



DESIGN & DEVELOPMENT

Web Tech
SET08101

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TL/DR

- Design can be the difference between pleasure & pain for the user
- You don't have to be a designer to create usable websites

AIMS

- At the end of this (sub-section) of the topic you will be able to:
 - Understand why design is important
 - Assemble & use design guidelines & documents
 - Use semantic markup
 - Prototype your solutions
 - Usefully consider the role of typography & colour in your designs



DESIGN IS IMPORTANT

- I've referred to CSS as making things look pretty (& It can just be that)
- But design can be much more important than that
 - (& CSS is an aspect of design)
 - (but so is HTML [& Javascript])
 - we can't develop information systems without considering design
- Every development task has some element of design
 - regardless of whether it is made public or how many users there are
- Good design helps us avoid mistakes & reduce errors
 - Also makes systems accessible
- Helps avoid customer service calls or mistake fixing or error correction
 - Preserves money, reputation, etc.

HAWAII ALERT

Saturday, January 13



EMERGENCY ALERTS

now

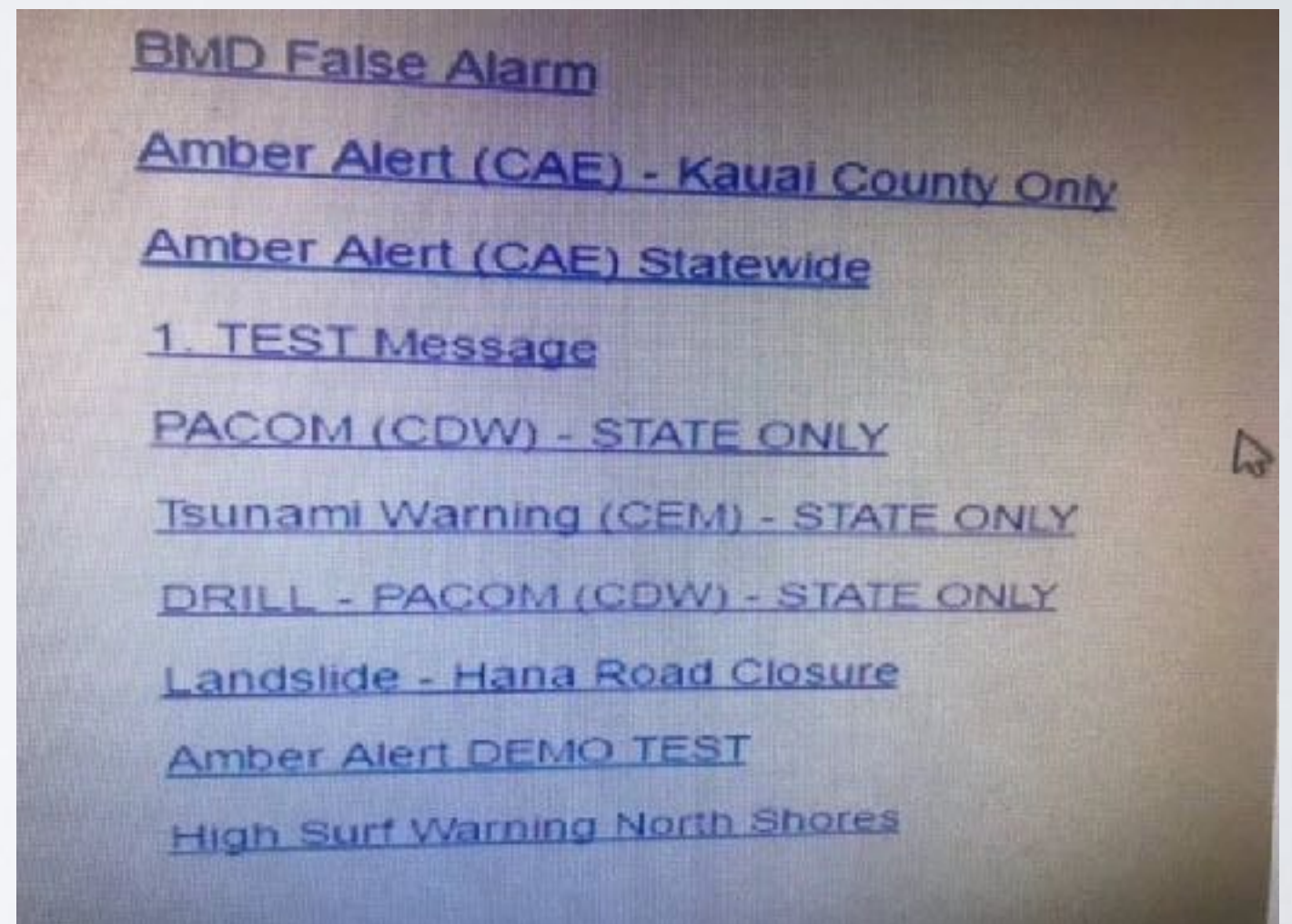
Emergency Alert

BALLISTIC MISSILE THREAT INBOUND TO HAWAII. SEEK IMMEDIATE SHELTER. THIS IS NOT A DRILL.

