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Welcome to the issue

THE WEB DESIGNER MISSION

"To be the most accessible and inspiring voice for the industry, offering cutting-edge features and techniques vital to building future-proof online content"

Steve Jenkins

Highlight

"We focus on projects where we can make a real difference by using our proven user-centred design process"

Web Designer heads to the home county of Hertfordshire to meet creatives Cyber-Duck
Page 34

There is more than one CMS in the world

Mention the acronym CMS and for many web designers a certain word springs to mind. There is no doubt that WordPress is a great CMS, but we all like choices and there is a host of alternatives out there to consider.

With over 35 million downloads and counting, Joomla is no fly-by-night CMS. It is a powerful and extremely competent content management system that boasts thousands of extensions. It is also highly intuitive and, thanks to its friendship with Bootstrap, it's also mobile-friendly too. Check out our feature on page 42 for an in-depth look at what it has to offer and what it can bring to the site creation process.

JavaScript, it's the language that stays out of sight but has a profound effect on the way that the web works today. Without it, the web would be a far duller place. The hard part is finding the right library for the right job – but not anymore. Head to page 80 to find the definitive list of libraries for apps, mobile, code management and more.

It's a tutorial extravaganza this issue with 39 pages of must-know techniques. Head to page 50 to find out how to build a horizontal parallax scrolling site and page 56 to discover the art of faster responsive design thanks to Foundation 5's Interchange feature.

Finally, as always, don't forget to check out our Lightbox pages for a dose of inspiration and look forward to seeing you again next issue.

"Joomla 3 was the first CMS to be completely responsive for both visitors and administrators"

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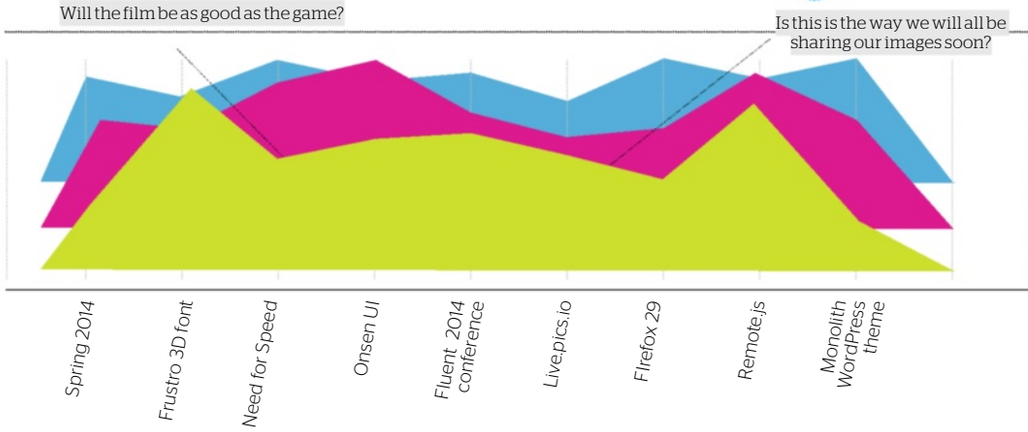


Excitographic

Plotting the features that got us in a frenzy over the month...

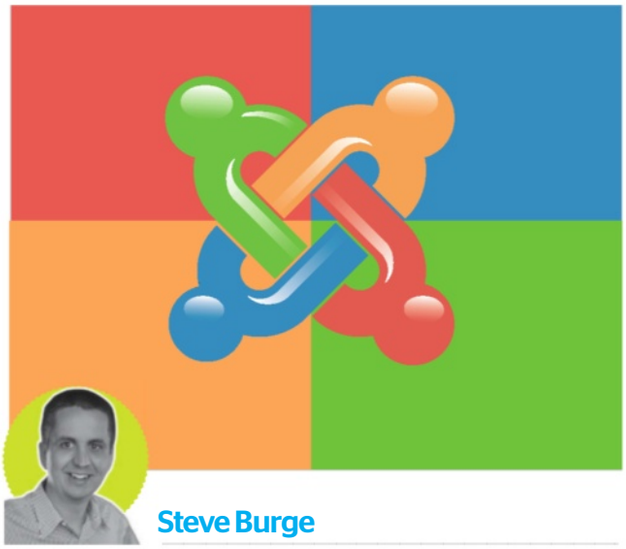
- Steve Jenkins, Deputy Editor
- Will Shum, Designer
- Victoria Richards, Sub Editor

Turn over to the contents to discover what's going to get you excited this issue...

This issue's panel of experts

Welcome to that bit of the mag where we learn more about the featured writers and contributors...

"The installation process is beautifully fast and you're provided with a variety of sample websites to choose from"



Steve Burge

Steve runs OSTraining.com, a company which specalises in teaching people all about CMSs including the Joomla platform. He is also the author of the in-depth guide Joomla Explained. This issue he utilises his knowledge to reveal Joomla's best features and how to use them. **Page 42**

Richard Lamb

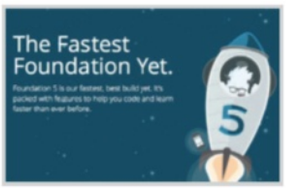
Richard is a web designer and writer who has a passion for creating great content and design. He takes a closer look at how navigation should look good on all screens with his tutorial on responsive retina menus. **Page 68**

Tam Hanna

Tam is a veteran in the world of coding but a newcomer to Web Designer. He has worked with a host of languages with a focus on mobile. This issue he reveals 20 of the best Javascript libraries for apps, mobile and code. **Page 80**

Mark Shufflebottom

Mark is a Professor of Interaction Design at Sheridan College, Ontario. This issue he reveals the power of Foundation 5's Interchange feature. Find out how to get faster sites with its selective loading. **Page 56**



Neil Pearce

Neil is a designer and instructor for the Envato network and a keen exponent of CSS. It is his mission to make things stylish and this issue he gets creative with shadows and gradients to create paper folds. **Page 62**

Jayson Winters

The creative lead at Brace Design, Jayson is always looking to give users what they want. This issue its a twist on the popular parallax scrolling. Discover how to create side-scrolling sites with the help of jInvertScroll. **Page 50**

Tim Stone

Tim is a front-end developer with a first-class degree in Interactive Media Production. This issue it is the React.js library that comes under his expert tutelage. He reveals how to create slick and responsive UIs. **Page 92**

David Howell

David is an experienced writer, author and journalist who runs his own publishing company. He loves to talk and this issue he takes his interview talents to the wilds of Elstree to get cosy with Cyber-Duck. **Page 34**

Matt Gifford

Matt Gifford is a lead RIA consultant developer and industry author from Cambridge, who specialises in mobile development. This issue he reveals how to use the Harp.js library to create fast, static HTML applications. **Page 86**

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Cutting-edge features, techniques and inspiration for web creatives

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"Clear, open and, above all, consistent communication is essential to a successful client relationship"

Matt Gibson

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If you have a creative project, new web product or great designer story, contact the editorial desk
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Is Google the new arbitrator of today's web standards?

Does Google dropping support for the Adobe-backed CSS Regions reveal a power shift for standards? **Web Designer** investigates...

Gaining support for a HTML/CSS module is crucial to its success. If a module isn't developed beyond its initial stages, it is unlikely that it will ever make the final cut.

But who decides whether a module makes it into the final specification? Typically, this is the work of the W3C and its various offshoots, which endeavours, along with thousands of community members, to bring the specification to a viable, and usable conclusion.

However, there is a shift that has seen Google look to assert its will over the Adobe-backed CSS Regions module. In a nutshell, Google has decided to abandon support for CSS Regions and concentrate on its own core goals instead. They claim that the module is too complex and will not tie in well with their future plans for Chrome.

Google Chrome is a WebKit-based engine, but Google recently introduced its own browser layout engine, Blink, and unsurprisingly, this is the engine they wish to work with. This is where the issue with CSS Regions started. Adobe has had a huge impact on how the web has been built. Its tools, while not at the zenith of five years ago are still the cornerstone of many creative agencies. But, they have very little influence or involvement with the browser builders.

This is why Adobe has been getting friendly with both Google and Apple – to implement CSS Regions into both WebKit and the Blink engines. Adobe's creative instincts tell them that with their experience they can make a difference. We all know that Flash has effectively been killed off, so it appears that the software vendor is looking to gain kudos – and cash – in other ways.

So, as you can imagine, Adobe is not happy with Google's decision to drop support for their product while giving traction to its own. But it's not all pistols at dawn; Google has proposed working with Adobe to remove the CSS Regions code from its Blink browsing engine.

Eric Seidel, a Blink project leader, said previously, "I believe Blink's focus this year (2014) must be on mobile and specifically mobile performance... I have come to understand that Regions does not play well with existing performance optimisations [and] impedes ongoing simplification and optimisation work to our core rendering code."

> "Adobe has had a huge impact on the web... but they have little influence with browser builders"

He went on to say, "Regions addresses some very real deficiencies of the Web platform. But I believe Blink (hopefully with Adobe's help) will need to find other simpler/smaller ways to address these deficiencies."

This could be seen as a show of strength by Google, but to give some perspective to the argument, the community is split between those in favour of dropping support and those in favour of keeping CSS Regions included in the HTML specification.

Håkon Wium Lie, the CTO of Opera (who is working with Google), wrote a post, CSS Regions Considered Harmful (**bit.ly/1gxPCWXl**), on the A List Apart site. In the post he goes into great depth to explain his opinion and demonstrates why he thinks CSS Regions are a no go.

Of course, there is always a counter argument and Sara Soueidan wrote on Flippin' Awesome site (**bit.ly/1dmRcfB**) why CSS Regions do matter. Plus, there is a swatch of articles and tutorials on the web demonstrating how to use CSS Regions. This would suggest that it would be a welcome addition.

In the final analysis, we wonder if this is simply a battle between two giants of the web looking to take control for the greater good of standards, or, do they both have their own agendas? We think you can make up your mind on this. Personally, we think the W3C should get to decide the outcome of web standards – not those who have personal interest.

EXPERT INSIGHT

Mark Shufflebottom

Professor of interaction design

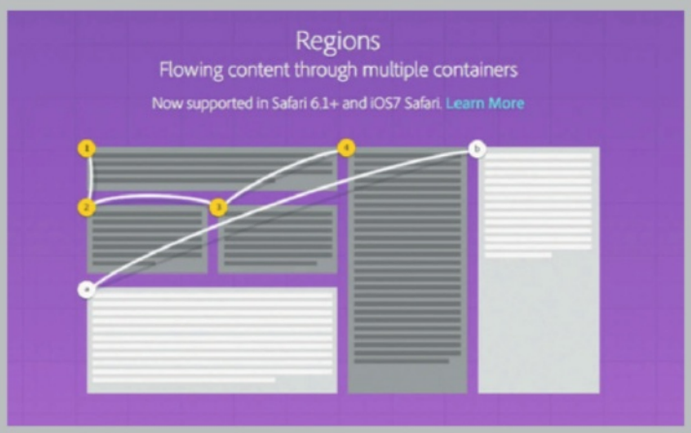
We can all relate to and understand the reasoning behind Google's decision not to support the CSS Regions specification in it's Blink browser engine. As web designers and developers we constantly have to assess whether a certain feature has deep enough penetration with our audience in order to give us a pay off for using it. Google's line on this is that they want to make Blink lightning fast on mobile devices – a very understandable point, and one that is well supported by designers. However, desktop machines certainly have enough ability to use Regions, so why not include it in those and allow designers to use responsive fallbacks for mobile?

I get the feeling that CSS Regions was probably developed to enable beautiful, magazine-style layouts on tablet devices and it makes sense as tablets have had a huge impact on digital publishing. It will surely be a blow to designers who want to produce intricately laid out applications using HTML to the Android platform.

What is CSS Regions?

Is the Adobe-backed module something that we need or want in the HTML specification? First find out what it does

The W3C describes the space as follows: "The CSS Regions module allows content to flow across multiple areas called regions. The regions are not necessarily contiguous in the document order. The CSS Regions module provides an advanced content flow mechanism, which can be combined with positioning schemes as defined by other CSS modules such as the Multi-Column Module [CSS3COL] or the Grid Layout Module [CSS3-GRID-LAYOUT] to position the regions where content flows."



The principle of CSS Regions is simply to try and recreate text flow. A prime example would be text flows around images, or through columns, typically featured in desktop publishing packages such as Adobe InDesign. These dynamic magazine layouts require a certain degree of flexibility, and the current HTML specification does not offer any viable solution – which is why Adobe has been working on developing the module.

If you'd like to find out more information regarding the various intricacies of the CSS Regions module, be sure to visit **www.w3.org/TR/css3-regions**, where you can read the official W3C working draft.

Blink: the Google layout engine

Google is looking to move away from WebKit and work on its own engine – but what exactly is Blink?

Blink is described as a rendering engine for the Chrome browser – but what, exactly, is a rendering engine?

It is a browser layout engine that helps determine exactly how the layout is seen in the browser. It was announced back in April 2013 and includes contribution from Opera.

But what is the point of Blink? According to the official Chromium Projects site, it is setting out 'to improve the open web through technical innovation and good citizenship'. Not noble causes, we are sure. For more information about the project and its progress pay a visit to **www.chromium.org/blink**.This tackles the technical aspects of the engine and reveals how developers and enthusiasts can get involved. There are also some guidelines on committing and reviewing code, as well as information on changes to Web Platform and testing.

To get a greater insight to the history of Blink and Google's plans for the engine a visit to Google Groups is a must. This reveals their plans for 2014 with input, explanation and opinion from a host of experts.

<news cloud>

Bite-sized coverage of the month's trending topics

Who's top of the mobile browser charts?

The popular mobile browsers are Chrome, iOS and Android. Looking at the latest stats from StatCounter (**gs.statcounter.com**) it was iOS and Chrome that enjoyed the biggest increases from Dec 2013 to Jan 2014. iOS saw a 1.7 per cent increase while Chrome went up 1.2 per cent. Android only managed a 0.3 per cent increase.

iOS

No longer need to update manually with 3.8

WordPress

Web fonts

We all love a font, make sure you take look at Brandon Printed

Google

NetBeans

The open-source editor NetBeans IDE 8.0 beta is now available to download

HTML5

Sencha launches Space for managing HTML5 apps on mobile devices

Time to build apps for Chromecast

The search giant wants developers to start building apps for Chromecast as the TV streaming device currently lacks in the apps dept. As might be expected, a host of unsavoury, according to Google, apps will be banned. This includes porn, gambling, hate speech and violence amongst others.

How to monetise your HTML5 web apps

The latest update to the Amazon Appstore now means that developers can finally start charging for their HTML5 web apps

The beauty of web apps lies in their accessibility, while the beauty of HTML5 web apps lies in its development path. There is no need to learn new development languages as designers and developers will already have the necessary knowledge. Anyone with a grasp of HTML, CSS and JavaScript can develop their own apps. The issue has always been how to monetise HTML apps.

There is the option to package up code with a third-party tool such as PhoneGap and then sell them through the popular app stores – iTunes, Google Play and Windows – but this isn't always a viable or preferred solution for developers.

However, things started to change when Amazon allowed developers to publish hosted apps next to native Android apps in the Amazon Appstore. This instantly made any submitted apps available to Amazon Appstore customers across the globe. With over 200 countries accessing the app store, it meant that the apps had a huge potential audience.

The initial influx of HTML web apps had one drawback: all web apps published on the Amazon Appstore were set to free. While it was great publicity for all involved, especially for those selling on alternative stores, it didn't bring in any income.

Back in **Web Designer 218** we considered whether or not HTML5 would ever be able to compete with native apps. In the article it states: 'Just ask yourself, how many HTML5 apps do you have on your mobile device? Okay then, how many have you merely tried and used? Precisely, and user demand feeds back into the central problem of developer support. Recent industry studies suggest performance, breadth of toolset, education and marketing as valid reasons for precisely why that support is so short.'

As the statement points out, marketing is one of the key reasons why HTML5 web apps will struggle to succeed. Remember how poor Android Market was? With no strict guidelines, poor construction and lame ease of use it was never destined for success. Enter the Google Play Store and how quickly things changed.

The inclusion of HTML5 apps into the Amazon Appstore resolved the marketing issue to a degree but Amazon has now taken another step forward in the quest to get HTML5 apps to the masses. Developers now have the opportunity to break away from the freemium model and start charging users for their HTML5 web apps.

Not only is there option to list a price for new apps, but the pricing feature is also retroactive. So all those free apps already up and running on the Amazon Appstore can be updated to include a price – and make a tidy profit if it sells well.

So, how can you start making money from your HTML5 web apps? The first

step is to get an Amazon Developer account, if you haven't already. With a developer account in hand, it is simply a matter of heading to the Availability & Pricing tab and discovering how to charge for the app and setting a price.

Unlike some Developer programmes, using the Amazon Developer programme is free and also allows developers to get their hands on any of the available APIs. It is also worth noting that Amazon does not charge to submit apps.

So, how does Amazon make money? Like all app store models, they take a cut of the sale price. For each app sold, they pay the developer 70 per cent of the list price, taking 30 per cent for themselves – this is pretty standard across the board. This may seem like a big chunk, but where else will HTML5 developers get such a vast 24-hour audience to sell to? We think it's a small price to pay.

Still, getting an app online is only one step in the process, selling is another. The ability to add a price means that HTML5 web app developers have the option to take part in the Amazon free app of the day (**bit.ly/1g2wsdm**) promotion, offering more exposure across the board for your app. So, if you have an HTML5 app that needs to be discovered, now is the time to sign up and start making your fortune.

Discover the World of Animals

Love penguins, lions, tigers, orangutans, dolphins and elephants? Get a unique insight into their world in this visually stunning wildlife magazine

World of Animals is a magazine unlike any other. Its visually rich pages bring to life a host of nature's most beautiful, interesting and unusual creatures. To highlight the sense of wonderment that Earth's diverse animals bring, **Imagine Publishing** has launched its wildlife magazine **World of Animals**.

"We wanted to create a magazine that inspires excitement and wonder at the amazing wildlife that the natural world has to offer," said Dave Harfield, Editor In Chief.

The latest issue takes a look at the life of penguins, as well as giving pandas, squirrels and modern-day dinosaurs some love as well.

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EXPERT INSIGHT

Matt Gifford

Lead developer and consultant at monkehWorks Ltd

"The very fact that Amazon has revised the ability to set a price and start charging for HTML5 web apps is a great indicator of the fact that HTML5 can cater for a multitude of requirements and handle features that will make certain apps worth paying for. This is something that most developers have known about for a while, but the product base may not have necessarily been quite as prevalent as it is now.

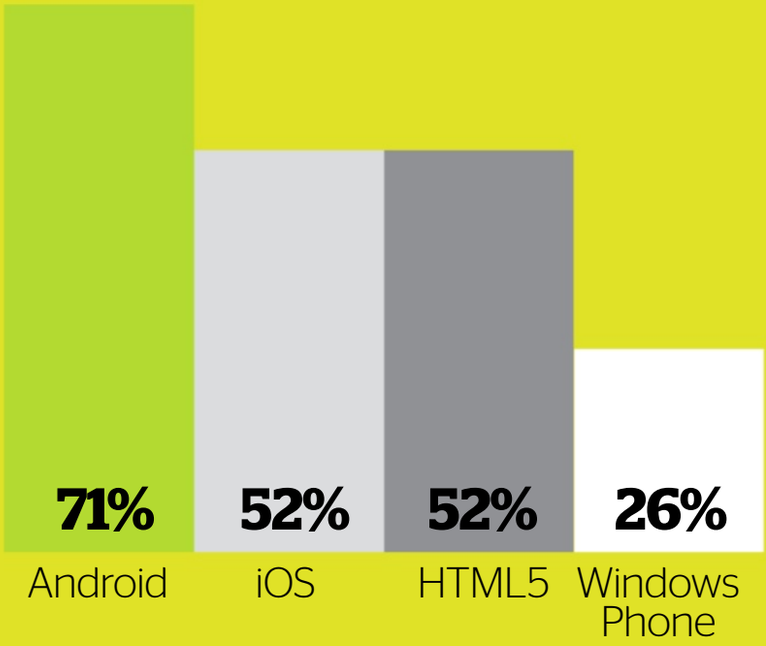
Today, we have more apps, more features and even more functionality available to interact with that is native to the browsers – and, of course, a greater number of applications being built.

While this is exciting, my concerns are with the developers and how they get paid, if at all. Having an app on the Amazon marketplace is nice and all, but how much control will they have over increasing its visibility on the sites to prospective customers? We may find that apps are 'nominated' for the free app of the day and may see a huge boost of downloads, but no financial gain or reward for the hard-working developer.

Although developers may be aware of the power of HTML5, are the end users truly ready for it and will they be willing or understanding enough to make the change? Or have they gotten used to native apps and not take up shopping from the new commercial avenue?"

The most popular mobile development platforms

The two big players, as expected, are Android and iOS – but it may not be long before HTML5 apps make a real impact



These figures come as no great surprise, but the HTML5 stat is rather interesting. HTML5 apps are competing strongly with iOS, but the HTML figure is split into two areas. 37 per cent relates to HTML5 as the key development platform. The remaining 15 per cent consists of hybrid apps and HTML5 translated to native code with services like PhoneGap.

The figures highlight the popularity of developing with HTML5, but also reveal that developers are struggling to find a place to sell their apps.

Source: www.developereconomics.com

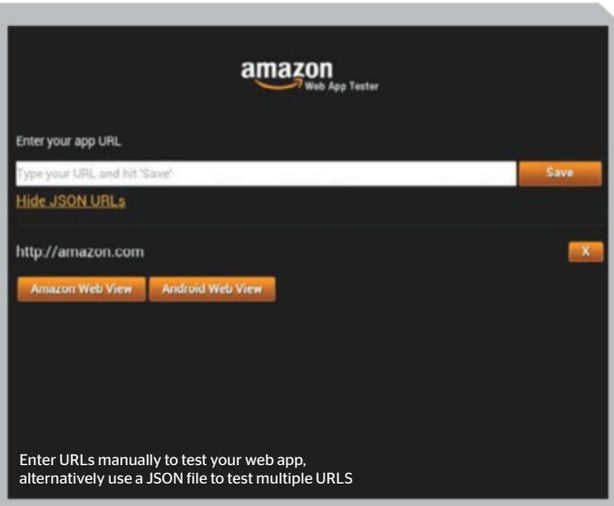
Test your web app

Testing is a critical stage in any development process – make sure that your web apps are always up to standard

Every app needs to be tested before it can go to market, and Amazon provides its own test app for developers. The app can be downloaded free of charge from the Amazon site at **amzn.to/1eSIlFd** and be installed on Android devices and, of course, the Amazon Kindle. Once the app is installed, users test a web app in a production-like environment on a Kindle Fire or Android device.

There are a couple of ways that you can test an app; enter URLS manually or use a JSON file with multiple web app URLs. For more detailed information on the test methods, visit **bit.ly/1gIn44f**.

Testing is critical, but so is debugging. Amazon does not provide dedicated tools for this, but thankfully Chrome Dev Tools does. Be sure to visit **bit.ly/1gpBOZH** to find out exactly how to implement the tools and set up a debugging environment.



Enter URLs manually to test your web app, alternatively use a JSON file to test multiple URLs

design

Work better with clients

Matt Gibson is production director at Cyber-Duck, a full service digital agency based in Elstree, Hertfordshire UK, home of James Bond, Indiana Jones and even Luke Skywalker.

Matt Gibson

Empathy, mutual trust and effective communication are all essential for successful client relations

We've all been there at some point, working with a client who makes seemingly arbitrary decisions, or worse, cannot decide at all, resulting in never-ending rounds of design iteration. Amongst some, clients have generated a reputation for being demanding, difficult or sometimes just plain daft (as seen on **www.clientsfromhell.net**). Egregious and occasionally humorous examples of client misunderstanding aside, it's our job as designers to take more responsibility rather than automatically placing all the blame on our clients when things don't go quite right.

Yes, client work can be challenging, however, it can also be incredibly rewarding. It gives us the opportunity to work on varied and interesting projects and find creative solutions to diverse problems for industries we perhaps knew little about before. It's why many of us got into design in the first place – we love exploring and solving problems. From my experience there are three key facets to successful client relationships – or just about any relationship for that matter. These are empathy, mutual trust, and effective communication.

As designers we often quite rightly show a lot of empathy towards the people who use the products and services we design; we consider how our work impacts upon their experience. However, many designers show an unfortunate and marked lack of empathy when it comes to our clients. Put yourself in your client's shoes for a moment. They have limited domain knowledge and experience and expect to be guided through the process by the expert they've hired. Ultimately they want their money's worth and don't want to be let down.

By clearly defining the roles on the project from the outset – what your client can expect from you, what you expect from them – you can lead the client through the process. Conducting stakeholder interviews at the beginning gives you the chance to meet the client and learn about their goals for the project, so you can manage their expectations.

Fostering an environment of mutual trust and respect with a client largely depends on your integrity, reliability, transparency and courtesy. Consistently be honest with your client and they'll respect your integrity – don't fall into the trap of over-promising and under-delivering. Instead, ensure you are accountable, reliable and that you deliver on your promises. Be transparent and keep your client updated; it's far easier to explain the rationale behind a design if the client has been involved throughout. There are no surprises because the client has had their input and been privy to the decision-making each step of the way; from user research, to information architecture and sketching workshops to developing style tiles (**www.styletil.es**) and designs.

Clients will know a lot more about their industry than you do, and chances are they will know a lot about their customers too. Always be courteous, even if they disagree with you or are suggesting changes – nothing kills mutual trust with a client quite like a dismissive designer. Instead, try to frame critiques against the goals of the design and how it affects users. You may have been asked to change the background to bright pink, but what problem is it solving? By investigating the underlying problem you can suggest a more effective alternative. This way you can say no to weaker ideas without being condescending. The client didn't hire you to educate them; they hired you to guide the creation of a successful user experience.

Clear, open and, above all, consistent communication is integral to a successful client relationship, and often is the area where many failed projects break down. Create a framework that encourages structured feedback and actively avoids misinterpretation. Don't send an email asking a client what they think about a JPEG and expect an informed response. Doing so can result in a game of design critique Chinese whispers where the feedback is further and further removed from any context and more based on personal opinion. Insist on structured sessions, ideally face to face, where you can discuss and explain your process and ensure feedback remains goal-oriented. Here you can use data from your user research, previous projects or even credible examples by others to back up your arguments.

Next time you encounter a difficult client or project, show a little more empathy and consider what you could have done differently before automatically putting the blame on their shoulders. Could you have defined the roles better at the start? Did you set and manage their expectations honestly and consistently? Did you collaborate and involve them as an equal? Did you structure feedback appropriately? Sometimes it may well be outside of your control. More often you will find it's an opportunity to learn and do better next time.

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business

Keeping up standards

Jacob Colton is director at Catalyst2, which provides managed hosting services to organisations across the UK. It specialises in high availability websites and exceptional customer support.

Jacob Colton

Documentation is key to resolving customer queries and keeping the client happy

Over 60 per cent of our customers come to us through recommendation. In our annual survey most clients state this is because of our reputation and the positive things they hear, which is the best type of advertising. Word of mouth is one of the most trusted forms of marketing and also has the benefit of being 'free'.

I say 'free' because it is arguably the most expensive form of marketing. It is all about providing an amazing and consistent service to your clients every single time they contact your company. For a start-up, this is tricky enough, but you have the advantage of the founder(s) being 100 per cent committed to the business and passionate about every aspect of it, usually giving the clients a knowledgeable, available and consistent point of contact. As a business grows from a few hundred customers, to a few thousand customers and more, this is an ever-evolving challenge.

For example, how can you ensure that high level of service is maintained across many staff members? How can you train your team so that they deliver the best possible experience? How do you instil your passion and business culture into your team? How can you monitor all this efficiently, so you can spot issues? These are only a few essential things of many worth consideration.

The first thing we learned was the need to document; it's no good having the answers if they are all in one person's head, it needs to be easily accessible to everyone to ensure the same answers are given every time. This also reduces the reliance of the business on that one person, protecting the company overall. In our business, this would equate to how to resolve common issues, how to access the tools that are a required to debug issues that have not come up before. These documents and procedures are key, but they need to be carefully put together and constantly reviewed. Too few and it means the team is slowed down by constantly having to escalate and research queries, too many and they are slowed down by having to work through document after document and procedure after procedure to resolve customer queries. It is about striking a balance to ensure your team can resolve problems in a timely fashion and keep the client happy.

Documentation in a central place is also important, as when a team member comes across a query they have not seen before, they can easily search through the internal resources to quickly and effectively deal with the query. This documentation has to be constantly reviewed and updated for it to be meaningful. It's also about documenting the customer query; if staff work shifts, anyone coming into an existing issue should be able to get a feel for the problem and what's been done so far within just a few minutes of reading the ticket.

Training your team and passing on the culture and customer-centric focus is key. Not all members of staff are equal, some will pick up concepts and learn faster than others, it's important to address this and ensure from your client's perspective everyone is able to deal with the same issues. Putting yourself in the customer's shoes when they have a query or question is fundamental to that. What would you want if you were the customer with a query? A speedy response? To be spoken to in a language you understand? Yes, all of the above.

Ensuring that levels are kept up as the team grows inevitably means keeping an eye on conversations that are taking place between your team and customers. This gives an insight into whether there are any knowledge gaps and also ensures the owners are keeping their finger on the pulse of what customers want. For us this means the owners doing a fair amount of the day-to-day customer support as well.

A key part of a growing business is the concept of 'Kaizen' – or continuous improvement. Nothing is perfect, so looking at what we're doing and seeing how we can improve is beneficial. Customers rate our support and overall service – but how can we be better? How can we deliver more? It is possible; you just need to rate your performance and look to constantly improve.

> "There's no point having the answers if theyr're all in one person's head, it needs to be accessible to everyone"

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Travel Alberta Tripplanner

tripplanner.travelalberta.com

Development technologies HTML5, CSS3, Modernizr, jQuery, Google Maps

Designer/developer **Eigen Fabrikaat**
www.eigenfabrikaat.nl
buildinamsterdam.com

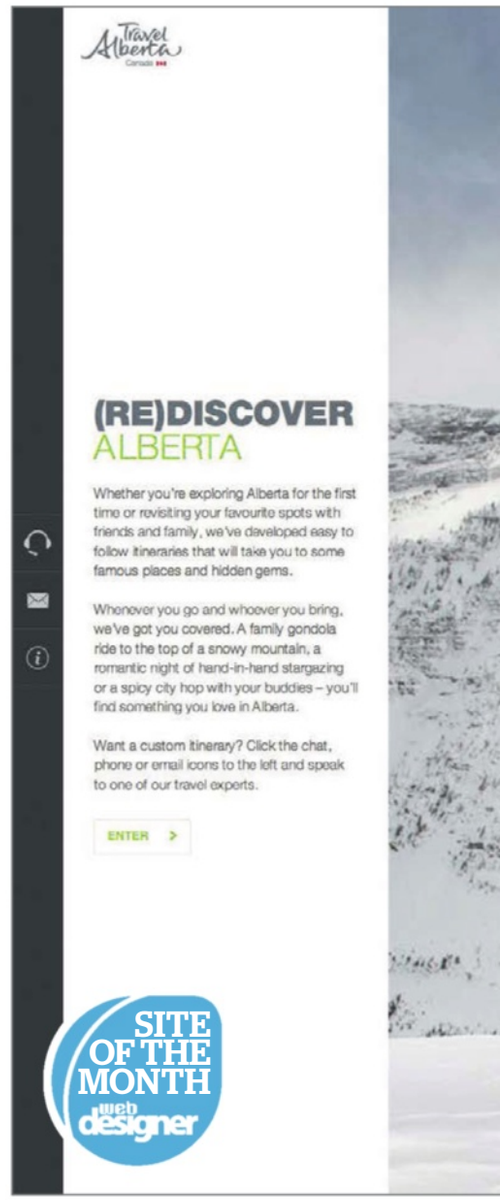
Is it a website or a browser-based app? Either way this tourism tool offers more than enough to turn site visitors into real-life visitors

International tourism is big business and top destinations across the globe must use everything at their disposal to attract visitors. With an online world now capable of bringing everyone that much closer together, web experiences such as Travel Alberta Tripplanner have a vital promotional role to play. The project was commissioned by Travel Alberta, the official tourism marketing organisation for Alberta and has been produced purposefully to perform consistently across desktop, tablet and mobile.

"Together with advertising agency Eigen Fabrikaat we created a responsive browser-based app that guides you to some famous places and hidden gems in the Canadian state of Alberta," explains Daan Klaver, head of design at Build in Amsterdam. "By using inspirational images we offer users a visual-based experience of the touristic highlights. In order to make the app usable for every target audience we divided the flow in a very intuitive and distraction-free navigation structure."

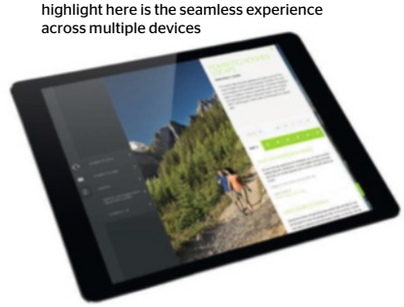
By traversing a series of split-screen categories the content is tailored quickly and everything kept bold and focused. Much more akin to a browser-based app than a traditional site, it's nice to see an experience that won't just entice holidaymakers to the area but also prove accessible during the visit. Seamless integration with Google Maps and links to local amenities is a big bonus here, applying substance to the sleek presentation.

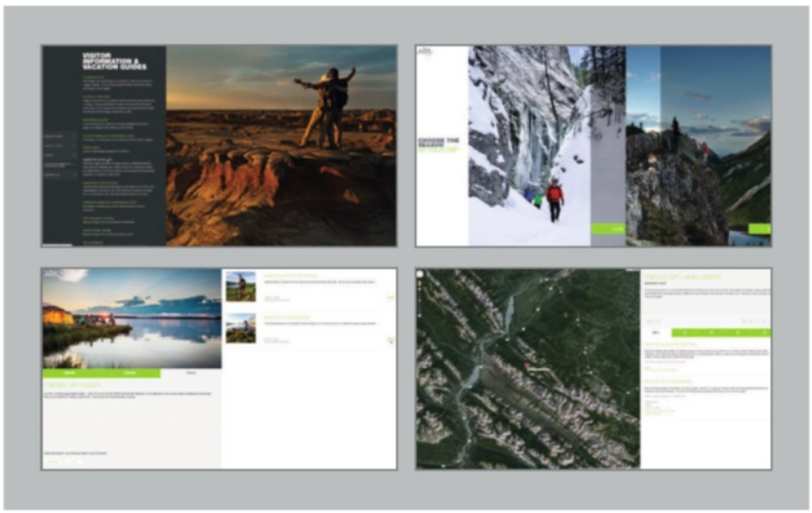
> "By using inspirational images we offer users a visual-based experience"



<Above>
• The site utilises wide-aspect photography to immediately emphasise and sell the appeal of Alberta to tourists

<Below>
• Looking and functioning more like a browser-based app, there's no doubt the highlight here is the seamless experience across multiple devices





#6A747C #C3C5C5 #8BC832 #FFFFFF

<Top left, clockwise>

- A menu glides out from the side panel, providing quick access to related local links
- The content is accessed by making decisions and chosen via a hierarchy of beautiful split-screen rollovers
- The full itinerary details each day's activity and plots the journey with Google Maps
- Options are filtered down and matched with a series of tabs pointing to the full trip information

<Below>

- Helvetica Neue handles most of the text styling to add an Apple-flavoured tinge of readability and sophistication to the site

abcABC
1234567

Get started with the Google Maps API

Full code found on the resource CD

Register for an API key and take the first steps to adding visual interest to your web projects with Google Map elements

01 Access the API console

When using the majority of Google's API services you are required to first request an API key. You can do this by visiting the Developer home at **developers.google.com** and clicking the API console icon under the Developer Tools section, or directly via **code.google.com/apis/console**. You must have a valid Google account to access the console, so create one if required before logging in.

02 New project

Click the red Create Project button, enter a project name and tick the Terms of Service agreement before clicking Create. You will be prompted to validate the new project via SMS or telephone message and enter a code. With the project created and open, click the 'APIs & auth' item from the left-side menu. Here you'll see a list of selected APIs – the only one you need switched on is Google Maps API v3.

