SMART STATIC SITES

WITH HAKYLL

-Eric Rasmussen

BACK TO THE 90'S

ERIC'S HOME PAGE!!!

Maybe not those 90's

But static sites **are** coming back in style

WHAT ARE STATIC SITE GENERATORS?

- think of them as build tools
- turn any input into html
- rebuild when content changes

BUT REALLY... WHY?

- minimalism
- reduce security concerns
- version control
- it's fun

TEXT FORMAT OF YOUR CHOICE

- markdown
- ReSTructured text
- LaTeX
- MediaWiki

SYNTAX HIGHLIGHTING

```
match ("about.markdown" .||. "commands.markdown") $ do
    route   $ setExtension "html"
    compile $ pandocCompiler
        >>= applyBase
        >>= relativizeUrls
```

"What's hard to ignore about all these platforms is that, your dad will never blog like this."

-Mike Bayer (author of SQLAlchemy)

WHY NOT?

- takes time to configure
- the wild wild west
- geek factor

HAKYLL

RULES-BASED EDSL

configuration via code

```
match ("images/*" .||. "js/**") $ do
  route   idRoute
  compile copyFileCompiler

match ("css/*" .||. "css/icons/*" .||. "foundation/*") $ do
    route $ setExtension "css"
    compile sassCompiler
```

FEATURES

- dependency resolution
- simple file metadata
- snapshots (during build)

HAKYLL BUILT-INS

- tags and tag cloud rendering
- rss/atom feed generation
- code syntax highlighting
- templating

EXAMPLE: RENDER POSTS

```
match "posts/*" $ do
    route   $ setExtension "html"
    compile $ pandocCompiler
        >>= saveSnapshot "content"
        >>= loadAndApplyTemplate "templates/post.html" postCtx
        >>= loadAndApplyTemplate "templates/base.html" baseCtx
        >>= relativizeUrls
```

EXAMPLE: CREATE AN ATOM FEED

```
create ["atom.xml"] $ do
    route idRoute
    compile $ do
        loadAllSnapshots "posts/*" "content"
            >>= fmap (take 10) . recentFirst
            >>= renderAtom (feedConfiguration "All posts") feedCtx
```

EXAMPLE: CREATE A CONTEXT

```
defaultPostCtx :: Tags -> Context String
defaultPostCtx tags = mconcat
  [ dateField "date" "%B %e, %Y"
  , tagsField "tags" tags
  , defaultContext
  ]
```

EXAMPLE: SASS/SCSS COMPILER

```
sassCompiler :: Compiler (Item String)
sassCompiler =
  getResourceString
    >>= withItemBody (unixFilter "sass" ["-s", "--scss"])
    >>= return . fmap compressCss
```

PANDOC

- Swiss-army knife of markup
- Can parse several markdown/markup formats
- Can output to html, tex, pdf, and other formats

GO DYNAMIC WITH JAVASCRIPT

- visual effects
- indexed search (sphinx)
- comments (Disqus, Branch)
- live feeds (twitter, app.net)

THE HASKELL CONNECTION

- You don't need to know Haskell for Hakyll
- But know that Haskell is awesome
- Modern type systems are expressive and productive
- Beginner friendly community

DRAWBACKS

HASKELL IS... TOO AWESOME?

"a monad is a monoid in the category of endofunctors, what's the problem?"

FOR COMPLEX SITES

- Haskell knowledge likely required
- DSLs can be hard to hack on
- but there are open source examples

WHERE TO BEGIN

The Hakyll tutorials are a great starting point

But if you already have a favorite language, try:

- pelican (python)
- jekyll (ruby)
- nanoc (ruby)
- middleman (ruby)
- high_voltage (ruby)

(ruby devs like DSLs)

(but you can find examples in most languages)

A WORD OF CAUTION

The good news: typically no proprietary format or DB, but...

