MAKING DRUPAL SASSY

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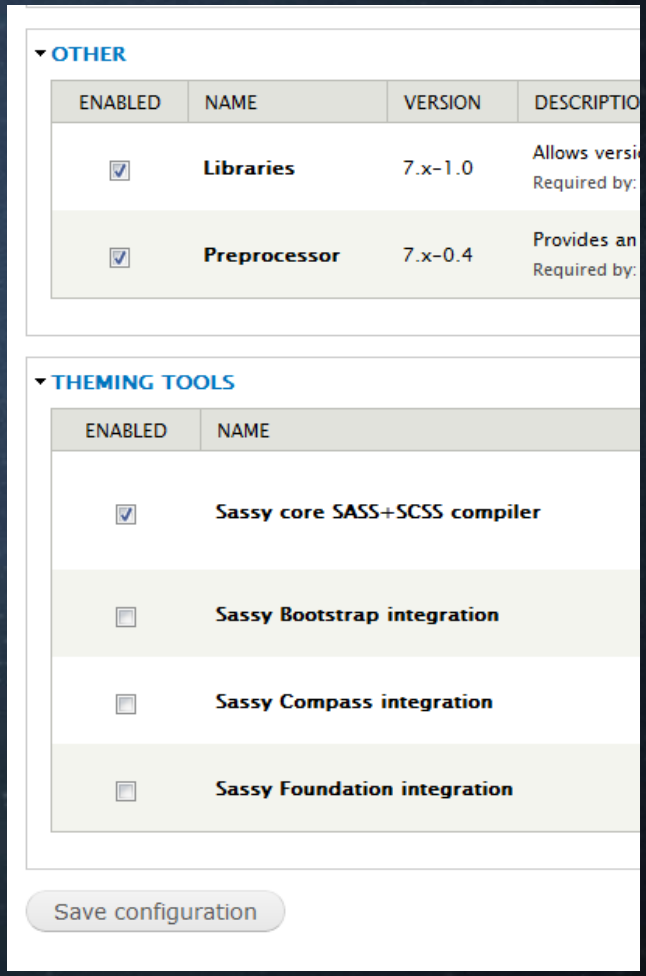
INSTALLATION PROCESS

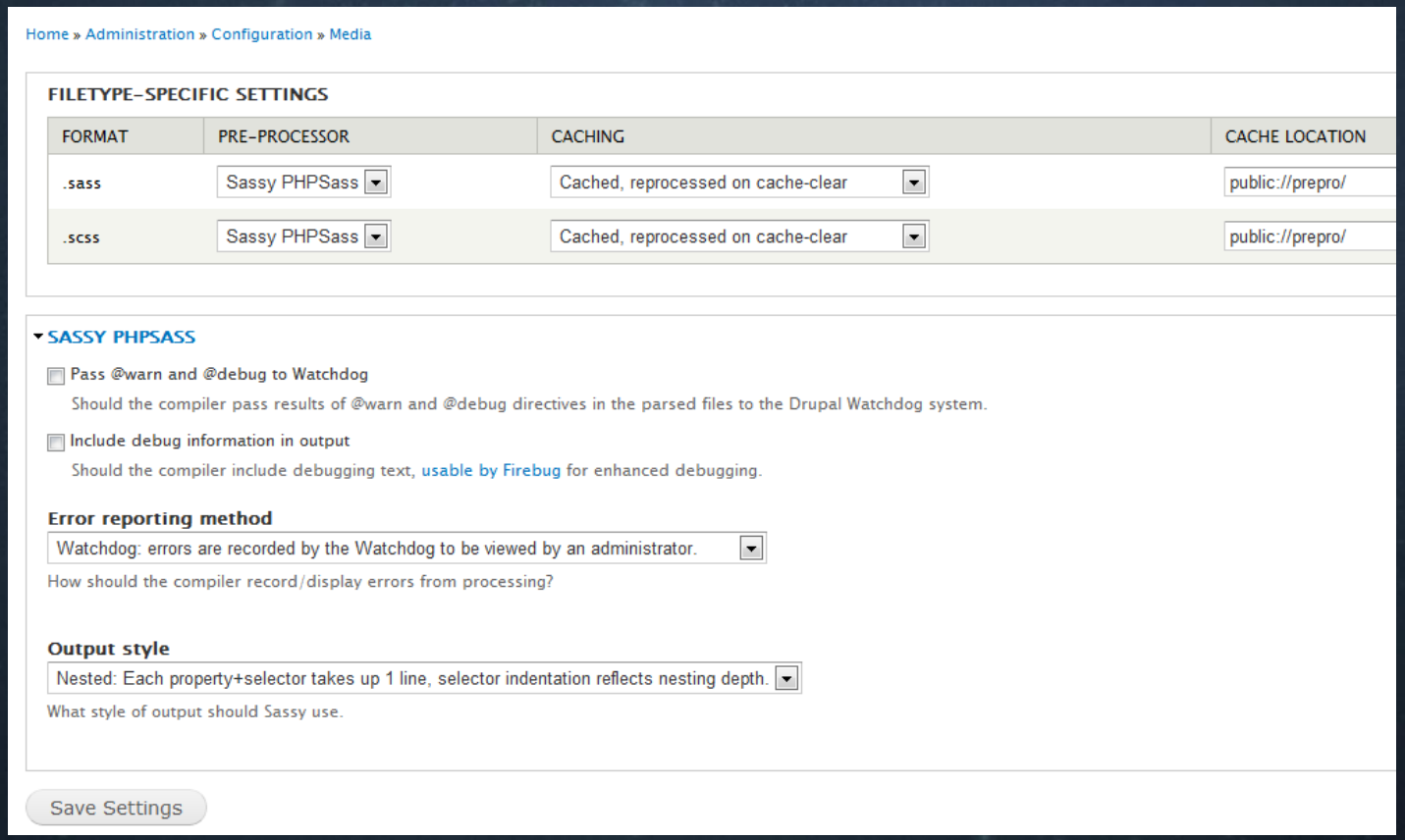
- Download Libraries, Prepro and Sassy, and place them in your modules folder:
  - drupal.org/project/libraries
  - drupal.org/project/prepro
  - drupal.org/project/sassy
- Download PHPSass, and extract into your sites/all/libraries folder:
  - github.com/richthegeek/phpsass

