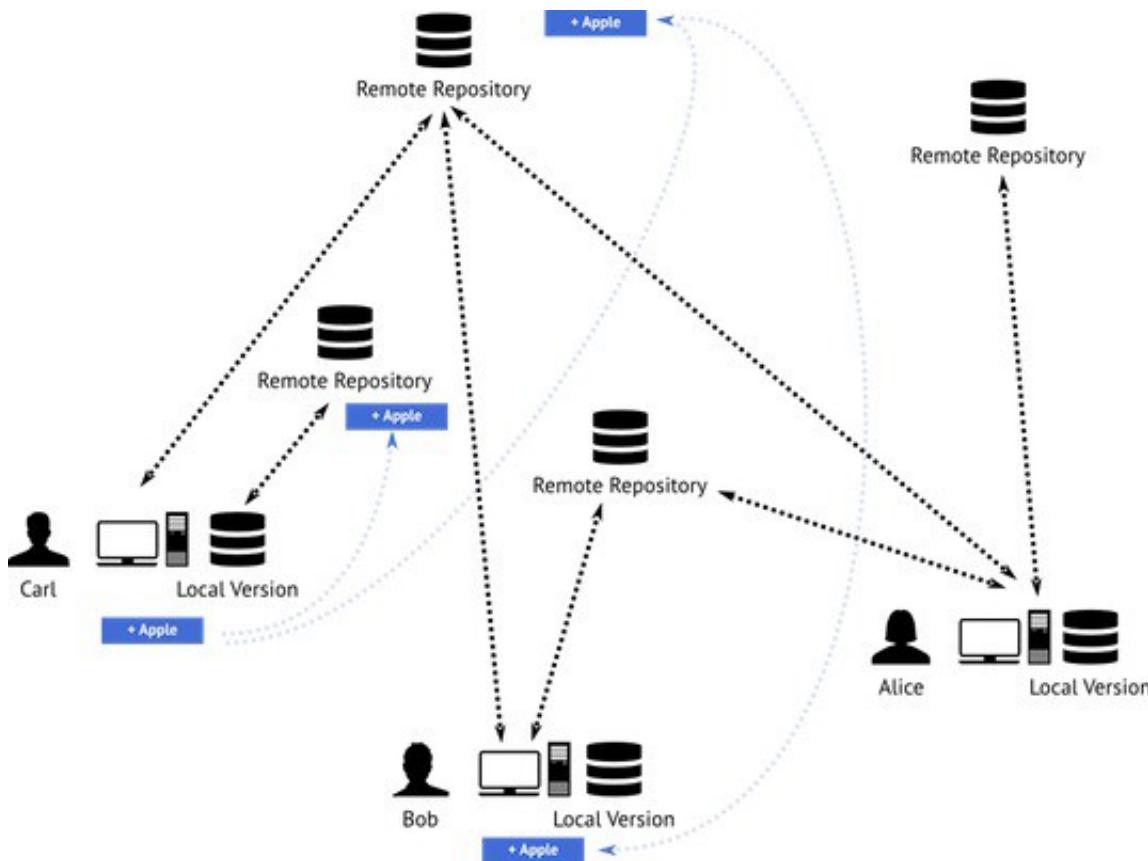
A more recent architecture, more evolved and popular. It usually tracks the state of the files, not just the changes.

Distributed Version Control System



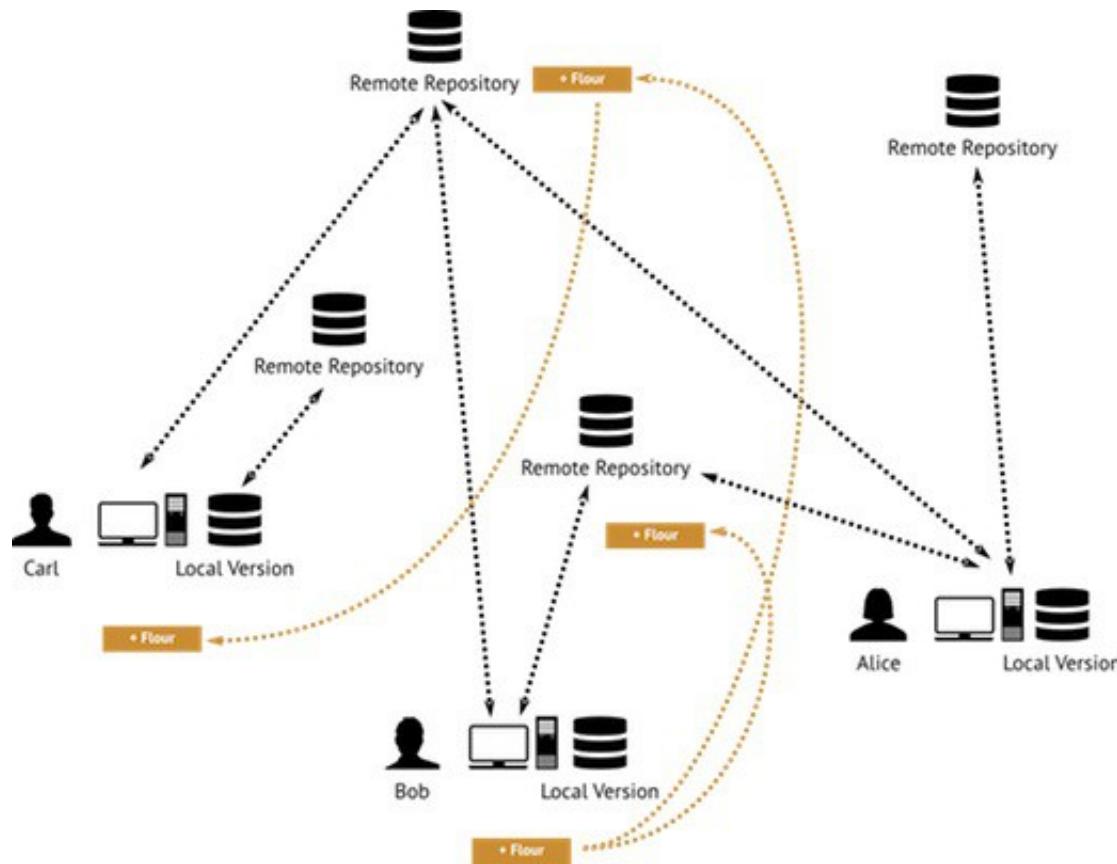
A more recent architecture, more evolved and popular. It usually tracks the state of the files, not just the changes.

Distributed Version Control System



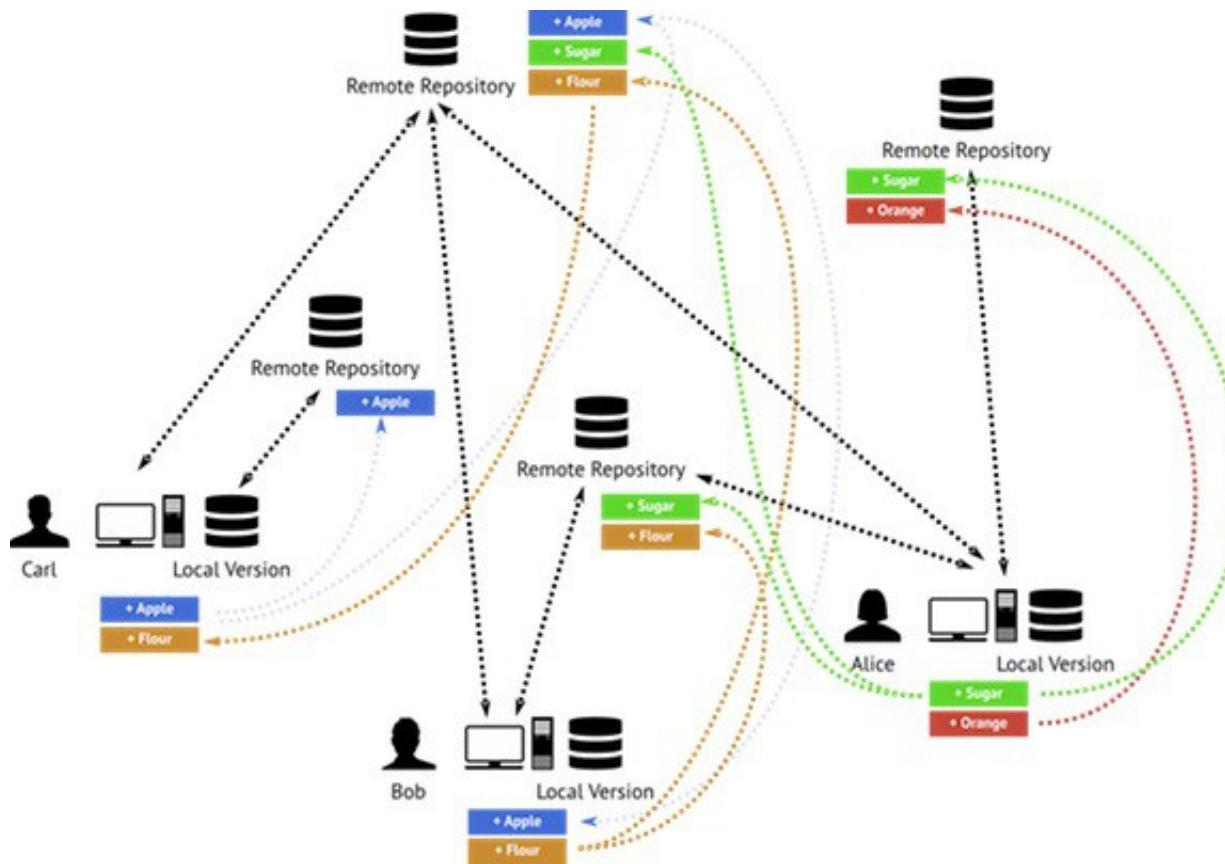
A more recent architecture, more evolved and popular. It usually tracks the state of the files, not just the changes.

Distributed Version Control System



A more recent architecture, more evolved and popular. It usually tracks the state of the files, not just the changes.

Distributed Version Control System



A more recent architecture, more evolved and popular. It usually tracks the state of the files, not just the changes.

Version Control System: the vocabulary (03)

Distributed Version Control Systems add new terms to the vocabulary:

- * **Clone**: create a working copy on your computer from another repository.
 - * **Push** : send a change to another repository (may require permission), even to your server.
 - * **Pull** : download the latest changes from an online repository.
-

Distributed Version Control System: Git

The screenshot shows the official Git website (<http://git-scm.com/>). At the top left is the Git logo with the tagline "local-branching-on-the-cheap". A search bar is at the top right. The main content area has a grid background. It starts with a brief introduction: "Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency." Below this is another paragraph: "Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**." To the right of the text is a diagram illustrating Git's distributed nature: seven computer nodes, each represented by a stack of four files, are interconnected by a network of colored lines (red, blue, green, yellow) forming a mesh-like structure. Below this section is a button labeled "Learn Git in your browser for free with Try Git." On the left side of the main content area, there are five circular icons with text labels: "About" (gear icon), "Documentation" (book icon), "Downloads" (download arrow icon), "Community" (speech bubble icon), and "Pro Git" (book icon). The "Downloads" section includes a note about binary releases for major platforms. The "Community" section encourages involvement through mailing lists and chat. The "Pro Git" section links to the online book. On the right side, there is a large image of a Mac desktop monitor displaying the latest stable release information: "Latest stable release 1.8.2.2" and a "Release Notes (2013-04-26)" link, with a "Download for Mac" button below it. At the bottom of the page are links for "Mac GUIs" and "Tarballs".

git --local-branching-on-the-cheap

Search entire site...

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**.

 Learn Git in your browser for free with **Try Git**.

About
The advantages of Git compared to other source control systems.

Documentation
Command reference pages, Pro Git book content, videos and other material.

Downloads
GUI clients and binary releases for all major platforms.

Community
Get involved! Mailing list, chat, development and more.

 **Pro Git** by Scott Chacon is available to read online for free. Dead tree versions

Latest stable release
1.8.2.2
Release Notes (2013-04-26)
[Download for Mac](#)

 **Mac GUIs**

 **Tarballs**

Developed by Linus Torvalds, for improving the distributed development of the Linux Kernel.

