

**VERZIONIRANJE
IZVORNOG KODA**

U slučaju požara



1. git commit
2. git push
3. napusti zgradu



https://neoteric.eu/wp-content/uploads/2016/04/in_case_of_fire.png

Sustavi za verzioniranje koda

Definicije

Skup alata koji imaju sposobnost praćenja različitih verzija izvornog koda
Jon Loeliger, Matthew McCullough (2012)

Kategorija programskih alata koji pomažu razvojnim timovima praćenje promjena na kodu tijekom vremena

<https://www.atlassian.com/git/tutorials/what-is-version-control>

Varijacije na temu

VCS: Version Control System

SCM: Source Code Manager

RCS: Revision Control System

Kalkulator -> Digitron | Sustav za verzioniranje koda -> Git

Git is an Open Source project covered by the GNU General Public License version 2 (some parts of it are under different licenses, compatible with the GPLv2). It was originally written by Linus Torvalds with help of a group of hackers around the net.

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

Povijest

**M.J. Rochkind. “The Source Code Control System“
IEEE Transactions on Software Engineering 1(4) (1975): 364-370**



Marc J. Rochkind was born in Baltimore, Md., on June 12, 1948. He received the B.S.M.E. degree from the University of Maryland, College Park, and the M.S.M.E. degree from Rutgers University, New Brunswick, N.J., in 1970 and 1972, respectively.

Since 1970 he has been a member of the Technical Staff at Bell Laboratories, Murray Hill, N.J. He is currently engaged in the development of software systems for use by Bell Telephone companies.

Walter F. Tichy. “RCS: A System from Version Control” Software Practice and Experience 15(7) (1985): 637-654

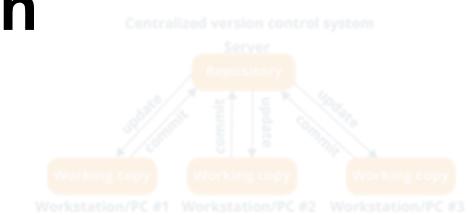
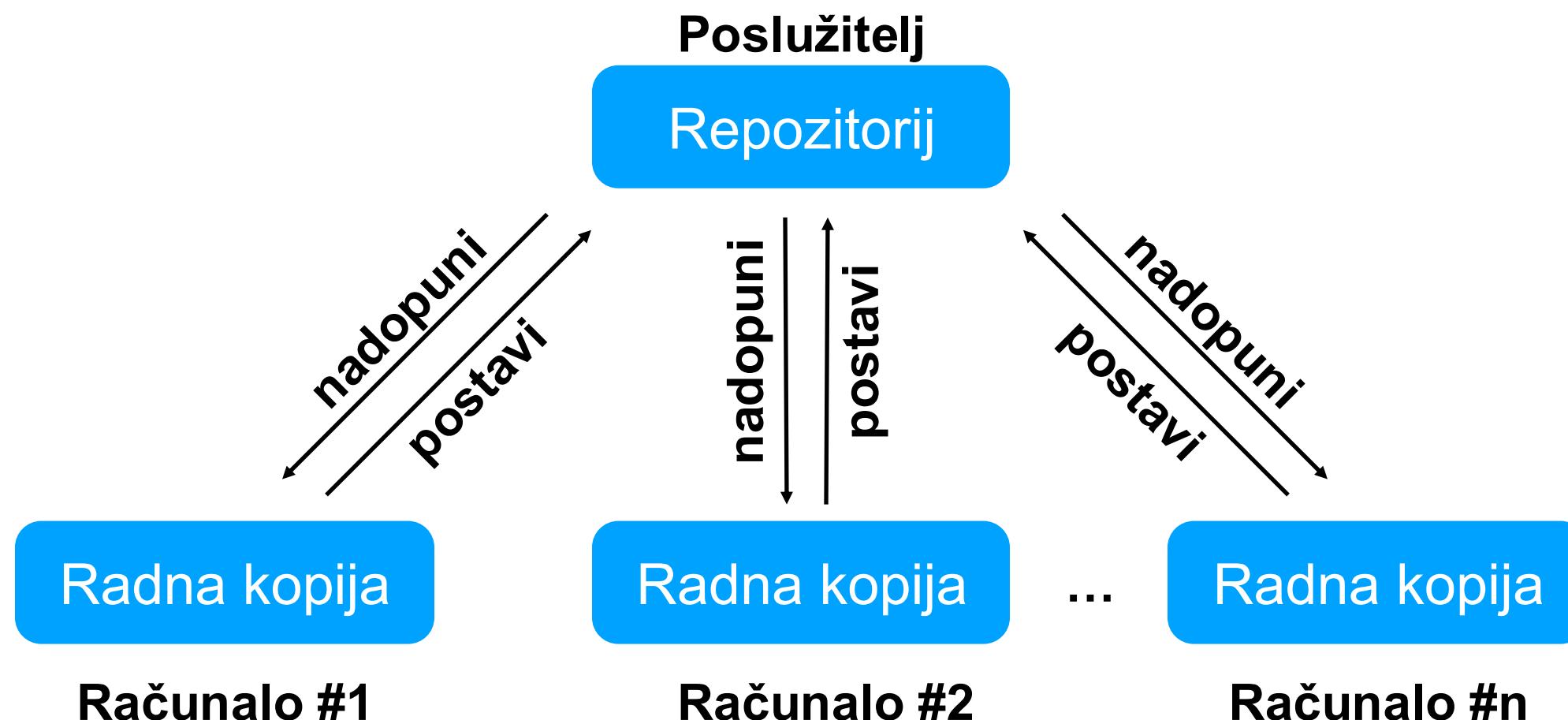
Walter F. Tichy

