

Short Introduction to SVN

Software Architecture

Spring Semester 2010

What is SVN?

- Subversion (SVN)
- Version-control system
- Client-server architecture (as opposed to distributed revision control systems like GIT)
- Widely used, especially in open-source development

- More: Lecture on configuration management

Checkout project

- Checkout command:

```
svn checkout
```

```
--username your-origo-user
```

```
https://svn.origo.ethz.ch/sa10-your-project
```

- Creates a directory “sa10-your-project” at your current location.
- Associated to your user.

Add/delete/move files

- Adding files:

```
svn add filename
```

- Deleting files:

```
svn delete filename
```

- Moving files:

```
svn move filename destination
```

Commit changes

- All local changes need to be committed to the repository:

`svn commit -m "message"` (all changes in this directory)

`svn commit filename` (individual file)

- Write meaningful commit messages!

Update/Status/Diff

- Update to newest revision:

```
svn update
```

- Status of local repository:

```
svn status
```

- See local changes:

```
svn diff filename
```

Conflicts

- When two people change the same file, a conflict occurs.
- SVN tries to merge changes, but if it cannot, you have to manually merge the two versions.
- Then, you need to tell SVN that the versions are merged:

`svn resolved filename`

SVN Properties

- Per file properties, meta-data for SVN
- Important properties:
 - `svn:ignore` Ignore files, locally per client
 - `svn:eol-style` Line-ending convention
 - `svn:keywords` Auto-replaced on commits

Best Practices

- Compile code before committing
 - Remember to add new files
- Review changes before committing
- Write meaningful commit messages

Demo

- TortoiseSVN
 - Set SVN properties
 - Checkout project
 - Adding/Removing files
 - History/Diff
 - Resolving conflicts
- Origo
 - Commit emails
 - WebSVN

Resources

- Windows client: TortoiseSVN
<http://tortoisesvn.tigris.org/>
- Recommended SVN Settings
[http://dev.eiffel.com/Subversion Settings](http://dev.eiffel.com/Subversion_Settings)