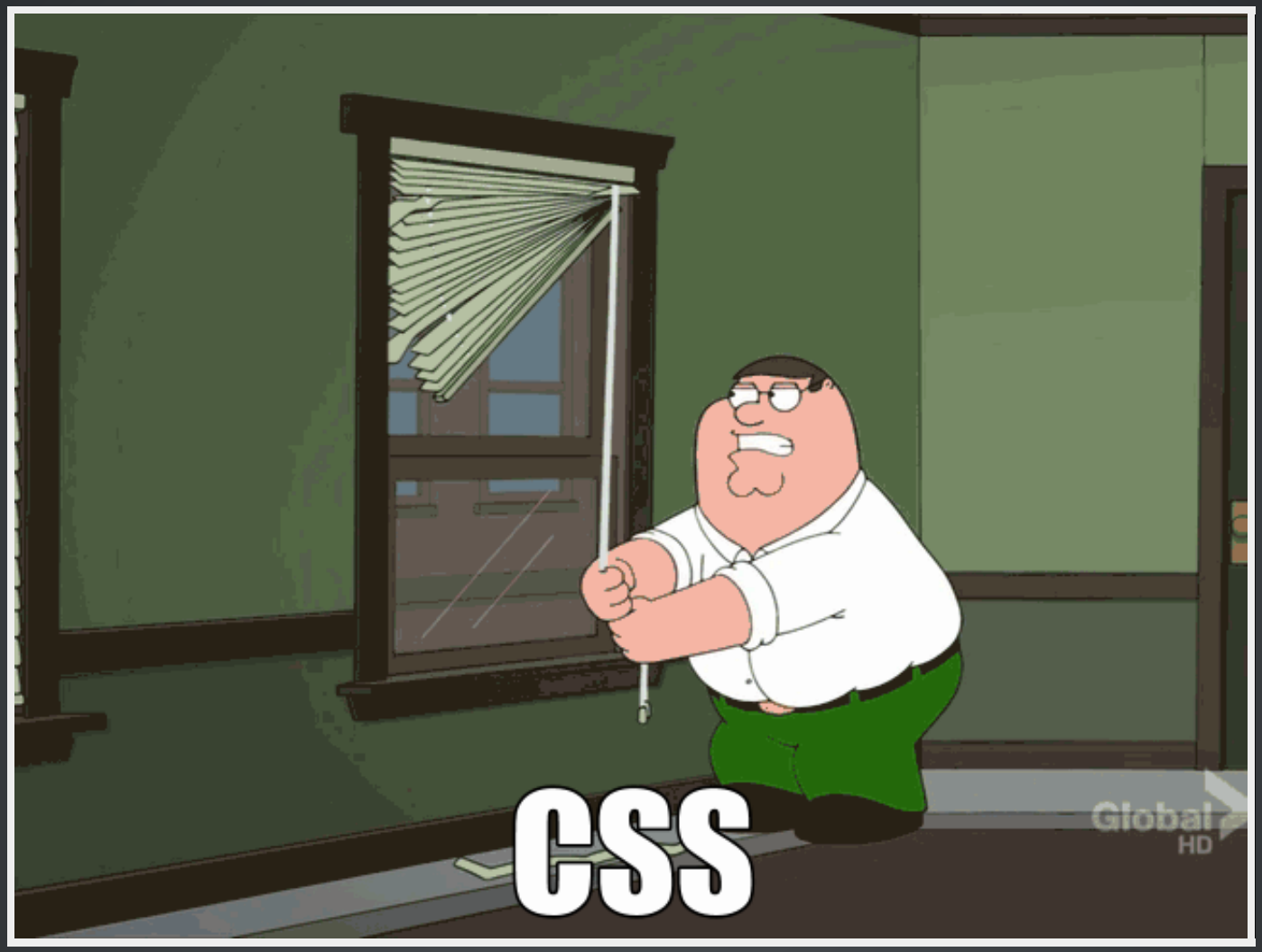
- Static site generators come and go
- Prepare for breaking changes/tinkering
- No security patches! (good thing)

DEPLOYMENT

- it's plain html and assets
- so you can deploy just about anywhere
- rsync -zrv mysite/ user@host:~/mysite/
- GitHub Pages (http://pages.github.com/)