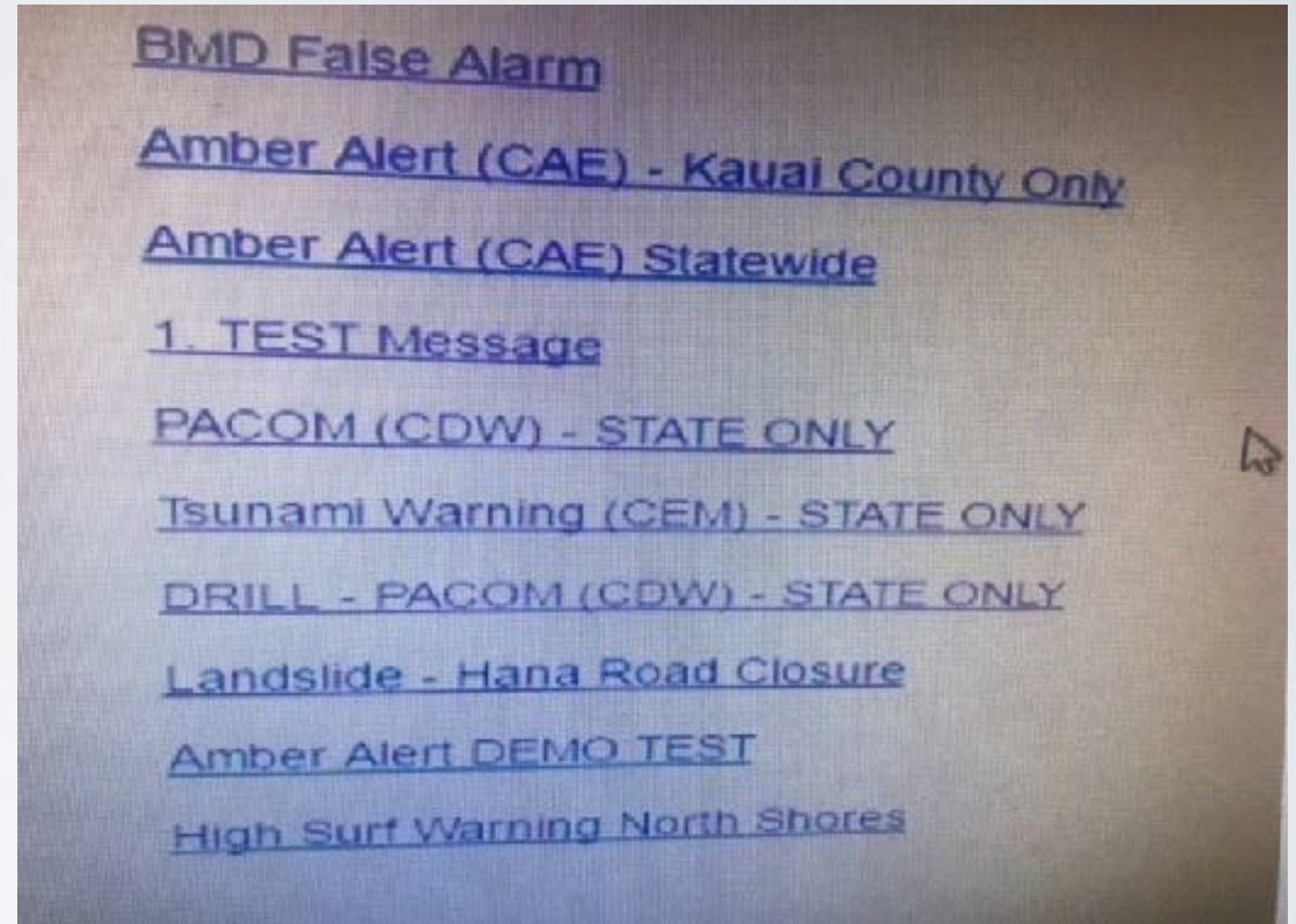
Slide for more

HAWAII EMA ALERT PAGE

- Web page used by Hawaii Emergency Management Agency to initiate emergency alerts
- How many poor design decisions can we identify?



- Wall of text
- Numbering/bulleting
- Inconsistent naming/word ordering
- No apparent order/classifications
- Use of acronyms
- No use of design to differentiate alerts or their severity
 - colour
 - framing
 - whitespace/padding/separation
 - text explanations/headings/organisation/tooltips?
- Alerts & Tests mixed on same page



- NB. There was a confirmation dialogue but this was clicked through anyway.
- What are chances that this was an isolated poorly designed page?





DATA TO DESIGN

- Marking up our data with HTML tags will give use an idea of how things might be structured leading to a set of unstyled HTML pages
 - You will have something that works - can read the data & navigate the links
 - You will probably want to personalise it (or your client might have branding that needs to be applied)
- How to go about design?
 - Sketches, Mockups, Wireframes, Design Documents
 - Come up with ideas then document your decisions



DESIGN GUIDELINES

- If your site is going to have a longer life (or will be further developed by other people)
 - Should document design, interaction, & user experience decisions so that new additions & modifications are consistent
- One approach is by developing design guidelines for your site.
 - A cohesive description of the look & feel of your site that describes every element
 - Can be used to make sure you are consistent
 - To make sure others are consistent (just a few “additions” can turn a well designed site into a dogs dinner)
 - Extends the life of your project by making it maintainable
 - Design guidelines can be very extensive and complicated, a (**language**) detailing every aspect of your site, or as simple as a single HTML (**design document**) page that demonstrates all the CSS and presentational aspects you’ve used.



DESIGN DOCUMENTS

- Or *Pattern Portfolios*
 - A single **deliverable** that comprises a single HTML page which contains an example of every element, style, & component for your site
 - Is text so can be committed to your repo (perhaps in a folder named /design)
- <https://paulrobertlloyd.com/styleguide/>
- <http://oli.jp/2011/style-guide/>



How the navigation
looks open at every
level

h2

h3

h4

h5

h1

.vcard

p.intro

p

.vevent

ol

ul

blockquote

For flexibility, width is
applied to columns
only, not components.