Source: <http://git-scm.com/>

An introduction to Git

 **git** --local-branching-on-the-cheap

[Search entire site...](#)

About

Documentation

- [Reference](#)
- [Book](#)
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- [External Links](#)

Blog

Downloads

Community

Download this book in [PDF](#), [mobi](#), or [ePub](#) form for free.

This book is translated into [German](#), [中文](#), [Taiwanese Mandarin](#), [French](#), [Japanese](#), [Dutch](#), [Russian](#), [Korean](#), [Brazilian Portuguese](#) and [Czech](#).

Partial translations available in [Arabic](#), [Spanish](#), [Indonesian](#), [Italian](#), [Finnish](#), [Macedonian](#), [Polish](#) and [Turkish](#).

Translations started for

Book

The entire Pro Git book, written by Scott Chacon and published by Apress, is available here. All content is licensed under the [Creative Commons Attribution Non Commercial Share Alike 3.0 license](#). Print versions of the book are available on [Amazon.com](#).



1. Getting Started

- [1.1 About Version Control](#)
- [1.2 A Short History of Git](#)
- [1.3 Git Basics](#)
- [1.4 Installing Git](#)
- [1.5 First-Time Git Setup](#)
- [1.6 Getting Help](#)
- [1.7 Summary](#)

2. Git Basics

- [2.1 Getting a Git Repository](#)
- [2.2 Recording Changes to the Repository](#)
- [2.3 Viewing the Commit History](#)

An open source book about using Git.

Git project hosting: GitHub.com

The screenshot shows the GitHub homepage. At the top, it displays "1,568,188 people hosting over 2,693,380 repositories". Below this, there's a search bar and a row of logos for various companies. The main content area is divided into two sections: "git /'git/" and "git·hub /'git,həb/'. Each section has a brief description and a large blue button labeled "Plans, Pricing and Signup" with the subtext "Unlimited public repositories are free!". Below these, there's a list of features: Team management, Code review, Reliable code hosting, and Open source collaboration. Each feature has a brief description and a "More about" link.

github

Signup and Pricing Explore GitHub Features Blog Login

1,568,188 people hosting over 2,693,380 repositories

jQuery, reddit, Sparkle, curl, Ruby on Rails, node.js, ClickToFlash, Erlang/OTP, CakePHP, Redis, and many more Find any repository

facebook. twitter Microsoft vmware redhat. LinkedIn mozilla

git /'git/
Git is an extremely fast, efficient, distributed version control system ideal for the collaborative development of software.

git·hub /'git,həb/
GitHub is the best way to collaborate with others. Fork, send pull requests and manage all your **public** and **private** git repositories.

Plans, Pricing and Signup
Unlimited public repositories are free!

Free public repositories, collaborator management, issue tracking, wikis, downloads, code review, graphs and much more...

Team management
30 seconds to give people access to code. No SSH key required. Activity feeds keep you updated on progress.
[More about collaboration](#)

Code review
Comment on changes, track issues, compare branches, send pull requests and merge forks.
[More about code review](#)

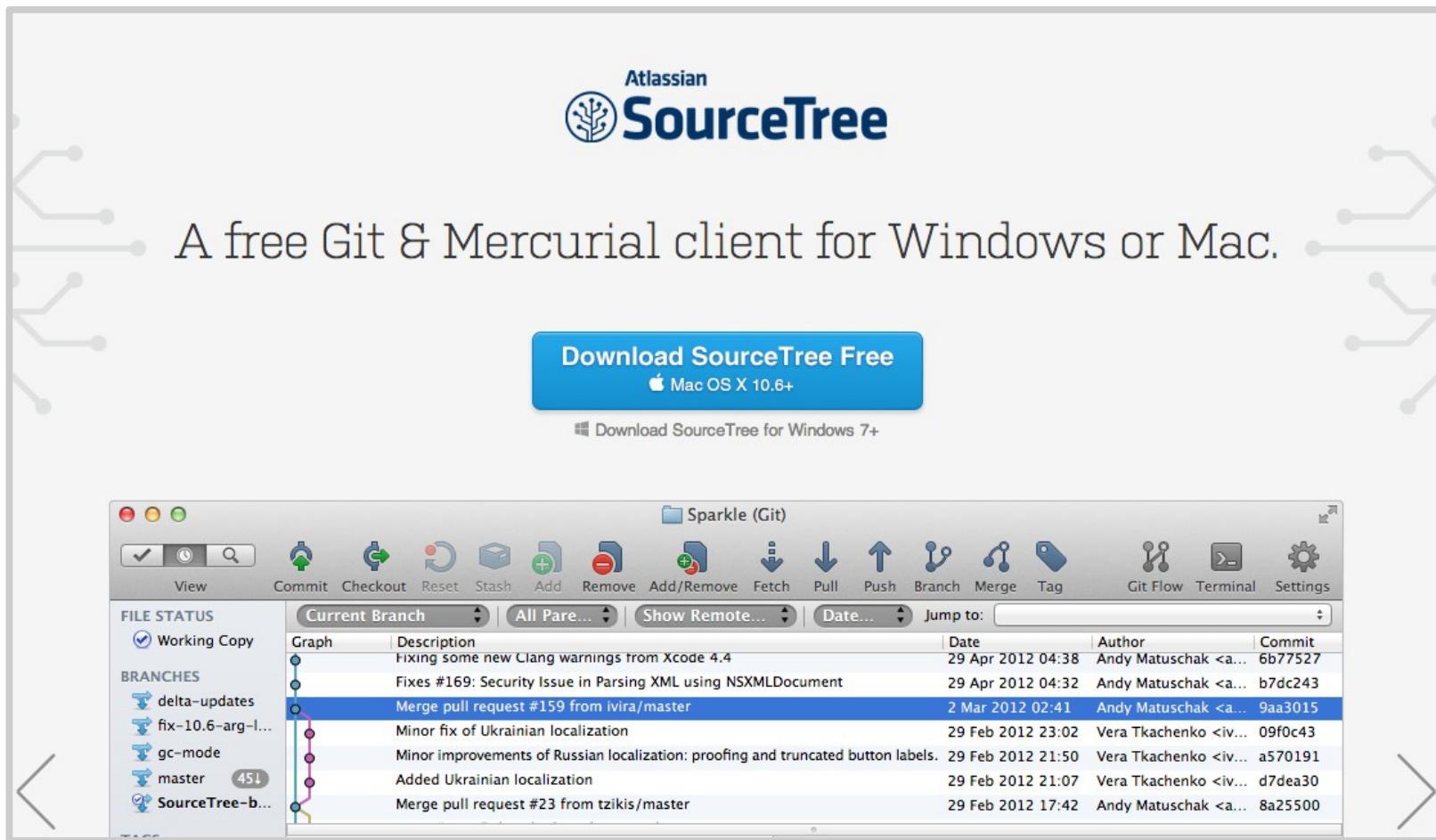
Reliable code hosting
We spend all day and night making sure your repositories are **secure**, **backed up** and **always available**.
[More about code hosting](#)

Open source collaboration
Participate in the most important open source community in the world today—online or at one of our meetups.
[More about our community](#)

The most popular (and refined) Git hosting available now, free plans for open source projects (you have to pay for private spaces).

Source: <https://github.com/>

Git Client: SourceTree (Mac, Win)



The image shows the SourceTree landing page and a screenshot of the application interface.

Landing Page:

- Atlassian SourceTree logo
- A free Git & Mercurial client for Windows or Mac.
- Download SourceTree Free (Mac OS X 10.6+)
- Download SourceTree for Windows 7+

Application Screenshot:

Sparkle (Git) - Current Branch: master

Graph	Description	Date	Author	Commit
	Fixing some new Clang warnings from Xcode 4.4	29 Apr 2012 04:38	Andy Matuschak <a...	6b77527
	Fixes #169: Security Issue in Parsing XML using NSXMLDocument	29 Apr 2012 04:32	Andy Matuschak <a...	b7dc243
	Merge pull request #159 from ivira/master	2 Mar 2012 02:41	Andy Matuschak <a...	9aa3015
	Minor fix of Ukrainian localization	29 Feb 2012 23:02	Vera Tkachenko <iv...	09f0c43
	Minor improvements of Russian localization: proofing and truncated button labels.	29 Feb 2012 21:50	Vera Tkachenko <iv...	a570191
	Added Ukrainian localization	29 Feb 2012 21:07	Vera Tkachenko <iv...	d7dea30
	Merge pull request #23 from tzikis/master	29 Feb 2012 17:42	Andy Matuschak <a...	8a25500

Actually, more than one GitX can be found...

Git project hosting: Gitorius.org

The best way to collaborate on distributed open source projects

Gitorious provides free open source infrastructure for open source projects that use Git.

LEARN MORE ABOUT OR THE PROJECTS WE HOST.

TRY IT — it's free! — OR — **LOG IN**

FEATURES — what we bring to the table.

Project hosting
Host your open source projects and their repositories for free on Gitorious to enable community contributions.

Project Wikis
Document your project using Gitorious' built-in wiki.

Activity monitoring
Keep track of project activity for both your personal projects and team projects.

Team contributions
Create development teams to encourage and organize cooperative development.

Public merge requests
Allow other developers to submit contributions to your project and merge them easily.

Project centric
Maintain all code repositories related to a single project under a single project area on Gitorious.

gitorious → gitorious

Branches: master

Commit log Source tree Merge requests (0)

Wednesday April 07 2010

PUSH 07:49 johan commented on gitorious/gitorious/22e03ac
Isum decided to leave for the far World of Grammar.

PUSH 07:49 johan commented on gitorious/gitorious/22e03ac
place and supplies it with the necessary regelarlia. It is a p
place and supplies it with the necessary regelarlia. It is a p

Free plans, and open source software itself.

Distributed Version Control System: Mercurial (hg)

The screenshot shows the official Mercurial website at <http://mercurial.selenic.com/>. The header includes the Mercurial logo and navigation links for about, guide, download, extensions, news/wiki, and sponsors, along with a search bar. The main content area features a large "Work easier Work faster" heading and a paragraph describing Mercurial as a free, distributed source control management tool. To the right, a prominent blue button says "Download now" with "Mercurial 2.0.2" and a download icon. Below it, there's a section for "Another OS?" with links for Mac OS X, Windows, and other operating systems. The sidebar on the left contains three sections: "How you can benefit from Mercurial" with icons for fast and powerful, easy to learn, and just works; and "Quick Start" with examples of cloning, committing, and creating projects.

Work easier
Work faster

Mercurial is a free, distributed source control management tool. It efficiently handles projects of any size and offers an easy and intuitive interface.

Download now
Mercurial 2.0.2
Mercurial 2.0.2 for Mac OS X

Another OS?
Get Mercurial for:
» Mac OS X
» Windows
» other

How you can benefit from Mercurial

It is **fast and powerful**
Mercurial efficiently handles **projects of any size and kind**. Every clone contains the whole project history, so most actions are local, fast and convenient. Mercurial supports a multitude of **workflows** and you can easily enhance its functionality with **extensions**.

It is **easy to learn**
You can follow our simple **guide** to learn how to revision your documents with Mercurial, or just use the **quick start** to get going instantly. A short overview of Mercurial's decentralized model is also **available**.

And it just works
Mercurial strives to deliver on each of its promises. Most tasks simply work on the first try and without requiring arcane knowledge.

Quick Start

Clone a project and push changes

```
$ hg clone http://selenic.com/repo
$ cd hello
$ (edit files)
$ hg add (new files)
$ hg commit -m 'My changes'
$ hg push
```

Create a project and commit

```
$ hg init (project-directory)
$ cd (project-directory)
$ (add some files)
$ hg add
$ hg commit -m 'Initial commit'
```

Open Source and distributed as Git, usually the most used in FabLabs.

