

# Rethinking Responsive Building Techniques

*with Sass & Drupal themes & modules*

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# The obvious method: region-based layouts



**Stark in  
Drupal 8**

“Multi-Device Layout Patterns”

<http://www.lukew.com/ff/entry.asp?1514>

Look, Ma!



*I'm responsive!*

At Drupalcon Denver, Luke Wroblewski gave the “hangover slot” keynote.



<http://denver2012.drupal.org>

Mobile First



Content First



Users First

Drupal 7 provides an opportunity



# Drupal 7 provides an opportunity

Home » Administration » Structure » Content types » Article

LABEL	NAME	FIELD
⊕ Title	title	Node module element
⊕ Tags	field_tags	Term reference
⊕ Body	body	Long text and summary
⊕ Image	field_image	Image

Field-based responsive layouts  
means “responsive content”

# Responsive Content Example

Palantir.net



<http://www.palantir.net/experience>



1024 x 768 (tablet - landscape)



- Services
- Team
- Work
- Blog
- Contact

# Increasing Knowledge and Appreciation of Our World

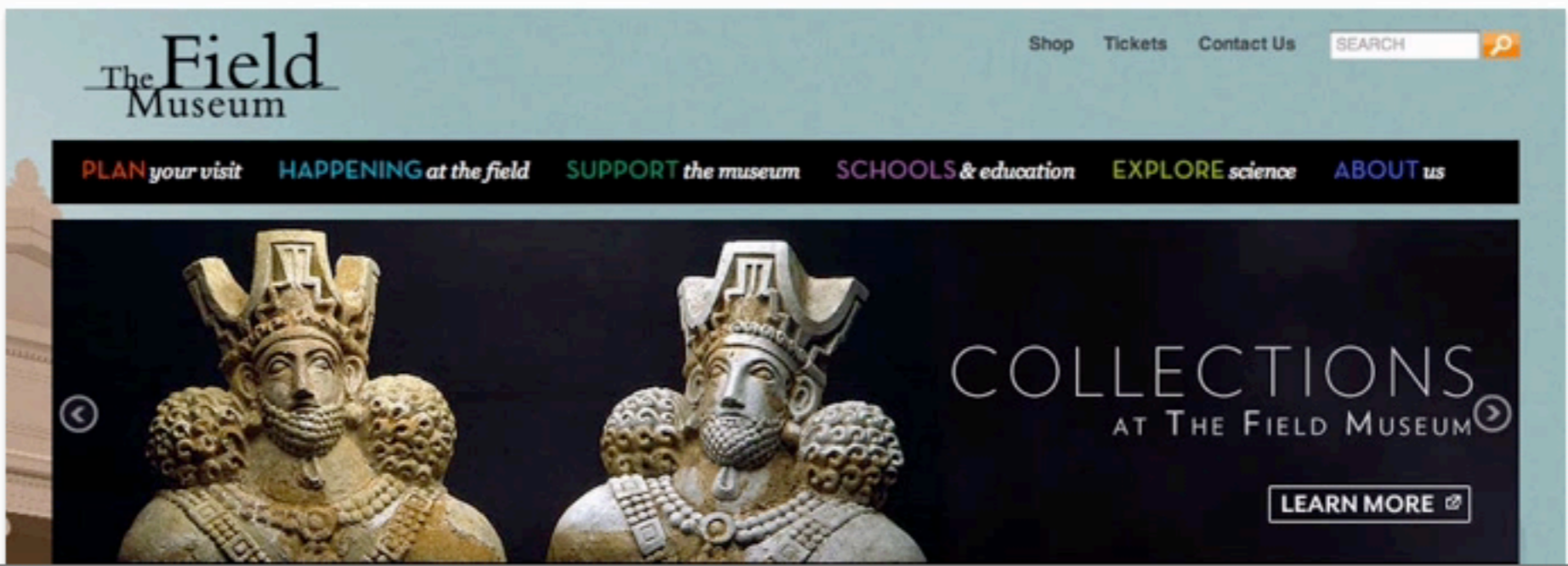
The Field Museum of Natural History | [fieldmuseum.org](http://fieldmuseum.org)

## HIGHLIGHTS

Streamlined workflow and opened up access to more content editors and contributors

Enabled the quick and easy creation of reusable microsites

Enabled collections data to be



Let's start with fields...

# Drupal 7 assumes the worst

( Multi-value, plain text fields with label )

```
<div class="field-NAME etc">  
  <div class="field-label">  
    LABEL: &nbsp; ;  
  </div>  
  
  <div class="field-items">  
    <div>VALUE 1</div>  
    <div>VALUE 2</div>  
  </div>  
</div>
```

# FENCES



[drupal.org/project/fences](https://drupal.org/project/fences)

# Fences assumes the norm

(There's already markup in your field content)

```
<h3 class="field-label">  
  LABEL  
</h3>
```

```
<ELEMENT class="field-NAME etc">  
  VALUES  
</ELEMENT>
```

# Fences

The screenshot shows the Drupal 7 administration interface. The browser address bar displays the URL: <http://drupal7x.42foo.com/#overlay=admin/structure/types/manage/page/fields>. The page title is "Basic page | Drupal 7". The navigation menu includes "Dashboard", "Content", "Structure", "Appearance", "People", "Modules", "Configuration", "Reports", "Advanced help", and "Help". The user is logged in as "admin".

The main content area shows the "Manage Fields" configuration for the "Basic page" content type. The breadcrumb trail is: Home » Administration » Structure » Content types » Basic page. There is a "Show row weights" link in the top right corner.

LABEL	NAME	FIELD	WIDGET	OPERATIONS
+	Title	title	Node module element	
+	Body	body	Long text and summary	Text area with a summary edit delete
+	Figure	field_figure	Field collection	Embedded edit delete

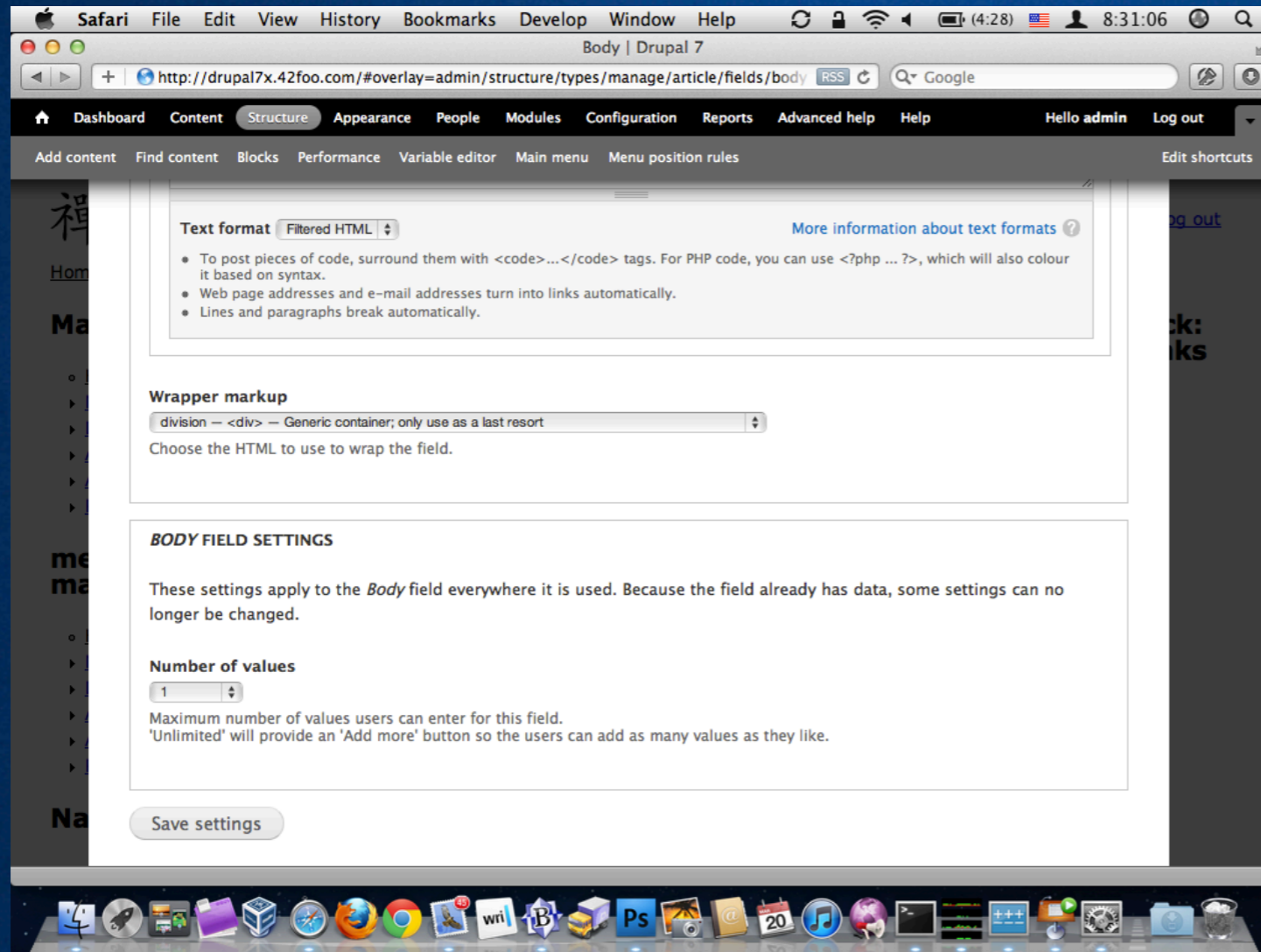
Below the table, there are two sections for adding fields:

- Add new field:** Includes a text input for "Label", a text input for "field\_" (Field name), a dropdown menu for "Select a field type", and a dropdown menu for "Select a widget".
- Add existing field:** Includes a text input for "Label", a dropdown menu for "Select an existing field", and a dropdown menu for "Select a widget".

A "Save" button is located at the bottom left of the configuration area.

