Simplifying Drupal Development with Subversion

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How do Drupal sites get managed and deployed?

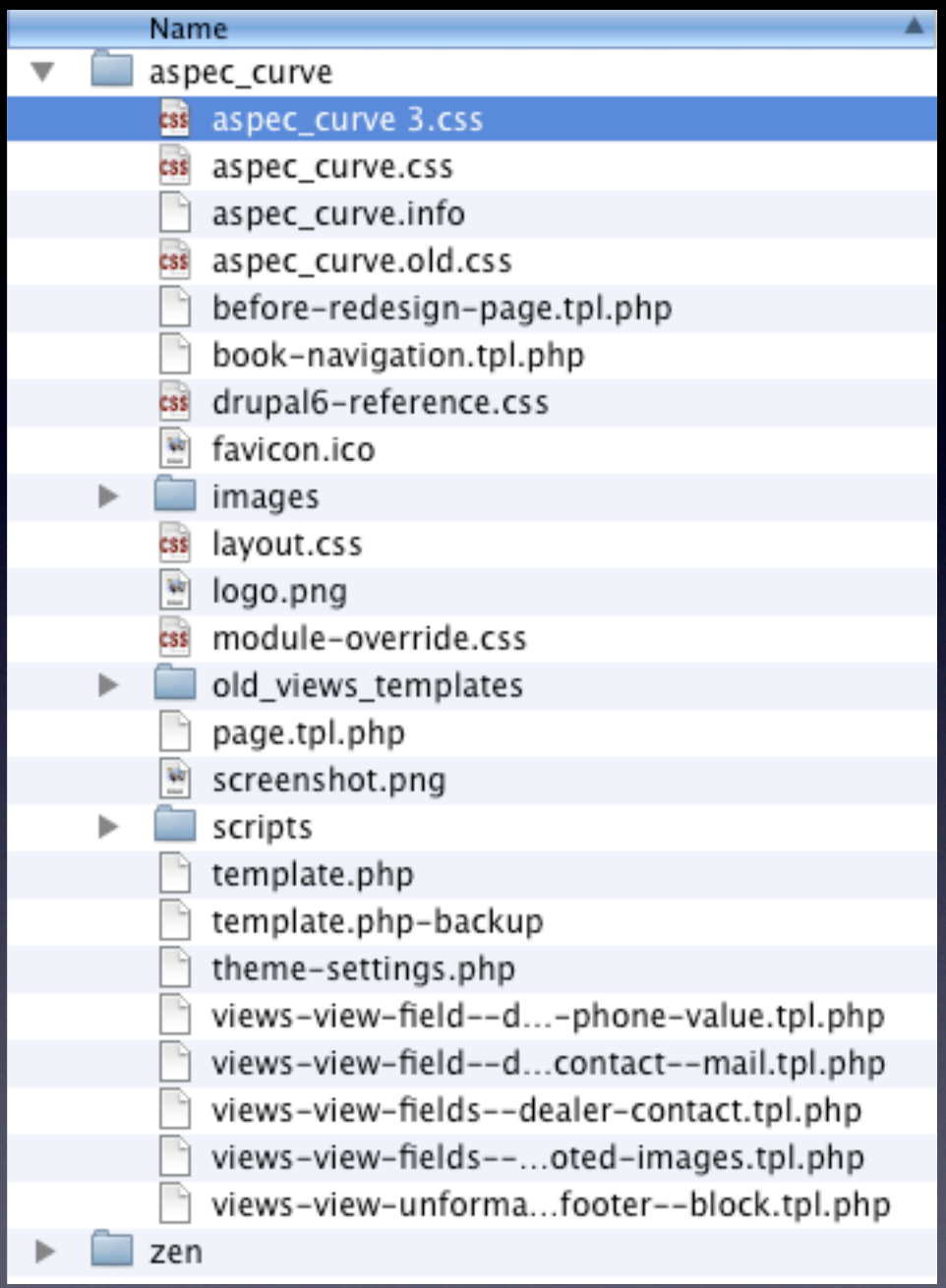

TGZ

And modules...

And themes...

And libraries...

And custom themes or code...


Name
aspec_curve
aspec_curve 3.css
aspec_curve.css
aspec_curve.info
aspec_curve.old.css
before-redesign-page.tpl.php
book-navigation.tpl.php
drupal6-reference.css
favicon.ico
images
layout.css
logo.png
module-override.css
old_views_templates
page.tpl.php
screenshot.png
scripts
template.php
template.php-backup
theme-settings.php
views-view-field--d...-phone-value.tpl.php
views-view-field--d...contact--mail.tpl.php
views-view-fields--dealer-contact.tpl.php
views-view-fields--...oted-images.tpl.php
views-view-unforma...footer--block.tpl.php
zen

What is Version Control?

