

# Git

“Source code control the way it was meant to be” (Linus Torvalds)

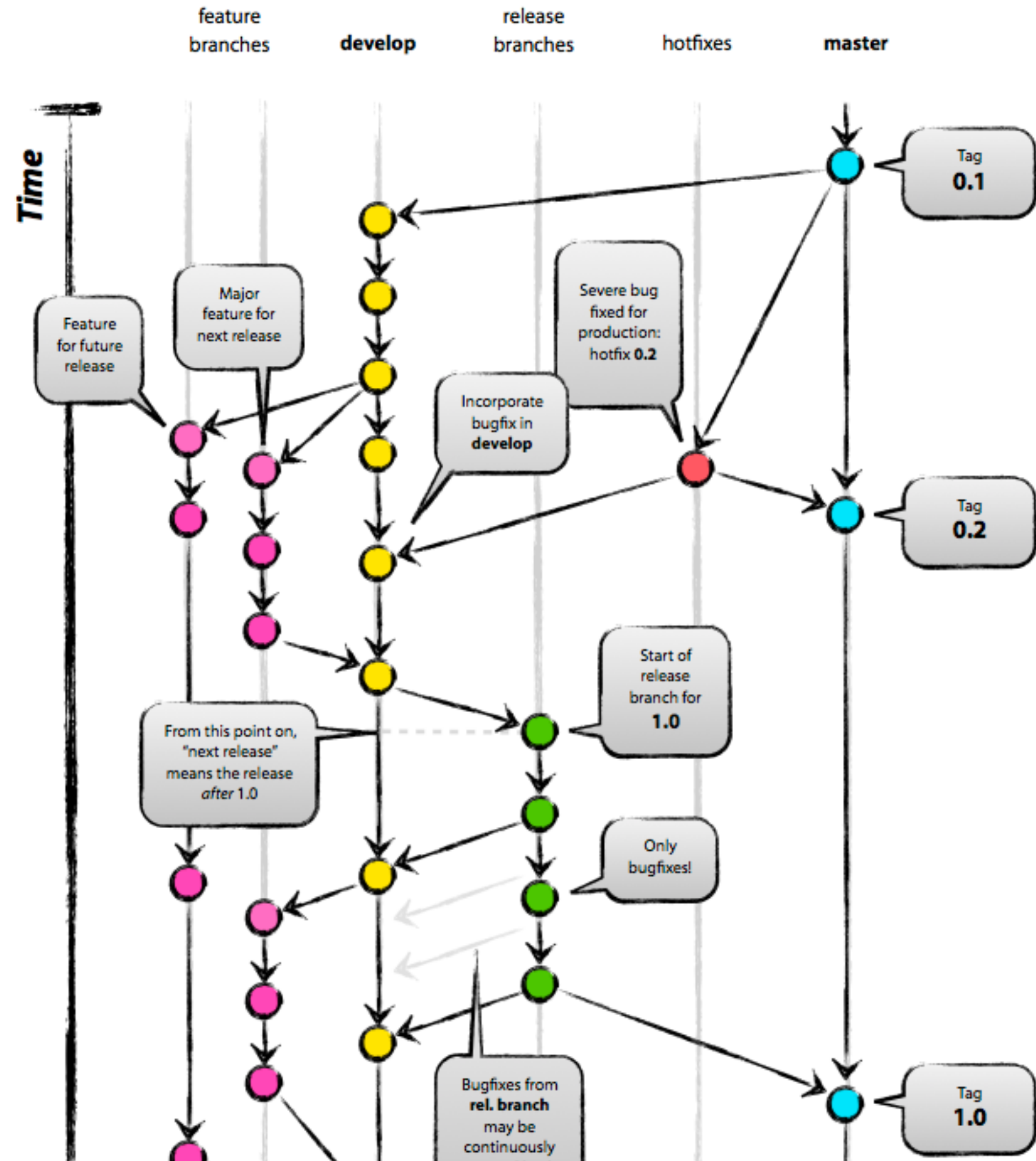
# Why?

