

COMP30680

Web Application Development

HTML and CSS - further reading

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<!DOCTYPE HTML>
<HEAD>
<TITLE>RA
<LINK REV
<META NAME

HTML 5 – further new elements

New Form Elements

Tag	Description
<datalist>	Defines pre-defined options for input controls
<keygen>	Defines a key-pair generator field (for forms)
<output>	Defines the result of a calculation

Graphics

Tag	Description
<canvas>	Defines graphic drawing using JavaScript
<svg>	Defines graphic drawing using SVG

New Media Elements

Tag	Description
<audio>	Defines sound or music content
<embed>	Defines containers for external applications (like plug-ins)
<source>	Defines sources for <video> and <audio>
<track>	Defines tracks for <video> and <audio>
<video>	Defines video or movie content

For further details and examples of how to use these new elements see:
http://www.w3schools.com/html/html5_new_elements.asp

CSS3

See:

<https://www.w3schools.com/cssref/default.asp>

<http://tutorialzine.com/2013/10/12-awesome-css3-features-you-can-finally-use/>

CSS3 Rounded Corners
CSS3 Border Images
CSS3 Backgrounds
CSS3 Colors
CSS3 Gradients
CSS3 Shadows
CSS3 Text
CSS3 Fonts
CSS3 2D Transforms
CSS3 3D Transforms
CSS3 Transitions
CSS3 Animations
CSS3 Images
CSS3 Buttons
CSS3 Pagination
CSS3 Multiple Columns
CSS3 User Interface
CSS3 Box Sizing
CSS3 Flexbox
CSS3 Media Queries
CSS3 MQ Examples

Further reading

Please also see the following:

HTML5 browser support (including a fix for older versions of IE)

http://www.w3schools.com/html/html5_browsers.asp

Combining CSS selectors:

- Combinators: http://www.w3schools.com/css/css_combinators.asp
- Pseudo-class: http://www.w3schools.com/css/css_pseudo_classes.asp
- Pseudo-elements: http://www.w3schools.com/css/css_pseudo_elements.asp

References:

HTML tags (note the HTML5 tags) : <http://www.w3schools.com/tags/default.asp>

CSS reference (note CSS3 properties): <http://www.w3schools.com/cssref/default.asp>



You lot start coding...
...I'll go and see what they want.

PROTOTYPES

“a representation of a design, made before the final solution exists.”

(Moggridge, Designing Interactions)

“the means by which designers organically and evolutionarily learn, discover, generate, and refine designs.”

(Lim & Stolterman)

