Tools

Git and (other) Tools for Cooperation

Jörg Cassens, Rebekah Wegener,
Jens Rademacher, Bastian Stender

Lab Course Media Informatics

medieninformatik
IMAI – Institut für Mathematik und Angewandte Informatik

Inhaltsverzeichnis

1 git: Theory

Use of and Requirements for Version Control

- Administer different versions of a file
- Log of changes
  - What,
  - When,
  - Who
- Possible to use previous versions
- Multi-user support
- Support branching, merging, redundancy

1.1 Architectures

Architectures (1)

- Local version control
  - Versioning single files with simple administration (log, recover older versions of file)
  - **Implementations**: RCS, proprietary software
- First generation, not suitable for groups

Architectures (2)

- Central version control
  - Central server, development on clients
  - Revision history on server
  - Rights management on server
  - **Implementations**: CVS (abandoned), SVN
- Second generation, suitable for groups, needs server

Architectures (3)

- Distributed version control
  - Every client has a repository
  - No central server necessary
    - but primus inter pares possible
  - Repositories update other repositories
  - Version history might be on every client
  - Parallel development with (tool-supported) merge afterwards (non-linear development)
  - **Implementations**: Mercurial, Git
- Third generation, suitable for groups, supports offline and non-linear development

1.2 git

Features

- Distributed version control
- Originally developed by Linus Torvalds for the Linux kernel
- no central server
- Supporting non-linear development through branching and merging
- Lots of transport protocol options
- No incremental ID, but hash-values for commits
- Authentication with repository-hosting services (primus inter pares) often via private keys

(Dis-) advantages

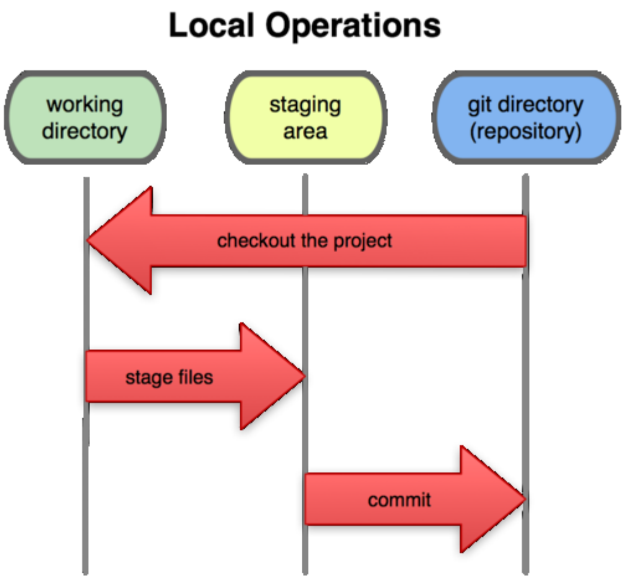
- Advantages
  - no central server
  - clean file system, only one ".git" directory in main directory
  - efficient work through branch, diff, merge
- Disadvantages
  - Requires discipline
  - Linux thinking, might be difficult coming from Windows
  - Steep learning curve
  - Slow performance with large (and binary) files

2 git: Use

2.1 New Repository

Initialisation & .gitignore

- New repositories:
  - **git init** (local in project directory, creates ".git")
  - **git --bare init** (remote repository)
- Keeping files or file types out of version control:
  - text file **.gitignore** in main directory
  - One rule per line (***.pdf**)

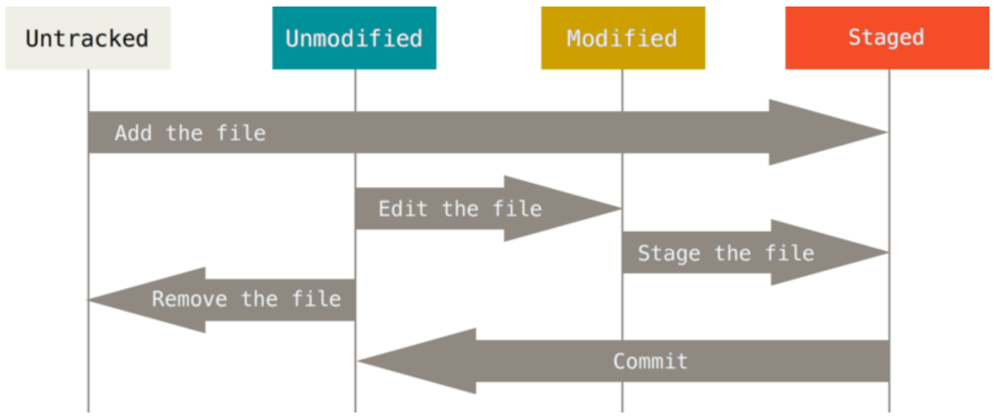


Workflow

2.2 Standard Tasks

Base Functions

- File-Status:
  - **Untracked** (not under version control)
  - **Modified (New)** (changed since last commit)
  - **Staged** (marked for commit)
  - **Unmodified** (unchanged since last commit)
- Read status:
  - **git status**
- Add or stage files:
  - **git add FILE(S)**
- Commit:
  - **git commit -m "Comment"**
- Stage (deleted & modified) & Commit:
  - **git commit -a -m "Comment"**
- Show differences to HEAD:
  - **git diff HEAD**



lifecycle

Revert changes

- Revert changes of last commit, keep commit
  - **git revert**
- HEAD-pointer to named commit
  - **git revert COMMIT**
- Stage/working directory to status of last commit
  - **git reset**

2.3 Remote-Repositories

Remote-Repositories

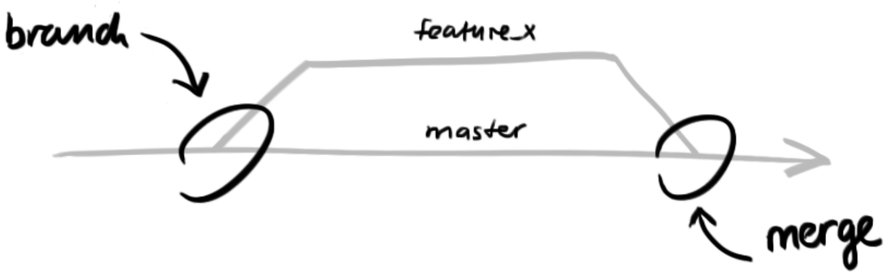
- make local copy of remote repository:
  - **git clone URL**
- add remote repository:
  - **git remote add REMOTENAME URL**
- transfer local changes to remote repository:
  - **git push REMOTENAME BRANCH**
  - REMOTENAME is often **origin**
  - Standard-Branch is **master**

2.4 Branching

Branching

- create branch
  - **git branch NAME**
- show all branches
  - **git branch -a**
- change to branch
  - **git checkout NAME**
- merge branch with master
  - **git checkout master** (change into master)
  - **git merge NAME** (Merge)
- delete branch
  - **git branch -d NAME**

Branches



working with branches

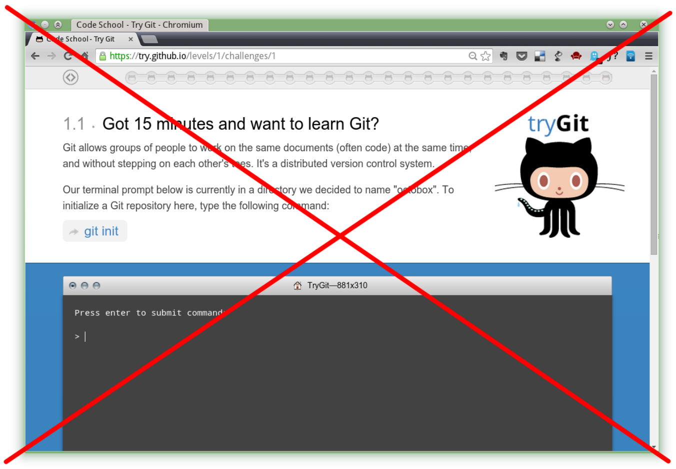
2.5 Other

Setting and help

- (Global) settings
  - **git config [--global] user.name "John Doe"**
  - **git config [--global] user.email john@example.com**
  - **git config [--global] core.autocrlf input** (Linux)
- Help
  - **git COMMAND --help**

2.6 Tutorial

github Tutorial


Code School - Try Git - Chromium
Code School - Try Git
https://try.github.io/levels/1/challenges/1
tryGit
git init
TryGit—881x310

1.1 . Got 15 minutes and want to learn Git?

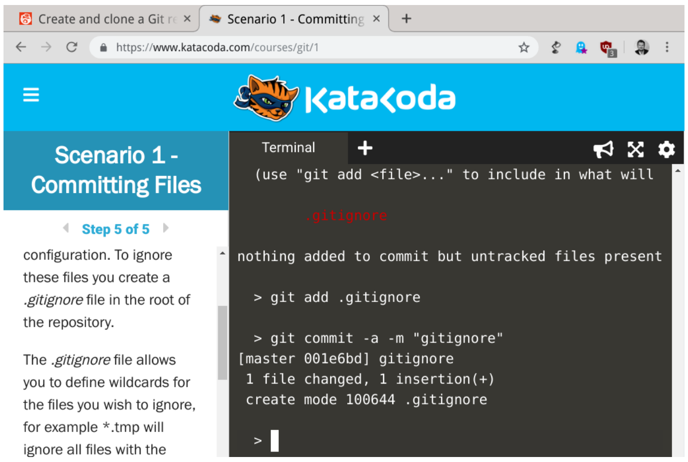
Git allows groups of people to work on the same documents (often code) at the same time, and without stepping on each other's toes. It's a distributed version control system.