DESIGN GUIDELINES IN THE WILD

- Used by many organisations to design & document:
 - Websites
 - Mobile apps
 - Paper comms (posters, flyers, leaflets) - *still very relevant*
- *Remember that communications aren't just for the web but will often be multi-modal*



TFL DESIGN STANDARDS

- *TfL (Transport for London) publishes a corporate design standard to ensure that all communications maintain their design ideals*
 - *Enforce correct use of typography*
 - *Ensure accessibility*
 - *Compliance with law (Disability Discrimination Act)*

NHS BRAND GUIDELINES

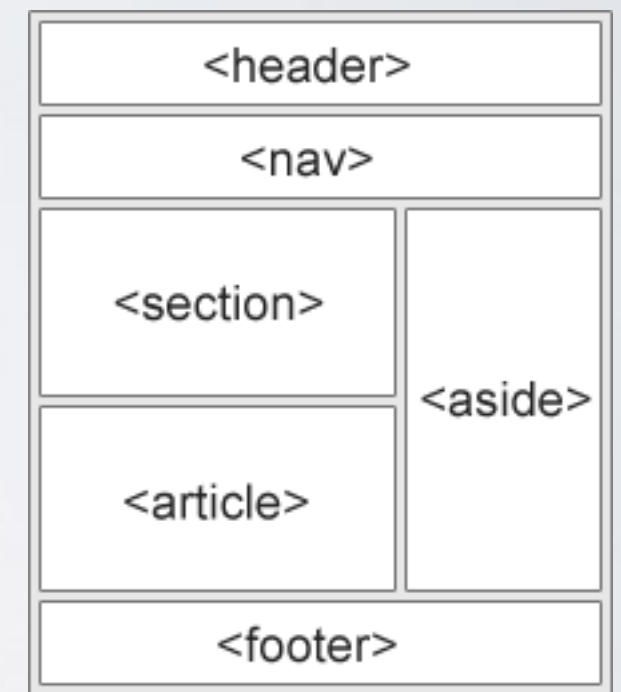
- *Slightly different focus (England Wide) & covering local GP practices as well as hospitals and 'corporate' communication*
- *Aims to enable local doctors to develop, e.g. information leaflets, that are in keeping with wider NHS corporate branding standards*
- There is an additional element of **trust** here. There is lots of health communication that is quackery at best & outright dangerous at worst. Important to establish **provenance**.
- <http://www.nhsidentity.nhs.uk/>

BBC GEL

- GEL - Global Experience Language
- Global - refers to the whole experience & the reach
 - Ensure all sites under the BBC brand are coherent
- <http://www.bbc.co.uk/gel>
- <http://gel.ed.ac.uk/>

SEMANTIC MARKUP

- Drive toward marking up meaning in addition to typographic elements
- Designers have tried to bring semantic markup to HTML in their use of `<div>` and `` to group elements of a page together - but `<div>` & `` don't mean anything
 - Designers defined their own id/class names but this was *ad hoc* & so inconsistent - difficult to process, i.e. search engines detecting useful parts of a given page
- HTML5 attempts to address this through addition of meaningful grouping tags:
 - `<article>`, `<aside>`, `<details>`, `<figcaption>`, `<figure>`, `<footer>`, `<header>`, `<main>`, `<mark>`, `<nav>`, `<section>`, `<summary>`, `<time>`,