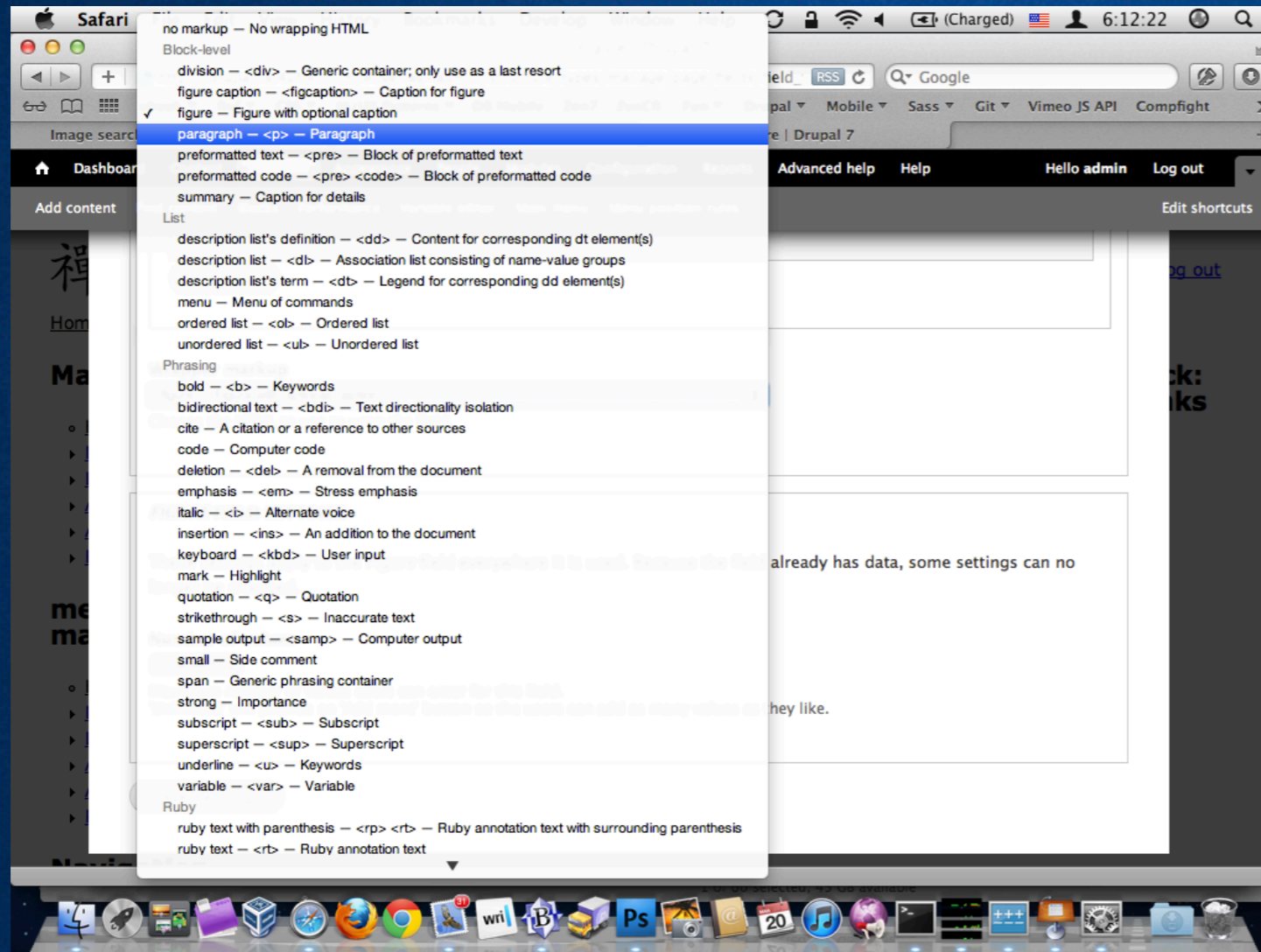
<http://drupal.org/project/fences>

# Fences



<http://drupal.org/project/fences>

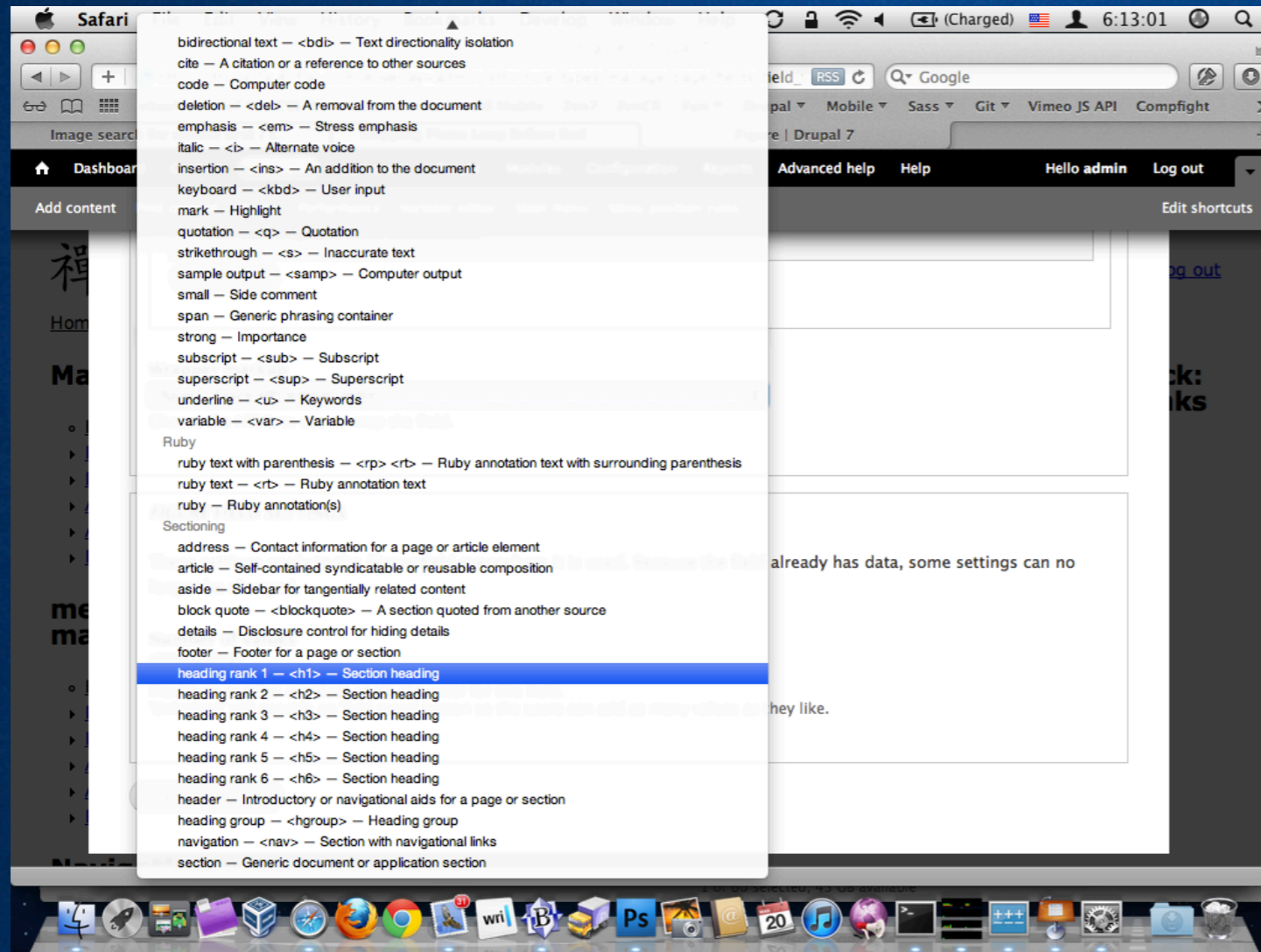
# Fences



<http://drupal.org/project/fences>



# Fences



<http://drupal.org/project/fences>

# When in doubt go naked

```
<h3 class="field-label">
```

```
    LABEL
```

```
</h3>
```

```
VALUES
```

# Fences everywhere! Automatically.

- View modes
- Views
- Anywhere `field.tpl.php` is used!

# Fences works using theme hook suggestions



Smart custom markup you define

<http://drupal.org/node/1089656>

# Field Collection + Fences

Home » Administration » Structure » Content types » Basic page

LABEL	NAME	FIELD	WIDGET	OPERATIONS
+	Title	title	Node module element	
+	Body	body	Long text and summary	Text area with a summary edit delete
+	Figure	field_figure	Field collection	Embedded edit delete

**Add new field**

field\_  - Select a field type -  - Select a widget -

Label Field name (a-z, 0-9, \_) Type of data to store. Form element to edit the data.

**Add existing field**

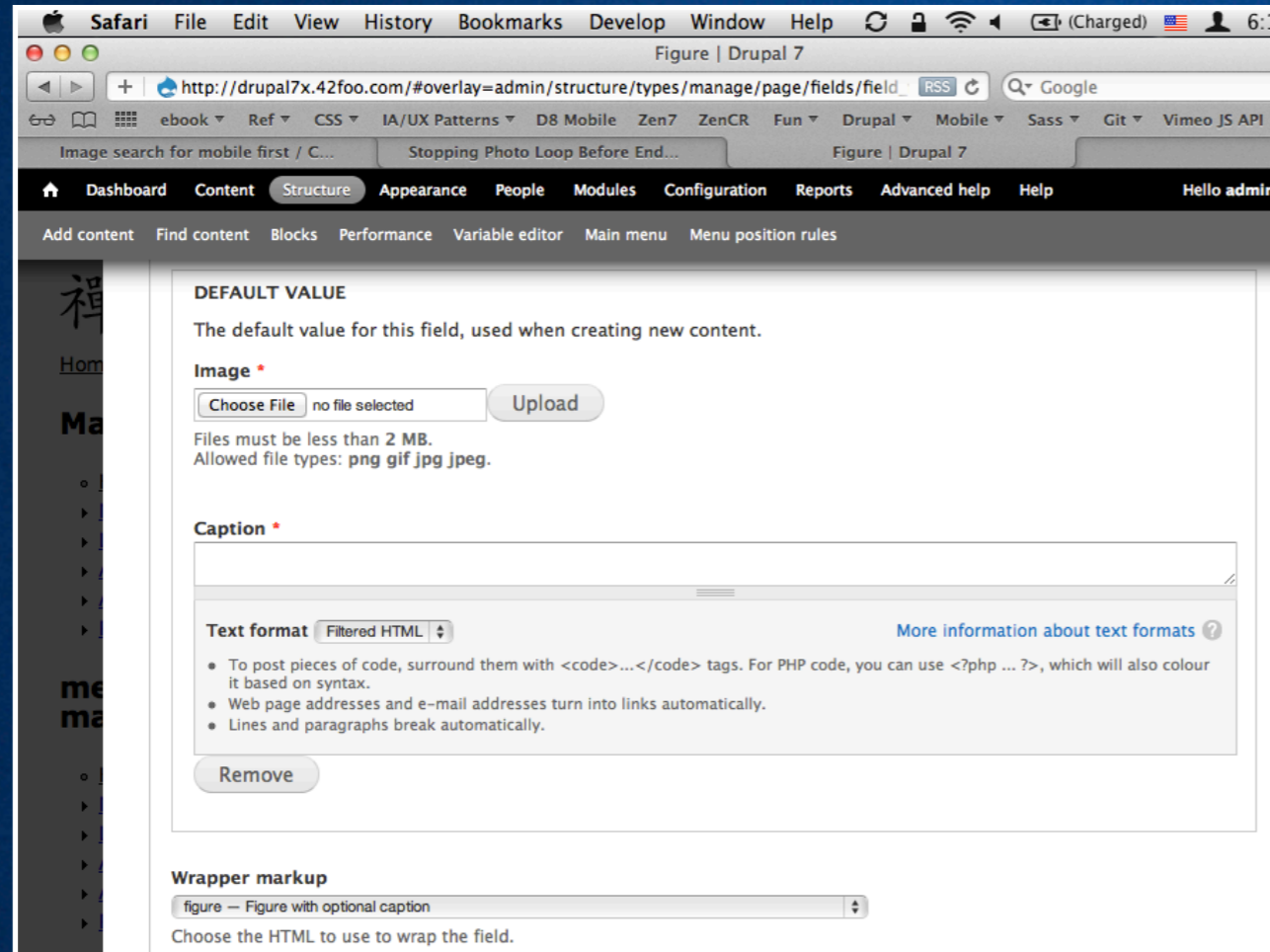
- Select an existing field -  - Select a widget -

Label Field to share Form element to edit the data.