03 Generate API key

Choose the 'Credentials' link from the left-side menu and click the Create New Key button under Public API access. Here we want a Browser key, so pick this button, leave the HTTP referrers box blank for now and click on Create. You should now have a 39-character string, which we will add to the <head> of our HTML page. As shown in the code, the '&sensor=false' addition indicates we will not be using GPS.

```
001 <title>Google Maps API Demo</title>
002 <script src="http://maps.
googleapis.com/maps/api/js?key=REPLACE_
WITH_YOUR_API_KEY&sensor=false"><script>
003
```

04 Function mapSetup01

We now need some code to initiate the map, which starts with a function where we set a variable with specific options. This starts with 'center' and latitude/longitude co-ordinates for centring on a specific location, in our case Alberta, Canada. The 'zoom' value sets the default resolution, with zero most distant. You may also change the HYBRID part of '.MapTypeId' to Roadmap, Satellite or Terrain should you want to display an alternative map view instead.

```
001 <script>
002 var myCoords = new google.maps.
LatLng(56.4,-115);
003 function mapSetup()
004 {
005 var mapSettings = {
006 center: myCoords,
007 zoom: 7,
008 mapTypeId: google.maps.MapTypeId.
HYBRID
009 };
010
```

05 Function mapSetup02

The <script> continues creating a new map object by passing in our identified page element we want to contain the map, here a called mapCanvas, as well as the mapSettings from above. You can then attach an event listener that builds the map once the page has finished loading. In your page <body> you will need to add the element with the appropriate id and desired dimensions.

```
001 var myMap=new
002 google.maps.map(document.getElement
ById"mapCanvas"),mapSettings);
003 }
003 google.maps.event.
addDomListener(window, 'load', mapSetup);
004 </script>
005 BODY:
006 <div id="mapCanvas" style="width:
1000px; height: 760px;"></div>
007
```

06 Markers and bubbles

Quickly add a marker icon by passing in your co-ordinates to a new marker object and attaching it to the map. We may also use a similar method to add a text bubble floating above the marker. Add the following code lines to the end of the mapSetup() function before the closing bracket and the on load listener. Save your page and test in your browser to view the map!

```
001 var myMarker=new google.maps.
Marker({
002 position: myCoords
003 });
004 myMarker.setMap(myMap);
005 var myBubble = new google.maps.
InfoWindow({
006   content: "Welcome to Canada!"
007 });
008 myBubble.open(myMap, myMarker);
009 }
010 google.maps.event.addDomListener
window, 'load', mapSetup);
011
```

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Hello Monday. Projects + Culture + Contact

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Meet the people that love pretty pixels, clean code and vast Icelandic landscapes

A Photo Odyssey of our Yearly Agency Gathering

See more

MoMA

THE MYSTERY OF

<Above>
• If you like 'pretty pixels, clean code and vast Icelandic landscapes' then you've come to the right place

#27303F #17202A

#7A8080 #A65B38

<Above>
• The content below gradually appends itself as you scroll, thanks to the Gravity-Defying Polygon Display™

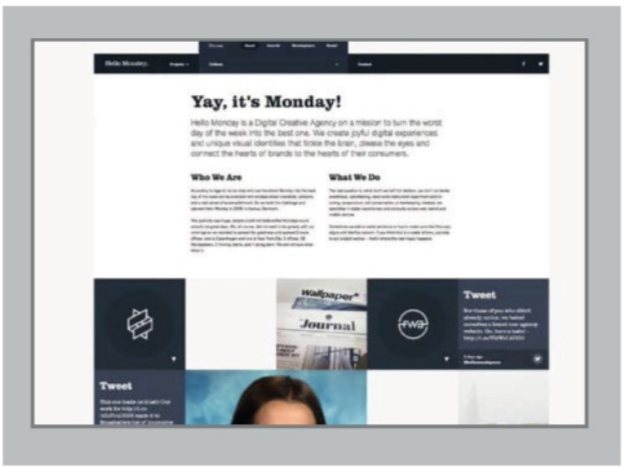
<Above>
• Pages for featured projects can be lengthy, although the careful use of colour versus white space is effective

<Above>
• Switch to the client view instead and a grid of the familiar rollover block elements simplify navigation

Hello Monday

hellomonday.com

Development technologies HTML5, CSS3, JavaScript, WebINK



Designer **Hello Monday**
hellomonday.com

With an abundance of dynamic and engaging features across the site, it looks like Mondays just got a whole lot more attractive

Apparently on a quest to turn the worst day of the week into the best, Hello Monday is a digital creative agency founded out of Denmark in 2006. Now operating from offices in New York and Aarhus, Copenhagen, they specialise in crafting award-winning experiences across web, tablet and mobile.

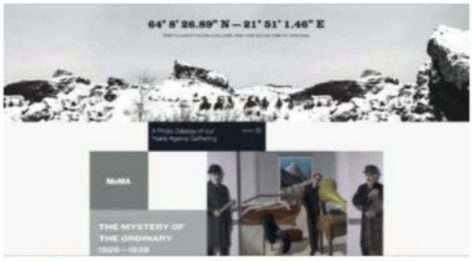
Thankfully this great work is exemplified through this latest incarnation of **hellomonday.com**, the official portfolio site brimming with personality. Starting with a revolving header featuring a series of Icelandic landscapes and latitudinal co-ordinates, the page below springs to life as you start to scroll. Content relating to recent projects is chopped up and modularised, loading gradually and jumping into view. Photographic panels are inter-spliced by rollover blocks and tabs, forming an asymmetrical structure to the stacking elements.

"We wanted our new agency site to be accessible to everyone, but offer special features for the different devices," says Hello Monday senior developer Joey Maese. "We allowed larger screens to display a more content-rich experience, whereas mobile gets tweaked to facilitate finger-based gestures, and desktop offers more animation to enrich the design. One of the most prominent desktop features is the Gravity-Defying Polygon Display™, which allows content to slide into place as the user scrolls. Built using plain JavaScript and CSS3 transitions, it's a simple effect with a big impact."

abcABC
1234567890

<Above>
• The Theinhardt font by François Rappo for Optimo is used in light, regular and bold varieties

> "One of the prominent desktop features is the Gravity-Defying Polygon Display™, which allows content to slide into place"



Emulate Hello Monday's gravity-defying template

Full code found on the resource CD

Senior developer Joey Maese explains how you can build your very own Gravity-Defying Polygon Display™ as featured on hellomonday.com

01 Prepare the CSS

Add the core CSS classes for the basic elements. Here we'll set a page body margin, define a container for the block rows, plus the blocks themselves. We will spend the remaining steps focusing on JavaScript coding – you can find the full listings on the disc.

```
001 body {
002 margin-bottom: 1000px;
003 }
004 .row-container {
005 position: relative;
001 background-color: #CCC;
007 width: 1280px;
008 height: 640px;
009 margin: 0 auto;
010}
011.block {
012 position: absolute;
013 background-color: #333;
014 width: 320px;
015 height: 320px;
016 -webkit-transition: top .35s ease-
017out;
018 -moz-transition: top .35s ease-out;
019 -o-transition: top .35s ease-out;
020 transition: top .35s ease-out;
021}
```

02 Set up block position data

Within the JavaScript, start by creating an array variable named 'rowBlockData' containing an object for each block. The x and y properties determine where the block will be placed, while the block property is set as null by default but will be set later in Step 4.

```
001 var rowBlockData = [
002   {x: 0, y: 0, block: null},
003   {x: 640, y: 0, block: null},
004   {x: 320, y: 320, block: null},
005   {x: 960, y: 320, block: null}
006 ];
```

03 Build a container

Next we must create a container element that will hold all the blocks. This container is also being used to detect when the block's elements should animate into view on the page. The element will pick up the 'row-container' styles defined in the class from Step 1.

```
001     var rowContainer = document.
        createElement('div');
002 rowContainer.className = 'row-
container';
003 rowContainer.style.marginTop =
window.innerHeight - 40 + 'px'; //
position the container barely in view
004 document.body.
appendChild(rowContainer);
```

04 Build the blocks

We then run through the block data and build each block, along with positioning the blocks into their respective places. After the blocks are built, we store each one in the rowBlockData array variable so we have easy access to it later when repositioning things.

```
001 for (var obj in rowBlockData) {
002   var block = document.
createElement('div');
003   block.className = 'block';
004   block.style.left =
rowBlockData[obj].x + 'px';
005   block.style.top =
rowBlockData[obj].y + 'px';
006   rowContainer.appendChild(block);
007   // store the block for later use
008   rowBlockData[obj].block = block;
009 }
```

05 Hide all the blocks

Appended to the end of the for() loop in the last step, we move all the blocks below our 'fold' threshold – the point below which our blocks are to be hidden. This is simply achieved by setting the top positional value based on the current rowBlockData[] object's y value added to the window.innerHeight.

```
001 // placed at end of previous for()
loop
002 block.style.top =
rowBlockData[obj].y + window.innerHeight
+ 'px';
003
```

06 Detect page scroll

Once the blocks are all hidden, we want to detect when the rowContainer is in view when scrolling occurs. To achieve this, add a listener to the window's scroll and then detect when the top of the rowContainer element has hit the centre point of the window:

```
001 window.addEventListener('scroll',
onPageScroll);
002 function onPageScroll(e) {
003   // determine how far the user has
003 scrolled
004   var scrollAmount = Math.
max(document.body.scrollTop, document.
documentElement.scrollTop);
005 // is the top of rowContainer at
the center of the screen?
006   if (scrollAmount >= rowContainer.
offsetTop - (window.innerHeight / 2)) {
007   // remove the scroll listener
008     window.
removeEventListener('scroll',
onPageScroll);
009     // rowContainer is in view! Now
what happens...
010   }
011 }
```

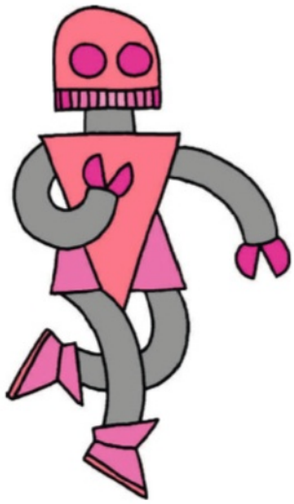
07 Animate in the blocks

Once the rowContainer element has been detected as in view, we call an animateIn() function, which loops through the rowBlockData array in order to grab each block. The blocks are then animated up into place using the earlier CSS transition defined in our .block class from the first step.

```
001   // rowContainer is in view! Now
what happens...
002   animateIn();
003 }
004 function animateIn() {
005   for (var obj in rowBlockData {
      rowBlockData[obj].block.style.top
= rowBlockData[obj].y + 'px';
006   }
007 }
```

08 Stagger the block animations

At present however, all the blocks are animating together so we must add a delay. While looping within animateIn(), we increment a delay variable and simply add it to the CSS transition-delay. Now the blocks will slide up independently as desired!



Can you volunteer for Code Club?

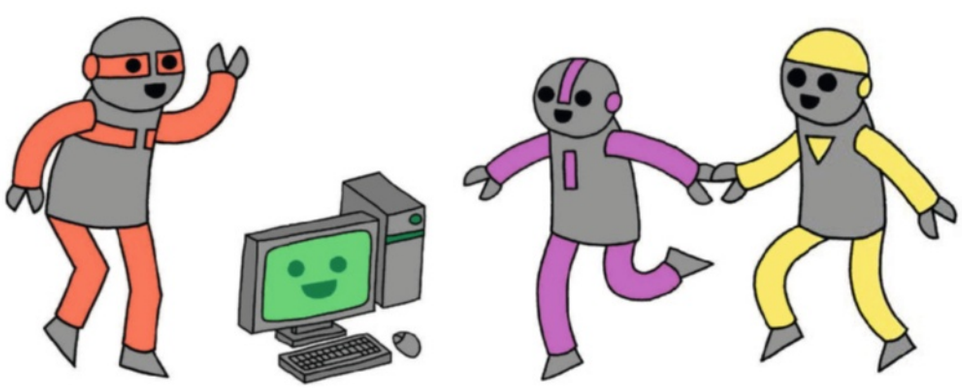
Code Club is a nationwide network of volunteer-led after school coding clubs for children aged 9-11.

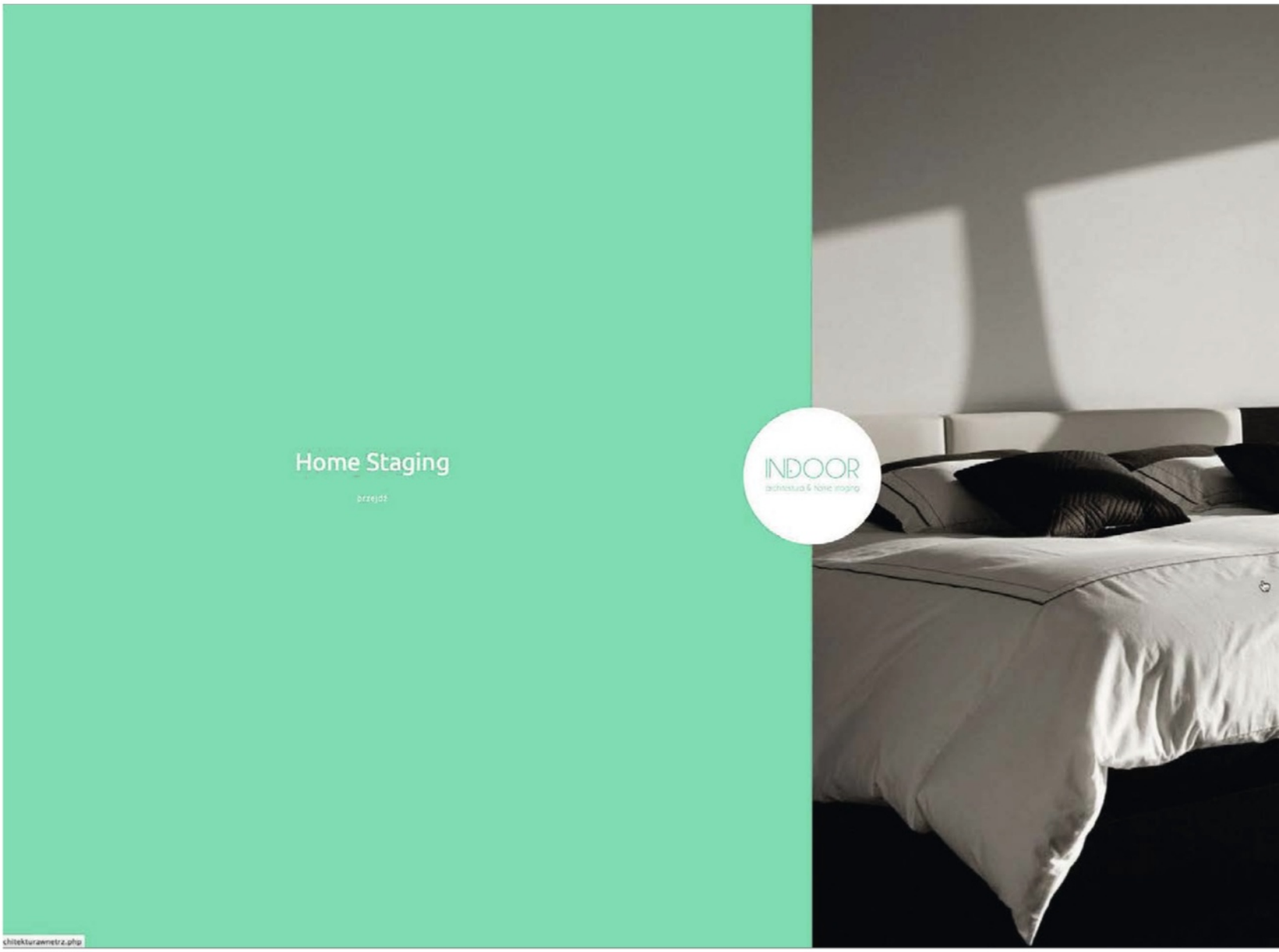
We need people who know how to program computers to volunteer to run a club at their local primary school, library or community centre for an hour a week.

We create the projects for our volunteers to teach, the projects we make teach children how to program by showing them how to make computer games, animations and websites.

Get involved, let's teach the next generation to code!

Visit **www.codeclub.org.uk** to find out more





<Above>
• The site opens to two halves assigned to home staging or interior design, targeting services towards differing customers

#1BE4A4 #FCFFD2
#E6E7E8 #F8F8F8
#E0E0E0 #FFFFFF

<Above>
• Simple support for Pinterest is seamlessly integrated to allow visitors to clip and share inspiring images to their profile

<Above>
• Panels of photography, neat nuggets of text and plenty of white space ensures a boutique designer feel

<Above>
• The site uses an array of jQuery plug-ins including ZURB's TwentyTwenty for comparing images

Studio Indoor

studioindoor.pl

Development technologies HTML5, CSS3, JavaScript/jQuery, Sublime Text, Pinterest

Designer **Karol Podlesny**

karolpodlesny.pl

When it comes to interior design for your browser, this classy showcase website sticks to trusted standards to deliver 'Polish' aplenty

Designing to satisfy the design conscious can be delicate. On one hand you could reach those most appreciative of what you do, or risk more discerning criticism. This was the challenge for Polish web-slinger Karol Podlesny when crafting this presence for new interior design firm Studio Indoor. The multi-disciplinary marketing graduate from Gdansk University of Technology has utilised HTML5, CSS3, JavaScript and brochure photography to marry a flat, refined style with subtle page effects.

"The general look represents the open-minded attitude of the client, who loves experimenting with interior design," Karol explains. "The first section was inspired by a kinetic slider of a Lexus website, plus I noticed a skeuomorphic-style camera icon somewhere on Dribbble and wondered how I could elaborate on it. So I produced a set of animated flat icons that enhance the experience."

These aspects all help to add some life to the template when combined with parallax scrolling effects, multiple backgrounds, responsive tables and stylish tooltips – realised with core standards. "Used responsibly they make the internet a better place and that is why I love them. Now web designers are able to craft more interactive and mobile-friendly websites. My favourite tool though, is the text editor Sublime Text. I prefer designing in the browsers, rather than Photoshop. Most of the animations are made by combining CSS3 and JavaScript, plus well-known scripts such as Stellar.js and Swipebox."

abcABC
123456789

<Above>
• Ubuntu is an open font style designed by Dalton Maag and will be familiar to those within the Linux community

> "Most of the animations are made by combining CSS3 and JavaScript, plus well-known scripts Stellar.js and Swipebox"

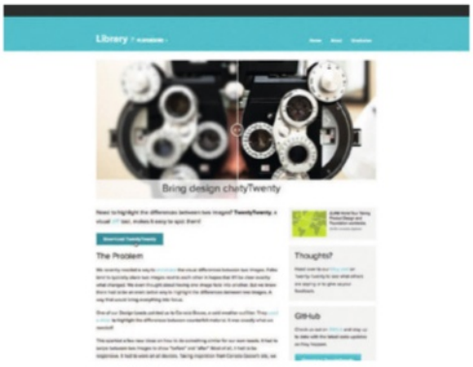
Build an image comparison component

Full code found on the resource CD

Overlay a pair of images and make before and after transitions using the TwentyTwenty jQuery plug-in as featured on studioindoor.pl

01 Download TwentyTwenty

For the image comparison widget on **StudioIndoor.pl**, Karol uses a jQuery plug-in called TwentyTwenty by ZURB. Here we will show you the basics of setting up this neat component as well as certain CSS tweaks for overriding the default styles as desired. Begin by visiting **zurb.com/playground/twentytwenty** and clicking the Download TwentyTwenty button before saving the 'twentytwenty-master.zip' archive and unpacking.



02 Attach the plug-in

With the archive unzipped you will crucially have access to the 'css' and 'js' folders. From these you need to copy the 'twentytwenty.css' file as well as both the j'query.twentytwenty.js' file and the bundled 'jquery.event.move.js' plug-in to enable the 1:1 slider movements that TwentyTwenty utilises. These must be attached to the top and end of your HTML page as follows, along with the latest jQuery CDN link.

```
001 <head>
002 <link href="twentytwenty.css" rel="stylesheet" type="text/css" />
…
003 </body>
<script src="http://code.jquery.com/jquery-1.10.1.min.js"></script>
004 <script src="http://code.jquery.com/jquery-migrate-1.2.1.min.js"></script>
005 <script src="jquery.event.move.js"></script>
006 <script src="jquery.twentytwenty.js"></script>
007 </html>
```

03 Ready the images

For the images you'll want a pair of identical size pictures, most likely showing the same subject but with subtle differences between them.We have two shots, both with dimensions of 720 x 540px, named 'before_shot.jpg' and 'after_shot.jpg'. Place your images in the page root and embed them inside a element within the <body> of your page. Set a suitable id for the as we will pass this into the plug-in function. Adding the CSS class 'twentytwenty-container' is optional for avoiding a Flash Of Unstyled Content (FOUC).

```
001 <body>
<div id='twentyBox' class='twentytwenty-container'>
002   <img alt="Esprit Photo" src="before_shot.jpg" height="540" width="720">
003   <img alt="Esprit Negative" src="after_shot.jpg" height="540" width="720">
004 </div>
```

04 Call the plug-in

Here we are basically attaching the main twentytwenty() function to the element containing our images, upon page load. Add a new <script> tag, inserting the following small snippet of code below between them. Make sure this goes after the <script> tags added in Step 2, just before your page's closing HTML tag. Notice we can add the default_offset_pct option parameter to set where the drag handle appears by default – this is optional.

```
001 <script>
002   $(window).load(function(){
003          $("#twentyBox").twentytwenty({default_offset_pct: 0.6});
004   });
005 </script>
006 </html>
007
```

05 Layout fix

Should you save and test now in your browser, it's likely the default grey hover overlay will overflow the container. To avoid this we can simply place a containing around '#twentyBox' and set the size via CSS to wrap exactly the images. In our example we have it centred and with a grey padding border. Whatever subsequent page styling you choose, the component itself should be working as expected.

```
001 CSS:
002 .myContainer{
003 background:#999;
004 margin:10px auto;
005 width:720px;
006 height:540px;
007 padding:30px 40px;
008 HTML:
009 <div class="myContainer">
010 <div id='twentyBox' class='twentytwenty-container'>
011 <img alt="Esprit Photo" src="before_shot.jpg" height="540" width="720">
012 <img alt="Esprit Negative" src="after_shot.jpg" height="540" width="720">
013 </div>
014 </div>
```

06 Override default styles

Styling of the twentytwenty component can be further customised by overriding certain CSS classes from 'twentytwenty.css'. These can be added to your page <head> or you could edit the file itself to make more definite changes. The CSS example below basically changes the hover overlay colour to yellow and the hover labels to blue. You will notice that the label text can also be edited.

```
001 .twentytwenty-before-label:before, .twentytwenty-after-label:before {
002   background: rgba(28, 23, 230, 0.3);
003 }
004 .twentytwenty-overlay:hover {
005   background: rgba(230, 198, 23, 0.5);
006 }
007 .twentytwenty-before-label:before {
008   content: "PHOTO";
009 }
010 .twentytwenty-after-label:before {
011   content: "NEGATIVE";
012 }
013
```

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Project	**Graffiti Général**
Web	**www.graffitigeneral.com**
Agency	**BETC DIGITAL for BETC Paris**
Web	**www.betc.com**
Duration	**6 months**
People involved	**15**
Total hours	**1 week of photo shoots, (3,454 indoor photos, 1,398 outdoor photos) 351 photos showing details and surfaces 255 hours of touch-ups & 880 hours of modelling**
Project budget	**N/A**

BETC has done an impressive job of bringing the building to life online

Art for everyone

HTML tagging never looked so good. We investigate how international advertising agency BETC turned a derelict mecca for street art into an ambitious online graffiti experience

The question of what constitutes art is as contended today as it has ever been. Philosophers through the ages have indeed wrestled with such a quandary, not to mention the very artists themselves. The development of contemporary art movements have only gone on to muddy the waters, often subverting our typical perceptions to the point of parody.

One of the most recent trends has been to populate the world's trendiest gallery walls with works more normally associated with inner-city decay. Street artists such as Banksy have elevated graffiti to highbrow status, clashing starkly with its traditional status as criminal vandalism. This mainstream acceptance provides a necessary backdrop to our featured project, named as such that you may be forgiven for expecting a gritty, urban hospital-based soap opera.

Graffiti Général is, in fact, a quite beautiful digital project for capturing a significant building found in a Parisian suburb. The derelict warehouse known as

> Graffiti Général is, in fact, a quite beautiful digital project for capturing a significant building in a Parisian suburb

'Magasins Généraux' has become a concrete canvas since abandoned in 2004, gaining artistic and cultural significance in the process. With the site set for transformation into the new headquarters for advertising agency BETC, an in-house design team settled on a rather unprecedented idea.

All 20,000 square metres would be painstakingly photographed and virtually rendered via a WebGL 3D tour, giving grafitti fans a chance to view every paint-daubed wall from the comfort of their browsers. "Fluid to use, with exceptional form and colour rendition and a vivid reconstitution of the sound environment and special atmosphere of this singular site, Graffiti Général offers a breathtaking 3D sensory experience," as BETC itself describes the site. "Users can stroll through the building at their leisure, exploring its corridors and its several floors."

Far from merely a passive experience, visitors can also engage with the surroundings by adding new artwork. A specially designed painting module allows custom scrawls to be previewed, saved and published in just a few mouse clicks. Transforming the experience into an ever-evolving entity rather than merely a virtual mausoleum to murals past, the whole thing oozes with rich layers of interactivity. So, given the chance to ask the good people at BETC Digital about the site's genesis, we weren't about to brush over the cracks. Given the unorthodox nature of the project then, how did the idea for Graffiti Général materialise in the first place?

"When a temple to graffiti art is transformed into an advertising agency, the question of the transmission of heritage is inevitably raised," explains BETC founder and creative director Rémi Babinet. "In choosing to install our agency in the Magasins Généraux at Pantin, we were conscious of our duty to preserve as many pieces of artwork as possible. However, the nature of this art form and the way it is realised presented us with a dilemma."

It seems very early that the notion of this project revolved around adding a deeper experience than merely capturing a snapshot of the building as it was. This would move Graffiti Général beyond the realms of a web-based time capsule and something the community could grab a hold of and reshape its own way. "The very essence of graffiti is that it is continually over-painted by new works," Babinet continues. "Preserving the works as they are, freezing them in time at an arbitrary date in the life of the building did not really make sense. At the same time, renovating the building by destroying the thousands of artworks that have given it the unique identity it has today was unthinkable.

The Graffiti Général project provides a solution to this contradictory problem through an initiative that is consistent with the very spirit of graffiti art: preserving the current state and atmosphere of the building and its works on the eve of the reconstruction while still allowing it to continue to live and evolve through an unprecedented virtual experience."

Outside of this desire to deliberately complicate the scope of the work, the BETC Digital team would face an inevitable obstacle. The majority of projects featured by Design Diary are based around an agency working for an external, third-party client. Of course here we have an internal design team in effect commissioning themselves to tackle a very personal idea. This would be more of a labour of love, perhaps a neat test case for future projects and certainly an admirable promotional story. That said, it would still require the kind of discipline and commitment

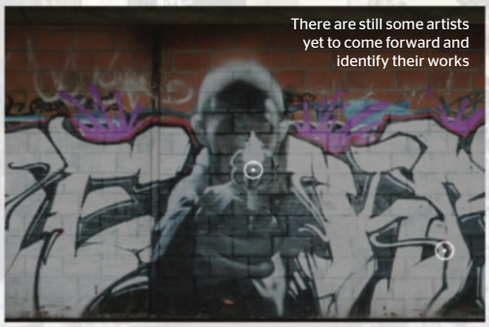
Monsieur Chat, by Thomas Vuille

ALL ABOUT THE ARTIST

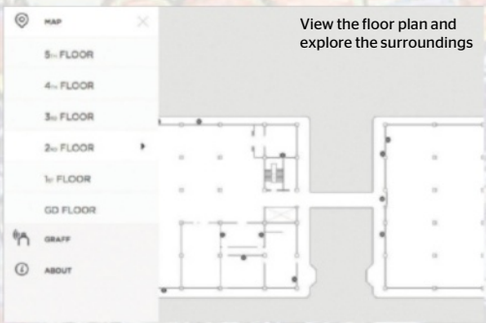
Monsieur Chat [Mr Cat] is the graphic creation of the Franco-Swiss artist Thomas Vuille. His child-like paintings of smiling cats painted in acrylics appeared in 1997 in various provincial towns before decorating the rooftops of Paris at the beginning of the 2000s.

Vuille describes the work as 'full of fun and good humour' and *Monsieur Chat* subsequently became the theme for a 2004 film by Chris Marker entitled 'Chats perchés' [literally 'perching cats' but also French for the game of tag]. It was projected at the Pompidou Centre where the artists, with the Centre's permission, covered the whole of the esplanade with an immense yellow grinning cat.

Since then, as a confirmed street artist, Thomas Vuille has painted across the world and participated in numerous exhibitions and festivals.



There are still some artists yet to come forward and identify their works



View the floor plan and explore the surroundings

required by more traditional development lifecycles: "A project this ambitious for one's own company is paradoxically more stressful than a client project," concurs BETC Digital CEO Ivan Beczkowski. "Firstly you've got no excuses with fewer constraints, approval amongst colleagues, total conceptual and creative trust. Plus, it's always difficult to talk about yourself. You need to know how to enjoy this freedom, knowing where to set limits on people's commitment and passion, in order to keep deadlines and stay within timings."

One of the advantages the team did have in this instance however, was an unflinchingly rigid source of inspiration. The building itself was the focal point and really held everything the designers needed between its many multi-coloured walls. It was in effect a silent client, not prone to budging on a whim when it comes to stipulating the requirements the project should fulfil. "An abandoned building is not a product like another," Beczkowski continues. "It's destined to disappear, to be transformed. What you see, no one else will again. We all knew that the experience of visiting the building was our most important source of inspiration. We didn't yet know what we could do with it, we just wanted to share the experience... we wanted to say 'Now it's your turn'."

Those visits to the building would of course become essential and more frequent as the project moved into the practical phase. In regards to the visual design process, Graffiti Général rests entirely on the front-end and a graphics-heavy virtual tour. This needed to be modelled as a 3D space but also would require an intensive image capture exercise. A vast collection of photos of the building exterior and interior were collected

> "You need to know how to enjoy this freedom, knowing where to set limits on people's commitment and passion"

PERFECT PERFORMANCE

WEBGL AND HD ARE VERY BANDWIDTH INTENSIVE. WHAT PROBLEMS DID THEIR IMPLEMENTATION BRING TO THE PROJECT AND HOW WERE THEY RESOLVED?

There were two key challenges with this website in particular: performance and loading time.

Performance was mostly because of the sheer size of the 3D model, the detailed walls and objects in each room and the additional particles and light effects, we've had to find creative ways of dealing with performance. First of all we decided to cut out the building in smaller areas or rooms, then we made sure to hide the model while Three.js was loading it and we hid textures in memory, to stop the initial lag. Finally, we even had to force the browser to clear the memory by refreshing the document in between each room.

In terms of load times, as all websites with an international reach, we've made sure to use a vast content delivery network (Amazon Cloudfront) in order to optimise static assets serving in all regions. We also gave the user a choice of resolutions for textures, leaving him/her the decision to either wait for a better experience, or quickly enjoy the interactivity. And finally, we automated the static assets concatenation and compression using Grunt as part of our deployment workflow (controlled with Jenkins). Perhaps most importantly, we were making sure that continuous deployment was set up from the very beginning of the project.

over roughly the space of one week, and readied for mapping onto virtual surfaces. "The stars of this website are the building and its graffiti. It was a titanic job to reference and capture every square metre of space. More than 5,000 photos were taken in total." This is, of course, astounding in itself, but he goes on to stress that there was even more to it than simply trying to re-create.

"Then of course, this physical place and the style of the graffiti had to take precedence over our interface," Beczkowski continues. "Graffiti Général is graphically designed as an application, as software. The elements of web design had to be as simple as a cultural venue's signage. The resulting motion design elements combined the spirit of a Parisian industrial building and Brooklyn-style graffiti street culture."

Moving over to development, again the coding was very much focused on realising the visual experience. Effort was trained around 3D JavaScript library three.js for plotting models onto the canvas element, backed up by PHP5 framework Kohana. Perhaps the biggest surprise is the size of the development team given the impressive performance of the final product.

"Most of this project's development is actually frontend, primarily three.js and (HTML5) canvas. However Kohana was used as a back-end framework to speed up the development and localisation effort, with Jenkins configured for continuous integration. The development team consisted of two senior developers, one focusing mostly on the 3D modelling and rendering, while the other focused on the website's layout and the graffiti feature. The biggest coding challenges were finding the most efficient workflow to model the entire building from the pictures taken on site, while enabling colour calibration from the web design team. Secondly, the enabling of users to graffiti freely on walls, in 3D and while moving, hence the need for mapping their 3D movements onto a 2D plane realistically. Last, dealing with transparency through windows inside & outside of the building."

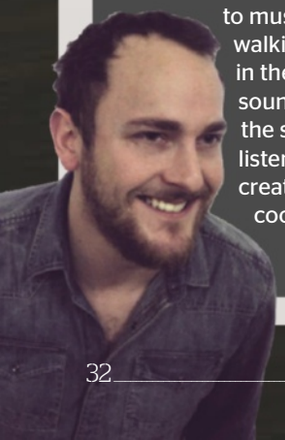
Most will agree that the end result at **www.graffitigeneral.com** is jaw-dropping, especially for those connected adequately to enjoy the full high-definition version. Impressive as it is however, the site continues to feel a little like an undiscovered gem – retaining the underground factor so indicative of the graffiti art scene. As the folks at BETC reveal, the project could not rely on

THE BIG QUESTION...

GIVEN THE GREAT MUSIC FOUND ON GRAFFITI GÉNÉRAL, WHAT BAND OR ARTIST WOULD PROVIDE THE PERFECT BACKGROUND TRACK FOR CREATING YOUR OWN GRAFFITI?

JULIEN DERREVEAUX
ART DIRECTOR

"I actually don't listen to music while walking or painting in the building, the sound design for the site itself, if listened to loud, creates a pretty cool atmosphere."



ROMAIN PERGEAUX
COPYWRITER

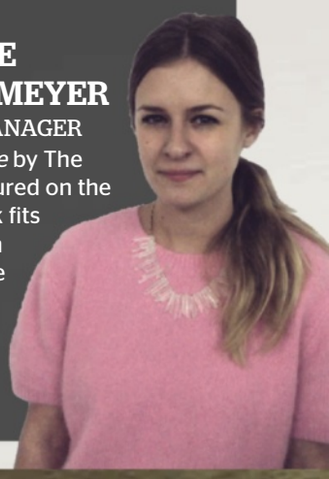
"*Sabotage* by Beastie Boys because the high adrenaline in the graffiti is present in the rhythm of this song."

CHRISTOPHE CAURRET
BETC MUSIC CREATIVE DIRECTOR

"Sporto Kantès and *Lee* is a perfect background track for doing graffiti in the virtual building, with all its rhythm changes. I feel like a ninja when I'm listening to this track!"

CAROLINE MELODY-MEYER
ACCOUNT MANAGER

"*Time to Dance* by The Shoes (as featured on the site). This track fits really well with the spirit of the building, it's catchy and inspiring!"



One of the walls is dominated by this extraordinary work from Julien Malland, an artist simply known as Seth

A beetle, a work by Itvan Kebadian, attracts attention from across the room

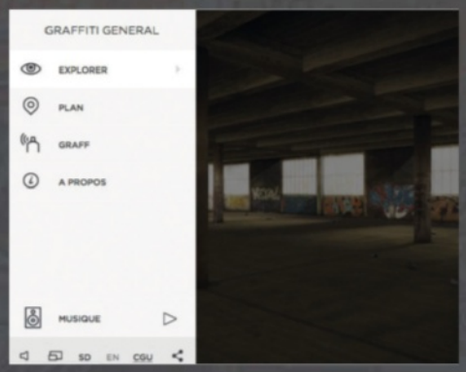
the usual marketing resources enjoyed by big commercial launches. Instead, the site has amassed an admirable following by being talked about between visitors and press, leveraging opportunities like this to spread awareness: "As an internal cultural project, Graffiti Général has no media budget for its launch," Beczkowski reveals. We relied solely on the interest of the media and on word of mouth. Before reconstruction work started, we invited journalists to visit the building and presented the website in one of the rooms. The risk paid off, as the project has since created a buzz, with more than 60,000 people visiting the building and 35,000 new virtual pieces of artwork created on the site."

Somewhat aptly, the site after launch has relied on journalists to fulfil a role as an on-going research project. In order to make Graffiti Général an evolving document of artistic works it has reached out to various sources and experts to identify the various daubs. Perhaps the biggest triumph has been the ability to bring artists, fans and even potential employees together around the content and inspire more great work.

"Graffiti Général will continue to be a living project. With the help of a specialised journalist, we've already identified 40 major pieces and their artists, in the building. Visitors to the site can see these artists' biographies and interviews. In the future, we're sure other graffiti artists will step forward to identify their work, allowing us to update the site. The online artwork module allows visitors to the building to create their own artwork. It's become a real communication tool and some users are leaving messages such as requests for internships, for example!"

Users have since contributed to the online rendering of the building

> The project has created a buzz, with more than 60,000 people visiting the building and 35,000 virtual pieces of artwork created



BREAKING DOWN BARRIERS

LANGUAGE CAN BE A BARRIER FOR MANY WEBSITES. HOW WAS IT DECIDED WHICH LANGUAGES WERE TO BE USED AND HOW WERE SOLUTIONS IMPLEMENTED?

