

THE
WEB NATIVE
DESIGNER

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University of Greenwich: MA Web Design & Content Planning
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- How do you design for that lot?
- What does design even mean in the context of a medium that can be consumed and accessed in such a variety of disparate, unknown and potentially unimagined ways?
- And what we're looking at here is still only scratching the surface.
- Who knows what kind of ways we're going to see people accessing and consuming the web over the next 5, 10, 15 years.

*The power of the Web is in its **universality**.
Access by everyone regardless of disability is an
essential aspect.*

Tim Berners-Lee

<http://www.w3.org/People/Berners-Lee/UU.html>

- John Allsop wrote an article a few months ago, in which he talks about the next 6 billion.
- Current statistics put the number of current regular web users at just over 2 billion people.
- The UN projects that the population of the world in 15 years time will be over 8 billion.
- That's 6 billion potential new web users in the next 15 years. And most of them won't be in Europe and North America where 80% of people are already online. The next 6 billion to start using the web won't be using the web on modern computers in offices, homes and schools, or on iPhones or other modern smartphones.
- They'll be using whatever they can find. They'll be using whatever a child in rural China or India has to hand. Whatever's available in the favelas of Rio de Janeiro. **If** we can reach this next 6 billion.
- So again, how do we design for that?



Design?

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- As designer's we're trying to create experiences that look beautiful, work intuitively, that people enjoy using, maybe are even passionate about using.
- That's great—as designers, that's what we want to do. It's a worthy goal, of course.
- But it can't come at the expense of this.

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- Web designers have more than a little bit of form when it comes to breaking some of these essential aspects.
- It turns out that writing code is dangerous. It's when we add code, that things go wrong.
- So, in the name of creating beautiful experiences, and adding these rich visual features, and interactivity, we end up doing things like this...

```
<a href="javascript:doAjax();">
```

- We break links...

reenwich

- We create content that's only accessible visually via browsers that support images...

```
.container {  
    width: 960px;  
}
```

- We break layout flexibility by saying this element must be 960px wide...

*From now on, instead of talking about making a site accessible, I'm going to talk about **keeping** it accessible.*

Jeremy Keith

adactio.com/journal/1224

- The crazy thing about this is that we're not failing to make a site accessible, or responsive, or adaptive.
- It's that we're actively breaking these things which come with the web for free in the first place.
- The web is responsive by default. TBL didn't know anything about responsive design when he built this page. **Of course** it just adapted to the width of the device. It's our assumptions as designers over the past 20 years that have put us into a position where "responsive design" is something we need to re-learn. We shouldn't need to re-learn it. It comes for free. We just need to stop breaking it.
- We need to remember what it is that's great about the web in the first place, and then not write code that constrains it into our own little desktop centric world. We need to remember the next 6 billion.

```
<a href="javascript:doAjax();">  
<a href="/link/to/our/content">
```

- This is a link, it's the thing that makes the web the web.
- We don't need to do anything special to make that work. All we need to do is not break it.
- And yet, code like this lives littered all over the web—today.

The World Wide Web project

http://www.w3.org/History/19921103-hypertext/hypertext/

World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#), [Policy](#), November's [W3 news](#), [Frequently Asked Questions](#).

[What's out there?](#)
Pointers to the world's online information, [subjects](#), [W3 servers](#), etc.

[Help](#)
on the browser you are using

[Software Products](#)
A list of W3 project components and their current state. (e.g. [Line Mode](#), [X11 Viola](#), [NeXTStep](#), [Servers](#), [Tools](#), [Mail robot](#), [Library](#))

[Technical](#)
Details of protocols, formats, program internals etc

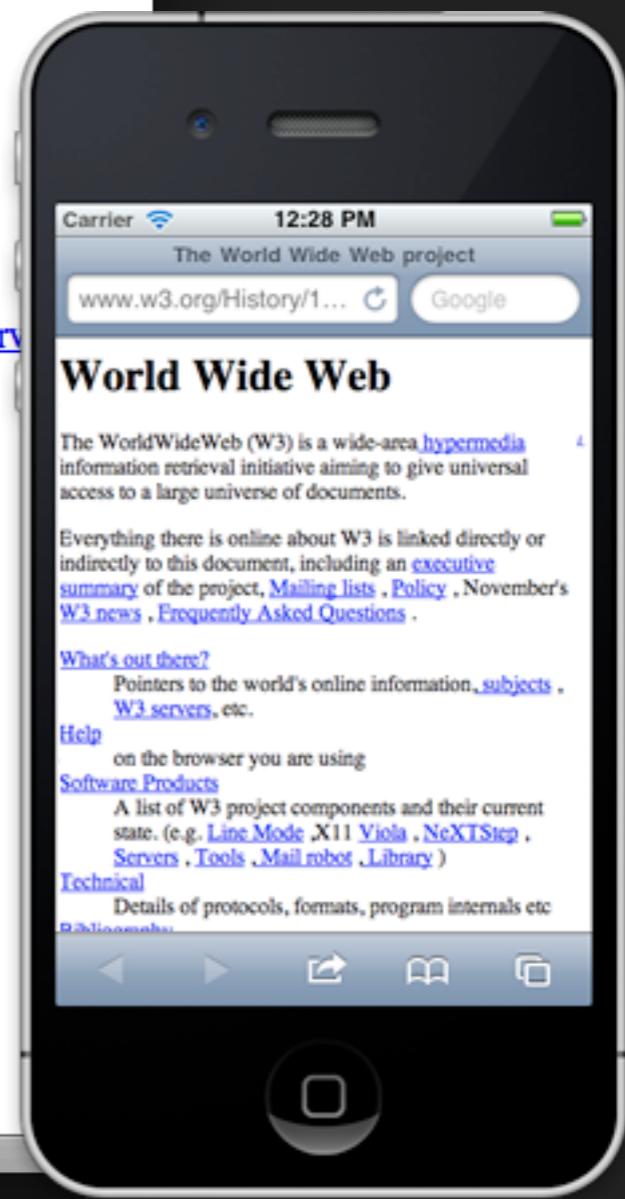
[Bibliography](#)
Paper documentation on W3 and references.

[People](#)
A list of some people involved in the project.

[History](#)
A summary of the history of the project.

[How can I help ?](#)
If you would like to support the web..

[Getting code](#)
Getting the code by [anonymous FTP](#), etc.



- Similarly we don't need to do anything special to make a website responsive. The web is responsive by default.
- This is the first web page ever made By Tim Berners-Lee in the early 90s.
- TBL didn't know anything about responsive design when he built this page. **Of course** it just adapted to the width of the device.
- It's our assumptions as designers over the past 20 years that have put us into a position where **responsive** design is something we need to re-learn. We shouldn't need to re-learn it. It comes for free.

Smartphone

Search

World Wide Web

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A List of W3 pointers to documents and their

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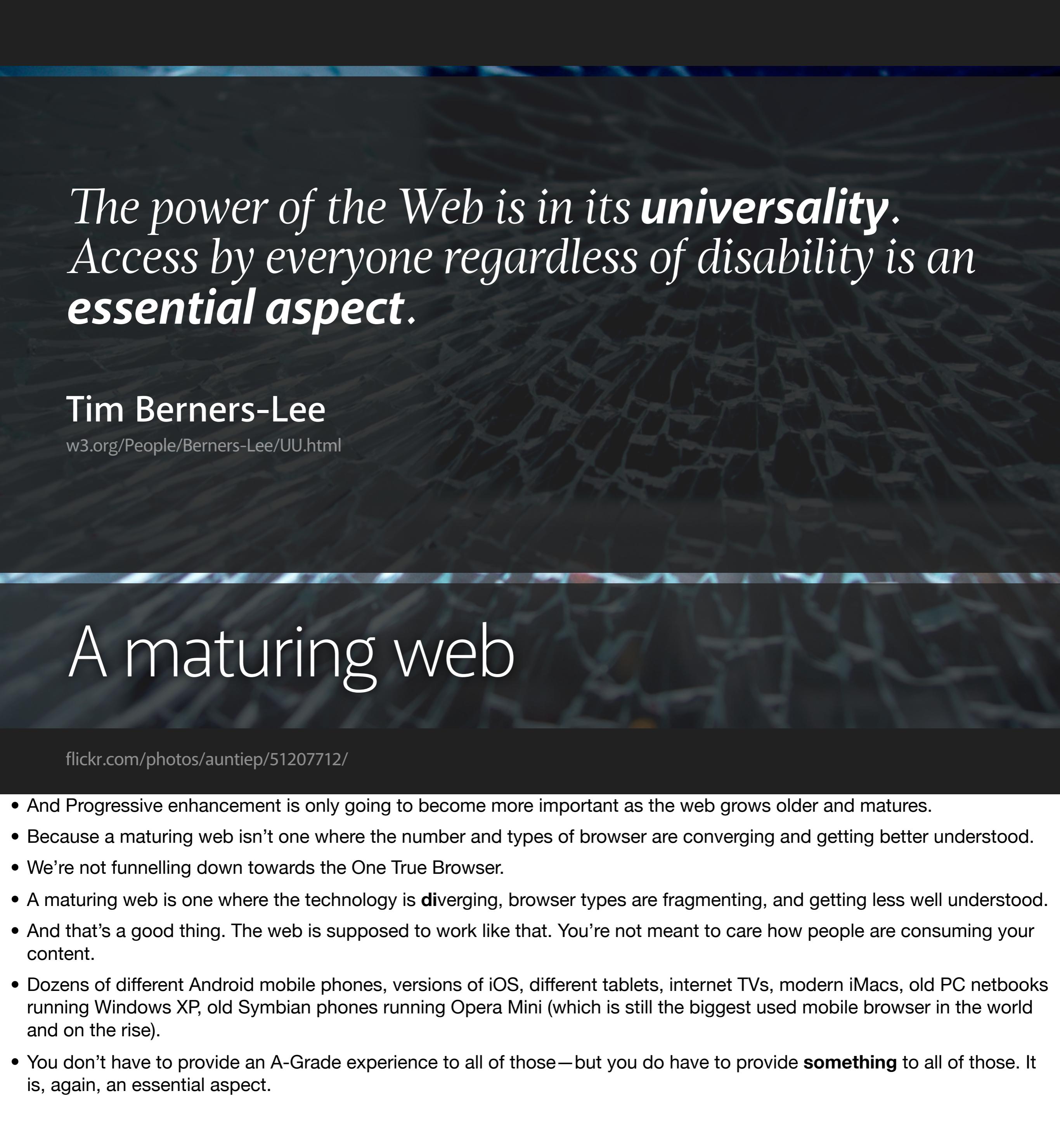
- We just need to stop breaking it.
- We need to remember that the web handles all of this on its own, by default.
- We need to remember to not write code that constrains it into our own little desktop centric world.
- We need to remember the next 6 billion.