**Git gives the opportunity for a better development flow**

- **Only go live with code (features) that is finished**
- **Sharing unfinished features with the team**
- **Less merge conflicts**
- **Less worrying about the builds**

# Git Flow

(Best practice extension)



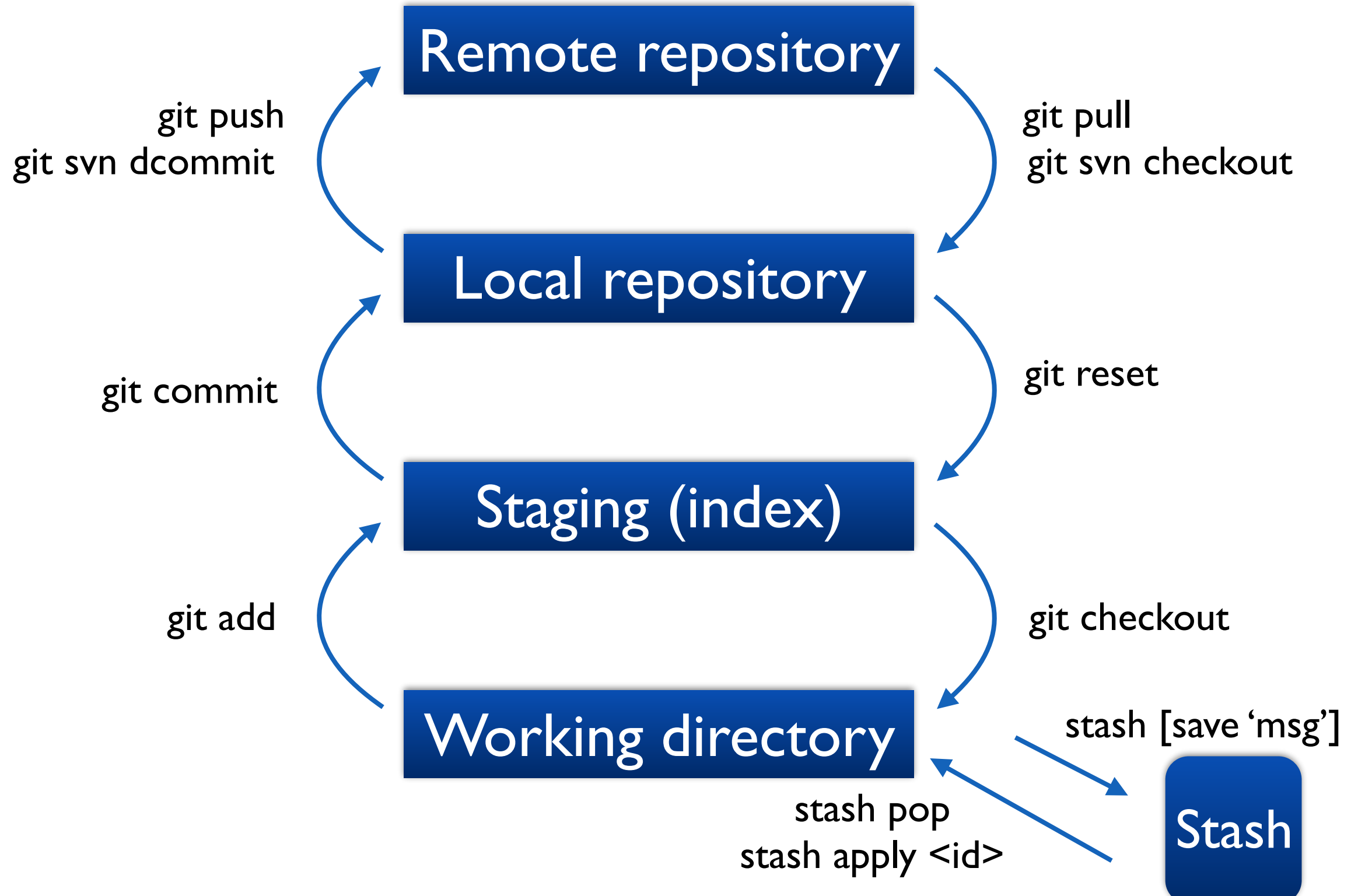
# How?

- Distributed
- Branches are easy
  - Work with feature branches
- Guarantee that what you put in also comes out.
- Small commits, commit often