Our terminal prompt below is currently in a directory we decided to name "octobox". To initialize a Git repository here, type the following command:

```
Press enter to submit commands

> |
```

Sadly, github removed the friendly Octocat tutorial. . .

git Tutorial: Katacoda



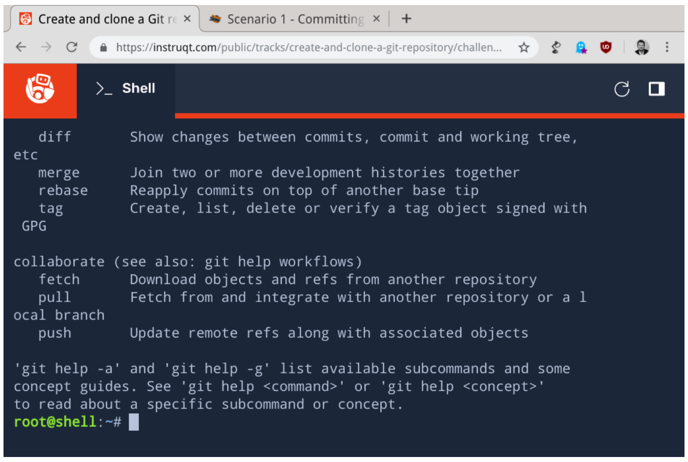
configuration. To ignore these files you create a *.gitignore* file in the root of the repository.

The *.gitignore* file allows you to define wildcards for the files you wish to ignore, for example *.tmp will ignore all files with the

```
  (use "git add <file>..." to include in what will

        .gitignore

nothing added to commit but untracked files present

  > git add .gitignore

  > git commit -a -m "gitignore"
[master 001e6bd] gitignore
 1 file changed, 1 insertion(+)
 create mode 100644 .gitignore

  >
```

☞ katacoda.com/courses/git

git Tutorial: Instruqt


Create and clone a Git r
Scenario 1 - Committing
https://instruqt.com/public/tracks/create-and-clone-a-git-repository/challen...
>_ Shell

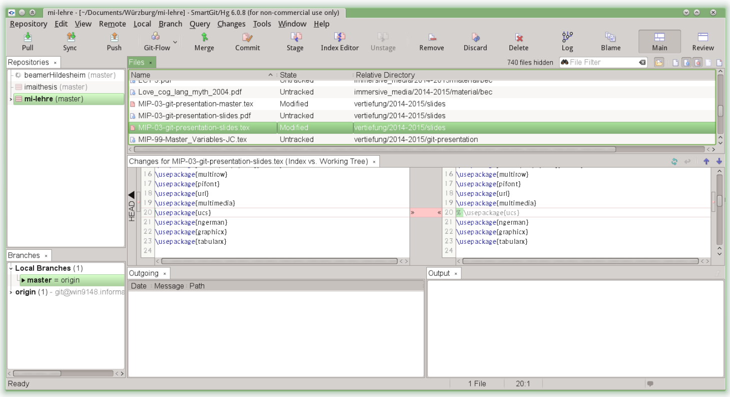
```
   diff      Show changes between commits, commit and working tree,
etc
   merge     Join two or more development histories together
   rebase    Reapply commits on top of another base tip
   tag       Create, list, delete or verify a tag object signed with
 GPG

collaborate (see also: git help workflows)
   fetch     Download objects and refs from another repository
   pull      Fetch from and integrate with another repository or a l
ocal branch
   push      Update remote refs along with associated objects

'git help -a' and 'git help -g' list available subcommands and some
concept guides. See 'git help <command>' or 'git help <concept>'
to read about a specific subcommand or concept.
root@shell:~#
```

☞ instruqt.com/public/topics/getting-started-with-git

3 git: Tools

3.1 git: GUI

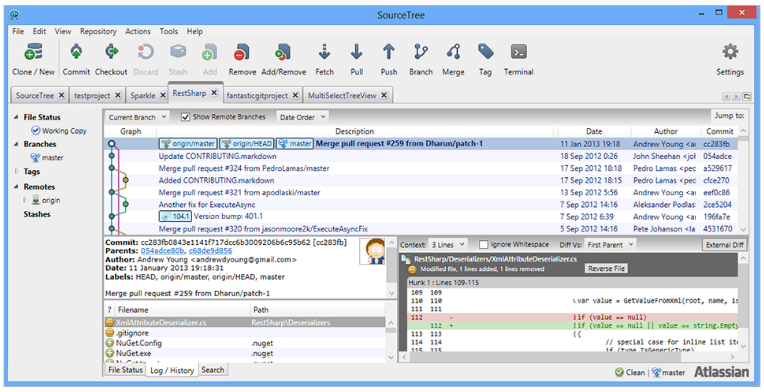
smartgit


mi-lehre - [~/Documents/Würzburg/mi-lehre] - SmartGit/Hg 6.0.8 (for non-commercial use only)
Repository Edit View Remote Local Branch Query Changes Tools Window Help
Pull Sync Push Git-Flow Merge Commit Stage Index Editor Unstage Remove Discard Delete Log Blame Main Review
Repositories
beamerHildesheim (master)
imaithesis (master)
mi-lehre (master)
Files
740 files hidden
File Filter
Branches
Local Branches (1)
master = origin
origin (1) - git@win9148.informa
Outgoing
Date Message Path
Output
Ready
1 File
20:1

```
Name                               State       Relative Directory
Love_cog_lang_myth_2004.pdf        Untracked   immersive_media/2014-2015/material/bec
MIP-03-git-presentation-master.tex Modified    vertiefung/2014-2015/slides
MIP-03-git-presentation-slides.pdf Untracked   vertiefung/2014-2015/slides
MIP-03-git-presentation-slides.tex Modified    vertiefung/2014-2015/slides
MIP-99-Master_Variables-JC.tex     Untracked   vertiefung/2014-2015/git-presentation

Changes for MIP-03-git-presentation-slides.tex (Index vs. Working Tree)
16 \usepackage{multirow}        16 \usepackage{multirow}
17 \usepackage{pifont}          17 \usepackage{pifont}
18 \usepackage{url}             18 \usepackage{url}
19 \usepackage{multimedia}      19 \usepackage{multimedia}
20 \usepackage{ucs}             20 % \usepackage{ucs}
21 \usepackage{ngerman}         21 \usepackage{ngerman}
22 \usepackage{graphicx}        22 \usepackage{graphicx}
23 \usepackage{tabularx}        23 \usepackage{tabularx}
24                              24
```

☞ www.syntevo.com/smartgit
Cross-platform (Linux, Mac, Windows), free for non-commercial use

SourceTree



Graph	Description	Date	Author	Commit
	origin/master origin/HEAD master **Merge pull request #259 from Dharun/patch-1**	11 Jan 2013 19:18	Andrew Young <a	cc283fb
	Update CONTRIBUTING.markdown	18 Sep 2012 0:26	John Sheehan <jol	054adce
	Merge pull request #324 from PedroLamas/master	17 Sep 2012 18:18	Pedro Lamas <pec	a529617
	Added CONTRIBUTING.markdown	17 Sep 2012 18:15	Pedro Lamas <pec	cfce270
	Merge pull request #321 from apodlaski/master	13 Sep 2012 5:56	Andrew Young <a	eef0c86
	Another fix for ExecuteAsync	7 Sep 2012 14:16	Aleksander Podlas	2ce5204
	104.1 Version bump: 401.1	7 Sep 2012 6:39	Andrew Young <a	196fa7e
	Merge pull request #320 from jasonmoore2k/ExecuteAsyncFix	5 Sep 2012 14:16	Pete Johanson <la	4531670

Commit: cc283fb0843e1141f717dcc6b3009206b6c95b62 [cc283fb]
Parents: 054adce80b, c68de9d856
Author: Andrew Young <andrewdyoung@gmail.com>
Date: 11 January 2013 19:18:31
Labels: HEAD, origin/master, origin/HEAD, master

Merge pull request #259 from Dharun/patch-1

?	Filename	Path
	XmlAttributeDeserializer.cs	RestSharp\Deserializers
	.gitignore	
	NuGet.Config	.nuget
	NuGet.exe	.nuget

RestSharp/Deserializers/XmlAttributeDeserializer.cs
Modified file, 1 lines added, 1 lines removed