- The management of changes to code and project resources over time
- Project history
- Takes the processes you do manually for creating copies of old files, cleans it up, and makes it automatic


PHP
page.tpl.php


PHP
page.tpl.php


1
PHP
page.tpl.php
2
PHP
page.tpl.php


1
PHP
page.tpl.php
2
PHP
page.tpl.php


1
PHP
page.tpl.php
2
PHP
page.tpl.php
3
PHP
page.tpl.php

Immediate benefits

- Revert local changes
- Revert to a previous version
- Compare previous versions of a file
- “annotate” or “blame”
- Multiple developers / computers
- Conflict resolution

SVN Hosting

- Your own system (VPS, desktop, web server, etc)
  - Just make sure that your server is accessible over the ‘net
- Code hosting services
  - Unfuddle, Beanstalk, Springloops, etc
  - Google Code, Sourceforge

Setting Up the command-line SVN Client

- It's really simple on Linux - just search for and install "subversion" from your package manager
- OS X 10.5 includes an older version of Subversion (1.4.4 currently)
  - I recommend downloading the latest version and installing that
  - For Windows, or the latest version for other OS's, see http://subversion.tigris.org/

http://www.flickr.com/photos/dans180/243974098/

Demonstration!

```
cd drupal-6.13
svn import https://kibble.serveftp.net/svn/wdug-demo/
cd ~/Projects
svn co https://kibble.serveftp.net/svn/wdug-demo/
svn log
svn mkdir sites/all/modules
mv ~/Drupal\ Modules/webform sites/all/modules/
svn stat
svn add sites/all/modules/webform
svn stat
svn ci
svn info
svn up
svn log
```

About .svn folders...

Copy in the new webform files.
svn stat
svn revert -R .
diff -rup webform-2.6 webform-2.7 | grep "Only in"
svn ci -m "Updating to webform 6.x-2.7 for critical security upgrades."
svn up

I broke it!

- svn stat
- svn diff
- svn revert
- svn merge -r HEAD:PREV .
- If it's committed, your local checkout is expendable

Repository Layout

http://www.flickr.com/photos/copleys/3725348370/

Three Directories

- trunk
- branches
- tags
- ...

Branches Merging to Trunk

- Have each developer working on a feature work in their own branch
- When complete, merge back to trunk
- Deploy site from trunk, or from a tag made from trunk

Trunk Splitting into Branches

- Trunk is the latest, bleeding-edge code
- Branch from trunk to stabilize code for release
- Tag from branch once ready to be deployed

Whatever your repository layout, keep it consistent and documented

Subversion is flexible, so use it that way!

http://www.flickr.com/photos/40002687@N02/3676625419/

Demo!

Billy Mays firing dead bugs at a windshield to demonstrate wipers.

```
svn up
svn rm * .htaccess
svn ci
svn mkdir trunk tags branches
cp -Rv ~/Drupal\ Modules/drupal-6.13/ .
svn add * .htaccess && svn ci
svn cp trunk/ branches/new-theme && svn ci
```

svn switch

(having the entire repository checked out isn't the best use of your disk space)

svn switch https://kibble.serveftp.net/svn/wdug-demo/trunk
svn switch https://kibble.serveftp.net/svn/wdug-demo/branches/new-theme
add acquia_slate
merge to trunk
svn switch trunk
svn merge https://kibble.serveftp.net/svn/wdug-demo/branches/new-theme .

Deployment Advantages

- No more FTP!
- No more manual tracking of file and folder changes
- Much faster transfer (compression, differences only, less overhead)
- Use ‘svn stat’ on the server to detect changes

Drupal-specific Notes

- settings.php may be an issue due to SQL passwords
- /files directories
  - svn:ignore
- Database / code coupling

hook_update_N

- You can use a custom module with a .install file to automatically configure site updates
- For example, you can easily set variables, install modules, or update the database

Merging external sources

External Code

- Every Drupal developer will need to merge in changes from external sources
- Subversion, plus additional utilities, can make updating modules a much simpler process
- Faster, less errors, automatic patch integration (!)
- Many thanks to IMAGEX MEDIA (http://imagexmedia.com/)

http://www.flickr.com/photos/31847994@N04/3676331838/

In a Nutshell

- Import the first version of the module into /vendor/modules/<module_name>/current
  - I use current-47, current-5, current-6
- Tag current with version number
  - “svn cp current 6.x-1.0”
- Use svn_load_dirs.pl to import later versions of the module
  - svn_load_dirs.pl -t 6.x-1.1 https://example.com/svn/vendor/modules/cck current cck

Handy Utilities

- svnmerge.py: http://www.orcaware.com/svn/wiki/Svnmerge.py
- svn_load_dirs.pl (or the Python equivalent)
- grep
- diff / patch
- pbcopy, pbpaste, open, gnome-open

GUI Clients

- IDE Plugins (Eclipse, NetBeans, DreamWeaver, etc)
- TortoiseSVN (watch the download links for ads)
- KSVN
- Web interface (WebSVN, ViewVC, mod_svn)
- Many, many others

Other VCS'

- Drupal uses CVS
- The Linux Kernel developers use Git
- Ubuntu uses Bazaar
- Many more Free and proprietary VCS systems
- http://en.wikipedia.org/wiki/Revision_control

Questions / Comments?