Save

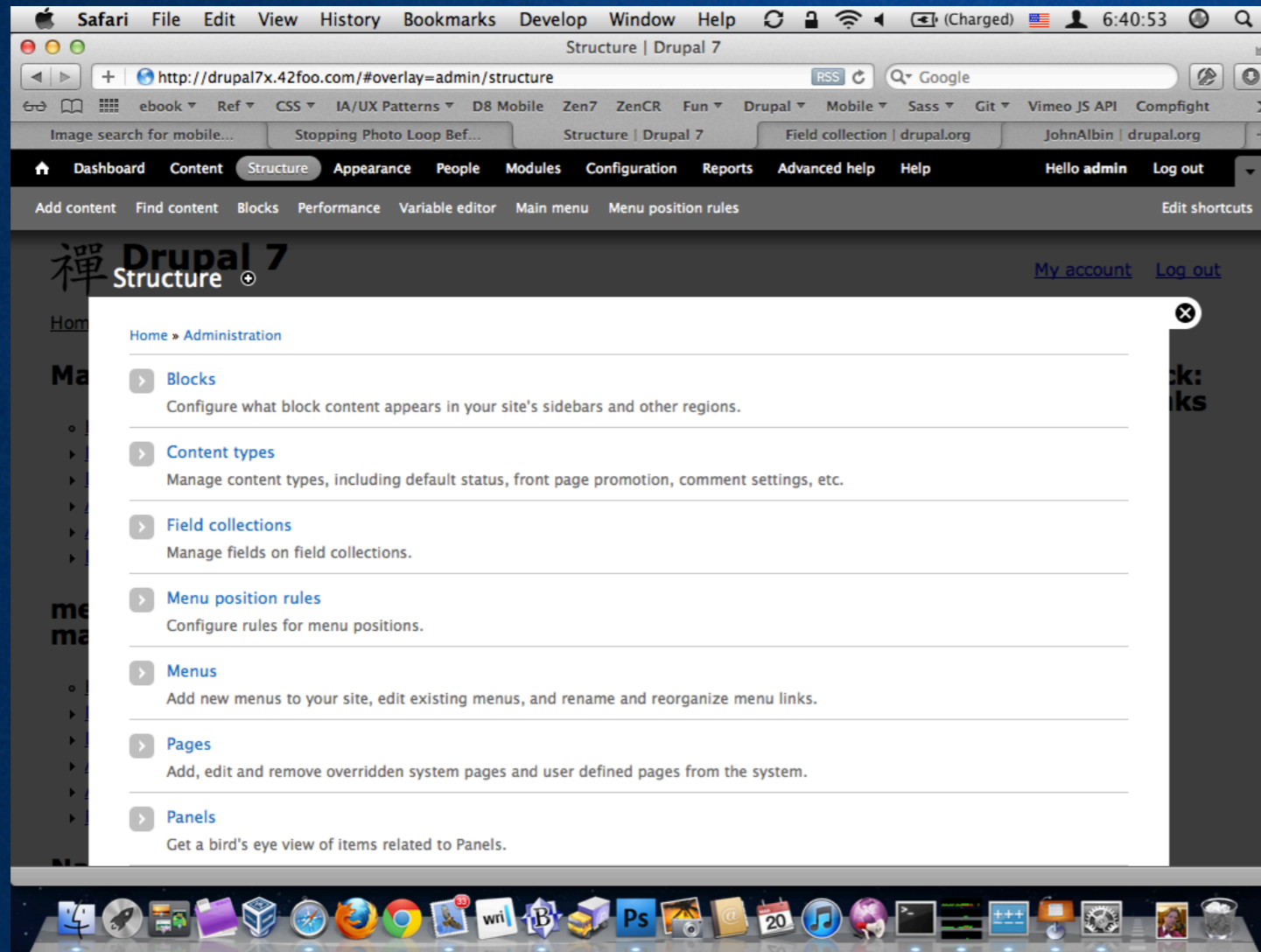
[http://drupal.org/project/field\\_collection](http://drupal.org/project/field_collection)

# Field Collection + Fences



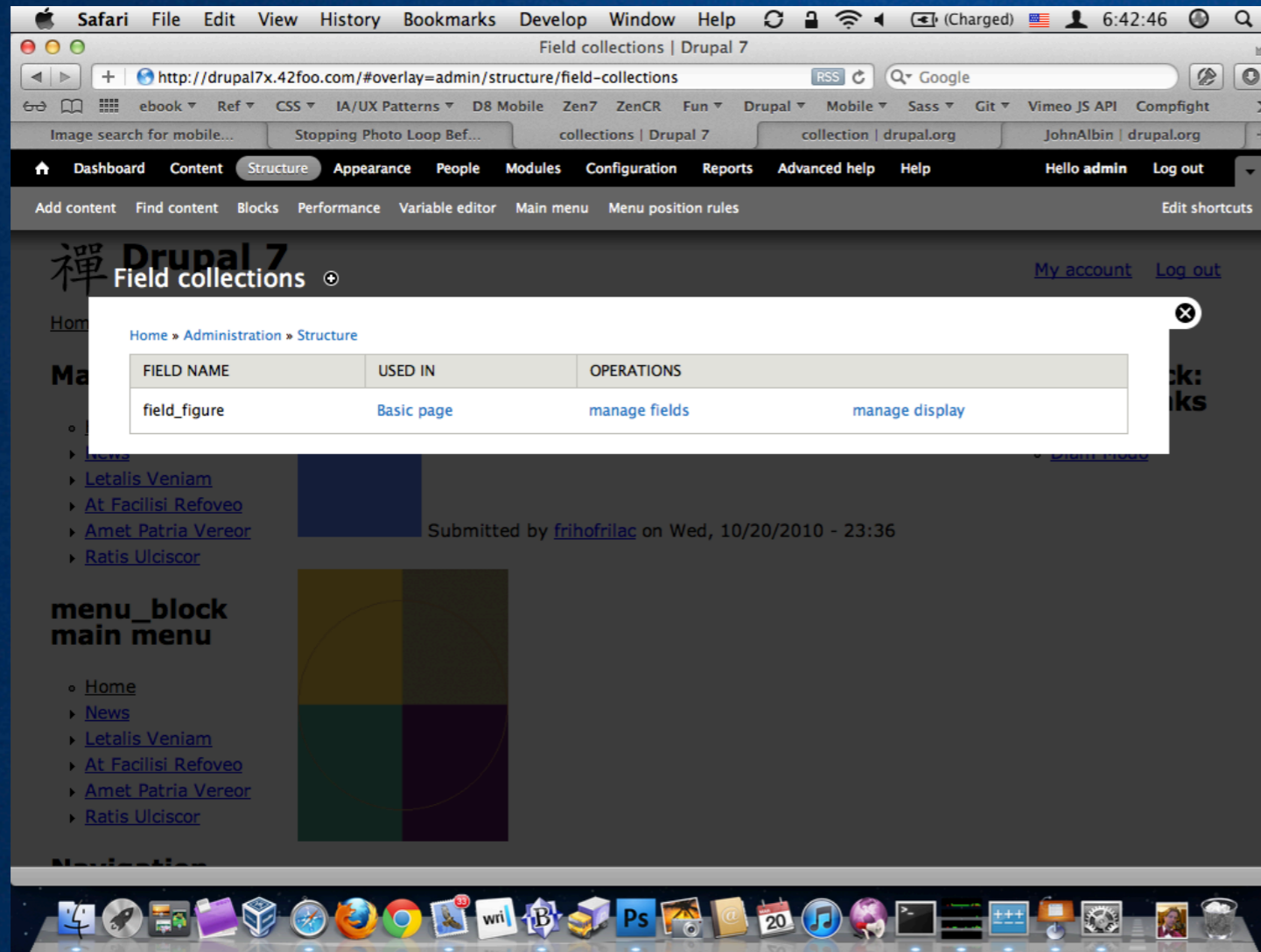
[http://drupal.org/project/field\\_collection](http://drupal.org/project/field_collection)

# Field Collection + Fences



[http://drupal.org/project/field\\_collection](http://drupal.org/project/field_collection)

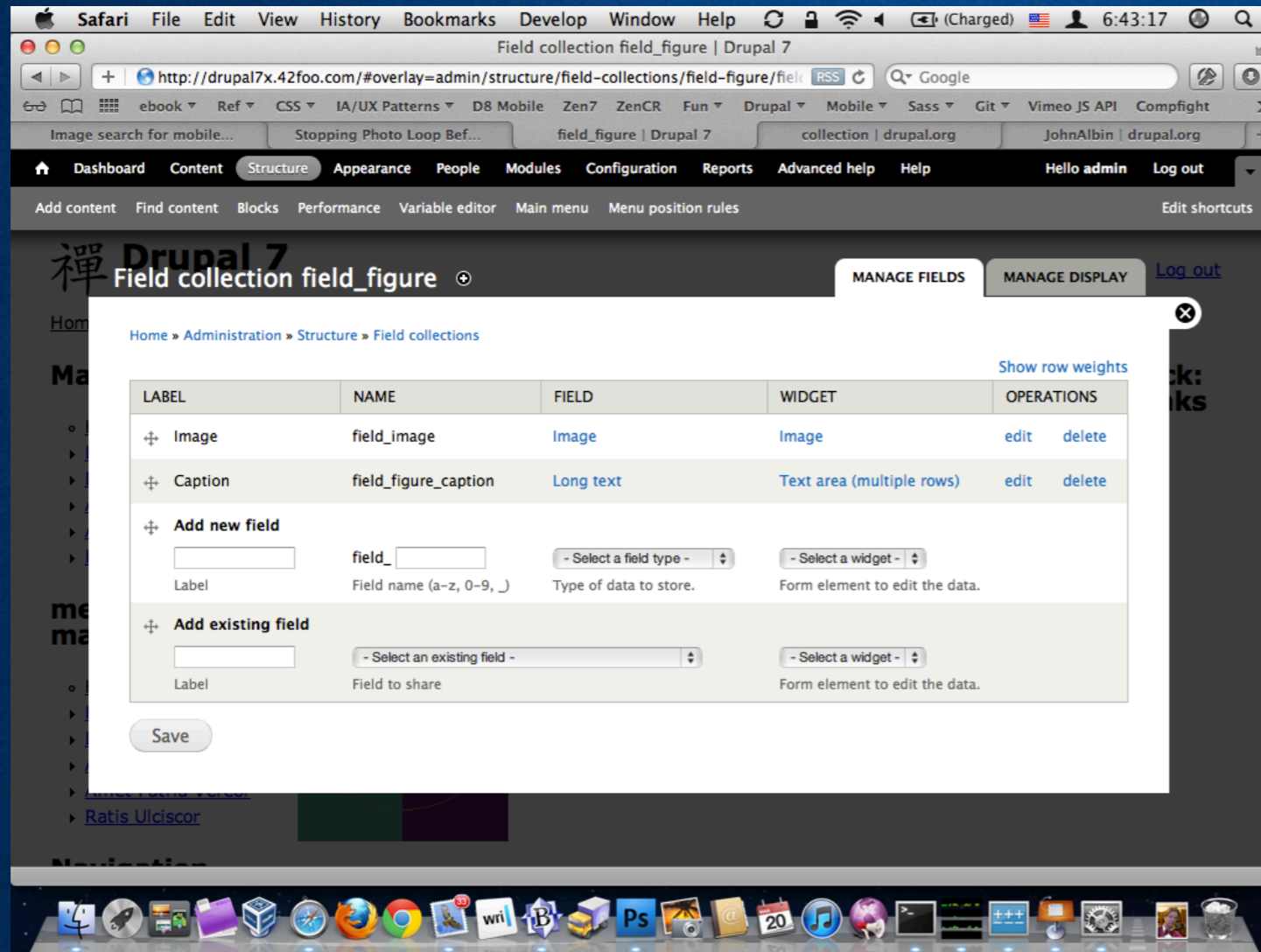
# Field Collection + Fences



[http://drupal.org/project/field\\_collection](http://drupal.org/project/field_collection)



# Field Collection + Fences



The screenshot shows the Drupal 7 administration interface for the 'Field collection field\_figure'. The page title is 'Field collection field\_figure' and it has tabs for 'MANAGE FIELDS' and 'MANAGE DISPLAY'. A modal window is open, displaying a table of fields and options to add new or existing fields.