Department of Computer Sciences
Purdue University
West Lafayette, Indiana 47907

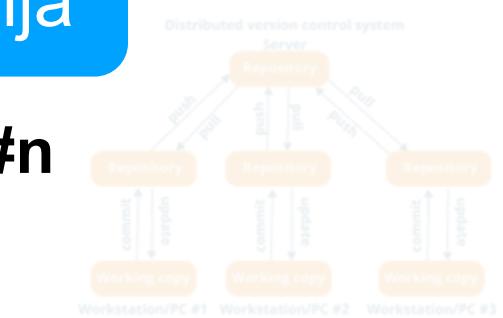
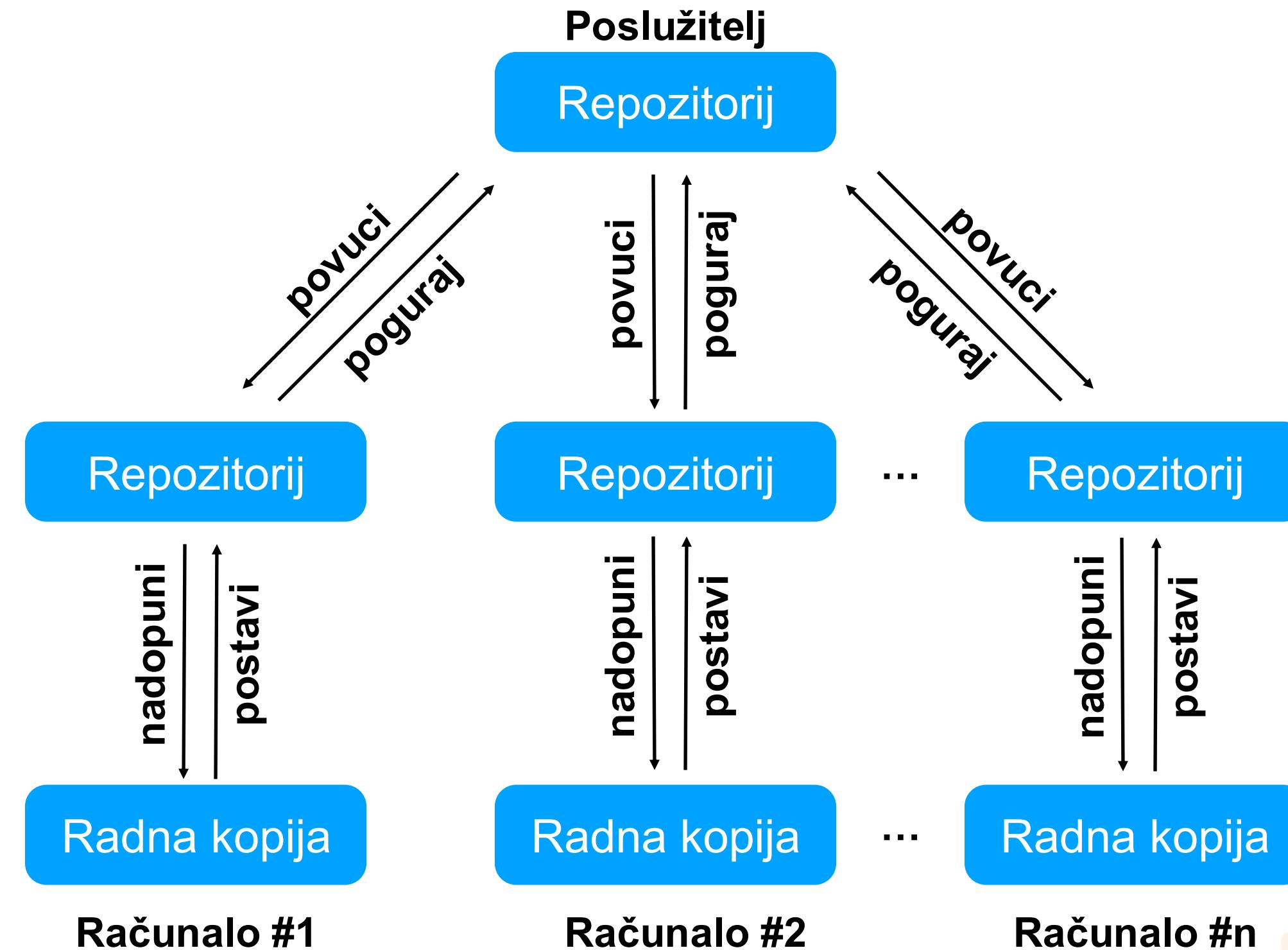
<http://www-public.imtbs-tsp.eu/~gibson/Teaching/Teaching-ReadingMaterial/Rochkind75.pdf>
<http://www.gnu.org/software/rcs/tichy-paper.pdf>