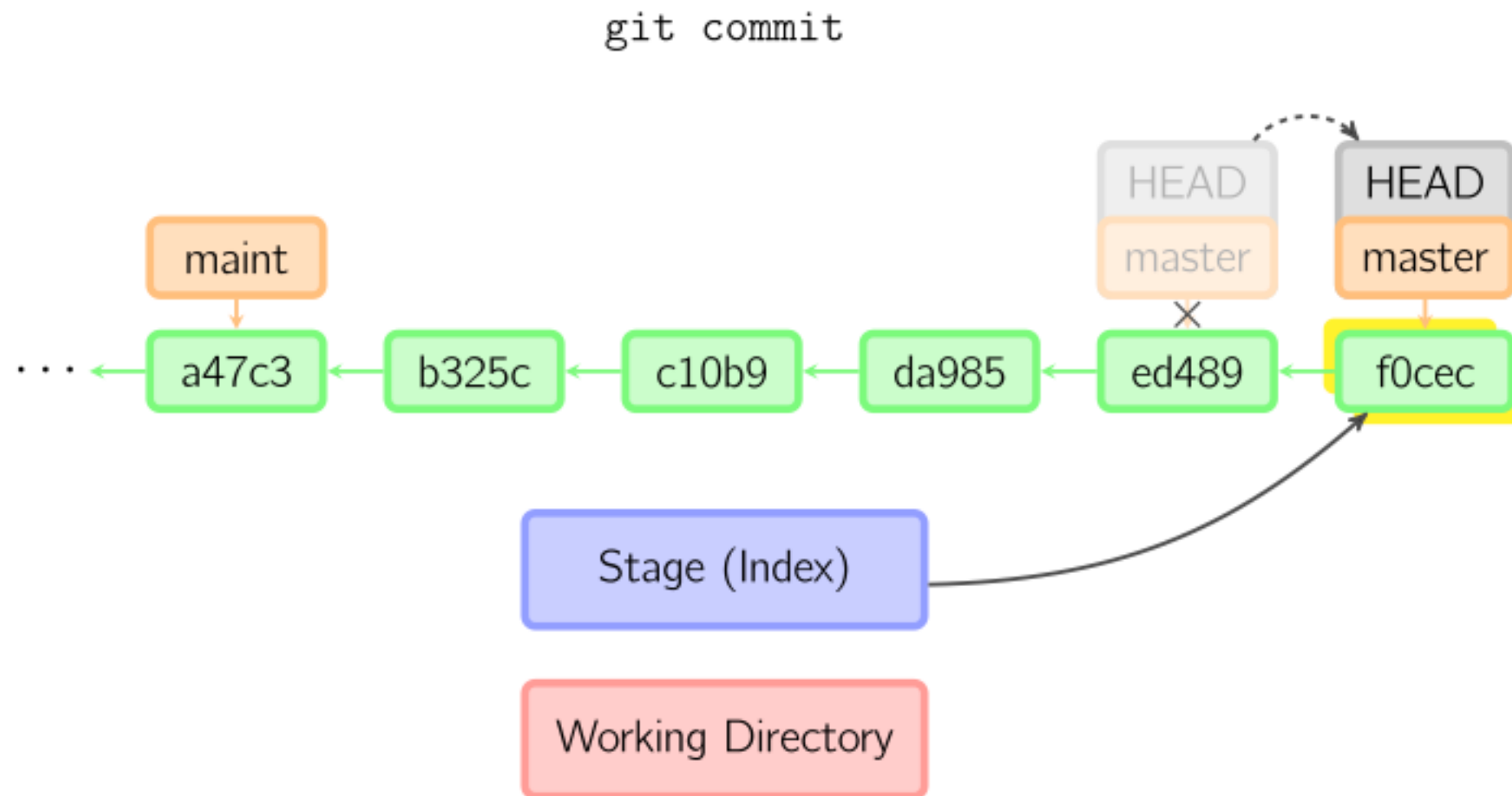
# What is Git

- DVCS
- Build by Linus Torvalds
- Based on ideas of BitKeeper
- Highly reliable

# How Git works



# What a commit does



# Workshop - Begin

## 1. Checkout project from svn

```
git clone <url>
```

```
git svn clone -T trunk <url>
```

[http://svn.local.nl.bol.com/svn/personal/  
jdenboer/git-workshop](http://svn.local.nl.bol.com/svn/personal/jdenboer/git-workshop)

## 2. Fix test and commit change

```
git status
```



# Workshop Add, Undo

3. Add a file and undo Add

4. Rename a file and undo Rename

5. Stash changes

```
git stash [help|list|show|apply|pop|...]
```

# Workshop - Branches

6. Create a new branch 'feature1' and add a commit on that branch.
7. Create another branch 'feature2'
8. View branches with gitk
9. Remove branch 'feature2'

