

<a>

Understanding URLs & Addressing

OCI / CAIT

R. Scott Granneman

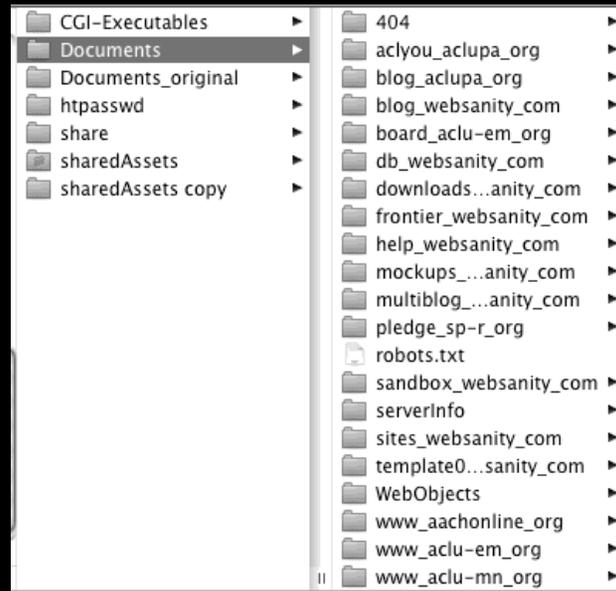
Jordan Lev

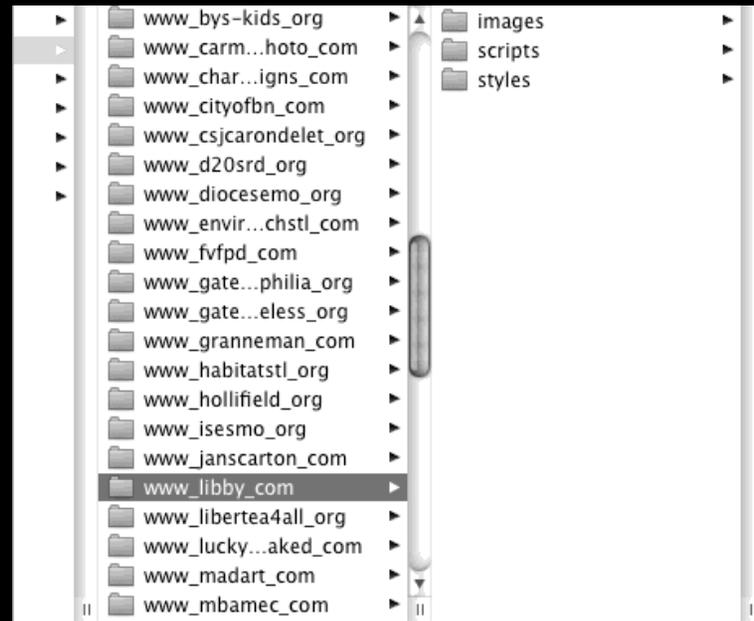
© 2008 Scott Granneman

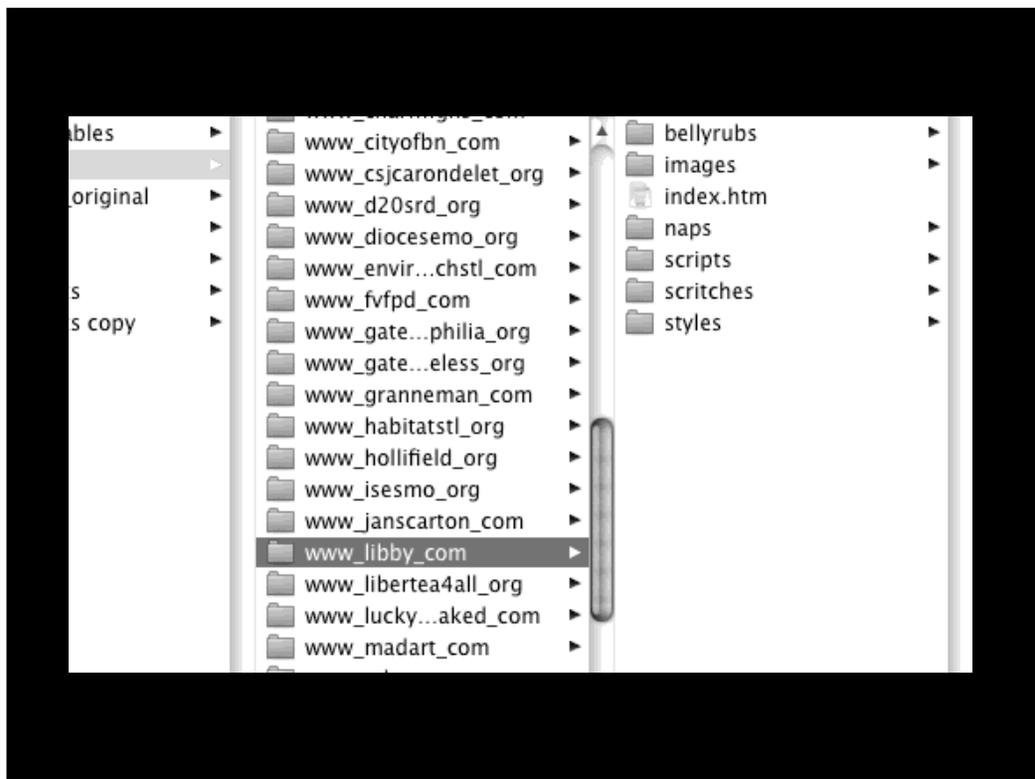
Last updated 20140120

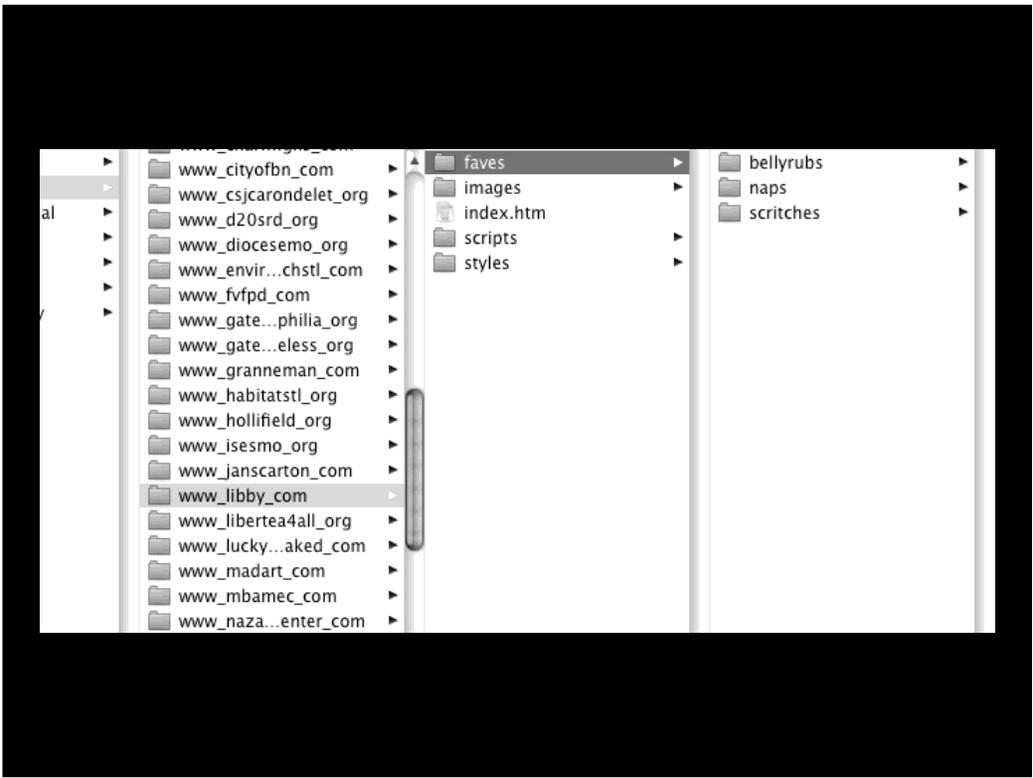
You are free to use this work, with certain restrictions.
For full licensing information, please see the last slide/page.