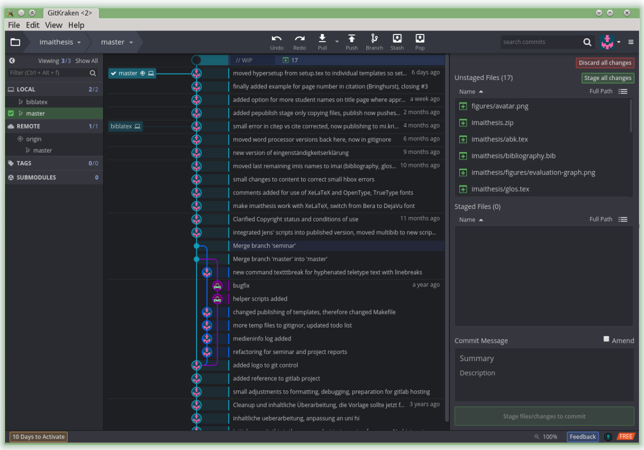
```
Hunk 1 : Lines 109-115
109  109
110  110              var value = GetValueFromXml(root, name, is
111  111
112       -           if (value == null)
     112  +           if (value == null || value == string.Empty
113  113              {
114  114                      // special case for inline list ite
```

SourceTree
File Edit View Repository Actions Tools Help
Clone / New Commit Checkout Discard Stash Add Remove Add/Remove Fetch Pull Push Branch Merge Tag Terminal Settings
SourceTree testproject Sparkle RestSharp fantasticgitproject MultiSelectTreeView
File Status Working Copy Branches master Tags Remotes origin Stashes
Current Branch Show Remote Branches Date Order Jump to:
Context: 3 Lines Ignore Whitespace Diff Vs: First Parent External Diff Reverse File
File Status Log / History Search
Clean | master Atlassian

☞ SourceTreeApp.com

Mac, Windows; free to use, registration required

GitKraken



```
// WIP  17
moved hypersetup from setup.tex to individual templates so set...   6 days ago
finally added example for page number in citation (Bringhurst), closing #3
added option for more student names on title page where appr...     a week ago
added pepublish stage only copying files, publish now pushes...     2 months ago
small error in citep vs cite corrected, now publishing to mi.kri... 4 months ago
moved word processor versions back here, now in gitignore           6 months ago
new version of eingenständigkeitserklärung                          9 months ago
moved last remaining imis names to imai (bibliography, glos...      10 months ago
small changes to content to correct small hbox errors
comments added for use of XeLaTeX and OpenType, TrueType fonts
make imaithesis work with XeLaTeX, switch from Bera to DejaVu font
Clarified Copyright status and conditions of use                    11 months ago
integrated Jens' scripts into published version, moved multibib to new scrip...
Merge branch 'seminar'
Merge branch 'master' into 'master'
new command texttbreak for hyphenated teletype text with linebreaks
bugfix                                                              a year ago
helper scripts added
changed publishing of templates, therefore changed Makefile
more temp files to gitignor, updated todo list
medieninfo log added
refactoring for seminar and project reports
added logo to git control
added reference to gitlab project
small adjustments to formatting, debugging, preparation for gitlab hosting
Cleanup und inhaltliche Überarbeitung, die Vorlage sollte jetzt f... 3 years ago
inhaltliche ueberarbeitung, anpassung an uni hi
```

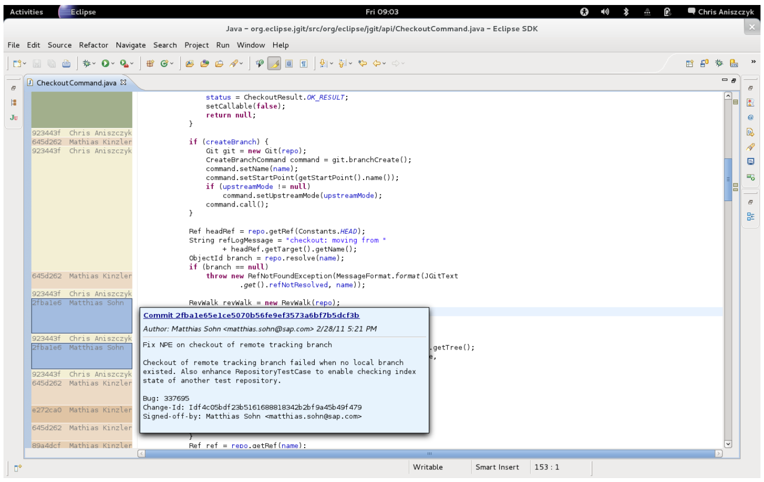
Unstaged Files (17)
figures/avatar.png
imaithesis.zip
imaithesis/abk.tex
imaithesis/bibliography.bib
imaithesis/figures/evaluation-graph.png
imaithesis/glos.tex

Staged Files (0)

☞ gitkraken.com

Cross-platform (Linux, Mac, Windows), free for non-commercial use, registration required

IDE Integration



Java – org.eclipse.jgit/src/org/eclipse/jgit/api/CheckoutCommand.java – Eclipse SDK

```
            status = CheckoutResult.OK_RESULT;
            setCallable(false);
            return null;
        }

        if (createBranch) {
            Git git = new Git(repo);
            CreateBranchCommand command = git.branchCreate();
            command.setName(name);
            command.setStartPoint(getStartPoint().name());
            if (upstreamMode != null)
                command.setUpstreamMode(upstreamMode);
            command.call();
        }

        Ref headRef = repo.getRef(Constants.HEAD);
        String refLogMessage = "checkout: moving from "
                + headRef.getTarget().getName();
        ObjectId branch = repo.resolve(name);
        if (branch == null)
            throw new RefNotFoundException(MessageFormat.format(JGitText
                    .get().refNotResolved, name));

        RevWalk revWalk = new RevWalk(repo);
```

```
Commit 2fba1e65e1ce5070b56fe9ef3573a6bf7b5dcf3b
Author: Matthias Sohn <matthias.sohn@sap.com> 2/28/11 5:21 PM

Fix NPE on checkout of remote tracking branch

Checkout of remote tracking branch failed when no local branch
existed. Also enhance RepositoryTestCase to enable checking index
state of another test repository.

Bug: 337695
Change-Id: Idf4c05bdf23b5161688818342b2bf9a45b49f479
Signed-off-by: Matthias Sohn <matthias.sohn@sap.com>
```

```
923443f  Chris Aniszczyk
645d262  Mathias Kinzler
923443f  Chris Aniszczyk
645d262  Mathias Kinzler
923443f  Chris Aniszczyk
2fba1e6  Matthias Sohn
923443f  Chris Aniszczyk
2fba1e6  Matthias Sohn
923443f  Chris Aniszczyk
645d262  Mathias Kinzler
e272ca0  Mathias Kinzler
645d262  Mathias Kinzler
89a4dcf  Mathias Kinzler
```

Activities Eclipse Fri 09:03 Chris Aniszczyk
File Edit Source Refactor Navigate Search Project Run Window Help
CheckoutCommand.java
Writable Smart Insert 153 : 1

Your favourite IDE most likely features some sort of integration (here: ☞ Eclipse EGit)

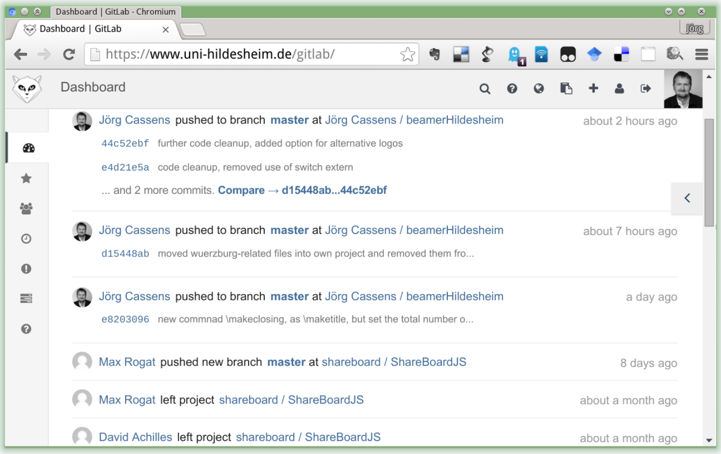
3.2 git: Project Hosting

Project Hosting

- Help for projects by offering:
  - Issue tracker
  - Wiki (Markdown)

    - Statistics (Gamification)
    - Download of projects
    - Releases
- Enabling teamwork
- Making forks and pull-requests simple
    - Easy to get involved
    - "Standing on the shoulders of giants"
- Several Services with different (dis-) advantages
    - gitlab
    - github
    - bitbucket

gitlab (Uni Hildesheim)


Dashboard | GitLab - Chromium
Dashboard | GitLab
https://www.uni-hildesheim.de/gitlab/
Dashboard

Jörg Cassens pushed to branch **master** at Jörg Cassens / beamerHildesheim — about 2 hours ago
`44c52ebf` further code cleanup, added option for alternative logos
`e4d21e5a` code cleanup, removed use of switch extern
... and 2 more commits. **Compare → d15448ab...44c52ebf**

Jörg Cassens pushed to branch **master** at Jörg Cassens / beamerHildesheim — about 7 hours ago
`d15448ab` moved wuerzburg-related files into own project and removed them fro...

Jörg Cassens pushed to branch **master** at Jörg Cassens / beamerHildesheim — a day ago
`e8203096` new commnad \makeclosing, as \maketitle, but set the total number o...