While the idea and message of our digital projects are transferable across any border and culture, the Pantin building and its meaning to local Parisians, and thus French community is very significant. We have built this site to become an international story board, but also a tribute to local graffiti mecca.

For these reasons and also, since this digital experience doesn't intend or have to drive traffic, there were no calls for the visitor to buy, order or register for anything, so we chose to implement French (local) and English as the two main languages. The language function has been implemented as a JSON language file.

Cyber-Duck

who Cyber-Duck
what A specialist in UX and design, Cyber-Duck builds next-generation digital platforms
where Elstree House, 12 High Street, Elstree, WD6 3EP
web cyber-duck.co.uk

Key clients

The European Union
Maxi / GSK
BAM
Eurofighter Typhoon
Arsenal FC

Custom creations

Strategy, design, build and support are the foundations onto which Cyber-Duck has built a reputation, defining a deep appreciation of how design interacts with its users

Founded in his North London flat in 2005, Danny Bluestone had spent many years working for large communications and digital agencies including Ogilvy Interactive, Glue Isobar, Line Communications and Endomol. Danny believed that user experience should be central to the design process, and after realising he could build a very different digital agency of his own, Cyber-Duck was born.

Danny designed the initial logo for the company in 1998 while he studied computer graphics and visual communication design in Tel Aviv, Israel. During one particular class, each student had to design a geometrical shape based on their favourite animal. When Danny moved to the UK, he had a period of freelancing and realised that he needed to come up with a name for his business idea. He decided to use the duck, combining it with the word 'cyber' due to the emergence of the internet and cyber surfing at the time.

Cyber-Duck as a company has grown completely organically from its inception to the team of 24 that it has today, with primary studios in Elstree, Hertfordshire and a satellite office in Canary Wharf. The Cyber-Duck name is incredibly important to the agency, as this represents the fun, quirky and focused energy that exists in the office – which is decorated with plethora of rubber ducks.

Matt Gibson, production director said: "Many of the agencies around that time Danny founded the company were also trying to fit digital into their existing workflows, which made the digital stuff very siloed. They would often have different departments or even different businesses working on elements of the digital campaign. For us, the integration of these elements was vital. We have a team of researchers, designers and developers that all sit next to each other – meaning they can each draw on their respective expertise.

"Our user-centred process works extremely well. All aspects of the team work closely together from the start of each campaign to ensure we always deliver outstanding results. A key facet of our process is that it's flexible enough to accommodate any kind of client."

Cyber-Duck

Researchers, designers and developers all sit together in order to draw on each other's expertise

industry insight

Danny Bluestone, Founder and managing director

"We focus on projects where we can make a real difference by using our proven user-centred design process and planning the appropriate technology and systems architecture from the outset"

An agency can attract its clients in many different ways, but for most their web presence is of paramount importance as it is often the very first point of contact. Danny explained: "Our website is our biggest sales tool. It's the face that many prospects and customers will first interact with before meeting us and therefore it needs to represent who we are as a company, the great work we do and the technical capabilities we have. We tend to iterate our website every year and are just in the process of starting a further evolution.

"Early in 2013 we completely overhauled our website, moving towards a responsive design. This coincided with a massive increase in the number of mobile and tablet visitors and performs much better in terms of driving quality project briefs our way.

"Controversially, in 2013 as part of our website revamp we removed our CMS (apart from the blog). While we regularly keep the blog and portfolio updated, much of the site just requires the occasional design tweak. Therefore, we couldn't justify the performance footprint of the CMS, mainly because we're all proficient coders here and updating the site would still be quick and easy."

Cyber-Duck is also active in product development and the development of their community. Writing for all of the leading digital design magazines including **Web Designer**, Danny continued: "We also run our own popular London-based meet-up event called The Digital Pond (**www.thedigitalpond.com**) with over 900 members where we have speakers from across the industry impart their experiences and knowledge with our audience."

Matt also explained how Cyber-Duck chooses the clients it works with: "We always insist on meeting the clients that approach us, as it's vital that they are a good fit with our agency. We always try and get a feel for their culture. It's as much about us

"Our website is our biggest sales tool. It's the face that many customers first interact with"

Cyber-Duck timeline

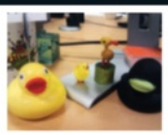
Established **2005**
Founder **Danny Bluestone**

2005

Number of employees **2**

2006

Cyber-Duck is officially founded by Danny in his North London flat.



Sylvain joins as development director and Cyber-Duck begins working with certain key clients that it still works with today.

Number of employees **4**

2007

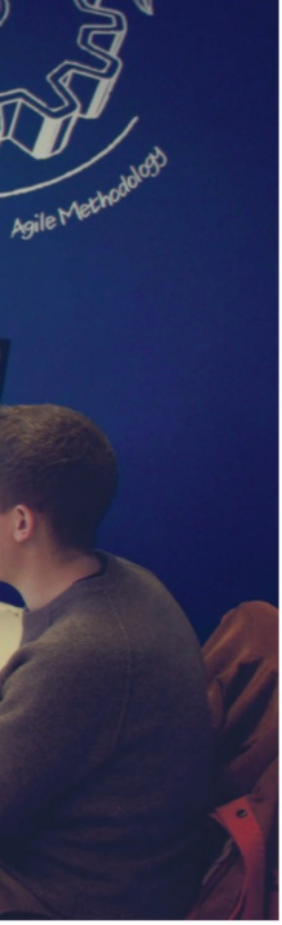
Cyber-Duck is getting recognised for its work, winning several awards and Matt joins as production director.

Number of employees **6**

2008

As the team continues to grow, the Ducks move to a bigger office.

Number of employees **9**



AGENCY BREAKDOWN

- Directors
- UX designers
- Strategy managers
- Senior visual designer
- ASP.net developer
- PHP developers
- Online marketing manager
- Accountant
- Technical lead
- IT/hosting manager
- Front-end developers
- QA analyst
- Marketing executives
- New business executive

interviewing them, as it is them interviewing us. A lot of this is based on a gut feeling that we have developed over the years. You know if a client is going to be a good fit for your company, and that you are going to be able to work with them as, ultimately, design is about working with people. Also, we have a talented team in-house, and we want them to be working on interesting and engaging projects."

Danny continued: "We are definitely selective regarding projects we take on. You have to be, and we've learnt a lot of this through experience, knowing how to profile and check [whether] a client will be a good fit for us. Because of how we work we won't tend to take on small budget projects (unless they are consultancy-based) and take on development projects where the design did not go through a user-centred design process.

"We focus on projects where we can make a real difference by using our proven user-centred design process and planning the appropriate technology and systems architecture from the outset. Typically we are involved from the very start of the project through to QA, delivery and support using a mixture of design, UX and technical skills, although it's not always the case. Sometimes, we are hired more for our UX skills and sometimes more for our technical expertise where we help to support and troubleshoot complex technology projects. We turn down work if during early meetings we can see the project conflicts with another client or the client's culture and values don't match our own. Obviously we turn down work if it is not the best use of our expertise."

After some time, agencies tend to become associated with a certain type of digital work that defines their company. Danny outlined one project that gives an insight into the ethos that Cyber-Duck lives by: "The website we produced for the European Union several years ago. Why? It's had a massively positive impact on the UK and Europe as a whole, and we worked really closely with them right throughout the process from research to information architecture (taking a complex and expensive pamphlet and turning it into a fun, easy-to-use website) to prototyping, usability testing and visual design right through to a responsive front-end and CMS development. They were great clients to work with. We had full support of their team and worked together well to create a project

<Above>
Digiredoo has revolutionised how travelling passengers read

DMD

www.dawsonmd.com

Dawson Media Direct is the world's leading supplier of newspapers and magazines to the airline and travel industry. They came to Cyber-Duck with a vision to modernise the way travelling passengers consumed magazines and national newspapers. This project, named 'Digiredo', was about giving international rail travellers in London St Pancras the latest, best-selling publications electronically, helping to reduce their carbon footprint and improve the convenience of news consumption.

Cyber-Duck worked with DMD to design, build and host a responsive web application, allowing passengers access to the content ranging from daily newspapers to various magazines optimised for their browsing device, regardless of whether they were using a laptop, tablet or smartphone.

From the initial brief Cyber-Duck planned and delivered the project in accordance with its proven, ISO-accredited user-centred design process. This meant that they were regularly conducting usability testing with both stakeholders and customers in situ at the London St Pancras travel lounge, so it was possible to understand them and the environment better and deliver the best possible experience.

The 'Digiredoo' web app has been a revelation, engaging hundreds of thousands of travellers on a plethora of devices. Thanks to this success,it has since been adopted by major airlines and is now available in airport lounges across the world.

2009 — Number of employees **14**

Danny is a guest speaker at several events, including at BAFTA, where he presents Cyber-Duck's first iPad app.

2010 — Number of employees **19**

Cyber-Duck begins working on more complex web applications that show off its technical abilities.

2011

Matt is featured on Channel 5's *The Gadget Show* and the Ducks move again into a 500-year-old building.

2012 — Number of employees **21**

The Digital Pond launches, Cyber-Duck is listed as a Deloitte Fast 500 Company and several Ducks became parents.

2013 — Number of employees **22**

Danny is a BIMA Hot 100 personality, Matt is featured on the BBC, Cyber-Duck is ISO 9001 certified and mentors a winning team at Young Rewired State.

Number of employees **24**

Cyber-Duck

<Above>
Cyber-Duck turned BAM reports into a responsive site

BAM Sustainability

sustainability.bam.co.uk

Cyber-Duck has been working with BAM, a major European construction company, for over five years. When BAM approached Cyber-Duck to transform their annual Sustainability Report into an easy-to-read responsive website, Cyber-Duck was delighted to help. BAM cares deeply about sustainability, leading their industry and creating buildings that work better with zero impact on the environment; a philosophy that Cyber-Duck supports.

The purpose of the website was to communicate BAM's success and knowledge within sustainable construction, as well as display the key findings of BAM's own annual Sustainability Report. The site was built using Perch, a lightweight and responsive CMS so that BAM could update their content and share data on their achievements quickly and without hassle, no matter what device they're using.

The project kicked off by conducting research to better understand the behaviour, motives and expectations of BAM's Sustainability Report readership. By understanding the audience the content could be planned into a logical structure. Colour was used specifically throughout the website to emphasise this structure; each section of the website has an associated colour. This helps to facilitate navigation through the website.

Cyber-Duck created an immersive reading experience on the homepage using animated infographics to highlight key information in the report as the reader scrolls. From early usability studies it was found that users wanted to see examples of how BAM puts what it says into action, so case studies were made a key feature of the website. BAM has plenty of stunning photography of their key construction projects, which helped Cyber-Duck when creating engaging case studies.

The responsive website looks spectacular and works fabulously on any screen size from tiny mobile screens right through to large desktops. Since the launch in late 2013, it has won many plaudits including an Awwward special mention. Though time will tell, the new website seems to have helped BAM increase readership of their Sustainability Report and promoted BAM's Sustainability team as thought leaders in the industry.

The team work away in their new offices – a 500-year-old building

that has won awards, got featured on the BBC and has helped them achieve their original objectives."

All agencies have their own particular working practices with some adopting the agile methodology. "Our preference is to work long-term with clients. This way they see the biggest impact of our involvement through our user-centred design and R&D approach," said Danny. "We've been working with some clients for about seven or eight years since our inception!

"Timelines really depend on the scope and complexity of the project," Danny continued. "We combine agile methods with user-centred design to ensure that iteration is built into our process – so on certain projects we will deliver earlier and then build upon it. This is the approach we've taken with overhauling Eurofighter Typhoon's web presence. We designed, built and launched the initial iteration of their new website in just five weeks last November. Since then we have been making constant iterative developments and improvements, making sure to incorporate both stakeholder and user feedback and insights."

With a diverse range of tools now available across the digital design environment, Cyber-Duck, like its contemporaries, has developed an affinity for a

Pen and paper sketching and Post-It notes form an early part of Cyber-Duck's design process

<Above> A wall of art references the era of classic games

The ducks take pride of place next to Cyber-Duck's many awards

number of the offerings – and even developed original ones themselves. Matt outlined their approach: "Our design team uses a variety of tools in our process. From pen and paper sketching and Post-It notes very early on to creating functional prototypes using either Axure, or simply by coding in HTML/CSS with a sprinkle of JavaScript. For more high-fidelity visual sketches we use Adobe Photoshop, Fireworks and Illustrator, though we've been trialling tools like Sketch App and Adobe Edge to see if these can help us explore responsive designs before getting into production-ready code.

"The development team uses a mixture of tools such as Source Tree and Bit Bucket for managing git version control and Grunt for deployment. We use a variety of tools like Sass for CSS pre-processing. As an ISO 9001 certified business, processes are important to us. We use operational tools like Harvest for time-tracking and financial reporting, Trello for managing backlogs, Basecamp for project collaboration and both Jira and Zendesk for support tickets and bug tracking."

Danny elaborated further: "We love all the latest Web technologies. We love contributing them through Open Source projects, whether we're doing R&D or during the regular hackathons we hold and attend throughout the year. These are an opportunity for us to work with newer technologies such as the MEAN stack – Mongo, Express, AngularJS, Node.js. We've also been working with one client since 2013 to do some really exciting stuff with HTML5, PHP and Web RTC to create a really original and immersive user experience.

"The hack events yield some great projects and breakthroughs that enhance our skillset and what we can offer clients. They can benefit the wider community too – we've built an application to make it easier for teachers, pupils and parents to communicate and work together called Homeworker.io. These mini products also benefit our internal operations. One example is where we've built an application called Lead Forecast, which lets us see enquiries that come in and track them from the initial contact to signing an agreement – it has enabled us to be more effective with our sales – we're planning to make it available in 2014/2015.

"Also, we tend to focus on the latest modern browsers, though by using a progressive enhancement approach to responsive design, we can ensure our designs are backwards-compatible with older browsers too. The browsers we test are defined by the clients' audience – if they still have a large proportion of IE users, it would be irresponsible of us not to test and ensure their website at least functions in that browser. We're very careful to explain that websites won't look and necessarily behave the same in every browser to clients early on so that their expectations are managed."

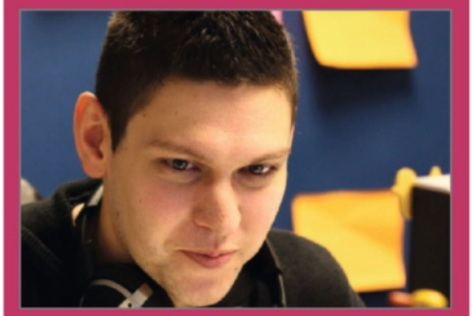
And how important is responsive design to Cyber-Duck? "We're massive advocates of responsive web design; that is, websites that are designed from the outset to work flexibly on any device or screen size," said Danny. "We don't know what weird and wonderful devices and screen sizes the next few years will bring, so our content and designs need to be able to adapt for these unknowns. Quite a few of us regularly speak at events and conferences and run workshops about responsive design with tips for development, speed and performance, design and user experience for other people – sharing is our favourite aspect of working in the web, we benefit massively from it and we try to give back (or pay it forward) as much as we possibly can.

"We've seen that when responsive web design is executed well it has a massive impact on the performance of a client's website. When people complain that responsive sites are heavier or don't

> "Sharing is our favourite aspect of working in the web, we benefit massively from it"

industry insight

Matt Gibson , Production director



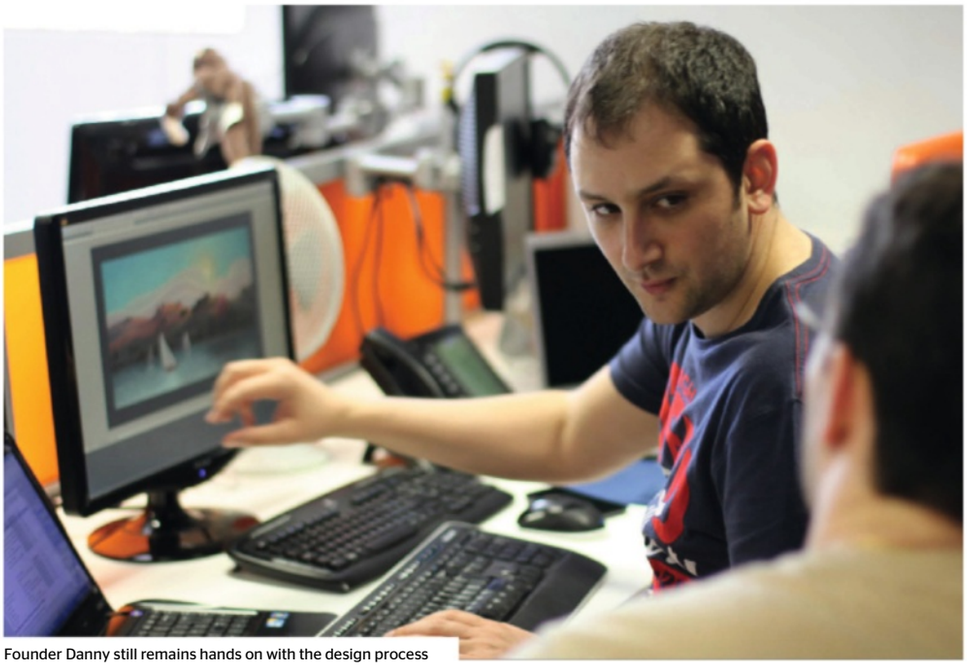
> "When people complain that responsive sites are heavier or don't perform well, we see this as more of an issue with implementation than the technique itself"

The Cyber-Duck team just keeps getting bigger and better

perform well, we see this as more of an issue with implementation than the technique itself.

"Responsive design does not mean that the experience cannot be made to feel custom to mobile and tablet devices, as you can combine it with progressive enhancement to make the experience almost feel native on these devices where they support newer technology. If you design from the small screen up rather than trying to squeeze a desktop site into mobile, responsive can work really well – though it's not a panacea and it's important to pick the approach that's right for the project, as there have been some clients where a separate mobile site was more appropriate.

"We do make apps as well, though we don't see building an app or a mobile-friendly website as an if/or question – the two are not necessarily mutually exclusive. The question is rather about priority and if a client is already getting thousands of mobile visitors to their website, then of course making their website mobile-friendly should be top of the priority list rather than trying to get an app out."



Founder Danny still remains hands on with the design process

On the subject of Cyber-Duck's approach to responsive design Matt said: "We prefer to design from the content-out, so the content shapes the layout and grid, as opposed to having the layout or a framework define the structure of the content.

"As a result we actually built our own mini Sass framework called Hoisin.Scss (duck-related pun alert!) that is extremely flexible, lightweight and does not make any design decisions for us – it therefore gives us complete control over the grid and layout of the website while ensuring our code is semantic, structured and manageable. We open-sourced this project on GitHub to encourage others to fork and adapt it for their own needs: **bit.ly/1fuDJ38**.

New technologies, frameworks and tools are always making an appearance. What has grabbed Cyber-Duck's attention recently? "We have used Node.js to develop financial web apps that display critical data live and in real-time. We're excited about how Node and Mongo can be used to deliver next-generation SaaS applications," said Danny. "Web RTC will help shape new types of rich media interactions across the web using real-time chat, audio and video.

"New standards in security such as those included from the FIDO Alliance the OneID may finally offer an alternative to username and password authentication. The Bitcoin system presents big opportunities to both vendors and agencies to help transform eCommerce and banking in general.

Cyber-Duck
www.cyber-duck.co.uk

As a digital agency specialising in producing award-winning websites, Cyber-Duck's own website is very important to them. At the end of 2012, the agency decided to recreate its web experience as a way of demonstrating its creative and technical abilities as an agency. Cyber-Duck wanted to maintain the strengths of its brand, while modernising its services by overhauling the information architecture of the website.

<Above>
Cyber-Duck embraced responsive design to deliver a consistent message to all of its visitors

Having previously had separate mobile, desktop and tablet websites in place to cater for its ever-growing mobile audience, Cyber-Duck recognised that responsive was the way forward for delivering a consistent message to all visitors, whether on iOS, Android, Symbian mobile devices or Windows and Apple desktop PCs.

As the website is Cyber-Duck's main marketing engine, the agency adhered closely to its user-centred design methodologies, working with some key clients to produce a website that was truly responsive to their needs. The key objective was to enhance the performance of the website so that it loaded quickly on every modern device with a web browser. This meant designing an experience that worked across multiple breakpoints, stripping out the CMS (excluding the blog), optimising every asset on the website and using a content delivery network for faster delivery of assets.

The new responsive website has been a huge success since launch; Cyber-Duck has seen a 200 per cent increase in mobile traffic (and an 82 per cent increase in overall traffic), a significant increase in conversion rates and numbers overall, and a massive reduction in homepage exit rates. Cyber-Duck saw the launch of its new website as the first improvement in its quest for truly responsive design.

"The year of the smartwatches is upon us and we can already see companies like eBay design small apps with a minimal set of features for certain watches. It's going to be interesting to see which operating systems succeed and how our agency gets involved. In short, it is yet to be seen how long the concept of combining the web with what we wear will take to emerge and what sort of web technologies will be used."

So which web technologies does Cyber-Duck particularly favour? "In terms of back-end development we use Laravel, which is an extremely powerful open-source MVC framework with a fantastic community. The most experienced developers worldwide constantly contribute improvements and evaluate each other's code. This means we are always building from a stable, proven and impartially curated platform that only gets better with each update. As a result, the back-end system is easier to maintain and support, as comprehensive documentation is widely available.

"For CMSs and eCommerce, we work with a variety of technologies when appropriate rather than tying ourselves down to one technology – we've been working a lot recently with Perch and Silverstripe as they're lightweight and don't suffer from the same feature bloat that other CMSs have."

Moving onto recruitment, we wonder what kind of qualities Cyber-Duck looks for in a prospective employee and whether they have any advice would they offer anyone looking to step into the industry: "It's probably a given that talent and being personable are the major factors in hiring," Matt commented. "They have to fit in with the culture of the Ducks, someone can be the most talented individual in the world but if they don't work well with others, be it their colleagues or clients, then they are going to struggle."

Danny also outlined his thoughts, focusing on keeping it personal: "If someone is looking to work in a digital agency they should be proactive about shortlisting agencies based on their merits, processes and work. It's also important for job seekers to look outside of central cities as there are some great firms and agencies in the countryside (like Cyber-Duck!). When you find an agency you want to work for, write a personalised cover letter on why they should hire you.

"When hiring we want to know that we are hiring someone who cares deeply about what they are doing. My biggest recommendation for those looking to break into the industry would be to write, whether it's your own blog or contributing to other publications. Your writing can tell us a lot about you, how you approach problem solving which is the biggest skill we hire against – and are able to think critically about design, development, project management and other facets of our industry."

Multi-talented is a word that clearly describes Cyber-Duck, who not only produces groundbreaking UX experiences, but also takes the time to develop a unique community around their agency. The Digital Pond and DuckLabs continue to grow year-on-year, illustrating a commitment to the industry that few agencies can match – and with that kind of enviable reputation, it's little wonder that everyone, from prospective employees to big organisations, is enthusiastic about working with them.

> "We want to know we are hiring someone who cares deeply about what they're doing"

Cyber-Duck®
Award Winning Digital Agency

WEB	www.cyber-duck.co.uk
FOUNDER	Danny Bluestone
YEAR FOUNDED	2005
CURRENT EMPLOYEES	24
LOCATION	Elstree and London

SERVICES

- User experience
- Web and mobile design
- Hosting and support
- Marketing
- Consulting

Joomla!™

20 REASONS TO SWITCH FROM WORDPRESS

Discover the power, features and flexibility of the CMS that can provide an alternative to WordPress

Joomla is one of the most innovative and most storied open source projects around. With origins as far back as 2000, Joomla was at the forefront of many innovations in the PHP/MySQL space that includes WordPress, Drupal, Magento and so many others. It remains the second most popular content management system (CMS), behind only WordPress.

Now with the development of Joomla 3, there is even more reason to get to know the service. Joomla 3 is a fascinating evolution, as it was the first CMS to be completely responsive for both visitors and administrators. This is because the Joomla team has adopted the Bootstrap framework and also the LESS preprocessor. The use of Bootstrap and LESS makes Joomla 3 attractive for front-end designers, but it also makes it much easer for developers to create consistent interfaces for their code. Besides, a lot of work has gone into your initial experience with Joomla 3; the installation process is beautifully fast and you're provided with a variety of sample websites to choose from.

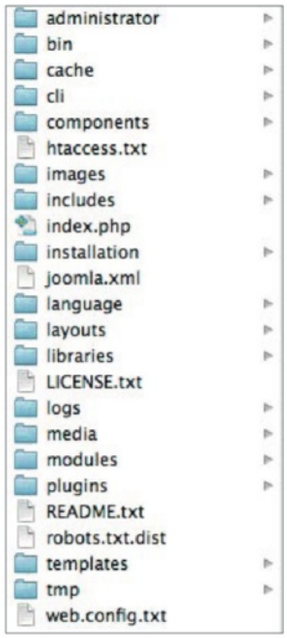
While you've almost certainly used Joomla at some point, if you haven't used it in a while, Joomla 3 provides plenty of reasons to give it a fresh look. It really is possible to get a Joomla 3 website up and running in no time at all – but if you still need more encouragement and convincing, we are going to walk you through just some of the reasons to consider making the jump from WordPress.

DOWNLOAD AND INSTALL

Find out how to download, upload and install Joomla – you can complete the entire process in just six steps

1 Download Joomla 3

www.joomla.org/download.html is the place you'll need to go in order to download the latest release of Joomla 3. This is the recommended version for new sites, although also available on this page is Joomla 2.5, the older, but still supported, version. Get started by clicking the blue 'Download Joomla 3.2' button.

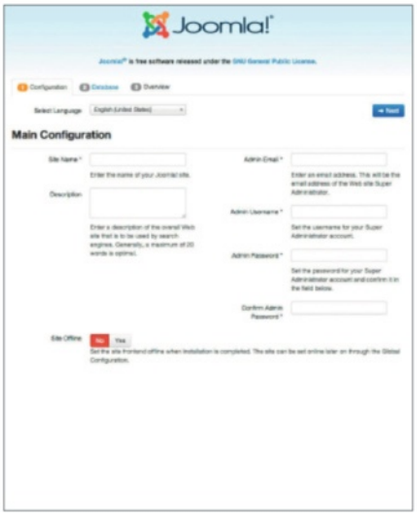


2 Upload Joomla 3

When you download Joomla you'll get a file with a name similar to 'Joomla_3.2.1-Stable-Full_Package'. Extract this file and check to make sure that you see the same files and folders inside as in the image to the left. Upload these files to your server or localhost. It is worth noting here that you will need a PHP or ISS server.

3 Start the Joomla 3 installation

Visit the location of your uploaded files and you'll see an installation screen. This is first of three steps in the installation process. If you're not using English for your site, you can change your language here. Simply enter the name of your site, plus your admin account details. Click Next to move forward with the installation.

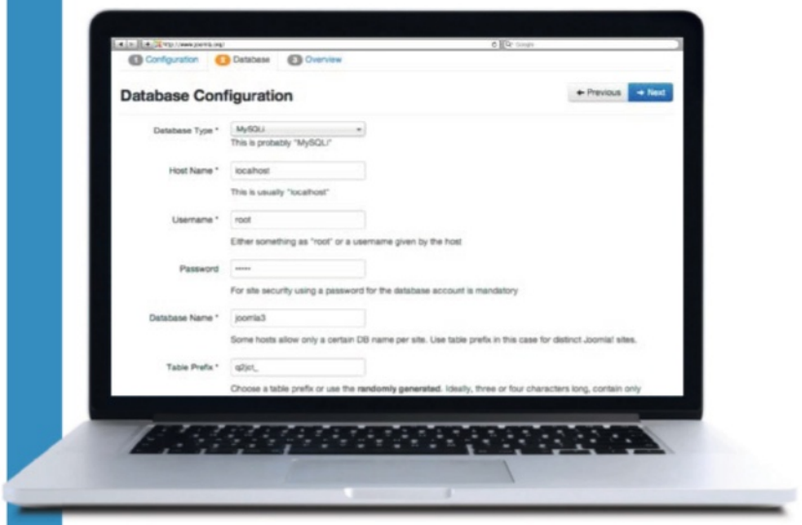


4 The Joomla 3 database

You'll need a MySQL, MySQLi or PostgreSQL database to install Joomla. Enter your database's host name, username, password and name in here and Joomla will then automatically generate a random table prefix to make life that little bit more difficult for hackers (see opposite). Click Next in order to move forward in the installation process.

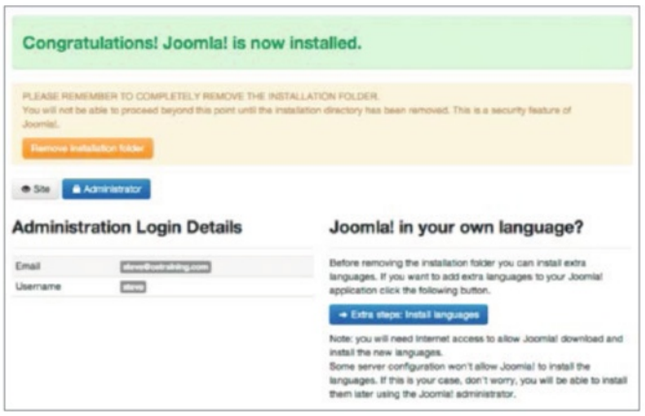
5 Final installation check

The third and final installation screen offers you the choice of different samples. Hover over each sample data set to get an explanation. We're opting for Blog English for this article. Lower down the page is an overview of your configuration settings. Joomla also checks to make sure that your server is properly set up. If anything needs correcting, it will be marked in red. Now all you have to do is click Install!



6 Installation complete

Here you should see a progress bar before reaching a 'Congratulations!' screen. For security reasons we need to remove all the installation process we just used, so click the 'Remove Installation' folder. Next, click Site to visit the front of your newly installed Joomla site.

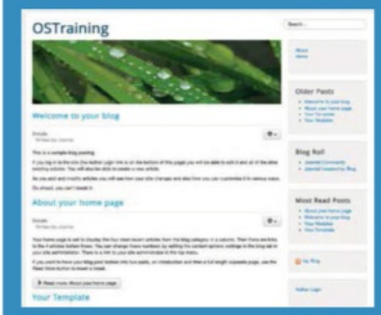


15 TOP FEATURES

Joomla has an outstanding set of features. Here we reveal exactly what makes the CMS so special

The basics of using Joomla

Now we'll demonstrate how to view the visitor and administrator areas of your Joomla site, so you can get going as quickly as possible



1 Your new Joomla site

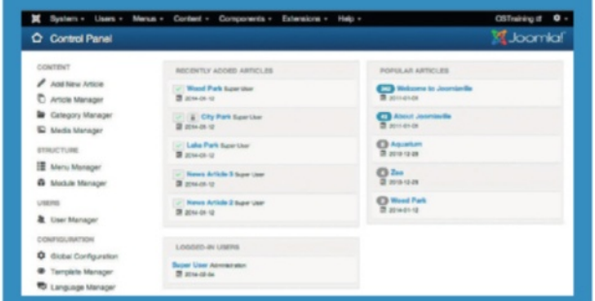
Because of our choice of Blog English for sample data, the Joomla site is set up just like a blog. You will see that there are four explanatory posts on the homepage, simply click on the title of any post to see the full content. There's also a sidebar with typical blog features such a list of Recent Posts, a Blog Roll and a list of Most Read Posts.

2 Joomla gone mobile

As we mentioned earlier, Joomla now uses the Bootstrap framework – have a go at shrinking your browser to see how Joomla reacts on smaller screens. You should find that the search box moves under the title, the image shrinks effectively and the sidebar slides neatly under homepage posts.

3 The Joomla admin interface

The admin interface has been completely redesigned for Joomla 3 and is now completely mobile-friendly. To access it, add the word /administrator/ to the URL of your site. For example, visit **example.com/administrator/**. The main toolbar across the top of the screen contains everything you need to manage your site, while the Control Panel you see after first logging in contains useful shortcuts and information based on that main toolbar.



Multilingual websites

Joomla makes it really easy to create multilingual websites, without requiring any add-ons.

You won't need any complicated add-ons to be able to build multilingual sites with Joomla as during the installation process you have the chance to install other languages in addition to English – in fact, there are over 60 languages for you to choose from, and it's worth experimenting

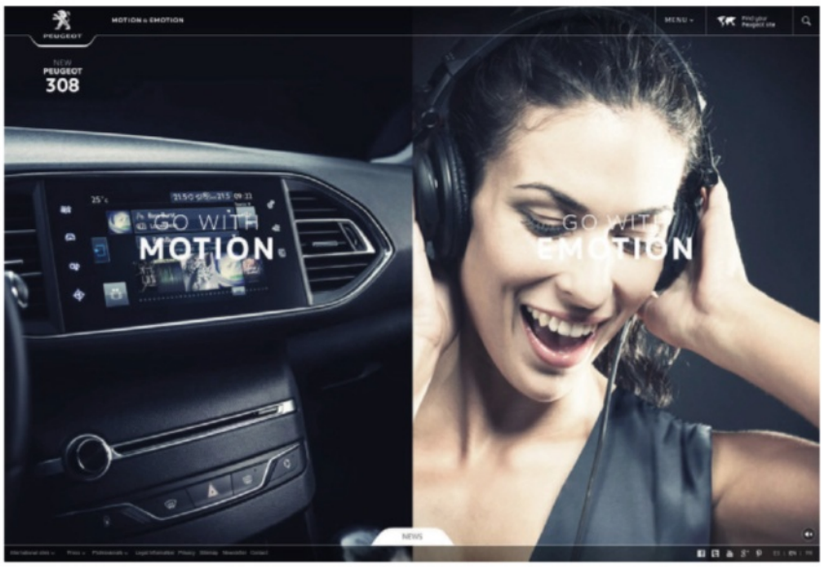
Websites can take many different approaches to creating multilingual sites and each approach is better suited to some sites than others. Here's an overview of how Joomla approaches translation: let's imagine you have an English and Spanish site. When you write a new article, you can label that article as 'English', 'Spanish' or 'All'. If you choose 'All', this article will show whether someone is viewing the site in English or Spanish. If you choose 'English', you will then have two choices.

You can create a translated version of this article and label it as Spanish. Then all you have to do is click a button to link the two articles together.

Or, the other option is choosing not to translate the article. This is ideal for sites that don't have exactly the same content available in all languages.

Overall, we've had great success with Joomla multilingual sites. They're increasingly quick to set up, easy to understand and simple to manage.

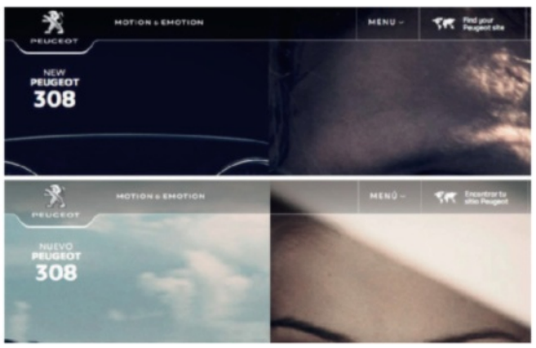
Peugeot is just one major business using Joomla to their advantage

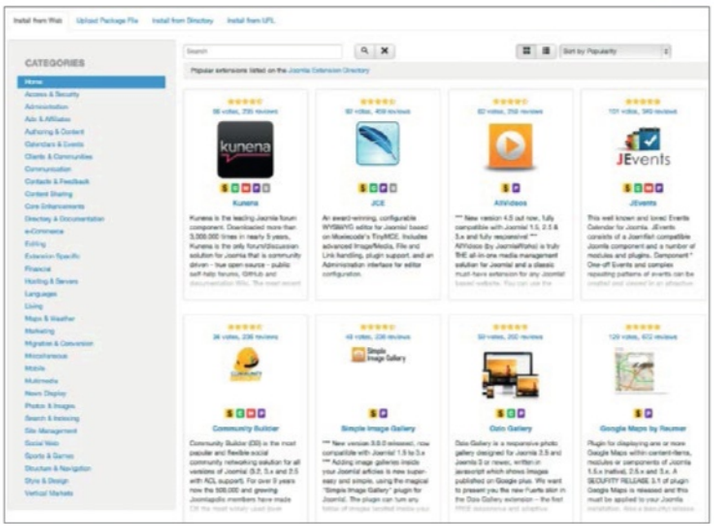


SHOWCASE SITE

Peugeot | Peugeot.com

Joomla powers many business, entertainment and news websites and can handle large amounts of traffic. Organisations from Ikea to General Electric and from Porsche to Peugeot have used Joomla.