- Enable the Sassy module (this will auto-enable Libraries and Prepro)



PREPRO CONFIGURATION

- Prepro provides settings handling for all registered preprocessors, for simpler management.



YOUR FIRST SCSS FILE
+ ERROR HANDLING

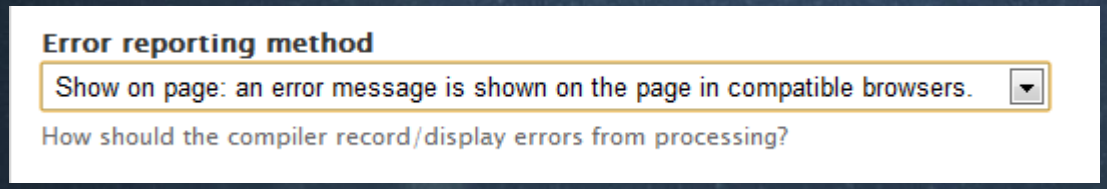
- Using SASS is now as easy as adding a .scss or .sass file to your CSS list:

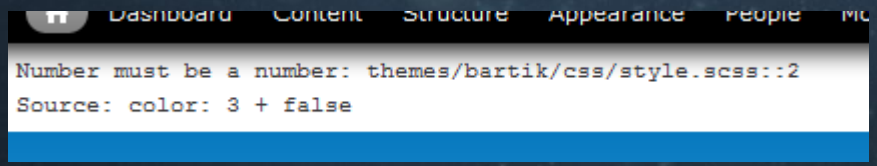
```
stylesheets[print][] = css/print.css

stylesheets[all][] = css/style.scss

regions[header] = Header
regions[help] = Help
```

- If you use “show on page” errors, errors appear before the page content:





HISTORY

- Sassy is a system for allowing Drupal to compile SASS and SCSS files on the fly.
- Comprised of two modules and a library:
  - Prepro
  - Sassy
  - PHPSass (our fork of the PHamlP library)
- Started in August 2011 by Richard Lyon (@richthegeek) and Sebastian Siemssen (@thefubhy) due to poor existing Drupal modules. Originally it was just the Sassy module which included the parser and everything that is now in the Prepro module.
- Split into the Prepro + Sassy + PHamlP structure in January 2012. This allows greater modularity and made PHamlP less dependant on Drupal (it is now entirely independent).
- Renamed our PHamlP fork to PHPSass, to mark that it's no longer a branch and is purely focused on SASS parsing.

WHAT IS PREPRO?

HTTP://DRUPAL.ORG/PROJECT/PREPRO

- Prepro is a middle-man tool designed to make the act of making a CSS pre-processor very easy to implement.
- It handles picking the right files and passing them to “registered” pre-processors.
- Output is optionally cached on a per-filetype and/or per-file basis .
- Settings for each filetype and pre-processor are handled without hassle.