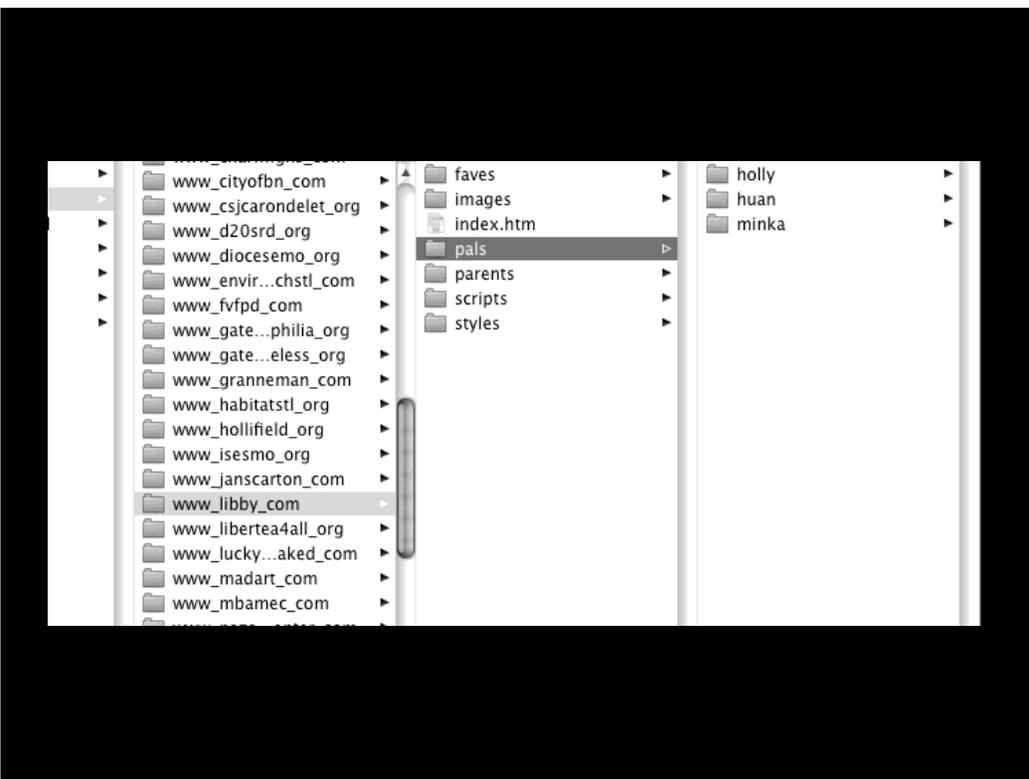
Default Folder Structure

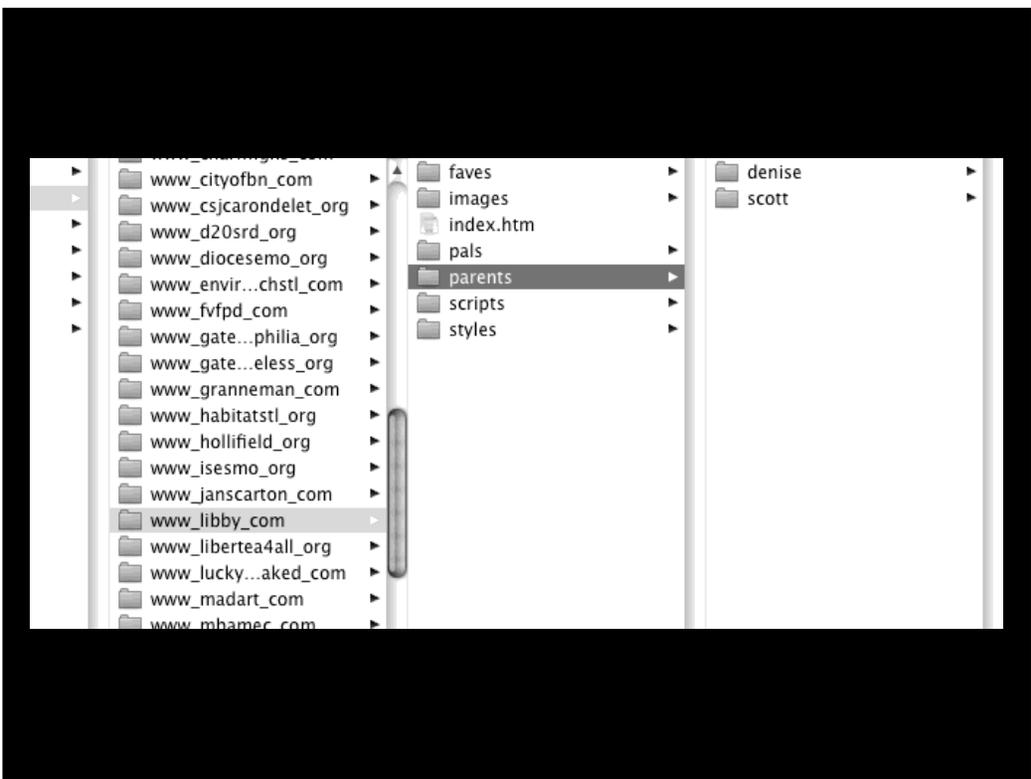


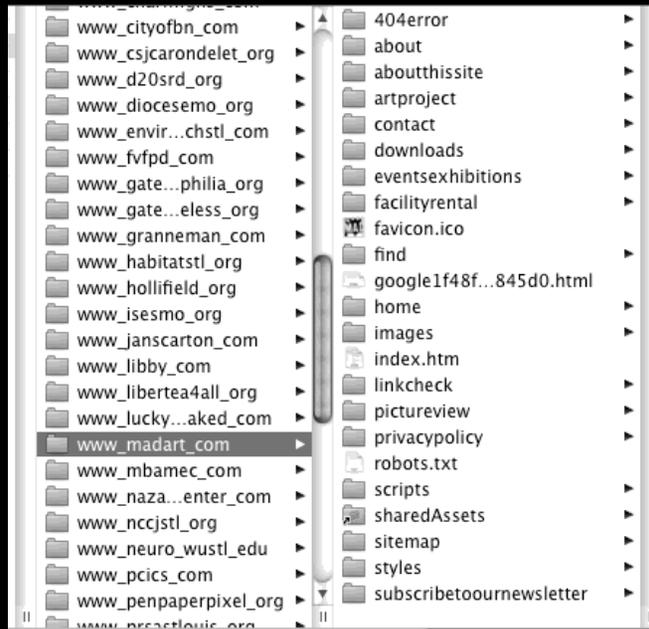


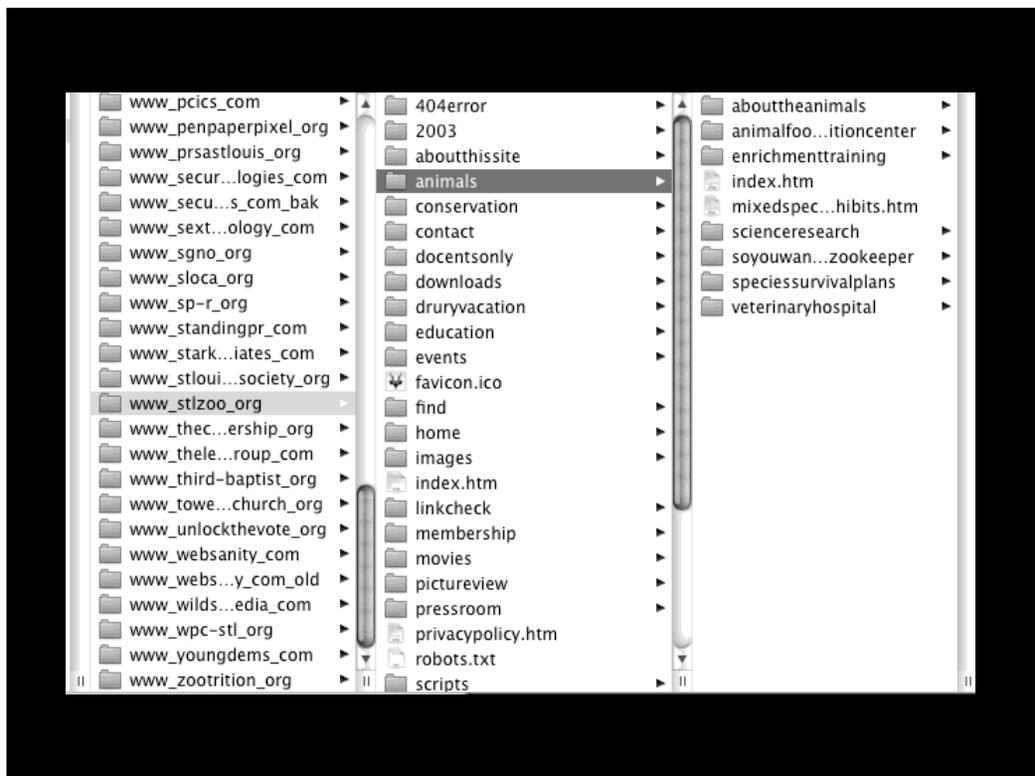


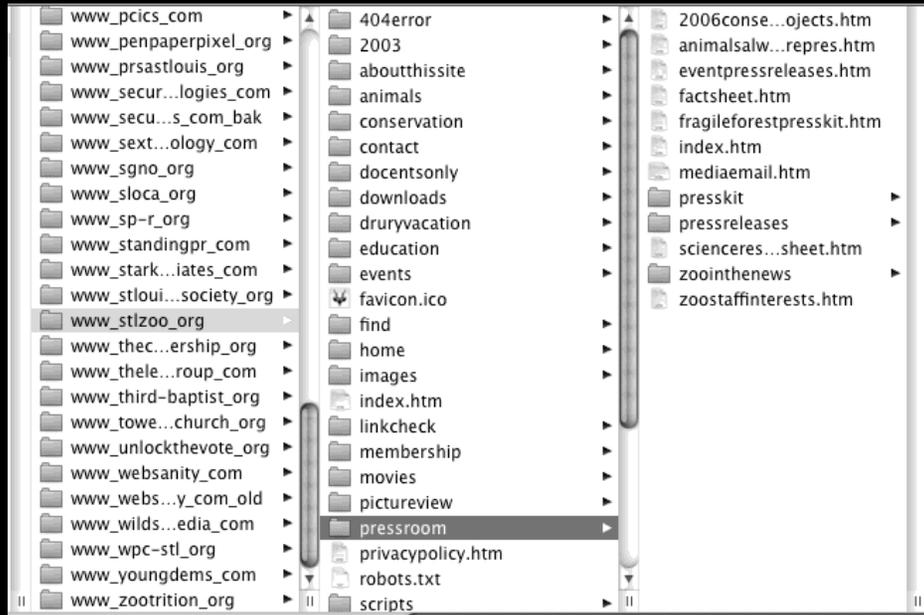












Default Index Files

```
<a href="http://www.nytimes.com">  
  The New York Times</a>
```

```
<a href="http://www.google.com/">  
  Google</a>
```

```
<a href="http://www.granneman.com">  
  Scott Granneman</a>
```

Where do you end up
when you go these URLs?

How does the web server
know which page you're asking for?

```
<a href="http://www.nytimes.com/arts">  
  The New York Times Arts</a>  
  
<a href="http://www.google.com/a/">  
  Google Apps</a>  
  
<a href="http://www.granneman.com/  
  webdev/">  
Web Development :: Scott Granneman</a>
```

Where do you end up
when you go these URLs?

How does the web server
know which page you're asking for?

Error 403

Access forbidden!

You don't have permission to access the requested directory. There is either no index document or the directory is read-protected.

If you think this is a server error, please contact the [webmaster](#).

Error 403

www.diocesemo.org

Mon Sep 29 14:14:43 2008

Apache/2.2.8 (Unix) mod_ssl/2.2.8 OpenSSL/0.9.7l DAV/2 PHP/5.2.6

Error 404

Object not found!

The requested URL was not found on this server. If you entered the URL manually please check your spelling and try again.

If you think this is a server error, please contact the [webmaster](#).

