REAL LIFE RESPONSIVE DESIGN

@andyhume
SmashingConf, Freiburg, 2013
Source: ABC

Sunday, December 29, 13
Guardian print circulation

Source: ABC

Sunday, December 29, 13
UK print circulation

Source: ABC

Sunday, December 29, 13
Guardian mobile visitors

Source: ABC & NRS PADD

Sunday, December 29, 13
Project goals

New mobile site
Project goals

New mobile site
New responsive client-side architecture
Project goals

- New mobile site
- New responsive client-side architecture
- New server-side app architecture
Project goals

New mobile site
New responsive client-side architecture
New server-side app architecture
New responsive site at www.theguardian.com
Project goals

New mobile site
New responsive client-side architecture
New server-side app architecture
New responsive site at www.theguardian.com
The architecture

CONTENT
The architecture

CONTENT

WRITE API

CMS TOOLS

EDITORIAL TOOLS

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The architecture

- IPHONE
- ANDROID
- WINDOWS PHONE
- RESPONSIVE
- WEBSITE
- IPAD APP

READ API

CONTENT

WRITE API

- CMS
- TOOLS
- EDITORIAL
- TOOLS
The architecture

- iPhone
- Android
- Windows Phone
- Responsive Website
- iPad App

Content

- CMS Tools
- Editorial Tools
Mobile first
Silo for responsive work

But...

Redirect performance
SEO complexity

m.guardian
Simplify
Prioritise

Mobile first design
Simplify
Prioritise
Stealth redesign

Mobile first design
Mobile first development

Core HTML content first
Core styles first
Cutting the Mustard

The browser is a hostile development environment and supporting a wide range of desktop browsers can be tough work.

One of the immediate challenges we discovered when we first started the responsive news prototype was the large range of devices that we would have to support. It terrified us. This article is about a solution we use to alleviate this problem.
var guardian = {

  isModernBrowser: (  
    'querySelector' in document &&  
    'addEventListener' in window &&  
    'localStorage' in window
  );

The browser is a hostile development environment and supporting a wide range of desktop browsers can be tough work.

One of the immediate challenges we discovered when we first started the responsive news prototype was the large range of devices that we would have to support. It terrified us. This article is about a solution we use to alleviate this problem.
Sunday, December 29, 13

**Syria: Putin rubbishes chemical attack claims**
- Russian president goes on offensive against Obama
- US weighs up next move as UN team go to Lebanon
- Two-thirds of French people oppose intervention, says poll

**Delhi gang-rape and murder trial: juvenile guilty**

First conviction in case that outraged nation, of woman who
Real time performance
Real time performance
Real time performance
Real time performance
Real time performance
THREE STAGES

Content
Enhancement
Leftovers
THREE STAGES

- Content
- Enhancement
- Leftovers
THREE STAGES

Content
Enhancement
Leftovers
THREE STAGES

Content
Enhancement
Leftovers
Content

Enhancement

DOMContentLoaded event

Load event

Leftovers
Content

0.0s  0.1s  0.2s
Text Egyptian Web Regular
Just sit at "home" methodically ‘typing’ the most grotesque and inflammatory “statements” you can think of.

Text Egyptian Web Regular Italic
Just sit at "home" methodically ‘typing’ the most grotesque and inflammatory “statements” you can think of.

Text Egyptian Web Medium
Just sit at "home" methodically ‘typing’ the most grotesque and inflammatory “statements” you can think of.

Text Egyptian Web Medium Italic
Just sit at "home" methodically ‘typing’ the most grotesque and inflammatory “statements” you can think of.

http://www.flickr.com/photos/spacemanbob/1084139169/
FONT LOADING

Progressive enhancement
FONT LOADING

Progressive enhancement

Cuts the mustard
FONT LOADING

Progressive enhancement

Cuts the mustard

Supports WOFF
FONT LOADING

Progressive enhancement

Cuts the mustard

Supports WOFF

localStorage available
PRE-RENDER

CUT THE MUSTARD?

SUPPORT WOFF?

FONTS IN STORAGE?

NO FONTS

SHOW FONTS

NO

NO

NO

Sunday, December 29, 13
POST-RENDER

STORAGE AVAILABLE?

NO

DOWNLOAD FONTS: BASE64 ENCODED IN JSON

NO FONTS

CACHE FONTS IN STORAGE

SHOW FONTS
Resilience

http://www.flickr.com/photos/kayaker1204/4319542459/

Sunday, December 29, 13
Resilience

http://www.flickr.com/photos/kayaker1204/4319542459/
Unreliable

http://www.flickr.com/photos/the_jorr/325224175/
Resilient

http://www.flickr.com/photos/vpickering/6824364286/

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Progressive enhancement

http://www.flickr.com/photos/8040811@N06/3167877765

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### Performance Results (Median Run)

<table>
<thead>
<tr>
<th></th>
<th>Load Time</th>
<th>First Byte</th>
<th>Start Render</th>
<th>Speed Index</th>
<th>Document Complete</th>
<th>Fully Loaded</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time</td>
<td>Requests</td>
<td>Bytes In</td>
<td>Time</td>
<td>Requests</td>
<td>Bytes In</td>
</tr>
<tr>
<td>First View (Run 7)</td>
<td>3.675s</td>
<td>16</td>
<td>231 KB</td>
<td>3.736s</td>
<td>28</td>
<td>255 KB</td>
</tr>
<tr>
<td>Repeat View (Run 4)</td>
<td>2.437s</td>
<td>9</td>
<td>39 KB</td>
<td>3.869s</td>
<td>18</td>
<td>58 KB</td>
</tr>
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http://www.webpagetest.org/result/130908_K2_796/
Median of nine test runs

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Median of nine test runs
iPhone 4, iOS 5.1

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Median of nine test runs

iPhone 4, iOS 5.1

3G (1.6Mps, 300ms RTT)

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Progressive enhancement

http://www.flickr.com/photos/8040811@N06/3167877765

Sunday, December 29, 13
Thank-you!

http://lanyrd.com/sccxwy
@andyhume
These people *actually* built it...

@grantklopper
@dtrainvsquincy
@stephanfowler
@mattandrews
@GidsG
@kungpochicken

@patrickhamann
@commuterjoy
@kaelig
@gudaithi

Ordered by volume of commits on Github (because that’s how you measure developers).
https://github.com/guardian/frontend

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