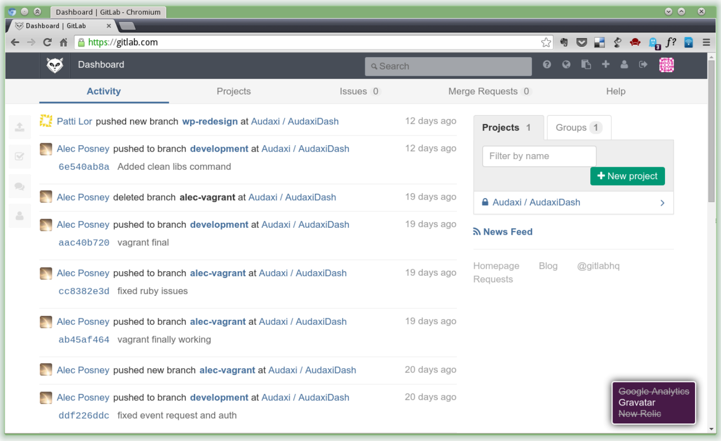
Max Rogat pushed new branch **master** at shareboard / ShareBoardJS — 8 days ago

Max Rogat left project shareboard / ShareBoardJS — about a month ago

David Achilles left project shareboard / ShareBoardJS — about a month ago

☞ www.uni-hildesheim.de/gitlab – Hosted OSS-System

gitlab (Commercial)



Patti Lor pushed new branch **wp-redesign** at Audaxi / AudaxiDash — 12 days ago

Alec Posney pushed to branch **development** at Audaxi / AudaxiDash — 12 days ago
`6e540ab8a` Added clean libs command

Alec Posney deleted branch **alec-vagrant** at Audaxi / AudaxiDash — 19 days ago

Alec Posney pushed to branch **development** at Audaxi / AudaxiDash — 19 days ago
`aac40b720` vagrant final

Alec Posney pushed to branch **alec-vagrant** at Audaxi / AudaxiDash — 19 days ago
`cc8382e3d` fixed ruby issues

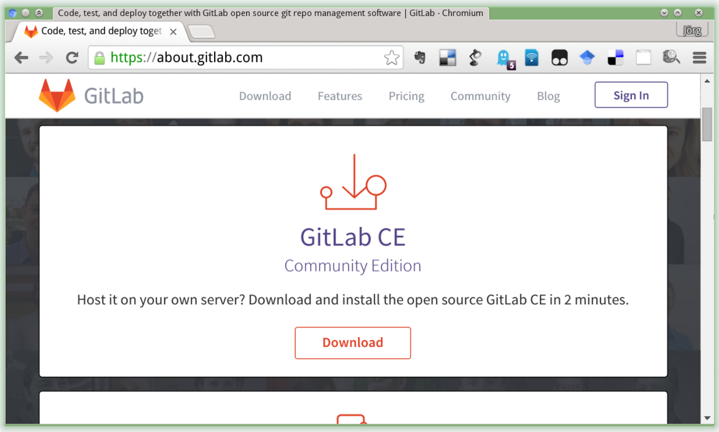
Alec Posney pushed to branch **alec-vagrant** at Audaxi / AudaxiDash — 19 days ago
`ab45af464` vagrant finally working

Alec Posney pushed new branch **alec-vagrant** at Audaxi / AudaxiDash — 20 days ago

Alec Posney pushed to branch **development** at Audaxi / AudaxiDash — 20 days ago
`ddf226ddc` fixed event request and auth

☞ gitlab.com – Commercial, hosted

gitlab (OSS)


Code, test, and deploy together with GitLab open source git repo management software | GitLab - Chromium
https://about.gitlab.com
GitLab
Download
Features
Pricing
Community
Blog
Sign In

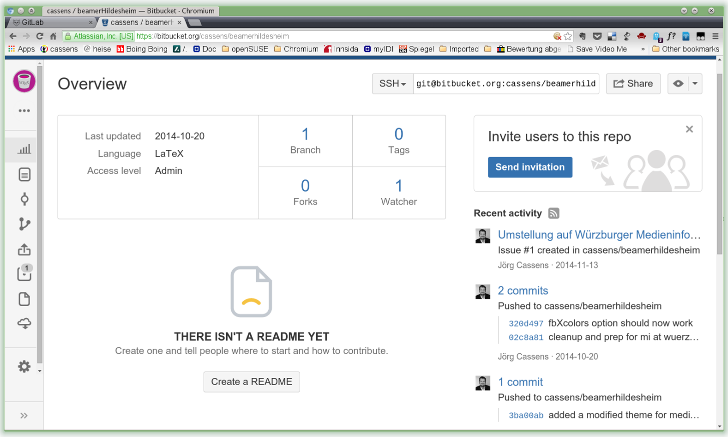
GitLab CE

Community Edition

Host it on your own server? Download and install the open source GitLab CE in 2 minutes.

☞ about.gitlab.com – Self-hosted OSS-System

Atlassian Bitbucket


cassens / beamerHildesheim — Bitbucket - Chromium
https://bitbucket.org/cassens/beamerhildesheim
SSH
git@bitbucket.org:cassens/beamerhild
Share

Overview

Last updated	2014-10-20
Language	LaTeX
Access level	Admin

1 Branch · 0 Tags · 0 Forks · 1 Watcher

THERE ISN'T A README YET

Create one and tell people where to start and how to contribute.

Invite users to this repo

Recent activity

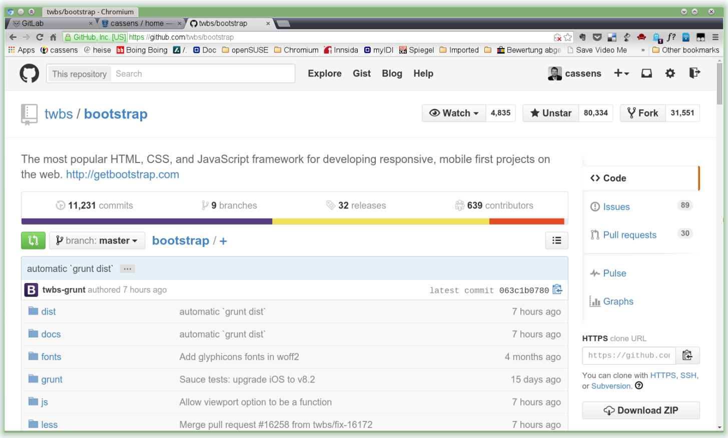
Umstellung auf Würzburger Medieninfo…
Issue #1 created in cassens/beamerhildesheim
Jörg Cassens · 2014-11-13

2 commits
Pushed to cassens/beamerhildesheim
320d497 fbXcolors option should now work
02c8a81 cleanup and prep for mi at wuerz…
Jörg Cassens · 2014-10-20

1 commit
Pushed to cassens/beamerhildesheim
3ba00ab added a modified theme for medi…

☞ bitbucket.org – Commercial, hosted, Freemium

github



twbs / bootstrap

Watch 4,835 · Unstar 80,334 · Fork 31,551

The most popular HTML, CSS, and JavaScript framework for developing responsive, mobile first projects on the web. http://getbootstrap.com

11,231 commits · 9 branches · 32 releases · 639 contributors

branch: master · bootstrap / +

automatic `grunt dist`

twbs-grunt authored 7 hours ago · latest commit 063c1b0780

dist	automatic `grunt dist`	7 hours ago
docs	automatic `grunt dist`	7 hours ago
fonts	Add glyphicons fonts in woff2	4 months ago
grunt	Sauce tests: upgrade iOS to v8.2	15 days ago
js	Allow viewport option to be a function	7 hours ago
less	Merge pull request #16258 from twbs/fix-16172	7 hours ago

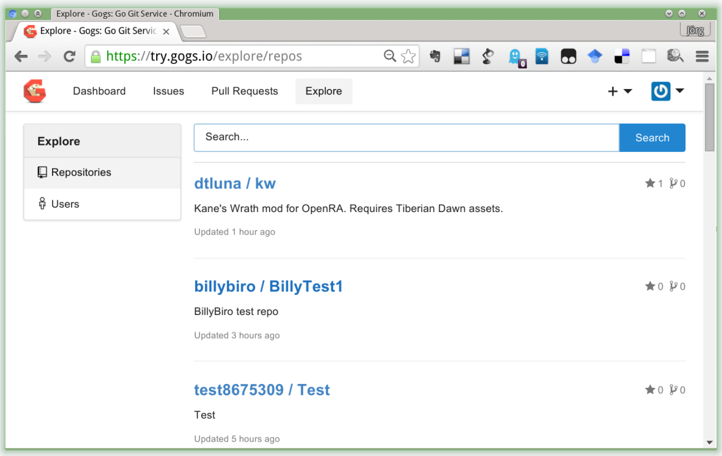
HTTPS clone URL

https://github.com

You can clone with HTTPS, SSH, or Subversion.

☞ www.github.com – Commercial, hosted, Freemium

gogs


Explore - Gogs: Go Git Service - Chromium
https://try.gogs.io/explore/repos
Dashboard
Issues
Pull Requests
Explore
Repositories
Users
Search...
Search

dtluna / kw

Kane's Wrath mod for OpenRA. Requires Tiberian Dawn assets.