Error 404

www.janscarton.com

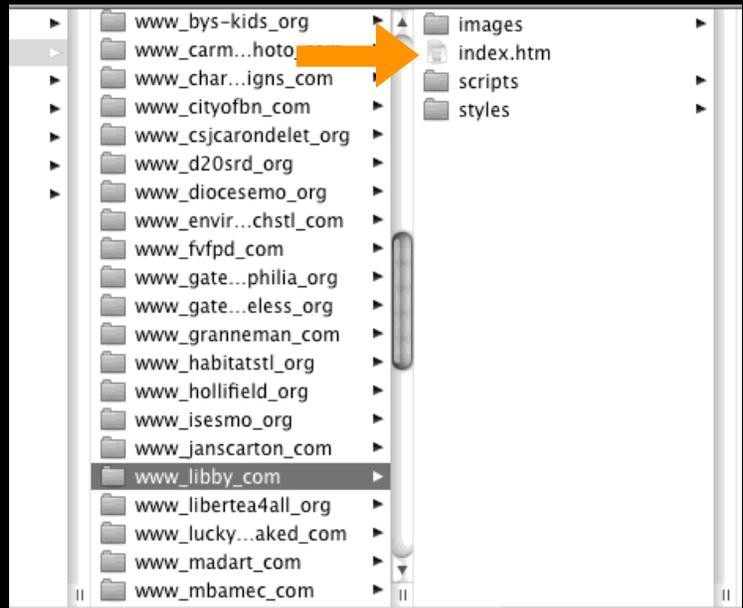
Mon Sep 29 14:16:21 2008

Apache/2.2.8 (Unix) mod_ssl/2.2.8 OpenSSL/0.9.7i DAV/2 PHP/5.2.6

Directory Listing

Index of /downloads/apply/options

| <u>Name</u> | <u>Last modified</u> | <u>Size</u> |
|--|----------------------|-------------|
|  d6c7f99b8d7684e6ad064505daa424d5data.txt | 26-Sep-2008 16:23 | 3k |
|  61bb8384f9716726fffc16489ea87061data.txt | 25-Sep-2008 20:57 | 2k |
|  a873ae3c272180f64d042e34977b8071data.txt | 25-Sep-2008 20:40 | 3k |
|  3a71aa784db915c2adad643a74b3c751data.txt | 25-Sep-2008 15:32 | 3k |
|  4a663a89203bb0e311786cf238d907cadata.txt | 24-Sep-2008 23:53 | 3k |
|  e7c2d5481f212272c509c6cc2896d68ddata.txt | 24-Sep-2008 20:11 | 3k |
|  f1cfe80b146b954c68b0b16c2e27e547data.txt | 24-Sep-2008 19:50 | 3k |
|  a0925a393d5009ea3f0f27f72af42data.txt | 24-Sep-2008 17:53 | 3k |
|  d8861a00f88fdd1532e26cdb79b14356data.txt | 24-Sep-2008 08:14 | 2k |
|  eed2192c51d0b3ee42e203ed8d6c77aedata.txt | 23-Sep-2008 21:57 | 3k |
|  76044134547bfbec2bbcd61b42e8f920data.txt | 23-Sep-2008 16:41 | 2k |