Vrste sustava za verzioniranje izvornog koda

Centralizirani sustav



Distribuirani sustav



Sustavi za verzioniranje koda

- PVCS Version Manager (1985)
- CVS (1986)
- IBM Relational ClearCase (1986)
- SourceSave (1991)
- CMVC (1994)
- Microsoft Delta (1994)
- Borland StarTeam (1995)
- Perforce (1995)
- Sun Workshop TeamWare (1996)
- BitKeeper (1998)
- CVSNT (1998)
- BitKeeper (2000)
- Subversion (2000)
- GNU Arch (2001)
- AcuRev (2002)
- Darcs (2002)
- DCVS (2002)
- Monotone (2003)
- SVK (2003)
- SourceGear Valt (2003)
- mercurial (2005)
- Microsoft TFVC (2005)
- git (2005)
- Fossil (2006)
- Bazaar (2007)

The image displays a grid of 15 software product cards from Capterra, each representing a different source code management tool. The tools listed are:

- Git by Git (36 reviews)
- Team Foundation Server by Microsoft (26 reviews)
- FundView Permits by Fund Accounting Solution Technologies (19 reviews)
- Apache Subversion by Apache Software Foundation (2 reviews)
- IBM Rational ClearCase by IBM (2 reviews)
- CA Harvest SCM by CA Technologies (1 review)
- SourceAnywhere by Dynamsoft (1 review)
- SourceGear Vault by SourceGear (1 review)
- Mercurial by Mercurial (1 review)
- BitKeeper by BitKeeper (0 reviews)
- Kallithea by Kallithea (0 reviews)
- Plastic SCM by Codice Software (0 reviews)
- RhodeCode by RhodeCode (0 reviews)

Each card includes a small logo, the tool name, the developer, the number of reviews, and a brief description.

CVS

“CVS started out as a bunch of shell scripts written by Dick Grune, posted to the newsgroup comp.sources.unix in the volume 6 release of July, 1986.”