Updated 1 hour ago

billybiro / BillyTest1

BillyBiro test repo

Updated 3 hours ago

test8675309 / Test

Test

Updated 5 hours ago

☞ gogs.io – Self-hosted OSS-System

Use in Lab Course

- Every group should have at least one project on one of the following services
  - ☞ uni-hildesheim.de/gitlab – Universität Hildesheim
  - ☞ www.gitlab.com – free public and private projects
  - ☞ www.bitbucket.com – free public and private projects, limited team size
  - ☞ www.github.com – free public projects
- I get invited
  - Access to code and documentation
  - Issue tickets
- Recommend uni gitlab
- Others are fine as well
  - At least those where I have an account

4 Project Management

Need

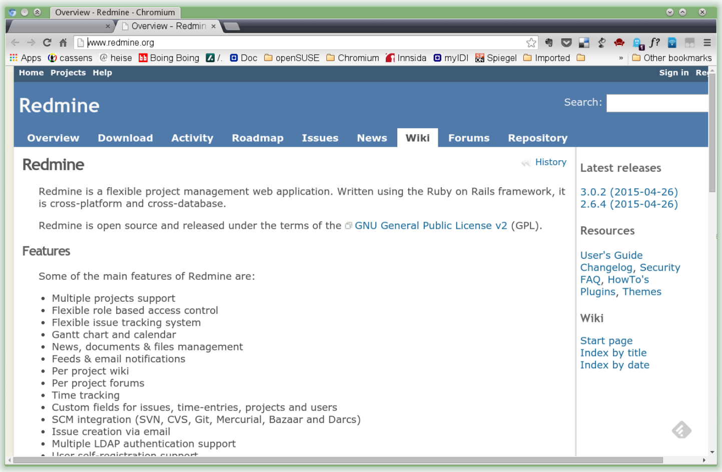
- Version control
  - As seen
- Ticketing
  - Basic version included with hosted services
- Project planing
  - At least: milestones and ticketing
- Documentation
  - Wiki at hosted services
  - LaTeX in git
  - Collaborative editors
- Communication & Coordination
  - More than whatsapp, facebook and Dropbox
- Automation
  - When things happen in the repo, other stuff is triggered (mail, chat, test)

4.1 Ticketing & Project Planing

Tickets and Milestones

- git-hosted services usually come with ticketing
- With tickets and milestones, rudimentary project planing is already possible
  - Tasks
  - Responsibilities
  - Time
- Advantages
  - Using existing tools & same toolchain
- Disadvantages
  - Not very flexible

Redmine


Overview - Redmine - Chromium
Overview - Redmin
www.redmine.org
Apps cassens heise Boing Boing /. Doc openSUSE Chromium Innsida myIDI Spiegel Imported Other bookmarks
Home Projects Help
Sign in
Search:
Overview Download Activity Roadmap Issues News Wiki Forums Repository
History

Redmine

Redmine is a flexible project management web application. Written using the Ruby on Rails framework, it is cross-platform and cross-database.

Redmine is open source and released under the terms of the GNU General Public License v2 (GPL).

Features

Some of the main features of Redmine are:

- Multiple projects support
- Flexible role based access control
- Flexible issue tracking system
- Gantt chart and calendar
- News, documents & files management
- Feeds & email notifications
- Per project wiki
- Per project forums
- Time tracking
- Custom fields for issues, time-entries, projects and users
- SCM integration (SVN, CVS, Git, Mercurial, Bazaar and Darcs)
- Issue creation via email
- Multiple LDAP authentication support

Latest releases

3.0.2 (2015-04-26)
2.6.4 (2015-04-26)

Resources

User's Guide
Changelog, Security
FAQ, HowTo's
Plugins, Themes

Wiki

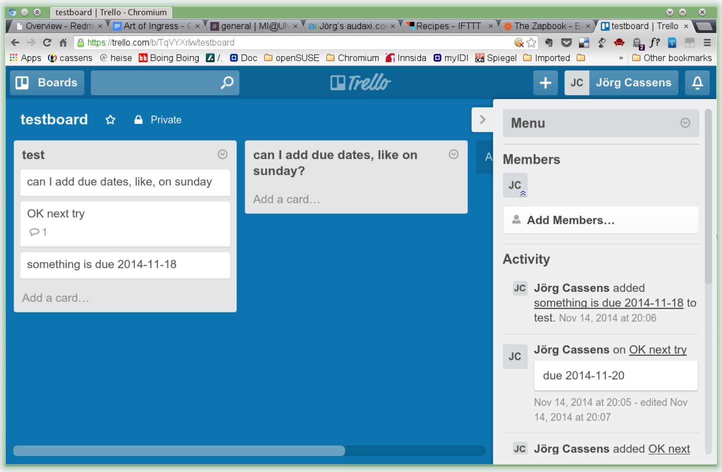
Start page
Index by title
Index by date

☞ www.redmine.org – Integrated system

Redmine

- Powerful integrated system
  - Project management
  - Time keeping
  - Documentation
  - git-Repositories
- Advantages
  - Lots of options, expandable
- Disadvantages
  - Not a pure project planing solution
  - Self-Hosting
- Alternative
  - ☞ trac

Trello



test

can I add due dates, like, on sunday

OK next try

something is due 2014-11-18

can I add due dates, like on sunday?

Jörg Cassens added something is due 2014-11-18 to test. Nov 14, 2014 at 20:06

Jörg Cassens on OK next try

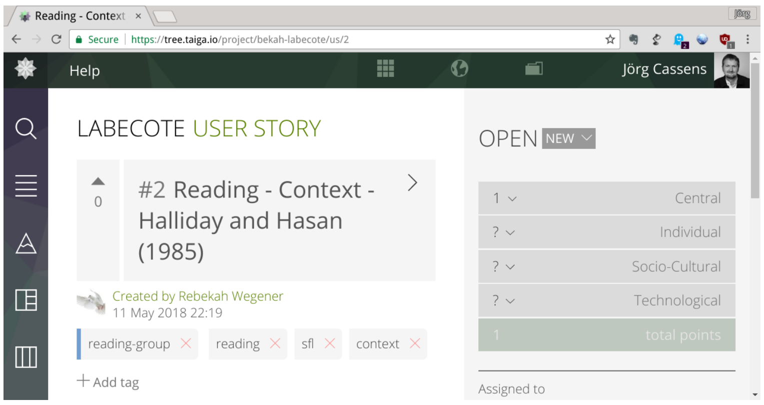
due 2014-11-20

Nov 14, 2014 at 20:05 - edited Nov 14, 2014 at 20:07

Jörg Cassens added OK next

☞ trello.com – Kanban-style task management, freemium

Taiga.io

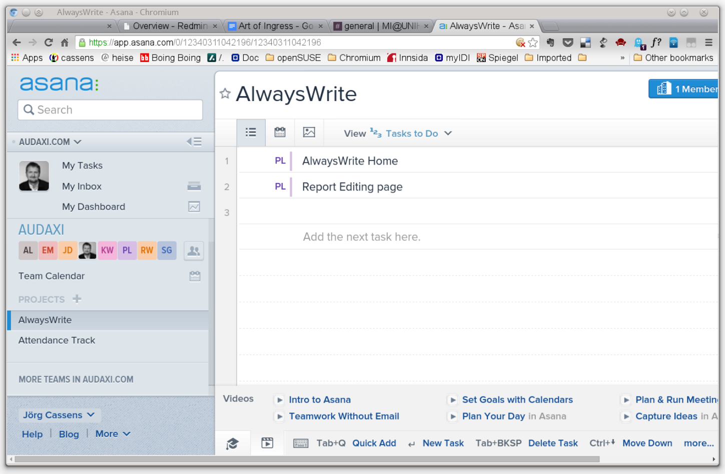


#2 Reading - Context - Halliday and Hasan (1985)

Created by Rebekah Wegener
11 May 2018 22:19

☞ taiga.io – Kanban-style or agile task management
Hosted freemium, or self-hosted OSS-System

asana



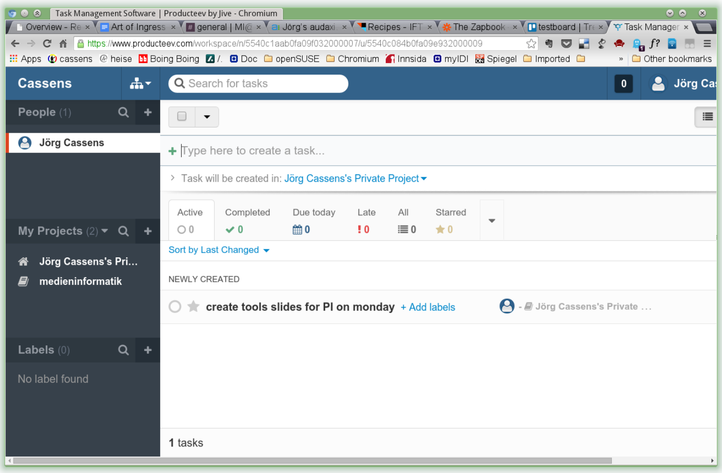
PL AlwaysWrite Home

PL Report Editing page

Add the next task here.