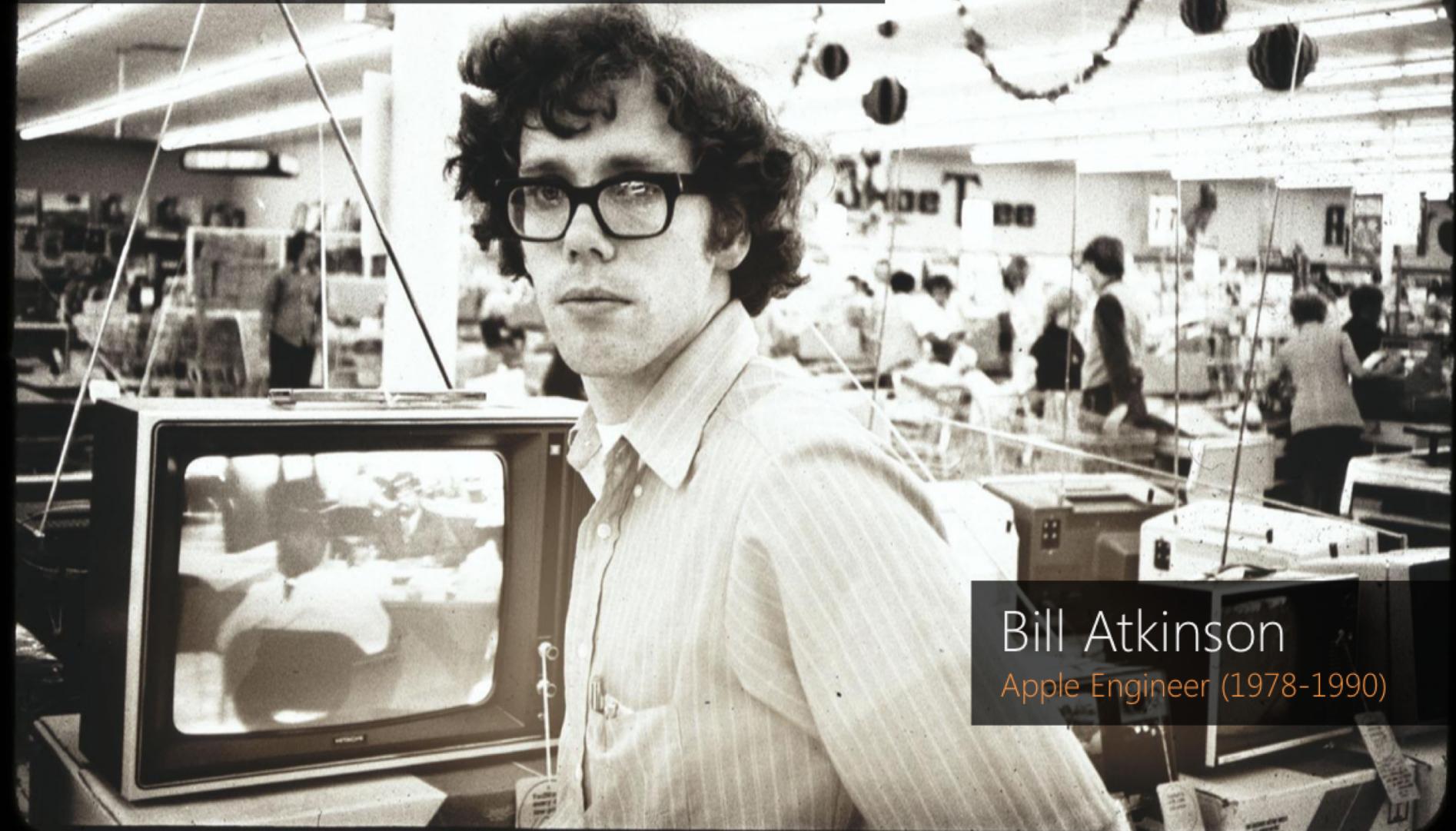
“producing early working versions of the future application system and experimenting with them.”

(Lichter)





Prototyping Apple Lisa



Bill Atkinson
Apple Engineer (1978-1990)

PAPER PROTOTYPING

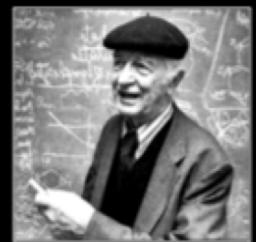
“Paper prototyping is potentially a breakthrough idea for organizations that have never tried it, since it allows you to demonstrate the behavior of an interface very early in development, and test designs with real users... It is fast, it brings results early in development (when it is relatively cheap to make changes), and allows a team to try far more ideas than they could with high-fidelity prototypes.”