**05. prosinca 2000 via
web.archive.org**

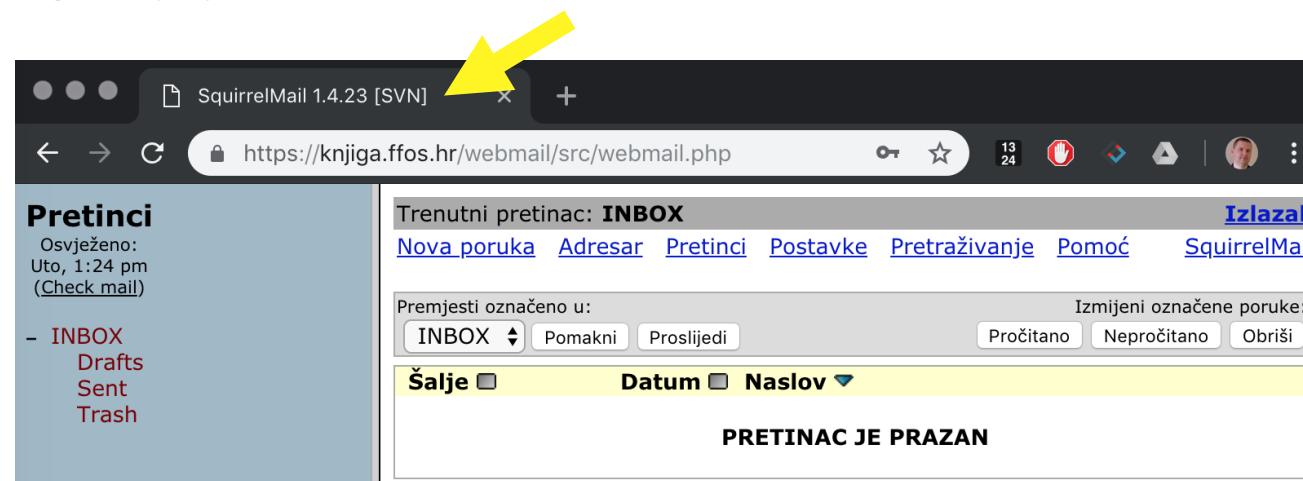


Centralizirani sustav

Apache™ Subversion®

“Subversion is an open source version control system. Founded in 2000 by CollabNet, Inc.”

<https://subversion.apache.org/>



Centralizirani sustav

mercurial

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

<https://www.mercurial-scm.org/>

The screenshot shows the official Mercurial website at <https://www.mercurial-scm.org/>. The header features the Mercurial logo and navigation links for About, Guide, Download, Extensions, and News/Wiki. A search bar is also present. The main content area includes a slogan "Work easier Work faster" and a brief description of Mercurial's capabilities. A prominent blue button labeled "Download now" for "Mercurial 4.8" is displayed. Below the download button, there's a section for "Another OS?" with links for Mac OS X, Windows, and other operating systems. The footer contains links for "How you can benefit from Mercurial", "Quick Start", and "Create a project and commit".

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.

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](#).

Quick Start

Clone a project and push changes

```
$ hg clone https://www.mercurial-scm.org/repo/hello
$ cd hello
$ (edit files)
$ hg add (new files)
$ hg commit -m 'My changes'
$ hg push
```

