

# The Main Title

The Subtitle

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# What is Version Control System?

# Why we need a VCS?

# VCS Work Flow Categories

- Centralized: VSS, CVS, Subversion
- Distributed (centralized workflow is also supported here) : BitKeeper, git, mercurial, ...

# Why git is better than Subversion

- git is super fast
- Full repository clone
- Local history: you don't need to connect to the server when viewing the commit history
- github: social coding
- Other things: better compression, multi workflow support, . . .

# General Advice on Learning git

- Try git and github
- Most graphical tool/plugsins suck. Please use the command-line git.
- Find “how-to” on Google, StackOverflow, git book

# Thumb-up Rules of Using git

- “A clear development workflow is worth a bunch of version control systems.”
- Modular design, avoid simultaneous source file editing by different members.
- Head (latest) version at the master branch is always ready to deploy.
- Modification is made on branches, then merged into master.
- Stay on your own branch.
- Do NOT edit files in .git directory unless you know exactly what you are doing.

# git workflow on a stand-alone computer



# git workflow with a central repo

# gti workflow with multi repos

# git command

- init
- add
- commit
- tag
- branch
- Oh, there is a conflict!!!
- “Time Machine”: stash, stash list, checkout to a commit, checkout to master

# Exercise: git environment

# Exercise: git local repo

# Exercise: diff

# Exercise: branch

# Exercise: github



# Exercise: Remote Branch

# Exercise: Conflicts

# Exercise: tag

# Exercise: Time Machine