See reviews and ratings for any one of the 8,000 extensions available

Install from Web

The Install from Web feature is Joomla's version of the App Store – lots of features are just a click away

The Install from Web feature is perhaps the most popular new feature in Joomla in recent years. Essentially, the feature is similar to Apple's App Store and Google Play, but for Joomla extensions instead.

Inside the administrator area of your Joomla site, you can browse for and install any available Joomla extension. There are around 8,000 extensions available, and Install from Web allows you to see descriptions, screenshots, reviews and ratings for all of them. You'll find dozens of photo galleries, shopping carts, calendars and extra features available for quick installation.

For many years Joomla has cultivated a directory that was called the Joomla Extensions Directory (JED). Every extension that was worth using was included here. It is regularly scanned for problem extensions and the Joomla security team removes any software that has reported, but unpatched, security holes. Joomla Extensions Directory has been leveraged to provide the basis of this Install from Web feature.

In short, if you decide to use Install from Web you know that you'll be getting software that's easy to install, has been tested by hundreds of users and has no known security flaws.

Rapid application development framework

Joomla has a new rapid application development (RAD) framework built on top of the core code

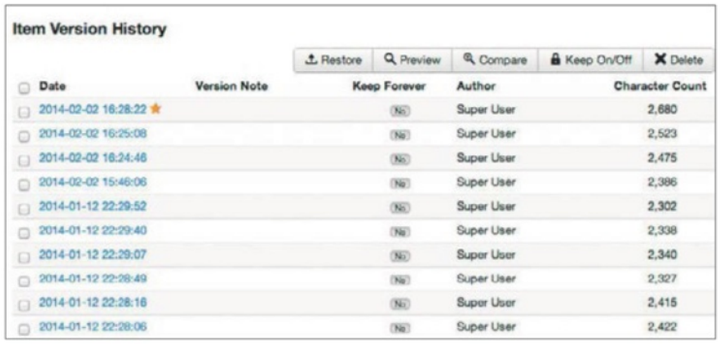
Joomla has a new rapid application development (RAD) framework built on top of Joomla's core code. This is incredibly solid work that has been used by a group of extension developers for their own work, before its inclusion in the Joomla core.

There are several major advantages to using this framework rather than interfacing more directly with Joomla. First of all, the RAD framework builds on the Joomla platform instead of simply replacing it, so it's going to be easy to work with if you have ever written Joomla extensions before. This also means that you can start being productive from the very first day you use it.

Second, when writing extensions for Joomla, the RAD framework will require up to 50 per cent less code. Most of the extensions built with the framework use less than half the files and code that they did previously. On top of that, with an added framework, it's much easier to maintain both backwards and forwards compatibility for your code.

Finally, the framework adds several important features that would be hard to include in the Joomla codebase itself. The RAD framework relies heavily on DRY (Don't Repeat Yourself) principles. It uses both Bootstrap and jQuery and it provides web services, integrated JSON support and is very close to being RESTful.

Keep a copy of your Joomla articles every time you save a change



Versioning

Keep on top of all your changes and updates with the invaluable version control feature

Do you work with clumsy people? Are you sometimes clumsy yourself? If you answered 'Yes' to either question, then one key Joomla feature is particularly perfect for you.

Versions is a security feature for your content that allows you to keep a copy of your Joomla articles every time you save a change. The Versions button appears in the toolbar at the top of the articles screen. Click the Versions button and you'll be able to browse and compare all of the saved versions. Every time you save your article, a new version will be accessible via this pop-up window.

This Versions feature is especially easy to browse because of its great visuals. Joomla has a clear colour scheme for changes: text that has been removed is marked in red and text that has been added will be marked in green.

Additionally, Joomla doesn't just store all of your content, but also the settings for your articles. For example, if you change the author or publication date of an article, Joomla will remember the previous setting and allow you to roll back should you need to.

If you have a large site and are worried about the size of your database with tens of thousands of revisions, Joomla allows you to set a maximum number of versions to be stored.

SHOWCASE SITE
GoTire // gotire.com
GoTire is a Canadian company that provides car repairs on the move. They needed a completely mobile-friendly site, so they chose to use Joomla 3.

Design overrides

Almost all of the Joomla core layouts can be overridden with a single click

Overrides are an essential feature for most content management systems (CMSs) as many have a default look and feel that good designers want to have the option to change. However, because CMSs need to be updated regularly, you can't hack the core files or you'll lose your changes with every update.

Enter overrides, which allow you a safe space to apply your changes without any risk of deletion. This makes a powerful and easy override system a very valuable tool for designers.

With some CMSs, it can be really hard to understand what files can be overriden, where you need to place the new override files and what naming system you need to use. With Joomla it's all very easy. Joomla does all the work of finding, locating and naming the override files.

Inside Joomla's Template Manager, click the Create Overrides tab and you'll be able to see every possible file that can be overriden. Once you've chosen the file to override, click on it and Joomla will automatically create the new override file in the correct location. The whole Joomla core can be overridden and, because Joomla has supported overrides for many years, nearly all extensions allow you to override their layouts.

Joomla allows you to use overrides in a safe, secure way

Mobile-friendly

Joomla is the first CMS to be completely responsive for both visitors and administrators

If you're reading this magazine, you don't need us to give you the hard sell regarding the benefits of creating a mobile-friendly website. Thankfully, Joomla 3 makes mobile-friendly easy by being completely responsive by default. It was the first CMS to be completely responsive for both visitors and administrators.

The Joomla frontend uses the Boostrap framework to make responsive design easier. The developers are aware that a lot of people love Bootstrap and, even if you're not a full-time designer, Bootstrap puts a lot of power at your fingertips. However, you can also skip Bootstrap if you prefer to design with another framework, such as Zurb Foundation for example.

The Joomla administrator area also uses Bootstrap so you can edit your site on the move. Perhaps best of all, the mobile version of the Joomla administrator area isn't dumbed down – anything you can do on the desktop can be done on your phone or tablet.

However, some important areas are simplified. For example, Joomla relies on the new mobile features in the TinyMCE editor to provide a simple content editing experience. On your desktop, you'll see 50 to 60 formatting buttons, whereas on your phone, you'll just see five or six.

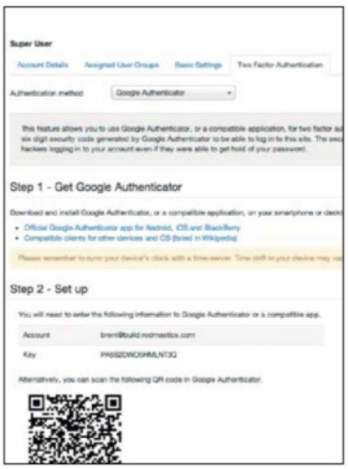
Access control

Make use of Joomla's powerful and flexible access control system

If you're going to use software in an enterprise environment, you need some kind of access control. If you're going to have customers accessing their orders on your site, you need some kind of access control. If you're going to use software for a membership site, you need some kind of

Security and two-factor authentication

To help keep your site safe from hacking, Joomla now has a strong passwords feature and requires a two-step sign in



Over the last few months, Joomla has really focused heavily on improving security. One of the most useful additions was two-factor authentication. Joomla now ships with the integration to Google Authenticator and YubiKey.

Once the two-factor authentication feature is turned on, it can be applied to any user account. Each user can go to their account, click the two-factor authentication tab and get set up. When you use Google Authenticator for your Joomla sites, when you try to log in from a new location, you'll need to verify your identity. If you don't want to tie your accounts to Google, you can the Yubikey USB drive.

Joomla has also launched a strong passwords feature as hackers have been able to break older forms of password encryption. As a result, Joomla enhanced the encryption of all its password hashing and storage using BCrypt.

Joomla is also raising the bar on PHP version usage. Many people are still using Joomla, WordPress and other platforms on old, unsafe versions of PHP. As a result, Joomla has just set its minimum required version of PHP to 5.3.10.

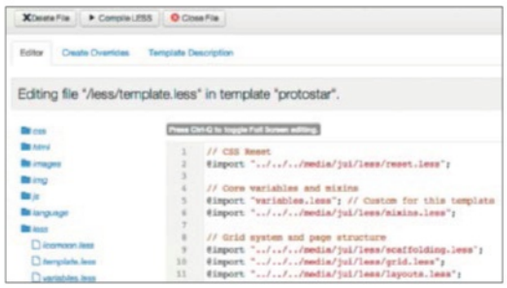
Flexible core searching

Be sure you make use of Smart Search, which is the most powerful default search feature available in a major CMS

A lot of CMSs ship with rudimentary core searching features, so many larger sites must rely on external search platforms such as Apache Solr.

Joomla ships with Smart Search, which allows you to index all the content on your site and perform fast, targeted searches. After running the first indexation, Joomla will then index your content automatically. There's no need to run a cron job or spend time maintaining the search index, as with some other search tools. You can also drill down through your content based on authors, categories, languages, type of content and much more.

Smart Search also offers a variety of ways to weight your search results, so you can put more emphasis on titles, body text, meta data, URLs and matching text. It is also possible to create your own custom content maps to create pre-defined search options – so you could let people search for all content created in 2013, or find all the content that was published on your blog in Spanish. It really is an amazingly powerful tool.



LESS

Joomla ships with excellent support for the LESS preprocessor that makes your CSS much more efficient

CSS preprocessors are really popular, and one of the most commonly used is LESS. LESS isn't designed to replace CSS but it does give you lots of extra functionality such as variables, mixins, operations and functions. LESS basically allows you to streamline exactly how you create and manage CSS files.

Imagine being able to define a colour once and then use it in multiple places. Imagine being able to create rounded corners without needing to remember the styles for all the different browsers. Imagine being able to create gradients in CSS by telling it the colours you want to use.

LESS is a relatively new preprocessor, being only about four years old. It has its roots in the Ruby programming language but is now used more widely and is now based on JavaScript.

It's often compared to SASS, which you can use SASS in your Joomla projects. You don't have to use either LESS or SASS, it's just Joomla has gone with LESS as a default.

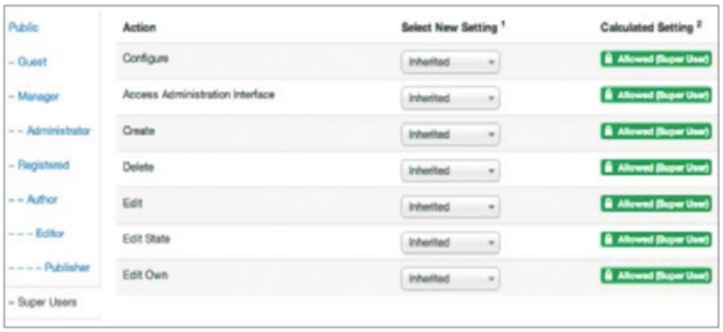
All of Joomla's Bootstrap CSS files are already complied with LESS. Joomla also has a feature in the admin area, which allows you to easily compile your own CSS files.

access control. Finally, if you have more than one or two people running your site... you know where this is going.

WordPress is brilliant software, but by default it provides really quite limited access control and it can also be difficult to customise. Out of the box, Joomla has a powerful and flexible access control system that works in two ways, using groups and access levels.

Groups are the more flexible system. People can be placed into multiple groups depending on their roles. For example, one user might be placed into the 'Forum moderator' and 'Content editor' groups. Another user might be in the 'Site administrator' and 'Technical support' groups.

Access levels are more broad – essentially, they are groups of groups. For example, you might create an access level called 'Registered users' and include all users in all groups who have an account. Or, you might create an access level called 'Staff' and include all users in all groups who work for you.



Joomla offers more flexibility than WordPress when it comes to access control

Bootstrap

Joomla provides Bootstrap, the most popular CSS framework, as the default option

One of the most common problems with CMSs is that so many designers and developers have their own unique styles.

Your core files will be created by one group of developers. Your site's theme will come from another designer. Your site's shopping cart may come from another group using a completely different framework. Your photo gallery's developer will have another approach to CSS entirely. By the time you have added in all of your site's desired features, you may find yourself wrestling with at least half a dozen different frameworks and approaches, which is not ideal.

Joomla has tried something different. Bootstrap is the most widely used CSS framework in the world. It's also the most starred project on GitHub and has a huge userbase. As a result, Joomla decided to make Bootstrap part of the core. It's not essential to use Bootstrap (you can disable it if you wish), but it is highly recommended.

This has a variety of benefits. Once you add CSS to your site, there's a good chance it will work everywhere, from your shopping cart to your photo gallery. There are also fewer conflicts between different frameworks and, the user interfaces for most third-party features are far better and more consistent than they had been previously.

Front-end editing

Finding and editing your site from the frontend is made as easy as possible with Joomla

When normal people are working on a CMS site, it can often be quite difficult for them to understand exactly what it is that they need to edit – that block on the right-hand side… is it a plug-in? A widget? A module?

It can also be hard for users to accurately preview their content before publishing, finding that it looks great when they write the article in the administrator, but it looks a mess when they publish it.

We mentioned before that Joomla has many of the strongest features that can be found in WordPress. Well, when it comes to front-end site management, it starts to more closely resemble Drupal. In both Joomla and Drupal, you can hover over almost any item on a page and see an Edit button. Whether it's an article, a block or a menu, your users are only ever one click away from being able to edit anything they need to.

Joomla has fully featured front-end article editing. When you're editing content you'll see the full WYSIWYG toolbar and it'll be directly inside the content area, with no pop-ups or admin features. So, you'll be able to see what the content will look like when you publish it.

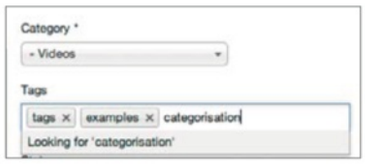
SHOWCASE SITE

Guggenheim
www.guggenheim.org

Joomla is popular with everyone from universities to museums. One of the most famous is the Guggenheim museum with branches in New York, Venice, Bilbao, Berlin and Abu Dhabi.

Multiple categorisation options

Joomla has a content categorisation system that is very similar to WordPress



Use categories and tags to make locating specific posts that much easier for users

If you've used WordPress, you'll feel very much at home with Joomla's categorisation system. In almost every way, the two systems are identical, with Joomla using both categories and tags to organise content.

As with WordPress. Categories are the main organisational structure for content. They have their own 'Category Manager' where you can create and organise the categories as well as arrange them into a multi-level hierarchy. The categories you use are often responsible for defining the URL structure for the site.

Tags are more free-form. As with WordPress, they're used to create a looser association between content. Tags aren't responsible for your site's URLs but are able to join multiple types of content. For example, you could link content articles, RSS feeds, contact pages and much more with the same tag.

Both categories and tags can be used for front-end presentation. You can easily create a menu link to show your visitors all the content that has a category, a tag or multiple tags attached.

If you combine Tags and Categories with the Smart Search feature we mentioned earlier, you can really get creative with the ways in which you present content. Want to show all the content on your blog that was written in French and tagged with 'Paris'? You can do that with the Joomla core. It is a brilliant option to have on hand.

User-friendly and accessible admin

The Joomla admin area has been refreshed with Bootstrap

The Joomla admin area has evolved slowly over the last eight years. It is still recognisable from the original version 1, but there have been several iterations over the years to make it radically overhauled.

The new Joomla admin is completely responsive, thanks to Bootstrap. The content management system now has a visually striking colour scheme, with the most important action buttons being much more clearly marked in strong greens, reds and blues, signifying a clear visual hierarchy of importance.

The use of Bootstrap has also led to a visual consistency with third-party extensions. If you've ever used a busy WordPress site, you know how messy things can become with the visual clutter. The Joomla admin now largely presents a consistent, clean and intuitive experience.

Joomla is also a leading CMS in presenting an accessible experience. There's a default admin template called Hathor, which is accessible using the WCAG 2.0 AA guidelines. More governments, educational institutions, and even companies are requiring web accessibility. If you want to build a website for use in those environments, Joomla would be a good choice.

Language overrides

Having to wrestle with complicated language files is now a thing of the past in Joomla

Many people have spent several hours wrestling with language files in CMSs as it has never been easy to make simple language changes on the site. Sometimes you would end up having to to hack the core files and replace them with every update.

Sometimes you would need large and complex third-party add-ons. Sometimes you would need to export the whole set of language strings, edit them in a strange file format, and then reimport everything.

Joomla has developed a much easier system. Any language string on your site can be easily overriden from your administrator area. Unlike the other systems we've mentioned, you're not making any permanent changes to your files – these are smooth overrides. For example, if you wanted to replace the word 'Login' with 'Log in and join us', you can do that directly from your site's Language Manager.

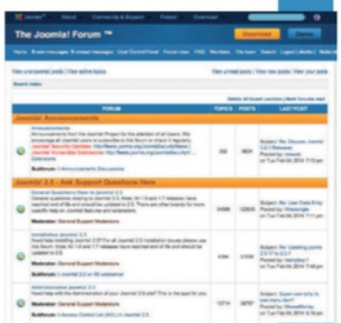
The Language Manager provides a search box for language strings. You can browse all through the available language strings, including those from third-party developers. You can find strings in any language that you have installed on the site. Click on the string you want to change, enter the new text and click Save. It's as simple as that. All your modified strings are stored in a Language Overrides area for easy editing.

Resources

Joomla's official website

joomla.org

The official Joomla site is, as you might expect, the starting point to learn more about Joomla. Here you'll find links to all the key resources, from downloads to the latest Joomla news, to the support forum and documentation. You'll also find directories of extensions, developers for hire, and sites using Joomla. Over 7 million people visit **joomla.org** each month, so if you're interested in Joomla, you should join them.



Joomla's official forum

forum.joomla.org

The official Joomla support area is actually one of the largest forums online, with nearly 3 million posts – and that's just since 2006.

The forums are divided up according to the Joomla version that you're using. For Joomla 3, there are sub-forums for installation, security, design, SEO, moving to Joomla, and many other topics.

With a potential audience of thousands of people at any one time, if you have Joomla questions, this forum is probably the best place to ask.

Joomla's extension directory

extension.joomla.org

This is the official source for all Joomla extensions. At the time of writing, there are nearly 8,000 extensions available to use. About 50 per cent of those extensions are free to download and the other 50 per cent are commercial. All extensions have helpful reviews and ratings.

The directory is closely monitored to ensure that all the extensions are of reasonable quality. There's a Joomla security team, which removes any listings that are reported to have unfixed security holes.

Joomla's documentation

docs.joomla.org

The official Joomla documentation site is huge, with over 4,000 articles. There are documentation sections for beginners, administrators and developers. If you want to know which version of Joomla to use, how to recover your lost administrator password or how to create your first Hello World! extension, this is a great resource.

If you are a developer, then **developer.joomla.org** is also rich source for finding out information about updates, links and documentation.

Scroll horizontally using jInvertScroll

To see the bigger picture, 'wide' can be better than 'tall', and using horizontal parallax is an innovative way to showcase that

tools | tech | trends Parallax scrolling, JavaScript, jInvertScroll
expert Jayson Winters

You don't need to spend long with marketing and design people before someone's going to use a phrase like 'Yes, but what's the differentiator?'. But they're not talking algebra or electronics, they're just reaching out for something, anything, that might make what they are working stand apart from the competition.

Different is good because it causes people to pause... and pausing enables an opportunity to consider. It helps the brain to remember and it encourages people to share that experience with others. These are good reasons for doing things differently and providing your visitors with a fundamentally different way of interacting with your content must be worth a try. Computer and TV screens are wide rather than tall because it's more natural for us to engage with the world in that orientation. Ancient man didn't do much for his survival or hunting chances by spending his time looking up and down. Looking around is how you'll find most of what's interesting and what makes landscapes and panoramas so compelling. So why not give your visitors a break from vertical scrolling and an opportunity to take the wide view?

01 The HTML

The head of the HTML is kept fairly simple, with the Open Sans font being loaded from Google's font library. Next a link to the jInvestScroll stylesheet is made that includes only ten lines of code. Finally there is a link to the styles for the parallax elements and the content panels.

```
001   <!DOCTYPE html>
002   <html>
003   <head>
004   <meta charset="utf-8" />
005   <title>The Hot Air Balloon</title>
006   <link href="http://fonts.googleapis.
    com/css?family=Open+Sans:400,300,700"rel="s
tyle sheet"type="text/css" />
007   <link rel="stylesheet" href="css/
jInvertScroll.css" />
008   <link rel="stylesheet" href="css/style.
css" />
009   </head>
```

02 Background

The background comprises two elements: the horizon scroll and the middle scroll. In the artwork used for the tutorial the horizon scroll is the landscape graphic and plain blue sky and this sits as the background layer on the page. The middle scrolls sits in front of this and provides the graphics for the clouds, balloons and birds.

```
001   <body>
002   <div class="container">
003   <div class="horizon scroll">
004   <img src="images/background.png" alt=""
/>
005   </div>
006   <div class="middle scroll">
007   <img src="images/cloudsandballoons.png"
alt="" />
008   </div>
```

03 The content layer

The content layer is last and given the class 'front scroll'. You can of course add additional parallax layers if you wish but try to keep the right balance between achieving a design that is visually rich with one that is simple enough to render smoothly. Each of the content panels is added as a separate .

```
001   <h1 class="intro">Scroll down</h1>
002   <div class="panel1 page">
003   <h2></h2>
004   <p></p>
005   </div>
006   <div class="panel2 page">
007   <h2><h2>
008   <p></p>
009   </div>
```

04 The script

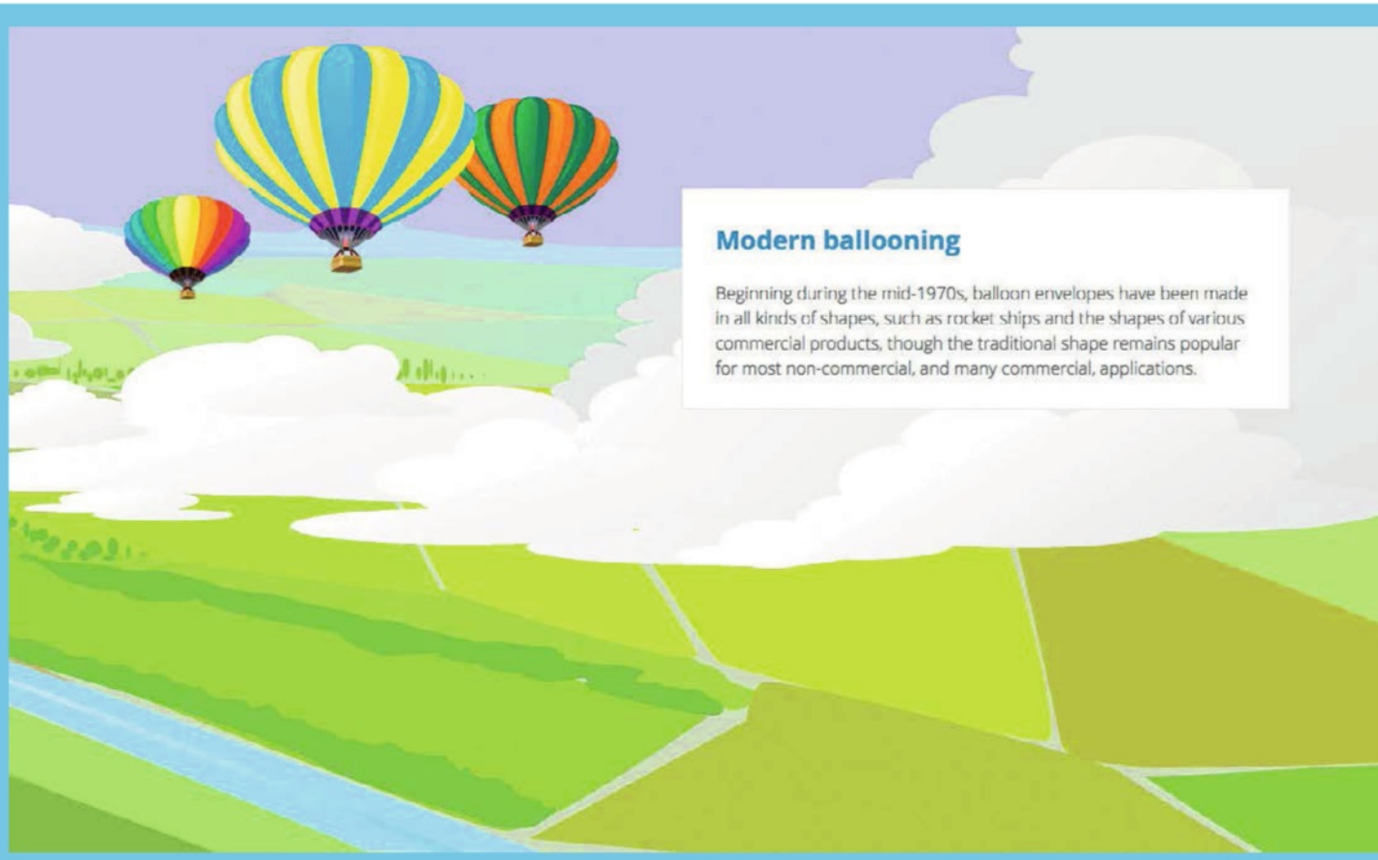
After all the content has been loaded the jQuery is called, then the jInvertScroll.js plug-in before the plug-in is actually executed. The plug-in ships with jQuery version 1.10.2, so you'll want to test the functionality is not affected if you use an earlier or later version of jQuery to deliver other functionality for your site.

```
001   <script type="text/javascript" src="js/
jquery.min.js"></script>
002   <script type="text/javascript" src="js/
jquery.jInvertScroll.js"></script>
003   <script type="text/javascript">
004   (function($) {
005  $.jInvertScroll(['.scroll']);
006  }(jQuery));
007   </script>
```

05 Hide and scroll

These styles are found in the jInvertScroll.css and are likely to remain the same whatever your design. This technique uses the vertical scrollbar to show the user how far along the page they are, so the horizontal scrollbar is switched off here. The page elements are anchored to the bottom of the browser and this will suit most designs.

```
001   {
002   overflow-x: hidden;
003   }
004   .scroll
005  {
006  position: fixed;
007  bottom: 0;
008  left: 0;
009  }
```



<Above>
• Parallax scrolling is very much in vogue. It provides a great method for telling stories, delivering timelines and presenting statistics.

<Right>
• When choosing colours, remember that it's normally much more effective to use darker shades in background layers and lighter ones in the foreground

06 Design-specific styling

Padding and margins are set to 0px to assist with cross-browser consistency. A Google font is selected (loaded in the HTML as usual) and a fallback is listed. Font-weight 300 sits nicely between 'light' and 'regular', an elegant but readable weight. Simple touches such as this can really help to elevate your design above the norm.

```
001   {
002   padding: 0;
003   margin: 0;
004   font-family: 'Open Sans', sans-serif;
005  font-weight: 300;
006  font-size: 16px;
007  color: #555;
008  background: #9fdefd;
009  }
```

07 Headings and background

Here the headings are set to a suitable colour to integrate in your design. The first parallax element is styled here. With the lowest z-index number it will sit at the back of the design. As the rearmost object it will scroll at the slowest speed and should therefore be the narrowest element (in this case 3,000px).

```
001   h1,
002   h2
003   {
004   color: #238acb;
005  }
006  .horizon
007  }
008  line-height: 0;
009  z-index: 100;
010  width: 3000px;
011  }
```

08 Clouds, balloons and birds

The sandwich filling in this three-layer arrangement comes next and so has a middling z-index value. This element is 50 per cent wider than the background. In the tutorial it contains the clouds, balloons and birds. You'll need to use a transparent PNG for the graphics on this layer so that you'll see the layer behind it.

```
001  .middle
002  {
003  z-index: 250;
004  line-height: 0;
005  width: 4500px;
006  }
```

09 Content layer

This layer is the top of the sandwich, the front-most layer with the highest z-index value. This is your content

Out in the wild

Russian digital agency Hot Dot (**hotdot.pro**) uses parallax horizontal scrolling to great effect. Out of focus foreground elements help to add depth to the presentation.

<Top>
• Consider how the elements will interact. It's easy if your subjects are flying, but cars and people might need a road to move along

<Left>
• Don't make your foreground content so large that it prevents people from appreciating the effort you put into your background layers

<Right>
• Struggling to choose a subject to try out this technique? Just think what you would do if your dream client just briefed you and take it from there – let your imagination run wild!

The benefits of parallax

The use of parallax effects in web design has become hugely popular and for many years before that in computer games. The word comes from the Greek 'parallaxis', meaning 'alteration'. From our perspective, nearby objects move more than distant objects when observed from different positions.

Parallax techniques can be used to create fun, interactive features and approaches such as horizontal scrolling can take their place among the skills you can bring to your next suitable project.

Still, it's important to keep the needs of your visitor in mind. Consider the experience on a slow connection, with a mobile design and provide alternatives. Finally, don't sacrifice SEO – if people can't find your page it doesn't matter how cool it is.

Mixing it up

Check out New York agency Fluger's shining example of parallax, which cleverly integrates horizontal and vertical scrolling as they take you on a fly-past tour of their services. Check it out at (**fluger.com**)

layer and moves the most when it is scrolled. With a width of 6,000px it moves twice a fast as the background. In this tutorial the layer contains the information panels.

10 Avoid confusion

As with any technique that doesn't work exactly how the user is expecting, it's important to help things along with a little instruction. This first element is set at 500px from the left of the page, which should work for most setups. There's no responsive solution here because we want people to scroll beyond the width of their viewport.

```
.intro
{
position: absolute;
left: 500px;
top: 0px;
padding-right: 50px;
background: url('../images/scroll.png')
 no-repeat right 5px;
}
```

11 Content panels

This class determines the basic properties of the content panels. You can make these as complex or as minimal as you prefer. Having discrete areas of content with good sized gaps between each panel works well with this technique though, so keep in mind usability if you do decide to start getting really creative.

```
{
 top: 0px;
 width: 500px;
   background: white;
   padding: 10px 30px;
   border: 1px #eee solid;
   position: absolute;
}
```

12 Panel positioning

Now it's just a case of finding the right place for each of your panels to appear. It's easy to get drawn into overtweaking this as you fine-tune the interplay between the layers. However, remember that the height and width

of the browser will play a huge part in the positioning of the elements and aim for a design with some flexibility.

```
.panel1
{
left: 1500px;
}
.panel2
{
left: 2575px;
}
.panel3
{
left: 3800px;
}
.panel4
{
left: 5100px;
}
```

13 In context

This tutorial just shows the horizontal-scrolling element of a page, but with a real website you'll probably want to include other non-scrollable elements. Fortunately that has been thought of and only the elements with the attribute 'position: fixed;' will scroll. Your header can be styled as normal and, as this is likely to include a navigation menu, it will helpfully remain in view at all times.

14 Your design concept

Horizontal scrolling is a useful technique when you want to show a sweeping panorama or a journey with stages along the way. A comic strip would be particularly suitable for this style of presentation. Here the we use a free graphic from **vectorbackground.ne**t separated into its component elements starting with the background.

15 The sandwich filling

If you are going to use mainly words on your top layer, for example when telling a story, your middle layer is likely to be the graphical subject of your design. This layer probably needs the most amount of attention if you are creating a portfolio-standard piece of work.

16 Content panels

In the tutorial these panels have been kept simple and provide a contrast to the busier balloons and landscape background. However if your design warrants it, this layer can be as visually rich as you want. You can apply more formatting, images, etc, to achieve your design goals.

17 All together now

When you bring all of the elements together, does your design work as you expected it to? You might need to go through several rounds of iteration changing elements as necessary so that they work together. You'll know you've cracked it if you can picture your audience not asking themselves why you've used a slightly quirky layout trick but just being drawn into the content and accepting your presentation of it as the most natural and logical solution.

Code library
The plug-in

The jInvertScroll is a lightweight plug-in, written by Alex Franzelin and sponsored by Pixxelfactory. Easily configured, it can help you achieve the perfect horizontal scroll effect

Extract all selected elements from the DOM and then save them into an array.

Use the longest elements width and height if set to auto then set the body to the selected height.

Listen for the actual scroll event and set the variable scrollPercent to the current percentual position.

Call the onScroll callback and do the position calculation for each element. Math.floor() returns the largest integer less than or equal to a number.

```
$.each(sel, function(i, val) {
 $(val).each(function(e) {
  var tmp = {
  width: $(this).width(),
  height: $(this).height(),
  el: $(this)
 }

 elements.push(tmp);

 if(longest < tmp.width) {
  longest = tmp.width;
 }
 });
});

 if(config.width == 'auto') {
  config.width = longest;
 }
 if(config.height == 'auto') {
  config.height = longest;
 }
 $('body').css('height', config.height+'px');

 $([document, window]).on('ready resize', function (e) {
   totalHeight = $(document).height();
   winHeight = $(this).height();
   winWidth = $(this).width();
 });

 $(window).on('scroll resize', function (e) {
  var currY = $(this).scrollTop();

  var scrollPercent = (currY / (totalHeight - winHeight)).toFixed(4);

  if(typeof config.onScroll === 'function') {
  config.onScroll.call(this, scrollPercent);
 }
  $.each(elements, function (i, el) {
   var pos = Math.floor((el.width - winWidth) * scrollPercent) * -1;
   el.el.css('left', pos);
  });
 });
```

> You'll know you've cracked it if your audience accepts the presentation as the most natural and logical solution

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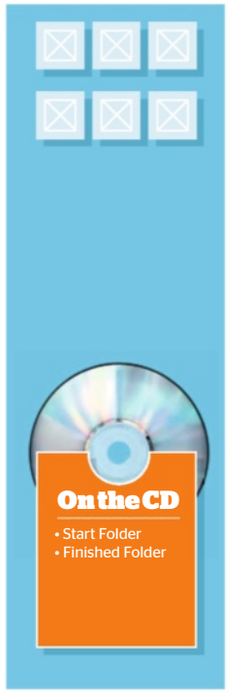
Faster responsive sites with Foundation

Don't hide content from desktop to mobile devices, use the Interchange feature to only load the content required by the device

tools | tech | trends Foundation 5, Dreamweaver
expert Mark Shufflebottom



Ever noticed when creating a responsive site that if you have a huge image for desktop, it is far too big for mobile? Of course you have – and you've probably even tried to find a solution. There are some out there but by and large they require a lot of work. Foundation is a responsive framework and with the new release of Foundation 5, we have access to a new module called Interchange.

Interchange lets the designer specify which content is viewed on different screens. It doesn't turn tags on and off, instead it checks the device width with a media query and using AJAX it loads the right content for that device – it doesn't just work on images either.

This is a significant improvement over hiding desktop content, as doing that forces mobiles to still download the content, using extra bandwidth and precious memory. Now you can apply Interchange to a tag and load in external HTML snippets that will populate that tag for you – this is known as HTML partials.

This is probably the easiest way to create truly responsive content that doesn't force mobile to have a bloated desktop experience shrunk to the device.