An introduction to Mercurial

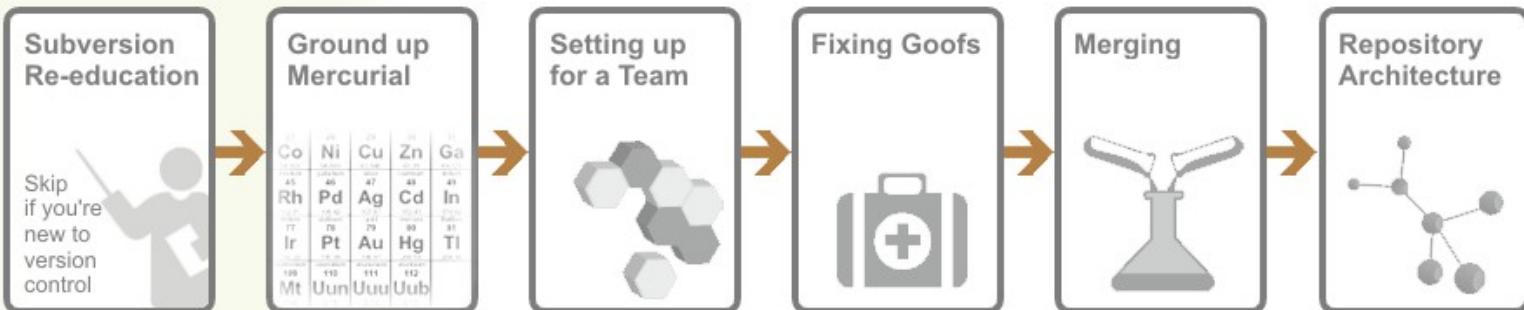
80

Hg Init

200.59

Hg Init: a Mercurial tutorial

Mercurial is a modern, open source, distributed version control system, and a compelling upgrade from older systems like Subversion. In this user-friendly, six-part tutorial, [Joel Spolsky](#) teaches you the key concepts.



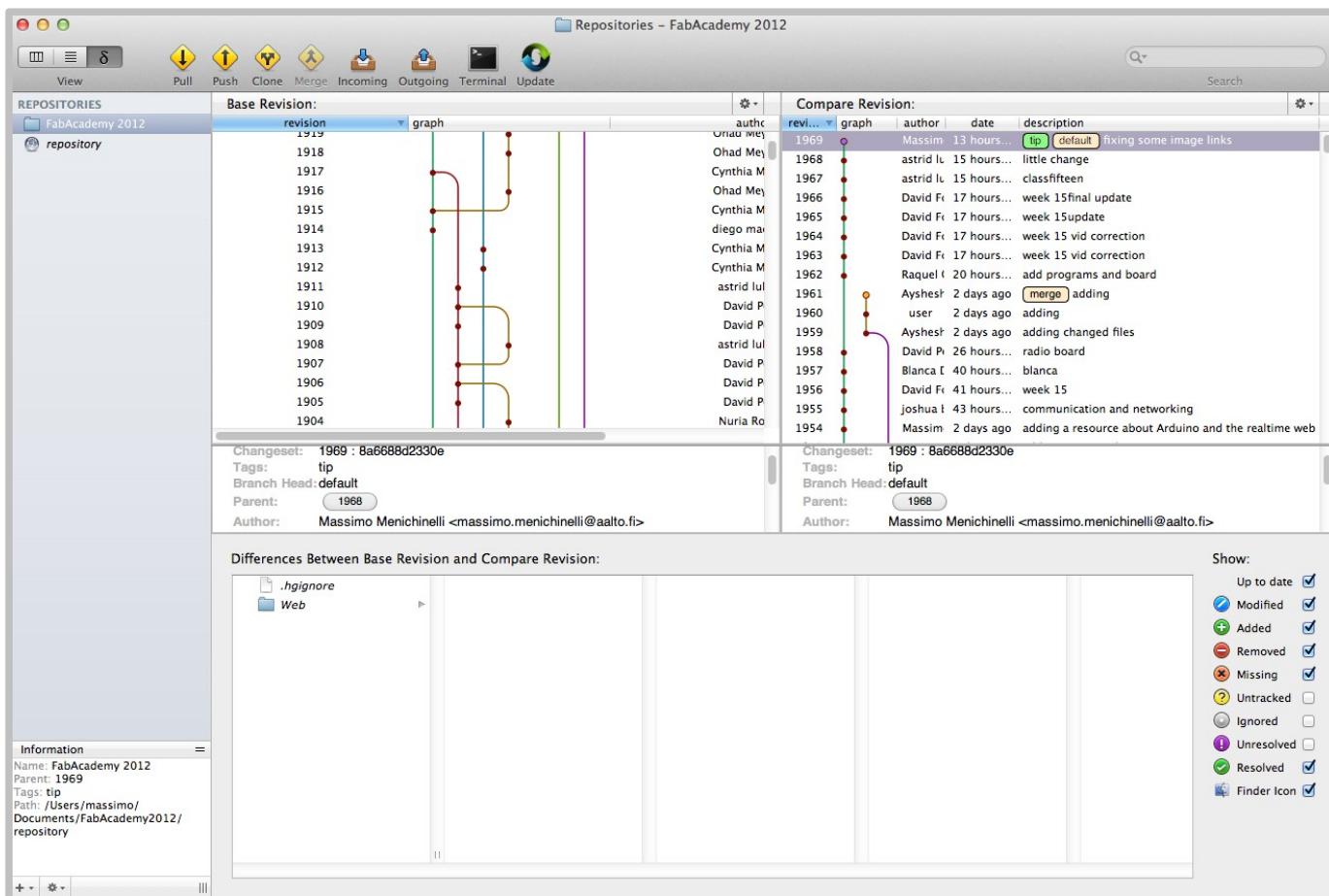
A complete and easy introduction to using Mercurial.

Git / Hg project hosting: Bitbucket.org

The screenshot shows the Bitbucket homepage with a dark blue header. The header includes the Atlassian Bitbucket logo, navigation links for Features, Pricing, Log in, and Sign up, and a search bar. Below the header, a large white text area on a blue background reads "Unlimited private code repositories". Underneath this, smaller text lists "FREE FOR 5 USERS + GIT OR MERCURIAL + LIGHTWEIGHT CODE REVIEW + MAC AND WINDOWS CLIENT". A sign-up form is present, featuring a "Username" field containing "openp2pdesign", a password field with ".....", and a blue "Sign up for free" button. At the bottom of the page, there is a "Free Git tutorials" link.

For both Git and Hg, free plan also for private projects.

Mercurial (hg) client: MacHg



Much better than the terminal for starting, and it has Mercurial packaged (no need to install it separately).

Source: <http://jasonfharris.com/machg/>

File comparison: Kaleidoscope (Mac)

Compare files with...

KALEIDOSCOPE

Use Kaleidoscope to **spot the differences** in text and image files. Review changes in seconds with the world's **most advanced** file comparison application.

[Download](#)  [Buy for €29](#) 

[30 Day Demo](#) [Introductory Price](#)

[Learn more...](#)

 **Text Scope**
Compare text and

 **Image Scope**
Review mockups

 **Workflow**
Integrate with just

 **Details**
Skim through the



Free trial for one month...

File comparison: Perforce P4Merge (Win, Mac, Linux)

The screenshot shows the official website for Perforce. At the top, there's a navigation bar with links for Company, Partners, Resources, a search bar, and a "Search" button. Below the navigation is a secondary menu with links for Products, Downloads, Documentation, Customers, Services, Purchase, and Support. A large banner in the center features the text "Create. Develop. Version everything with Perforce." and a paragraph describing the Perforce Server as a fast version management platform. To the right of this text is a testimonial from NYSE Euronext, which includes a small photo of a man and a quote: "*We're really not even close to maxing out the scalability of the Perforce server.*" Below the testimonial is a call-to-action button labeled "Try Perforce". At the bottom of the page, there's a section for the 2011.1 Beta Release, featuring a download link and a "Get the beta now" button.

PERFORCE

Company Partners Resources Search

Products Downloads Documentation Customers Services Purchase Support

1 2 3 4 5

Create. Develop. Version everything with Perforce.

Only Perforce products have the Perforce Server – the fast version management platform that powers productive teamwork. Built from the ground up to be scalable and easy to manage, Perforce helps thousands of the world's leading organizations innovate and succeed.

NYSE Euronext. uses Perforce throughout the entire technology lifecycle of the exchange.

"We're really not even close to maxing out the scalability of the Perforce server."

Why Perforce Try Perforce

Get the fast track on better SCM... Free 2 user trial or multi-seat evaluation...

Get the Perforce 2011.1 Beta Release. Check out the [beta features](#) or [download the beta now](#).

Perforce is another version control system, but it is interesting for its visual diff applications (freeware).

Source: http://www.perforce.com/product/components/perforce_visual_merge_and_diff_tools

File comparison: ComparePSD (Windows)

The screenshot shows the pixelnovel website interface. At the top, there's a navigation bar with links for 'timeline', 'Do you like it?', 'SVN account', 'customers', 'blog', and a 'sign in' button. Below the navigation, a breadcrumb trail shows the user has navigated to the 'comparepsd' section from the homepage. A green button on the left says 'ComparePSD for Windows'. To the right, there's a section titled 'ComparePSD' with the subtext 'compare two Adobe Photoshop files layer-by-layer a must-have tool for Photoshop professionals'. A large green button offers to 'download for FREE for Windows'. On the right side, there's a sign-up form for 'more exciting news' with fields for 'your email:' and a 'Kudos!' button. Below these sections, there's a large image showing two Photoshop file windows side-by-side, demonstrating the tool's interface for comparing layers.

Freeware for Windows, can compare Photoshop .psd files.

Source: <http://pixelnovel.com/comparepsd/>

Subversion hosting service: Pixelnovel

The screenshot shows the Pixelnovel website's SVN account page. At the top, there's a navigation bar with links for 'timeline', 'Do you like it?', 'SVN account', 'customers', and 'blog'. On the right, there's a 'sign in' button. Below the navigation, a breadcrumb trail shows 'account' as the current page. The main heading is 'PIXELNOVEL ACCOUNT IS A SUBVERSION HOSTING FOR DESIGNERS'. To the left, there are two buttons: 'SVN account' (highlighted) and 'Pricing & plans'. The central content area lists several features:

- 3 plans for your convenience, a **free account** is available
- View all your files online along with **previews and history***
- Is based on Subversion (SVN), a proved version control system
- Add more users to your account and manage their rights

* only available if used along with Timeline, the Subversion client for Adobe Creative Suite

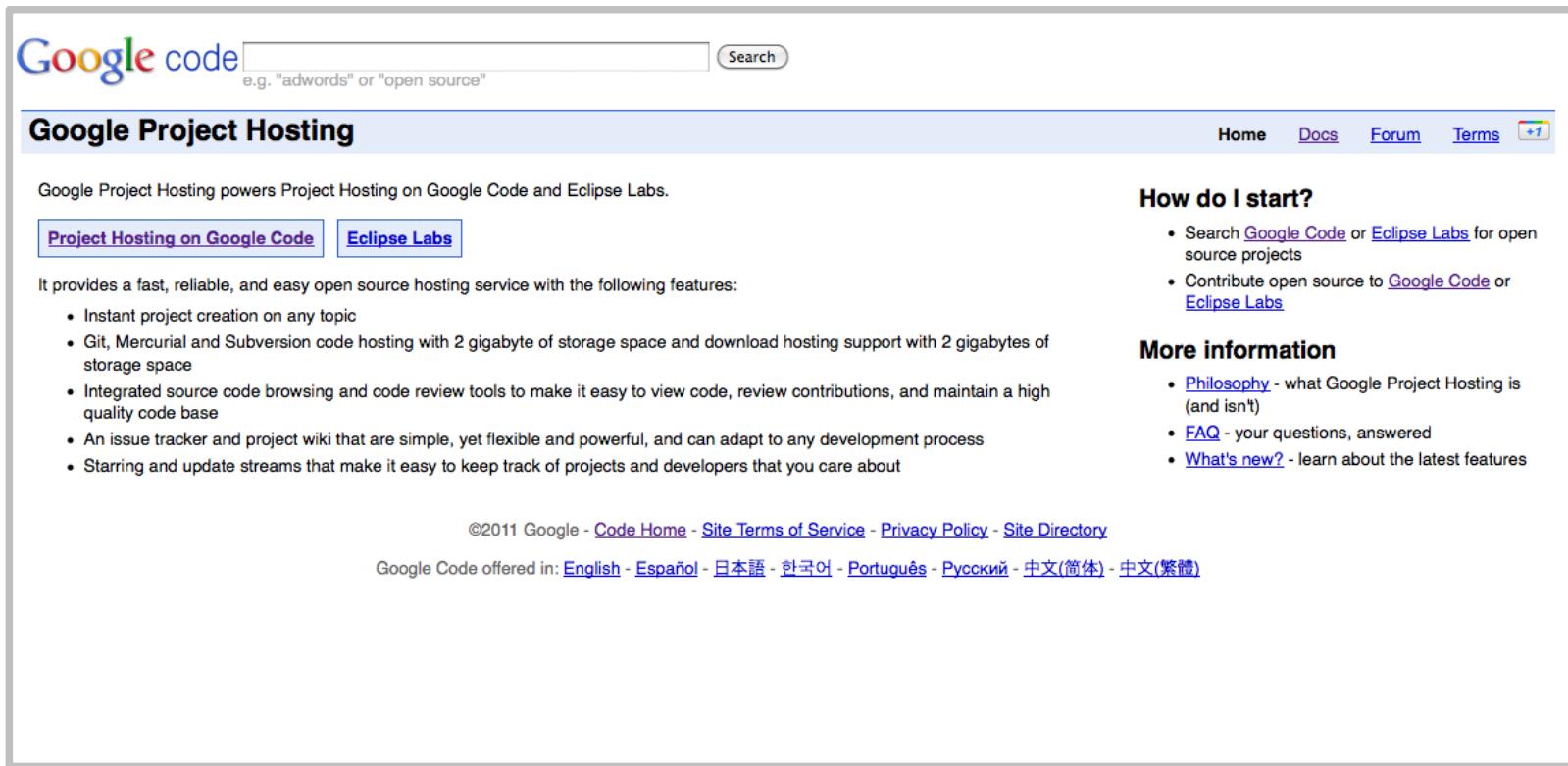
On the right side, there are two prominent buttons: 'SEE PLANS' and 'SIGN UP'.