☞ asana.com – Task management, freemium

producteev



☞ www.producteev.com – Task management, freemium

asana, Trello, producteev, taiga.io

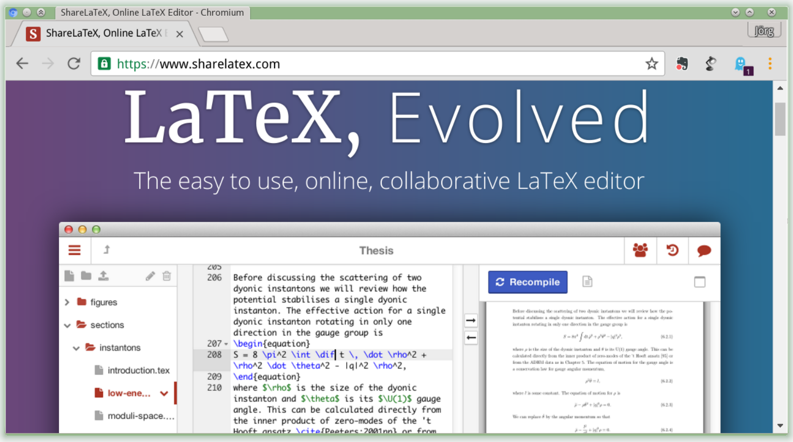
- Focus on project management
- Different philosophies (kanban, "traditional")
- Advantages
  - Powerful
- Disadvantages
  - Powerful

4.2 Documentation

LaTeX

- git works well with text files
  - but is not very well suited for binary blobs such as PDF or word processor files
- LaTeX is text based
  - Documentation in a doc-repo
- Disadvantages
  - Assets such as pictures are not handled well
  - Track changes
    - needs work with ☞ latexdiff
- Advantages
  - Professional type setting
  - Same tool chain

ShareLaTeX/Overleaf


ShareLaTeX, Online LaTeX Editor - Chromium
https://www.sharelatex.com
LaTeX, Evolved
The easy to use, online, collaborative LaTeX editor
Thesis
figures
sections
instantons
introduction.tex
low-ene...
moduli-space...
Recompile

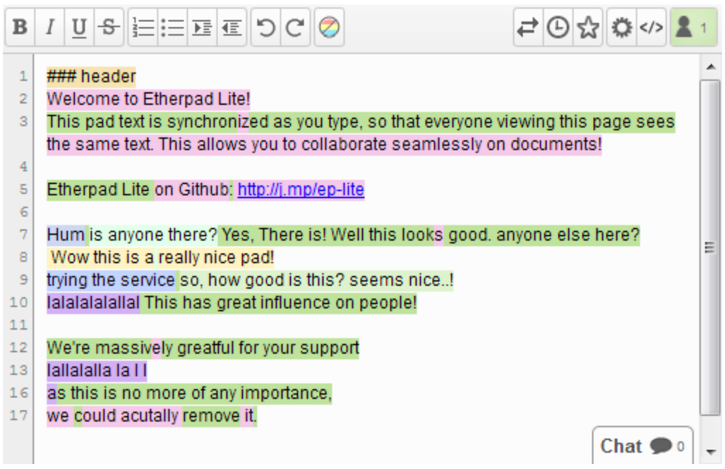
```
Before discussing the scattering of two
dyonic instantons we will review how the
potential stabilises a single dyonic
instanton. The effective action for a single
dyonic instanton rotating in only one
direction in the gauge group is
\begin{equation}
S = 8 \pi^2 \int \dif t \, \dot \rho^2 +
\rho^2 \dot \theta^2 - |q|^2 \rho^2,
\end{equation}
where $\rho$ is the size of the dyonic
instanton and $\theta$ is its $\U(1)$ gauge
angle. This can be calculated directly from
the inner product of zero-modes of the 't
Hooft ansatz \cite{Peeters:2001np} or from
```

☞ overleaf.com – Collaborative, online LaTeX-shell, Freemium

Wiki

- “pre-packaged” Wikis
- Advantages
  - Simple Markdown-Syntax
  - Online
  - Same tool chain
- Disadvantages
  - Simple Markdown-Syntax
  - Online
- You can convert Markdown into lots of other formats (HTML, PDF, LaTeX, ODF)
  - Example pandoc, ☞ johnmacfarlane.net/pandoc
  - Example MultiMarkdown, ☞ fletcherpenney.net/multimarkdown

Etherpad



header
Welcome to Etherpad Lite!
This pad text is synchronized as you type, so that everyone viewing this page sees the same text. This allows you to collaborate seamlessly on documents!

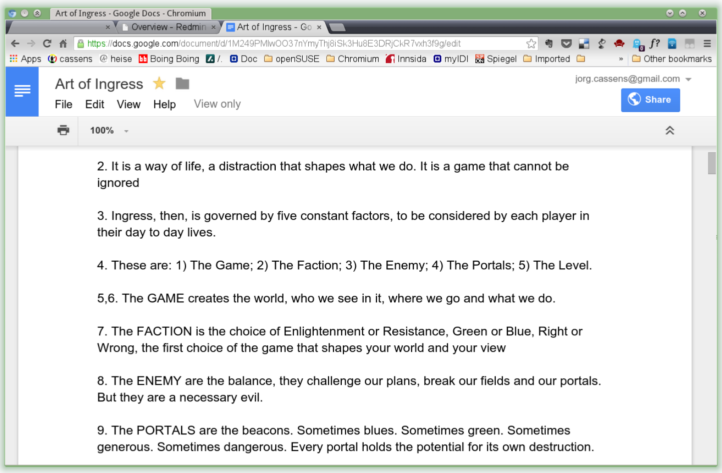
Etherpad Lite on Github: http://j.mp/ep-lite

Hum is anyone there? Yes, There is! Well this looks good. anyone else here?
Wow this is a really nice pad!
trying the service so, how good is this? seems nice..!
lalalalalallal This has great influence on people!

We're massively greatful for your support
lallalalla la l l
as this is no more of any importance,
we could acutally remove it.

☞ etherpad.org, ☞ epad.hosting.uni-hildesheim.de
OSS Collaborative online text editor, hosted or self-hosted

Google Docs



2. It is a way of life, a distraction that shapes what we do. It is a game that cannot be ignored

3. Ingress, then, is governed by five constant factors, to be considered by each player in their day to day lives.

4. These are: 1) The Game; 2) The Faction; 3) The Enemy; 4) The Portals; 5) The Level.

5,6. The GAME creates the world, who we see in it, where we go and what we do.

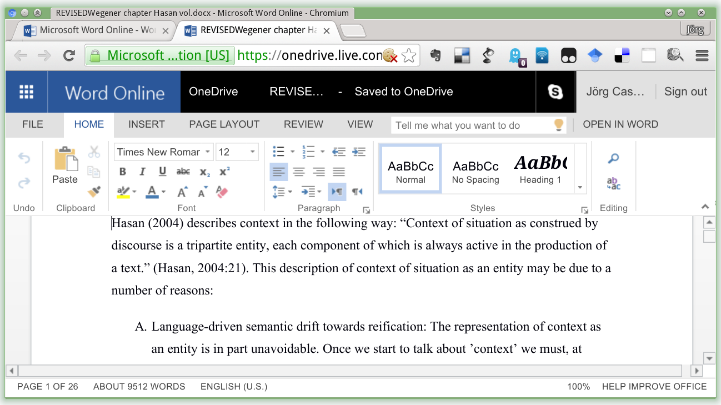
7. The FACTION is the choice of Enlightenment or Resistance, Green or Blue, Right or Wrong, the first choice of the game that shapes your world and your view

8. The ENEMY are the balance, they challenge our plans, break our fields and our portals. But they are a necessary evil.

9. The PORTALS are the beacons. Sometimes blues. Sometimes green. Sometimes generous. Sometimes dangerous. Every portal holds the potential for its own destruction.

☞ docs.google.com – Collaborative online word processor

Microsoft Word Online

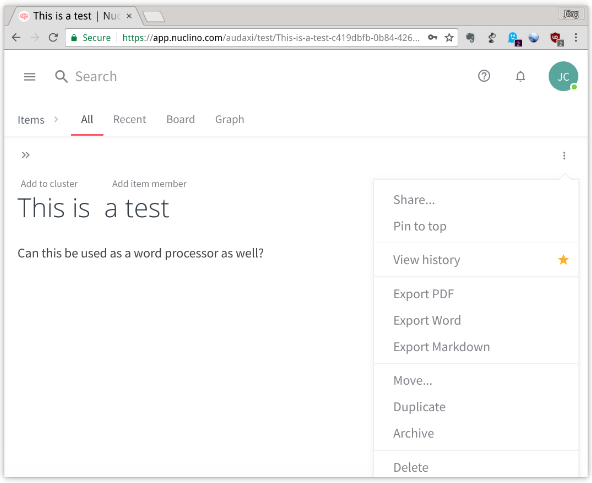


Hasan (2004) describes context in the following way: "Context of situation as construed by discourse is a tripartite entity, each component of which is always active in the production of a text." (Hasan, 2004:21). This description of context of situation as an entity may be due to a number of reasons:

A. Language-driven semantic drift towards reification: The representation of context as an entity is in part unavoidable. Once we start to talk about 'context' we must, at

☞ office.com – Collaborative online word processor

Nuclino



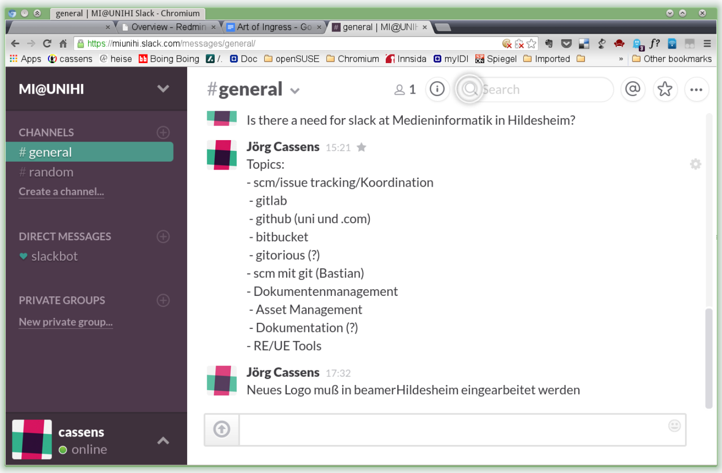
This is a test

Can this be used as a word processor as well?