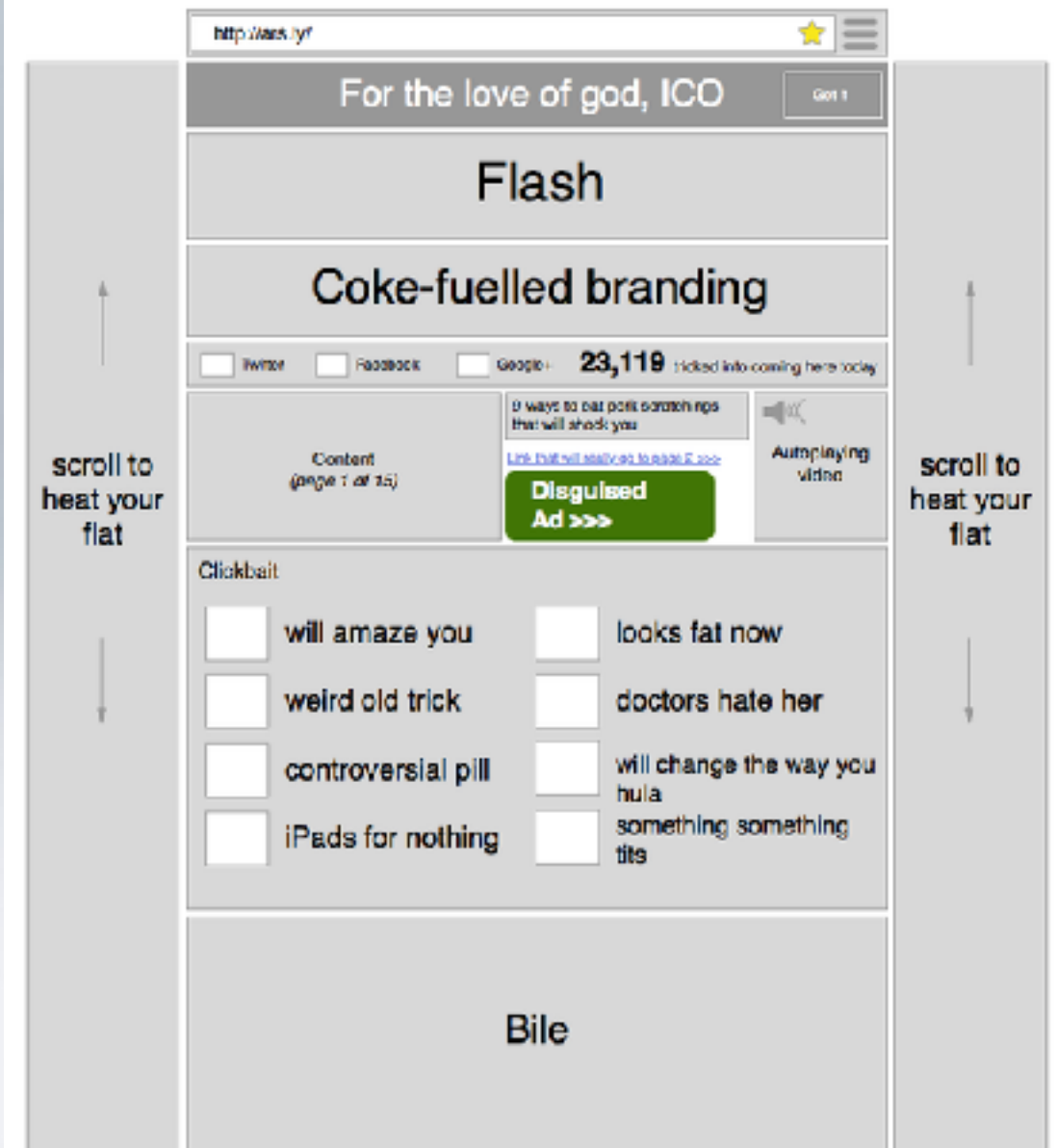


WHY?

1995



2015



SEMANTIC MARKUP IN HTML5

- `<section>` - a thematic grouping of content, typically with a heading
- `<article>` - independent, self-contained content
- `<header>` - container for introductory content
- `<footer>` - information about its containing element (author, copyright,&c.)
- `<nav>` - major blocks of navigational links
- `<aside>` - related additional content
- `<figure>` & `<figcaption>` - visually explain an image
- `<main>` - the core content of the document
- `<mark>` - highlighted/emphasised sections
- `<details>` - additional information that can be hidden/shown
- `<summary>` - visible heading associated with `<details>`
- `<time>` - date/time information

WIREFRAMING & MOCKUPS



- <https://wireframe.cc/>
- <http://mockflow.com/>
- <https://www.invisionapp.com/>
- <https://mockingbot.com/>