LABEL	NAME	FIELD	WIDGET	OPERATIONS	
+	Image	field_image	Image	Image	edit delete
+	Caption	field_figure_caption	Long text	Text area (multiple rows)	edit delete

Below the table, there are two sections for adding fields:

- Add new field:** Includes a text input for 'Label', a text input for 'field\_' (Field name (a-z, 0-9, \_)), a dropdown for '- Select a field type -', and a dropdown for '- Select a widget -'. Below these are instructions: 'Type of data to store.' and 'Form element to edit the data.'
- Add existing field:** Includes a text input for 'Label', a dropdown for '- Select an existing field -', and a dropdown for '- Select a widget -'. Below these are instructions: 'Field to share' and 'Form element to edit the data.'

A 'Save' button is located at the bottom of the modal window.

[http://drupal.org/project/field\\_collection](http://drupal.org/project/field_collection)

# Field Collection + Fences

Home » Administration » Structure » Content types » Basic page

LABEL	NAME	FIELD	WIDGET	OPERATIONS
+	Title	title	Node module element	
+	Body	body	Long text and summary	Text area with a summary edit delete
+	Figure	field_figure	Field collection	Embedded edit delete

**Add new field**

field\_  - Select a field type -  - Select a widget -

Label Field name (a-z, 0-9, \_) Type of data to store. Form element to edit the data.

**Add existing field**

- Select an existing field -  - Select a widget -

Label Field to share Form element to edit the data.

Save

[http://drupal.org/project/field\\_collection](http://drupal.org/project/field_collection)

Next let's look at  
layout markup...



# Custom CTools Layouts

<http://drupal.org/node/495654>

# Step 1

Add this to your theme's .info file:

```
; Custom panels layouts  
plugins[panels][layouts] = layouts
```

# Step 2

Add these files to your theme's directory:

layouts / layout\_name / layout\_name.inc

layouts / layout\_name / layout-name.tpl.php

layouts / layout\_name / layout-name.css

layouts / layout\_name / layout-name.png

layouts / layout\_name / layout-name-admin.tpl.php

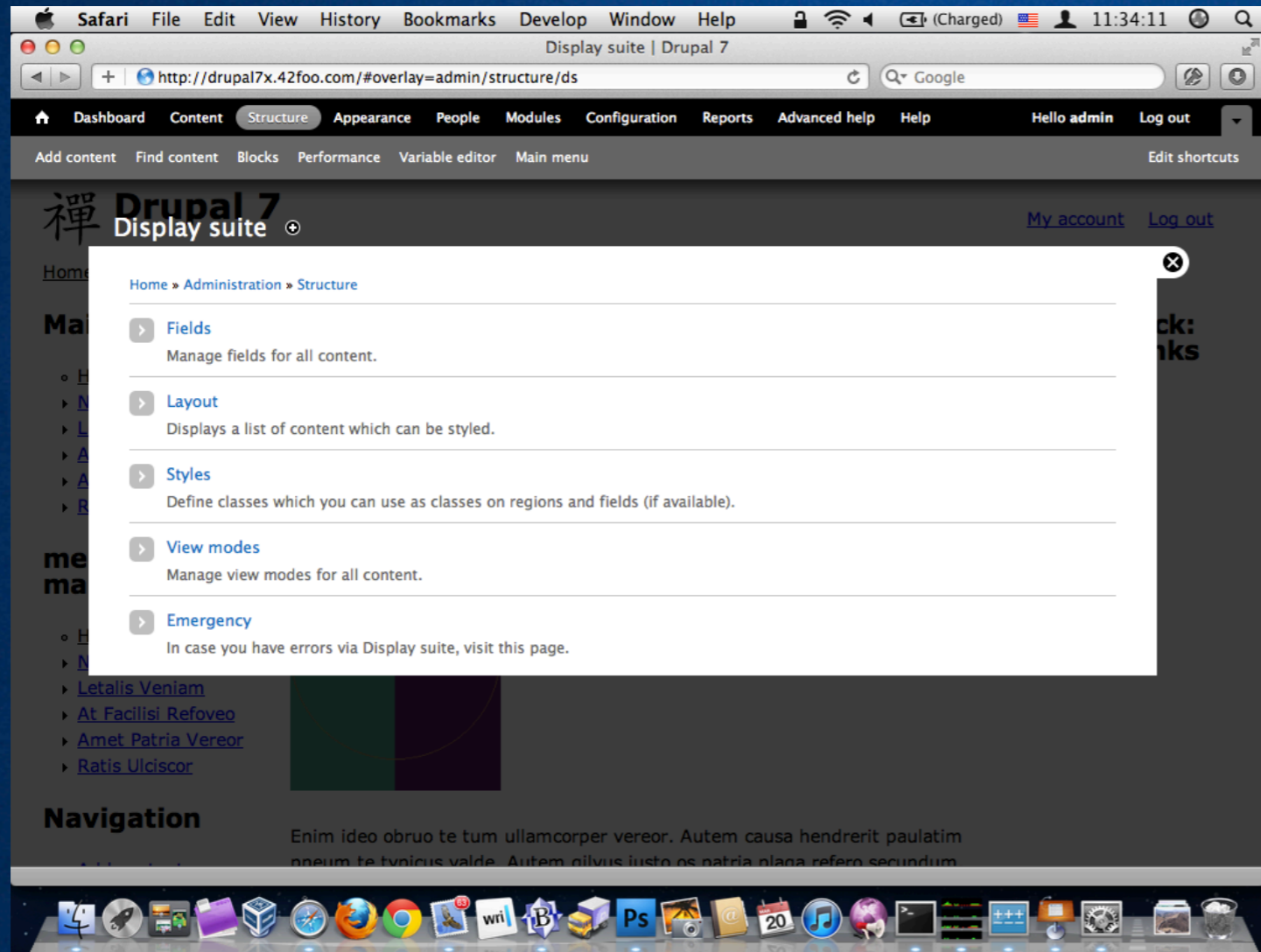
layouts / layout\_name / layout-name-admin.css