01 Starting the project

From the resource CD, copy the Start Folder to your htdocs/web folder of your local server, such as W/L/MAMP. Open the file 'index.html' in a code editor and add the code as shown below to the head section of the page. This links up the Foundation stylesheet with the Modernizr library, which identifies which HTML5 elements are supported by the browser.

```
<link rel="stylesheet" href="css/foundation.css" />
  <script src="js/modernizr.js"></script>
```

02 Link up Foundation

Now scroll to the bottom of the document and add the following script tags before the closing body tag. This links up both the jQuery and Foundation library to the document. The last script tag starts Foundation, enabling the Interchange options to work properly on our webpage.

```
<script src="js/jquery.js"></script>
  <script src="js/foundation.min.js"></script>
  <script>
   $(document).foundation();
  </script>
```

03 Add the video

We are going to add some video to a desktop browser but substitute this with an image for smaller-screen devices. Add the code below after the 'start video' comment in the body of the document. As you can see, it loads different HTML content for the different-sized devices into this part of the document. In the next few steps we'll create those external pages.

```
<div class="full">
    <div data-interchange="[v-default.html, (small)], [v-medium.html, (medium)],
[v-large.html, (large)]">
  </div>
 </div>
```

04 Video for desktop browsing

Create a new HTML page and make sure it is empty of all tags – we don't need body and HTML tags as they will be added to our existing page. Now input the code as shown below, which adds the stylesheet for the content we'll be adding. We're making our video 100 per cent wide with a height of 600px.

```
<style>
#vid {
  width: 100%;
  height: 600px;
    overflow: hidden;
}
```

05 Style the video

Here we are adding in the CSS for the video tag itself, so that the video fits the size we want it to. Notice that we also close the style tag down at this point. We could also put these styles inside a master stylesheet on our main page if we wanted to, but this example shows how styles can be added dynamically.

```
video{
    min-width:100%;
    min-height:600px;
    width:auto;
    height:auto;
  }
</style>
```

06 Add the HTML5 video

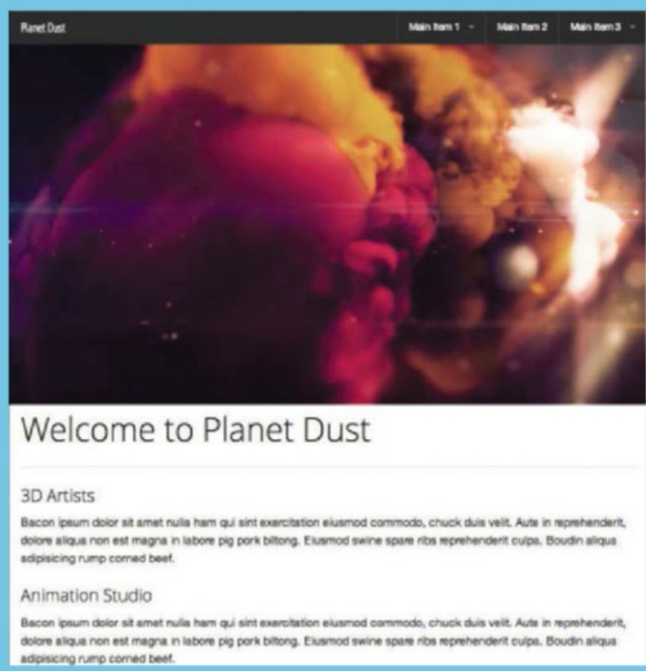
Directly after the stylesheet we add the following code, which is for an HTML5 video with options for MP4, WebM and Ogg Theora video in order to cover all the major browsers. We set this video to play automatically and then to loop. Now save this page as 'v-large.html' in the same folder as the index page.

```
<div id="vid">
  <video autoplay loop>
    <source src="header.mp4" type="video/mp4">
    <source src="header.webm" type="video/webm">
    <source src="header.ogv" type="video/ogg">
  </video>
</div>
```

07 Medium screens

If you view your index page now over an HTTP connection on a local server you will see the video load in and play. Because we haven't created the smaller pages yet it will not change for lower screen widths, so again

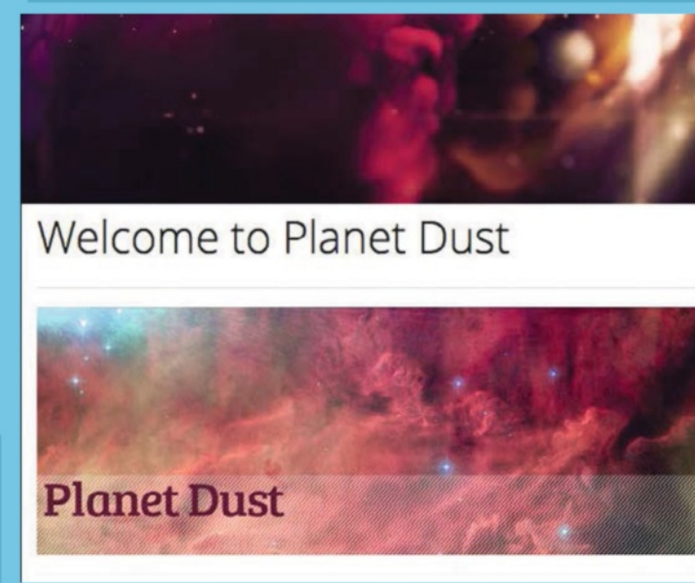
<Above>
• We add our HTML5 video that will only be viewable in the desktop browsers. This will save bandwidth on the smaller screen devices that may be accessing your site with a data plan



<Above>
• When it comes to other size screens, Interchange will only load up the relevant content for that screen. Here on medium-sized tablet screens we load an image instead of the video

<Right>
• As well as loading separate HTML content from different files, we can also change the image to the appropriate display size

<Above>
• For a mobile device we can now load a smaller image so that no bandwidth is wasted



create another new HTML page and add the following code as the only code on the page.

```
001 <img src="img/vid-medium.jpg">
```

08 Create the default image

Save the last page as 'v-medium.html' and create another new HTML page. Here we add the code as shown below and then save this page as 'v-default.html'. Now if you refresh your browser you can resize this and see the different images load depending on the size of screen.

```
001 <img src="img/vid-default.jpg">
002
```

09 Switch the images

Images can easily be switched inline. To switch content we use the data-Interchange HTML5 parameter. Inside here information is passed to the JavaScript so that the appropriate image can be loaded into the page. Add this code after the horizontal rule under the 'Welcome' title.

```
001 <img data-interchange="[img/space-
small.jpg, (small)], [img/space-medium.jpg,
(medium)], [img/space-large.jpg, (large)]">
```

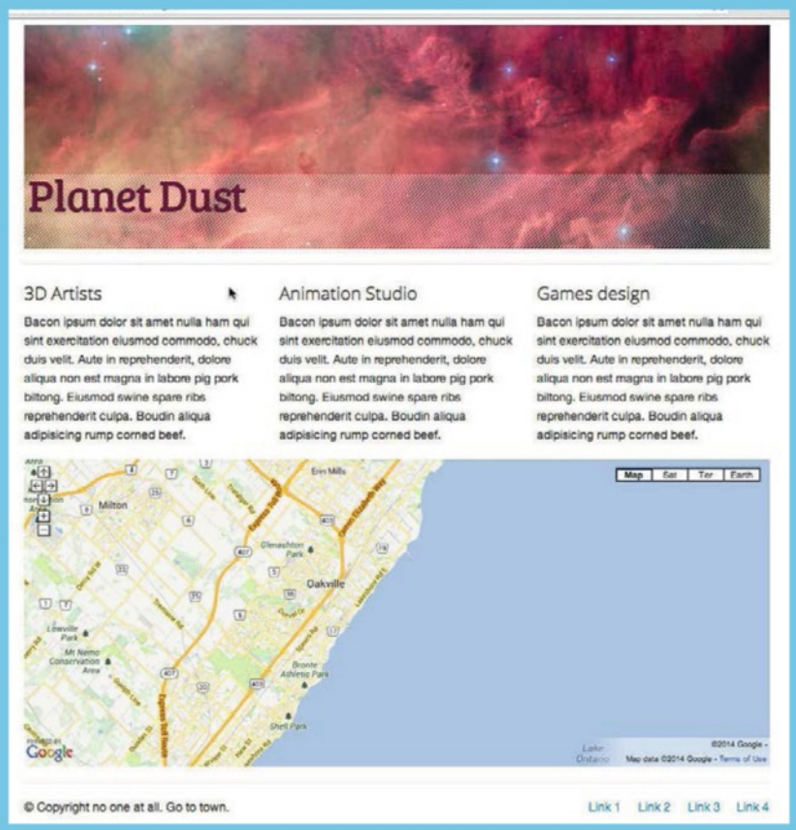
10 Default image view

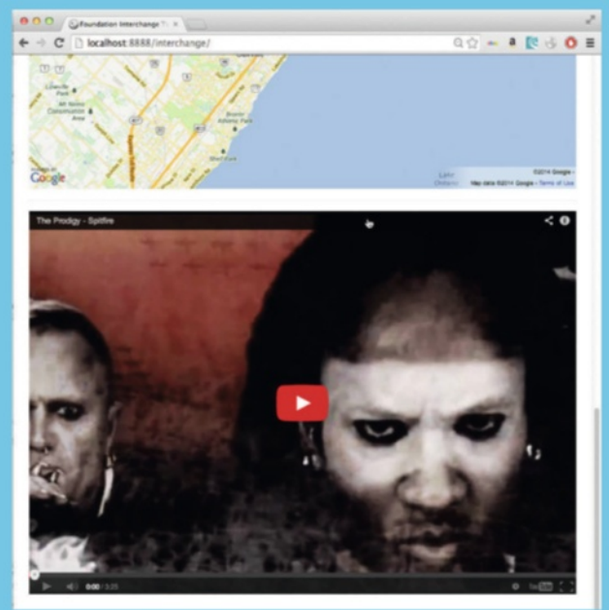
The next code that we add directly below the last step is a no script tag, so if JavaScript is disabled for any reason, this will be the image loaded here. We've added the smallest image to the page because if there's no JavaScript, the user will likely want a low rendering of the page.

```
001 <noscript><img src="img/space-small.jpg"></
noscript>
002   <hr>
003
```

11 Readable text

Test the page in the browser now and you will see the video and image are responsive – but rather than just downsizing, they actually change to a lower bandwidth for the smaller-screen devices. Now let's add a little space





<Left>
• Foundation's Interchange is very good at loading specific content for devices and we can create separate files that feel a little like includes in PHP

<Above>
• Here we have added a YouTube video for desktop-sized browsing. As you can see, it fits responsively into the Foundation grid

between the heading tag and the video. Go back into your code and add the 'spacer' class to the row as shown below.

```
001 <div class="row spacer">
```

12 Style the link

Now move to the head section of the document and we'll add in the style tags and the spacer class, just to give the heading a little more space from the video or image that is loaded. Save and view this in the browser again to see the changes take effect.

```
001 <style>
002      .spacer{ padding-top: 40px;}
```

13 Responding map

In the document, scroll down through the body until you come to the comment for the 'map panel'. Add the following code just below that comment. Here we are going to load either a Google map for the large-screen display or just a small image for the reduced screen size.

```
001 <div class="row">
002   <div class="large-12 columns">
003     <div data-interchange="[default.html, (small)], [medium.html, (medium)], [large.html, (large)]">
```

14 Close the s

All we are going to do here is close those three tags and save our document. Create a new HTML document as we are going to add our Google Map into here. Head over to **maps.google.co.uk** and copy the embed options of your chosen map, as we will need this for our design very shortly.

15 Style the map

We will style the map up first, so in the new HTML document make sure there are no other tags in there, such as a head section or body section. Then, add the following code in as shown. This is going to style up the tag surrounding the map so that it is the full width of space available and 400px high.

```
001 <style type="text/css">
002   #map {
003   width: 100%;
004   height: 400px;
005  }
006 </style>
```

16 Add the map

Now we will add the map inside a with the id of 'map'. So, paste in the code we copied from Google Maps in Step 14. We will need to make some changes though; change the width to 100 per cent and height to 400 as shown. Also you might want to get rid of the text to view a larger map, but that's down to your preference.

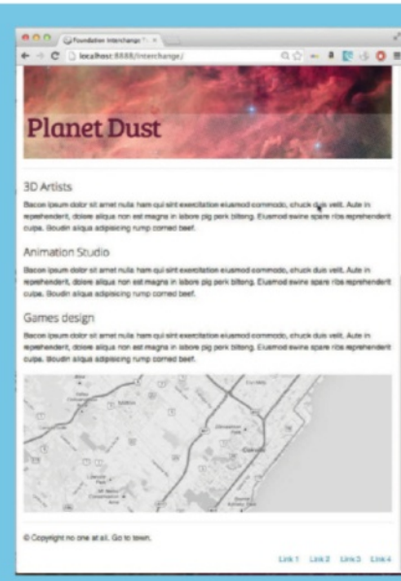
```
001 <div id="map">
002 <iframe width="100%" height="400" frameborder="0" scrolling="no" marginheight="0" marginwidth="0" src="https://maps.google.ca/?ie=UTF8&amp;ll=43.447946,-79.624382&amp;spn=0.445663,0.467606&amp;t=m&amp;z=11&amp;output=embed"></iframe>
003 </div>
004
```

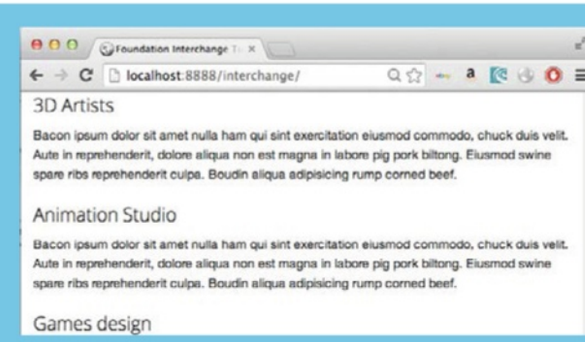
AJAX loading

Foundation uses AJAX to load the appropriate content into the page, as such this will only work if you are hosting the page on a server, which can be a local server on your computer or your web host.

17 Medium map

Save the HTML page as 'large.html' and create another new HTML page. This one is going to be much simpler and have a static image display instead of the live





<Left to right>

- The mobile-sized image replaces the Google Map on much smaller device screens. This is very useful for targeting the right content for your user
- On other devices we can swap out the HTML code for a Google Map and make it load an image instead
- As an alternative to the YouTube video, we've added text as a description of the content that was presented in the video for smaller-screen devices

Google Map. It's also a good idea to add the address as text in here as well, as that will be more useful. Make sure you save this page as 'medium.html'.

```
001 <img src="img/map-medium.jpg">
```

18 Small map

Create another new HTML page and add only the code shown below. Now save this page as 'default.html'. Go back to your browser and refresh the page. You will now see all of your map details on the screen. You will need to replace the map images with your own map screenshot.

```
001 //code// <img src="img/map-small.jpg">
002
```

19 Create YouTube content

Move to the comment 'YouTube Panel' and add the following code after that comment. This is going to create an Interchange section for YouTube video content on the page. Notice that we are calling the same file for both small and medium displays. Save the current page after adding this code as it is now finished.

```
001 <div class="row">
002   <div class="large-12 columns">
003   <hr>
004 <div data-interchange=" [yt-medium.html,
 (small)],  [yt-medium.html, (medium)],  [yt-
large.html, (large)]">
005   </div>
006   </div>
007  </div>
```

20 Grab some content

Head to YouTube and grab the embed code for a video in there. Now return to your code editor and create a new HTML page. Make sure there are no other tags in the HTML page and add in the flex-video tag as shown in the code snippet below. Now paste in the embed code. Save the page as 'yt-large.html'.

```
001 <div class="flex-video">
002 <iframe width="560" height="315"
src="//www.youtube.com/embed/FBmkFYym9hE"
 frameborder="0" allowfullscreen></iframe>
003 <div class="flex-video">
```

21 Alternate video content

Now create a new HTML page (last one, we promise!) and instead of the video we are going to add in a title and description of the video to inform the user about the information presented. This means that smaller screen devices will still get the content but in a different format – as text instead of video.

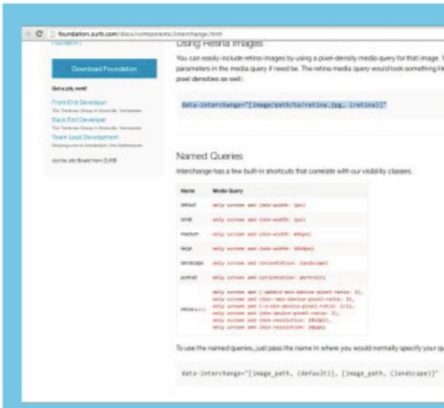
```
001 <h3>What we do</h3>
002 <p>Description Goes Here...</p>
003
```

22 Final step

Finally save this document as 'yt-medium.html'. Go back to your browser and refresh the page. You should see all the content swapping in and out depending on your page size and obviously on smaller devices you are saving bandwidth for the user, giving them optimised page content.

Going further

Custom media queries can be defined for changing content with Interchange and events can be fired through JavaScript, visit **bit.ly/1fQPF49** to find out more.



Interchange and handling retina images

Retina screens cause web designers no end of problems, one of the major ones being that images just look so low quality on them. Essentially, a retina screen has a higher ratio of pixels so a single pixel gets stretched over about usually 4px.

The solution from Foundation is to have a named query for retina, so as well as specifying a small, medium and large image, you would also specify a retina image, like this:

```
001 data-interchange="[image/path/to/
retina.jpg, (retina)]"
```

Perhaps a larger problem is that retina screens appear on mobile, tablets and desktop computers, so it is hard to know the width that you are dealing with. As yet this remains largely unsolved, as you would need to query width and retina then serve the appropriate image. Still, solutions will emerge as these devices become more widespread.

web workshop

Create rollover effects using image maps

inspiration **www.planetpropaganda.com**

Planet Propaganda is a design and advertising agency and as such needs a strong web presence to show off their skills in the digital arena. On the homepage, there is a fullscreen background image slider as found on a great many sites – but the part that grabs the users attention is the large cross in the middle of the screen.

This splits the page into four triangular sections, which relate to the how Planet Propaganda works. Each of these elements around the cross is a rollover, which is quite unusual as images can't be triangular. It turns out they are transparent PNGs that are using an image map as the rollover trigger.

Highlight the content

As the main page slideshow changes, it appears that these are images from the agency's portfolio, but the bottom of the page reveals the area in grey is the description of the work being displayed. This keeps the user informed and the main image clutter free.

1 INSPIRATION

Preload and reveal the content

The whole website uses AJAX in order to load new content into the existing page. This means that the site never actually has a page refresh, as the old content fades out while the new content is preloaded in and then revealed. More and more sites are turning to this method to load content. It is URL-friendly because the URL updates with a hash followed by the new page, made possible through the 'hashchange event' plug-in for jQuery (**github.com/cowboy/jquery-hashchange**). Several sites also take advantage of the HTML5 History API to get this to work without the hash change.

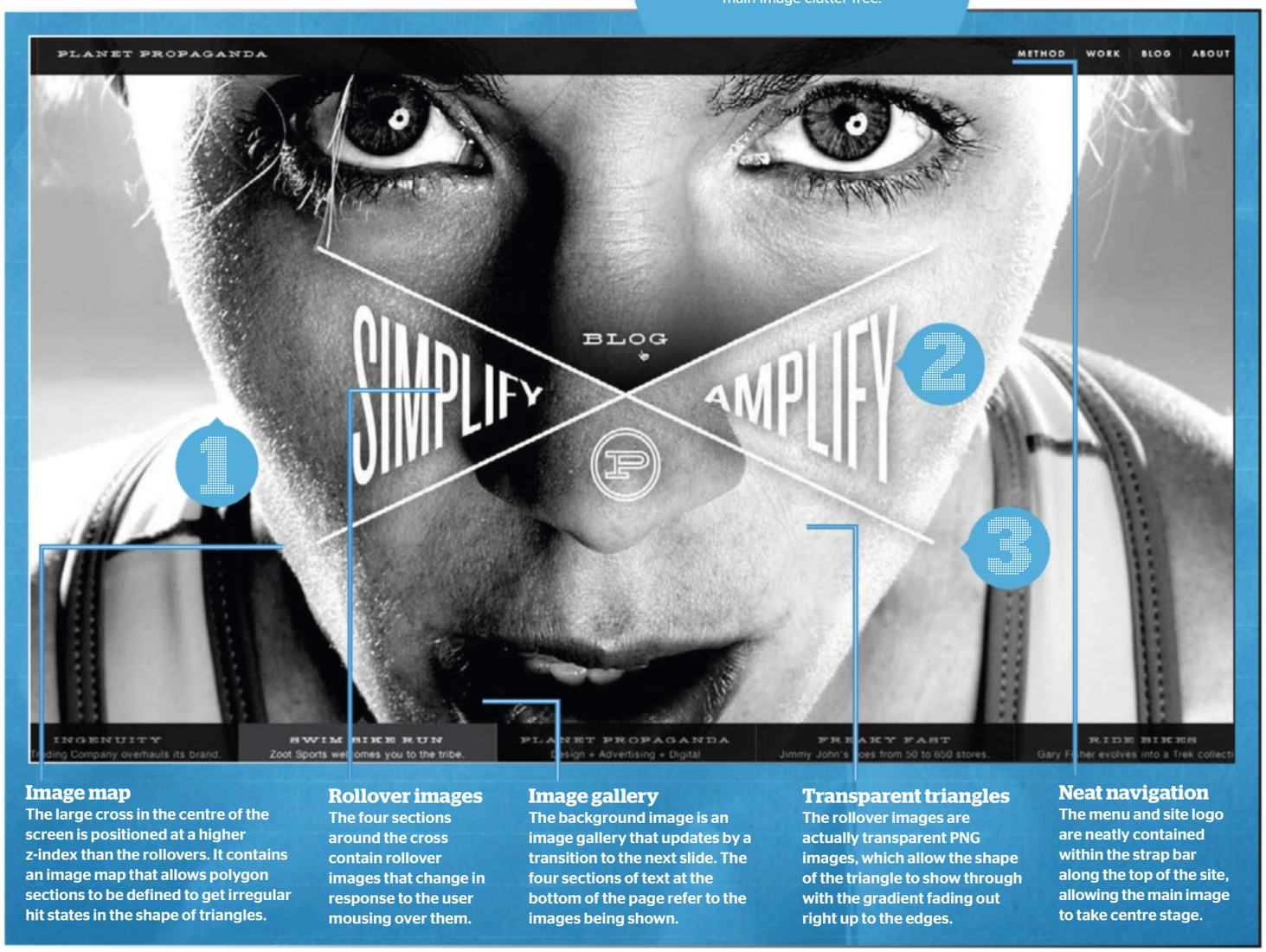


Image map
The large cross in the centre of the screen is positioned at a higher z-index than the rollovers. It contains an image map that allows polygon sections to be defined to get irregular hit states in the shape of triangles.

Rollover images
The four sections around the cross contain rollover images that change in response to the user mousing over them.

Image gallery
The background image is an image gallery that updates by a transition to the next slide. The four sections of text at the bottom of the page refer to the images being shown.

Transparent triangles
The rollover images are actually transparent PNG images, which allow the shape of the triangle to show through with the gradient fading out right up to the edges.

Neat navigation
The menu and site logo are neatly contained within the strap bar along the top of the site, allowing the main image to take centre stage.

<comment>
What our experts think of the site

Using the right technology

There are a number of ways the triangular rollovers could have been created, the image map method that Planet Propaganda used being just one. It could also have been achieved using the Canvas tag, or perhaps it could even be an interactive SVG – ultimately you have to go with what you feel is right.

Mark Shufflebottom

Full code found on the resource CD

2 TECHNIQUE

The rollover effect

01 Style the document

The main rollover effect on the homepage is accomplished by using an image map. In the document, add a link to the jQuery library in the head of the document and add the style for the background and container. Inside the container we'll position the images.

02 Style the rollover

We're creating two styles for rollover and rollout. They're positioned directly over one another but the rollover opacity is set at 0. This enables us to fade it in and fade out the other content with jQuery later. The image map we create needs to be the topmost element, so its z-index is set higher than the others.

```
001 #top-out{
002     background-image: url(img/top-
out.png);
003 }
004 #top-over{
005     top: -676px; opacity: 0;
006     background-image: url(img/top-
over.png);
007 }
008 #imgMap{
009     position: relative;
010     z-index: 200;
011   }
012 </style>
013
```

Interact with me

Create a link for irregular shapes by making an image map that can then fade the rollover image in and out by using jQuery. Here the shape is triangular to fit the cross on the screen.

03 Page content

Now move to the main body tag of the page and add in the following code for the page structure. Here we add an image inside the 'imgMap', which has an image map attached – see the 'usemap', we'll add it in the next step. Then we have two empty tags to hold the rollover and rollout images.

```
001 <div class="container">
002     <div id="imgMap">
003     <img src="img/cross.png"
alt="image-map"  usemap="#map">
004   </div>
005 <div id="top-out" class="top"></
div>
006 <div id="top-over" class="top"></
div>
```

04 Add the image map

Now we add the image map. To get these co-ordinates, we just used Dreamweaver and in the Properties panel, after selecting an image, a Polygon tool is available to draw the triangle shape. Notice the JavaScript 'onMouseOver' and 'onMouseOut' calls.

05 JavaScript code

Now at the bottom of the page we add the following JavaScript. The first function fades in the rollover and the second fades it back out. This is scalable so you can build as many as you like and it will work, as the id is passed in dynamically in the previous step. Save and test it in the browser.

```
001 <script>
002 function change(block)
003     $('#' + block + '-over').
animate({"opacity": "1"}, "slow");
004     $('#' + block + '-out').
animate({"opacity": "0"}, "slow");
005 }
006 function changeb(block){
007     $('#' + block + '-over').
animate({"opacity": "0"}, "slow");
animate({"opacity": "1"}, "slow");
008     $('#' + block + '-out').
animate({"opacity": "1"}, "slow");
009 }
010 </script>
```

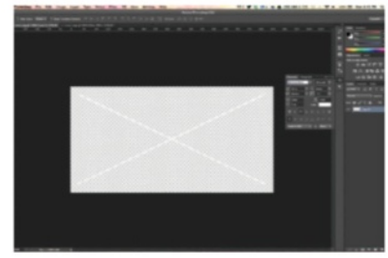
3 TECHNIQUE

Create the cross

The rollovers on the homepage are created with image maps and a ton of transparent PNG images layered up on the screen. Here we show how to create the same look, using Photoshop to create the graphics.

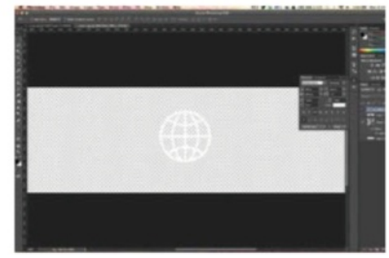
01 Start the cross

The cross can easily be drawn by using the Vector Line tool in Photoshop. Once one line is created, copy the layer and flip it vertically in order to get the cross nice and even. Save this as a PNG.



02 Add the icon

Duplicate the cross and crop it so that only the top half is showing. Add your icon to this document and align the icon to the cross image. Turn off the visibility of the cross image and save the icon as a PNG.



03 Create the rollover

Turn off the visibility of the icon and turn the cross layer back on. Use this as a guide to select a triangle shape in the upper section with the Polygon Selection tool. Fill this with a gradient and add text. Turn off the cross layer and save the image as a PNG.

Create a responsive CSS3 paper fold effect

Make use of CSS3 features such as box-shadows and background gradients to create this engaging effect

tools | tech | trends HTML, CSS
expert Neil Pearce

There are so many remarkable and exciting things that we designers can achieve on the web today, whether it's using the pillars of the web HTML5, CSS3 and good old jQuery, or more modern frameworks and technologies, development just never seems to ease up. Better yet, there are sure to be even more remarkable and exciting things to look forward to experimenting with in the near future.

Still, even among all of these great technologies, it is worth remembering that we must also make use of the more subtle elements available to us, even if it's just any old box element on the site, as these can make all the difference to our webpages. Such elements can provide some much-needed polish and finesse, which can really help elevate the page to a new level.

So in this tutorial, we are going to turn our attention to CSS3 and see how we can create a more delicate responsive folding paper effect. Later on we're also going to use a touch of HTML5 and talk about drop shadows in more detail, so you can truly master the technique. Interested? Let's get started!

01 Get started

Begin with a new HTML5 file and start adding in the HTML markup. We're creating just one stylesheet and, because we want this to be responsive, we need to add in the 'viewport' meta tag. Below that we use the HTML5 Shiv to compensate for IE users when using HTML5 elements.

```
<head>
  <meta charset="utf-8" />
  <title>Flexible Folded Paper Effect</title>
  <link rel="stylesheet" type="text/css" href="css/style.css" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <!--[if IE]>
    <script src="http://html5shiv.googlecode.com/svn/trunk/html5.js"></script>
  <![endif]-->
  <!--[if gte IE 9]>
<style type="text/css">
  .gradient {
    filter: none;
  }
 </style>
<![endif]-->

</head>
```

02 The page wrap

Now that we have dealt with the head meta information, let's start adding in some much-needed structure to our HTML. Firstly then, let's add in a called 'page-wrap'. We're going to use this to centre our content before adding in another with a class name of 'paper', as shown in the code below.

```
  <div id="page-wrap">
    <div class="paper">
   </div><!  End paper  >
  </div><!  End paper  >

```

03 The header

The header section is pretty straightforward, but this is the first time we've used an HTML5 element, the <header> element. The header element is typically used to group a set of h1 to h6 elements to mark up a page's title with a subtitle or tagline, which fits perfectly with what we are trying to achieve here.

```
<header>
  <h1>Responsive Paper Fold Effect</h1>
  <h2>Using CSS3 and HTML5</h2>
</header>

```

04 Add content

In this next step we're just going to create some content. In this tutorial, all we will do is use some generic dummy text (available from www.lipsum.com) and place that with another HTML5 element, the <section> element. Using the section element is somewhat debatable because you can at times use the <article> element. But because this is not going to be syndicated content, the <section> element seems more semantic.

```
<section>
 <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.
  Etiam sollicitudin sapien quis augue pellentesque pulvinar.</p>
</section>

```

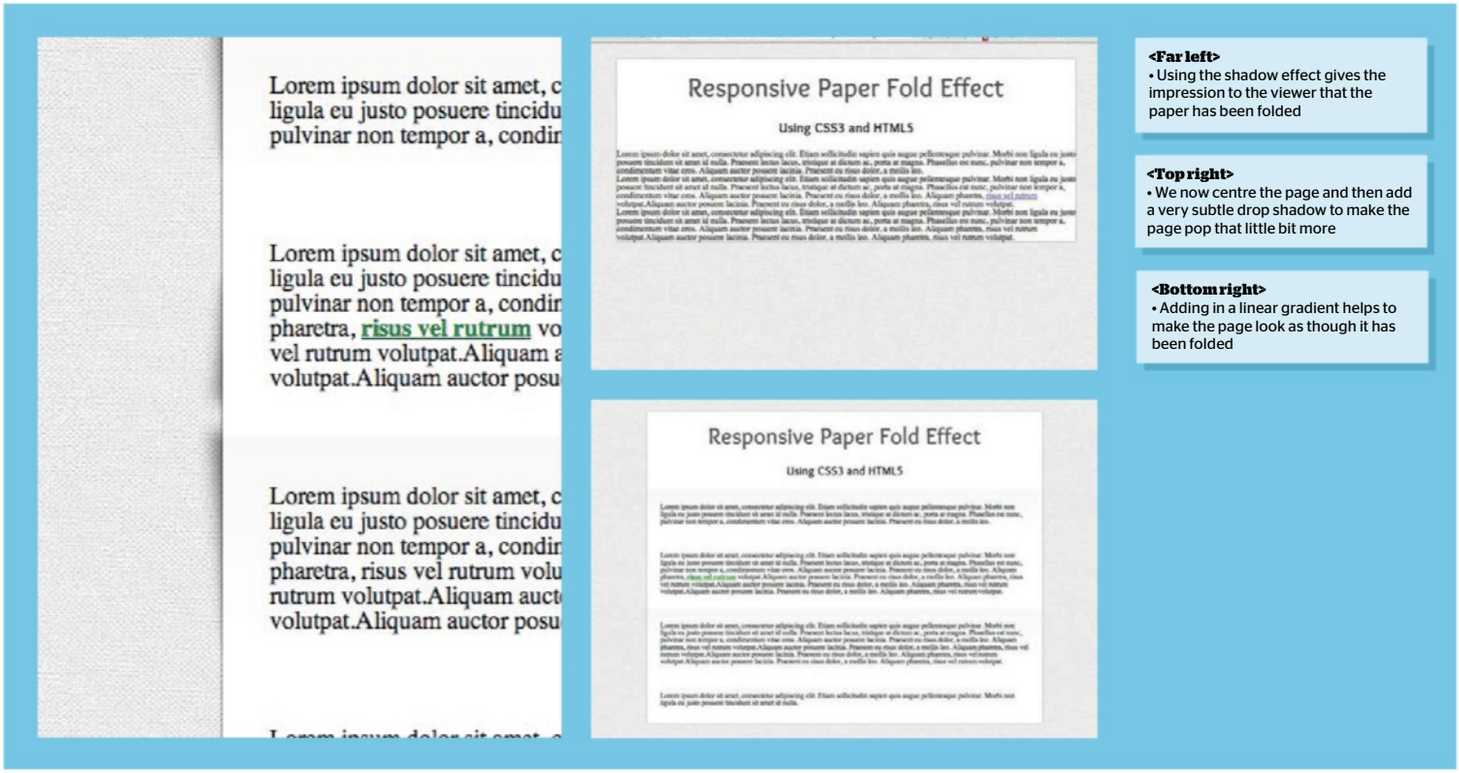
05 More content

Now to finish off our HTML markup, copy and paste a couple more paragraphs, but making sure you add more text than you see in the example below. Then it's just a case of adding some subtle things within, such as a link, just to get a feel of how certain elements would look. Of course, adding other content such as images where you feel it would look good is also encouraged. Now that's the HTML done, let's do some styling.

```
  <section>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.
   Etiam sollicitudin <a href="">risus vel rutrum</a> sapien
   quis augue pellentesque pulvinar.</p>
  </section>

  <section>
   <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.
  Etiam sollicitudin sapien quis augue pellentesque pulvinar.</p>
   </section>

```



06 Add a reset

Create a new CSS file and call it 'styles.css' before placing it within its own folder called 'CSS'. We're going to use a reset to start with and Eric Meyer meyerweb.com/eric/tools/css/reset always has an updated one to use. But the most important thing to add is the HTML5 display role. Without this we risk our pages becoming very messy when viewed in older browsers.

```
/* HTML5 display-role reset for older browsers */
  article, aside, details, figcaption, figure,
  footer, header, hgroup, menu, nav, section {
  display: block;
}
```

07 Reset continued

People add a CSS reset without really understanding fully why and even though the most important rule to add is the HTML5 display role that we covered in the last step, the other significant rule we should be adding is for box sizing. The 'box-sizing' declaration will cause all the box sizes (block level elements) to be applied to the border and everything inside it.

```
* {
  -moz-box-sizing: border-box;
  -webkit-box-sizing: border-box;
  box-sizing: border-box;
}
```

08 Default styles

What we're going to do now is add in some simple default styles to the main page. Next, some texture to our document's body by using a textured image we've supplied in the source files. If the image doesn't work for some reason, then we default to an off-white colour. Finally we centre the paper using margins and set its width.

```
body {
  background: #f1f1f1 url("../imgs/bg.jpg");

}

#page-wrap {
  margin: 0 auto;
  max-width: 980px;
  width: 100%;
}

```

09 Header styles

Here we need to give the header some styles. We're going to give it a width of 100 per cent and a minimum height of 100px. This will allow the header to adjust accordingly whenever the browser window is resized. Next we position this relative to its parent container (which is the page-wrap) and lastly give it some padding.

```
header {
  width: 100%;
  min-height: 100px;
  position: relative;
  padding: 30px;
}
```

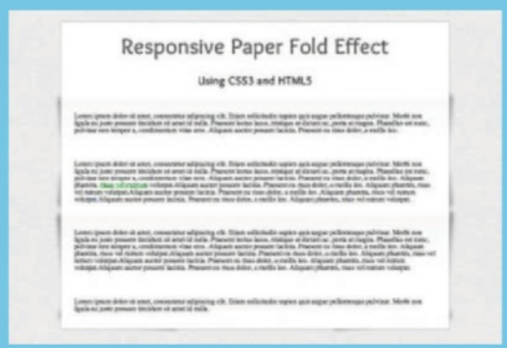
10 Page title

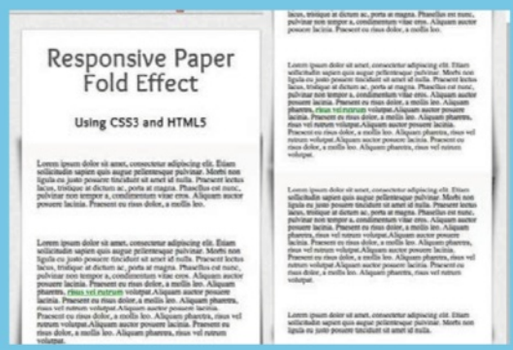
In this step we're going to give our page title and tagline some styles. The font we used here is taken from Google Fonts and as you can see, is called 'Overlock' (download it from **www.google.com/fonts/specimen/Overlock**). Target the 'h1' element first and give it some basic styles before adding in a touch of drop shadow using the 'text-shadow' declaration. Then we can finish off targeting the 'h2' element, setting the font size to half of our 'h1' element, as shown below.

```
h1 {
  font-family: 'Overlock', cursive;
  font-weight: bold;
  font-size: 50px;
  color: #555;
  text-align: center;
  text-shadow: 0 1px 0 #fff;
  margin-bottom: 20px;
  padding-bottom: 20px;
}

h2 {
  font-family: 'Overlock', cursive;
  font-weight: bold;
  font-size: 25px;
  text-align: center;
}
```

Create a responsive CSS3 paper fold effect





<Top left>
• Continuing on from the previous step, we can add some shadows to the right side of our paper folds (sections)

<Top right>
• We're going to add some shadows to the top-left of our paper fold sections. Things are finally looking pretty good

<Bottom left>
•The last step for the shadows is to add some over to the top-right of our paper fold sections

<Bottom right>
•Now that we have made this responsive, we can play around with the shadows and see if we have the correct values (sizes)

11 Paper styles

Not much is happening right now, so let's get some structure to our paper. We're going to set the background of our paper to white and push it away from the top using margin. We then set its maximum width to 960px and add in a subtle drop shadow using the 'box-shadow' property, which will surround the whole paper element and help to make it look like it's raising off the page slightly.

```
.paper {

 background: #fff;
 margin: 30px auto;
 max-width: 960px;
 width: 90%;
 box-shadow: 0 0 2px rgba(0, 0, 0, 0.8);

 }

```

12 The paper sections

In this next step we're going to add a rule that targets every section element within the 'paper' class. So we will tell our browser to make every section element have a width of 100 per cent. Then we give them a minimum height of 100px and position them relative to the 'paper' class. Finally, we give them some padding of 30px.

```
.paper section {
 width: 100%;
 min-height: 100px;
 position: relative;
 padding: 30px;
}
```

nth-child

The nth-child pseudo class accepts two keywords – 'odd' and 'even' – but it does also accept numbers and expressions as well.