Progressive Enhancement

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- People talk about layers of technology.
- Rich semantic HTML to markup content.
- CSS to suggest presentational detail.
- JavaScript to add client-side interactivity and behaviour.
- But the key thing is this, the addition of one layer must not contrive to break one below it.
- This is the definition of progressive enhancement.
- So to go back to the link example, when we add JavaScript, that doesn't mean we don't need to do links any more. Because if we don't do links - well, we're not part of the web.
- So, as you add code, keep asking yourself, what "essential aspect" to use TBLs phrase again, does this break. Am I designing or writing code that is specific to my browsing environment or context. Am I forgetting about the next 6 billion?



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essential aspect.*

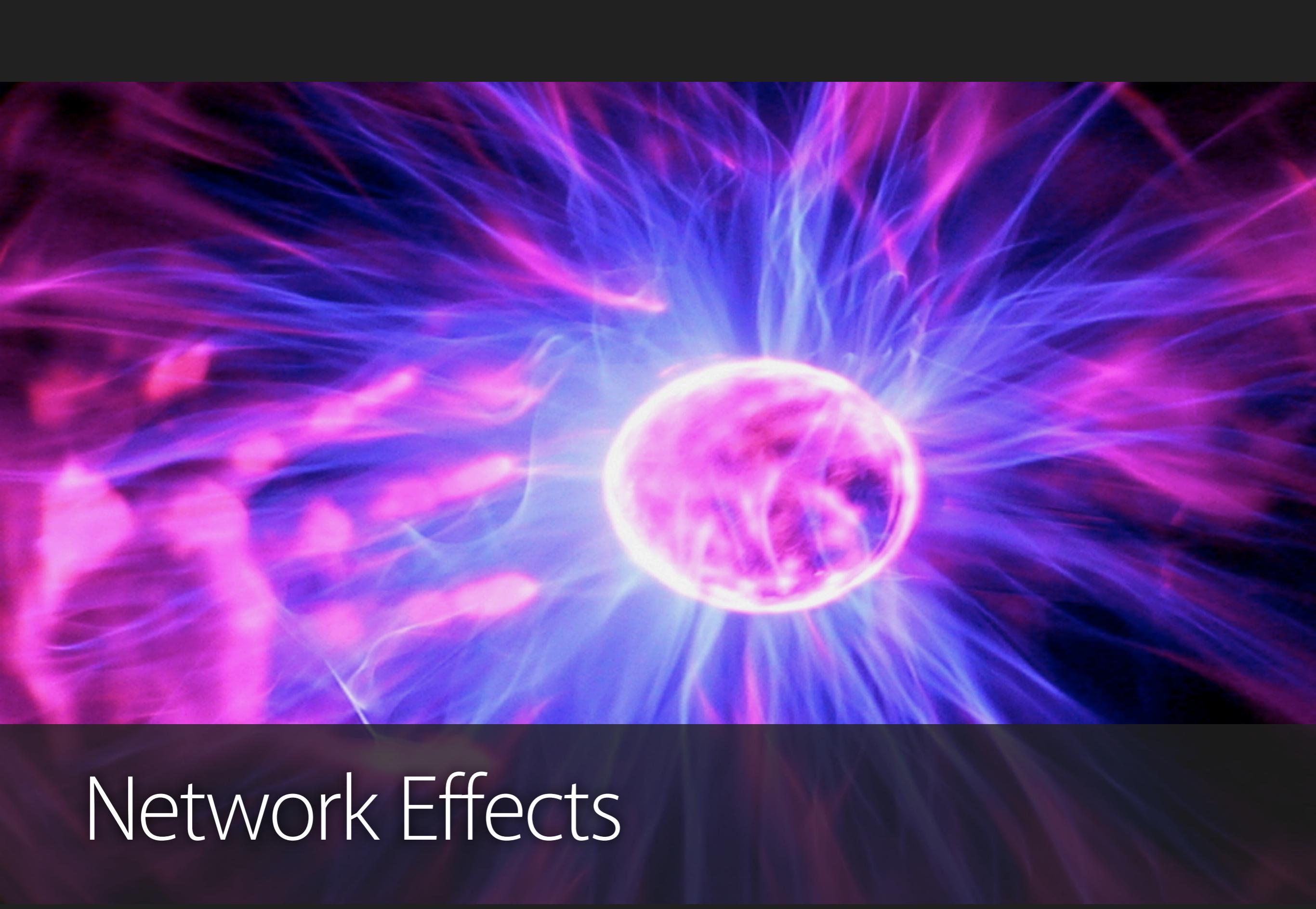
Tim Berners-Lee

w3.org/People/Berners-Lee/UU.html

A maturing web

flickr.com/photos/auntiep/51207712/

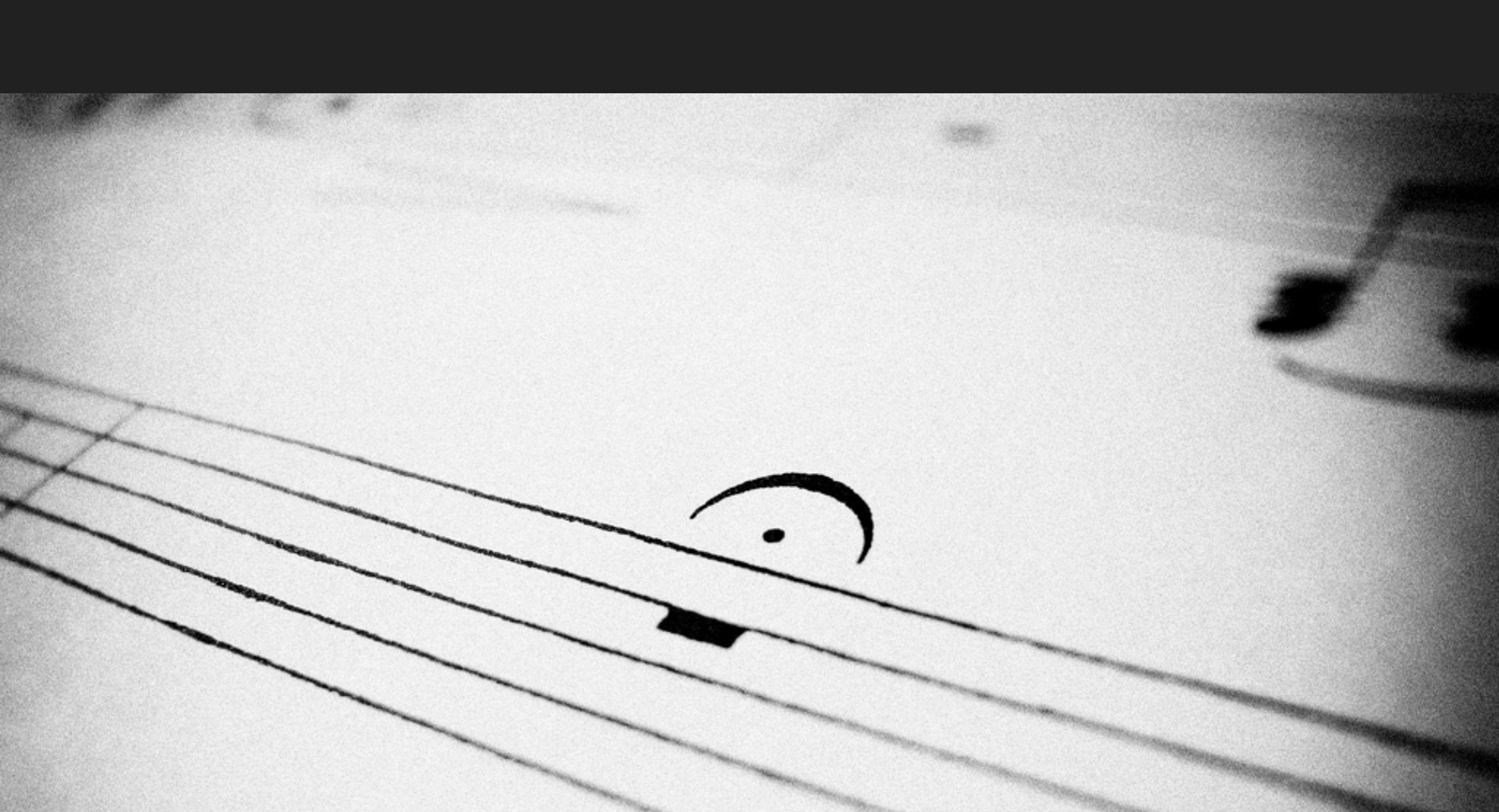
- And Progressive enhancement is only going to become more important as the web grows older and matures.
- Because a maturing web isn't one where the number and types of browser are converging and getting better understood.
- We're not funnelling down towards the One True Browser.
- A maturing web is one where the technology is **diverging**, browser types are fragmenting, and getting less well understood.
- And that's a good thing. The web is supposed to work like that. You're not meant to care how people are consuming your content.
- Dozens of different Android mobile phones, versions of iOS, different tablets, internet TVs, modern iMacs, old PC netbooks running Windows XP, old Symbian phones running Opera Mini (which is still the biggest used mobile browser in the world and on the rise).
- You don't have to provide an A-Grade experience to all of those—but you do have to provide **something** to all of those. It is, again, an essential aspect.



Network Effects

flickr.com/photos/jurvetson/167197691/

- And there's reason to do this stuff beyond just the nice philosophical, altruistic reasons of access to all. If that's not enough!
- Doing this right makes you part of the web as a platform.
- Your site, rather than just being a destination on the web, becomes weaved into the fabric of the web. It can become part of the platform; it enables other people to build on it; to access it in ways you never imagined, and to build on it in ways you never imagined.
- In short, you take advantage of the network effects that come with being part of the web.
- If you don't—you might as well be playing on your own web. You're playing in your own little backwater. You're like a telephone on a private network, a train on the wrong rail gauge, a newspaper behind a firewall, or (dare I say it) an iPhone application in the app store.
- People can't link to you, they can't reference you, they can't find you in search engines, they can't build you into their network of stuff. And you want to be in their network of stuff, whether it's Google, Facebook, Twitter... whatever. Whether we like it or not, these big companies drive the commercial web—and you want to be part of that.