|  26cf614ef74f716719e0606e900625eddata.txt | 23-Sep-2008 11:10 | 3k |
|  9c1a4d753c7c622a5ee1b314ff72371edata.txt | 23-Sep-2008 09:59 | 3k |
|  a7f0d62433d975d095f30e7019c6d737data.txt | 22-Sep-2008 16:09 | 2k |
|  ae3392cbd785ab2edfef3bb6818d1b09data.txt | 22-Sep-2008 11:22 | 3k |
|  7c9ea0913bbb473250b8936d458b247fdata.txt | 19-Sep-2008 09:44 | 4k |
|  44fd7188a101d65d1c45fc5fa424e902data.txt | 16-Sep-2008 16:23 | 2k |
|  61d23a8d68952ff0b5d283fd8d095feadata.txt | 16-Sep-2008 01:13 | 3k |
|  1e26d948a753fcc339404af4234c3a8adata.txt | 14-Sep-2008 21:29 | 2k |
|  3bdf06e95b9a7f53c110a174fdf35e33data.txt | 14-Sep-2008 17:06 | 3k |



Typical Default Index Files

| Apache | IIS |
|--------------------------|--------------------------|
| <code>index.html</code> | <code>default.htm</code> |
| <code>index.htm</code> | <code>default.asp</code> |
| <code>index.php</code> | |
| <code>index.shtml</code> | |

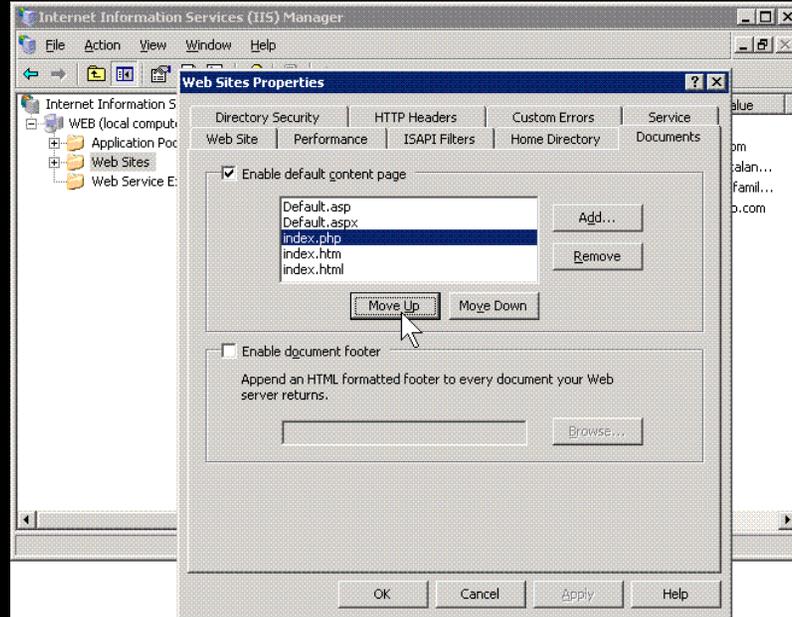
You can use any of these
on any web server,
depending upon how it's configured

Apache

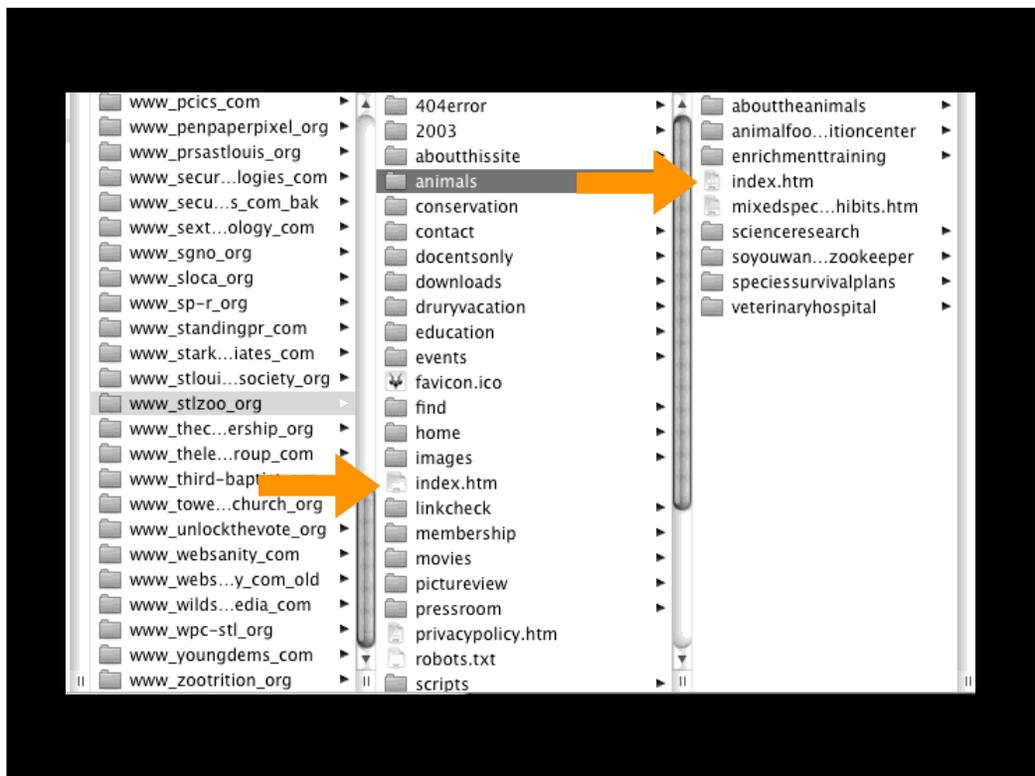
```
DirectoryIndex "index.php" "index.html"  
"index.htm"
```