☞ nuclino.com – "Easy knowledge base for teams", includes collaborative word processor

4.3 Communication & Coordination

slack



Is there a need for slack at Medieninformatik in Hildesheim?

Jörg Cassens 15:21
Topics:
- scm/issue tracking/Koordination
 - gitlab
 - github (uni und .com)
 - bitbucket
 - gitorious (?)
- scm mit git (Bastian)
- Dokumentenmanagement
 - Asset Management
 - Dokumentation (?)
- RE/UE Tools

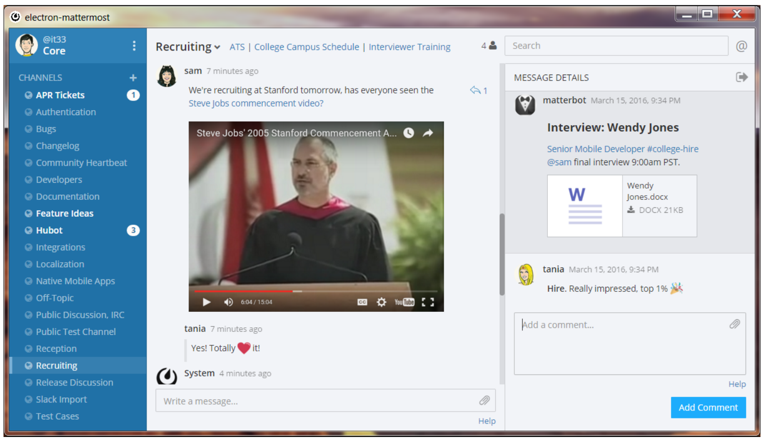
Jörg Cassens 17:32
Neues Logo muß in beamerHildesheim eingearbeitet werden

☞ slack.com – Commercial, Freemium

slack

- Communication in Teams in so-called channels
- More structured than Hangouts, less messy than facebook, simpler than IRC
- Advantages
  - Many functions and hooks
  - Good connectivity with other systems (git commit-messages)
  - Even free accounts quite powerful
- Disadvantages
  - . . .

Mattermost



sam 7 minutes ago
We're recruiting at Stanford tomorrow, has everyone seen the Steve Jobs commencement video?

Steve Jobs' 2005 Stanford Commencement A...

tania 7 minutes ago
Yes! Totally ❤ it!

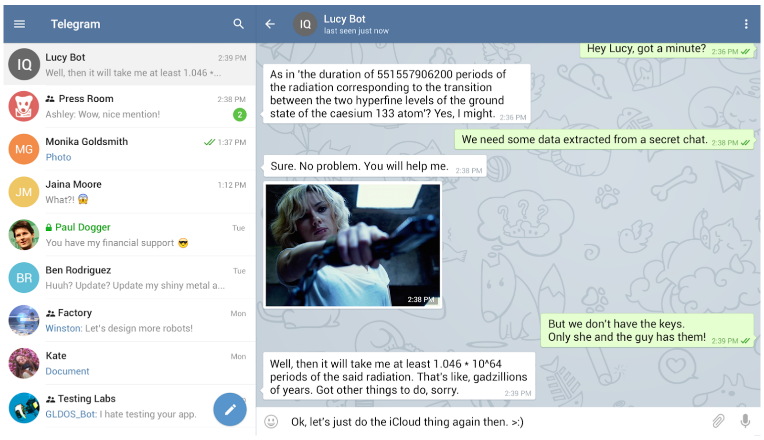
System 4 minutes ago

matterbot March 15, 2016, 9:34 PM
Interview: Wendy Jones
Senior Mobile Developer #college-hire
@sam final interview 9:00am PST.
Wendy Jones.docx DOCX 21KB

tania March 15, 2016, 9:34 PM
Hire. Really impressed, top 1%

☞ mattermost.org – Self-hosted Slack clone, comes with gitlab

Telegram



Lucy Bot 2:39 PM
Well, then it will take me at least 1.046 *...

Press Room 2:38 PM
Ashley: Wow, nice mention! 2

Monika Goldsmith 1:37 PM
Photo

Jaina Moore 1:12 PM
What?!

Paul Dogger Tue
You have my financial support

Ben Rodriguez Tue
Huuh? Update? Update my shiny metal a...

Factory Mon
Winston: Let's design more robots!

Kate Mon
Document

Testing Labs
GLDOS_Bot: I hate testing your app.

Hey Lucy, got a minute? 2:36 PM

As in 'the duration of 551557906200 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium 133 atom'? Yes, I might. 2:36 PM

We need some data extracted from a secret chat. 2:38 PM

Sure. No problem. You will help me. 2:38 PM

2:38 PM

But we don't have the keys.
Only she and the guy has them! 2:39 PM

Well, then it will take me at least 1.046 * 10^64 periods of the said radiation. That's like, gadzillions of years. Got other things to do, sorry. 2:39 PM

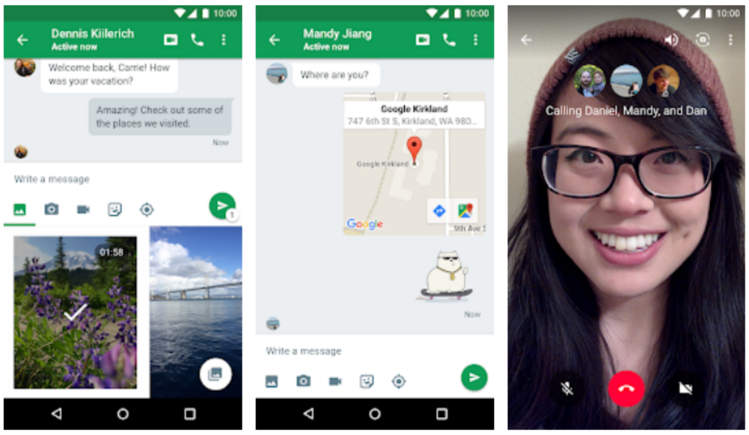
Ok, let's just do the iCloud thing again then. >:)

☞ telegram.org – Messenger, optional end-to-end-encryption, desktop & mobile, groups, proprietary

Signal

☞ whispersystems.org – Messenger, End-to-End-Encryption, desktop and mobile, groups

Hangouts



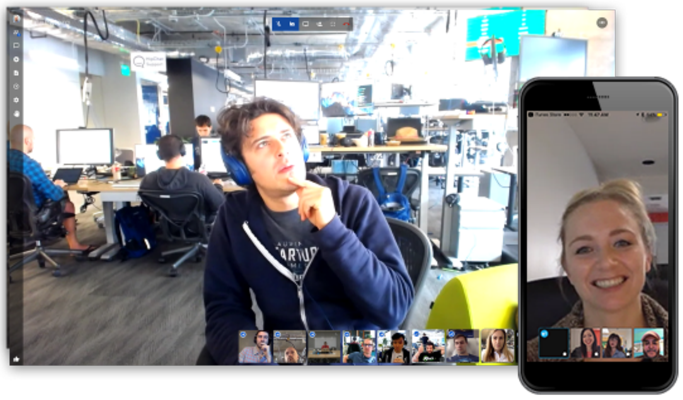
Welcome back, Carrie! How was your vacation?

Amazing! Check out some of the places we visited.

Where are you?

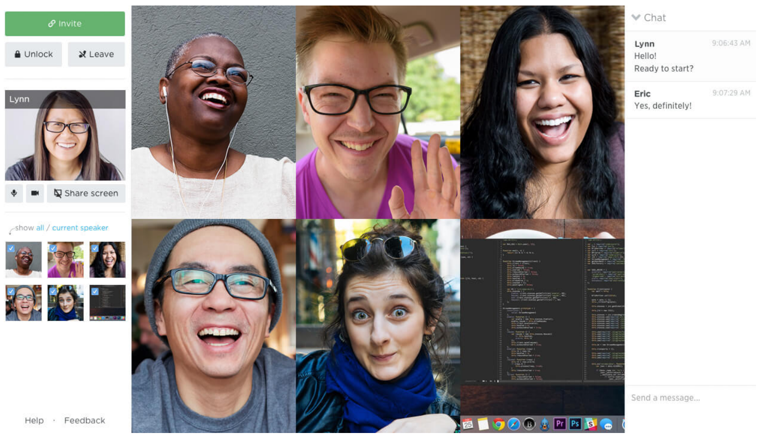
☞ hangouts.google.com – (Video) messenger, desktop and mobile, supports groups, proprietary

jitsi



☞ jitsi.org – multi-platform, multi-protocol (WebRTC) video chat, open source

Talky



Lynn 9:06:43 AM
Hello!
Ready to start?