CSS FOR NON-DESIGNERS

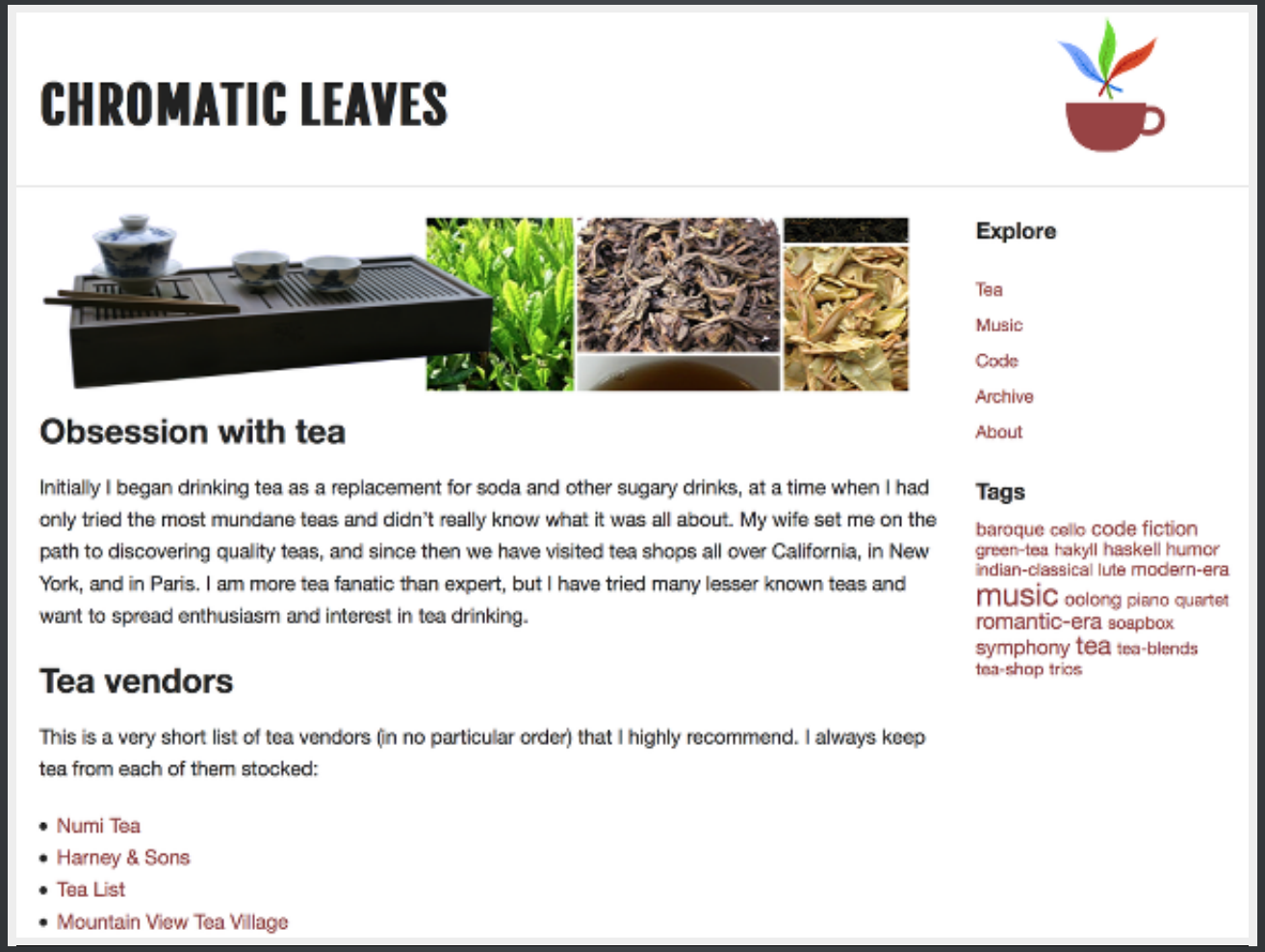
- Don't do it
- Just... don't


CSS
Global
HD

THE EASY WAY

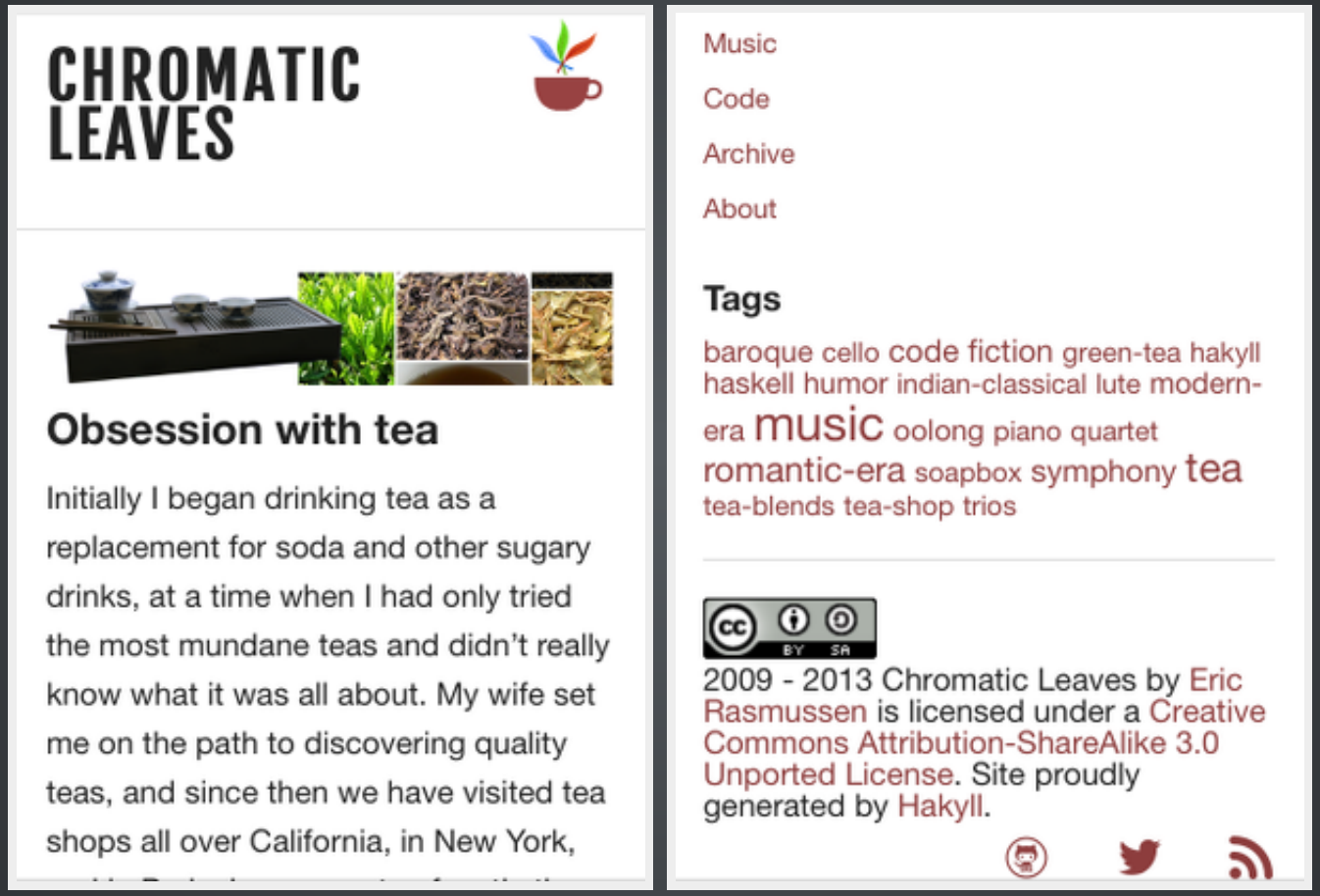
- Use twitter bootstrap
- Or zurb foundation
- Learn grid systems and responsive classes

DESKTOP



Use grid layouts to design big

MOBILE



Design small at the same time

SASS

- variables -- $blue: #3bbfce;
- functions -- darken($blue, 9%);
- like coding, but not
- reduces CSS ~~madness~~ boilerplate
- compile with your build process

CHOOSE YOUR OWN ADVENTURE

Q&A

- haskell
- hakyll
- javascript + services
- responsive design

LINKS

- Chromatic Leaves
- HaykII
- Foundation / SASS
- Geo for Bootstrap
- reveal.js