WHAT IS SASSY?

HTTP://DRUPAL.ORG/PROJECT/SASSY

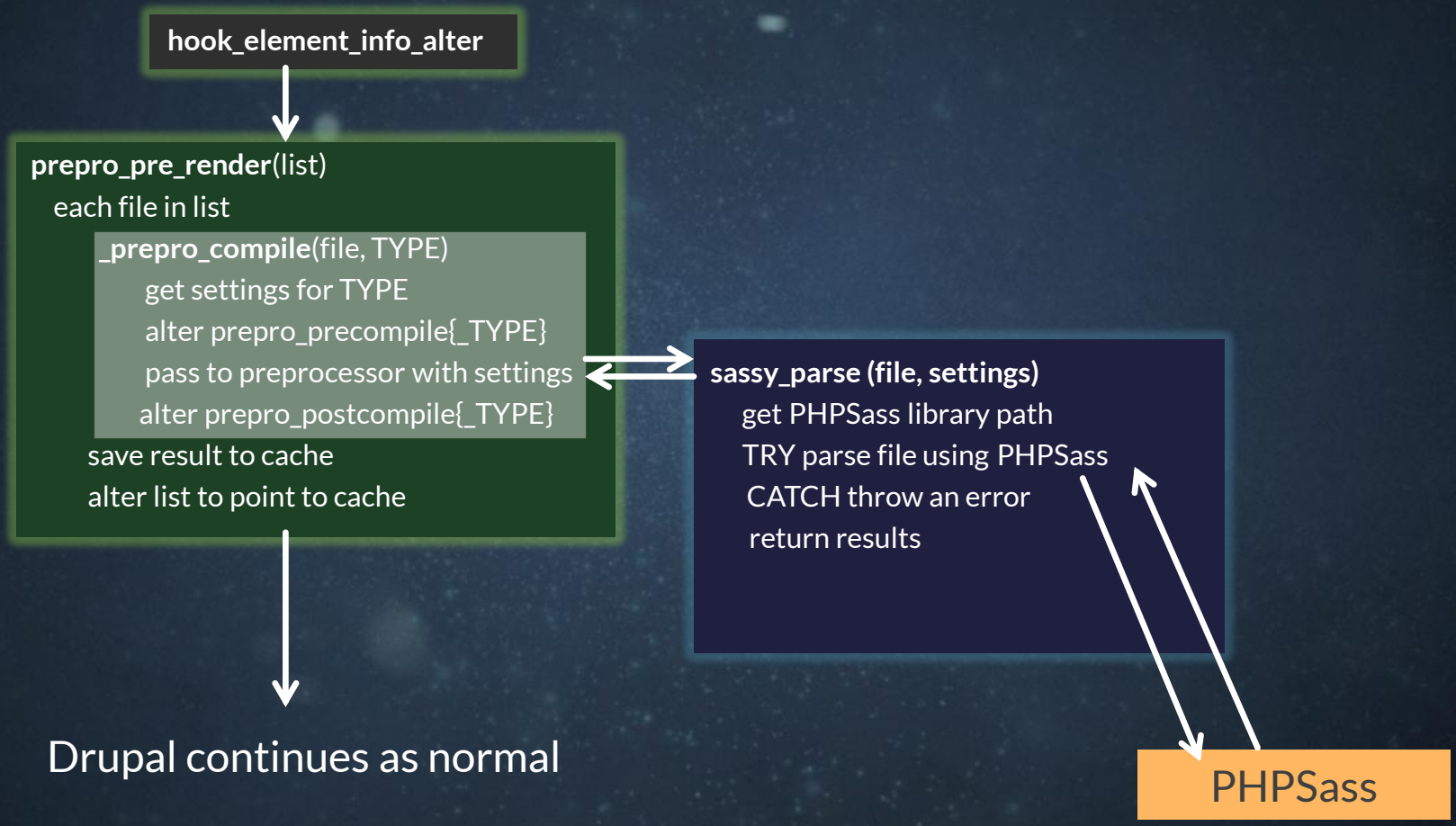
- Sassy acts as a registered pre-processor for Prepro. It offers to process .sass and .scss files.
- It provides settings (via Prepro) that control the PHPSass library and error handling.
- Files are then parsed by the PHPSass library.
- Sassy provides hooks for custom functions and namespaces, which allows fully modular extensions such as Compass or Zurb Foundation.

WHAT IS PHPSASS?