# Step 3



Edit all the files

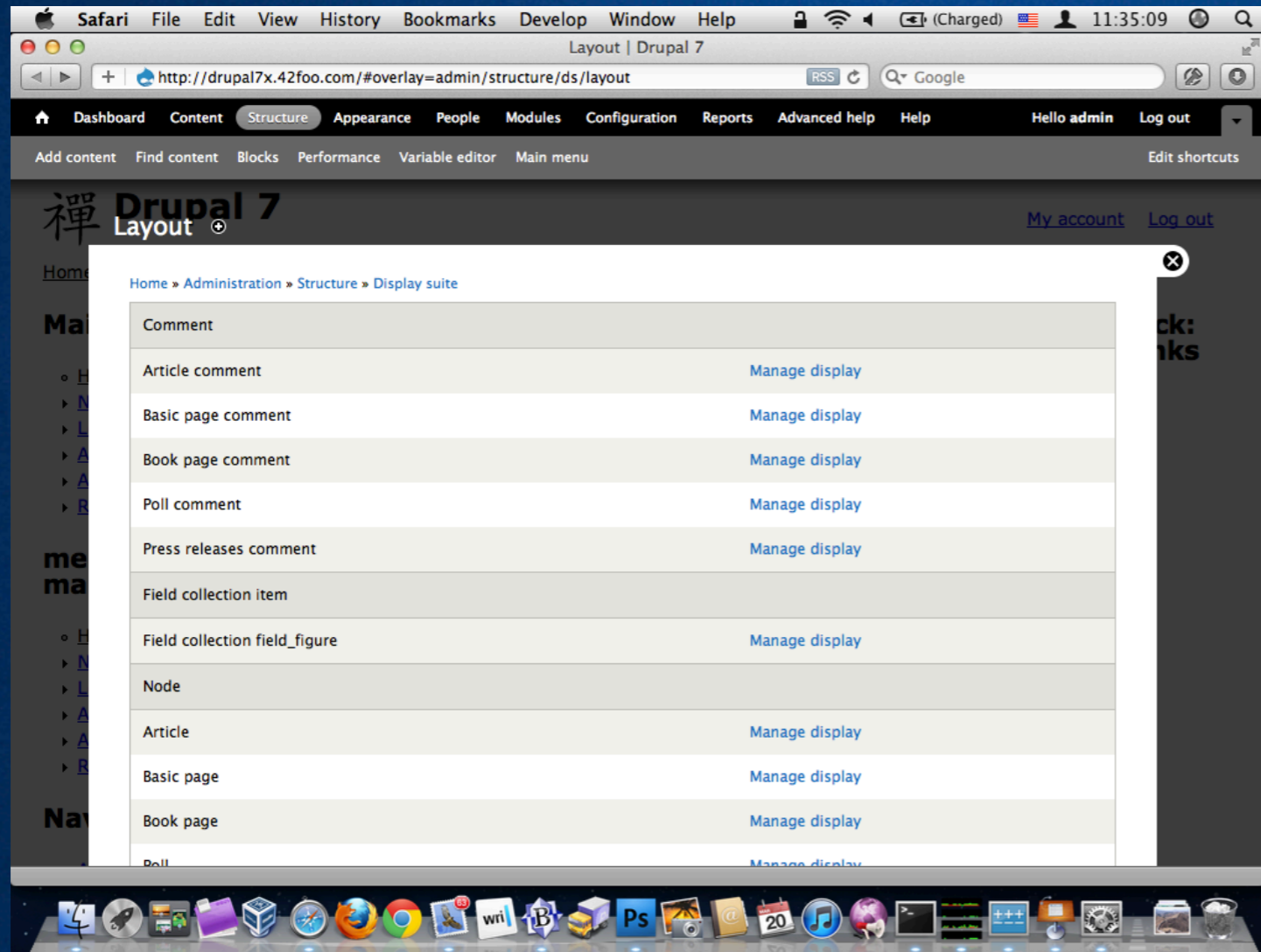
# Step 5



# Configure!

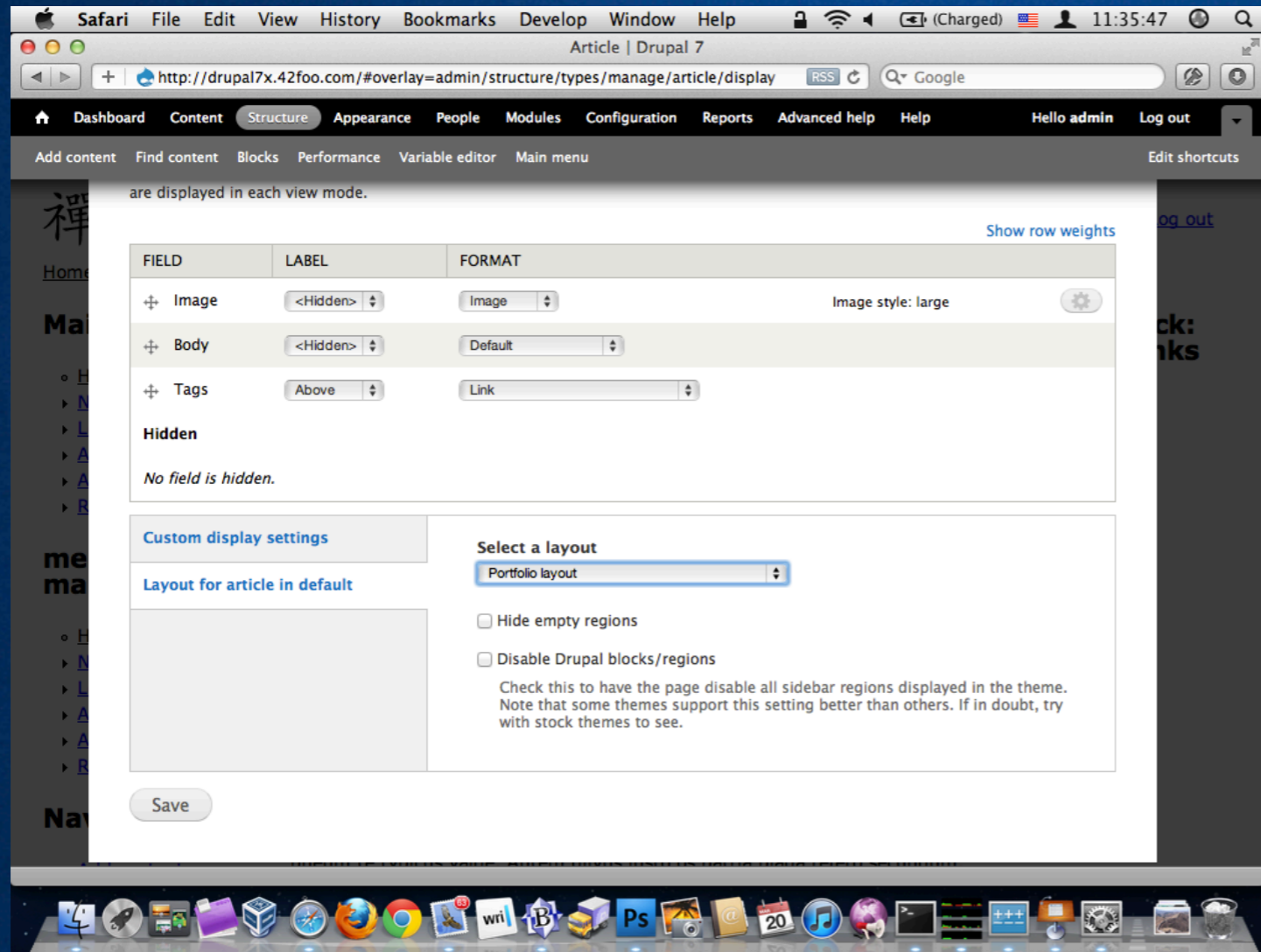


# Step 5



# Configure!

# Step 5



# Configure!

# Step 5

Home » Administration » Structure » Content types » Article

Content items can be displayed using different view modes: Teaser, Full content, Print, RSS, etc. *Teaser* is a short format that is typically used in lists of multiple content items. *Full content* is typically used when the content is displayed on its own page.

Here, you can define which fields are shown and hidden when *Article* content is displayed in each view mode, and define how the fields are displayed in each view mode.

[Show row weights](#)

FIELD	REGION	LABEL	FORMAT	
<b>Intro</b>				
+ Image	Intro	<Hidden>	Image	Image style: large
<b>Portfolio</b>				
+ Body	Portfolio	<Hidden>	Default	
<b>Complementary</b>				
+ Post date	Complementary	<Hidden>	Long	
+ Links	Complementary	<Hidden>	Default	
<b>Disabled</b>				

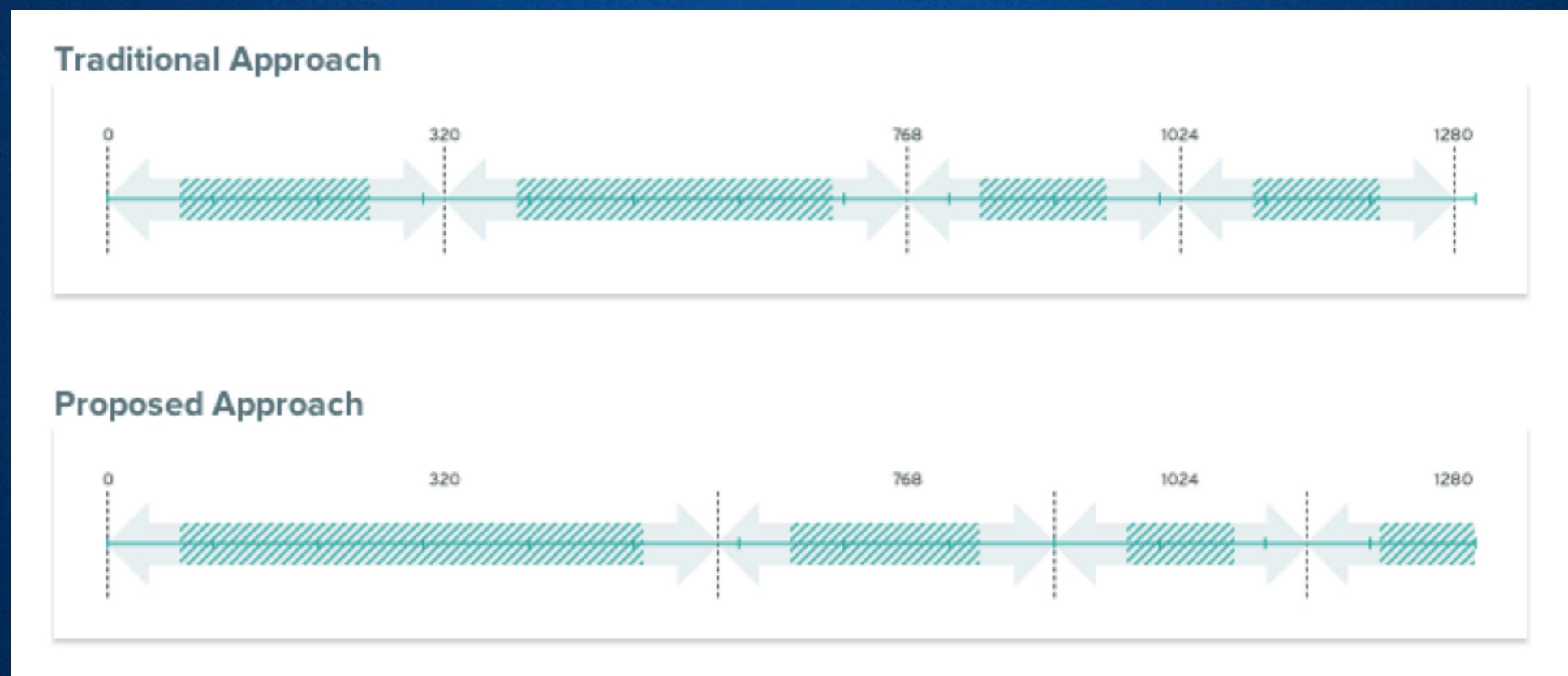
# Configure!

Let's talk about...  
**TANGENTS!**

# Responsive Images

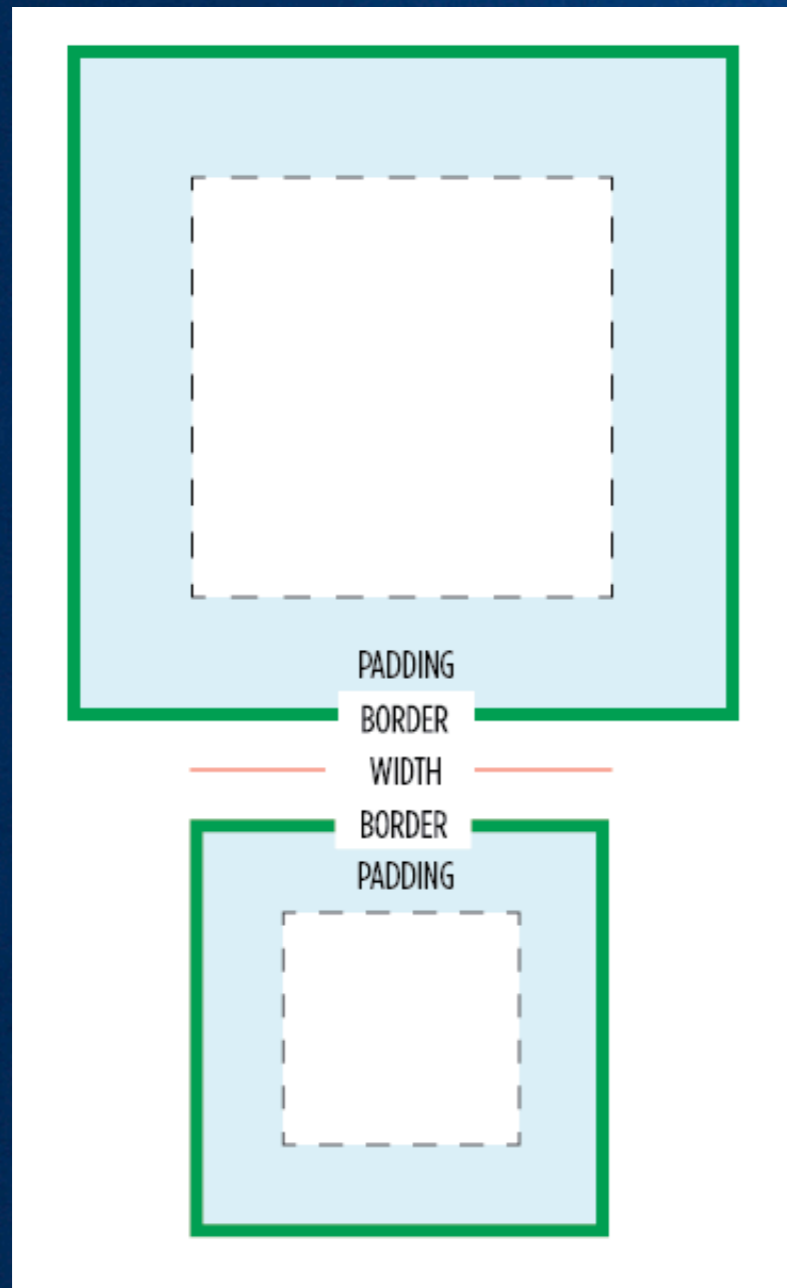
- Adaptive Image module  
[http://drupal.org/project/adaptive\\_image](http://drupal.org/project/adaptive_image)  
Based on Matt Wilcox's Adaptive Images.
- Borealis  
<http://drupal.org/project/borealis>
- Evaluate the solutions based on the problem space. Jason Grisby explains it best.  
<http://cloudfour.com/responsive-imgs/>