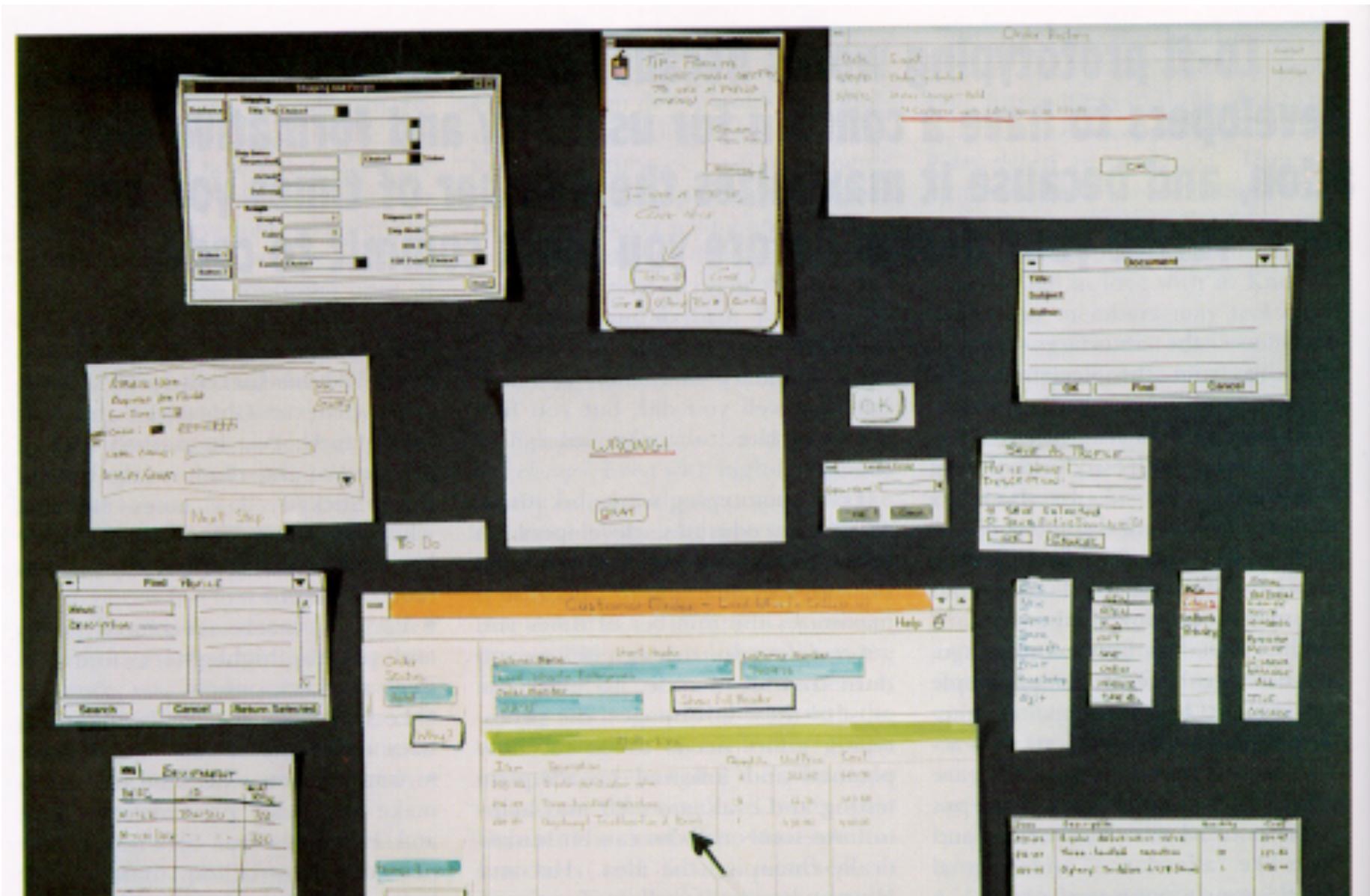
Marc Rettig

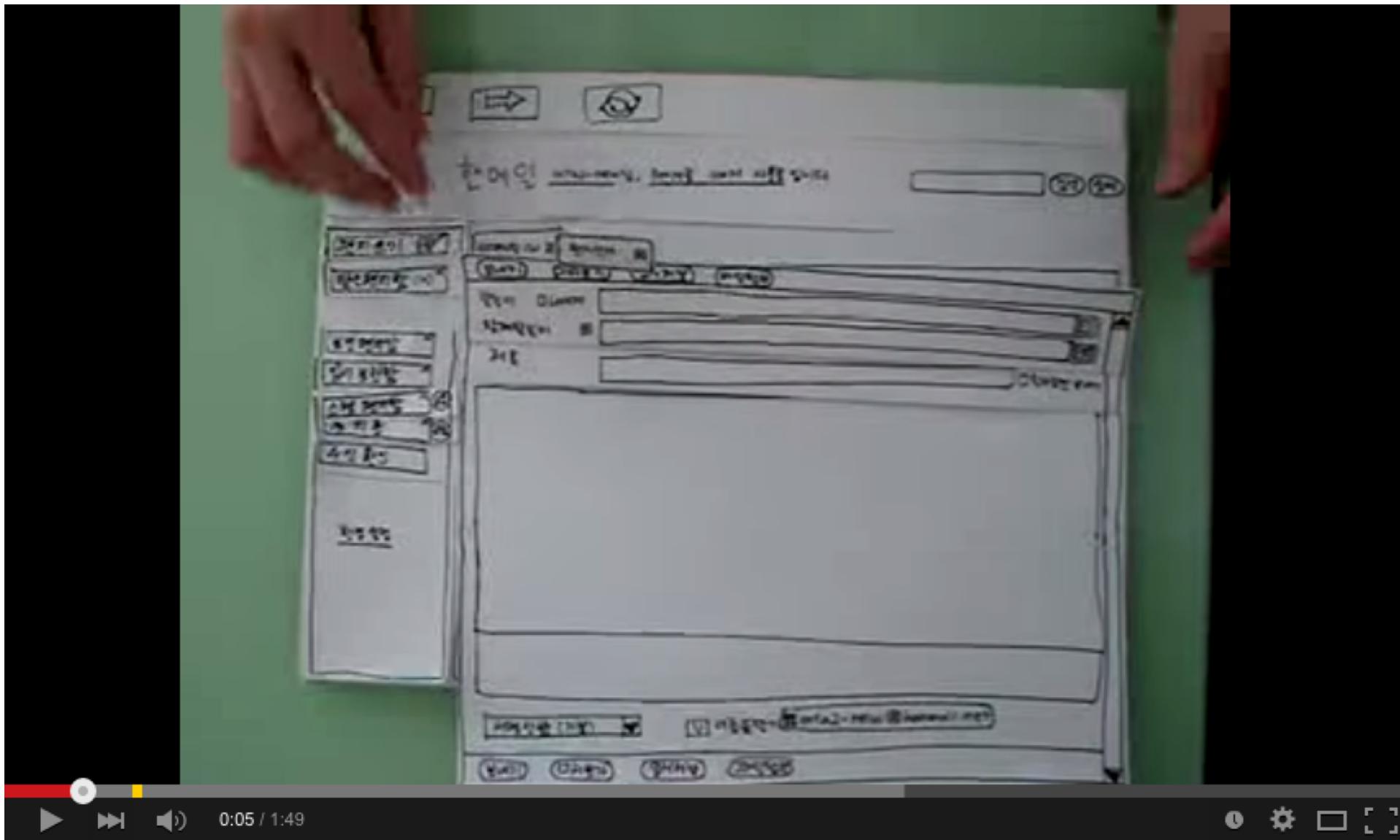
Prototyping for Tiny Fingers, Communications of the ACM 1994

Lo-fidelity prototypes allow us to realise Pauling's recommendation:

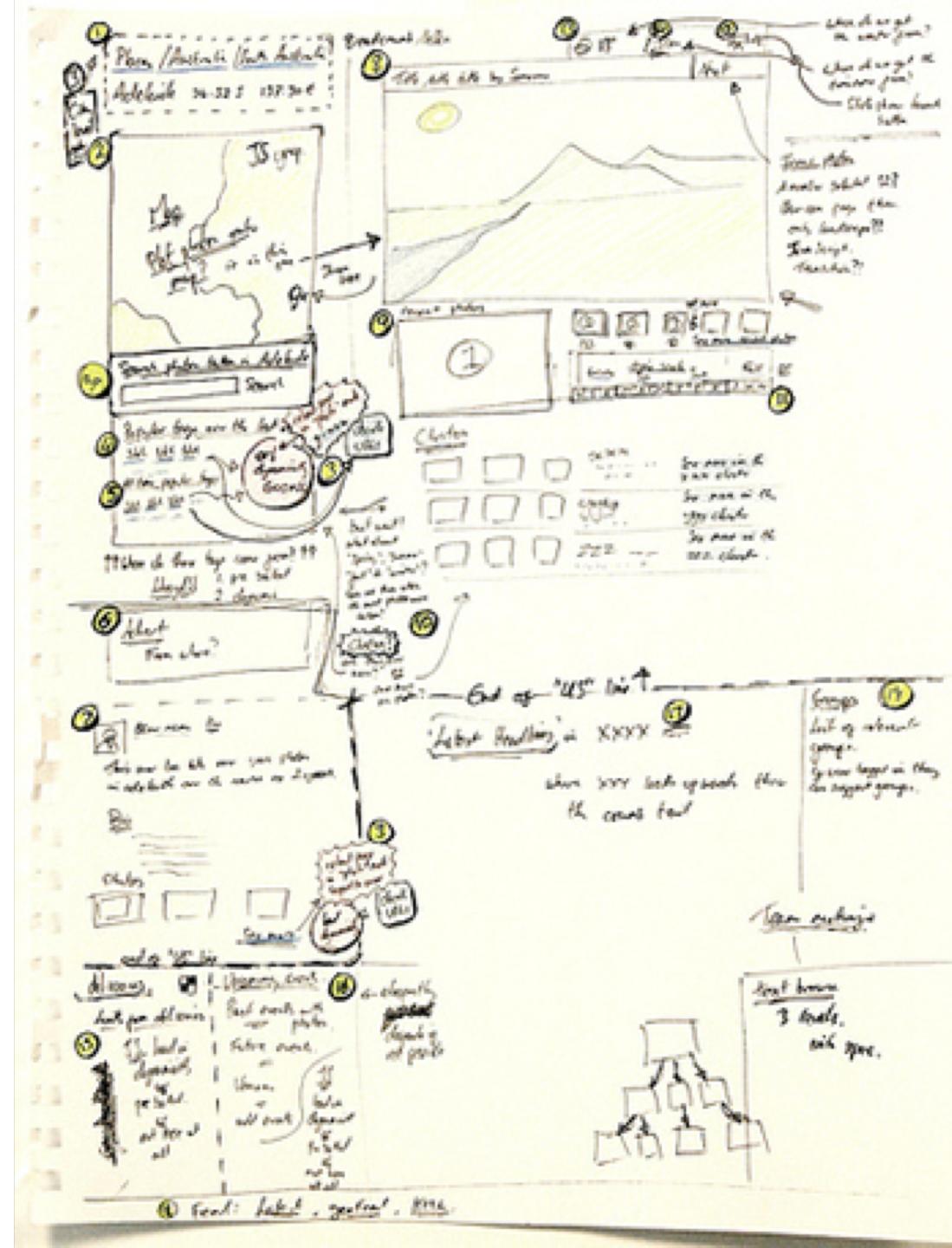
“The best way to have a good idea is to have lots of ideas.”