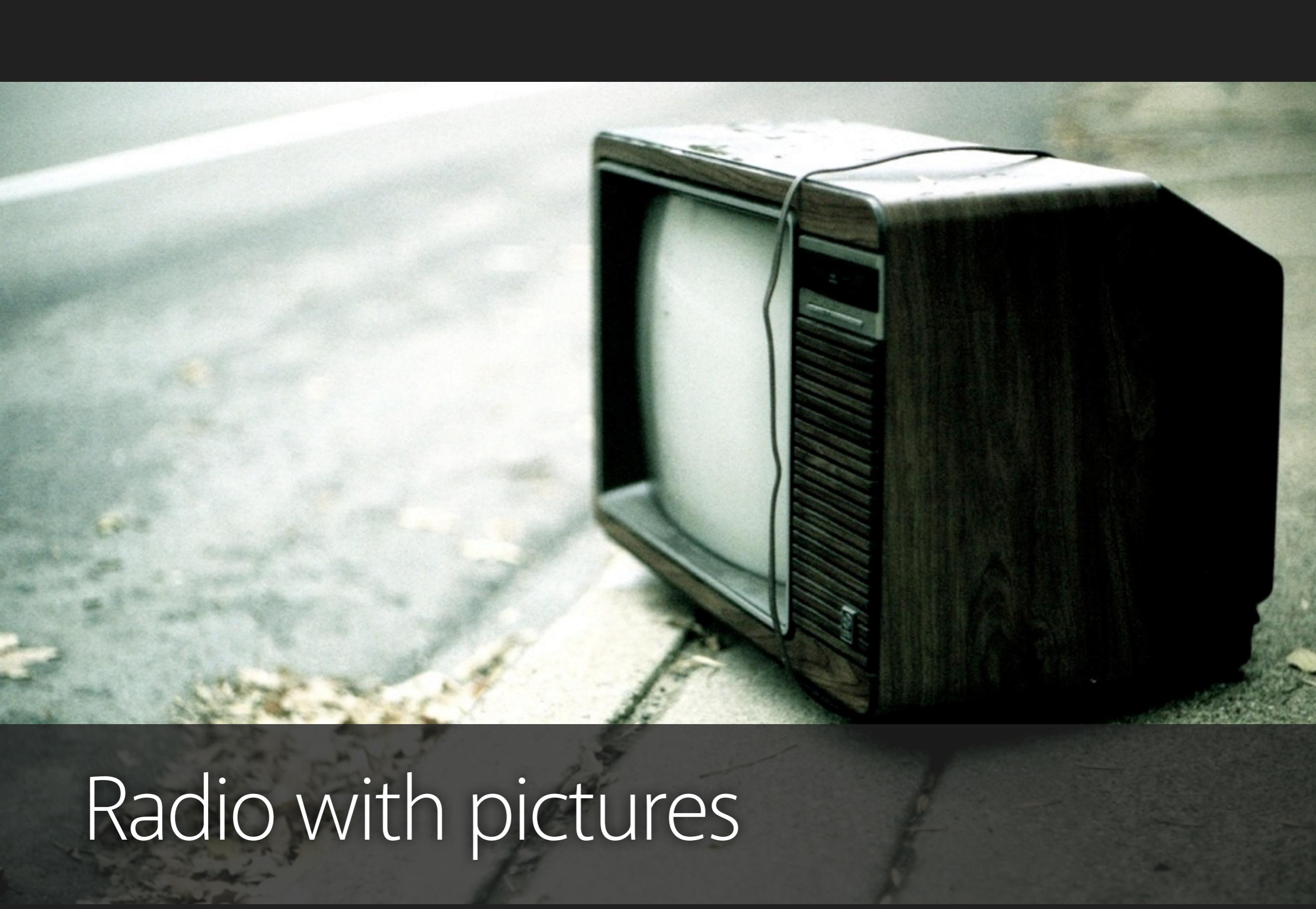
REST (Representational State Transfer)

flickr.com/photos/24444656@N05/6618115427/

- I can't believe I've got a slide about REST in this talk... but I couldn't help it. It's my most favourite thing that I know.
- Don't worry—I'm not going to talk about REST. Because people's brains switch off.
- I'm just quickly going to explain what it is. And if you're interested in the things I've been saying, beyond the philosophical, altruistic outpouring, then you can go and do a bit more research.
- REST is a set of design principles. They were written in by looking at the web, and asking the question: "Why is the web so successful?" "Why is it so robust?" "Why has it grown so fast?" "Why does it never break?"
- So, the answers to those questions are in REST. The features that make the web the web are in REST.
- So, if we're designing and building things on the web, web sites, web applications, surely we need to understand the absolute core features of the platform we're building on top of? So that we benefit from as much of it as possible.
- And those core features are described in these design principles known as REST. And I would recommend you take a look at them.
- Some of them are very obvious to anyone that's spent more than 2 minutes on the web. Others are more nuanced, but they give you a great insight into what it takes to build something that will be successful on the web.

How can we design for the web as a medium in it's own right?

- Going to hand over to Paul. More about design. The things that I care about—what I think it means to be a designer that is native to the web.
- As Andy has described, the medium we're designing for is quite different to anything else.
- Flexible, adaptable, universal and ever changing.
- So how on earth do we design for such a thing?
- I want to review some emerging approaches, but first lets take a step back.



Radio with pictures

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- Whenever a new medium comes along, we look at existing practice to inform our methods.
- Another medium introduced in the 20th Century was television.
- Here, early shows were based on existing radio formats; the talk show for example.
- Radio dramas had a voice over explaining what you couldn't see.
- So did early television dramas even though this was no longer necessary.

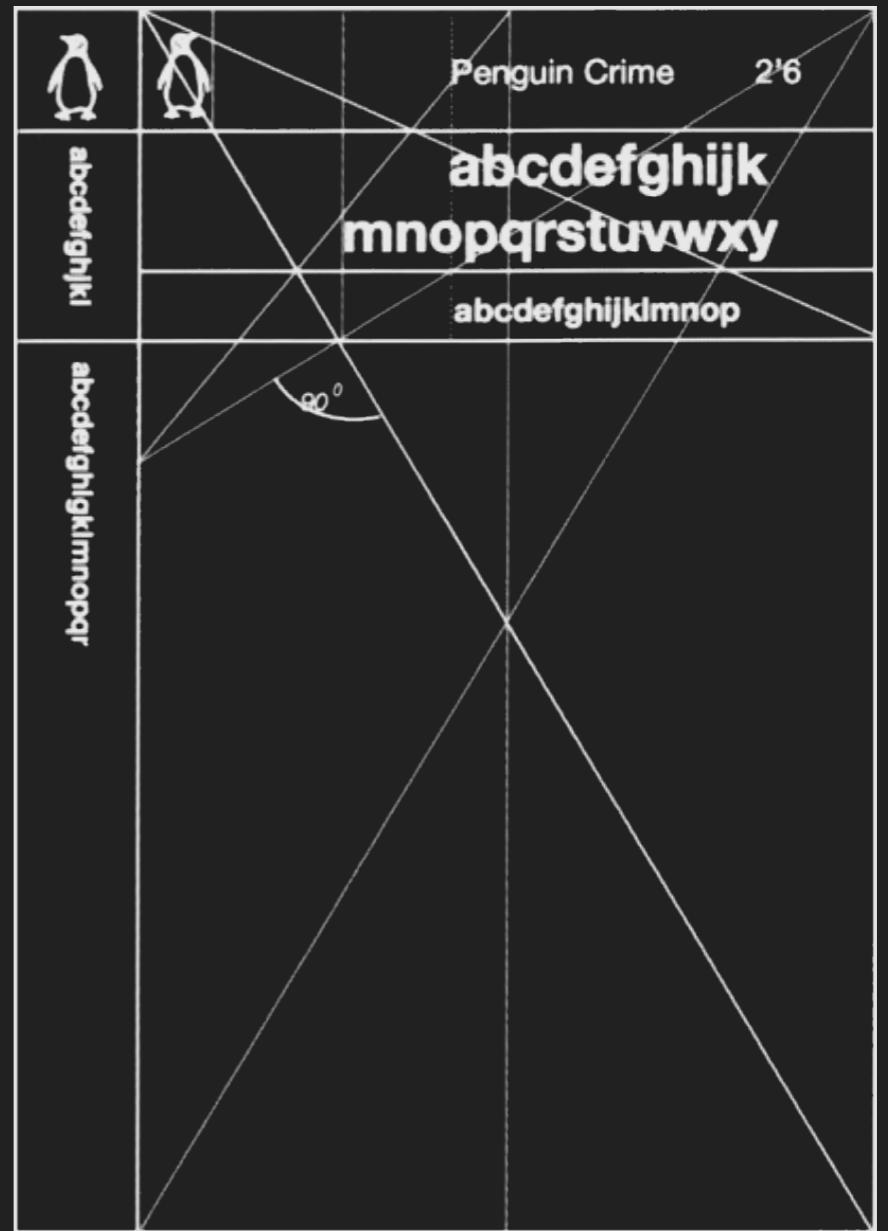


Print with interactivity?