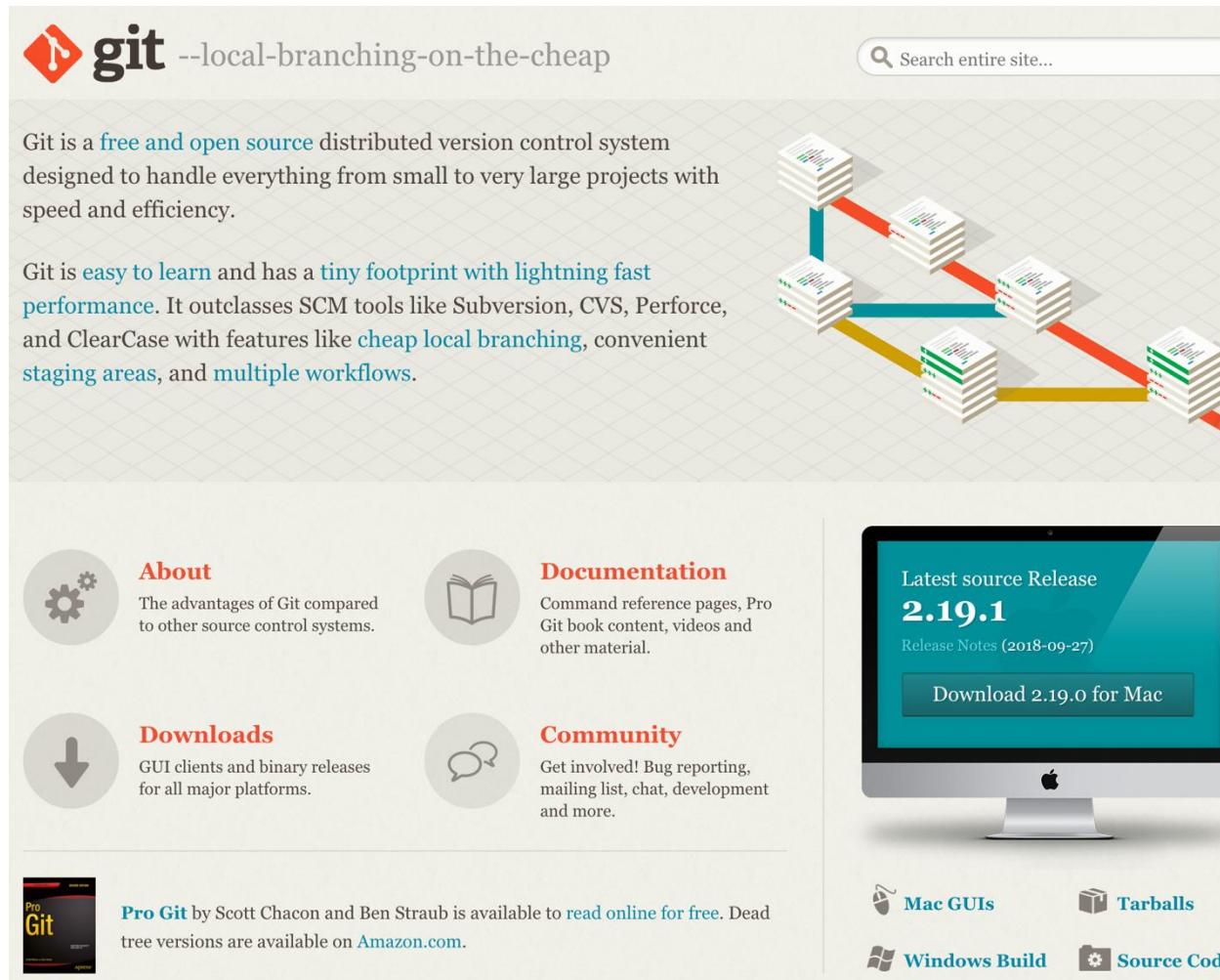
Create a project and commit

Distribuirani sustav

git

“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.”

<https://git-scm.com/>



Distribuirani sustav



Timeline

With the stage set, a bit of external impetus, and a dire VCS crisis imminent, **Git** sprang to life in April 2005.

Git became self-hosted on April 7 with this commit:

```
commit e83c5163316f89bfbde7d9ab23ca2e25604af29
Author: Linus Torvalds <torvalds@ppc970.osdl.org>
Date: Thu Apr 7 15:13:13 2005 -0700
```

Initial revision of "git", the information manager from hell

Shortly thereafter, the first Linux commit was made:

```
commit 1da177e4c3f41524e886b7f1b8a0c1fc7321cac2
Author: Linus Torvalds <torvalds@ppc970.osdl.org>
Date: Sat Apr 16 15:20:36 2005 -0700
```

Linux-2.6.12-rc2

Initial **git** repository build. I'm not bothering with the full history, even though we have it. We can create a separate "historical" **git** archive of that later if we want to, and in the meantime it's about 3.2GB when imported into **git** - space that would just make the early **git** days unnecessarily complicated, when we don't have a lot of good infrastructure for it.

Let it rip!

That one commit introduced the bulk of the entire Linux Kernel into a **Git** repository.⁴ It consisted of

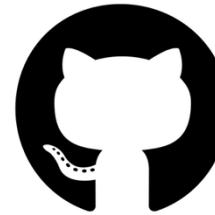
17291 files changed, 6718755 insertions(+), 0 deletions(-)

What's in a Name?

Linus himself rationalizes the name "**Git**" by claiming "I'm an egotistical bastard, and I name all my projects after myself. First Linux, now **git**."⁵ Granted, the name "Linux" for the kernel was sort of a hybrid of Linus and Minix. The irony of using a British term for a silly or worthless person was not missed, either.

Since then, others had suggested some alternative and perhaps more palatable interpretations: the Global Information Tracker seems to be the most popular.