“If you don't have your own SVN repository, a PixelNovel account will provide you with a hassle-free alternative, plus you get the extra features such as user management system and automatic back up**”**

Integrated with Photoshop: free plan (100 MB) and better paid plans.

Source: <http://pixelnovel.com svn-account/>

SVN / Git / Hg hosting service: Google Code



The screenshot shows the Google Project Hosting homepage. At the top, there's a search bar with placeholder text "e.g. 'adwords' or 'open source'" and a "Search" button. Below the search bar, the title "Google Project Hosting" is displayed. To the right of the title are links for "Home", "Docs", "Forum", "Terms", and a plus sign icon. A banner below the title states "Google Project Hosting powers Project Hosting on Google Code and Eclipse Labs." There are two blue buttons: "Project Hosting on Google Code" and "Eclipse Labs". A section titled "How do I start?" contains a bulleted list: "Search Google Code or Eclipse Labs for open source projects", "Contribute open source to Google Code or Eclipse Labs", and "Create a project on Google Code or Eclipse Labs". Another section titled "More information" lists "Philosophy", "FAQ", and "What's new?". At the bottom, copyright information and language links are provided.

Google code e.g. "adwords" or "open source"

Google Project Hosting

Home Docs Forum Terms +1

Google Project Hosting powers Project Hosting on Google Code and Eclipse Labs.

[Project Hosting on Google Code](#) [Eclipse Labs](#)

It provides a fast, reliable, and easy open source hosting service with the following features:

- Instant project creation on any topic
- Git, Mercurial and Subversion code hosting with 2 gigabyte of storage space and download hosting support with 2 gigabytes of storage space
- Integrated source code browsing and code review tools to make it easy to view code, review contributions, and maintain a high quality code base
- An issue tracker and project wiki that are simple, yet flexible and powerful, and can adapt to any development process
- Starring and update streams that make it easy to keep track of projects and developers that you care about

©2011 Google - [Code Home](#) - [Site Terms of Service](#) - [Privacy Policy](#) - [Site Directory](#)

Google Code offered in: [English](#) - [Español](#) - [日本語](#) - [한국어](#) - [Português](#) - [Русский](#) - [中文\(简体\)](#) - [中文\(繁體\)](#)

Free for open source projects.



Aalto University
Media Factory

03. QR Code: bits about a project from its atoms

Retrieving the source code of an object

The screenshot shows a blog post titled "ARDUINO TOOL THAT CONNECTS EACH BOARD TO ITS OWN SOURCE" by Dave Vondle on March 15, 2012. The post includes a screenshot of the Arduino IDE interface with the "Tools" menu open, highlighting the "Retrieve Source" option. The post discusses the challenge of tracking down source code for physical devices and introduces a tool to solve this problem. It also provides links to the GitHub page and direct download.

15 MAR '12 ARDUINO TOOL THAT CONNECTS EACH BOARD TO ITS OWN SOURCE BY DAVE VONDLE

Arduino File Edit Sketch Tools Help

Auto Format ⌘T
Archive Sketch
Fix Encoding & Reload
Serial Monitor ⌘M
Retrieve Source
Upload Source to Github
Board
Serial Port
Programmer
Burn Bootloader

If you create something with Arduino and put it out into the world, there is no well-established link to the source. If you personally made the device, the source can get lost over time. If you didn't create it, you could have a tough time tracking the source down. You have the physical device, why can't it tell you where its code lives?

I made a tool for Arduino called "Upload-And-Retrieve-Source" that for the most part solves this problem.

Github page [here](#), direct download link [here](#)

HOME ABOUT CONTACT

ABOUT IDEO LABS

IDEO Labs is a place where we can show bits of what we're working on, talk about prototyping, and share our excitement over the tools that help us create.

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3D
Arduino
flash
Hack
iPhone
multi-touch
open source

What about retrieving the information about a project, in order to be able to modify it? If we work with Arduino, there is this software from IDEO.

Source: <http://labs.ideo.com/2012/03/15/arduino-tool-that-connects-each-board-to-its-own-source/>

Dead Drops: local (really!) information

The screenshot shows the official website for 'dead drops'. The main content area features the project's logo (a stylized 'dd' inside a circle) and the tagline 'Un-cloud your files in cement! 'Dead Drops' is an anonymous, offline, peer to peer file-sharing network in public space.' Below this is a navigation bar with links to 'About', 'Dead Drops', 'Blog', 'Forum', 'Media & Press', and 'Contact'. The 'About' section contains a photograph of a small USB drive embedded in a brick wall. The sidebar on the right includes a search bar, a 'Pages' menu with links to 'Dead Drops', 'Database, Map & Submit', 'FAQ', 'How to make your own', 'Manifesto', and 'Mobile Apps', and social sharing buttons for Facebook ('Like') and Flattr.

About



'Dead Drops' is an anonymous, offline, peer to peer file-sharing network in public space. USB flash drives are embedded into walls, buildings and curbs accessible to anybody in public space. Everyone is invited to drop or find files on a dead drop. Plug your laptop to a wall, house or pole to share your favorite files and data. Each dead drop is installed empty except a readme.txt file explaining the project. 'Dead Drops' is open to participation. If you want to install a dead drop in your city/neighborhood follow the ['how to' instructions](#) and submit the location and pictures.

Search
To search, type and hit enter

Pages

- [Dead Drops](#)
 - [Database, Map & Submit](#)
 - [FAQ](#)
 - [How to make your own](#)
 - [Manifesto](#)
 - [Mobile Apps](#)

 Like  Emile Hooge and 20,670 others like this.

 Flattr

85

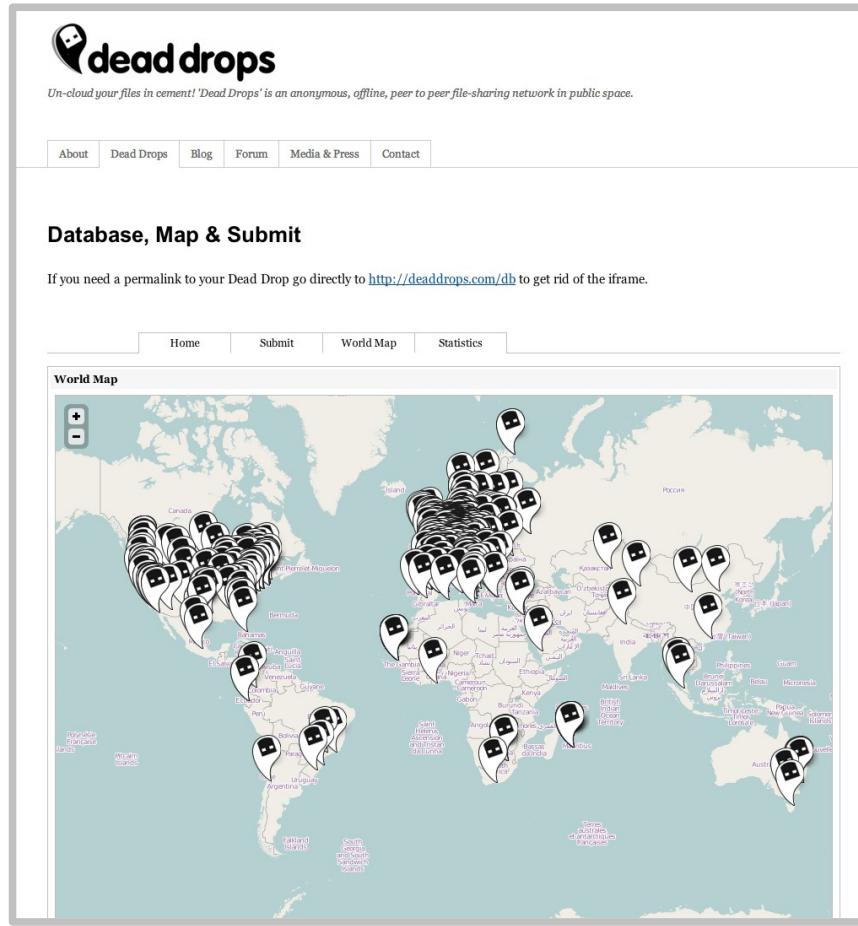
 Aram Bartholl
Dead_Drops

Dead_Drops hehe THXI RT @basisffm
Danke @arambartholl für den
spannenden Vortrag! Die Doku legen wir
auf unseren neuen @dead_drops
[deaddrops.com/dead_drops_arambartholl](#)

‘Dead Drops’ is an anonymous, offline, peer to peer file-sharing network in public space. USB flash drives are embedded into walls accessible to anybody.

Source: <http://deaddrops.com/>

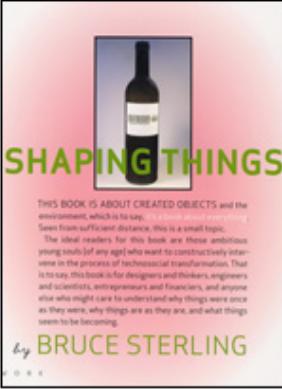
Dead Drops: how to find them



‘Dead Drops’ is an anonymous, offline, peer to peer file-sharing network in public space. USB flash drives are embedded into walls accessible to anybody.

Source: <http://deaddrops.com/dead-drops/db-map/>

Spime: sp(ace) + (ti)me of an object



Shaping Things
Bruce Sterling
Designed by Lorraine Wild

► [Table of Contents and Sample Chapters](#)

"*Shaping Things* is about created objects and the environment, which is to say, it's about everything," writes Bruce Sterling in this addition to the Mediawork Pamphlet series. He adds, "Seen from sufficient distance, this is a small topic."

Sterling offers a brilliant, often hilarious history of shaped things. We have moved from an age of artifacts, made by hand, through complex machines, to the current era of "gizmos." New forms of design and manufacture are appearing that lack historical precedent, he writes; but the production methods, using archaic forms of energy and materials that are finite and toxic, are not sustainable. The future will see a new kind of object—we have the primitive forms of them now in our pockets and briefcases: user-alterable, baroquely multi-featured, and programmable—that will be sustainable, enhanceable, and uniquely identifiable. Sterling coins the term "spime" for them, these future manufactured objects with informational support so extensive and rich that they are regarded as material instantiations of an immaterial system. Spimes are designed on screens, fabricated by digital means, and precisely tracked through space and time. They are made of substances that can be folded back into the production stream of future spimes, challenging all of us to become involved in their production. Spimes are coming, says Sterling. We will need these objects in order to live; we won't be able to surrender their advantages without awful consequences.

The vision of *Shaping Things* is given material form by the intricate design of Lorraine Wild. *Shaping Things* is for designers and thinkers, engineers and scientists, entrepreneurs and financiers—and anyone who wants to understand and be part of the process of technosocial transformation.