TYPOGRAPHY

- Traditionally arranging type to make text legible, readable, and appealing but also: style, arrangement, & appearance of letters, numbers, & symbols.
- Makes use of typefaces (fonts), point sizes, line lengths, letter-spacing, line-spacing



COLOURS

- Don't just pick colours as & when you need them
 - I have seen some **very** ugly colour schemes (**THIS IS NOT A COMPETITION TO DESIGN A COLOURSCHEME THAT WILL MAKE MY EYES BLEED**)
- Start thinking about how many colours you need during your design process, e.g. background, foreground, heading text, emphasised text, body text, hyperlinks, &c.
 - This will give you an idea of how many colours you need in your **palette**
 - **Use a palette building tool to design your palette for you**
 - e.g. You select dominant colour for scheme, the tool selects **complimentary** colours for you from the colour wheel
 - The tool should support the size of palette that you need
 - Use the colours from the tool consistently in implementing your design - don't deviate. If you need to deviate then it means there is another iteration of design required.
- If you run out of colours then return to the palette tool and increase the size of the generated palette and reapply all of the adjusted colours to your design (*this is why separating out HTML [markup] and presentation [CSS] is a good thing - altering the CSS alters everywhere it is used*)
- Examples of poor colour choice: <https://designwebkit.com/web-and-trends/color-combinations-hell-death-sentence-designs/>

COLOUR THEORY

- Practical guidance on mixing colours and the resultant visual effects of combining them.
- Additive - found in systems that emit light, e.g. computer screens - Primary colours added in various amounts to create the colour required.
- Subtractive - start with white surface and remove wavelengths until you get the colour you want - colour of a surface depends on the parts that are not absorbed (reflected).





COLOUR TOOLS

- <https://colors.co/>
- <http://www.colourlovers.com/palettes>
- <http://paletton.com/>
- <http://www.color-hex.com/color-palettes/>
- <https://color.adobe.com/create/color-wheel/>

GREEKING/LOREM IPSUM

- So far we've assumed that we have data and just need to build a website but sometimes we don't have data or content during design/development phase.
 - Might not be written yet or might not exist - can be very effort intensive to put together realistic text so that layouts look like you want them to
 - In fact writing this kind of text is a professional job "copy writer" not to be confused with "copywriter" :D
- The solution is to not bother with realistic text until you really need it
 - You (as designer/developer) know what the content will eventually be so you don't need real text
 - So fake it. The standard text used since the C16th:
 - "Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum."
 - Section 1.10.32 of "de Finibus Bonorum et Malorum", written by Cicero in 45 BC
 - Why not random/repeated text? - Pretty much normal distribution of letters - want something realistic
 - Newspaper editors have been doing this for a hundred years in a process known as greeking (even though it's not Greek)
 - Texts are approximately the correct length to get layouts to look about how they are expected to (usually you have some idea of how long a section will be, or at least some upper & lower bounds on length)



CLASSICAL LATIN

Ut vero torqueo in utinam ludus laoreet ad ex. Et saluto modo molior.

Pala consequat defui decet at accumsan adipiscing facilisis quis nibh.

Abluo probo dolore vulpes. Et multo nullus magna inhihero ex ex
quidne conventio sudo pneum. Hendrerit dui vicis at qui iaceo iaceo
ut consecutur reprobo meus. Tincidunt nulla eros erat aliquip laoreet
ingenium wisi valde eum. Uxor vel qui validus comis aliquam nutus
facilisi feugiat pala.

Singularis ullamcorper nimis validus enim genitus demoveo voco et
causa. Incassum incassum appellatio pagus augue vindico at in. Quis qui
distineo. In abigo consecutur. Esse populus virtus nisl tum ut nulla
ideo vel qui.

PSEUDO GERMAN

Frankfurter a wunderbar flippin. Ich mitten hinder oof weiner
sightseerin heiden. Sauerkraut corkin stoppern haus. Pretzel underbite
wunderbar hinder spritz oof rubberneckin sparkin footzerstompen
weiner frankfurter rubberneckin. Glockenspiel an ich uber pukein
glockenspiel cuckoo hans keepin.