13 Inner link

In this simple step, we can style our links that we have with our content, or ones we may add in a later date. The colour green goes really nicely with the grey, and we have made the font more prominent by setting it to bold. We then add a nice subtle blue for when the link is hovered over – simple but effective.

```
section a {
  color: green;
  font-weight: bold;
}

section a:hover {
color: blue;
}
```

14 Section gradients

What we are going to achieve here is on every even number of the sections, we are going to add a linear gradient that will help make the paper lift up as though it has been slightly folded. So, we start by setting the top to an off-white colour and for the bottom we can use the 'rgba' property and play around with the opacity.

```
.paper section:nth-child(even) {
 background: linear-gradient(180deg, #f9f9f9 0%,
 rgba(245, 245, 245, 0.1) 100%);

}
```

15 Add in shadows

Things are starting to take shape now and to finish off the effect, all we need to do is add in some shadows to the left and right sides of our sections to make it look like they are lifting off the page. Start with the left side, using the code as shown below.

```
.paper section:nth-child(odd):before {
 z-index: -1;
 position: absolute;
 content: "";
 bottom: 30px;
 left: 10px;
 width: 30%;
 top: 50px;
 background: rgba(0, 0, 0, 0.7);
 box-shadow: -10px 20px 15px rgba(0, 0, 0, 0.5);
 transform: rotate(5deg); }

```

16 Right-side shadows

What we've done so far and in this step is create a shape with a background colour of black and then position it behind our paper and then rotate it. We then finish off by giving it a drop shadow, which then allows us to give the shadows the angles we need.

```
.paper section:nth-child(odd):after {
  z-index: -1;
  position: absolute;
  content: "";
  bottom: 30px;
  right: 10px;
  left: auto;
  width: 30%;
  top: 50px;
  background: rgba(0, 0, 0, 0.7);
  box-shadow: 10px 20px 15px rgba(0, 0, 0, 0.5);
  transform: rotate(-35deg); }

```

17 Top-left shadows

Now we are just going to create the top shadows on the left-hand side. These are the shadows that will sit just above the ones we now have. Be sure to play around with the positioning and perhaps the width to see if a bigger or smaller shadow looks better for your needs.

```
.paper section:nth-child(even):before {
  z-index: -1;
  position: absolute;
  content: "";
  bottom: 20px;
  left: 10px;
  width: 40%;
  top: 0;
  background: rgba(0, 0, 0, 0.7);
  box-shadow: -10px -20px 15px rgba(0, 0, 0, 0.5);
  transform: rotate(-5deg); }

```

18 Top-right shadows

So let's finish off our shadows for good and place some on the top-right side. We are going to position it 20px from the bottom and move it 5px from the right (not 'to' the right). We then rotate it five degrees back the other way.

```
.paper section:nth-child(even):after {
  z-index: -1;
  position: absolute;
  content: "";
  bottom: 20px;
  right: 5px;
  left: auto;
  width: 40%;
  top: 0;
  background: rgba(0, 0, 0, 0.7);
  box-shadow: 5px -25px 15px rgba(0, 0, 0, 0.5);
  transform: rotate(5deg); }

```

19 Responsive header

Of course, it's always best practice to make our work responsive where possible. We start with the page title; make sure the maximum width is 500px, as this is the point where the shadows don't look so big. Then set default sizes for the h1 and h2 respectively.

```
@media screen and (max-width: 500px) {
  h1 {
    font-size: 25px; }

  h2 {
    font-size: smaller; }

```

20 Responsive paper sections

To finish off our responsive page, we target each section. First, let's set the right-sided shadows to only be 20px out when scaled down. Naturally, we do the same for our left-sided shadows. Of course, depending on your breakpoint (ours is 500px), the amount may be different.

```
.paper section:nth-child(even):after {
    right: 20px; }

  .paper section:nth-child(odd):after {
    right: 20px; }

  .paper section:nth-child(even):before {
    left: 20px; }

  .paper section:nth-child(odd):before {
    left: 20px; } }

```

21 Add browser prefixes

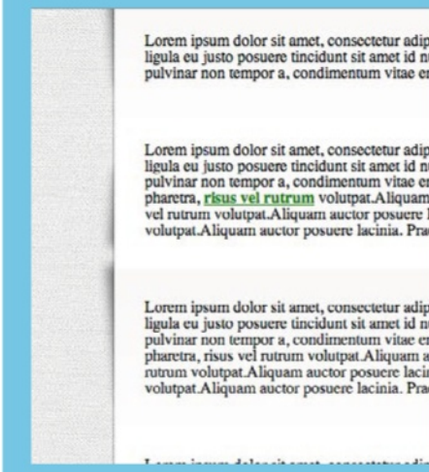
We have gone through this tutorial not adding any browser prefixes. It is actually important to add them to real-world projects, but for the purpose of this tutorial, we didn't really need to. However for the purposes of maintaining good practice, go ahead and add some to where we used the 'transform: rotate' declarations.

```
-webkit-transform: rotate(-5deg);
-moz-transform: rotate(-5deg);
-o-transform: rotate(-5deg);
-ms-transform: rotate(-5deg);

```

22 Final thoughts

The final effect isn't something that you would use for the whole page, it's something that you can use for maximum effect in sections of your webpages – consider a menu or a testimonial section, for example. Subtle effects such as these really do help give your pages a boost and make them stand out from the rest.



The drop shadow

The box-shadow property allows designers to easily implement multiple drop shadows on any box element, specifying values for colour, size, blur and offset. What we set out to do in this tutorial was create shadows that are angled so it gives us that pointed shadow and looks a little more realistic. We achieved this with the help of the 'transform: rotate' declaration – there may well be more ways to do this, but this is just one way of achieving our goal.

The browser support for the box-shadow property is growing, with all the major browser fenders offering a decent implementation of the spec, although Mozilla and WebKit browsers will still require that you use their respective -moz- and -webkit- prefixes. Note that Mozilla Firefox 4.0+ no longer requires the -moz- prefix.

How it works:
The box-shadow property can accept a comma-separated list of shadows, each defined by two to four length values. The order goes as follows: horizontal offset, vertical offset, optional blur distance and optional spread distance. To give us more control of our shadows, we added in the 'rgba' value and turned down its opacity, which is very handy indeed.

```
'box-shadow: 5px -25px 15px rgba(0, 0, 0, 0.5);'
```

Transform-rotate

Rotating an element is very easy with transform, but just remember the origin of the rotation is at the centre of the element.

Create a flip-over digital clock effect

inspiration **amphibiox.geox.com**

Geox is an Italian shoe and clothing brand that uses technology to improve the performance of its products – and they're more than capable of expressing their command of technology online.

When the award-winning digital agency Stinkdigital was briefed to promote the Geox Amphibiox, the challenge was to create a memorable campaign that showed how comfortable and dry Amphibiox boots will keep your feet even in heavy rain. The fun bit is how they ensured their tester would experience seven days of non-stop rain! The site also offers plenty of great visuals along the way and makes good use of a flip-over clock to signify time passing.

1 INSPIRATION

Whimsical charm

Flip clocks were all the rage in the Seventies, their success appearing to come from a combination of their properties. The physical movement of the device is rather more satisfying than the sweep of a clock hand, and they provide an instantly readable, reliable and high-quality display.

The distinctive appearance translates well to the computer screen and there is something pleasingly whimsical about creating a flip-over effect to mark each unit of time when modern displays can more easily and more simply just switch from one figure to the next. Perhaps that helps to explain how they seem to have largely survived The Great Skeuomorphic Cull of recent years.

Engaging experience

Every element of the site has been designed to encourage interaction. Marketers know that engagement increases the chances of buying and if you can create sites that demand to be interacted with like this, it might not be long before you have worldwide offices yourself!

Fullscreen video
Fullscreen video is put to good use to help create the most immersive web experience possible for the audience.

A hint of more
About 50px of the next section is shown at the page bottom. There's no point in risking people not finding your content for the sake of going completely fullscreen.

Dramatic imagery
You can watch each of the days individually. Each day's intro page uses a dramatic slow-motion close-up of the featured footwear and heavy rain.

Minimal use
The flip-over clock features a single digit and counts up from zero to seven. The minimal use of this effect makes it feel more compelling.

More options
The minimal navigation bar displays the branding, enables/disables sound, provides sharing options, and gives you the choice between five languages.

Full menu
There's a menu for accessing more content, which is handy when you've seen all the video content and are ready to buy.

<comment>
What our experts think of the site

A design for life

The appealing nature of the digital flipping clock secures its place in history, with a lasting value. The Amphibiox campaign is also something special because it's fresh and new. Given the amount of creative talent in the world, fresh and new doesn't seem to come along nearly as often as it should.

Jayson Winters

2 TECHNIQUE

Flip-over clock effect

01 HTML head

This tutorial is partly based on David Martin's 'Create a Countdown & Signup Coming Soon Page' available at **bit.ly/MpVFUC**. The effect is achieved using the flipclock.js plug-in with jQuery. The scripts are loaded first, followed by a Google font, and then finally the stylesheets for the clock and for the page itself.

```
001 <script src="https://ajax.
googleapis.com/ajax/libs/jquery/1.10.2/
jquery.min.js"></script>
002 <script src="js/flipclock.min.
js"></script>
003 <script src="js/scripts.js"></
script>
004 <link href="http://fonts.
googleapis.com/css?family=Montserrat"
rel="stylesheet" type="text/css">
005 <link rel="stylesheet" href="css/
style.css">
006 <link rel="stylesheet" href="css/
flipclock.css">
007
```

02 HTML body

The page content sits in a section which itself sits inside a wrapper to facilitate centring the content. All of the HTML required to locate the flipclock on the page is to allocate the class 'countdownclock' to a .

```
001 <section id="wrapper">
002   <section id="countdown">
003     <h1 class="launch_header">XX
COMMONWEALTH GAMES</h1>
004   <p>Glasgow 2014<br>23 July   3
August 2014</p>
005   <div class="countdownclock"></div>
006  </section>
007 </section>
```

03 Stylesheets

There's nothing much to see in the style.css, especially if you are already happy with creating fullscreen background images and centring content on pages. Flipclock.css has a ton of styles included and makes copious use of pseudo-elements and animation keyframes to achieve the effects. If you're prepared to do some digging about, you can change every element of the styling. For example, the font family can be changed to a new font-family.

```
001 .flip-clock-wrapper .flip {
002     font-family: 'Montserrat', sans-
serif;
003     text-transform: uppercase;
004     color: #fff;
005 }
```

04 Run the plug-in

Script.js is used for configuring and running the plug-in. Your target date is set on line nine. In our example the digit six represents July (January is zero), and the date is just the date. You can easily double check you've set your clock correctly by using the **days.to** site. If you want to know how many days it is until 10 December you would just type this address in your browser days.to/until/10-december.

```
001 var clock;
002 $(document).ready(function() {
003
004   // Grab the current date
005   var currentDate = new Date();
006
007   // Set the target date of your
launch. Here it is the 23 July.
008   var futureDate  = new
Date(currentDate.getFullYear() + 0, 6,
23);
```

05 3, 2, 1... Instantiate

Once you have the current date and your target date, the difference is calculated and this is the value that is displayed on screen. It's divided by 1,000 because the default units are milliseconds. 'Countdown: true' sets the clock going down. If you wanted a counter to show how long since an event you set this to false.

```
001 var diff = futureDate.getTime() /
1000 - currentDate.getTime() / 1000;
002  clock = $('.countdownclock').
FlipClock(diff, {
003 clockFace: 'DailyCounter',
004 showSeconds: true
005
```

3 TECHNIQUE

Make it yours

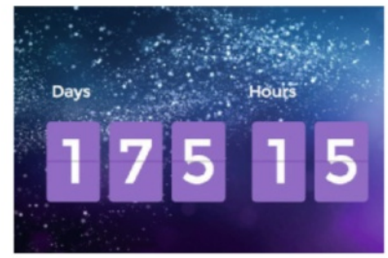
The look of the flip-over clock is totally customisable, so you really can tweak the code to entirely meet the needs of your project. Experiment with colours, fonts and the settings in flipclock.css so you can see the impact of your changes.

01 Change font colour

You can match the colours to your site branding, or at the very least create a strong contrast between your background and the clock. Lines 17 and 20 of flipclock.css are where you can experiment with and alter all the font colours.

02 Change flip colour

Change the flip-over colour itself at line 147. Make sure you test your changes in different browsers; too much contrast between the clock and background in FireFox can make the flip effect look jaggy.



03 Change font

You can, of course, change the clock font as well (line 161) but you don't need to stop there. You could increase the animation speed, lose the rounded corners or even create circular flipping elements.

Make a responsive menu for a retina screen

Make sure your menu is both responsive and ready for retina screens by using custom fonts instead of images

tools | tech | trends HTML, CSS
expert Richard Lamb

Designing the navigation element for your website in this age of mobile devices and differing screen widths can be a real pain in the mouse. Balancing usability with aesthetic credibility is the challenge that responsive design now presents to all designers. There are a wide variety of solutions and techniques available to solve the issue, from fixed drop-down menus to side-sliding variations. The problem is that, while these solutions all solve the problem of maintaining functionality at different screen widths, they can sometimes lacking visual impact.

These days it's nice to see a menu that remembers to look good, too. Longer, scrolling pages are reducing the number of menu elements some sites need to present, and those sites, in particular, can afford to be a little more adventurous with how they deliver the navigation. So it's time to give the responsive menu a much needed paint job and raise it above the purely functional. This tutorial will demonstrate how to create a responsive menu that is both eminently usable and visually striking. And to keep it retina friendly, we'll be using a custom-made icon font rather than images.

01 Choose your icons

In order to create the custom icon font, we'll be using the excellent IcoMoon tools at **icomoon.io/app/#/select**. You have a choice here of creating your own icons as vector images to import into the font creator or choose from the extensive selection already available. We'll choose ours from the library as they have exactly what we need.

02 Create a custom font

Having selected your icons, click the bottom Font button. On the next page, you can amend the icon's tags and corresponding letters used to call each icon. Click on Download and you will get access to the folder with its font files and stylesheet. Place the font folder into your root.

03 Add the custom font

Copy the custom CSS that came with your download and paste it into the top of your site stylesheet. Ensure that the path for the font files is still correct. You may also want to make sure that each icon is assigned to the font family individually by name rather than with the default blanket icon class.

```
@font-face {
  font-family: 'icomoon';
  src: url('../fonts/icomoon.eot');
  src: url('../fonts/icomoon.eot?#iefix')
format('embedded-opentype'),
    url('../fonts/icomoon.woff')
  format('woff'),
    url('../fonts/icomoon.ttf')
format('truetype')
url('../fonts/icomoon.svg#icomoon')
format('svg');
  font-weight: normal;
  font-style: normal;
}
.icon-happy,.icon-loved,.icon-uniF4F1,.
icon-skull,.icon-uniF539,.icon-rocket,.icon-
menu {
    font-family: 'icomoon';
    speak: none;
    font-style: normal;
    font-weight: normal;
    font-variant: normal;
    text-transform: none;
    line-height: 1;
    -webkit-font-smoothing: antialiased;
  }
  .icon-happy:before {content: "\e603";}
  .icon-loved:before {content: "\e61c";}
  .icon-uniF4F1:before {content: "\e613";}
  .icon-skull:before {content: "\e607";}
  .icon-uniF539:before {content: "\e612";}
  .icon-rocket:before {content: "\e600";}
```

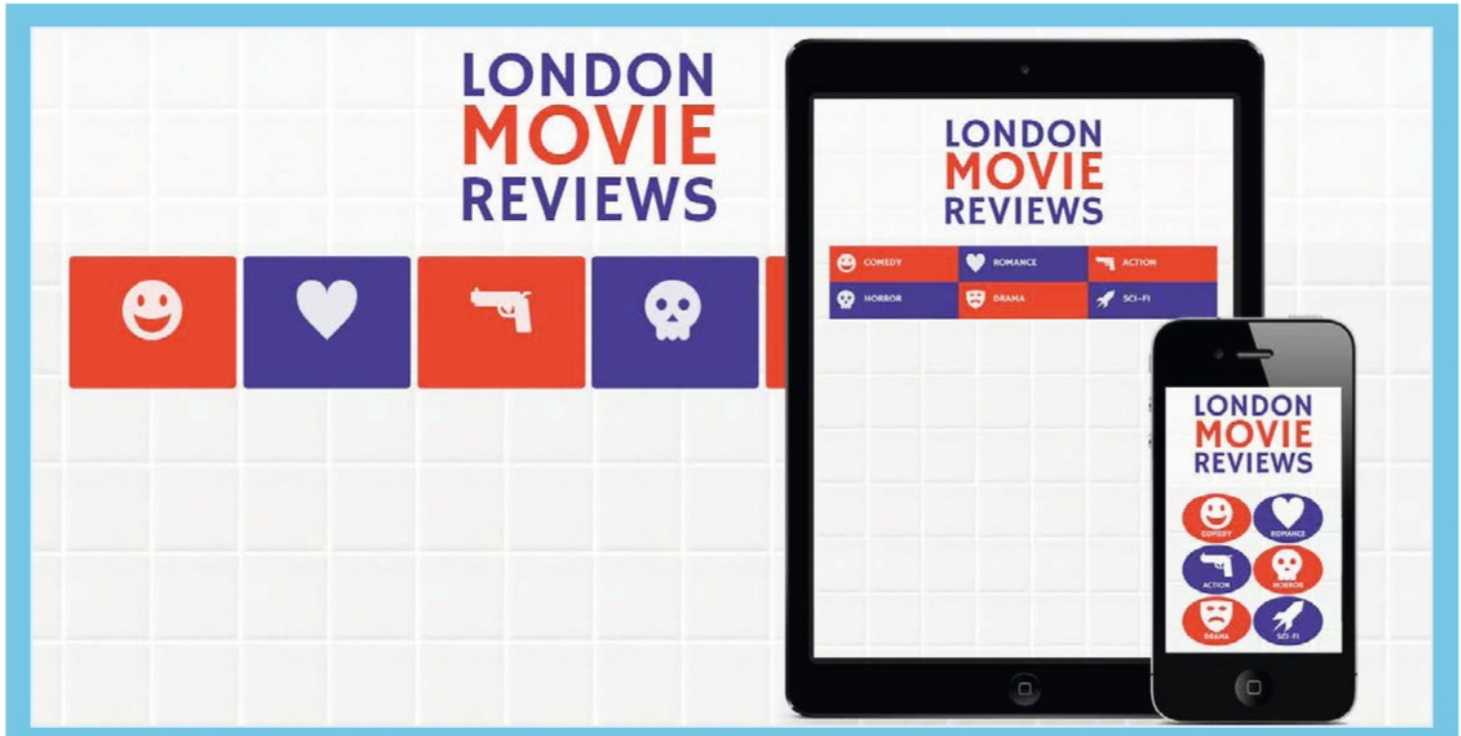
04 Base CSS

Before we start putting all the menu HTML into the index.html, we just need to prepare some base CSS for the project. Start by creating a container, main and a header into which the site title will be placed, making sure to call the stylesheet in the head. Use the following CSS to style the wrapping elements.

```
.main,
.container > header {
    width: 100%;
    margin: 0 auto;
    padding: 16px 32px;
}
.main {
    max-width: 1300px;
    min-height: 640px;
}
header {
    text-align: center;
    font-size: 16px;
    background: rgba(255,255,255,0.6);
}
header h1 {
    font-family: 'Hammersmith One', sans-
serif;
    font-size: 75px;
    line-height: 0.8;
    margin: 0;
    font-weight: 300;
    color:#3f3782;
  }
  .movie {
    font-size:102px;
    color:#e63c2b;
  }
```

05 Menu HTML

Create your menu <ul> using span classes for both the icon and the text label. The span class 'fon' will create



<Above>
• As more and more screen sizes flood into the market, it pays to keep your responsive elements as simple as possible to avoid meeting a width they can't deal with. Having three breakpoints, roughly representing PC, tablet and smartphone, is a tried and trusted approach to this problem

Menu love

Navigation menus can be overlooked as necessary items, requiring little thought. This is a shame since they are often the part of your site that is engaged with most. Love them and make them shine.

the styling for the custom icons, while the class 'item' is used for the labels. The icon name, as declared in the IcoMoon CSS calls each custom icon to its element.

```
001 <div class="container">
002 <header>
003 <h1>LONDON<br><span class="movie">MOVIE</
span><br>REVIEWS</h1>
004 </header>
005 <div class="main">
006 <nav id="menu" class="nav">
007 <ul>
008 <li><a href="#"><span class="fon ico-
happy"></span><span class="item">COMEDY</
span></a></li>
009 <li><a href="#"><span class="fon ico-
loved"></span><span class="item">ROMANCE</
span></a></li>
010 <li><a href="#"><span class="fon ico-
uniF4F1"></span><span class="item">ACTION</
span></a></li>
011 <li><a href="#"><span class="fon ico-
skull"></span><span class="item">HORROR</
span></a></li>
012 <li><a href="#"><span class="fon ico-
uniF539"></span><span class="item">DRAMA</
span></a></li>
013 <li><a href="#"><span class="fon ico-
rocket"></span><span class="item">SCI-FI</
span></a></li>
014 </ul>
015 </nav>
016 </div>
017 </div>
```

06 Non media query CSS

There are some styles that apply to all three of the upcoming menu sizes, setting some navigation styles and using a WebKit trick to eliminate blue bordering on click. Here we also colour our navigation element backgrounds, using the nth property to alternate the colour between the site theme red and blue.

07 Large screen query

Our first media query targets screens of 800px or more. The layout is a horizontal strip of rounded squares, with each element at a percentage for maximum flexibility. Icon and label are stacked one above the other. We set the position and size of our '.fon' icon, while the '.item' label begins opaque, to be animated later.

08 First transition step

Now we can arrange hover effects. The first step will see the .item label fade in on hover, with a .5s transition, while the '.fon' icons change their colour to match the appearing label. Both elements are now black from white.

09 Second transition step

The black characters don't look bad against the coloured elements, but what would really make the highlighted icon stand out is having no background at all. So, we'll add a transition that fades out the background on hover, leaving just the icon and visible label. We can also close that first media query here.

```
001 .nav li:hover {
002   background:none;
003   -moz-transition: background .5s;
004   -o-transition: background .5s;
005   -ms-transition: background .5s;
006   transition: background .5s;
007 }
008 }
```

10 Add the background

We'll finish off the site properly with an appropriate background image. In keeping with the London

<Clockwise from top left>
- Anyone who takes the London Underground regularly will probably recognise where this design is going
- Rather than having to adapt the layout per screen width, we'll use each breakpoint as an opportunity for redesigning
- Having fewer menu elements means that we can avoid having to hide them. Instead we can arrange them within our screen space

Underground theme, we're using for our London Movie site, we're going with a white tile motif, and making sure the Google font is used throughout.

```
001 body {
002   font-family: 'Hammersmith One', sans-
serif;
003   background: url(../img/bg.jpg);
004 }
005 margin: 20px;
006       border: 1px solid red; /* take off
asap   */
007 }
008
```

11 Second media query

Our second media query targets screen widths between 520px and 799px, which covers tablet screens and some larger smartphones at landscape. Our layout will differ considerably at this size. Two rows of three blocks, no margins and no rounded corners. Our fonts are also considerably smaller and sit side by side.

12 Tablet animation

In a reversal of our hover effects for large screens, this time we're going to change the background colour of the li element to black and give the white font and icon an off-white shade and a very slight fade. With that, all of the tablet styles are completed, so make sure you remember to close the media query here.

```
001 .nav li:hover {
002   background:rgba(0,0,0,0.9);
003   -moz-transition: background .5s;
004   -o-transition: background .5s;
005   -ms-transition: background .5s;
006   transition: background .5s;
007 }
008 .nav a:hover .fon,
009 .nav a:active .fon,
010 .nav a:active .item,
011 .nav a:hover .item{
012   color:rgba(259,259,259,0.9);
013   -webkit-transition: color .5s;
014   -moz-transition: color .5s;
015   -o-transition: color .5s;
016   -ms-transition: color .5s;
017   transition: color .5s;
018 }
019 }
020
```

Explore your options

IcoMoon isn't the only site worth visiting for custom icon fonts. You might also want to look at Fontello.com, **Fontastic.me** or **Pictonic.co**.

13 Target smaller screens

The final media query sets the layout for screens smaller than 520px, essentially targeting smartphones. Since we have so few menu elements, we can be bold and eschew the trend for JavaScript drop-down menus. We'll also lose the corners and have six circular elements, with icon and label fitting together snugly.

14 Header and fonts

The font sizes for the site title need to be reduced for this screen size, using iPhone as a guide. We can also allow for a nice, large font size for our icon and we need to make sure that fumbling fingers are able to click on the elements. Notice that the icons remain crisp at all sizes – that's the benefit of our custom font.

15 Background changes

Since the order of the elements has now changed, we'll need to do some tweaking to the background colours. At the moment we have one column of red and one column of blue, which looks a little bit odd. In order to keep the alternating pattern, we need to arrange a one, two, two, one repeat of the colours.

```
001 .nav li:nth-child(6n+1) {
002   background: rgb(230, 60, 43);
003 }
004 .nav li:nth-child(6n+2) {
005   background: rgb(63, 55, 130);
006 }
007 .nav li:nth-child(6n+3) {
008 background: rgb(63, 55, 130);
009 }
010 .nav li:nth-child(6n+4) {
011   background: rgb(230, 60, 43);
012 }
013 .nav li:nth-child(6n+5) {
014   background: rgb(230, 60, 43);
015 }
016 .nav li:nth-child(6n+6) {
017   background: rgb(63, 55, 130);
018 }
```

Improve fonts in Chrome

For many years, Firefox was the browser of choice for web developers. It was quick, it had great tools, and it rendered sites well. While it seems that recently Google Chrome has usurped Firefox, Chrome is certainly not flawless.

One area where developers have continually struggled to get Chrome to behave is in the rendering @font-face fonts. They tend to render with a jagged appearance, and sometimes alter the site layout as a whole. The popularity of Font Squirrel has made this a major sticking point for Chrome, but there is a solution in the form of a simple media query:

```
@media screen and (-webkit-min-device-pixel-ratio:0) {
@font-face {
                font-family: 'icomoon'; src:              url('../fonts/icomoon.svg#icomoon') format('svg');
};
}
```

This has the effect of forcing Chrome to use the SVG font format, which it is able to render perfectly. Problem solved!

16 Small screen transitions

This time, we'll still fade out the background of the clicked element, but change the icon and label to the same colour as the background it sits on. The CSS used here fades the background of all li elements on hover, but the colour changes need to be targeted individually. Here we are handling all of the red elements.

17 Last transition

And finally, we're handling the blue elements. Close the media query and we're done. We now have three very distinct layouts between the three breakpoints. Your menu at small-screen width doesn't have to be a small version of the large screen layout. You have the opportunity to give each menu its own appropriate design.

Code library
The HTML in full

In this tutorial we've covered all of the CSS in detail, so now we take the opportunity to get a closer look at the inner workings of the HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1">
<meta name="viewport" content="width=device-width, initial-scale=1.0, user-scalable=no">
    <title>London Movie Reviews</title>
    <link rel="stylesheet" type="text/css" href="css/style.css" />
    <link href='http://fonts.googleapis.com/css?family=Hammersmith+One' rel='stylesheet' type='text/css'>
</head>
<body>
    <div class="container">
    <header>
<h1>LONDON<br><span class="movie">MOVIE</span><br>REVIEWS</
h1>
    </header>
    <div class="main">
    <nav class="nav">
    <ul>
<li><a href="#"><span class="fon icon-happy"></span><span class="item">COMEDY</span></a></li>
    <li><a href="#"><span class="fon icon-loved"></span><span class="item">ROMANCE</span></a></li>
<li><a href="#"><span class="fon icon-uniF4F1"></span><span class="item">ACTION</span></a></li>
<li><a href="#"><span class="fon icon-skull"></span><span class="item">HORROR</span></a></li>
<li><a href="#"><span class="fon icon-uniF539"></span><span class="item">DRAMA</span></a></li>
<li><a href="#"><span class="fon icon-rocket"></span><span class="item">SCI-FI</span></a></li>
$(window).scroll(function(){
</ul>
</nav>
</div>
</div>
</body>
</html>
```

IE will use its most up-to-date rendering engine. Chrome=1 activates the Chrome Frame plug-in for early IE versions.

Here we tell the browser that the site is mobile ready and make sure the user can't scale the content, which they don't need to do.

Make sure you remember to include the Google Font declaration in the head of your index.html.

Though it may seem span-heavy, the span is one of the most under-appreciated HTML elements. Use them freely!

> Your menu doesn't have to be a small version of the large screen layout. You can give each menu its own design

Engaging transition effects with Ba Ba Dum

inspiration **babadum.com**

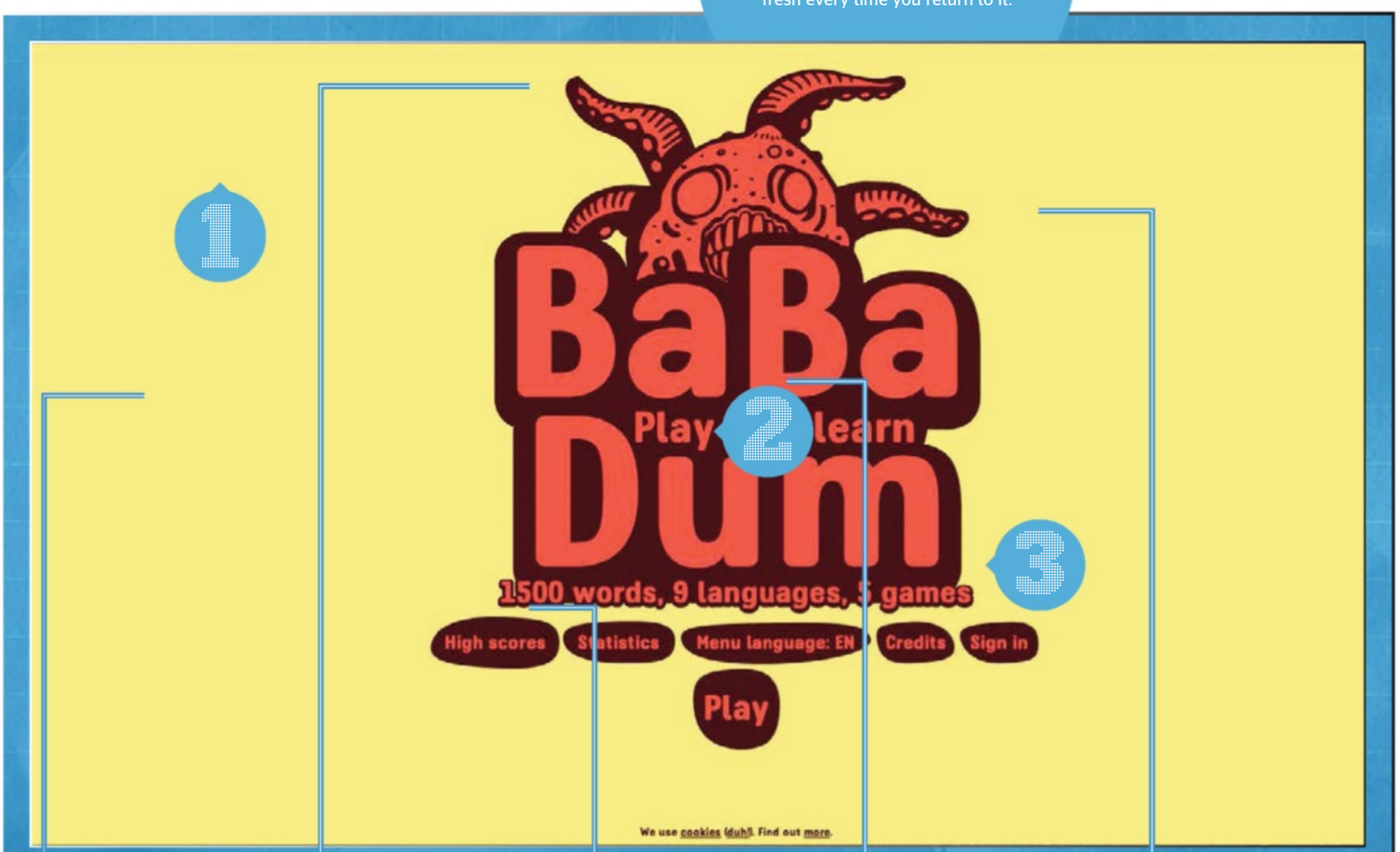
Ba Ba Dum is a multi-language series of word games and, as you'd expect with any playful experience, there are plenty of novelty features to keep you entertained. But out off all these features, perhaps the most striking is the use of amazing transitions that take place between the pages. From the centre of the screen, circles fly out and disappear, giving the illusion of a puff of smoke. Meanwhile, behind this, a large circular transition removes the page content while the next page loads in behind. This is the kind of stuff that would have been very simple to do in Flash, but seeing this recreated in the DOM with SVG elements is quite breathtaking.

Randomised design
Each page gets a random background colour and foreground colour for the content each time the page loads. Not only that but each colour theme loads a different image that appears above the main logo, which helps to keep the homepage fresh every time you return to it.

1 INSPIRATION
Animated and SVG elements

As each page loads, every single piece of text or image seems to spring onto the page through an animated transition. This demonstrates incredible attention to detail and really shows the high level of consideration that has been shown to each page with most of this animation being powered by the jQuery library.

The vast majority of graphics here are all SVG elements, meaning they can be blown up and down depending on the device viewing them, so the graphics remain crisp at every resolution screen and whether there is a high pixel density screen or not.



Refreshed colours
The background and foreground colours of the site change every time you load a new page. Each page colour is randomly picked, making for a fresh appearance every time.

Changing graphic
The graphic located above the logo is changed depending which colour is selected for the foreground. This helps add even more interest to this bright, lively website.

Page animation
Changing pages causes a huge puff of blobs to shoot out from the centre of the screen, while a radial wipe clears the screen and new content is loaded in behind.

SVG graphics
Many of the graphics on the page are SVG images, which means you can rest assured that they will rescale very well across a variety of screen resolutions and sizes.

Animated elements
All the elements of the page spring into position through animation, offering the viewer a visually rich and experience that encourages further engagement.

<comment>
What our experts think of the site

Custom typefaces and illustrations

"Just for the purpose of this game we drew 1500 images, then created a typeface with latin, cyrillic and greek alphabets and with hiragana and katakana characters. This part took a few months of work and it was about 40 per cent of the time we spent on Ba Ba Dum. The rest was coding and endless testing."

Aleksandra Mizielińska and Daniel Mizielińsk
babadum.com

2 TECHNIQUE

Create the puff effect

01 Link to jQuery

Ba Ba Dum uses SVG images to draw the blobs that shoot out from the centre. Here we are going to create regular tags with round corners to make them a circle. In the head section of your code, add a link to the jQuery library and style up the click area.

02 Style the blobs

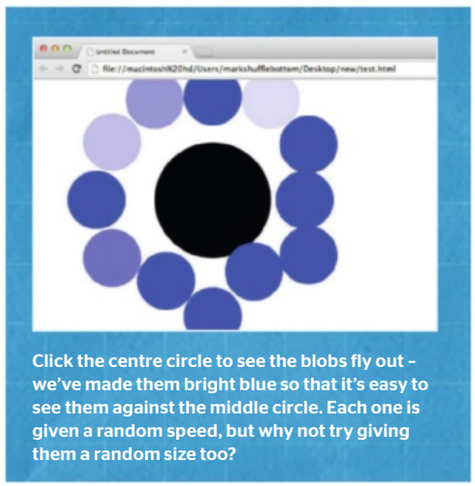
Here we style up the blobs. We are making them 100px high in width and height, then giving them 50px round corners so they will appear as circles. They are then positioned in the middle of the centre tag.

```
.point {
   width:100px;
   height:100px;
   border-radius:50px;
   background: blue;
   position:absolute;
   left: 50px;
   top: 50px;
}
</style>
```

03 Create the blobs

Next we add in the JavaScript tags. We create two arrays to hold our destination x and y positions for the animation. We then use a for loop to create 12 blobs on the screen, working out their destination based on how many there are in a circle.