# Natural vs. Unnatural Breakpoints



<http://www.palantir.net/blog/re-thinking-breakpoints-responsive-design>

# Gutters



```
box-sizing: border-box;
```

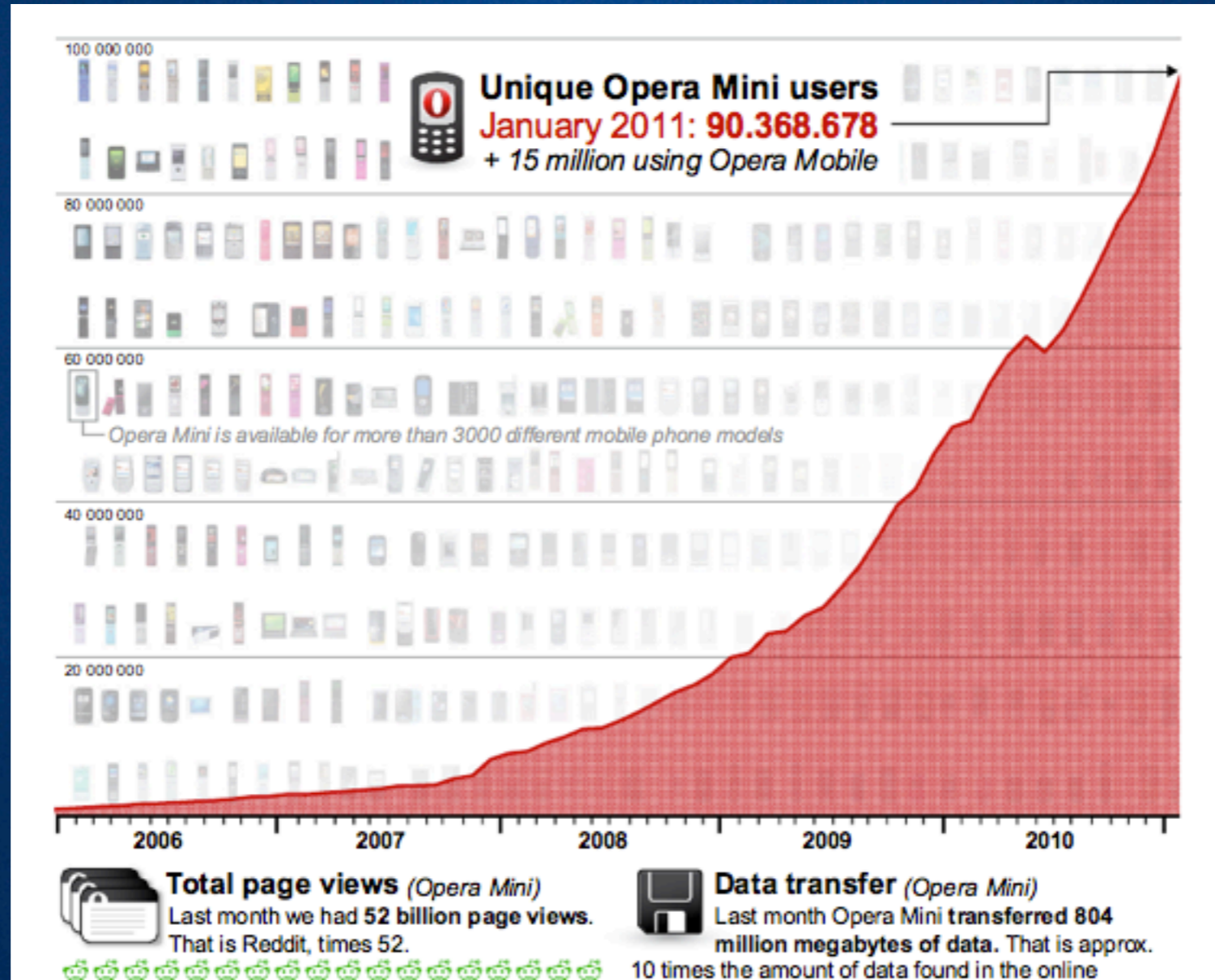
<http://paulirish.com/2012/box-sizing-border-box-ftw/>

Who are your users?

Beware of statistics!



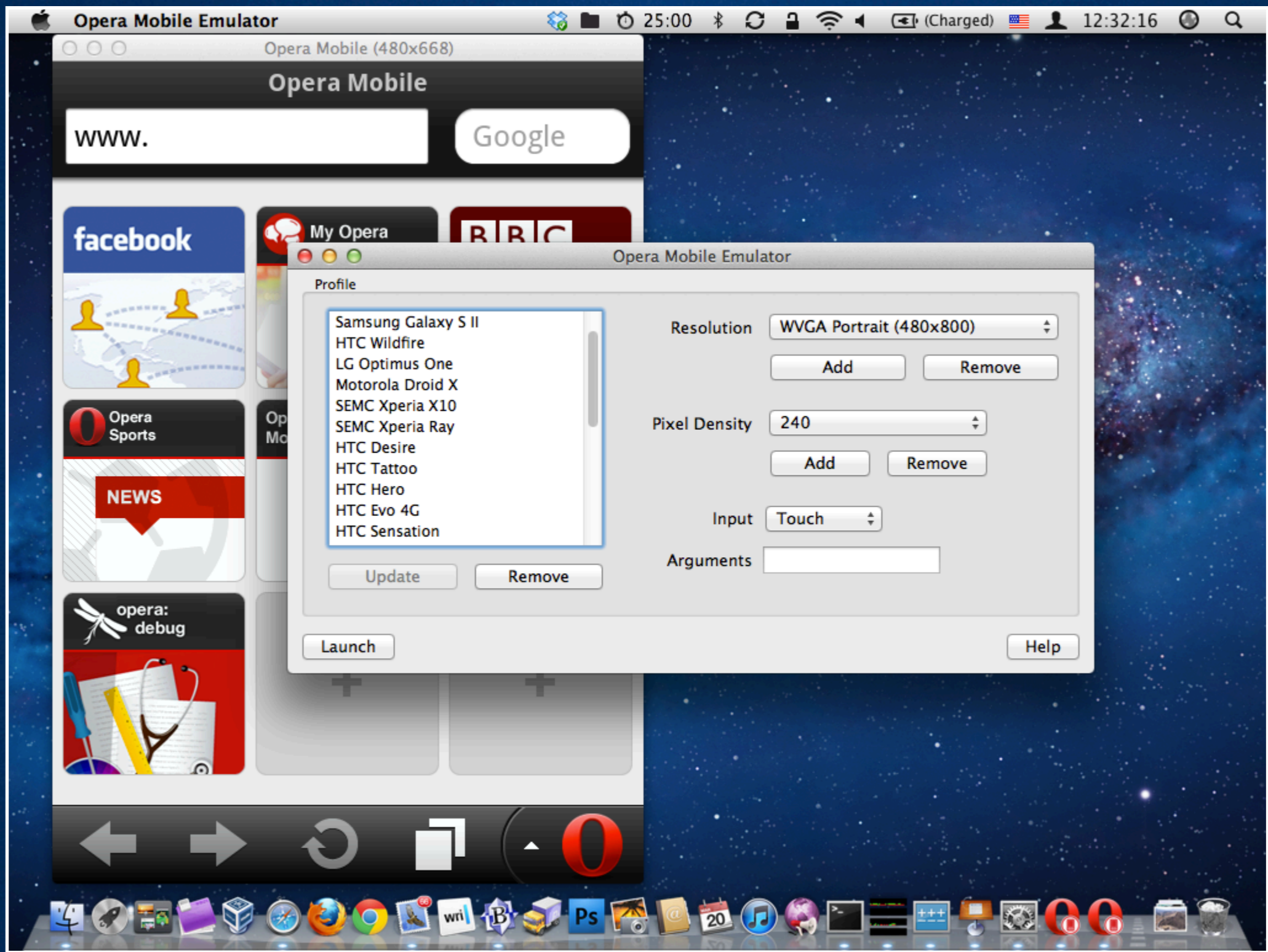
# Who are your users?



<http://www.slideshare.net/grigs/>

# Mobile Testing

- Opera Mini Simulator (web-based)  
[www.opera.com/developer/tools/mini/](http://www.opera.com/developer/tools/mini/)
- Opera Mobile Emulator (desktop app)  
[www.opera.com/developer/tools/mobile/](http://www.opera.com/developer/tools/mobile/)
- iPhone and iPad Simulator (Mac OS X app)  
Included with XCode 4 on Mac App Store.  
[developer.apple.com/devcenter/ios/](http://developer.apple.com/devcenter/ios/)
- Android emulator  
<http://developer.android.com/sdk/>



# Opera Mobile Emulator

# Even more mobile testing

Mobile Emulators & Simulators:  
The Ultimate Guide

<http://www.mobilexweb.com/emulators>

Let's talk about  
responsive layout  
building techniques...

# Building techniques



There's a difference between having the right tools and knowing how to use them.

<http://www.flickr.com/photos/14700745@N04/3330067933/>



Adding classes to HTML  
doesn't scale

# Sass to the rescue!



<http://zengrids.com/>





Content first

1

2

3

4

5

Use your content's natural semantic ordering.

(All other rules depend on it.)



# The Adjacent Sibling Rule



Rows are composed of elements that are next to each other in the HTML source.

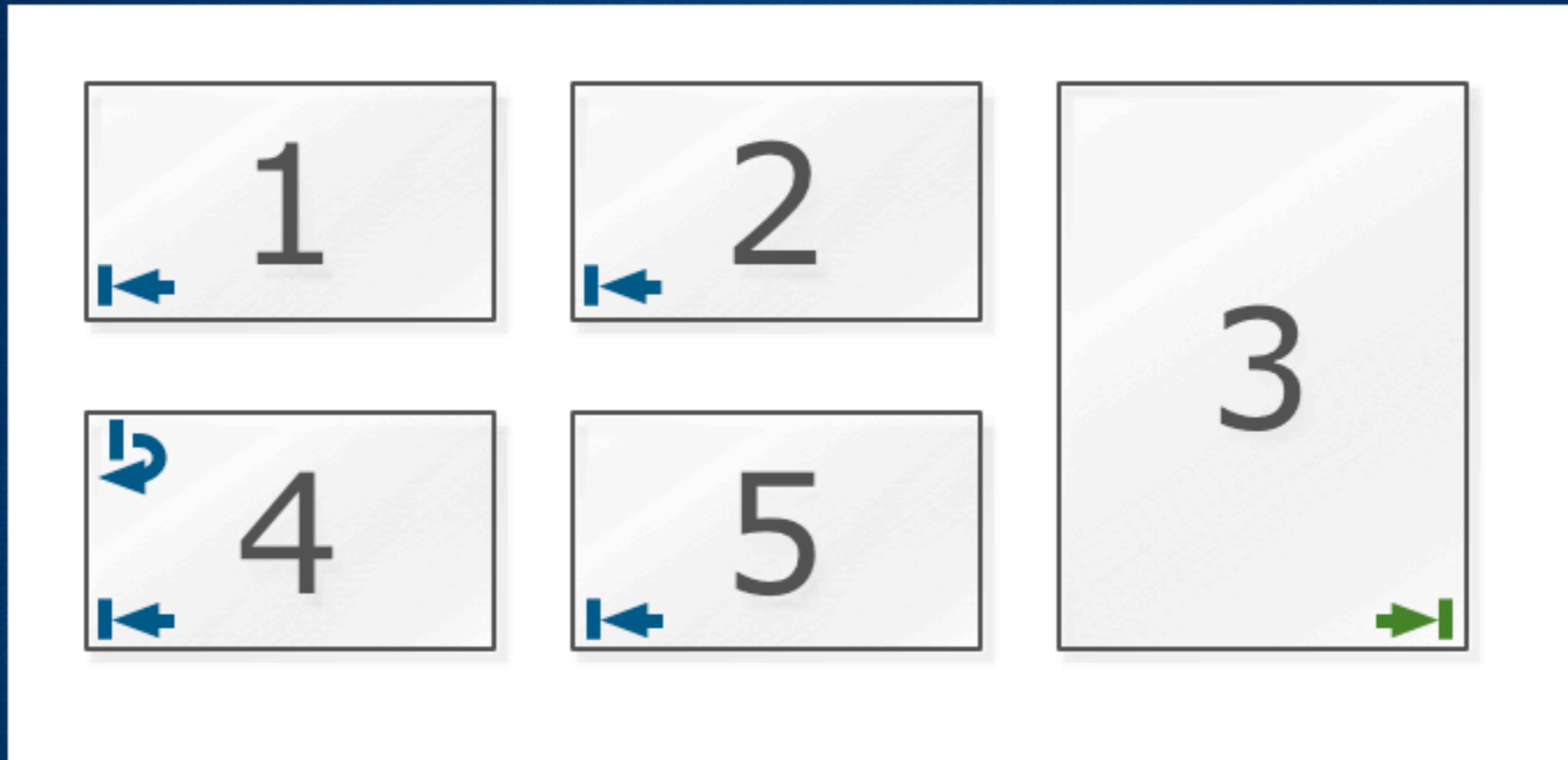
(But they can be re-arranged within the row.)

(To start a new row, add a clear to the first sibling.)