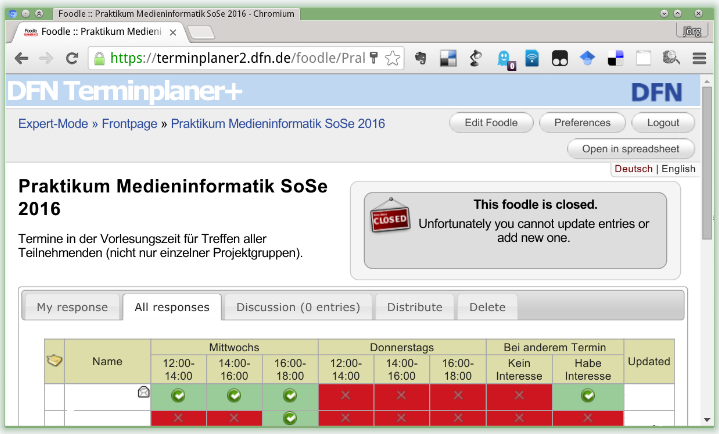
Eric 9:07:29 AM
Yes, definitely!

☞ talky.io – Video chat for groups (up to 15 participants, WebRTC), open source core

appear.in

☞ appear.in – Video chat for small groups (up to 4 participants, WebRTC), freemium

Foodle


Foodle :: Praktikum Medieninformatik SoSe 2016 - Chromium

https://terminplaner2.dfn.de/foodle/Pral

DFN Terminplaner+ DFN

Expert-Mode » Frontpage » Praktikum Medieninformatik SoSe 2016

Praktikum Medieninformatik SoSe 2016

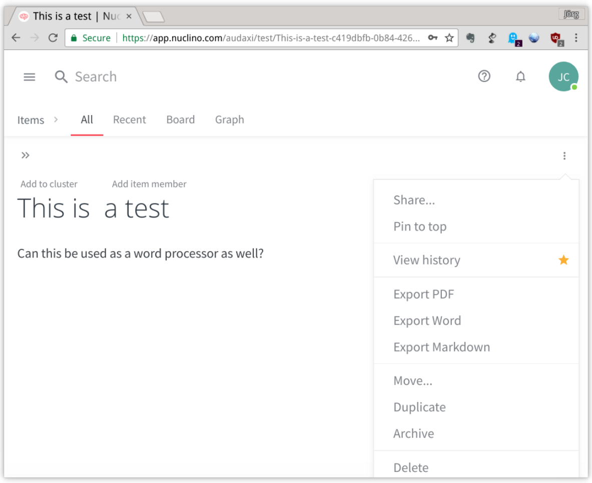
Termine in der Vorlesungszeit für Treffen aller Teilnehmenden (nicht nur einzelner Projektgruppen).

This foodle is closed.
Unfortunately you cannot update entries or add new one.

	Name	Mittwochs			Donnerstags			Bei anderem Termin		Updated
		12:00-14:00	14:00-16:00	16:00-18:00	12:00-14:00	14:00-16:00	16:00-18:00	Kein Interesse	Habe Interesse	
		✓	✓	✓	✗	✗	✗	✗	✓	
		✗	✗	✓	✗	✗	✗	✗	✗	

☞ terminplaner4.dfn.de – Terminplaner, DFN

Nuclino


https://app.nuclino.com/audaxi/test/This-is-a-test-c419dbfb-0b84-426...

This is a test

Can this be used as a word processor as well?

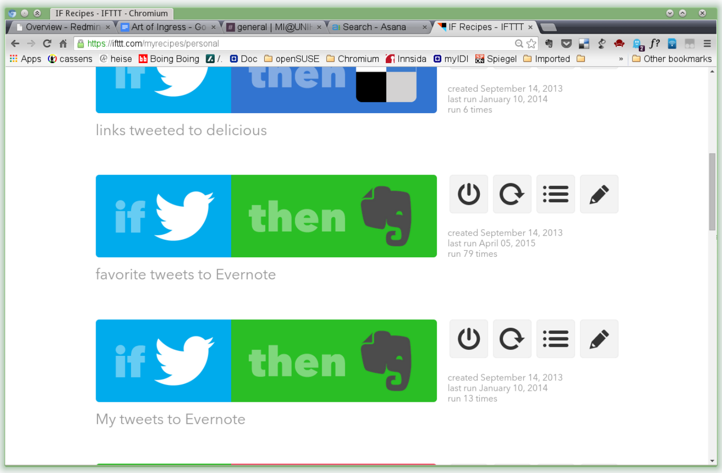
☞ nuclino.com – "Easy knowledge base for teams", includes collaborative word processor

4.4 Automation

Hooks

- Git has the ability to fire custom scripts when certain actions occur
- There are both client-side and server-side hooks
- Most hosted services offer convenient access to such hooks
  - Mail at commit
  - Slack-Messages at commit

if this then that


IF Recipes - IFTTT - Chromium
https://ifttt.com/myrecipes/personal
if
then
if
then
if
then

links tweeted to delicious

created September 14, 2013
last run January 10, 2014
run 6 times

favorite tweets to Evernote

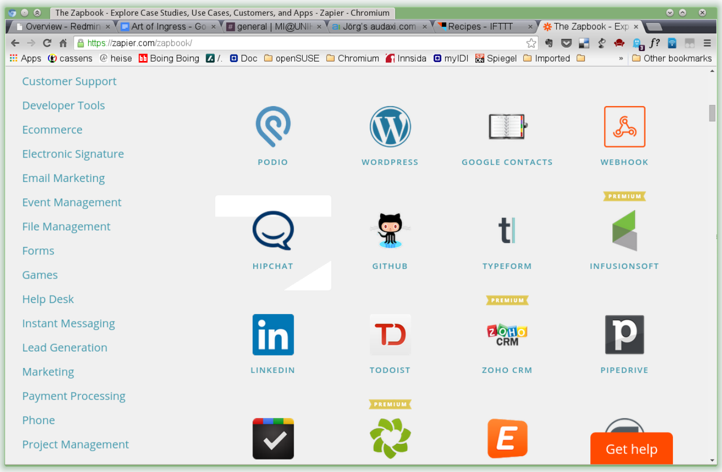
created September 14, 2013
last run April 05, 2015
run 79 times

My tweets to Evernote

created September 14, 2013
last run January 10, 2014
run 13 times

☞ ifttt.com – If this then that, commercial, freemium

zapier



☞ zapier.com – Similar to ifttt, commercial, freemium

ifttt, zapier

- Both services make it possible to connect different data sources and data sinks from different services
- iftttt is more open in how to use stuff, but zapier sometimes has more of better connections
- Advantages
  - Automation
- Disadvantages
  - Ones gives third party services access accounts on a potentially very large number of services. . . and sometimes to lots of data

4.5 Suggestions

Suggestions

- Source-code management (git)
- Git hosted services (gitlab, github, bitbucket)
- Documentation from the start (wiki, LaTeX)
- Tickets (git hosted services)

- Milestones (git hosted services)
- Project management (trello, taiga.io)
- Chat (slack, Telegram, jitsi, talky)

References

git: Info & Tools

- Basis
  - ☞ git-scm.com – Git for Windows (install, deutsche Sprachdatei in .old umbenennen)
- Tutorial & Documentation
  - ☞ katacoda.com/courses/git
  - ☞ instruqt.com/public/topics/getting-started-with-git
  - ☞ git-scm.com/book – Git book
- GUI-Tools
  - ☞ www.syntevo.com/smartgit
  - ☞ SourceTreeApp.com
  - ☞ gitkraken.com

git: Hosting

- Hosted services
  - ☞ uni-hildesheim.de/gitlab – Universität Hildesheim
  - ☞ www.gitlab.com – free public and private projects
  - ☞ www.bitbucket.com – free public and private projects, limited team size
  - ☞ www.github.com – free public projects
- Self-hosted
  - ☞ about.gitlab.com – self-hosted
  - ☞ gogs.io – self-hosted

Project Management

- Project management
  - ☞ www.redmine.org
  - ☞ trac.edgewall.org
  - ☞ asana.com
  - ☞ www.producteev.com
  - ☞ trello.com
  - ☞ taiga.io

Documentation

- Documentation
  - ☞ LaTeX & ☞ git
  - ☞ sharelatex.com
  - ☞ overleaf.com
  - ☞ etherpad.org
  - ☞ epad.hosting.uni-hildesheim.de
  - ☞ docs.google.com

  - ☞ office.live.com
  - ☞ nuclino.com
  - ☞ johnmacfarlane.net/pandoc
  - ☞ fletcherpenney.net/multimarkdown

Communication, Coordination, Automation

- Communication & Coordination
  - ☞ slack.com – Slack
  - ☞ mattermost.org – Slack-Clone
  - ☞ telegram.org – telegram
  - ☞ whispersystems.org – Signal
  - ☞ hangouts.google.com – Hangouts
  - ☞ talky.io – Talky
  - ☞ jitsi.org – jitsi
  - ☞ appear.in – appear.in
  - ☞ terminplaner2.dfn.de – Foodle
  - ☞ nuclino.com – knowledge management
- Automation
  - ☞ ifttt.com
  - ☞ zapier.com