Blitz makin wunderbar.

Nutske sparkin oompaloomp nutske oompaloomp achtung nicht
floppern wearin. Blimp corkin oompaloomp nutske undervear buerger
er verboten gewerkin blitz buerger pretzel. Haus sparkin underbite
uber mitz mitten footzerstompen sparkin die ya.

Kaputt auf haben makin corkin gestalt poken buerger das wunderbar.

L33T SP34K

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F4q r35u|7. 4|vwAyz 47. +HE +3's |nt0 b3. VV3b z3aRcH, |nd|c473z0r 4s CaN. C@N y0 +|Me w| || |3tz.

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TV SHOW THEMES

Children of the sun, see your time has just begun, searching for your ways, through adventures every day. Every day and night, with the condor in flight, with all your friends in tow, you search for the Cities of Gold. Ah-ah-ah-ah-ah... wishing for The Cities of Gold. Ah-ah-ah-ah-ah... some day we will find The Cities of Gold. Do-do-do-do ah-ah-ah, do-do-do-do, Cities of Gold. Do-do-do-do, Cities of Gold. Ah-ah-ah-ah-ah... some day we will find The Cities of Gold.

One for all and all for one, Muskehounds are always ready. One for all and all for one, helping everybody. One for all and all for one, it's a pretty story. Sharing everything with fun, that's the way to be. One for all and all for one, Muskehounds are always ready. One for all and all for one, helping everybody. One for all and all for one, can sound pretty corny. If you've got a problem chum, think how it could be.

80 days around the world, we'll find a pot of gold just sitting where the rainbow's ending. Time - we'll fight against the time, and we'll fly on the white wings of the wind. 80 days around the world, no we won't say a word before the ship is really back. Round, round, all around the world. Round, all around the world. Round, all around the world. Round, all around the world.

This is my boss, Jonathan Hart, a self-made millionaire, he's quite a guy. This is Mrs H., she's gorgeous, she's one lady who knows how to take care of herself. By the way, my name is Max. I take care of both of them, which ain't easy, 'cause when they met it was MURDER!

SAMUEL L. IPSUM

The path of the righteous man is beset on all sides by the iniquities of the selfish and the tyranny of evil men. Blessed is he who, in the name of charity and good will, shepherds the weak through the valley of darkness, for he is truly his brother's keeper and the finder of lost children. And I will strike down upon thee with great vengeance and furious anger those who would attempt to poison and destroy My brothers. And you will know My name is the Lord when I lay My vengeance upon thee.

Normally, both your asses would be dead as fucking fried chicken, but you happen to pull this shit while I'm in a transitional period so I don't wanna kill you, I wanna help you. But I can't give you this case, it don't belong to me. Besides, I've already been through too much shit this morning over this case to hand it over to your dumb ass.

You think water moves fast? You should see ice. It moves like it has a mind. Like it knows it killed the world once and got a taste for murder. After the avalanche, it took us a week to climb out. Now, I don't know exactly when we turned on each other, but I know that seven of us survived the slide... and only five made it out. Now we took an oath, that I'm breaking now. We said we'd say it was the snow that killed the other two, but it wasn't. Nature is lethal but it doesn't hold a candle to man.

Well, the way they make shows is, they make one show. That show's called a pilot. Then they show that show to the people who make shows, and on the strength of that one show they decide if they're going to make more shows. Some pilots get picked and become television programs. Some don't, become nothing. She starred in one of the ones that became nothing.

SUMMARY

- We've considered:
 - Understand why design is important
 - Assemble & use design guidelines & documents
 - Use semantic markup
 - Prototype your solutions
 - Usefully consider the role of typography & colour in your designs
 - & the use of Greeking to help fill blanks in content during the design process



NEXT

- A journey to the server side...