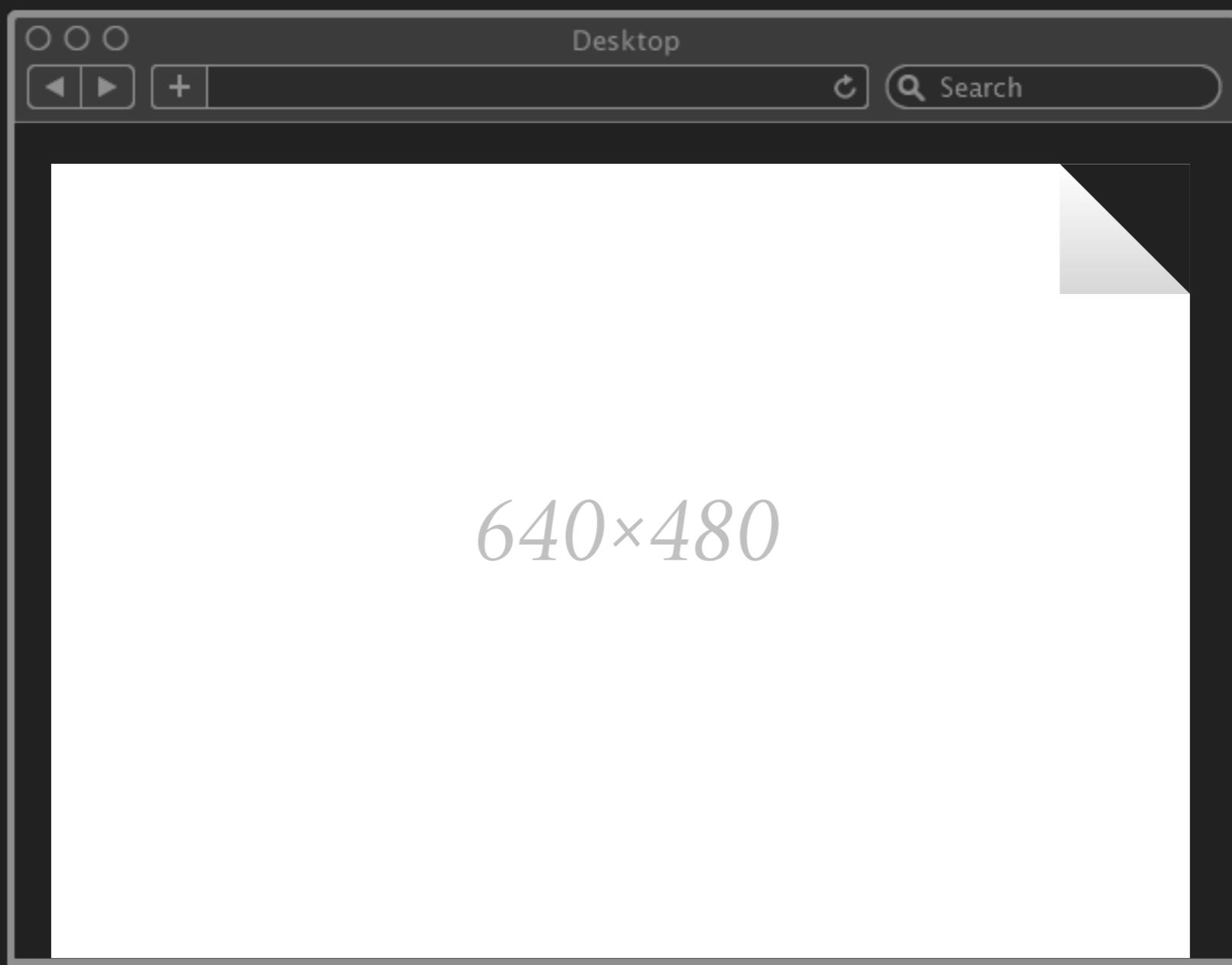
flickr.com/photos/paulwatson/308973659

- We've followed a similar path with web design.
- With hundred (if not thousands) of years of print tradition behind us, mad to ignore lessons learnt from the past.
- As a medium of communication, we still need a means of imparting emotion, giving order to information.
- Concepts such as colour, typography, layout are still massively important.

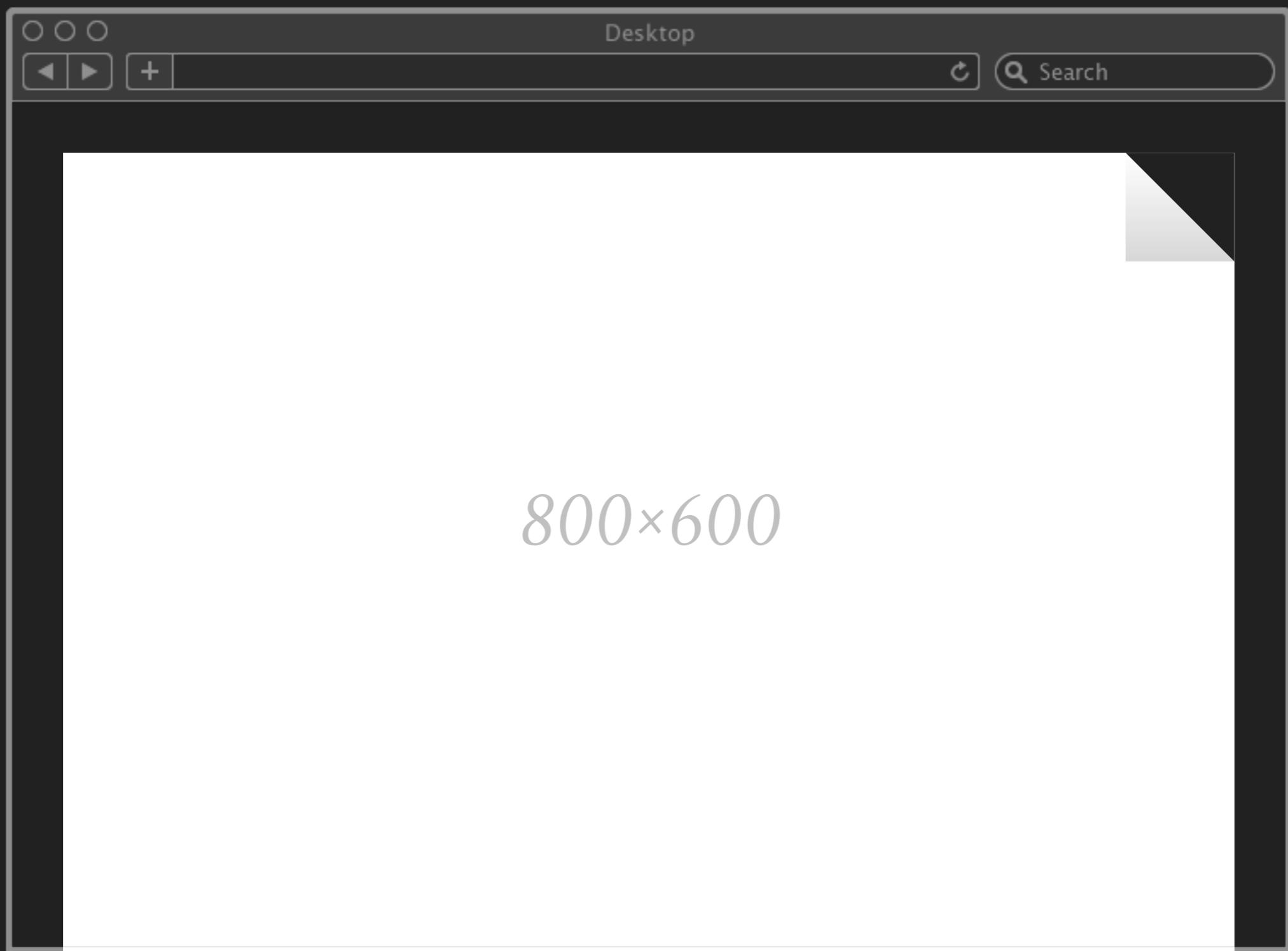
Wanting control & needing constraints



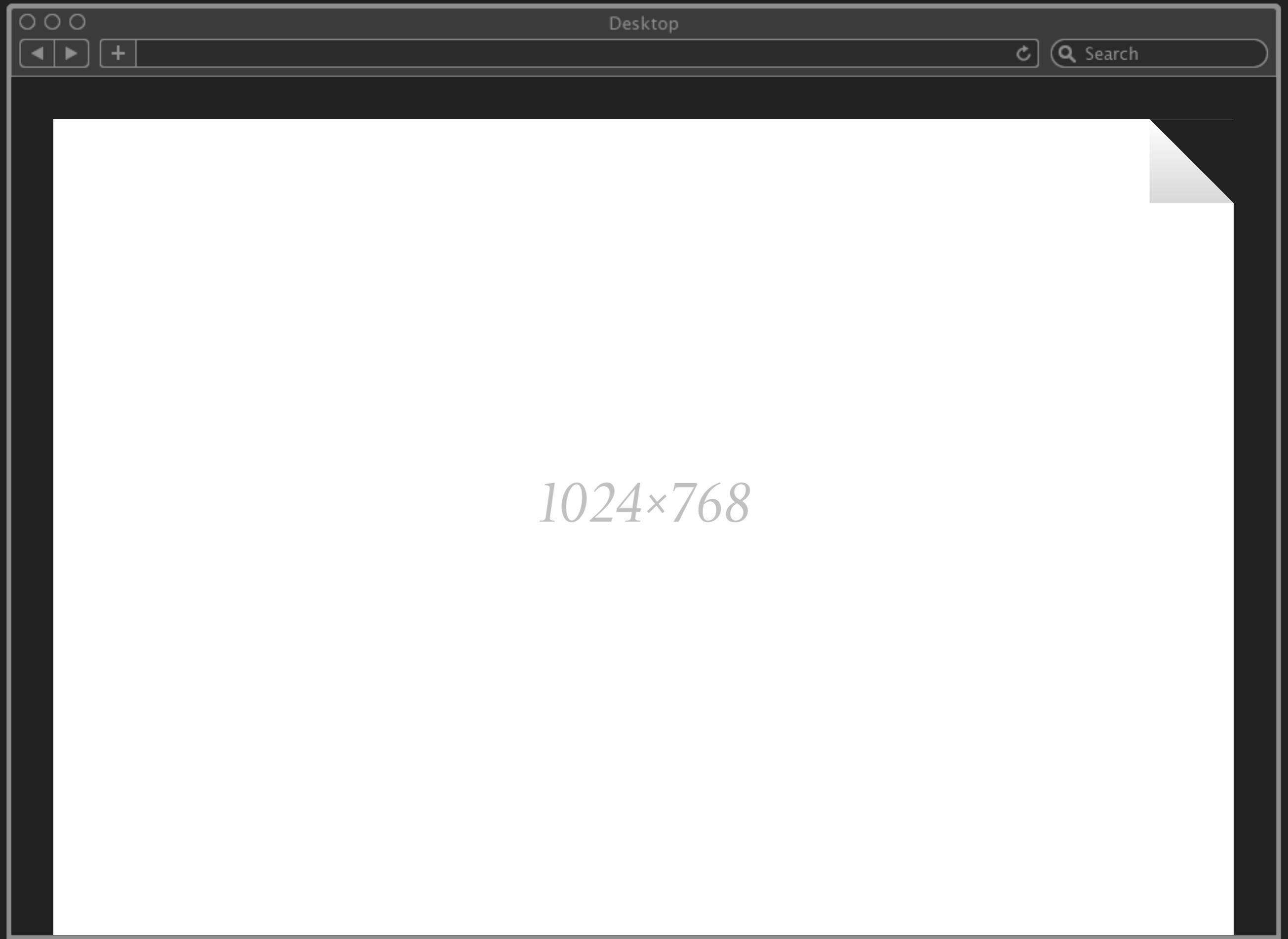
- Design is a lot about making decisions against a number of constraints.
- In print, the major constraint is the size of the page.
- From this canvas, we can divide the page and devise a grid.
- This allows us to make decisions about type size, layout, hierarchy etc.
- Having an edge gives us an element of predictability; a solid foundation to build upon.



