Advanced GIT

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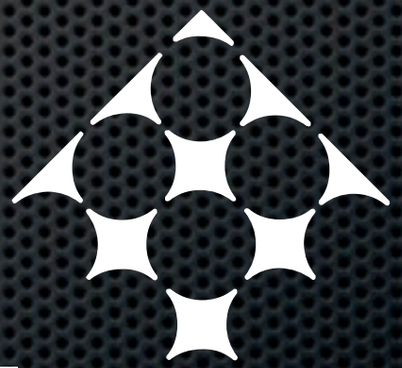

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Git Basics

- How Git works on a low level
- Understand concepts better
- Be able to read documentation

Git is so awesome

Subversion

Git

Git is so awesome

- I can haz Datenstrukturen?
- Fuck yeah .git
- Branches WTF
- OMG Rebase
- I herd u liek Push/Pull
- Tricks

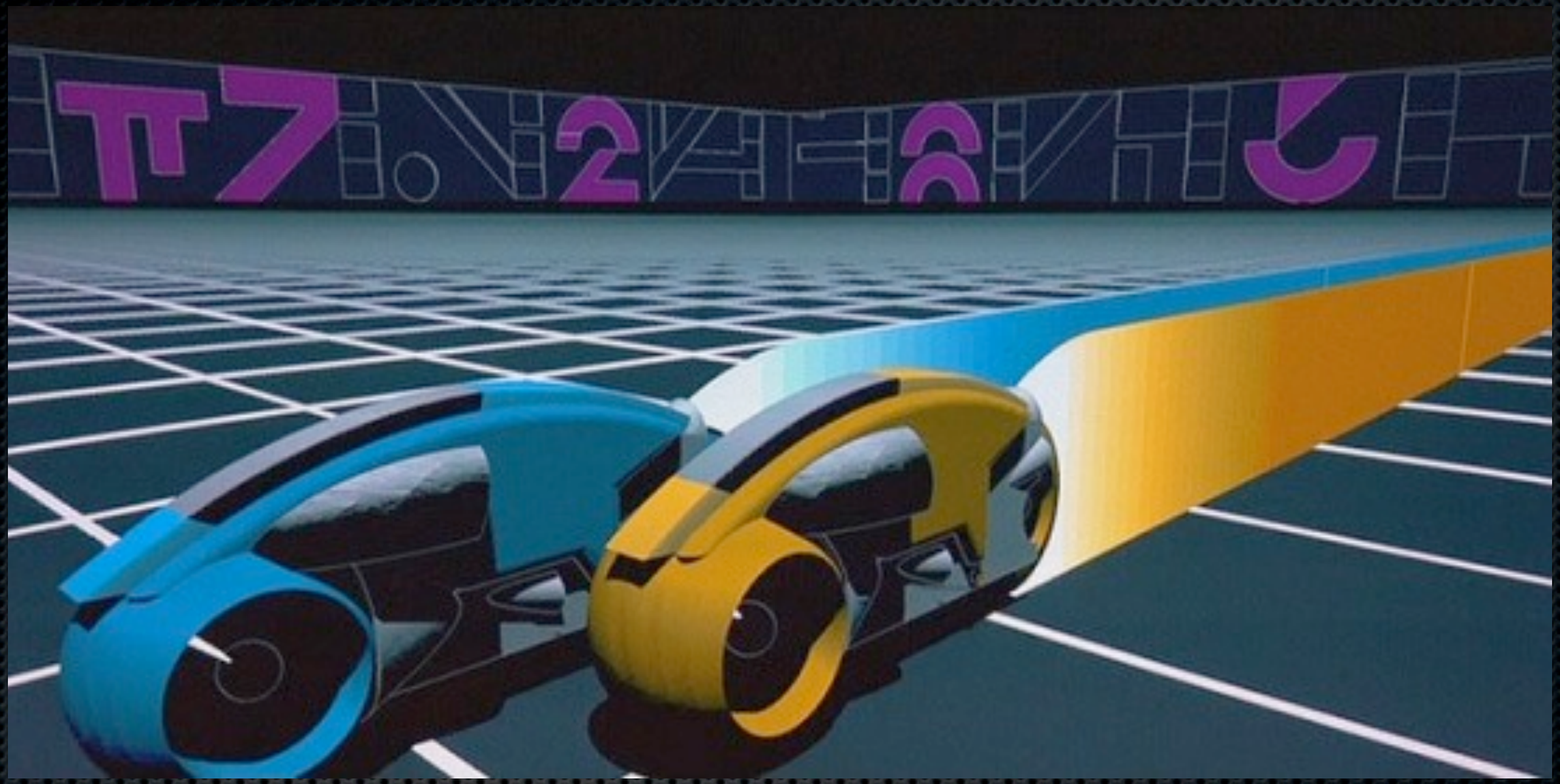
Git is so stupid

- Directed object graph
- Only 4 data types
  - Commit
  - Tree
  - Blob
  - Tag
- Inspect objects with git cat-file -p <object>

Branches

Pointers

- Branches are pointers to commits
- Types of branches
  - Local
  - Remote
  - Misnamed
- Located in .git/refs/heads