← float: left;    ↶ clear: left;

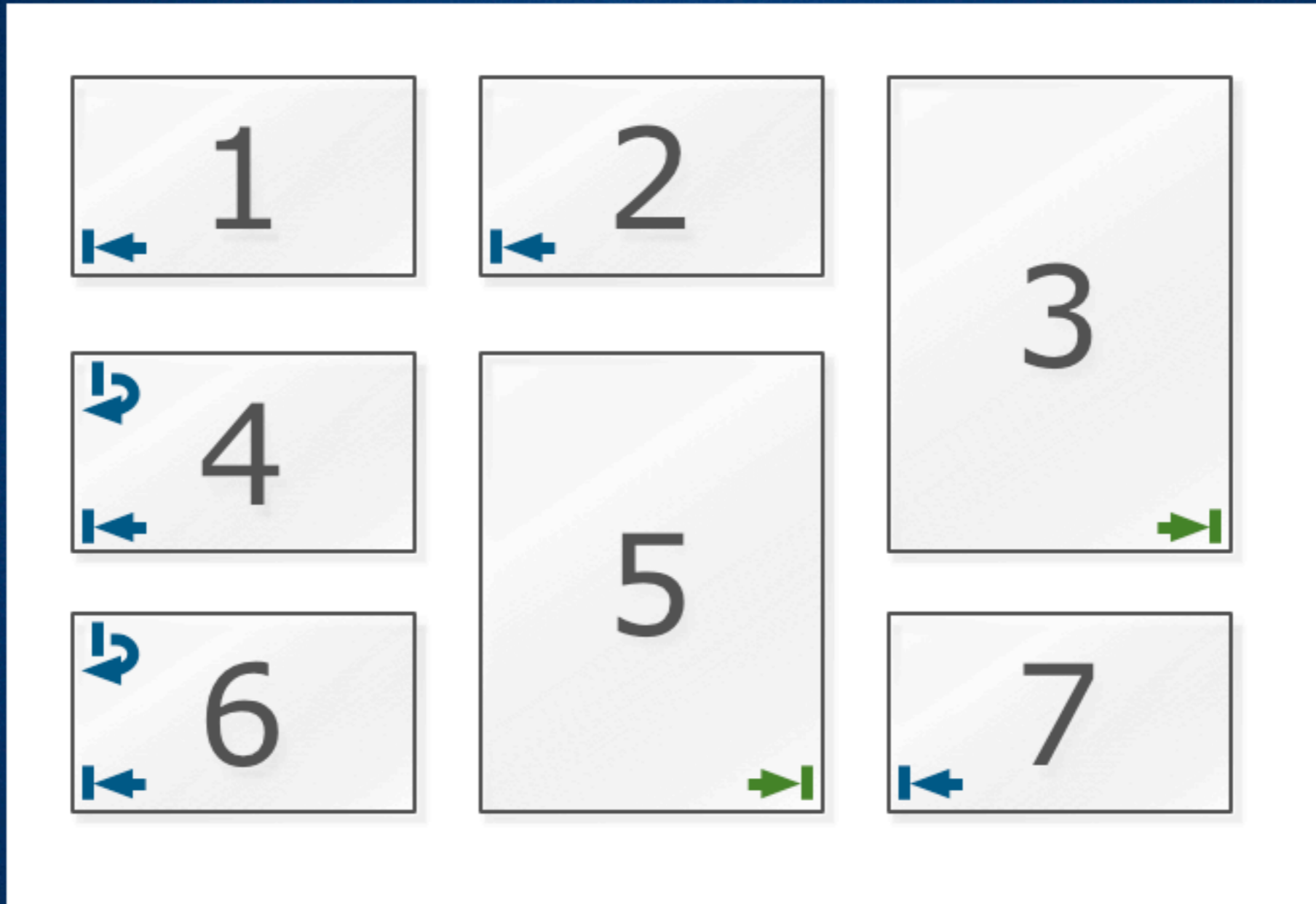


# The Opposing Float



An element can span multiple rows if it floats in the opposite direction of its siblings.

⇐ float: left;    ↶ clear: left;    ⇒ float: right;



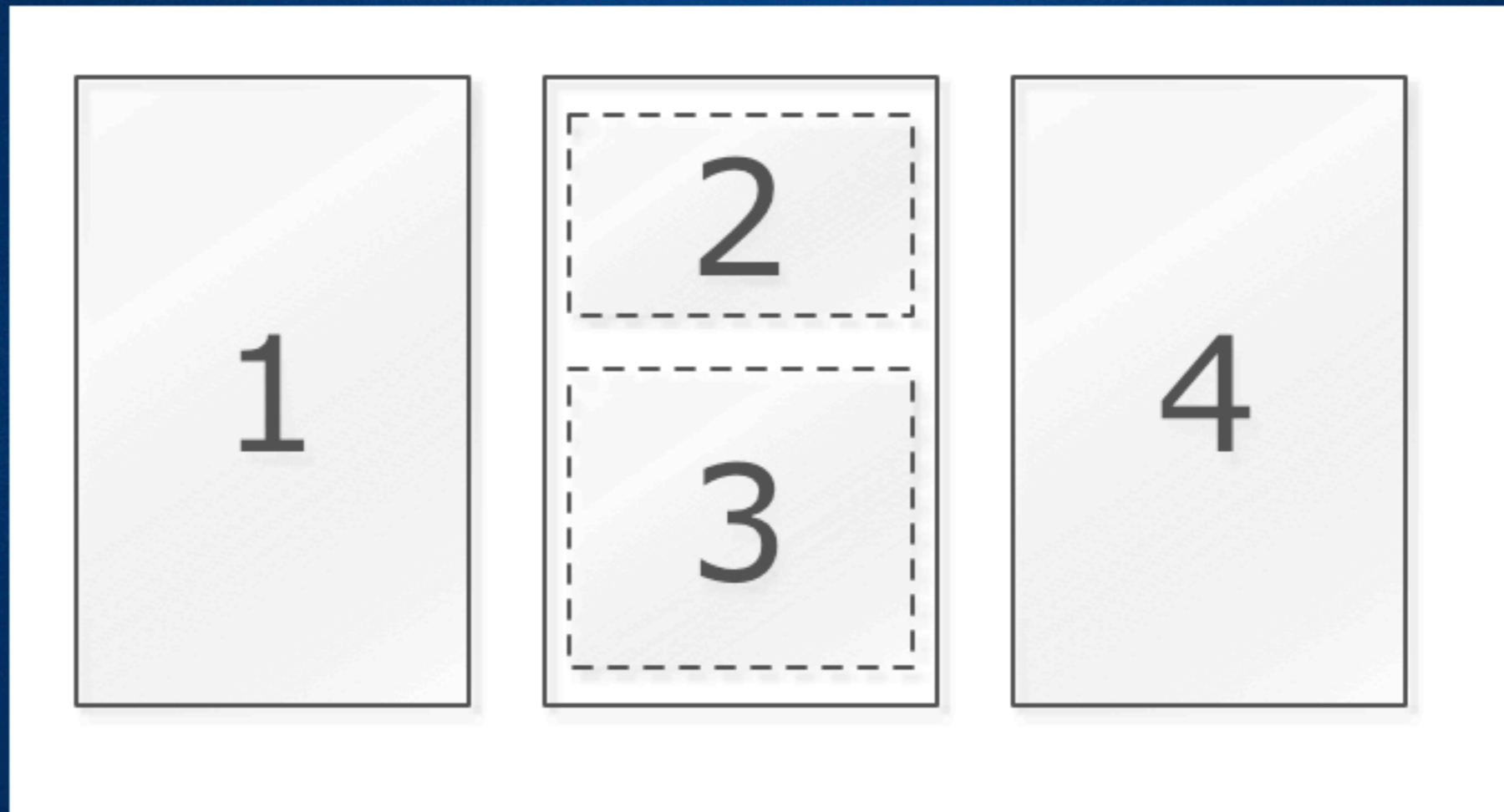
More complicated layouts are possible

← float: left;   ↶ clear: left;   → float: right;