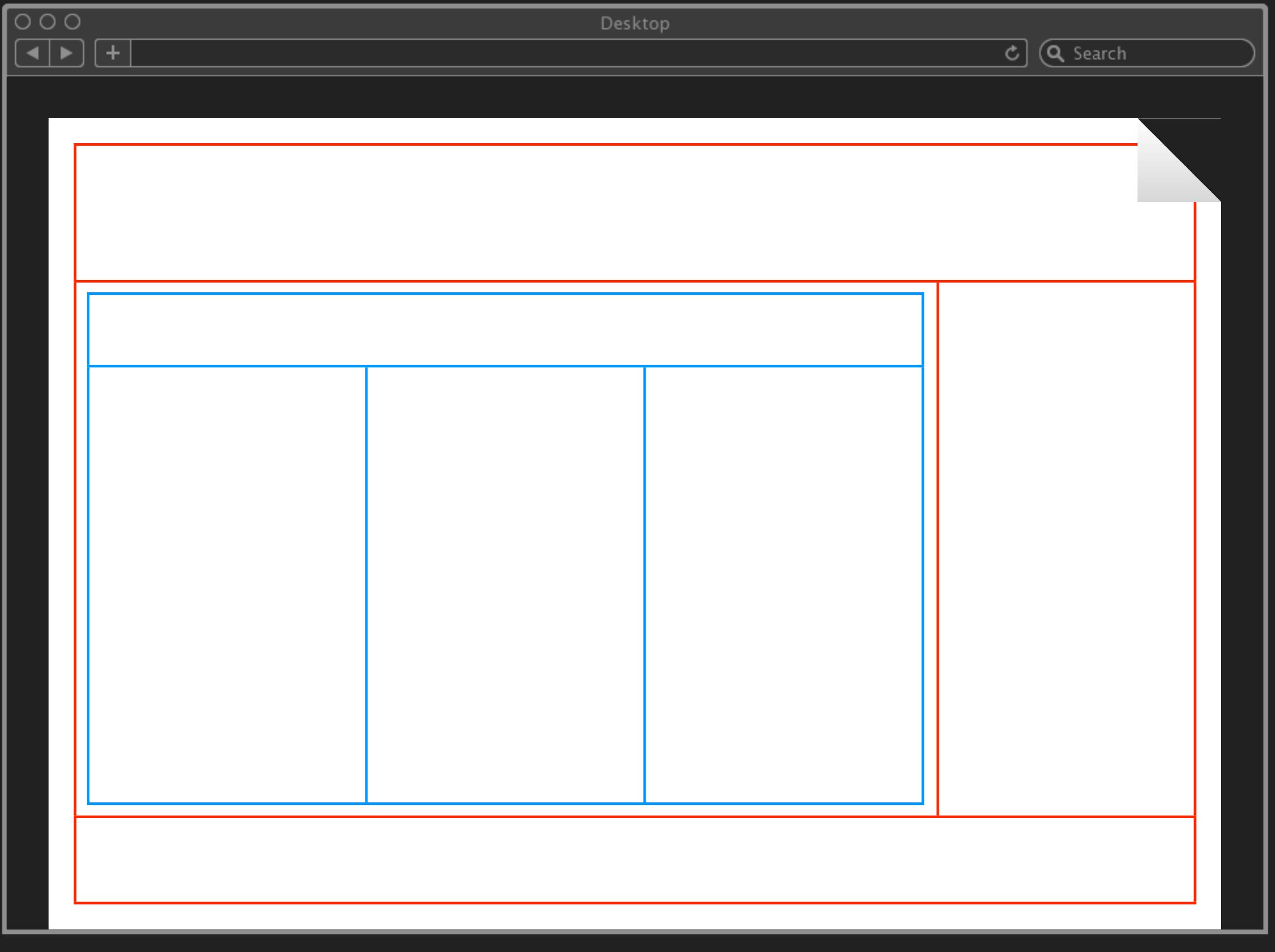
- With this practice so engrained in our workflows, no surprise we adopted it for the web.
- But what size is a web page?
- We thought we could base it on common screen resolutions.
- Initially we designed to 640x480...



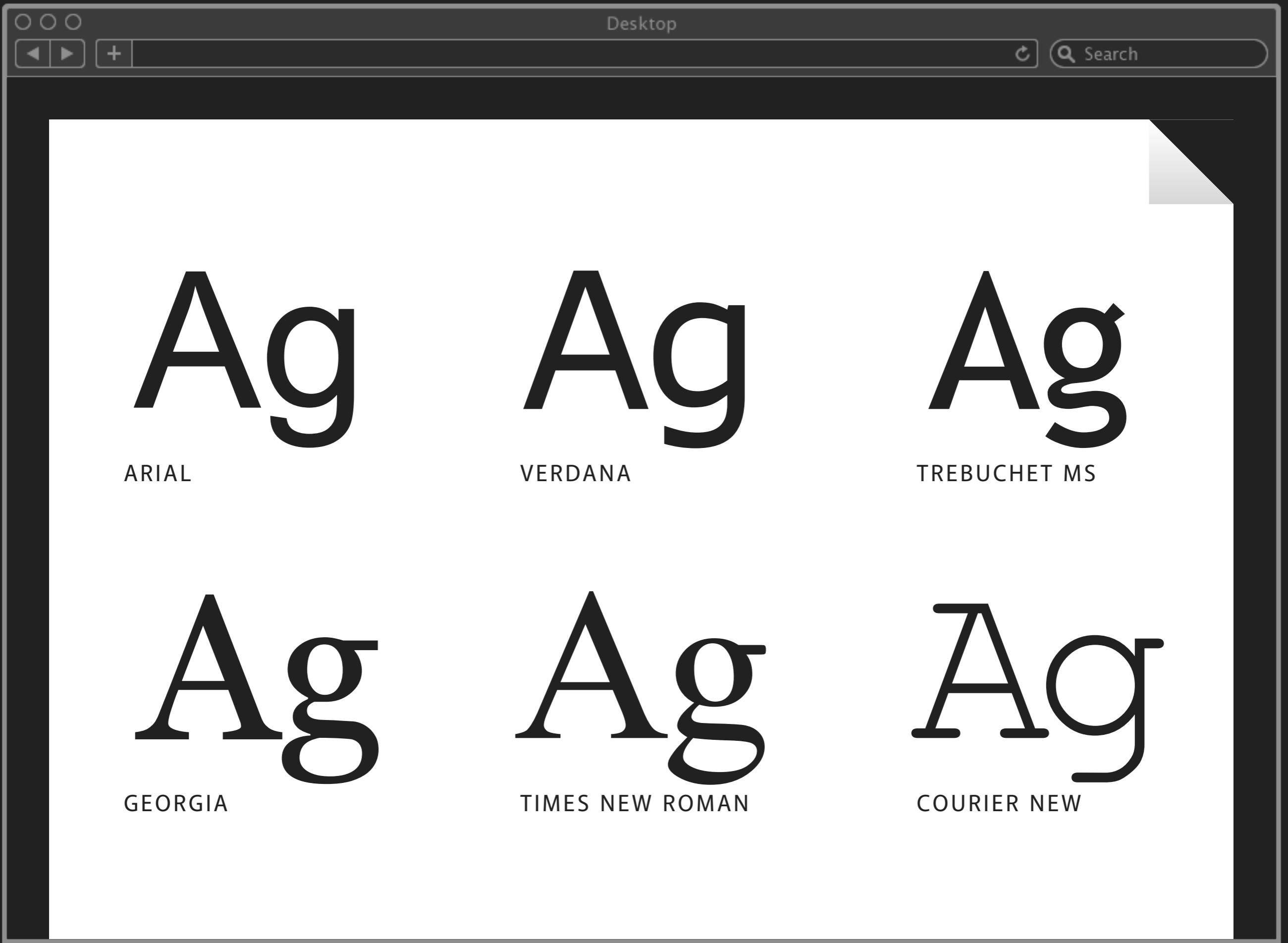
- This later increased to 800x600...



- Finally we settled on 1024x768...