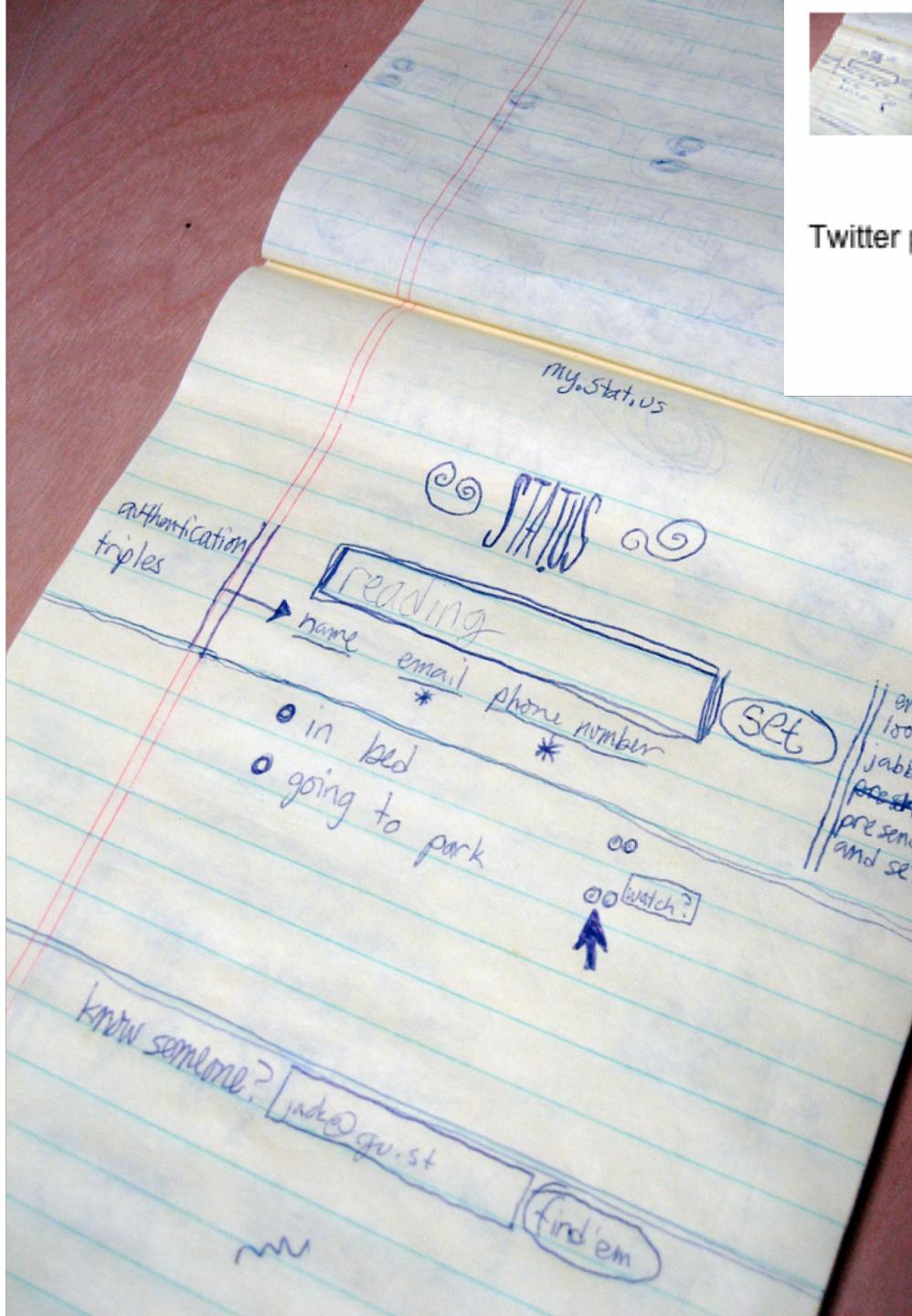




<https://www.youtube.com/watch?v=GrV2SZuRPv0>



The screenshot shows the Flickr homepage with a search bar at the top. Below the search bar, there's a map of North America and Europe. The main content area features a map of San Francisco with a red route line, a large image of the Golden Gate Bridge at night, and a search bar for "San Francisco". There are sections for "Popular tags over the last week" and "Featured Photographers". On the right, there are several Flickr groups about San Francisco, each with a thumbnail, name, member count, and photo count. At the bottom, there are links for activity, help, and footer information.



Prototype

A gallery curated by [LeanMantra](#) | 1 photo | 197 views

Twitter paper prototype



Jack Dorsey

+ Follow

twtrr sketch

On May 31st, 2000, I signed up with a new service called LiveJournal. I was user 4,136 which entitled me a permanent account and street cred in some alternate geeky universe which I have not yet visited. I was living in the Sunshine Biscuit Factory in Oakland California and starting a company to dispatch couriers, taxis, and emergency services from the web.

One night in July of that year I had an idea to make a more "live" LiveJournal. Real-time, up-to-date, from the road. Akin to updating your AIM status from wherever you are, and sharing it. For the next 5 years, I thought about this concept and tried to silently introduce it into my various projects. It slipped into my dispatch work. It slipped into my networks of medical devices. It slipped into an idea for a frictionless service market. It was everywhere I looked: a wonderful abstraction which was easy to implement and understand.

The 6th year; the idea has finally solidified (thanks to the massively creative environment my employer [Odeo](#) provides) and taken a novel form. We're calling it twtr (though this original rendering calls it stat.us; I love the word.ed domains, e.g. [gu.st](#)). It's evolved a lot in the past few months. From an excited discussion and persuasion on the South Park playground to a recently approved application for a SMS shortcode. I'm happy this idea has taken root; I hope it thrives.

Some things are worth the wait.

A MINIMAL, CLEAN LAYOUT FOR WEB DESIGN.

Get Started



EASY TO EDIT

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READY TO GO

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FEATURED CONTENT

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<header>

<h1>

Simply.

<nav>

HOME PORTFOLIO CONTACT BLOG

<div id="hero-image">

A MINIMAL, CLEAN LAYOUT FOR WEB DESIGN.