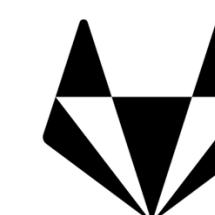
git repozitoriji i klijenti



github

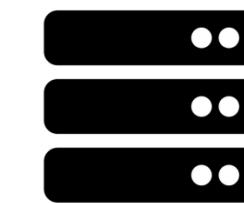


Bitbucket

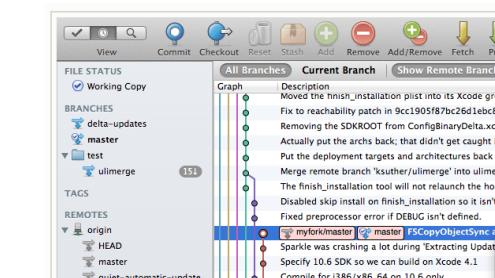
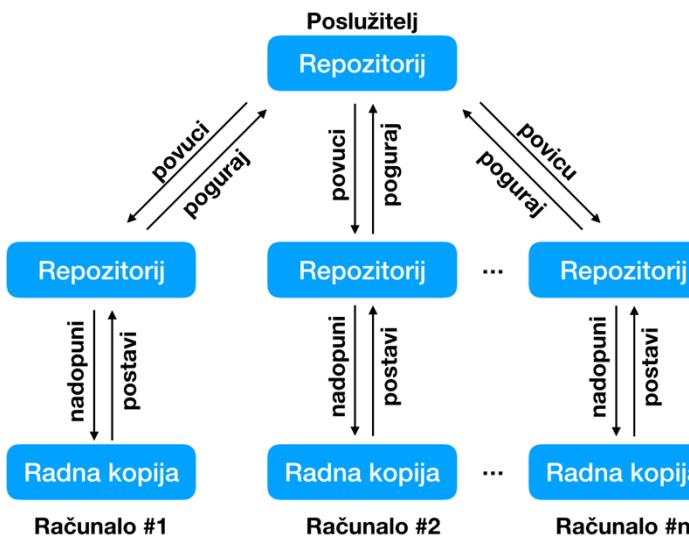


gitlab

...

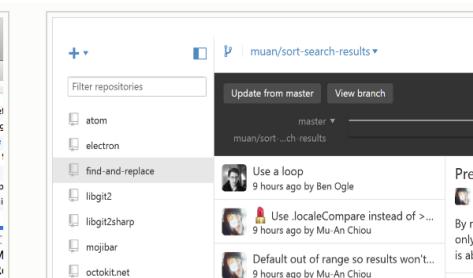


vlastiti repozitorij



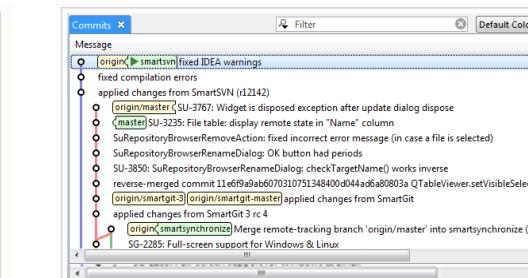
SourceTree

Platforms: Mac, Windows
Price: Free
License: Proprietary



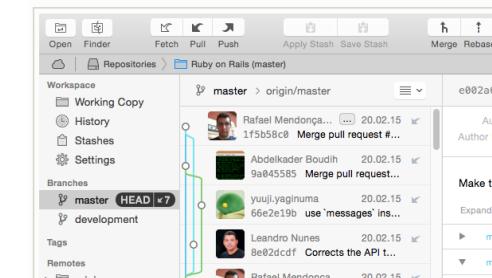
GitHub Desktop

Platforms: Mac, Windows
Price: Free
License: MIT



SmartGit

Platforms: Linux, Mac, Windows
Price: \$79/user / Free for non-commercial use
License: Proprietary



Tower

Platforms: Mac, Windows
Price: \$79/user (Free 30 day trial)
License: Proprietary

<https://git-scm.com/downloads/guis>



github -> dev CV



Pinned

symfony/symfony

Public

The Symfony PHP framework

PHP 26k 8.4k

twigphp/Twig

Public

Twig, the flexible, fast, and secure template language for PHP

PHP 7.3k 1.1k

splitsh/lite

Public

Split a repository to read-only standalone repositories

Go 1.4k 61

Fabien Potencier

fabpot

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10,802 contributions in the last year

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