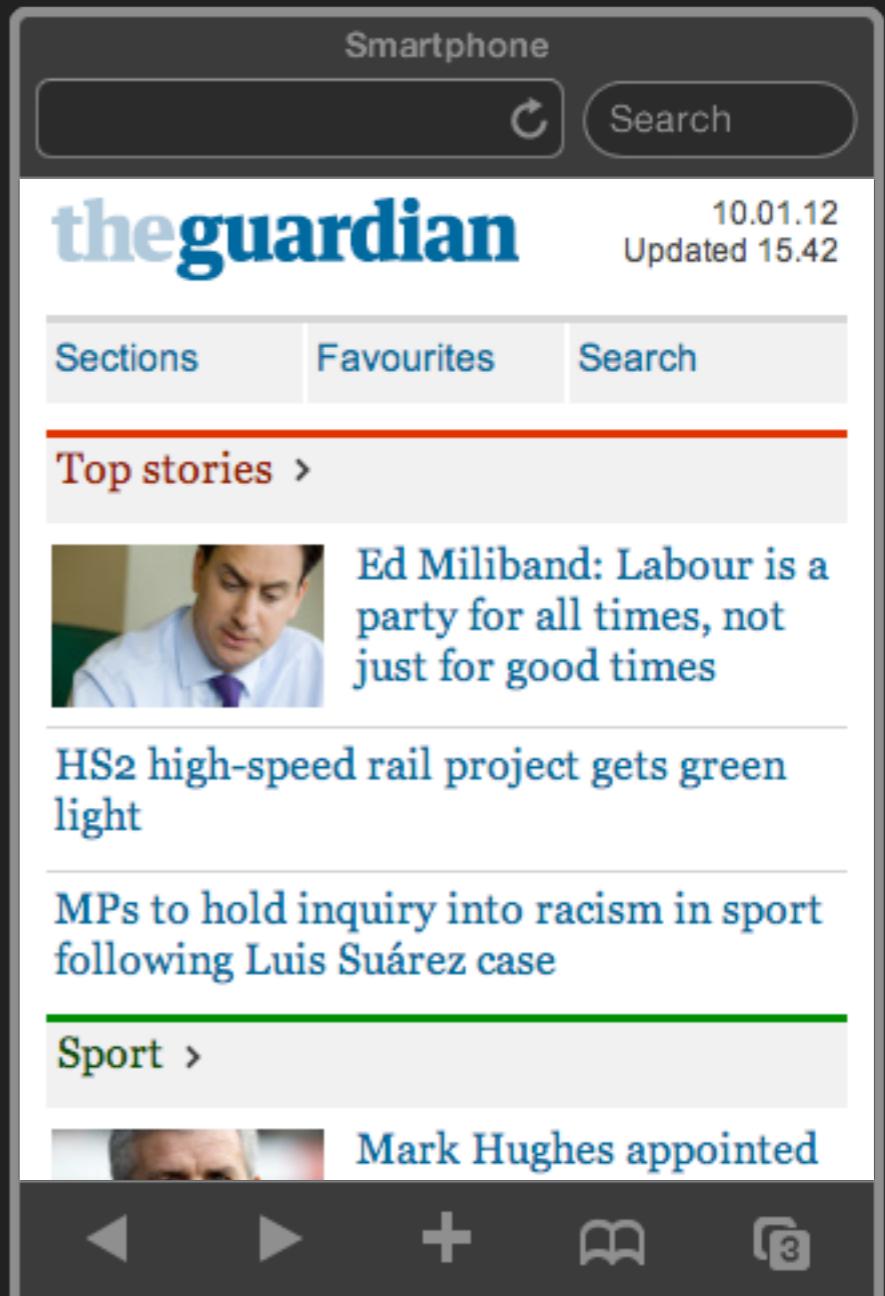


- By deciding on our canvas, we could revert to existing methods.
- Dividing a page up, initially using hacks like using the <table> element and spacer GIFs.

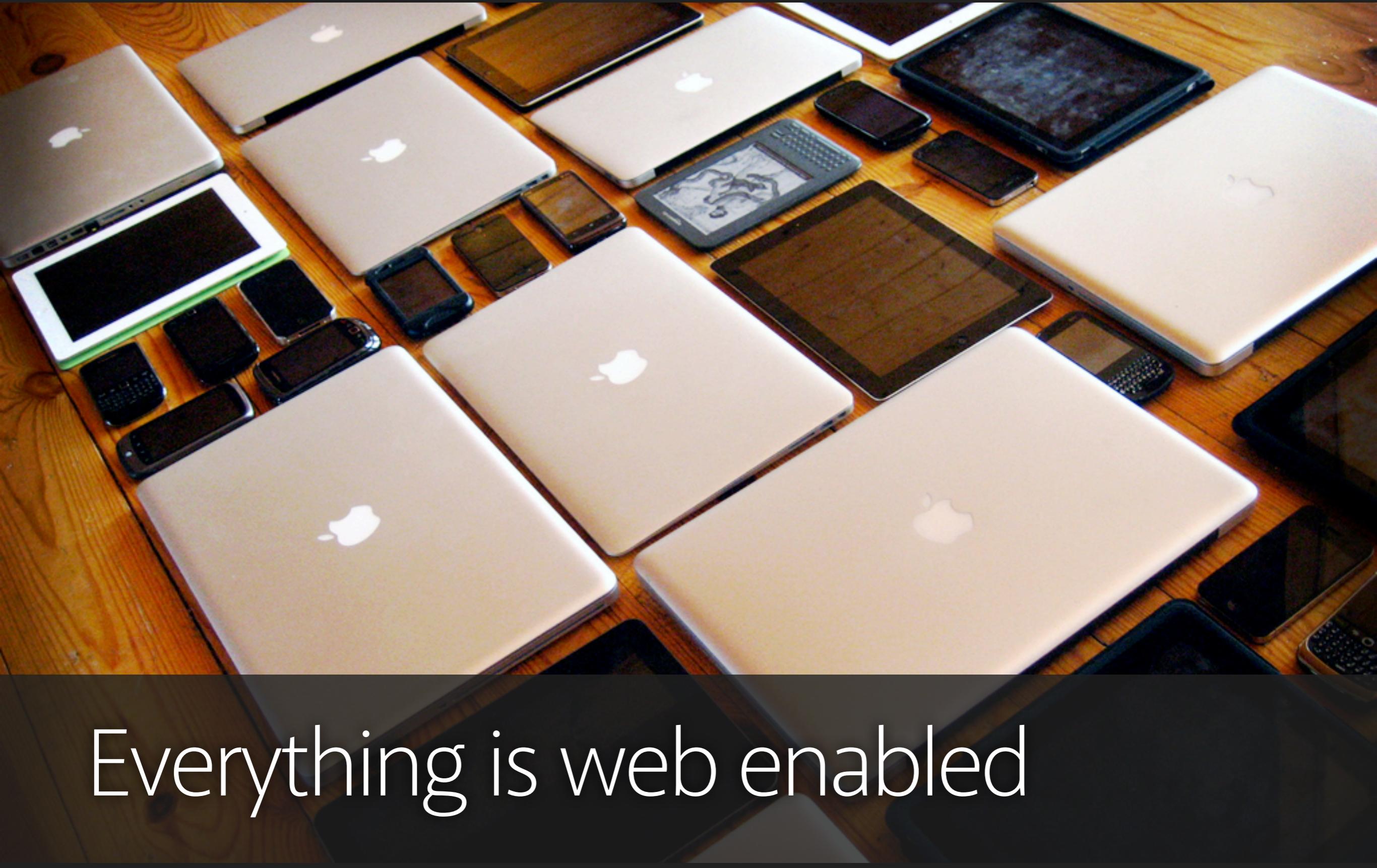


- We also had a palette of 'web safe' fonts.
- These were fonts commonly installed on most users computers.
- Linux users never had any 'web safe' fonts.

The ‘Mobile Web’



- With the advent of web enabled (smart) phones, these common defaults no longer made sense.
- Screens were much smaller, and bandwidth limited.
- So instead, we found decided on some new ones, and built a separate ‘Mobile Web’.
- This seemed to work for a little while...



Everything is web enabled

flickr.com/photos/adactio/6153481666

- But what do we do now that everything is web enabled.
- Devices have a complex matrix of different features and capabilities.
- Do we now create a ‘Tablet Web’. A ‘Netbook Web’. An ‘Internet Enabled Fridge Web’?
- Obviously our existing approach, assuming common defaults, could no longer work.

Collective hallucination

- We can no longer make assumptions about how a user will experience a design.
- But let's be honest, we never could. We've been under a collective hallucination.
- Whilst we could perhaps design to common screen resolutions, this never had any relation to browser viewport.
- Users could always adjust text size, or load in their own style sheets.
- The proliferation of devices has only highlighted the inherent unpredictability that was always there.

What does web design mean today?

- As we're starting to embrace this reality, our methods are adapting, our workflow changing.
- I want to touch on a few different aspects of how we're designing websites today.

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Introducing Siri



Siri was designed by [Göran Söderström](#), a talented young Swedish designer. It is a labour of love and a true super-family with a total of [24 styles](#).

Siri ExtraBold



Siri Core Regular



Siri Schoolbook Regular

- One of the biggest developments of recent years has been the resurgence in web typography.
- This has been ignited by the introduction of web fonts; we can link to any font and use that in our designs.
- As we move from 6 or so web safe choices to thousands, it's easy to think we now have control and choice.

Web typography



- But this is the web. Nothing is predictable.
- Not all browsers do—or ever will—support web fonts.
- Different operating systems can render fonts very differently, sometimes crudely.
- Font files tend to be quite large; might not be so great downloading 6 fonts over a cellular network.

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THE VENUE WILL INFORM THE DISCUSSION TOO, SEED WILL BE HELD IN THE "CATHEDRAL OF MODERNISM"

CROWN HALL *by Mies van der Rohe*

Painstakingly renovated in 2005, Crown Hall stands as one of the most important buildings of the modern age and it was also held in the highest regard by Mies himself who said it best represented his "architecture of almost nothing."

* THE DAY'S SCHEDULE *and INVITED GUESTS* *

- Luckily our previous experience having to use a limited palette of fonts holds us in good stead.
- We learnt to push the limits of typography when we had so few to choose from.
- This is one of my favourite examples for SEED Conference in 2008.
- This is something valuable we can take away from the dark old days.

Keeping it DRY with media queries

```
.product .title {  
    font-size: 1em;  
}  
@media screen and (max-width: 320px) {  
    .product .title {  
        font-size: 0.75em;  
    }  
}
```

- A key tenant of good programming is the DRY principle; Don't Repeat Yourself.
- With such a wealth of devices, we don't (can't) design for each type of device.
- A new CSS feature allows us to query display properties such as screen resolution, aspect ratio, colour depth.
- This means we can now create layouts that adapt to fit within varying browser viewport sizes.
- No more guess work!

Adaptive layouts



- One approach has been to take this technology and produce different **fixed** layouts that fit common resolutions.
- But if history has taught us one thing, its that there are never any ‘common’ values. If there are, they change.

Responsive Design



- Ethan Marcotte has advocated a different approach called ‘Responsive Web Design’.
- This combines media queries with fluid grids and flexible images and videos producing highly scalable designs.
- This approach makes little or no assumptions about what device a user will experience the site with.

ETHAN MARCOTTE
is a web designer & developer, a speaker and author.

Ethan lives in Boston, Massachusetts, and is passionate about beautiful design, elegant code, and the intersection of the two. He is a popular and experienced speaker, having been featured at An Event Apart, Carsonified Workshop, South by Southwest, and co-hosts the Handcrafted CSS seminar series with Dan Cederholm.

More fun facts: Ethan has a [blog](#), and blathers incessantly on [Twitter](#). His clientele has included *New York Magazine*, Stanford University, and the World Wide Web Consortium. Also, he is tall.

If you'd like someone to speak at your conference or company, or to work on your next design project, Ethan is available for freelance engagements from **March 2012**. Care to [get in touch](#)?