About the Author

Hugo Award-winning science fiction author and futurist Bruce Sterling has been called by *Time* "perhaps the sharpest observer of our media-choked culture working today in any genre." Three of his novels have been *New York Times* Notable Books of the Year, and he has been a contributing writer for *Wired* since its conception. In 2005 he is "Visionary-in-Residence" at Art Center College of Design, Pasadena. Bruce Sterling's blog *Beyond the Beyond* has been active since 2003.

ADD TO CART

Other Editions
[Cloth \(2005\)](#)

Series
[Mediaworks Pamphlets](#)

Spime is a neologism for a currently theoretical object that can be tracked through space and time throughout the lifetime of the object.

Source: <http://mitpress.mit.edu/catalog/item/default.asp?id=10603&ttype=2>

<http://en.wikipedia.org/wiki/Spime>

Evrythng.com

LOG IN ▶

HOME PRODUCTS AND SERVICES ABOUT US DEVELOPERS

Find out more about Active Digital Identities

We can help personalize individual products for every customer.

MORE ▶

Because every physical thing can be digitally connected.

EVRYTHNG is a software engine for creating Active Digital Identities. These are unique online profiles for products and other objects to make them part of the Web. Now every physical thing can be digitally connected.

Engine ▶

- Give a unique online profile to any physical thing
- Share and manage access with others
- Use a rich set of APIs to build apps and services

Services ▶

- Design how to connect each product with customers
- Build connected product experiences and services
- Use our portfolio of existing product applications

EVRYTHNG is a software engine for creating Active Digital Identities, unique online profiles for objects to make them part of the Web and digitally connected.

Source: <http://evrythng.com/>

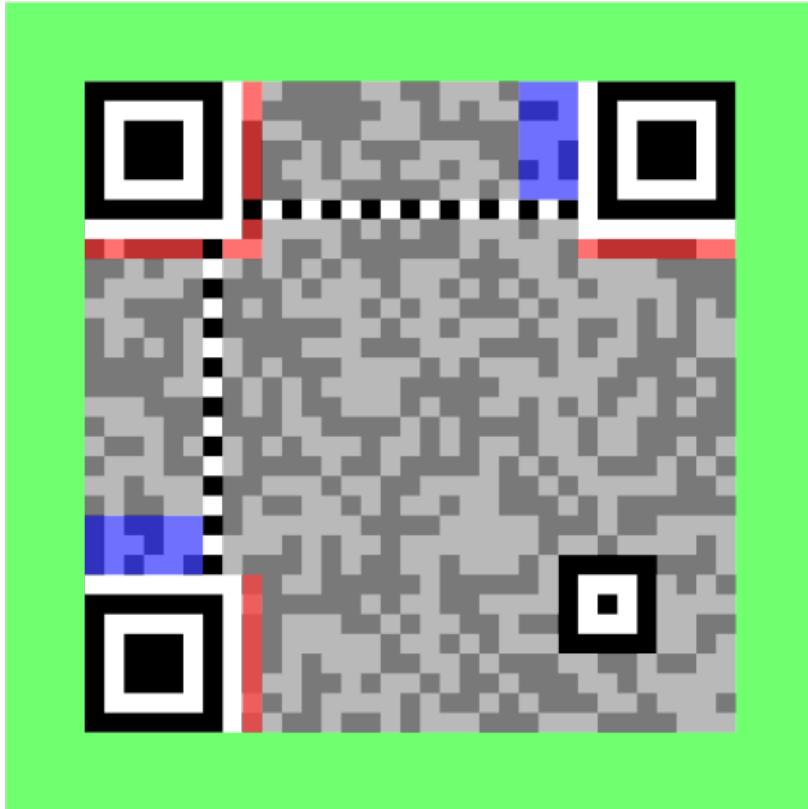
Tales of things (.com)

The screenshot shows the homepage of the Tales of things beta website. At the top, there's a logo with two fish and the tagline "it's a memory thing". Below it, the main title "tales of things" is displayed with "beta" underneath. A search bar says "Search things, tales and groups". Navigation links include "tales of things", "my things", "world of things", "scan a thing", and "groups". On the right, there are fields for "Username" and "Password" with a "Login" button. A large blue arrow points from the left towards the right, containing the text "Connecting anything with any media, anywhere!" followed by a descriptive paragraph about linking objects to video memories or articles via QR codes. To the right of the arrow is a call-to-action: "Sign up and start sharing your tales. It's free and anyone can join". Below the arrow, there are sections for "Latest Things", "Recently Viewed", and "Popular Tales", each showing small thumbnail images and titles like "Justin's Cartoon", "Chris's Cartoon", etc. On the right side, there's a "Learn More" section with a video player, an "App Store" link for iPhone and Android, and information about Oxfam's Shelflife app. The footer contains copyright and funding information, along with a Twitter follow us link.

Tales of Things allows just that with a quick and easy way to link any media to any object via small printable tags known as QR codes.

Source: <http://www.talesofthings.com/>

Q(uick)R(esponse) Code



1. Version information
2. Format information
3. Data and error correction keys
4. Required patterns
 - 4.1. Position
 - 4.2. Alignment
 - 4.3. Timing
5. Quiet zone

QR Code is the trademark for a type of matrix / 2D barcode that can encode four standardized kinds of data (numeric, alphanumeric, byte/binary, Kanji).

Source: http://en.wikipedia.org/wiki/QR_code

QR Code: data storage

The amount of data that can be stored in the QR Code symbol depends on the **datatype** (mode, or input character set), **version** (1,...,40, indicating the overall dimensions of the symbol), and **error correction level** (L[ow], M[edium], Q[uality], H[igh]). The maximum storage capacities are:

- * **Numeric only:** max. 7,089 characters (0, 1, 2, 3, 4, 5, 6, 7, 8, 9)
 - * **Alphanumeric:** max. 4,296 characters (0–9, A–Z [upper-case only], space, \$, %, *, +, -, ., /, :)
 - * **Binary/byte:** max. 2,953 characters (8-bit bytes) (23624 bits)
 - * **Kanji/Kana:** max. 1,817 characters
-

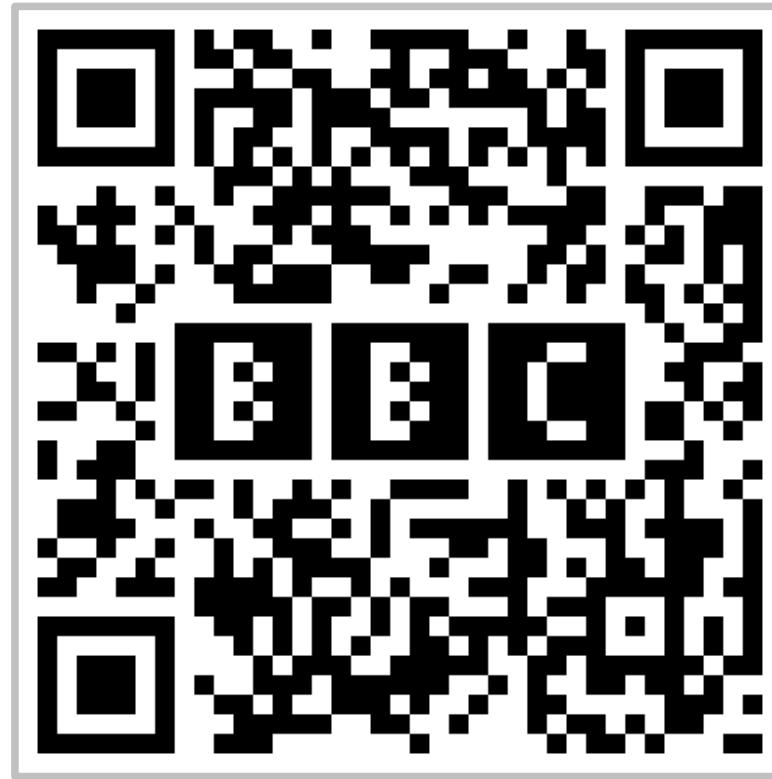
QR Code: data storage



The more information is encoded, the finer
the details of the code.

Source: http://en.wikipedia.org/wiki/QR_code

QR Code: error tolerance and customization



You can “hack” a QR Code thanks to its tolerance to errors.

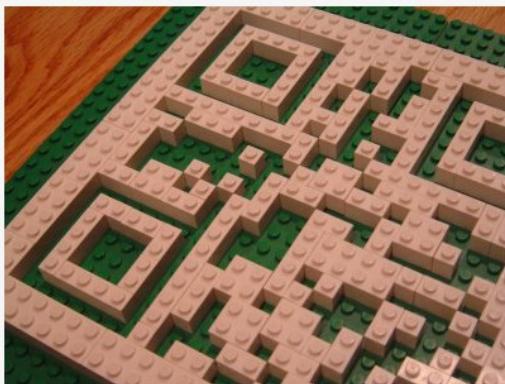
QR Codes: not just printed paper

QR codes in Lego

I've been experimenting with [QR codes](#) (2-d bar codes) with my mobile phone. While helping my daughter assemble a Lego® spaceship, I had the random thought that maybe I could build a QR code out of Lego. Would such a QR code be readable, or would the bumps and gaps mess it up?

To find out, I generated a QR code and started assembling it out of my daughter's spare Lego pieces. This would have been much easier if she had a lot of small white pieces, so I needed to really dig to find the necessary 1x1 blocks. (I'm pretty sure that determining if a code can be tiled with a specific set of blocks is a NP-complete problem, but my manual heuristics were sufficient to get it assembled.)

The moment of truth... would it scan? No, not at all. The problem was I needed a border around the code block and I'd put the pieces too close to the edge. So I laboriously shifted all the pieces over and added a white border.



LEGO Star Wars
MagnaGuard Starfighte...
LEGO

Buy from amazon.com

Privacy Information

With the border, the QR code scanned amazingly well. Here's a camera-eye view. If you have a barcode-enabled phone, you can probably scan this off the screen:



You can create QR codes with existing materials, objects and building blocks...

Source: <http://www.arcfn.com/2009/01/qr-codes-in-lego.html>

QR Codes: not just printed paper

A QR CODE BUILT FROM EVERYDAY OBJECTS

THURSDAY 12.15.2011 , POSTED BY BENJAMIN STARR

SHARE: [Tweet](#) 25 [Like](#) 16 [+1](#) 4 [Pin it](#) [Submit](#)



QR codes seem to be cropping up everywhere you look, from tags in electronics stores to flyers stapled to telephone poles... so it's really nice to see this [completely original project](#) from David Sykes. To promote his newly launched website, Sykes created an 8 foot square model of a QR code using objects sourced directly from his studio. He then photographed the 'cityscape' of stuff from above and made 8x10 prints retaining the full frame of the shot. By including the studio floor and rebates in the image, he gave the whole piece a further sense of depth. Possibly my favorite aspect of the project was the mysterious way each print arrived at its recipient: in an anonymous photograph mailer with no mention of who it was from. Brilliant!

You can create QR codes with existing materials, objects and building blocks...

Source: <http://www.visualnews.com/2011/12/15/a-qr-code-built-from-everyday-objects/>

QR Codes: not just printed paper



You can create QR codes with existing materials, objects and building blocks...

Source: <http://www.elenabelmann.blogspot.com/2011/02/objekt-als-informationstrager.html>

QR Codes: an easy way to create them

The screenshot shows a web interface for generating QR codes. At the top, there's a QR code icon and text explaining the service: "Create QR codes from different kinds of data, and download your code both in a rasterized (PNG) and vector format (PDF, SVG, EPS). Feedback/suggestions? Leave your message." Below this is a large heading "What do you want to turn into a QR code?". On the left, a vertical list of options includes "Regular text" (which is highlighted in blue), "Hyperlink", "Phone number", "Email address", "meCard", "vCard", and "WiFi settings". To the right of this list is a text input field and a "more options" button. At the bottom right is a prominent "CREATE" button. At the very bottom of the interface are social sharing links for Facebook and Twitter.

Create QR codes from different kinds of data, and download your code both in a rasterized (PNG) and vector format (PDF, SVG, EPS).
Feedback/suggestions? Leave your message.

What do you want to turn into a QR code?