```
<script type="text/javascript">
$(function(){
   var destX = [], destY=[];
   var items = 12;
for(var i = 0; i < items; i++) {
  var x = 100 - 50 + 200 * Math.
  cos(2 * Math.PI * i / items);
  var y = 100 - 50 + 200 * Math.
        sin(2 * Math.PI * i / items);
  $("#center").append("<div
              class='point'></div>");
  destX.push(x);
  destY.push(y);
}
```



Click the centre circle to see the blobs fly out – we've made them bright blue so that it's easy to see them against the middle circle. Each one is given a random speed, but why not try giving them a random size too?

04 Add the click event

When the user clicks the centre we will loop through all the children and set them off to animate to their respective outer positions. We give each of them a random speed so that they don't get there all at once before fading each blob out.

```
$('#center').click(function() {
  var cd = 0;
  $("#center").children().
each(function() {
    var spd = Math.floor((Math.
                  random()*300)+150);
    $(this).animate({left:
destX[cd]+"px",
     top: destY[cd]+"px"}, spd, "swing",
function() {
        $(this).fadeOut( 150 );
      });
    cd++;
  });
});
});
</script>
```

05 Add to the body

We need to create the centre tag so we can add our blob points and zoom them out from this area when clicked. Save your file and test in the browser. We've made the blobs bright blue so you can see them, but we could easily fade them in to start with too.

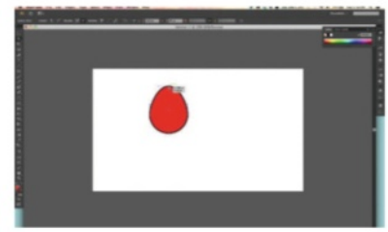
3 TECHNIQUE

Create SVG images

Creating SVG images requires a different set of skills compared to drawing in a pixel-based application such as Photoshop. Here we give a quick beginners' guide to drawing vector shapes in Illustrator.

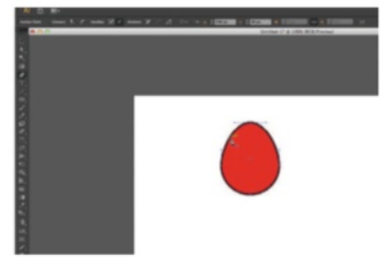
01 Manipulate a shape

For a lot of graphics, just changing the shape of an ellipse, star, polygon or rectangle can be enough to achieve a more unique look. To do this, simply click on the Direct Selection tool (the white pointer) and move one of the points.



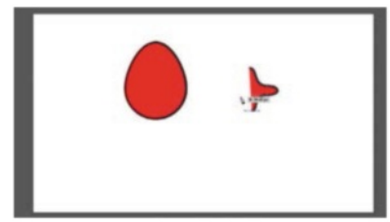
02 Add to the shape

Select the Pen tool and move this over the edge of the path. You will see the pen change slightly so that there is a '+' next to it, which means that you can add a point to the path. If you do this, you can then move this point as in the previous step.



03 Bezier drawing

Using the Pen tool you can also draw shapes. To draw curved shapes you have to click and drag in the direction that you want the path to go next, this enables you to draw more complex shapes and can take a considerable time to master.



Create responsive animation with Edge Animate

The latest version of Edge Animate takes responsive animation further, making it easier to add to your responsive projects

tools | tech | trends Edge Animate CC **expert** Mark Shufflebottom

Edge Animate has been simmering away for a few years now and is finally becoming something that is feature rich. Animate first burst onto the scene as the responsive web design movement was in full ascendancy. As such, many designers were left wondering exactly where animation could fit into their responsive layouts.

This new version of Animate has responded further to existing methods within the software that allowed the user to work in percentages. One of the benefits of working with Flash was that the whole SWF could just be scaled to fit any device, now with this version of Edge we have that same full content scaling technique again. In this tutorial we are also going to work with SVG images, allowing you to be reassured that your work looks sharp on whatever display is viewing your content.

> Edge Animate first burst onto the scene as the responsive web design movement was in full ascendancy

01 Get the latest Edge Animate

There has been a recent update to Edge Animate, so make sure your version of the software is up to date through the Creative Cloud app. Start Edge Animate and create a new document. Set the document size to 360 x 400px, then click on the icon to the far-right of the width to set a gradient background like the one shown in the screenshot.

02 Import the ship

From the resource CD, import the image 'ship.svg' from the Start Folder. Locate the width of the ship in the properties found to the left of the screen and click the switch to make the width a percentage. This will automatically be 100 per cent. For now, just move the ship down slightly so that it sits a little below halfway down the document, as shown above.

03 Import the title

Import the file 'astro.svg' and in the elements panel drag this below the ship. Change the width to 100 per cent as in Step 2 and move the text down slightly. Now we are going to resize the stage. Click off everything and you will see the stage in the properties, make the width 640px. Notice how both images remained centred on the stage.

04 Refine the ship position

To make the scene responsive it can be as simple as changing the width of the stage to 100 per cent, so go ahead and do that. If you press Cmd/Ctrl+Enter you can preview the result. We are going to position the ship slightly further to the right, so click on it to select it. In the 'Background Image' settings change the W property to 140.00.

05 Add the planet

Import the file 'pt.svg' and in the Elements panel drag this below the other elements. Change the width of this to a percentage by clicking the switch next to the width. Change the width value to 100 per cent as this will centre it. Now drag the planet down to the bottom half of the screen as shown in the screenshot.

06 Shine like stars

Now import 'stars.svg' and position on the stage halfway down but aligned to the left. In the Properties, switch the left position to a percentage, which will be 0. Now copy and paste the stars. Switch its position to be relative to the right side of the screen and move it to the right of the stage so that, again, its right positioning is 0.

07 Create a symbol

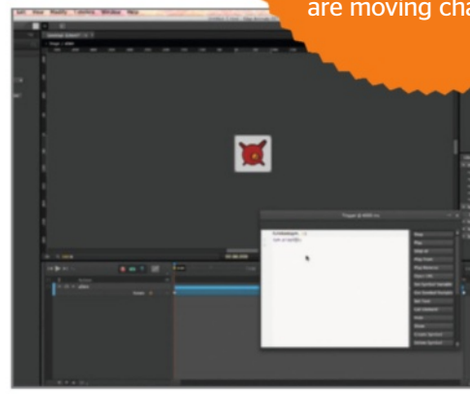
Change the opacity of both star's elements to 60 per cent. Import the 'alien.svg' file and go to Modify> Convert to Symbol. Name the symbol 'alien' and click OK. Double-click the 'alien' to edit – you now have a new stage. Uncheck the link for width and height and set both to 100px.

Lock movement to one axis

Hold down shift when moving an object around the stage and it will lock its position so only the direction you are moving changes.

08 Animate the rotation

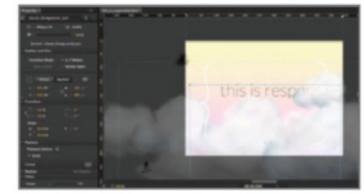
Move the alien to the centre of the document, and it should snap into position. Click the Toggle Pin icon in the timeline and move the playhead forward to 4 seconds. Click on Rotation in the Transform panel and make this 360 degrees. Hit the Play button to see the alien spin. You can click the Toggle Pin button again, as we are finished with this for now.



09 Loop the rotation

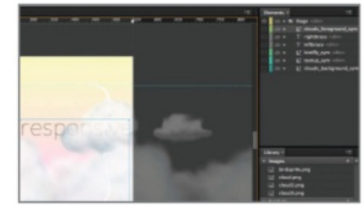
With the playhead at 4 seconds, go to Timeline>Insert Trigger, this will bring open a small code panel. On the left-hand side is a set of behaviours that we can choose from. Hit the Play From button and change the value in the code that appears to 0. This will loop the playhead back to the start so that it keeps on moving in a circular motion.

Get familiar with the Edge Animate interface



01 The left-hand panel

This has the tools for creating new content. Below this is the main Properties panel. This changes depending on what is selected and is broken into sections of content for changing CSS properties of each element.



02 The right-hand panel

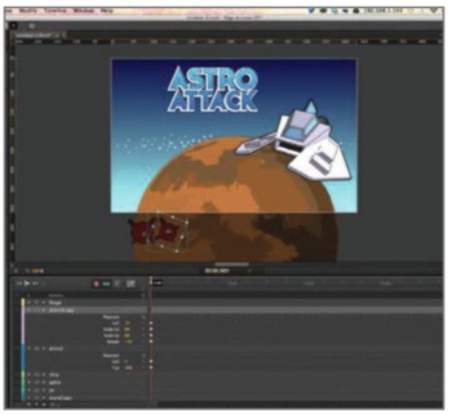
The first panel on the right is for elements. This is each tag on screen, but you might think of it as layers, because this is the stacking order of elements. The panel below shows images, fonts, etc, within the project.

03 Centre section

The main content is the stage that is just one tag containing all other content. Below this is the timeline that lets you work on the animation using the Toggle Pin and playhead to add two keyframes simultaneously.

10 Position the aliens

Return to the main stage by clicking the stage button in the top-left of the stage window. Change the left position to a percentage and give this a value of five per cent. Move the alien to just off the bottom of the screen. Copy and paste this alien, scale it down to 80 per cent, rotate it slightly and position just to the side of this at 15 per cent.



Edge Animate's latest features

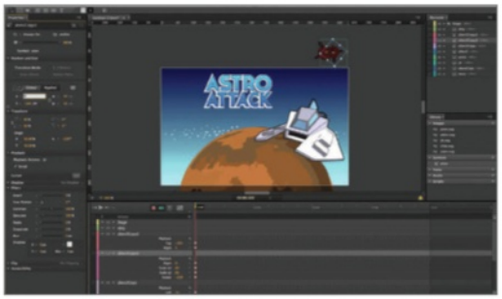
There are many new and useful features that have been added to the latest version of Edge Animate. Previously there was no support available for designers to have audio support in Edge Animate. A third-party script add-on was available that allowed this to work, but it wasn't supported through the interface.

That's all changed now and sound is fully recognised within the software. Two sound files can be imported for every sound that you want to play, giving you MP3 and Ogg support so that the vast majority of browsers are covered.

Edge Animate is also JavaScript library agnostic. You can import any third-party script to your project and start using it with your content and script for it within the interface. This is how designers like to work, so it's quite nice that the software recognises that and now caters for it.

11 Aliens above

Copy and paste the last alien and position it above the top-right corner. Adjust its relative positioning to the right and set the right value at five per cent. Copy and paste again, scale down to 65 per cent and rotate slightly. Set the right position to 0 per cent. You now have four aliens positioned around the stage. Move the ship in the elements panel above these.



13 Move the planet

With the ship animation selected, click on the easing button and add an ease out effect of 'circ'. Now select the planet and move the pin onto 3.5 seconds, dragging the planet off the bottom of the screen. Press Cmd/Ctrl+Enter to test the planet and ship animating into place. Now would be a good time to save your work.

15 Animate the aliens

Now move the playhead to 3.75 seconds and the pin to 3 seconds. Move the alien up onto the screen. Select the next alien and move the playhead to 4 seconds and the pin to 3.25 seconds, again move this alien up onto the screen slightly higher than the first as shown.

16 Last aliens

Select the next alien and place the playhead at 4.25 seconds with the pin at 3.5 seconds. Move this alien down onto the screen. Select the last alien and move the pin onto 3.75 seconds and the playhead to 4.5 seconds. Move this alien down onto the screen slightly higher than the first.

12 Animate the ship

Select the ship layer and turn on the Toggle Pin icon. Move the pin to 3 seconds, leaving the playhead on frame one. Change the position relativity to the right and scale the image down to 30 per cent. Add an eight-pixel blur and move the image over to the right side, which will give a value of -35 per cent. Press Cmd/Ctrl+Enter to see the ship animate into position.

14 Bring in the title

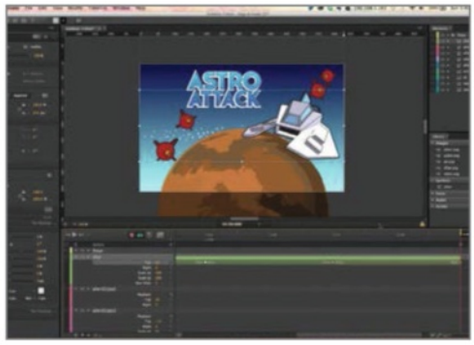
Select the 'Astro' layer and move the playhead to 2.5 seconds and the pin to 4 seconds. Change the easing to ease out with the 'bounce' preset. Move the playhead to just out of the top of the screen. Press Cmd/Ctrl+Enter to test the title bouncing into place. Now select the first alien and change the easing to 'circ' for ease out.

Preview in Edge Animate

At any time you can hit the Play button inside of Edge Animate, the stage is actually a WebKit browser, so hitting Play causes all the guides and object handles to disappear and you view what the browsers see.

17 Make the ship hover

Select the ship, move the pin to 3 seconds and the playhead to 5 seconds. Select 'quad' for easing out and move the ship up slightly. Move the pin to 5 seconds and the playhead to 5 seconds and move the ship back to its original position. Now select the animation for the ship between 3 and 5 seconds. Copy this and paste it, and it will paste onto the end.



18 Repeat the hover

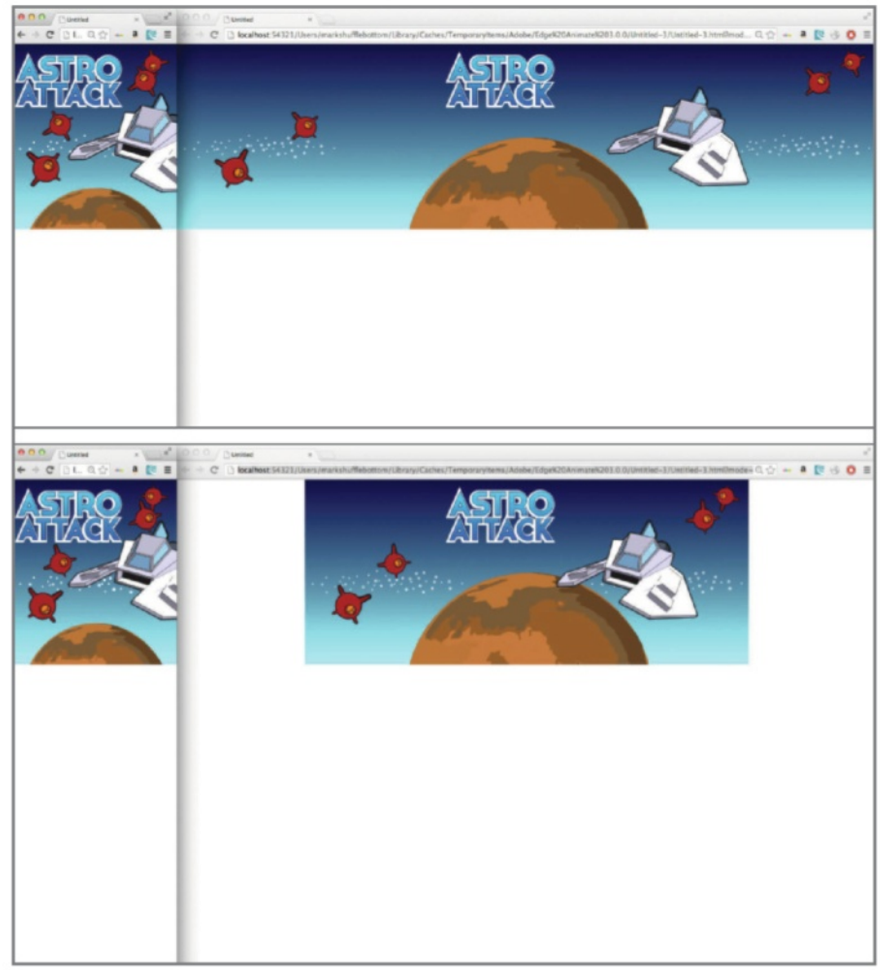
Turn the Toggle pin off. Put the playhead at frame 5 and choose Timeline>Insert Marker. Name this 'loop'. Place the playhead at the last frame and choose Timeline>Insert Trigger. Press the Play From button and insert 'loop' instead of the number as shown in the screenshot.

19 First responsive publish

The first responsive publishing style we will explore is the one we have been doing all along. Click off the stage and you will see that we set the width of our stage to 100 per cent. This will give us a static height of 400px for the animation and a full browser width. Press Cmd/Ctrl+Enter to test in the browser and view this in action at different widths.

20 Second responsive publish

Now click on 'MaxW' and set it to 960px so that it would fit into a 960 grid. Click Center Stage and leave at the default of Horizontal. Now publish again; this time we have a responsive small animation that never increases in size beyond 960px – this is very useful for working with grids such as Bootstrap or Foundation.



21 Final responsive publish

This time turn off Center Stage and set 'MaxW' back to None. Turn on Responsive Scaling and leave on the default setting. As you will see, this scales proportionally down and up the entire stage so that it fits your animation into the container or browser. As we are using SVG, we get beautiful, crisp graphics when scaled up on desktop.

> As we are using SVG, we get crisp, beautiful graphics when scaled up

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Construct all-screen user interfaces with React.js, from the developers of Facebook **Page 92**

Generate fast HTML applications

Utilise the speed and workflow benefits of creating a static site using Harp.js **Page 86**

20 best JavaScript libraries

The definitive list for animation, mobile, apps and code management **Page 80**

Full code found at www.webdesignermag.co.uk/tutorial-files

WE PROUDLY PRESENT A SELECTION OF THE MOST USEFUL, HIGHLY EFFICIENT AND CUNNINGLY INGENIOUS JAVASCRIPT FRAMEWORKS TO STREAMLINE YOUR WORKFLOW

BEST FOR... 2D GAMES Crafty.js craftyjs.com

DRAWING AND MOVING AN ENTITY

Crafty games are made up of entities – here's how to bring one of them to the screen

01 Initialise Crafty

Crafty tends to render itself into a canvas element. The first step involves calling the init() function, which then proceeds to set up the actual draw area with the predefined size. In our case, we further specify that the VGA-sized background of the area must be grey.

```
001                 startCrafty()
002     {
003   Crafty.init(640, 480);
004   Crafty.
ackground('rgb(127,127,127)');
005     }
```

02 Create entity

Entities are created by invoking the Crafty.e()-Function. The string passed to it defines the components which must be added to it. Here we create a 2D element that will appear in a solid color. Its movement and positioning will be governed using normal 2D co-ordinates.

```
001   var player = Crafty.e();
002   player.addComponent("2D, Canvas,
Color")
003   player.color("red");
004   player.attr({w:50, h:50});
```

03 Add movement logic

Crafty provides you with a variety of ready-made components that can influence the movement of on-screen elements. Multiway is the most flexible one of the bunch: it accepts a group of parameters that control the mapping between the keyboard keys and the direction of movement.

```
001   this.multiway(3, {UP_ARROW: -90,
DOWN_ARROW: 90, RIGHT_ARROW: 0,
LEFT_ARROW: 180});
```

BEST FOR... DATA-DRIVEN WEBSITES

Angular.js builtwith.angularjs.org

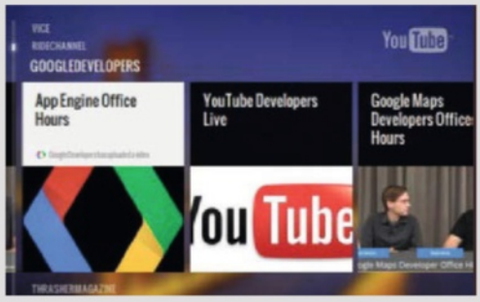
The Angular framework sees itself as HTML for dynamic and data-driven web applications. Thanks to its backing by Google, it quickly achieved impressive reach

Angular sees itself as a one-stop shop for development and maintenance of data-driven web apps. This means that it provides structures and helpers for business logic and GUI elements alike.

The most visible part of Angular.js is made up of the various tags that get added to the HTML markup of your site. During the bring-up process of the framework, a compiler-like element analyses the DOM. This information is then used to create the dependency graph.

Google invested considerable resources into the project over the last few years. The framework currently sports a two-way data-binding engine that works similarly to the one found in Knockout. In addition, various components are provided that usually have to be realised as a server-side element.

Sadly, Angular.js does not bother with older versions of IE. Support for IE6 and 7 was dropped in version 1.2. Angular 1.3 will eliminate IE8.



The YouTube app for the PlayStation 3 was created using the Angular framework

GETTING STARTED

Let's take a look at a few tags in order to get acquainted with Angular

01 Include library

Angular must be added to your website before it can be used. This is achieved by the <script> tag at the bottom of our snippet. The ng-app tag informs the Angular compiler that the services of the framework will be needed on all children of the <html> tag containing it.

```
001      <script src="https://ajax.
googleapis.com/ajax/libs/
angularjs/1.2.10/angular.min.js">
</script>
```

02 Self-updating text box

The ng-model tag lets you assign an element to a data storage. The text entered into the <input> field will be available via the yourName semantic. Then, insert the content of yourName into a h1 tag.

```
001  <div> <label>Name:</label>
002   <input type="text" ng-
model="yourName" placeholder="Add name">
003     <hr>
004      <h1>Hello {{yourName}}!</h1>
005      </div>
```

03 Invoke a model

When creating some of the more complicated web applications, direct data storage is not a workable method. In this case, a data model that is dedicated to managing the contents in question should be used. These models are usually declared in a separate JavaScript file and are then included via the ng-controller tag as shown in the following code snippet.

```
001 <div ng-controller="ModelClass">
002
```

BEST FOR... GENERAL UTILITY FUNCTIONS

Underscore.js underscorejs.org

UNDERSCORE.JS

Developers creating JavaScript apps tend to rewrite small helper functions again and again. Most languages would eventually include them – the slow pace of advancement in JavaScript's syntax has ensured that this hasn't happened so far.

The tiny underscore library weighs about 1KB in compressed form. Its developers squeezed in about five dozen highly useful helpers that tend to be useful in almost every program.

The main part of the library is made up of various helpers specialised on handling data sets. For example, a random sample can be extracted from a list or an array via the sample function:

```
001  sample([1, 2, 3, 4, 5,
6]);
```

If your program deals with contagious arrays, a group of methods simplify data traversal and analysis. The is-Functions help you when it comes to determining the type of the value found in a variable:

```
001  _.isFinite(-101);
002  => true
```

```
001  _.isFinite(-Infinity);
002  => false
```

Finally, underscore also contains a group of methods providing all kinds of mathematical features. A small templating engine helps you when it comes to creating HTML code automatically.

BEST FOR... BROWSER-LEVEL ACCEPTANCE TESTS

Selenium docs.seleniumhq.org

Selenium's testing tools aim to mimic a user interacting with your app via a mouse and keyboard. This is achieved by special test cases, which can be recorded as you use your app in a supported browser. You can also use a domain-specific language to refine the behaviour of the virtual user.

This shouldn't be the only way you test – but it's invaluable for analysing the 'glue code' between the engine and GUI.

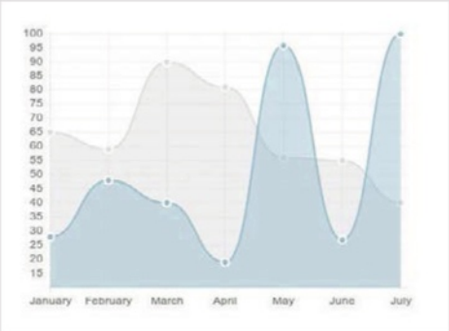
BEST FOR... LIGHTWEIGHT JQUERY WORK

Zepto.js zeptojs.com

Zepto.js weighs about 10KB, which makes downloading and parsing it fast. This is achieved by stripping out the rarely used parts of jQuery. The developers also restrict their library to modern web browsers and remove glue code to further accelerate the process. It is targeted at the mobile web, and boasts a large compatibility list

Zepto follows the lines specified by jQuery closely. jQuery's event system survived the cut and can be used in Zepto-enabled applications.

BEST FOR... CREATING CHARTS



Offering charts instead of endless lists of numerical data is far more preferable to the human brain

Chart.js www.chartjs.org

Plane crashes can be traced back to how the first digital FADEC systems displayed information – the human brain does not process long tables of numerical data very well

Charts.js promises to take the burden of mathematics and tedium off your shoulders. It can draw a variety of charts into a canvas element that can then be placed anywhere in your site or web app.

Data is usually provided via a data set. Data sets are made up of one or more objects that contain the numerical payload along with information about how the data should be displayed (colour, fonts, etc).

Chart.js provides six different types of diagram, which handle all common charting needs. Line, pie and bar charts can be used to show information about distributions or voter behaviour. Radar charts are suited to comparing various attributes of a group of products. Polar area and doughnut charts can be used to spruce up otherwise bland visuals.

Chart.js is based on HTML5, so is usable on mobile and desktop browsers. Special workarounds are provided to enable the library to be used with IE7 and 8.

CREATE A LINE CHART

Line charts are the simplest type of diagram supported by the library – here's how to include one

01 Set up

Chart.js works via a so-called context object, which is generated when a pointer to a canvas is passed to the getContext method. The code snippet shows the syntax needed for creating a tag, the traversal of the DOM is handled via the usual getElementById method.

02 Request chart type

Making Chart.js render a diagram is really simple. You need to invoke the method that is responsible for creating the chart you need, in our case, Line is invoked in order to generate a line chart. The parameters provided to the function set up the behaviour of the charting engine.

03 Pass in data

At this stage we provide a relatively simple data set made up of labels and the actual data sets. The display of the individual data sets can be customised via a variety of attributes. Further information on these can be found in the very concise online documentation.

BEST FOR... TESTING NODE.JS SOLUTIONS

Mocha visionmedia.github.io/mocha

Testing code based on Node.js with a 'normal' unit-testing framework doesn't take long to become tedious. Mocha excels at testing applications that are made up of server and client components in one go.

Because of it being based on Node.js, users are unable to run Mocha tests from within a web browser. Instead, the product has to be invoked from an npm command line in a fashion similar to the included code snippet.

Still, Mocha really shines when it comes to testing asynchronously. The callback routine of the code that is to be tested simply has to invoke the done() function when the result has been determined – data brokerage is handled by the framework.

BEST FOR... MANAGING JAVASCRIPT

Require.js requirejs.org

Small amounts of JavaScript code are best included using the Script tag. Once a program is made up of a group of interdependent libraries, a more sophisticated way tends to lead to better results.

Require.js offers utility functions to simplify things. Callback routines can be invoked once the loading of a JS file is completed – useful if you want to bring up frameworks in a specific order. Advanced users can create Web Modules containing code and info about other libraries it depends on.

BEST FOR... COMPACT MVC APPS

Agility.js agilityjs.com

Model View Controller frameworks tend to be complex. This is unattractive, since loading pages takes longer and developers are burdened with tons of boilerplate code.

Agility.js can create all three building blocks by invoking a factory function, which returns a new instance. The jQuery-inspired syntax gets you up to speed faster, a low file size then ensures swift loading times.

Most web projects are made up of HTML, JavaScript and CSS files. Agility permits you to unify these three content types into one file.

BEST FOR... UNIT TESTING JAVASCRIPT

Jasmine pivotal.github.io/jasmine

Code can break as the application changes. Well-placed unit tests analyse the parts of your program automatically. This is very helpful, as it informs you when a recently made change has unintended side effects.

But creating unit tests can be tedious – well-structured applications tend to be easy to test, so if your code does not provide obvious 'inspection points', refactoring might be in order.

Jasmine profits from a very simple-to-use domain-specific language for creating the test logic. Running the test is achieved by opening a framework-provided HTML file in a browser. It will then analyse your code. Results will be shown in a well-designed overview screen after the analysis is completed.

BEST FOR... DATA BINDING

This little example uses Knockout to mirror input into a <h> tag

Magic widgets Knockout.js

When Microsoft produced Silverlight, developers were introduced to data binding, which can all but eliminate glue code from your apps and simplify testing and maintenance

Due to the tremendous benefits in maintainability, a group of developers set out to port this concept to the web browser. The widgets used in creating Knockout-based applications are bound to the data stores in the backend via 'binding strings'. Tables can be generated from arrays via formatting templates.

If the user enters a value into one of the bound controls, the fields in the model are updated automatically. If this requires updates to other parts of the application, notifications are dispatched automatically.

This is achieved by the use of observable classes, which can best be described as more intelligent variables. Changing the value stored within is announced to the framework, which triggers updates.

Knockout is extraordinarily well tested and even works with Internet Explorer 6. It is designed to be unobtrusive, which makes integrating it into your program a quick and painless operation.

GET STARTED WITH KNOCKOUT

Using Knockout is really easy, we show you how you deal with an observable data store

01 Create an observable

Knockout-powered websites bind themselves to JavaScript objects known as models. Calling ko.observable returns a new observable with the value inside the brackets being used as default setting. Computed observables are declared in a similar fashion.

02 Read observables

Observables are normal JavaScript objects. Reading the value of the variable in the model would return a pointer to the object, which does not permit you to access the information in it. Instead, invoke the observable like a function in order to access the information.

03 Write observables

Updating the information found inside the observable cannot be done via the = operator, as writing in actual data would destroy the object structure. Instead, you must invoke the observable as it would be written but pass in the new value as a parameter to the 'self-named' function.

BEST FOR... DATA-INTEGRATED GUIS

Ext.js www.sencha.com/products/extjs

Sencha Ext JS

Applications based on Sencha Ext.js are broken up along the lines of the MVC pattern. A model class contains the business logic, a view handles the actual display. The controller sits between these two classes and acts as a broker.

MVC can be implemented without a framework but Ext.js has many benefits. First, the developer provides performant widgets that excel at handling data, and the new data package makes accessing business data a breeze. It can be used to create sophisticated class chains that handle the data processing for you.

For financial apps, the integrated charting framework can come in handy – but keep in mind that developers creating closed-source apps may not use Ext.js without paying a high licence fee.

BEST FOR... NATIVE-LOOKING PHONE APPS

PhoneJS phonejs.devexpress.com

PhoneJS

PhoneGap apps tend to look a bit 'off', as the widely used jQM framework does not do a good job of mimicking the GUIs of mobile operating systems.

PhoneJS intends to solve this. It's made up of a GUI stack specialised in creating native-looking apps. In the backend, jQuery and Knockout are integrated to simplify development. The developer also includes a view caching system and other elements that make creating robust architectures easier.

Sadly, the framework is not free and must be bought in subscription form, which costs $199 for the year.

BEST FOR... MVP-BASED SERVER-CLIENT APPS

Backbone.js backbonejs.org

BACKBONE.JS

Creating a large JS app is simpler when the data isn't tied into the document by hand. Backbone.js is very helpful when it comes to programs based on the MVP design pattern.

The core tenet of a JS app based on Backbone is found in classes derived from the Backbone.Model-Prototype. They act as a 'repository' for the business data processed by your app. As the information stored in the model is changed, views are informed. You can then use these update events to keep the user-facing parts of your program current.

BEST FOR... EVENT ROUTING

Radio.js radio.uxder.com

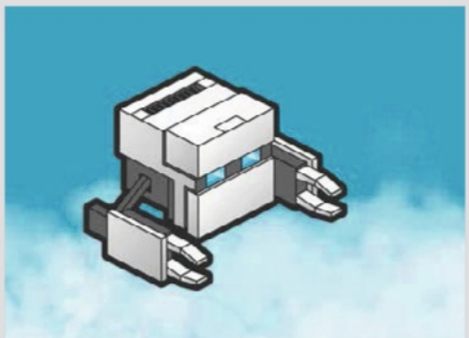
Radio.js

Event routing provides a quick way to decouple components. This ensures reusability, simplifies testing and can be helpful when developing complex systems.

Sadly, most event management subsystems tend to be part of a larger and more complex framework, offering a variety of unneeded functions. Radio.js is a welcome exception: the library is barely 1KB and contains no extra functionality beyond the event subsystem.

But important features are implemented in full. Once a channel is created, clients can subscribe whenever they are interested in the data. Radio.js is a well-tested library that works with all major browsers and is renowned for being extraordinarily easy to use.

BEST FOR... PACKAGING MOBILE WEB APPS



PhoneGap is a popular choice for those who simply want to wrap up HTML, CSS and JavaScript

PhoneGap phonegap.com

Submitting web apps to the app stores isn't very exciting stuff. Adobe's PhoneGap aims to simplify this process via a group of ready-made application templates

Adobe's offering is one of the most misunderstood frameworks out there. As its name implies, it aims to fill the gaps between the browser implementations provided by the various operating system vendors. This is achieved via the application stubs and a group of APIs that permit you to access hardware components such as the compass of the magnetometer.

Most of these functions are achieved by so-called plug-ins. Developers can use this system in order to provide their apps with routines written in native code. A large variety of ready-made plug-ins exist, covering a vast amount of more or less esoteric functions such as TCP socket access.

Developers who don't want to install the native IDEs onto their workstation can use Adobe-provided servers for compilation. This is achieved via a command line interface and an account at the PhoneGap Build service.

USE THE PHONEGAP CLI

The PhoneGap Command Line Interface makes using the PhoneGap framework so much easier. Here's you can get started

01 Install PhoneGap CLI

PhoneGap's command line tools are written in JavaScript. Their runtime environment is called Node.js, and must be installed before use. Visit **nodejs.org/download** to download the components.

```
001  npm install -g phonegap
```

02 Local compile

Compiling a PhoneGap project is relatively easy. All you need to do is invoke the 'phonegap local' command in the folder containing the manifest file. The PhoneGap command line tools will then proceed to automatically invoke the necessary native tools for you.

03 Remote compile

Should your workstation miss any of the required tools for whatever reason, Adobe is willing to provide you with a remote compilation workspace. It can be invoked by using the 'phonegap remote' command, which largely behaves like its local copy.

BEST FOR... APPS FOR SMART TVS

Enjo enyojs.com/about

Enjo was envisioned as GUI building framework for Palm's webOS. After it premature death, the rights of the library fell to LG. Pundits think the framework will be used on the next generation of LG smart TVs – but Enjo also works on most mobile and desktop browsers.

Creating user interfaces is easy. Forms are made up of 'kinds', which can best be described as slimmed-down components. Developers are provided with common widgets and additonal ones can be created using the kind() function.

Applications that access web services benefit from helper classes that simplify consumption. Internationalisation is aided by a library called g11n, which provides utility functions for adjusting text, number and date formats.

BEST FOR... CREATING 3D GRAPHICS

Three.js threejs.org

three.js r65

Three.js allows you to concentrate on the presentation of your content. Concepts like world and projection matrices are wrapped up in classes that provide real-world analogies.

Even though the library tries to abstract you from most of the 'raw metal', hand-written shaders are permitted, so it's possible achieve professional effects like bump mapping. Some browser vendors provide hardware-accelerated implementations of the underlying API, which also permit you to achieve very high performance.

BEST FOR... MOBILE USER INTERFACES

Sencha Touch sencha.com/products/touch

Sencha Touch

Sencha Touch has two great benefits. First, apps built with it must adhere to the MVC pattern. This leads to an unified architecture which makes understanding foregin programs easier.

Its second selling point takes the form of Sencha Architect. Users of this program can create user interfaces for mobile web apps in a fashion similar to the one employed in Visual Basic or Qt Creator. Sadly, this part of the framework is not available for free. Once the trial period has expired, a license must be purchased and will set you back $399 per coder.

BEST FOR... DATA-DRIVEN DOCUMENTS

D3.js d3js.org

Data-Driven Documents

For animating an SVG-based document, D3 is the library of choice. Its description summarises its purpose well: D3-based websites change their look and feel depending on the data contained in the code behind. This can, for example, be used to create a world map highlighting the amount of customers found in each country.

D3.js works by integrating itself into the DOM of your page. After having specified the relationship between data and styles, all the elements will be adjusted automatically.

The developers provide a group of ready-made examples showing both simple and complex apps. They can be looked up by opening **bit.ly/1dHsNN4** in your web browser of choice.

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This offer expires 30 June 2014.

Generate fast HTML applications with Harp.js

Discover the speed, workflow and financial benefits of creating a static site using Harp.js

tools | tech | trends Node.js, Harp.js
expert Matt Gifford

With the advent and continued development and enhancement of blogging and CMSs, whether open source or commercial, everyone can have an online presence. People have the option to populate their own little slice of the web with whatever content they choose to.

While it may be insignificant to the majority of creative professionals, the hosting options still have an effect, not only on the performance and reliability of a site, but also the financial implications. It may be nominal, but even the cheapest of hosting solutions still cost money.

In this tutorial we dive into Harp.js, an open-source framework that has been built to make a site manager's life easier. We'll see how easy it is to build custom pages and routes, define meta data for not only global values but also specific pages, and ultimately export the app as compiled HTML, ready to be placed on any web server. It will save you time to develop and maintain and will reduce your hosting costs. It's time to embrace the static sites again and make some music with Harp.js.

01 Install Harp

The Harp framework uses Node.js, so this must be installed first if you don't already have it. Once installed we can use the package manager to install Harp onto our system. Open up a Terminal or a command window and enter the following command to install Harp as a global package.

```
> sudo npm install -g harp
```

02 Directory structures

Harp can run as a root application or within a sub folder of the root called 'public'. We'll use the latter version. Create a folder for your project, inside which we'll also create a public directory. This will house the files that we want to serve publicly and helps define the URLs exposed by the application.