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ethanmarkotte.com

The Brasilia Palace Hotel



Alongside the [Palace of Planalto](#) and Our Lady Fatima Church, the Brasilia Palace Hotel was one of the first buildings constructed in Brazil's new capital. Designed by [Oscar Niemeyer](#) and inaugurated in 1958, it hosted important dignitaries like Queen Elizabeth, Indira Ghandi, Dwight Eisenhower and Che Guevara before being devastated by fire in 1978. After facing decades of abandonment and neglect, it was modernised and reopened in 2006.

Arrival

Your taxi having parked directly beneath the slender glass doors that slide open and invite you to enter, arrive in the lobby which sits under a low hanging ceiling. In Niemeyer's other buildings, you'll know that such an architectural trick that works surprisingly well.

After checking in and taking the swift lift ride up

The Brasilia Palace Hotel

The Brasilia Palace Hotel



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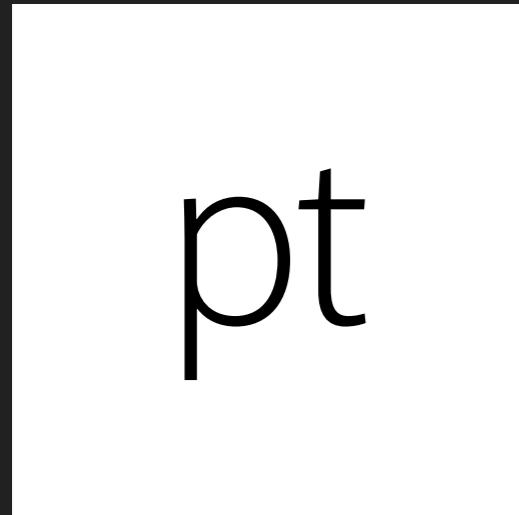


The Brasilia Palace Hotel

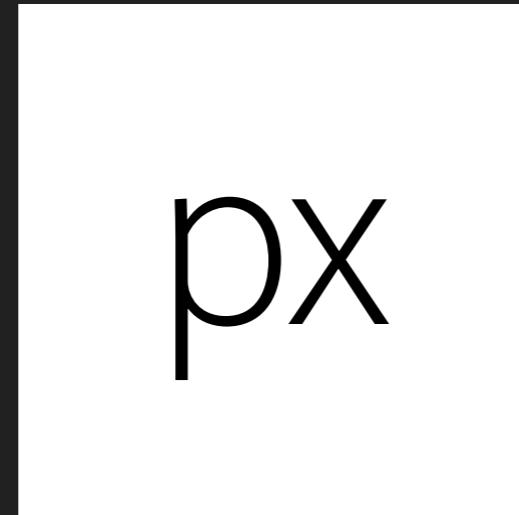


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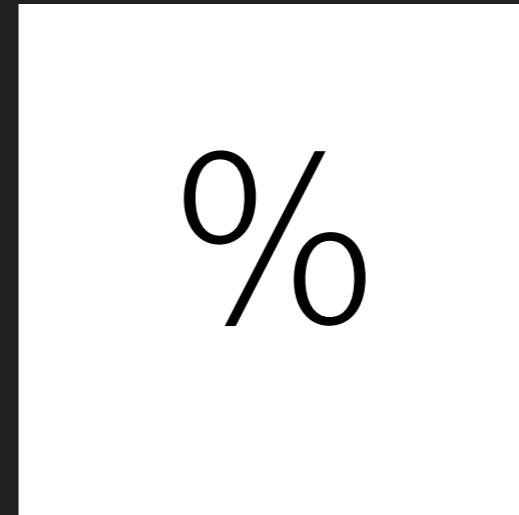
Proportions not fixed values



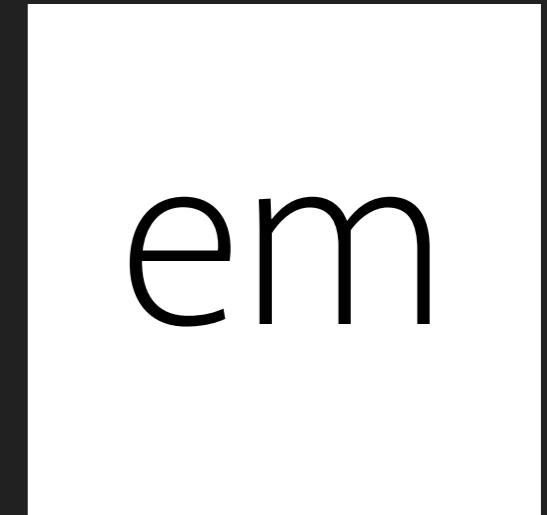
PRINT



SCREEN



WEB



em

- The secret to responsive design is that it thinks in terms of proportions rather than fixed values.
- In fact, I think you think of each medium in terms of the units best suited to it.

Beyond responsive design

- There's a lot of excitement around responsive design, but much of this is focused on layout.
- Obviously there is a lot more for us to consider for our designs to be truly adaptive.
- Things like input method, bandwidth, user preference can all effect a design.
- Having recently worked on some iPad apps, I know that behaviours and expectations are very different on touch based devices.

Where are our constraints?

- Now we've removed the constant of a fixed and defined page, how on earth do we make any design decisions?
- We need to think less in terms of pages, more in terms of components.
- Think about the information we need to display, and how different parts of a design can adapt.

*In order to embrace designing native layouts for the web—whatever the device—we need to shed the notion that we create layouts from a canvas in. We need to flip it on its head, and **create layouts from the content out.***

Mark Boulton

markboulton.co.uk/journal/comments/a-richer-canvas

- This is something Mark Boulton has been talking about recently.
- A content-out approach gain forces us to ask questions.
- What's the optimum line-length for this text? What's the best way to present this product information? What's the essential information I need here?

'Content is king'

- Of course, to be basing our designs upon content we some content to start with!
- When I started in the industry, a popular phrase was 'Content is King'.
- Yet it was never really treated that way.
- We were essentially decorating buckets into which we'd pour content once the client got round to writing it.
- That may still be the case, but we should try to design with representative content, not lorem ipsum!



 paulrobertlloyd.com

The Brasilia Palace Hotel – Paul Robert Lloyd

Aa



READ LATER



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Arrival

Your taxi having parked directly beneath the slender building, you are greeted by two understated glass doors that slide open and invite you to enter.

Descending a long shallow ramp you soon arrive in the lobby which sits under a low hanging mezzanine. If you've visited many of Niemeyer's other buildings

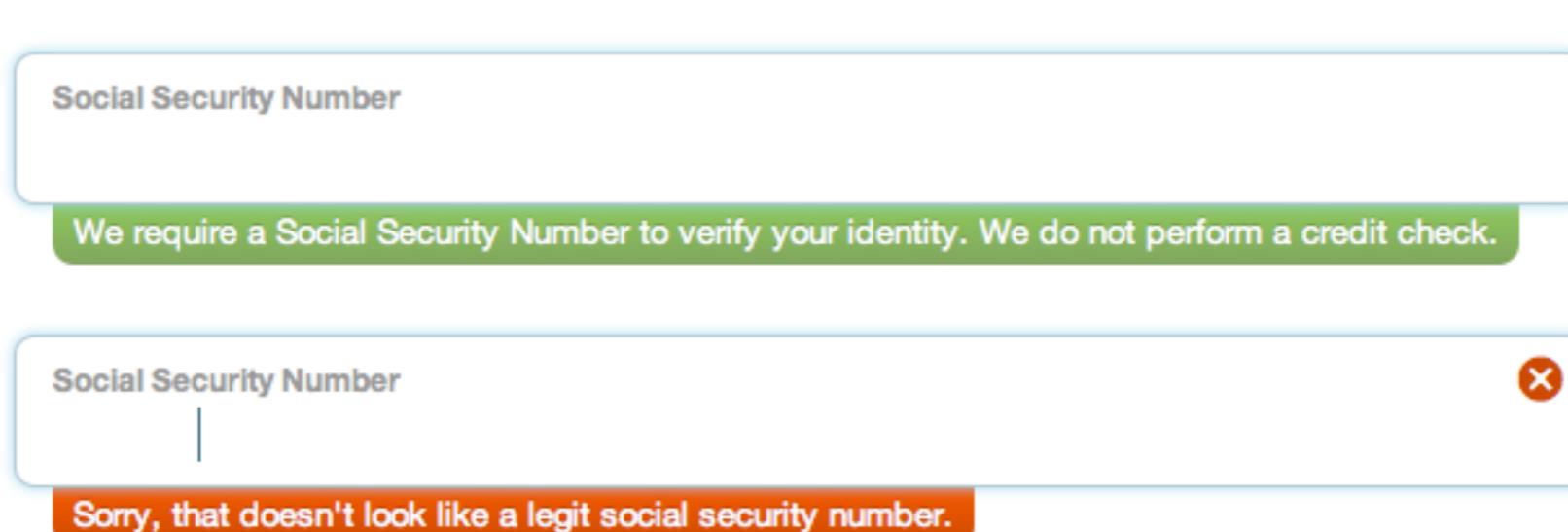
- Whilst content may be the basis of our designs, the reverse cannot be true.
- Content will often appear outside the context of any visual design.
- Tools like Instapaper and Readability purposely strip visual design from the content. So does RSS.
- No longer can content hide behind the veil of pretty designs, it needs to stand on its own.
- We can do this by writing for the web; meaningful, concise structured content.

Microcopy

flickr.com/groups/microcopy/

flickr.com/photos/fstorr/6512990915

- As an interactive medium, things like microcopy become incredibly important.
- This incidental copy can indicate desired behaviour, but also give products personality and a tone of voice
- Content is the interface.
- There's a good group on Flickr that documents examples of this type of copy in the wild.



Letting go

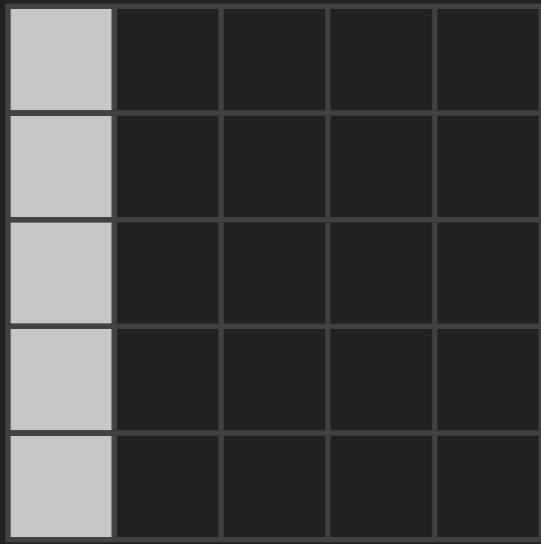
- I think to succeed in designing for this medium, you need to let go of a few things.
- There is no such thing as pixel perfect design; no matter how hard you try.
- Yet I don't think this gives us licence to be lazy and careless; we just need to focus on different things.