Regular text

Hyperlink

Phone number

Email address

meCard

vCard

WiFi settings

more options

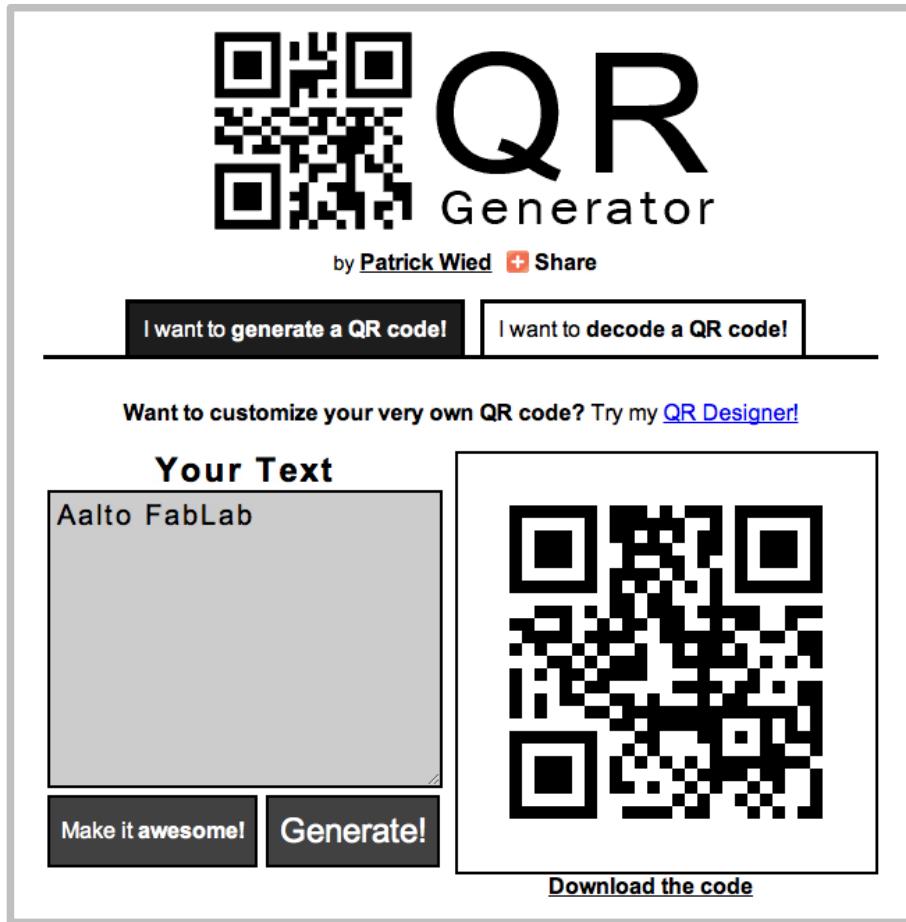
CREATE

Like Tweet

Many online free services will create QR Codes for you starting from many different kinds of information.

Source: <http://qrcode.littleidiot.be/>

QR Codes: an easy way to create (and decode) them



Many online free services will create QR Codes for you starting from many different kinds of information.

Source: <http://www.patrick-wied.at/static/qrgen/>

QR Codes: an easy way to create them

The screenshot shows the homepage of QRStuff.com. At the top, there's a navigation bar with links for HOME, ABOUT THIS SITE, QR CODES, PHONE SOFTWARE, EXAMPLES, FAQS, and AFFILIATES. There are also social media links for Twitter, Facebook, and a BLOG. A login form with fields for Email and Password is visible, along with links for Register and Forgot Password?.

The main content area features four numbered steps for creating a QR code:

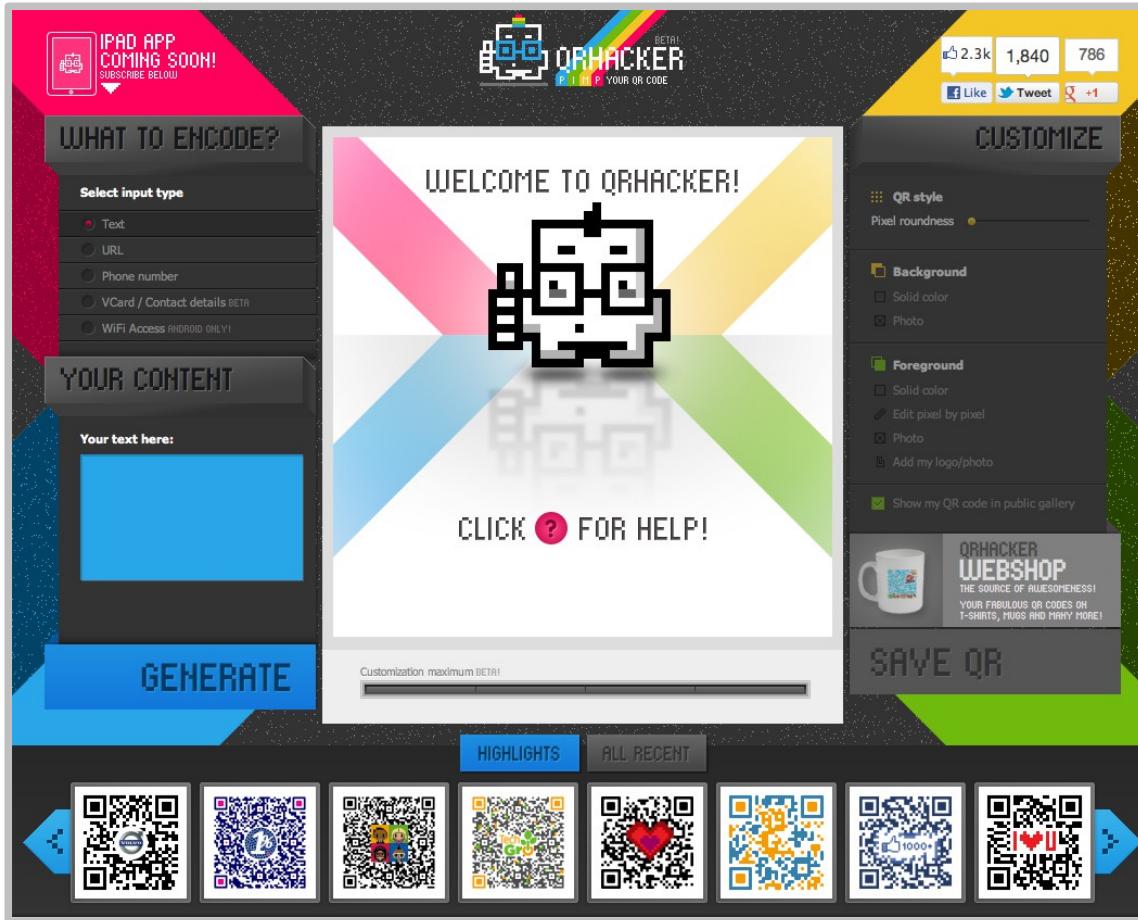
- 1 DATA TYPE:** A list of options including Website URL, YouTube Video, Google Maps Location, Twitter, Facebook, LinkedIn, Foursquare, iTunes Link, Plain Text, Telephone Number, Skype Call, SMS Message, Email Address, Email Message, Contact Details (VCARD), Event (VCALENDAR), Wifi Login (Android Only), and Paypal Buy Now Link. The "Website URL" option is selected.
- 2 CONTENT:** A field labeled "Website URL" containing "http://". Below it are two radio button options: "Embed URL into code as-is" (selected) and "Use our qrs.ly URL shortener". A note below says "Subscribers get analytics and dynamic QR code editing when using our URL shortener."
- 3 FOREGROUND COLOUR:** A color picker showing a gradient from purple to red. It includes a "Foreground Colour (Hex)" input field with "000000" and a color swatch. A note below says "Subscribers can also specify image size and resolution, and choose from 6 raster or vector output file types and 4 error correction levels."
- 4 OUTPUT TYPE:** Options for DOWNLOAD, PRINT, EMAIL, and BATCH FILE UPLOAD. There's also a section titled "PUT YOUR CODE ON OTHER STUFF" showing various items like a t-shirt, a mug, and a bag with QR codes on them. A note below says "Dynamically create your own custom QR code products".

On the right side of the main content area, there's a large preview of a QR code and a "DOWNLOAD QR CODE" button.

Many online free services will create QR Codes for you starting from many different kinds of information.

Source: <http://www.qrstuff.com/>

QR Codes: an easy way to create them



Many online free services will create QR Codes for you starting from many different kinds of information.

Source: <http://www.qrhacker.com/>

QR Codes: an easy way to create a stencil

The screenshot shows a web page from the Make: magazine website. The header features the 'Make:' logo with the tagline 'technology on your time'. Below the header is a navigation bar with four tabs: 'Blog' (highlighted in green), 'MAKE Magazine' (red), 'Videos/Podcasts' (blue), and 'Make: Projects' (orange). A breadcrumb navigation bar indicates the current location: 'Home / Culture jamming / QR Stenciler'. The main title of the article is 'QR Stenciler'. To the left of the main content, there is a sidebar with text from Golan Levin at fffff.at, which reads: 'writes: Yep, it's a QR code stencil'. The main content area contains a photograph of a QR code stencil painted on a concrete surface. Below the image, a paragraph of text discusses the 'QR_STENCILER' utility and 'QR_HOBO_CODES'.

Golan
Levin at
fffff.at
writes:

Yep,
it's a
QR
code
stencil

generator! We present **QR_STENCILER**, a free, fully-automated utility which converts QR codes into vector-based stencil patterns suitable for laser-cutting. Additionally, we present **QR_HOBO_CODES**, a series of one hundred QR stencil designs which, covertly marked in urban spaces, may be used to warn people about danger or clue them into good situations. The QR_STENCILER and the QR_HOBO_CODES join the [Adjustable Pie Chart Stencil](#) in our suite of homebrew "infoviz graffiti" tools for locative and situated information display.

... and there are even libraries for creating stencil of QR
Codes that you can laser cut!

Source: <http://blog.makezine.com/2011/07/20/qr-stenciler/>

QR Codes: you can track the position as well

springwise.com
YOUR ESSENTIAL FIX OF ENTREPRENEURIAL IDEAS

In Croatia, postage stamps made trackable via QR code

Croatia's Hrvatska Pošta has created postage stamps featuring QR codes that can be used to track mail and confirm delivery.

The image shows a collage of Croatian postage stamps on the left and a map of Central Europe on the right. The stamps feature QR codes and the text 'TT379K' and 'www.gimarks.pista.hr'. The map shows delivery routes from various countries like Switzerland, Austria, Slovenia, Croatia, and Serbia to destinations like Vienna, Budapest, and Belgrade. Numerous red and black location markers are placed along these routes, indicating tracking points.

1st November 2011 in Government.

As postal services around the globe struggle to keep up with the online era, we've already seen all-digital stamps rolled out in Denmark. Now it looks like Croatia's own Hrvatska Pošta has come up with a different solution: postage stamps featuring QR codes that can be used to track the mail and confirm delivery.

As you can link an identity to an object with a QR Code,
then we can track where this identity moves.

Source: <http://www.springwise.com/government/croatia-postage-stamps-trackable-qr-code/>

QR Codes: you can add related information

springwise.com
YOUR ESSENTIAL FIX OF ENTREPRENEURIAL IDEAS

On cigarette packages, QR codes reveal a nearby place to smoke

Ronhill has begun to use QR codes on its cigarette packaging to help consumers find a nearby place to smoke.



8th September 2011 in Lifestyle & Leisure.

Just as today's prevalent smoking bans can lead to a lot of cigarette butts on the doorsteps of public places, so the increasingly smoke-free world can make it difficult for smokers to find a place to enjoy their habit. Enter Croatian cigarette brand Ronhill, which has begun to use QR codes on its packaging to help consumers find a nearby place to smoke.

You can provide related information and build apps and services around an object!

Source: http://www.springwise.com/lifestyle_leisure/cigarette-packages-qr-codes-reveal-nearby-place-smoke/

QR Codes: you can add related information

Steelcase

PRODUCTS SERVICES RESOURCES SHOP COMPANY

Leap: QR Codes

Overview Gallery Environmental Adjustability QR Codes

QR codes help users learn how to properly adjust the Leap chair.

To help users quickly find information on how to properly adjust their chairs to be more comfortable, Steelcase will be adding QR codes to the arms of its best selling ergonomic task chairs, such as Leap (available fall 2011).

How does the QR code work?

Once a user scans the QR code with a mobile device, they are taken to a mobile-friendly site that plays an interactive video showing chair adjustments.

The QR code connects users to information about their chair that is relevant to them:

- how to adjust the chair
- how to clean the chair
- how they can purchase a chair for their home office

Find a dealer near you.