<a> Get Started

<div id="features">



EASY TO EDIT

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LAYERED PSD

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READY TO GO

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<div id="primary-content">

<article>

FEATURED CONTENT

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec euismod leo a nibh dignissim tincidunt. Nam ultricies odio ac neque suscipit volutpat. Ut dictum adipiscing felis sed malesuada. Integer porta sem nec nibh hendrerit imperdiet.





Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.

[Download Bootstrap](#)

Currently v3.3.6

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs.

For examples of sites using Bootstrap see: <https://expo.getbootstrap.com/>

Bootstrap 4 CDN

If you don't want to download and host Bootstrap 4 yourself, you can include it from a CDN (Content Delivery Network).

MaxCDN provides CDN support for Bootstrap's CSS and JavaScript. You must also include jQuery:

MaxCDN:

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet"
      href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">

<!-- jQuery library -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>

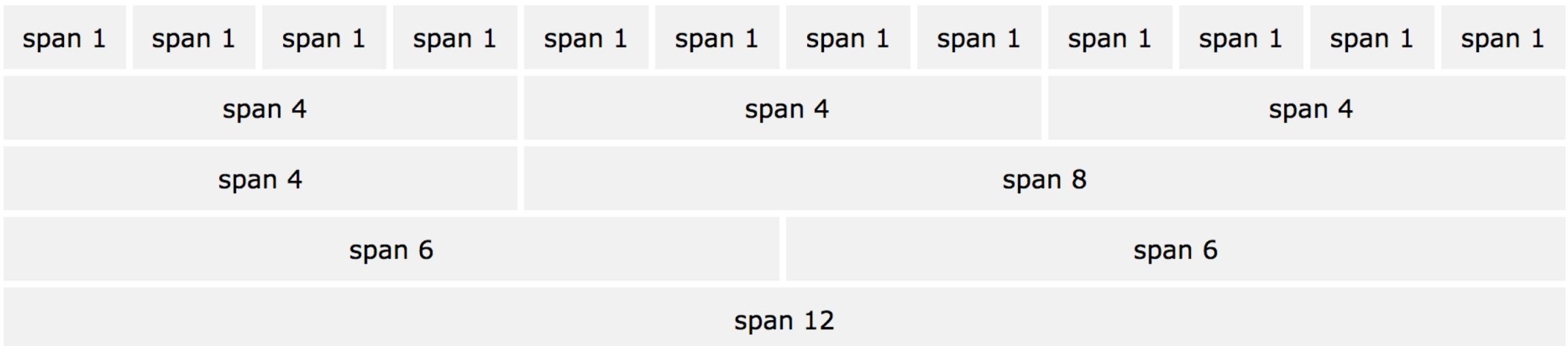
<!-- Popper JS -->
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js">
</script>

<!-- Latest compiled JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script>
```

Bootstrap 4 Grid System

Bootstrap's grid system is built with flexbox and allows up to 12 columns across the page.

If you do not want to use all 12 columns individually, you can group the columns together to create wider columns:



The grid system is responsive, and the columns will re-arrange automatically depending on the screen size.

Make sure that the sum adds up to 12 or fewer (it is not required that you use all 12 available columns).

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <title>Bootstrap Example</title>
5      <meta charset="utf-8">
6      <meta name="viewport" content="width=device-width, initial-scale=1">
7      <link rel="stylesheet"
8          href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
9          >
10     <script
11         src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js">
12     </script>
13     <script
14         src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js">
15     </script>
16 </head>
17 <body>
18     <div class="container-fluid">
19         <h1>Hello World!</h1>
20         <p>Resize the browser window to see the effect.</p>
21         <p>The columns will automatically stack on top of each other when the
22             screen is less than 768px wide.</p>
23         <div class="row">
24             <div class="col-sm-4" style="background-color:lavender;">.col-sm-4</div>
25             <div class="col-sm-4" style="background-color:lavenderblush;">.col-sm-
26                 4</div>
27             <div class="col-sm-4" style="background-color:lavender;">.col-sm-4</div>
28         </div>
29     </div>
30
31     </body>
32 </html>
```

See bootstrap_cols.html

Questions, Suggestions?

Next class:

JavaScript introduction