Patterns not pages

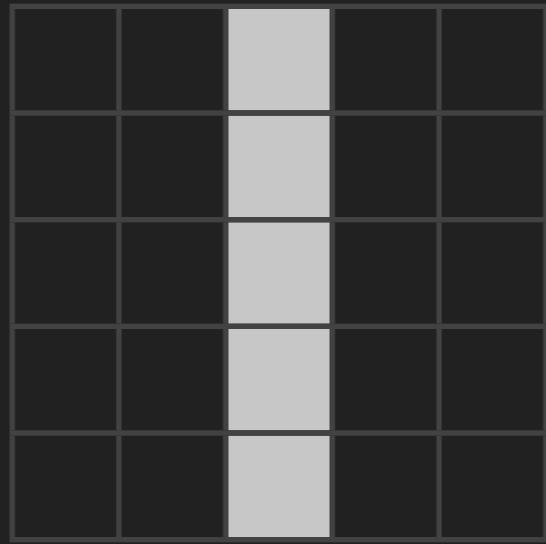
- The web is not print. It's a systematic platform that needs a systematic approach.
- At Clearleft we don't deliver page templates, but rather a pattern portfolio.
- This contains all the various components that are required to make up different pages; current and future.
- These components are designed so that they can exist largely in and of themselves.

Collaborative design & development

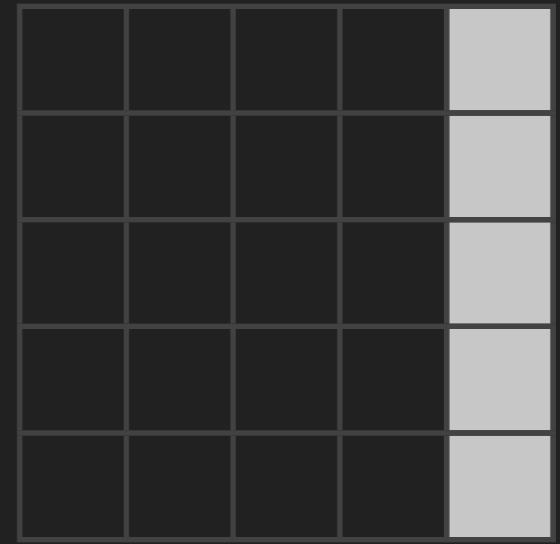
- The complexity of the web means we can no longer confine ourselves to linear processes.
- Design is a constantly an interplay between visual aesthetic and how this can be implemented in code.
- We need designers and developers working together to solve problems.
- Also need to take a more iterative process one that moves from static comps to the browser (and back again) more freely.



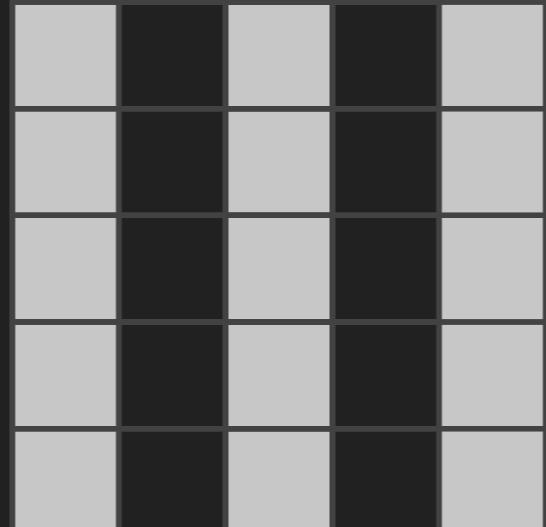
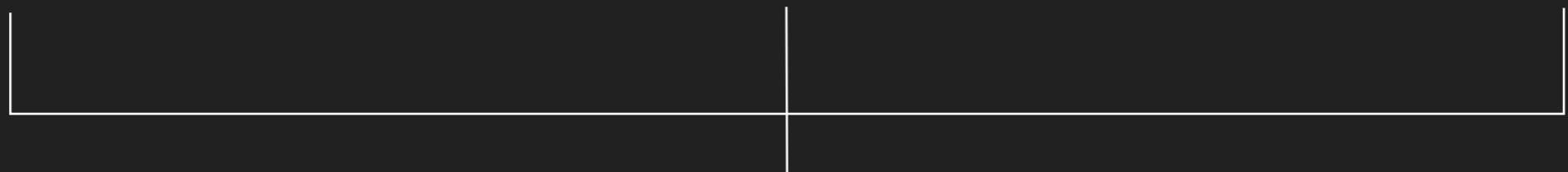
USER EXPERIENCE
DESIGNER



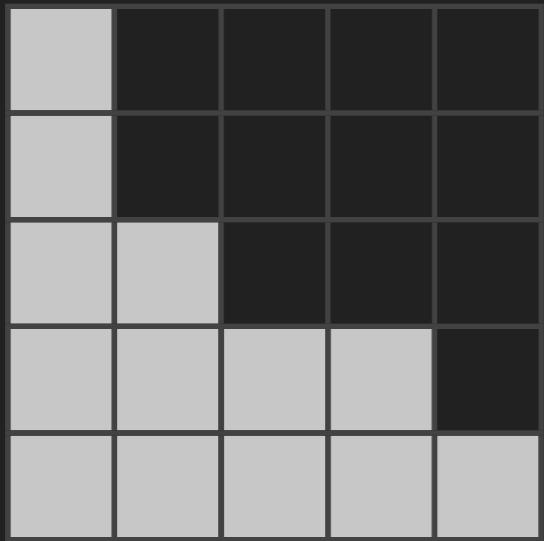
GRAPHIC/INTERACTION
DESIGNER



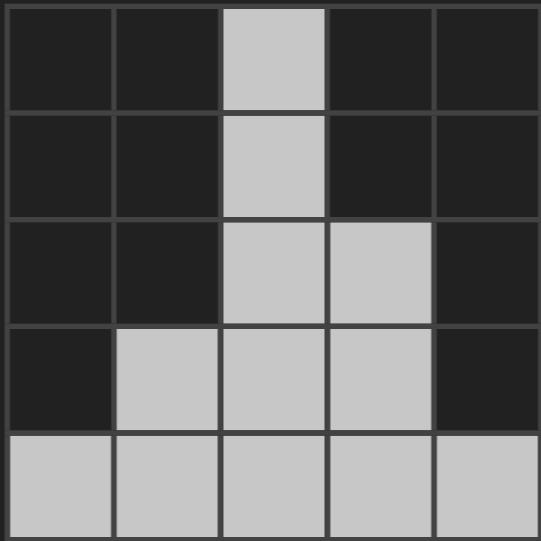
FRONT-END
DEVELOPER



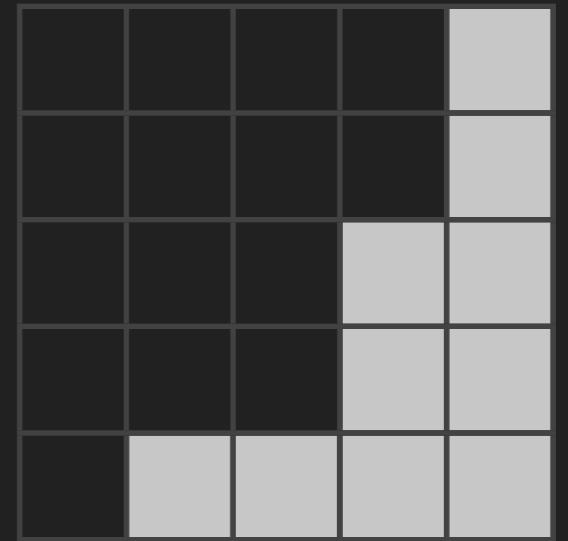
ENTIRE TEAM



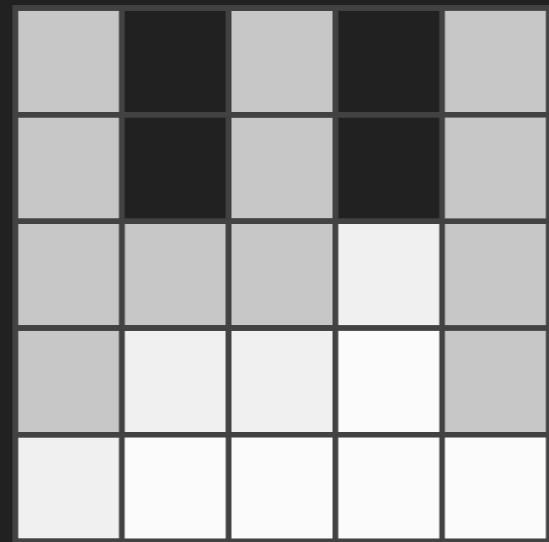
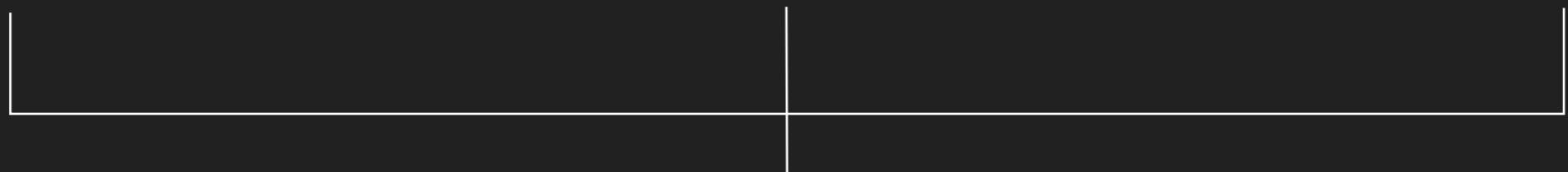
USER EXPERIENCE
DESIGNER



GRAPHIC/INTERACTION
DESIGNER



FRONT-END
DEVELOPER



ENTIRE TEAM

Design for all

- This is just the start of a new move in web design to design for all.
- Native platforms gives us control and perhaps better user experience.
- But there's no better experience than being able to access the information you want regardless of device.
- Trends like responsive design are seeing an acceptance and embrace of the fundamental promise of the web; access for all.

Thank-you!

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