You can provide the instruction manual of an object!

Source: <http://www.steelcase.com/en/products/category/seating/task/leap/pages/qr-codes.aspx>
<http://www.fastcodesign.com/1665090/an-office-chair-with-built-in-video-instruction-manual>

QR Codes: you can add the source code!

SUPERMECHANICAL objects that connect us

Objects Blog About



REV->TABLE

Products used to be less disposable; they came with repair manuals and a personal history. rev->table picks up where they left off.

This side table is built to last with quality components. And when those have outlived their useful life, the digital blueprint is a permanent part of rev->table. Use your smartphone to read the digital design file embedded in each part and create replacements. Modify the legs to make them longer or angled or art deco. This is furniture for the future of manufacturing.

Solid oak, powder-coated steel, laser-etched aluminum. Crafted in the United States using the best of traditional and digital construction.

21"H x 16"W x 16"L; 10.5 lbs.

 Tweet

... and finally you can even provide directly the source code of an object, not just a link to its source online!

Source: <http://supermechanical.com/rev/>

http://www.springwise.com/style_design/future-repairs-tables-digital-blueprints-etched-surface/

QR Codes: you can add the source code!

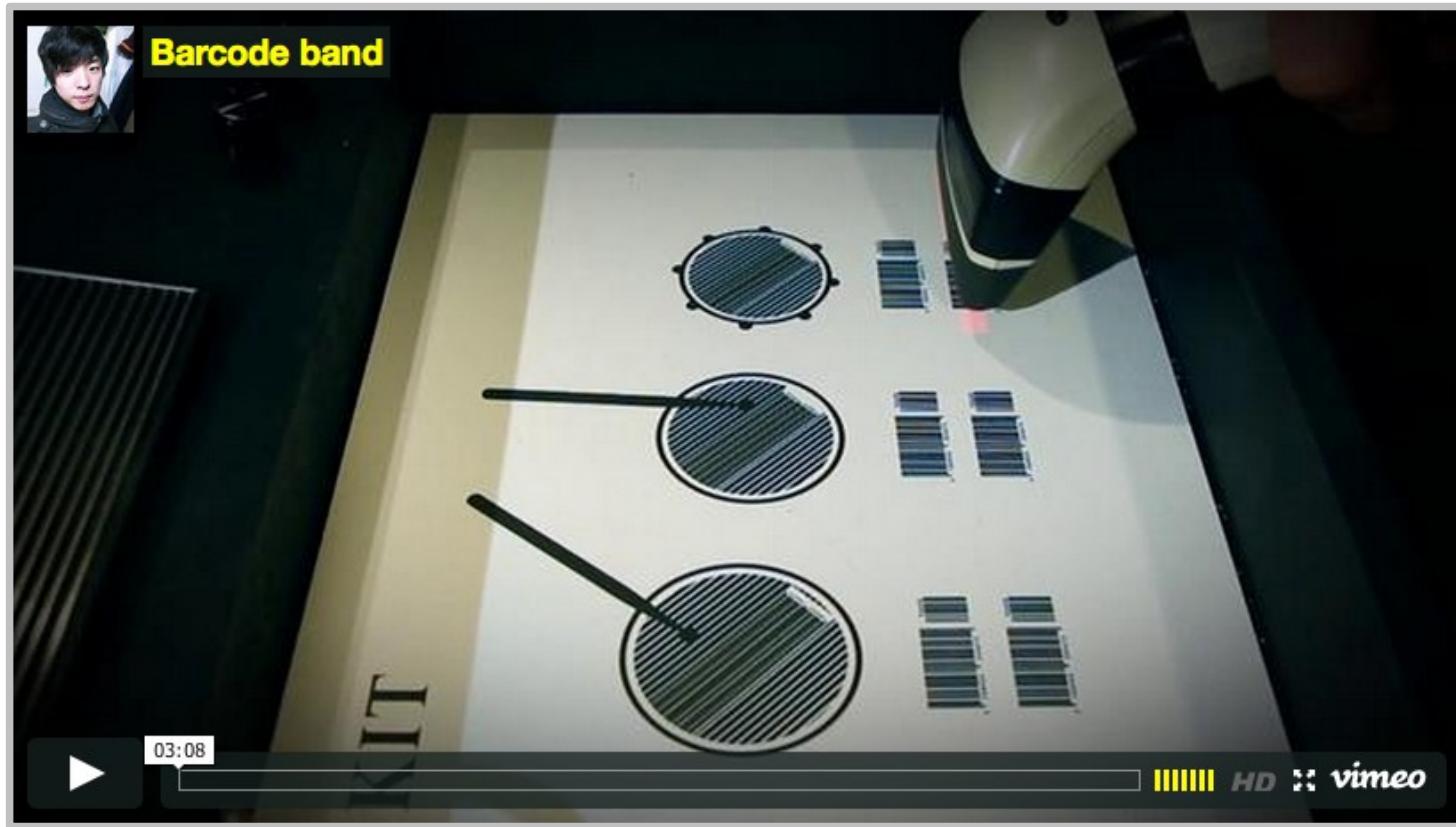


... and finally you can even provide directly the source code of an object, not just a link to its source online!

Source: <http://supermechanical.com/rev/>

http://www.springwise.com/style_design/future-repairs-tables-digital-blueprints-etched-surface/

Bar Codes: retrieving information through design!



... you can even use codes and existing objects to design a new system based on retrieving information!

Source: <http://www.designboom.com/weblog/cat/16/view/22271/barcode-band-scans-its-way-to-new-music.html>
<http://vimeo.com/41132461>

QR Codes: which bits?

PCWorld » Security

Recommend: 0 Comments Print

Beware of Malicious QR Codes

By Hamish Barwick, Computerworld-Australia

Cyber criminals have taken advantage of the [proliferation of quick response \(QR\) codes](#) on posters and marketing material by putting their own malicious stickers over the top of legitimate ones, warns security vendor AVG Australia and New Zealand.

QR codes can be read by scanning the sticker or typing in the code using a smartphone with a QR code reader.

In its latest report, entitled AVG Community Powered Threat Q4 2011, the company warns that cyber criminals are now producing their own QR codes which contain text and URLs with hidden malware. For example, one piece of malware called 'JimmRussia' sends costly SMS messages to premium numbers and also redirects to a URL which downloads a malicious file.

AVG Technologies chief technology officer, Yuval Ben-Itzhak, said in a statement that the smartphone user does not know what lurks behind the code until the malware is installed and running. "Putting a malicious QR code sticker onto existing marketing material or replacing a website's bona fide QR code with a malicious one could be enough to trick many unsuspecting people," he said.



We are embedding information on an object, and we use a device for retrieving it... but which kind of information?

Source: http://www.pcworld.com/article/248843/beware_of_malicious_qr_codes.html

Virus: a dangerous information



Some kind of information (like viruses) can modify, deform
and damage an object...

Source: <http://www.platform21.nl/page/3915/en>

<http://www.nextnature.net/2009/04/ikea-lamp-catches-elephantiasis-virus/>

Sound: a dangerous information



Some kind of information (like sound) can modify, deform
and damage an object...

Source: <http://www.dezeen.com/2012/07/13/noize-chairs-by-estudio-guto-requena/>
<http://vimeo.com/45568573>

QR Code: you can even print it (in 3D)

a MakerBot Industries website

THINGIVERSE

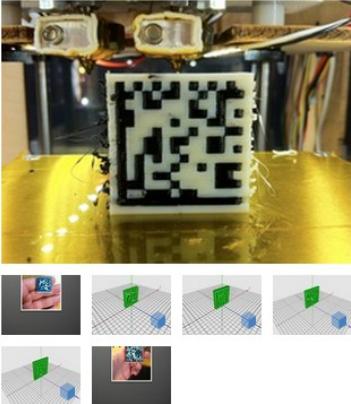
THINGS TOOLS TAGS BLOG

Welcome, friend.
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SEARCH

Digital designs for real, physical objects. A Universe of Things!

UPLOAD A THING



Data Matrix Dualstrusionator

Created by [tbuser](#)

Created on Oct 1, 2011

Derived from [OpenSCAD Bitmap Fonts Module](#) by [tbuser](#)

This script lets you create a positive/negative Data Matrix[1] Bar Code suitable for feeding into your experimental dual extruders. Or if you just want a negative space object barcode to cut into another model.

You can encode the whole thingiverse url in your barcode, but the result will be pretty big. Probably too large to stamp into another model. However, you can just encode the Thingiverse thing number to get a pretty small code!

1: en.wikipedia.org/wiki/Data_Matrix

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Instructions

Install OpenSCAD, download my OpenSCAD bitmap library, and make sure you have Ruby on your system. Then run gem install semacode. Now you can edit the variables in datamatrix_dualstrusionator.scad and .rb and run the .rb script. It will shell out to OpenSCAD and generate an a.stl and a b.stl. You'll probably get the best results if you print it vertically. Note: the bigger the string, the painfully longer it takes. OpenSCAD is slow. :(

Comments

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Latest From The Thingiverse Blog

You Know You're Onto Something...

...when you're having electron microscopes take the final photos of your 3D prints. This car is a little under 300 microns long, or just about the right size to sit inside the more fine-pitch extruder nozzle tips you can get these days for your thermoplastic printers. Atoms are the

If you have a 3D printer that can print at least
two different materials....

Source: <http://www.thingiverse.com/thing:12104>

QR Code: for real walls

QR code stickers turn real-world objects into digital conversations

QRawr enables users to transform physical objects into Facebook-style walls, with QR code stickers containing text and photo messages.



19th January 2012 in **Lifestyle & Leisure**.

We've seen QR codes being used to convey playful messages before when we covered [Qkies](#) cookies. Now San Diego-based [QRawr](#) is giving users the ability to transform any physical object into a Facebook-style digital wall, with QR code stickers linking to the users' own photos, videos or text.

QRawr hope their stickers, printed with unique QR codes, will turn real-world items into online conversations. Users must first download the QRawr iOS app to create their own message on the QR code stickers. QRawr encourage users to be creative, suggesting the stickers could be left in restaurants linking to photos of ordered meals, or at the end of a hiking trail with a message for others who complete the trek. Spotters of QRawr stickers can scan them — once they've downloaded the app — and post comments, pictures and videos in response. QRawr have built the initial version of the iPhone app and are seeking funding via [Kickstarter](#) to create an Android version and add features such as geolocation.

QRawr's founders believe the entertainment potential of QR codes has to-date been neglected. If you agree, this could this be an opportunity for you.

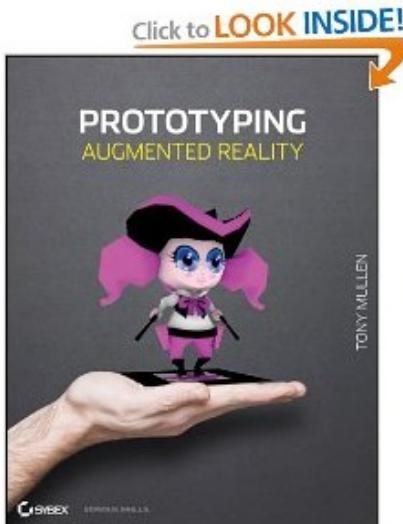
Website: www.qrawr.com

Contact: team@qrawr.com

Not only Dead Drops can be used for embedding information on a wall!

Source: http://www.springwise.com/lifestyle_leisure/qr-code-stickers-turn-real-world-objects-digital-conversations/
<https://qrawr.com/>

After QR Code, Augmented Reality?



Prototyping Augmented Reality [Paperback]

Tony Mullen (Author)

★★★★★ (1 customer review) |  Like (2)

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AR can be useful for adding a layer of bits on a space or object, and we can possibly think about its source code...