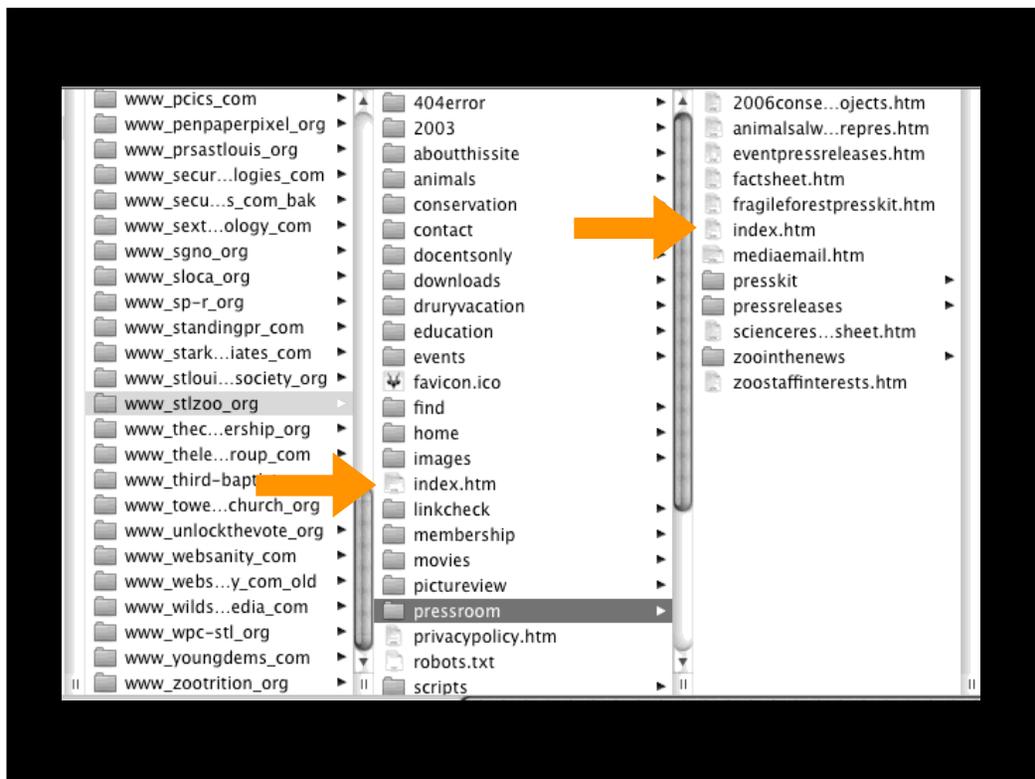
OR

```
DirectoryIndex "index.htm" "index.php"  
"index.shtml"
```



index.htm
index.html
index.shtml
default.html
default.shtml
default.asp
index.php
index.asp
index.jsp





Absolute & Relative

Absolute

The full, complete address
to somewhere,
from start to finish

Relative

The address
to somewhere,
in relation to where you are now

Absolute Directions

Party at my (old) house!

40 to Skinker

N on Skinker

Pass Forest Park Parkway

R/E on Waterman

1 and 1/2 blocks on Waterman

6047 Waterman

Relative Directions

Party at my (old) house!

From Wash U,
walk down Skinker to Waterman

Right on Waterman

1 and 1/2 blocks on Waterman

6047 Waterman

Google Maps Search Maps [Show search options](#)
 Find businesses, addresses and places of interest. [Learn more.](#)

Get Directions [My Maps](#) [Print](#) [Send](#) [Link](#)

[Add Destination - Show options](#)

Also available: [Walking](#)

Driving directions to 6047 Waterman Blvd, St Louis, MO 63112
 3.0 mi – about 9 mins

1. Head north on S Big Bend Blvd toward Arlington Dr 1.9 mi
2. Turn right at Forest Park Pkwy/Millbrook Blvd 0.8 mi
3. Turn left at N Skinker Blvd 0.1 mi
4. Turn right at Waterman Blvd 0.2 mi

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly.

Map controls: Street View, Traffic, More..., Map, Satellite, Terrain

Scale: 2000 ft / 500 m

©2008 Google. Map data ©2008 Tele Atlas.

URLs

| | | |
|---------------------------|--|---------------------------------------|
| Absolute | | Complete URL |
| Site root-relative | | Web server fills in protocol & domain |
| Document-relative | | Same directory |
| | | Down into sub-directory |
| | | Up into parent directory |

| OK | Never OK |
|---------------------------------|---------------------------------|
| <code>foo.htm</code> | <code>C:\Windows\foo.htm</code> |
| <code>bar/foo.htm</code> | <code>\Windows\foo.htm</code> |
| <code>http://www.foo.com</code> | <code>\foo.htm</code> |
| <code>../foo.htm</code> | <code>file:///</code> |
| <code>/bar/foo.htm</code> | |

No OS-specific paths!