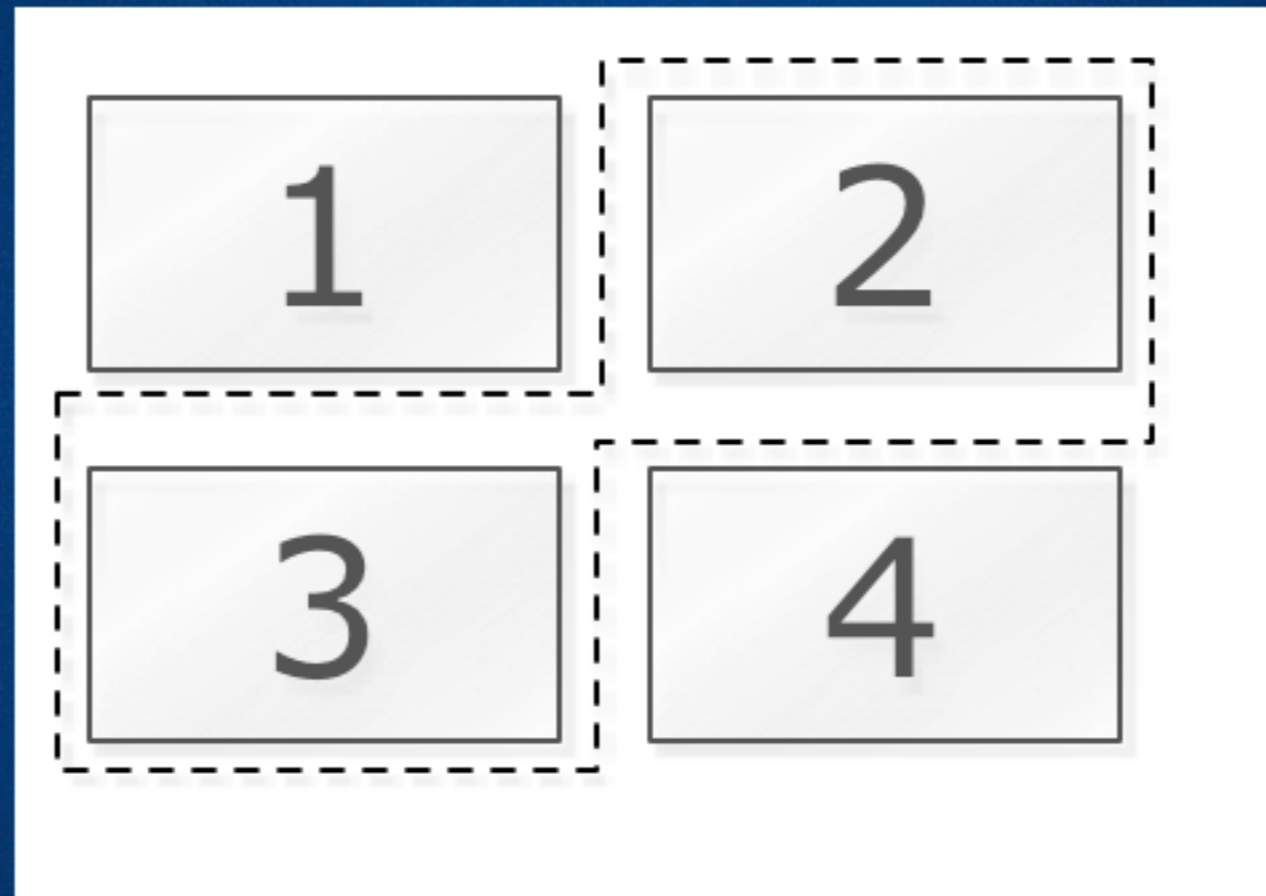


# The Lasso





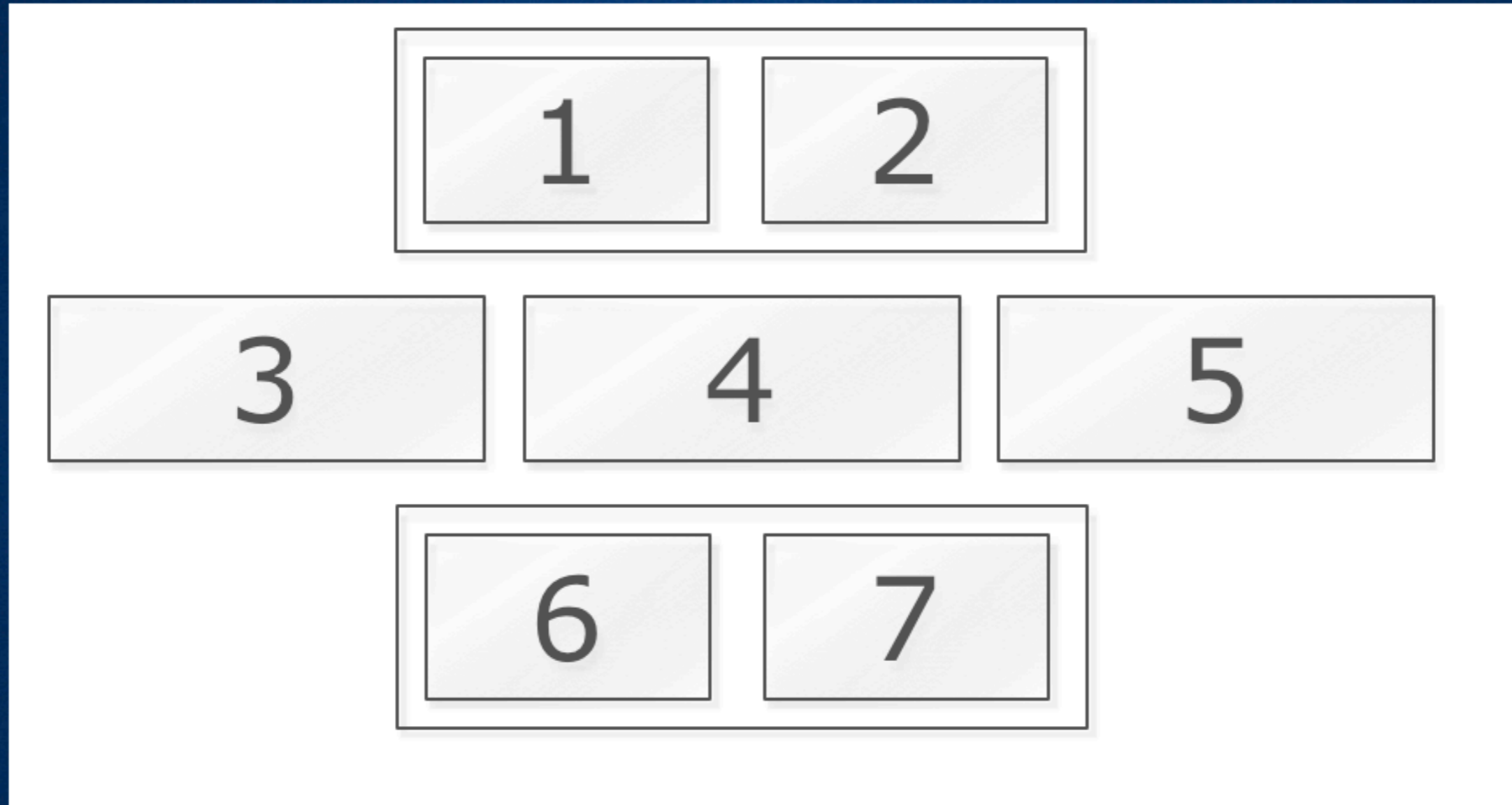
Sometimes the “lasso” is positioned...



Sometimes the “lasso” is positioned...  
...and sometimes not.



# The Corset Variant



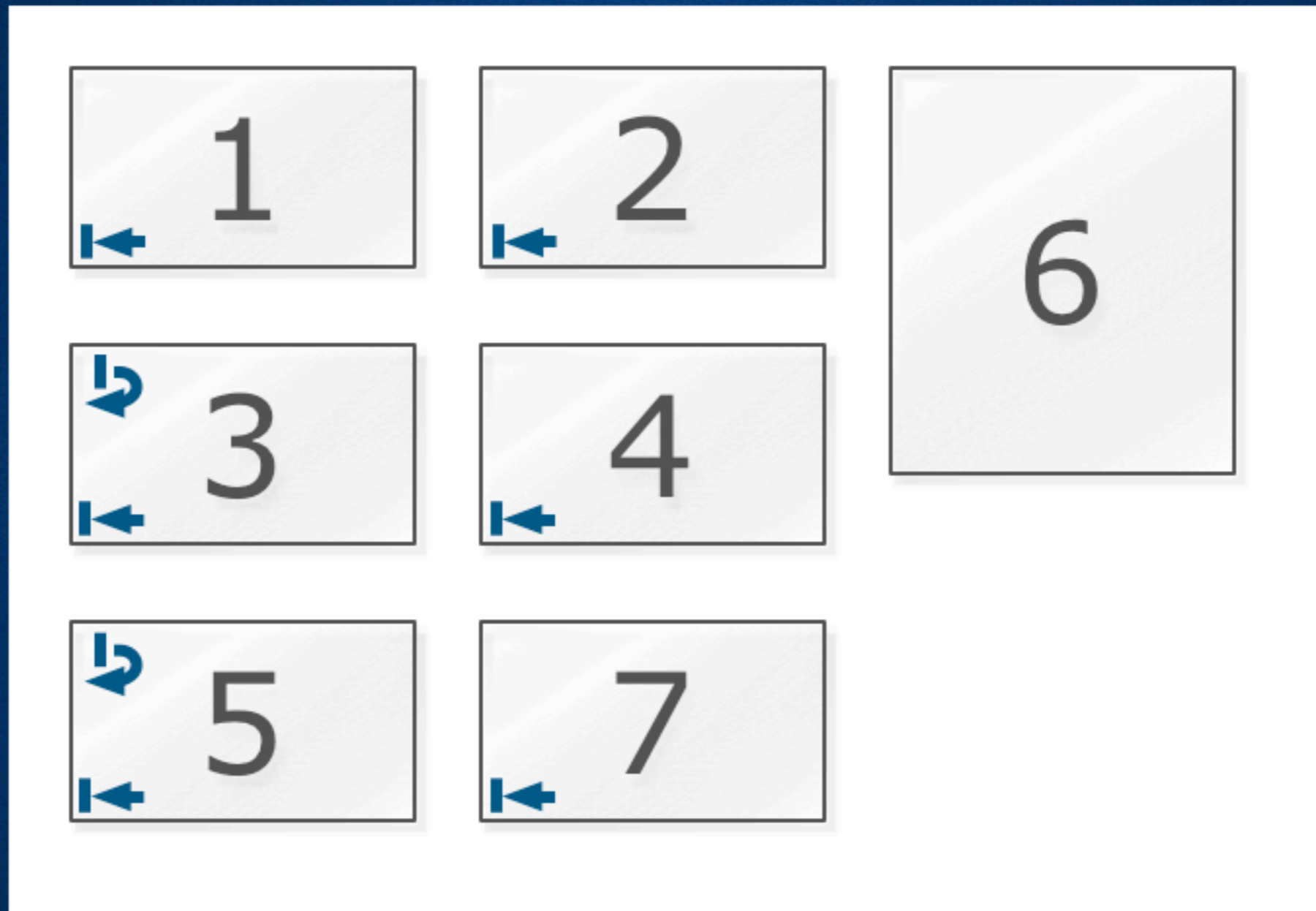
Two “lassos” make up the corset.

The un-lassoed content is the “wardrobe malfunction”.



# The Absolute Exception

( to the Adjacent Sibling rule )



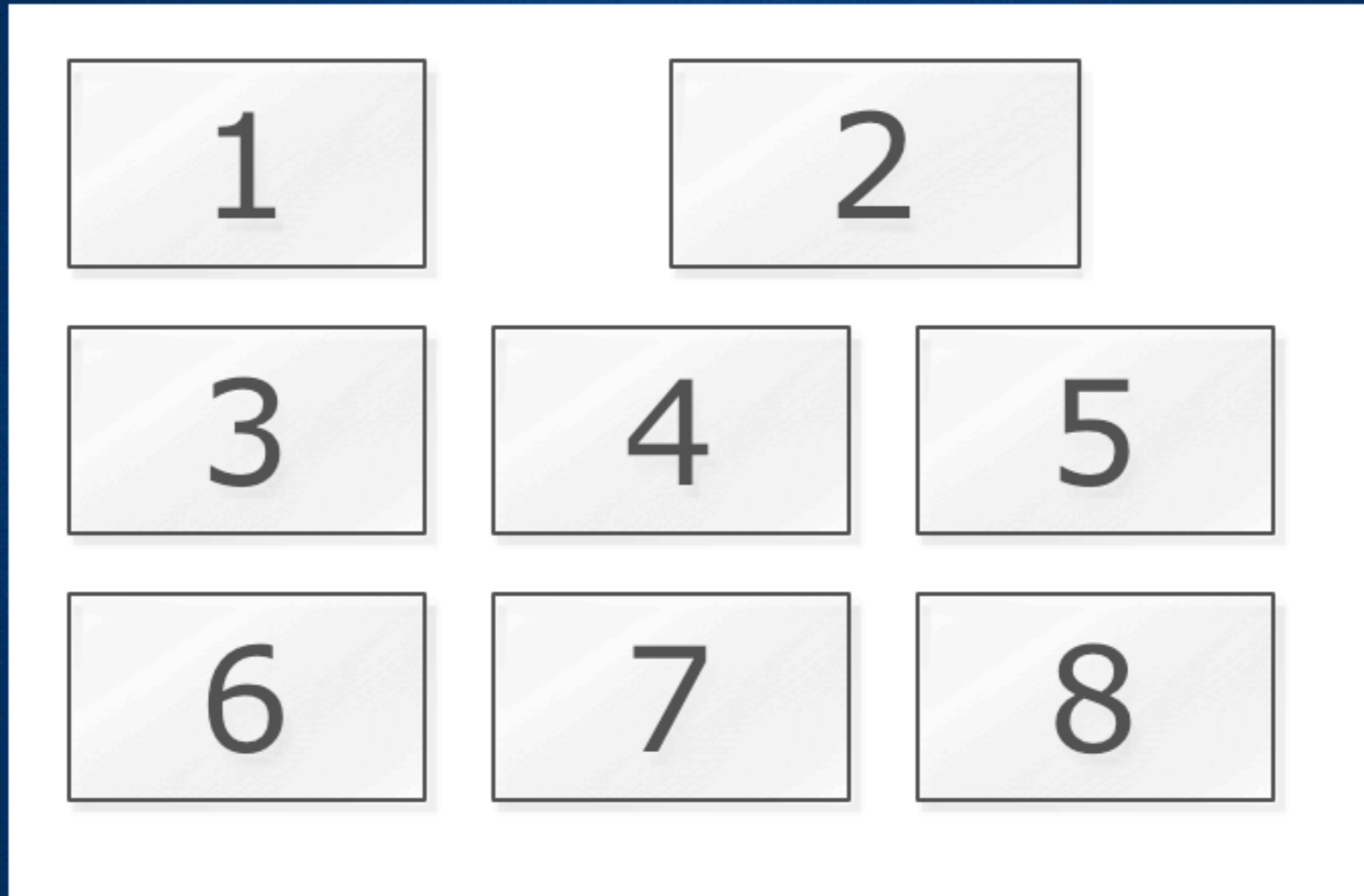
If you leave space below and can be sure no other content will overlap, you can apply `position: absolute;`

One more thing...



# The Violator





Violate the grid judiciously.

**Thank You!**