Source: <http://amzn.to/KUwNk6>

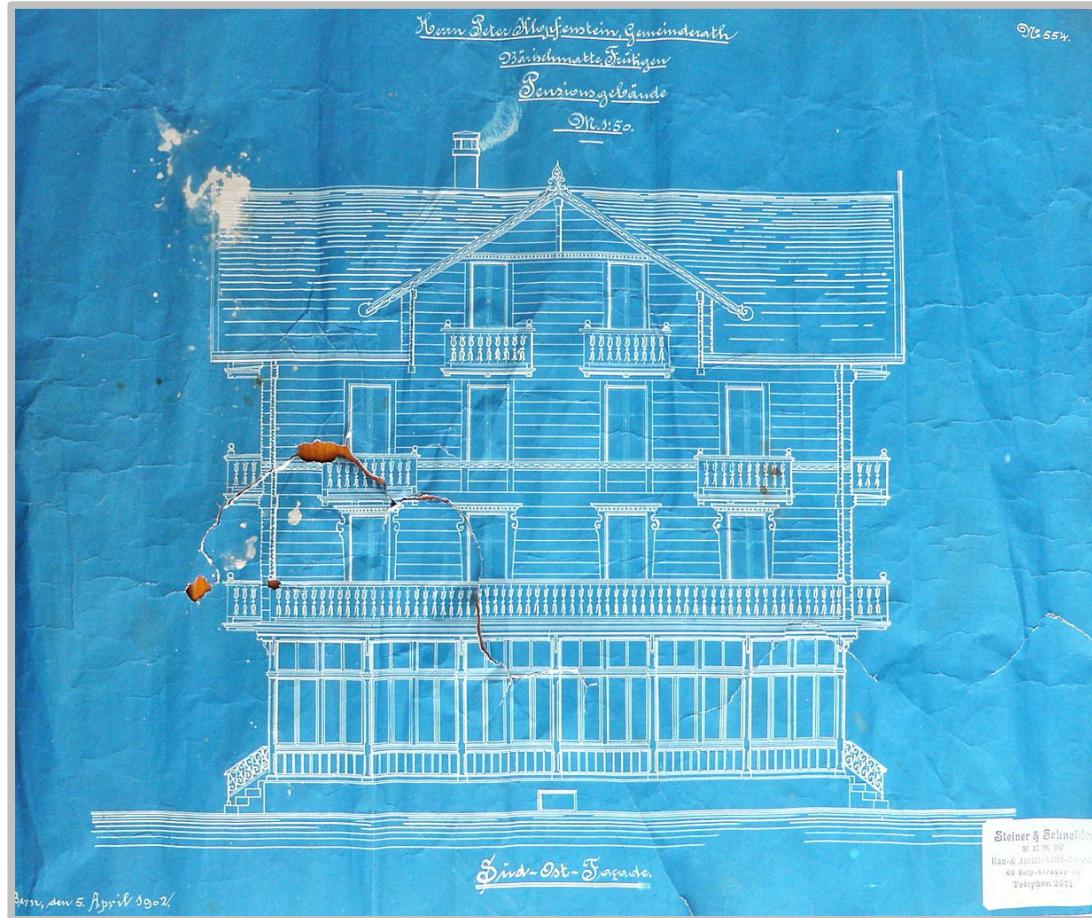


Aalto University
Media Factory

04.

Blueprints – suggestions for the documentation of the projects

Ok, the blueprints...



We need all the possible documentation for being able to replicate the project in other FabLabs.

Source: <http://commons.wikimedia.org/wiki/Category:Blueprints>

Patents (?)

Google 3d printing

Patents

Front Cover Download PDF

Apparatus and methods for 3D printing
David Russell et al

Overview Abstract Drawings Description Claims

3d printing Go

Patent number: 7291002
Filing date: Apr 2, 2004
Issue date: Nov 6, 2007
Application number: 10/817,159

Result 1 of 6 in this book for 3d printing - < Previous Next > - View all

United States Patent
Russell et al.

(10) Patent No.: US 7,291,002 B2
(45) Date of Patent: Nov. 6, 2007

(54) APPARATUS AND METHODS FOR 3D PRINTING

(75) Inventors: David Russell, Burlington, MA (US); Andres Hernandez, Malden, MA (US); Joshua Kinsky, Arlington, MA (US); Andrew Berlin, Gloucester, MA (US)

(73) Assignee: Z Corporation, Burlington, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 422 days.

(21) Appl. No.: 10/817,159
(22) Filed: Apr. 2, 2004

(65) Prior Publication Data
US 2004/0265413 A1 Dec. 30, 2004

Related U.S. Application Data
(60) Provisional application No. 60/472,922, filed on May 23, 2003.

(51) Int. Cl.
B28B 13/02 (2006-01)
(52) U.S. Cl. 425/447; 425/375; 425/174; 264/308; 700/119
(58) Field of Classification Search 425/375; 425/174; 264/308; 401; 700/119; 120
See application file for complete search history.

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(10) Patent No.: US 7,291,002 B2
(45) Date of Patent: Nov. 6, 2007

(Continued)

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DE 29907262 * 8/1999

(Continued)

Evaluation of the Advanced Ceramics Market for New Applications of Three Dimensional Printing, M.S. Thesis MIT 1995.

(Continued)

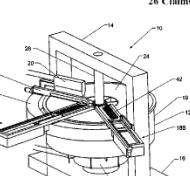
OTHER PUBLICATIONS

Primary Examiner—Robert Davis
Assistant Examiner—Maria Veronica Ewald
(74) Attorney, Agent, or Firm—Goodwin Procter LLP

(57) ABSTRACT

The invention relates to apparatus and methods for producing three-dimensional objects and auxiliary systems used in connection with the apparatus and methods. The apparatus and methods involve continuous printing radially about a circular anod or rotating build table using multiple printheads. The apparatus and methods also include optionally using multiple build tables. The auxiliary systems relate to build material supply, printhead cleaning diagnostics, and monitoring operation of the apparatus.

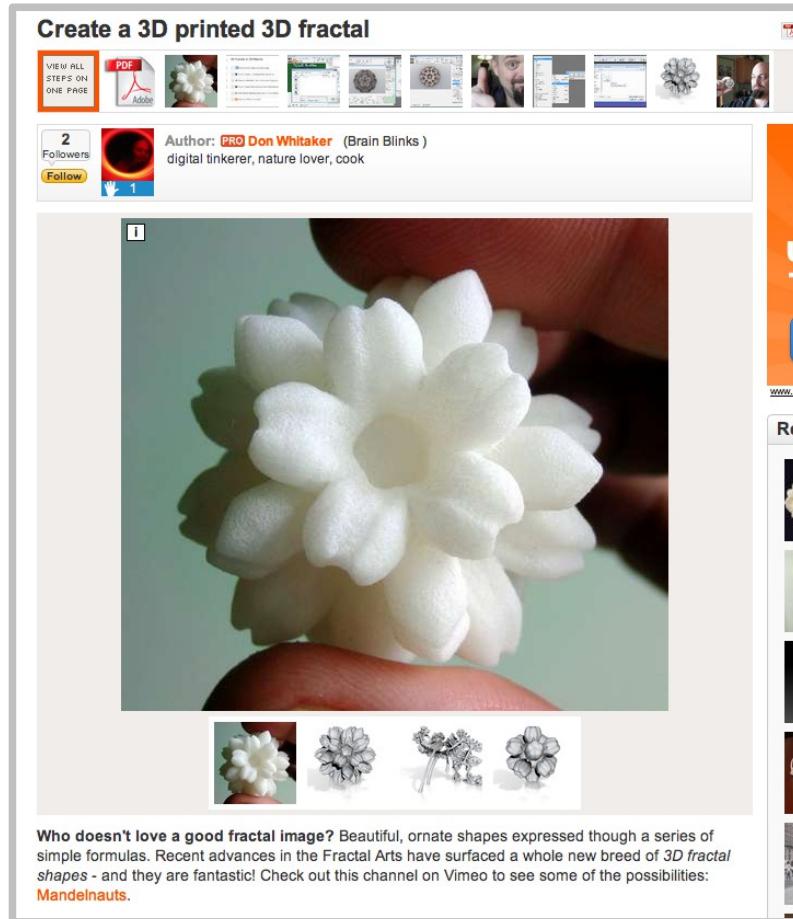
26 Claims, 19 Drawing Sheets



A very formal way of representing a project, but it could be useful.

Source: <http://bit.ly/K3YgxN>

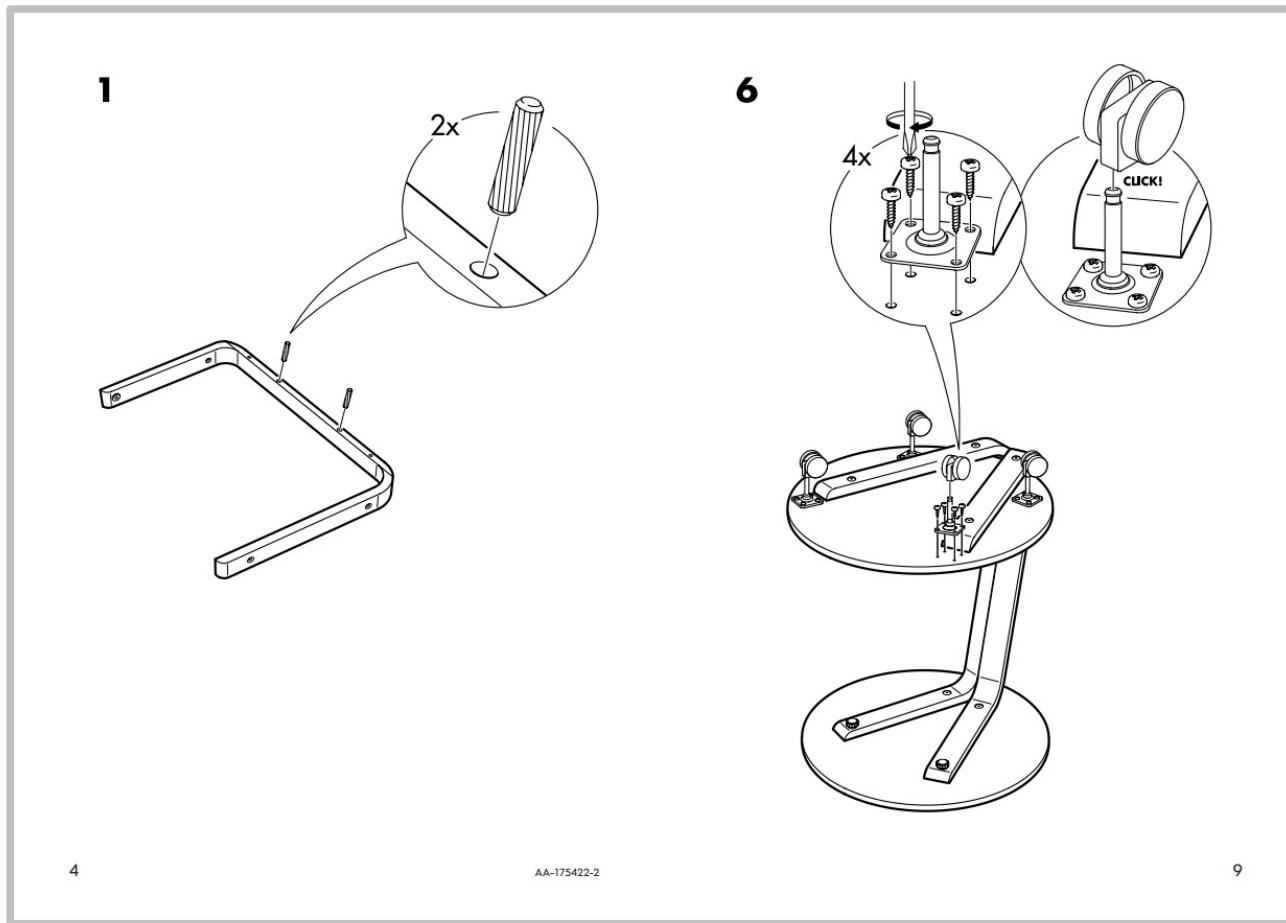
Instructions (process): Instructables.com



You can explain in a simple way the whole process...

Source: <http://www.instructables.com/id/Create-a-3D-printed-3D-fractal/?ALLSTEPS>

Instructions (process): IKEA



You can provide simple instructions...

Instructions (process) for dummies: IKEA



... simple instructions that can be understood by any culture!

Source: http://www.ikea.com/ms/en_US/customer_service/assembly/A/A80095184.pdf

http://www.ikea.com/ms/en_US/customer_service/assembly_instructions.html

Even videos...



Nowadays it is almost impossible to find a tutorial that it is not made with a video! Even researchers present their papers with a video.

Source: <http://youtu.be/dfNByi-rrO4>

A”

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Thank you!!

Massimo Menichinelli
Aalto Media Factory
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