*Changing branches: git checkout <name>*

*Create branch: git checkout -b <name>*

*View branches: git branch -a*

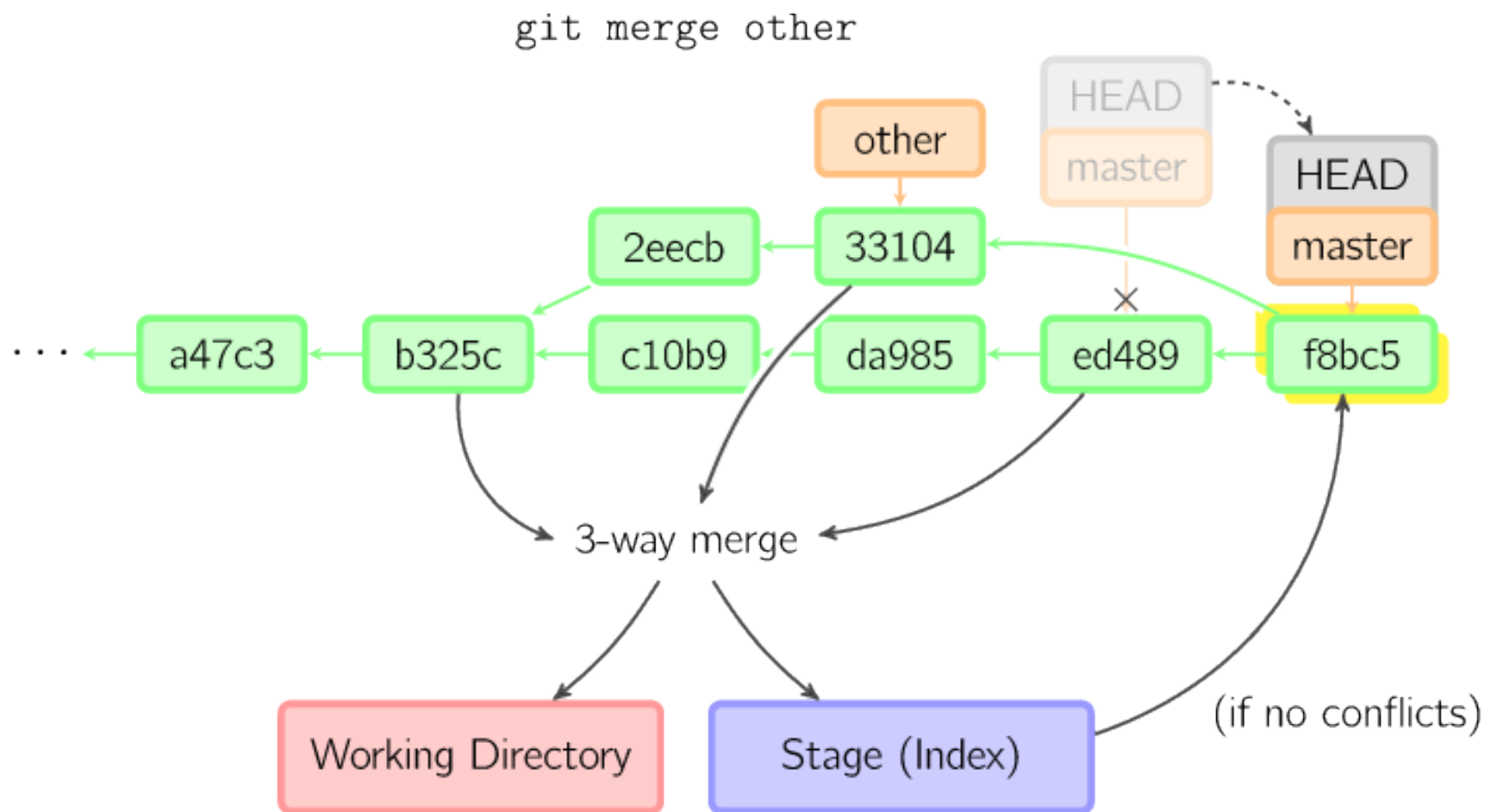
# Workshop - Merging

10. Change to master and create another commit

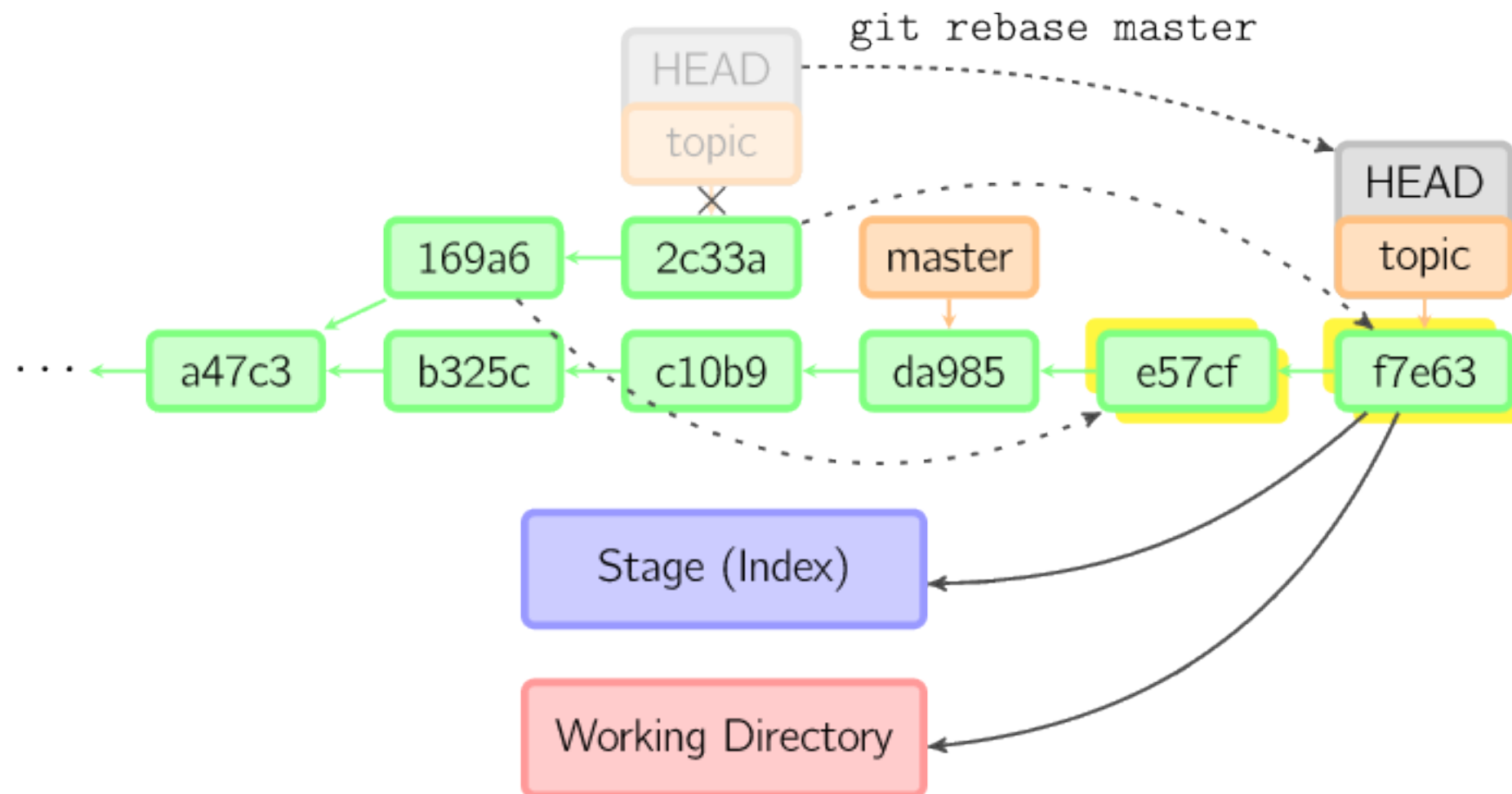
11. Merge change in 'feature1' branch into master using 'merge'

12. Merge change in 'feature1' branch into master using 'rebase'

# Merge



# Rebase



# Workshop - Push/Pull

## I 3. Push changes to remote repository

```
git push  
git svn dcommit
```

## I 4. Pull changes from others

```
git pull --rebase  
git svn rebase
```

## I 5.git

# Other Git cmds

- `init` // create new repo
- `aliases` // `git config [--global] alias.<alias> <cmd>`
- `blame`
- `mergetool`
- `diff`
- `log`
- `mv` | `rm` // rename or delete
- `tag`
- `reflog`
- `git help [cmd]` | info `git-<cmd>`
- `'hooks'`
- `'ignores'`

# Git Gui

- All
  - git (default apps 'gitk' 'git gui')
  - Egit for Eclipse
  - IntelliJ
- Windows
  - Git for Windows
  - Git Extensions (shell extension)
  - SmartGit
  - TortoiseGit
- Mac + Windows
  - Sourcetree



# Git Resources

- Git site ([git-scm.com](https://git-scm.com))
- [hginit.com](https://hginit.com) (Mercurial)
- [try.github.com](https://try.github.com)
- Books: (available on Git site)  
Git Pro, Git Community Book
- Visual Git
- Git by example
- Git Magic
- Git Immersion
- Git From Bottom Up.