Fast-Forward/Git reset

Fast-Forward/Git Reset

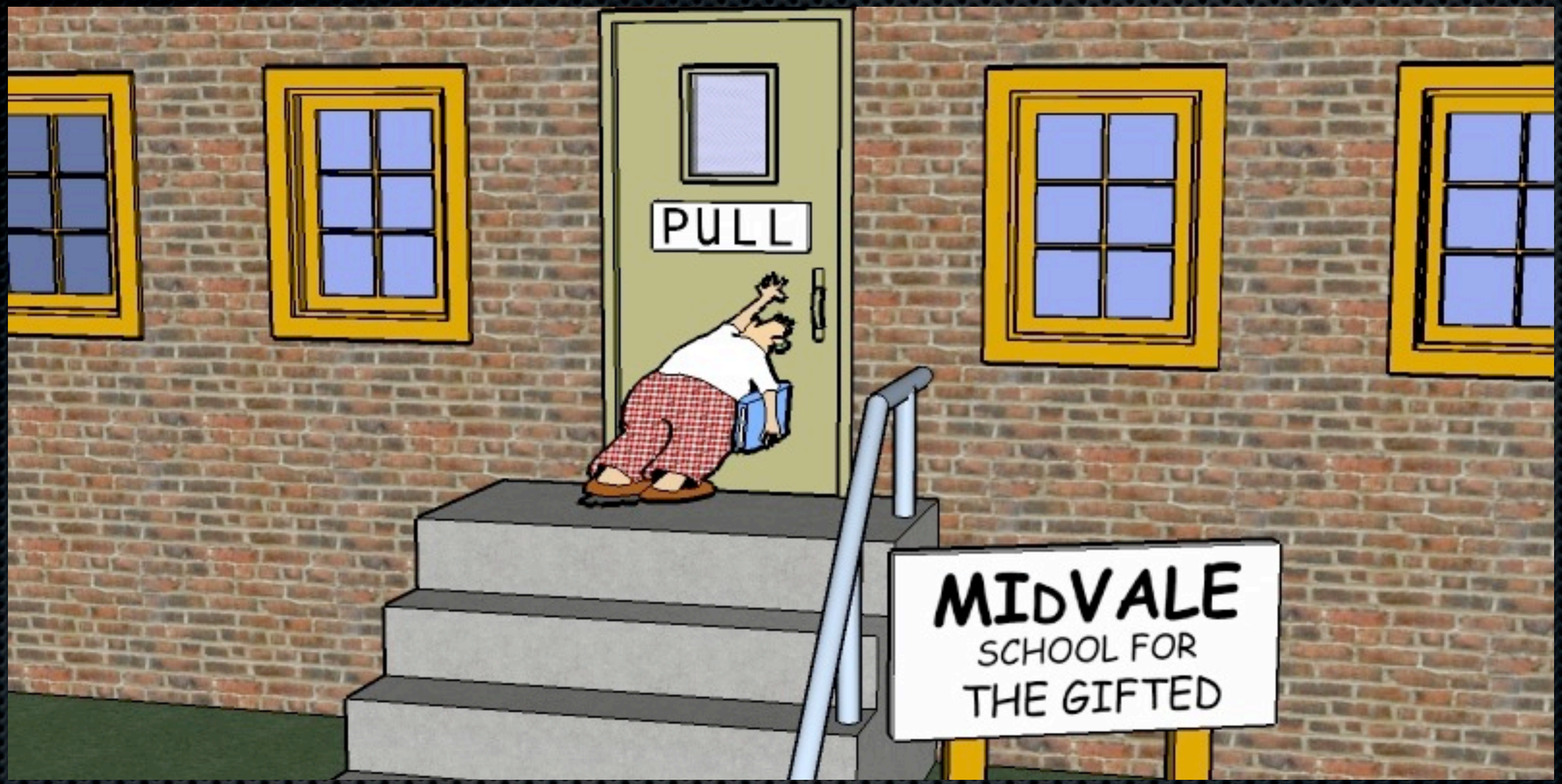
- Git always tries to preserve history
- Fast Forward = Reset instead of Merge
- Because this reset does not lose history

R.E.B.A.S.E.

It’s like Skynet for Commits

Rebase

- git rebase --onto <newbase> <upstream> [<branch>]
- git rebase <newbase/upstream> [<branch>]
- Commits in <branch>, that aren't in <upstream> are applied to <newbase>, the result is the new state of <branch>
- git rebase --interactive
- git rebase --continue | --skip | --abort



Push/Pull

Push/Pull

- git push <remote> refs/tags/<tag>:refs/tags/<tag>
- git fetch
- git pull = git fetch + git merge

Refspecs

- git push <remote> refs/tags/<tag>:refs/tags/<tag>
- Disambiguation
  1. .git/<name>(HEAD, FETCH_HEAD, ORIG_HEAD, MERGE_HEAD and CHERRY_PICK_HEAD);
  2. refs/<name>
  3. refs/tags/<name>
  4. refs/heads/<name>
  5. refs/remotes/<name>
  6. refs/remotes/<name>/HEAD

Tricks

Config Settings

- alias.reb=!BASE=$(git log --merges -n 1 --format=%H) && git rebase -i $BASE
- merge.conflictstyle=diff3
- rebase.autosquash=true
- branch.master.rebase=true
- branch.autosetuprebase=always

RTFM

Read the fucking manpage

KTHXBYE

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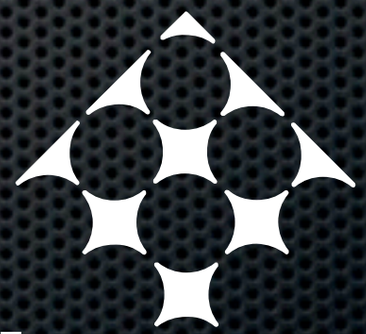

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