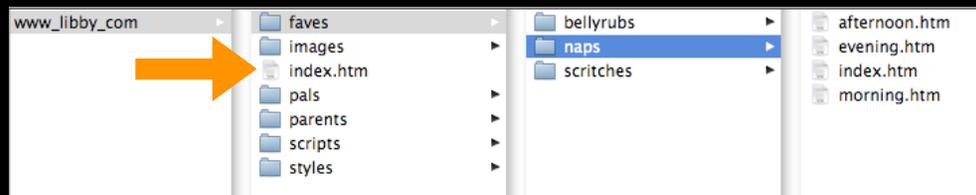
Absolute URLs

Absolute URL

<http://www.libby.com/>

<http://www.libby.com/parents/>

[http://www.libby.com/parents/
scott.htm](http://www.libby.com/parents/scott.htm)



On `index.htm`:

```
<a href="http://www.libby.com/faves/naps/afternoon.htm">After lunch</a>
```

```
<a href="http://www.dogster.com">Chat with pals</a>
```

Site-Root Relative URLs

/foo/bar.htm

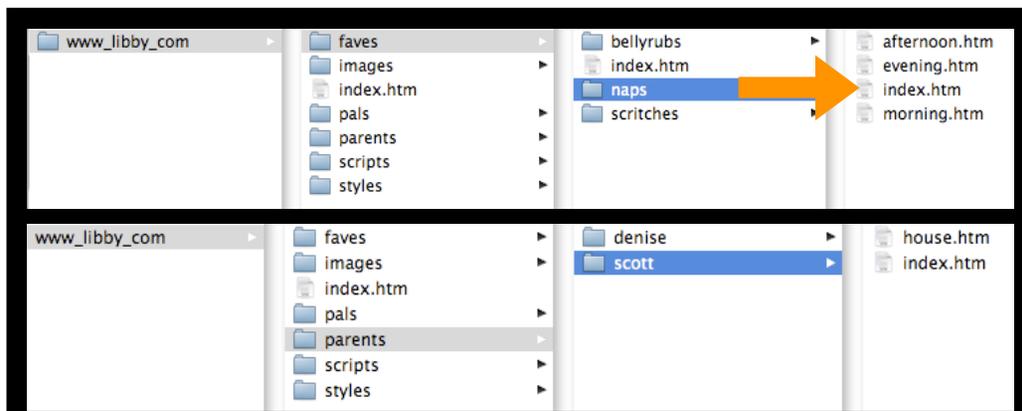
The web server fills in the rest:

http://

&

www.libby.com

The 1st / in
/foo/bar.htm
is always short for
http://www.libby.com



On `index.htm`:

`/parents/scott/house.htm`

`/parents/scott/`

`/styles/main.css`

Document- Relative URLs

Document-relative URLs
tell the browser
how to get
from the page it is currently on
to another on the same site

| | | |
|-------------|----------------------------|--------------------------------------|
| Grandparent | File in grandparent folder | <code>../../baba.htm</code> |
| Parent | File in parent folder | <code>../ali.htm</code> |
| Sibling | File in same folder | <code>foo.htm</code> |
| Child | File in child folder | <code>bar/foo.htm</code> |
| Grandchild | File in grandchild folder | <code>foobar/bar/ foo.htm</code> |

Same Directory

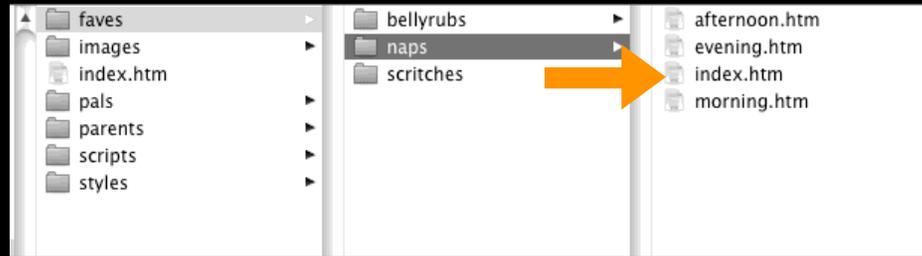
foo.htm

The server fills in the rest:

http://

www.libby.com/

path/to/URL/



On `index.htm`:

```
<a href="morning.htm">After breakfast</a>  
<a href="afternoon.htm">After lunch</a>  
<a href="evening.htm">After dinner</a>
```

Down

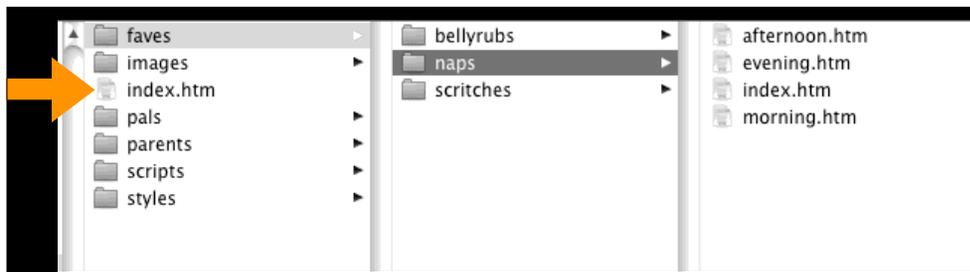
bar/foo.htm

The server fills in the rest:

http://

www.libby.com/

path/to/URL/



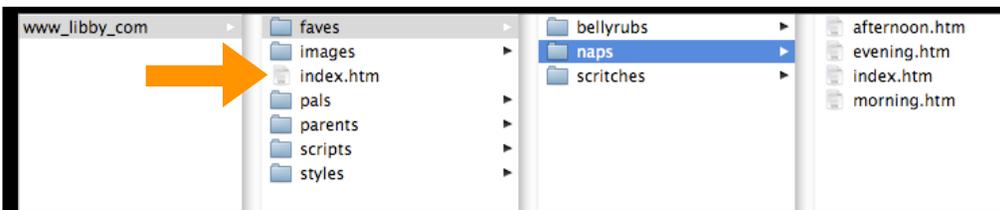
On `index.htm`:

```
<a href="faves/naps/morning.htm">After  
breakfast</a>
```

```
<a href="faves/naps/afternoon.htm">After  
lunch</a>
```

```
<a href="faves/naps/evening.htm">After  
dinner</a>
```

Up



As we just learned,
going *down* with a Relative URL is easy:

`naps/evening.htm`

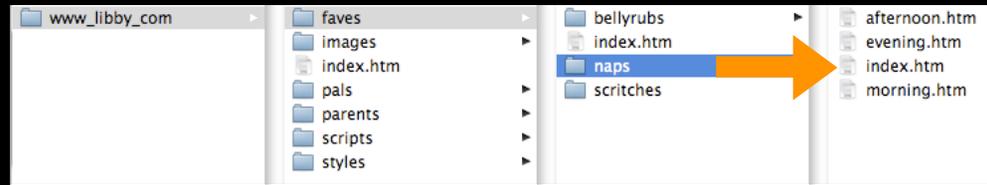
`naps/`

`faves/naps/`

`faves/naps/morning.htm`

How do you go *up*?

../ = up



On index.htm:

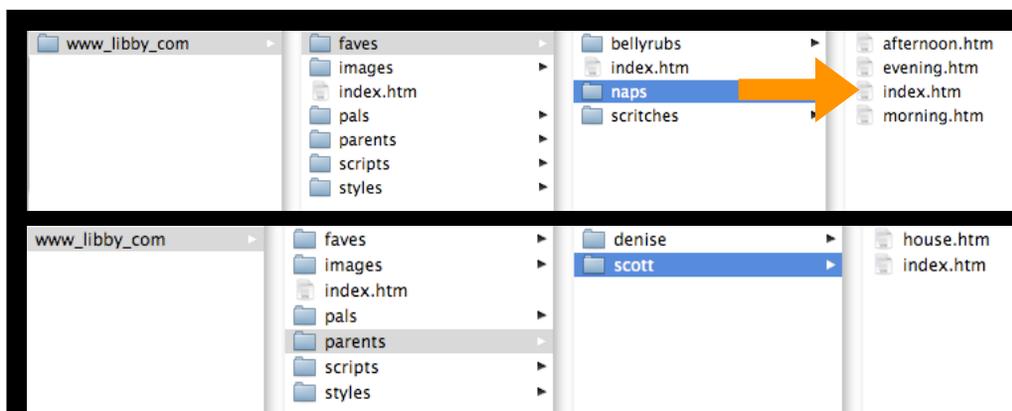
../index.htm

../

../..

What about this?

`../..bar/foo.htm`



On index.htm:

`../../parents/scott/index.htm`

`../../parents/scott/`

`../../parents/scott/house.htm`

`../../styles/main.css`

Which
One?

Advantages of Relative URLs

Quick & easy on small sites

Can test site on your local computer
without a web server

Can change domain name easily

Can move directories up or down
& links are preserved



Advantages of Absolute URLs

Doesn't matter where
the page with link on it
is in the file structure

Quick & easy

Required for external links

Extras

Want to create a “fake” link?

One that looks like a link,
but doesn't actually go anywhere?

```
<a href="#">Fake link</a>
```

(Actually, it reloads the same page)

You can also use the
`id` attribute
to position anchors in elements

Every `id` on a page
must be unique

Create an anchor

```
<h3 id="foo">Lorem ipsum</h3>
```

Link to the anchor

```
<a href="#foo">dolor sit amet</a>
```

You can use this technique
to create a table of contents

```
<h2>Table of Contents</h2>
<ul>
  <li><a href="#part-one">Part One</a></li>
  <li><a href="#part-two">Part Two</a></li>
</ul>
...
<h2 id="part-one">Part One</h2>
...
<h2 id="part-two">Part Two</h2>
```

You can also use this technique
to make it easy for visitors
to jump back to the TOC

```
<h2 id="toc">
  Table of Contents
</h2>
<ul>
  <li><a href="#part-one">Part One</a></li>
  <li><a href="#part-two">Part Two</a></li>
</ul>
...
<h2 id="part-one">
  Part One <a href="#toc">↩</a>
</h2>
...
<h2 id="part-two">
  Part Two <a href="#toc">↩</a>
</h2>
```

Thank you!

scott@granneman.com
www.granneman.com
ChainsawOnATireSwing.com
@scottgranneman

info@jordanlev.com
webconcentrate.com

<a>

Understanding URLs & Addressing

OCI / CAIT

R. Scott Granneman

Jordan Lev

© 2008 Scott Granneman

Last updated 20140120

You are free to use this work, with certain restrictions.
For full licensing information, please see the last slide/page.

Licensing of this work

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License.

To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/4.0/>.

You are free to:

- » *Share* — copy and redistribute the material in any medium or format
- » *Adapt* — remix, transform, and build upon the material for any purpose, even commercially

Under the following terms:

Attribution. You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. Give credit to:

Scott Granneman • www.granneman.com • scott@granneman.com

Share Alike. If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original.

No additional restrictions. You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

Questions? Email scott@granneman.com