HTTPS://GITHUB.COM/RICHTHEGEEK/PHPSASS
@PHPSASS

- PHPSass is a fork of the PHamlP library.
- It is a SASS compiler written entirely in PHP.
- Since forking, we've managed to fix almost all bugs that existed before, and implemented almost all missing features. The compiler is now:
  - Complete to v3.1.1.5 of the Ruby compiler
  - Tracking v3.2 development with a lag of about 2 weeks.
- We've stripped out large chunks of extraneous features for now – some of them will be added back in at a later date but we wanted to fix the language processing before anything else.

HOW THEY WORK TOGETHER



CREATE A PREPRO PREPROCESSOR

Drupal

```
function sassruby_css_preprocessor_info() {
  return array(
    'sassruby' => array(
      'label' => 'SASS Ruby parser',
      'callback' => 'parse',
      'filetypes' => array('sass', 'scss')
    )
  );
}

function sassruby_parse($file, $settings) {
    $local += array('style' => 'nested');
    exec($file['extension'] . ' --style=' . $local['style'] . ' ' . $file['data'], $output);
    return implode($output);
}

function sassruby_css_preprocessor_settings_form($form, $form_state) {
  $local += array('style' => 'nested');
  $form['style'] = array(
    '#type' => 'select',
    '#title' => 'Output style',
    '#description' => t('What style of output should the parser use.'),
    '#options' => array(
      'nested' => 'Nested: Each property+selector takes up 1 line, selector indentation …',
      'expanded' => 'Expanded: Each property+selector takes up 1 line, no selector indentation.',
      'compact' => 'Compact: Each selector takes up 1 line with properties on the same line.',
      'compressed' => 'Compressed: Almost no whitespace, designed to be as space-efficient …',
    ),
    '#default_value' => $local['style'],
  );
  return $form;
}
```

HOW TO ADD A LIBRARY
A CASE STUDY OF COMPASS INTEGRATION

- Compass contains two groups of data:
  - ~80 .scss files comprising most functionality
  - ~20 .rb files containing functions that are not implementable with SASS

- The SASS files aren't a problem, and are a great test of the compiler. However, the directory structure is somewhat verbose so we need to tell PHPSass how to find the files with a namespace. We add the "compass" namespace via ***hook_sassy_resolve_path_compass***, so we can do:
  - @import "compass/compass";
  - @import "compas/css3";

- The ruby files are a sticking point – we can't run Ruby in PHP so we need to convert the functions and make PHPSass aware of them. We add the functions via ***hook_sassy_functions***.

HOW TO ADD A LIBRARY

PATH LOOKUPS AND NAMESPACES

- Whenever PHPSass tries to find a file and it cannot, it iterates through a list of load path functions.
- Functions receive a filepath and should return an array of proper filepaths.
- Sassy extends this so your module can respond to a single namespace, for proper segregation of responsibilities.

PHPSass

```
$parser = new SassParser(array(
     'load_path_functions' => array(
          'my_custom_function'
     ));

function my_custom_function($file) {
    return array("/var/www/$file");
}
```

Drupal

```
function hook_sassy_resolve_path_foo($file) {
    return array("~/stylesheets/$file");
}
```

Result

```
@import   foo/styles;
PHPSass:   /var/www/foo/styles
Sassy:    ~/stylesheets/styles
```

HOW TO ADD A LIBRARY

CUSTOM FUNCTIONS

- Whenever PHPSass tries to call a function, it looks up a list of functions passed into the options.
- Functions receive arguments in string form, and we use PHP5 Reflections to verify argument counts and names where possible.
- Sassy provides a near direct hook.

PHPSass

```
$parser = new SassParser(array(
    'functions' => array(
        'reverse' => 'strrev'
    ));
```

Drupal

```
function hook_sassy_functions() {
   return array(array(
      'name' => 'reverse',
      'callback' => 'strrev'
   ));
}
```

Result

```
content:        reverse('foobar');
content:        baroof;
```

HOW TO ADD A LIBRARY

CUSTOM FUNCTIONS: ARGUMENT NAMING + DEFAULTS

- PHPSass uses the PHP5 Reflections API to figure out if we can use named arguments with defaults.
- This means your PHP functions act in a manner indistinguishable from your SASS functions.
- Compatible with PHP5.0, like the rest of PHPSass.
- For this reason, you should consider naming your arguments in obvious ways (bad example).

PHPSass

```
function x($a = 'foo', $b = 'bar') {
    return $one . ' ' . $two;
}
```

SCSS

```
default: x();
onetwo: x('one', 'two');
onebar: x('one');
footwo: x($b: 'two');
reverse: x($b: 'rev', 'erse');
```

CSS

```
default: foo bar;
onetwo: one two;
onebar: one bar;
footwo: foo two;
reverse: erse rev;
```