```
> mkdir harp_app
> cd harp_app
> mkdir public
```

03 Create pages

Let's create two pages for our application. Harp has the ability to process and serve Jade, Markdown and EJS templates, as well as processing for CSS and JS files. Create the default homepage within the public directory, called 'index.ejs'. We'll also create a page using Markdown for the static contact information. Call this file 'about.md'

04 Global JSON data

We now need to define a JSON file that we can use to hold global variables. Without this file, the server will not find the files. Create 'harp.json' in the root of the project. Add in the name of your application and any other details you may wish to use throughout the site.

```
{
  "globals": {
    "title": "Static Visions",
    "company": "monkehComms",
    "pageTitle": "Static Visions"
  }
}
```

05 Global variables

With some global variables defined, we can use Harp to obtain these values from the 'harp.json' file and use them within our templates, with the exception of Markdown files, which cannot process dynamic values. Open 'index.ejs' and add the following code to the page to draw in the variables defined for display on the page.

```
<h1>Welcome to <%= title %> from <%= company %>!</h1>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
```

06 Start the server

With the basic structure in place, we can now start the Harp server so that we can see our application as we work on it. Open the Terminal or command window and enter the following code to start the server. You can also change the default port number from 9000 if you wish by using the optional port flag in the command.

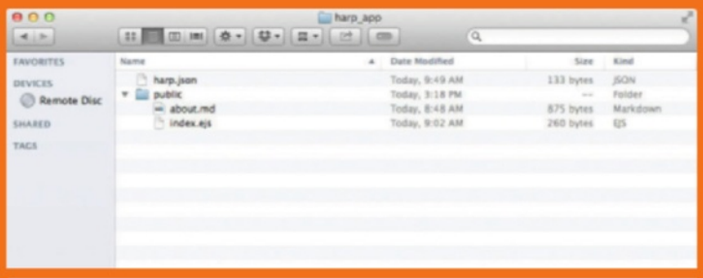
```
> harp server --port 9898
> harp server ./harp_app --port 9898
```

07 Create a layout

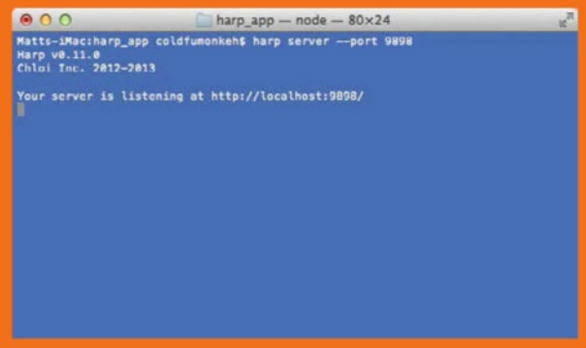
Let's apply a layout structure to our application. Create a file called _layout.ejs within the public directory. The underscore at the start means it will not be publicly accessible. Add any HTML you require to build your design. The contents of the body tag must contain the yield variable, which will display the contents of each file served.

```
coldfumonkeh — bash — 90×24
Matts-iMac:~ coldfumonkeh$ sudo npm install -g harp
Password:
npm http GET https://registry.npmjs.org/harp
npm http 200 https://registry.npmjs.org/harp
npm http GET https://registry.npmjs.org/harp/-/harp-0.11.0.tgz
npm http 200 https://registry.npmjs.org/harp/-/harp-0.11.0.tgz
npm http GET https://registry.npmjs.org/connect/2.9.0
npm http GET https://registry.npmjs.org/fs-extra/0.6.4
npm http GET https://registry.npmjs.org/terraform/0.6.2
npm http GET https://registry.npmjs.org/async/0.2.9
npm http GET https://registry.npmjs.org/mime/1.2.11
npm http GET https://registry.npmjs.org/commander/2.0.0
npm http 200 https://registry.npmjs.org/connect/2.9.0
npm http GET https://registry.npmjs.org/connect/-/connect-2.9.0.tgz
npm http 200 https://registry.npmjs.org/mime/1.2.11
npm http GET https://registry.npmjs.org/mime/-/mime-1.2.11.tgz
npm http 200 https://registry.npmjs.org/terraform/0.6.2
npm http GET https://registry.npmjs.org/terraform/-/terraform-0.6.2.tgz
npm http 200 https://registry.npmjs.org/fs-extra/0.6.4
```

<Above>
• Installing Harp through the Node package manager could not be easier



<Above>
• The skeleton project structure is, in essence, all that's needed to run a basic Harp application



<Above>
• Here we are browsing the freshly compiled (but rather sparse) Harp application on our local server

```
<html>
  <head>
    <title><%= title %></title>
  </head>
  <body>
    <%- yield %>
  </body>
</html>
```

08 File meta data

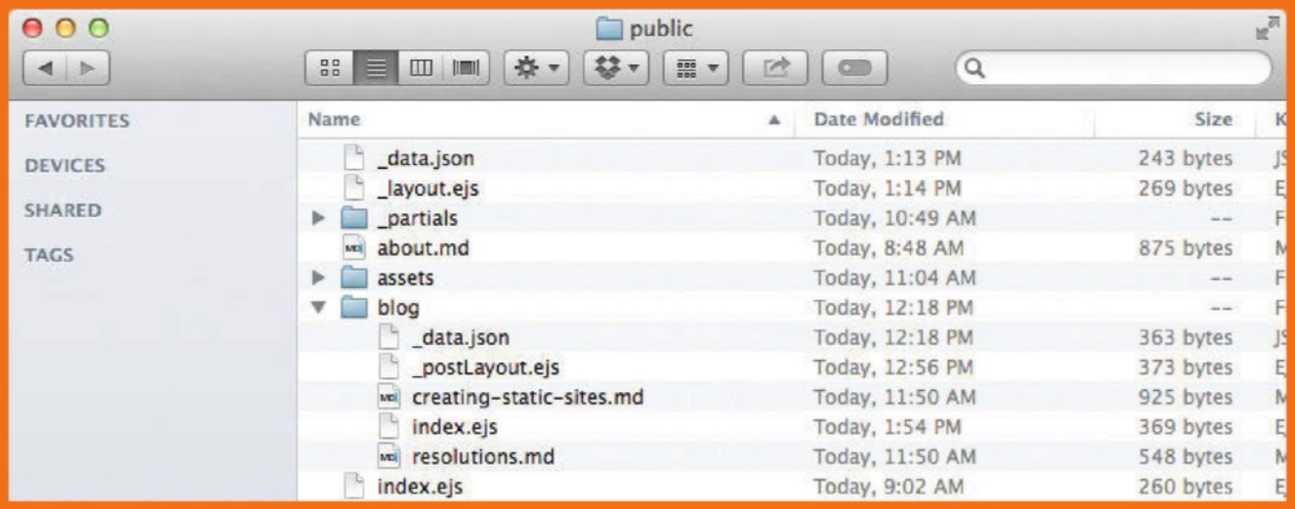
Not all variables should be stored globally. Let's create a new file called '_data.json' in the pubic directory. This file will make any values included available to all templates within this directory and, if the value names match those in the global JSON file, it will override them. Here we are going to add some meta data for each page in our application.

```
{
  "index": {
    "pageTitle": "Home",
    "menuLabel": "Home"
  },
  "about": {
   "pageTitle": "About",
    "menuLabel": "About Us"
  }
}
```

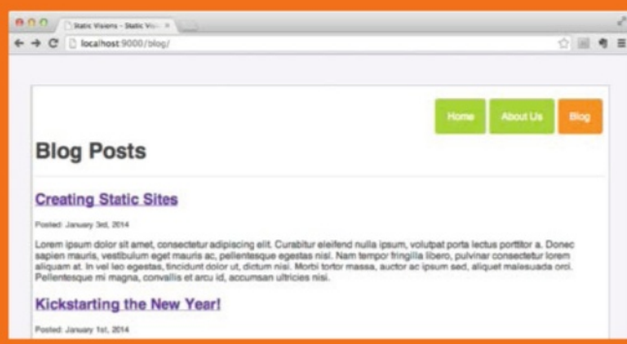
09 Revise layout

As we have the potential to customise the layout for each entry using any of the provided meta data, we can adjust the generic layout file to include these values. Let's amend the HTML title value to include the pageTitle value as well as the global title variable value.

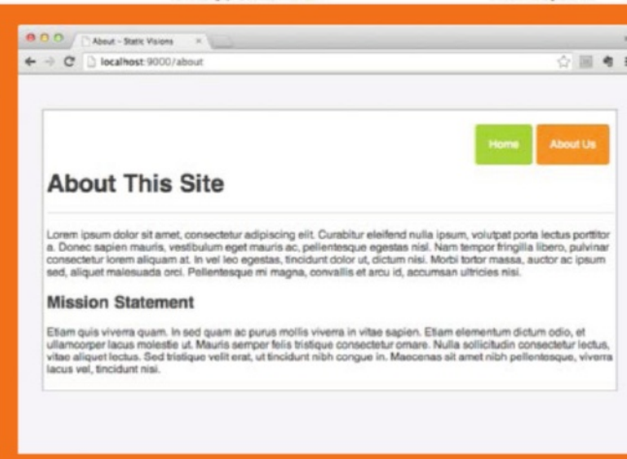
```
<html>
  <head>
    <title><%= pageTitle %> - <%= title %></title>
  </head>

```



<Above>
• Creating the individual blog posts is straightforward, each one a separate Markdown file



<Above>
• When we amend the menu partial to revise the indexOf() method, it then sets the correct active state



<Above>
• The 'main.less' file is being converted and processed by Harp and befor generating the CSS file for us

10 Partial includes

Partials are a great way to separate content and structure code for reuse and modularity. Create a new directory called '_partials' in your public directory and inside this create a new file called '_header.ejs'. This private file will be included on all pages as we'll add it to the layout file, like so:

```
001 <body>
002   <%- partial("_partials/_header") %>
003   <%- yield %>
004 </body>
```

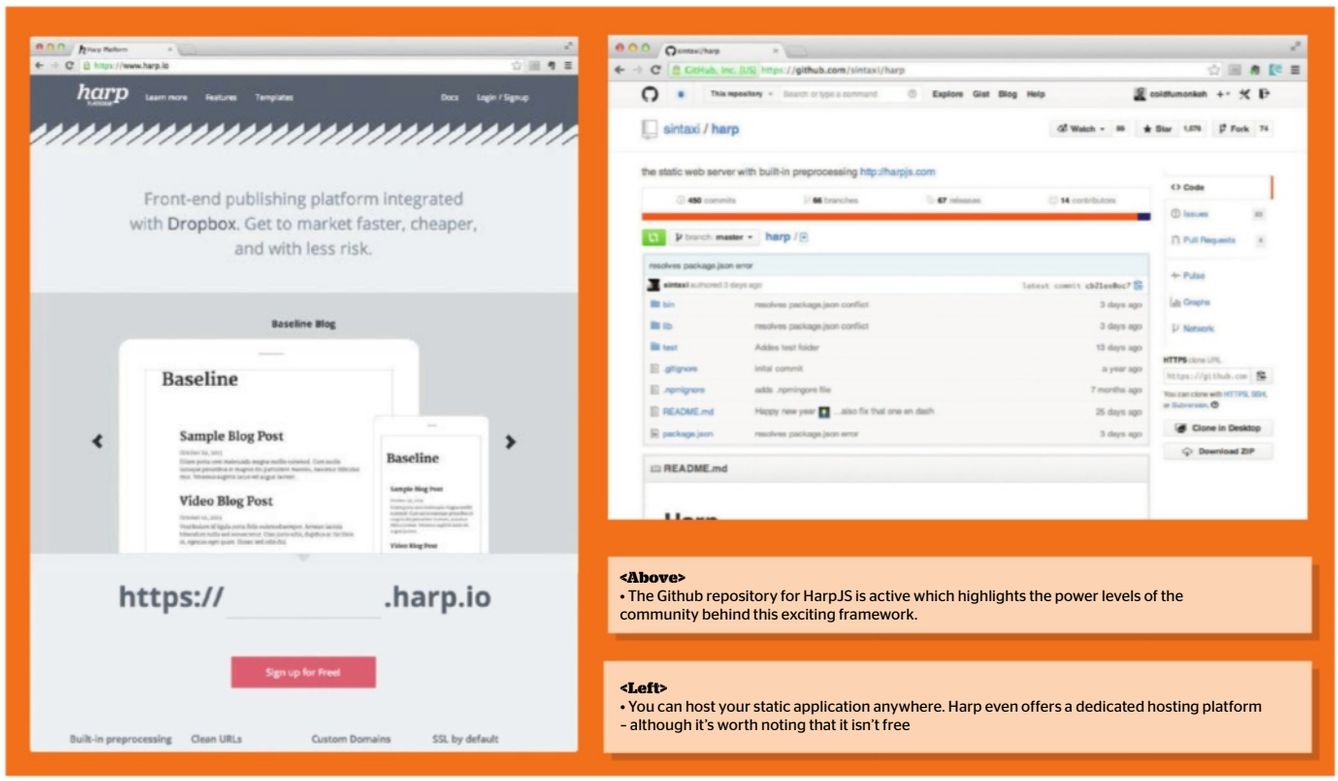
11 Loop over content

To keep our main menu as dynamic as possible – and to reduce hard coding paths – we can loop over the '_data.json' file we created earlier and create a new list item for each value in the returned object. Here we reference the '_data' file within the public directory and generate a link for each item, complete with custom menu label.

```
01 <nav id="mainnav">
002 <ul>
003 <% for(var slug  in public._data){ %>
004 <li>
005   <a href="<%- slug %>"><%= public._data[slug].menuLabel %></a>
006 </li>
007 <% }; %>
008 </ul>
009 </nav>
```

Host anywhere

As Harp automatically compiles the application down to HTML files, you can host your completed project anywhere. You can use GitHub pages, Amazon, Heroku or even Dropbox.



<Above>
• The Github repository for HarpJS is active which highlights the power levels of the community behind this exciting framework.

<Left>
• You can host your static application anywhere. Harp even offers a dedicated hosting platform – although it's worth noting that it isn't free

12 Current state

Harp makes an object called 'current' available to each page request. This object holds the path and source identifier for the current page and is a great way to manage active states for navigation elements to highlight the selected menu item. Add the following code to the '_header.ejs' partial file to set an active class on the selected menu item.

```
<li class="<%- current.source == slug ? 'active' : '' %>">
```

13 Add CSS

Harp has the ability to process and compile assets automatically for you, as we'll see now. Create a new file called 'main.less' within an assets directory inside the public folder. Add your CSS rules here to apply to the application, and add the link reference to the '_layout.ejs' file as 'main.css'.

```
<link rel="stylesheet" href="/assets/css/main.css" />
```

14 Add blog route

Add an additional object to the '_data.json' file in the public directory to define the route for the blog posts. This will generate the relevant top menu button with the link to the resource once compiled. Create a new directory called 'blog' in the public directory inside of which our blog posts will reside.

```
"blog": {
  "pageTitle": "Blog",
  "menuLabel": "Blog"
}
```

15 Create posts

Each post within the blog directory can be written as static Markdown files, as nothing dynamic should be happening. You can, of course, write in any template language you choose if you wanted to. Name each post with the convention of the URL you wish to apply to it. Two sample posts have been included in the project files for you.

16 Combine tasks

With more than one task defined we would have to run each task individually from the command line. We can combine as many tasks as we wish and create a default that will run when we write 'grunt' or 'grunt default' in the command line. This new task will run each task specified, saving us time.

```
{
  "creating-static-sites": {
    "title": "Creating Static Sites",
    "date": "January 3rd, 2014",
    "author": "Matt Gifford",
    "layout": "_postLayout"
  },
  "resolutions": {
    "title": "Kickstarting the New Year!",
   "date": "January 1st, 2014",
    "author": "Matt Gifford",
    "layout": "_postLayout"
  }
}
```

17 Post layout file

The blog posts will use a variation on the default layout file as we want to output information such as the blog title and the meta information for the date posted. Create a new 'private' file called '_postLayout.ejs' within the blog directory and add the following code to create the HTML structure.

```
001 <html>
002   <head>
003     <title><%= title %></title>
004     <link rel="stylesheet" href="/assets/css/main.css" />
005   </head>
006   <body>
007       <div class="container">
008         <%- partial("../_partials/_header") %>
009         <h1><%= title %></h1>
010         <%- yield %>
011         <div class="subMeta">
012         Posted: <%= date %> by <%= author %>
013         </div>
014       </div>
015   </body>
016 </html>
```

18 Post listing

Create 'index.ejs' in the blog directory. This will be the default page loaded for the blog view, and we want to list the available blog posts. To do so, we can loop over the '_data.json' file in this directory and generate the list with the blog excerpt and meta data, as seen below.

```
001 <% for(var slug in public.blog._data){ %>
002   <h2><a href="/blog/<%= slug %>">
003     <%= public.blog._data[slug].title %></a>
004   </h2>
005   <div class="subMeta">
006     Posted: <%= public.blog._data[slug].date %>
007   </div>
008   <%- excerpt(partial(slug)) %>
009 <% }; %>
```

19 Write JavaScript functions

To obtain the excerpt of the blog post, we called a function called 'excerpt()' in the previous code block. This function is added to the top of the 'index.ejs' file, wrapped within the <% %> tags to produce and execute the JavaScript. This finds an instance of the <!-- more > tag in the content and only displays content up to that point.

```
001 <% function excerpt(content) { %>
002   <% return content.split("<!-- more >")[0]; %>
003 <% } %>
```

20 Menu issue

Our partial include for the header menu will not set the active class to the blog menu item when we view that page, as it doesn't pick up the correct slug value. Add the following function to the top of the '_header.ejs' file to find the index of the slug within the current.path value instead.

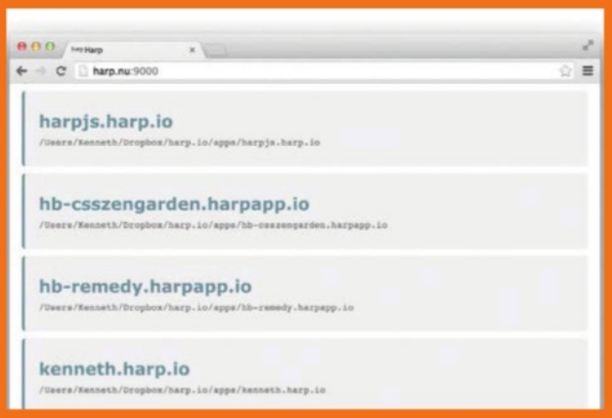
```
001 <% function indexOf(path, slug) { %>
002   <% return path.indexOf(slug); %>
003 <% } %>
```

21 Change class setting

To change the menu list item to use the new function we need to amend the conditional statement within the list item in the '_header.ejs' file. If the index value matches and equals 0, the active class will be set to the element. Save the change and test the menu in the browser.

Choose and use your Harp.js server instances

In this tutorial we have been creating and using a local instance of the Harp server directly within our project directory. This has been invaluable as it generates the asset pipeline and automatically compiles the HTML with each page request. The 'harp server' command is designed to run a single server instance on the specified port against the optional directory path. The default instance of the single server can be changed to improve speed and site performance by setting an environment variable for Node.js to 'production'. For anyone wishing to build or control more than one Harp-powered application, the multihost server option would be of use. Instead of controlling separate port numbers for each application, the Harp 'multihost' command option can serve an entire directory containing separate Harp applications, all under the one port number.



Default compilation

If you run the compile command from within the project root and leave out any of the optional parameters, the generated HTML will be placed within a www directory.

```
001 <li class="<%- indexOf(current.path, slug) == 0 ? 'active' : ''
%>">
002   <a href="/<%- slug %>"><%= public._data[slug].menuLabel %></
a>
003 </li>
```

22 Compile static content

The beauty of HTML static sites is that they can be hosted anywhere without any specific server-side language requirements. To export the project as a complete compiled HTML structure, open the Terminal or command window and enter 'harp compile', followed by the location of the application and the destination location to send the compiled pages, as demonstrated in the following code snippet below.

```
001 > harp compile ./ ~/Desktop/compiled_export
```

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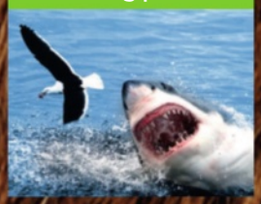


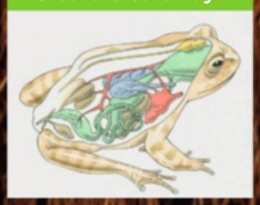
100s of facts

Your favourites

Incredible illustrations

Amazing stories

Creature cutaways



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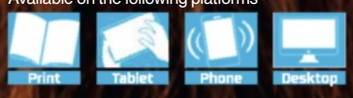


Construct faster user interfaces with React.js

From the developers of Facebook and Instagram, React.js will help you learn how to construct responsive UIs

tools | tech | trends JavaScript, React.js, JSX, HTML
expert Tim Stone

It's not often a library comes along that makes you rethink how you write JavaScript, but that's exactly what React.js does. Next to jQuery, it's probably the most battle-tested framework out there as it's been used on and developed by Facebook and Instagram.

React helps you build user interfaces and is focused on the 'V' in MVC – the view. The concept revolves around 'components', which are snippets of HTML with functionality attached to them. A component keeps this functionality tied to the element, resulting in maintainable and reusable code.

One of React's prominent features is JSX, JavaScript XML syntax. That means that you can write HTML in your JavaScript file, no messy string interpolation or clumsy native document constructors. This sounds like a gimmick, but once you've started using JSX it's hard to go back. We're going to use it to build a frontend for a fictional social network site, so you'll learn more of React's concepts and how to build your own components.

01 Script dependencies

Head to **facebook.github.io/react** and download React. Create a standard HTML page and add these dependencies. React doesn't use jQuery but we're going to use it for some AJAX requests. Moment.js is a nice library for easy date formatting, and app.js is where our own code will live.

```
<script src="//momentjs.com/downloads/moment.min.js"></script>
<script src="//code.jquery.com/jquery-2.0.3.min.js"></script>
<script src="react-0.8.0/build/react.js"></script>
<script src="build/app.js"></script>
```

02 Install React tools

React makes use of JavaScript XML syntax, so you can write HTML in your JavaScript files without worrying about string manipulation or DOM constructors. It's a Node module, so you'll have to install Node.js (nodejs.org) if you don't have it already. It then watches for changes in the src folder and compiles into the build folder.

```
$ npm install -g react-tools
$ jsx --watch src/ build/
```

03 Create a component

The commented text at the top is what the parser looks for to transform the JSX into executable JavaScript. This is as basic a class for a component should be; all components must have a render method that either contains JSX (which our watch will transform) or build markup through React's DOM methods.

```
/** @jsx React.DOM */
var User = React.createClass({
    render: function () {
        return (
            <div>
                <UserImage source={this.state.user.profile_picture} />
                <p>{this.state.user.name}</p>
            </div>
                <UserImage source={this.state.user.profile_picture} />
                <p>{this.state.user.name}</p>

            </div>
        );
    }
});
```

04 Render component

We can then use the React class like an HTML tag and populate the source property by treating it like an attribute; which is how we pass properties to components. In this case we're setting where to get the data from. The second argument is which element this component should reside within, this is sometimes called the mount node.

```
React.renderComponent(
    <User source="/api/user.json" />,
    document.getElementById('user')
);
```

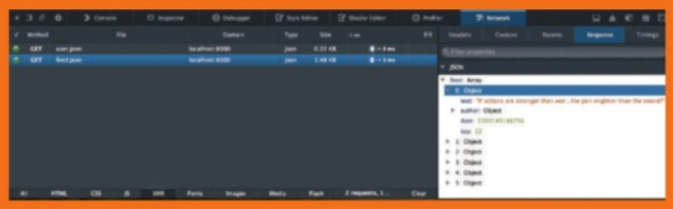
05 Set initial state

Components have a fairly simple API (when compared to frameworks such as Ember) but this makes for a smoother learning curve. Components have two ways to set data: properties and states. Properties should be set by the owner of the component, but state can change within itself. getInitialState is called when a component is first initialised to set your defaults.

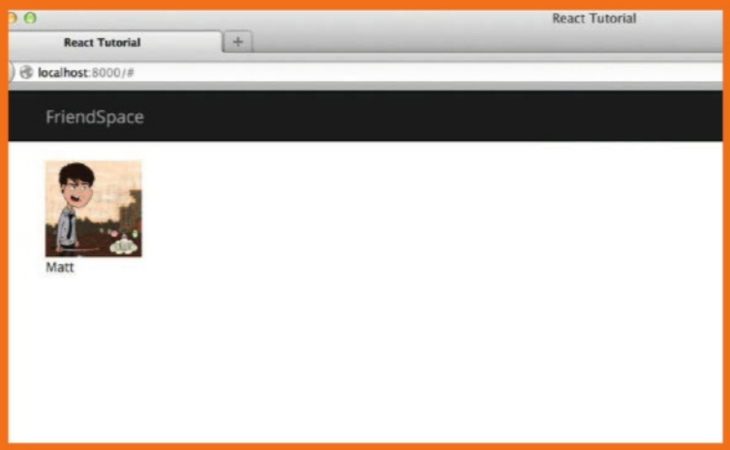
```
getInitialState: function () {
    return {
```

```
app.js changed; rebuilding...
built Module("app")
["app"]
app.js changed; rebuilding...
Error while reading module app:
Error: Parse Error: Line 149: Unexpected token :
    at throwError (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/esprima
.js:2155:21)
    at throwUnexpected (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/es
prima.js:2217:9)
    at consumeSemicolon (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/e
sprima.js:2303:13)
    at parseVariableStatement (/usr/local/lib/node_modules/react-tools/node_modules/esprim
a-fb/esprima.js:3402:9)
    at parseStatement (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/esp
rima.js:4111:24)
    at /usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/esprima.js:5823:38
    at parseSourceElement (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb
/esprima.js:4669:24)
    at parseFunctionSourceElements (/usr/local/lib/node_modules/react-tools/node_modules/e
sprima-fb/esprima.js:4199:29)
    at /usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/esprima.js:5823:38
    at parseConciseBody (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/e
sprima.js:4147:20)
From previous event:
    at /usr/local/lib/node_modules/react-tools/node_modules/commoner/lib/reader.js:125:35
    at Array.forEach (native)
    at /usr/local/lib/node_modules/react-tools/node_modules/commoner/lib/reader.js:124:31
    at /usr/local/lib/node_modules/react-tools/node_modules/commoner/lib/cache.js:56:30
app.js changed; rebuilding...
Error while reading module app:
Error: Parse Error: Line 150: Unexpected token :
    at throwError (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/esprima
.js:2155:21)
    at throwUnexpected (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/es
prima.js:2217:9)
    at consumeSemicolon (/usr/local/lib/node_modules/react-tools/node_modules/esprima-fb/e
sprima.js:2303:13)
    at parseVariableStatement (/usr/local/lib/node_modules/react-tools/node_modules/esprim
```

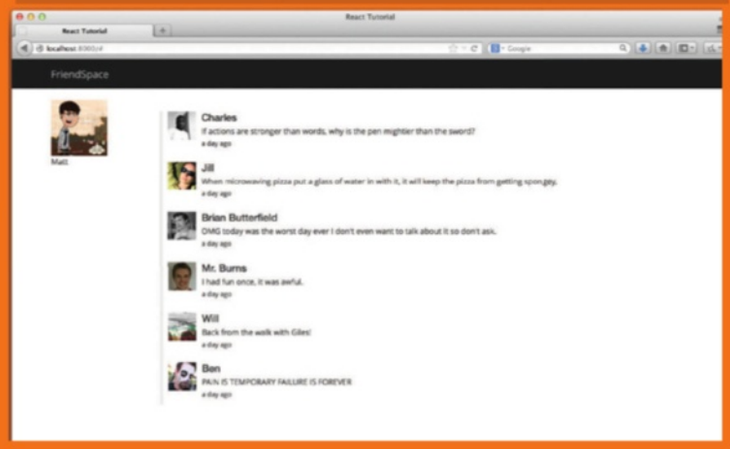
<Above>
• Once you start watching a folder for changes it will either show you the built module (top) or a stack trace



<Above>
• These network requests show us that the component is firing off requests at exactly the right time in its lifecycle



<Above>
• It might be a humble beginning, but this shows that our first component is rendering correctly using asynchronous data



<Above>
• Once all the story components are rendered this is how they will look. React ditches templates in favour of tying concerns

```
003         user: {
004             name: ‘’,
005             profile_picture: ‘’
006         }
007     };
008 },
```

06 Set state

componentDidMount is fired after rendering. Once rendered, we use jQuery to make an AJAX request to our 'service' (remember we passed the source as a property when invoking the component). Once we have that data, we can update the component's state with setState(). 'bind' sets the value of 'this' so we don't have to set 'this' as a separate variable.

```
001 componentDidMount: function () {
002     $.get(this.props.source, function (data) {
003         this.setState({
004            user: data.user
005         });
006     }.bind(this));
007 },
```

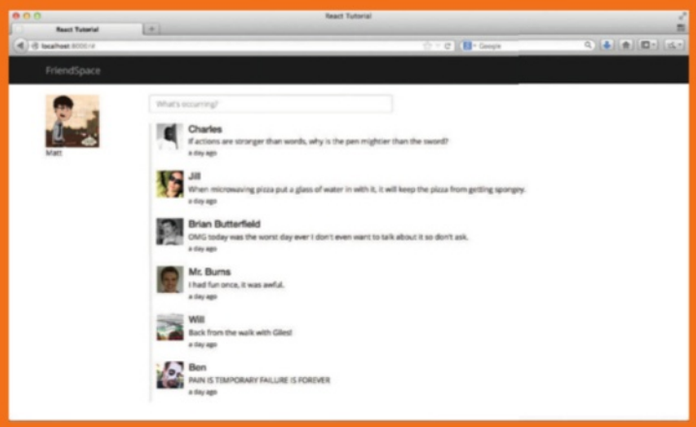
07 UserImage component

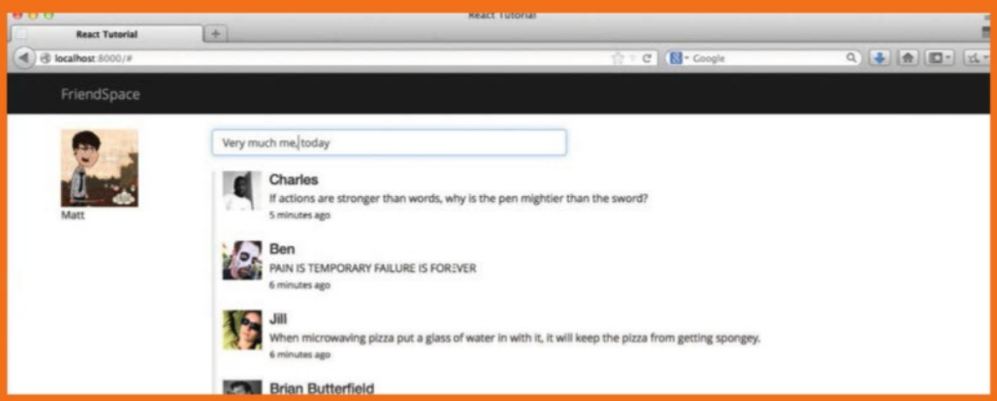
This simple component can be reused anywhere a profile picture is displayed. We use normal JavaScript to set a default if a height and width property doesn't come from the parent. An alternative way to do this is to return defaults in a method called `getDefaultProps` but for brevity we've simply set them inline.

08 Story component

Our Story component will be responsible for rendering a post. Note that because 'class' is a reserved keyword in JavaScript, JSX has to use 'className' instead (hence HTML-like). We're also using a new Time component which we'll write later on, but other than that the rest is just markup around properties.

```
001 var Story = React.createClass({
002     render: function () {
```





<Clockwise from top left>

- Once we've got the update component rendering, this is how it'll look. Building components in this way reduces coupling
- Using Moment.js and the setInterval mixin updates each component instance independently and re-renders the entire component
- New stories will get appended to the feed list; it's for this reason that keys need to be specified

```
003         return (
004             <div className="story media">

005                 <UserImage source={this.props.author.
image} width="50" height="50" />
006                 <div className="media-body">
007                     <h4 className="media-
heading">{this.props.author.name}</h4>
008                     <p>{this.props.text}</p>
009                     <Time date={this.props.date} />
010                 </div>
011             </div>
012         );
013     }
014 });
```

09 FeedList component

The FeedList component will house all of our individual stories. First we sort the data by date and then for each story we render those stories, passing the relevant properties. Lists in React need a key (identifier), else or get an error.

```
001 var FeedList = React.createClass({
002     render: function () {
003         var stories = this.props.data.sort(function
(a, b) {
004             return a.date < b.date;
```

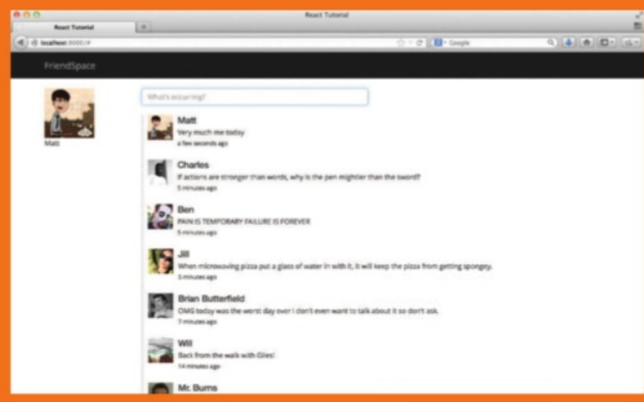
Different uses for intention.js

The Intention blog (**bit.ly/19ZznD7**) has a number of examples and more ways to use the library, including a helpful speed test.

```
005         });
006         var nodes = data.map(function (story) {
007             return <Story key={story.key}
author={story.author} text={story.text} date={story.date}
/>;
008         });
009
```

10 Render FeedList

One limitation of the render method is that it can only return one top-level element, so we'll wrap our story components in a . We can then simply reference our variable as '{}', which just denotes a JavaScript expression, and render all of the sorted story components at once.



<Above>
• Once our handleUpdate method has received new data it'll create a new story component without having to know how

<Above>
• There is a further component that displays 'friend requests' using the same principles we've covered here

```
        return (
            <div className="commentList">
                {nodes}
            </div>
        );
    }
});
```

11 Feed component

Our Feed component will own our FeedList and set the feed. Right now it's not doing much but it'll control the contents of the feed, whereas the List itself will control how that content is going to look. We'll add functionality to get the feed data in the following steps.

```
var Feed = React.createClass({
    render: function () {
        return (
            <FeedList data={this.state.feed} />
        );
    }
});
```

12 Events and requests

React encourages you to communicate between components with your own event system, so we'll use jQuery's. When a new story is received (either if a user writes one or you could implement server-sent events, see **www.w3.org/TR/eventsource**) it updates the status of the feed. We also send off a request to get the first set of stories.

13 Unmounting components

We set the initial feed state to an empty array (so long as it's not referencing an undefined property). componentWillUnmount is called before a component is torn down and removed from the DOM. This is the time to remove event listeners or timeouts and do manual cleanup for the lifecycle.

14 setInterval mixin

A mixin shares common functionality between components. For example, you might have multiple components that need to periodically check something with setInterval. This setInterval mixin (from bit.ly/1dv56Hw) simply sets and removes setIntervals in components but will automatically clear them when the component is ready to be removed.

```
var SetIntervalMixin = {
    componentWillMount: function() {
        this.intervals = [];
    },
    setInterval: function() {
        this.intervals.push(setInterval.apply(null, arguments));
    },
    componentWillUnmount: function() {
        this.intervals.map(clearInterval);
    }
};
```

15 Specifying mixins

Our Time component will show when the story was posted in a human-readable way, which is where Moment.js comes in. We specify which mixins we'll be using in an array and for now just return a small bit of markup (pardon the pun). We'll be updating the state so we render that, not 'props'.

```
var Time = React.createClass({
    mixins: [SetIntervalMixin],
    render: function () {
        return (
            <small>{this.state.date}</small>
        );
    }
});

```

16 Moments from now

When the component first loads we receive a timestamp and use Moment's fromNow method to give a human-readable relative time (eg a few seconds ago, one hour ago). When the component mounts, we use the mixin as if the methods belong to the component, similarly to prototypal inheritance.

```
001 getInitialState: function() {
002     return {
003         date: moment(this.props.date).fromNow()
004     };
005 },
006 componentDidMount: function () {
007    this.setInterval(this.tick, 60000); //1 min in ms
008 },
009
```

17 Ticking time

Every time 'tick' is called we set the new relative time using setState, so every minute for every individual instance we keep encapsulated. If the component unmounts, then the timer will clear. Most component lifecycle methods have a 'will' and a 'did' version; 'will' is called just before and 'did' immediately after.

```
001 tick: function () {
002     this.setState({
003         date: moment(this.props.date).fromNow()
004     });
005 },
006 componentWillUnmount: function () {
007    clearInterval(this.setInterval);
008 },
```

18 Handling submit event

Our last component will be a text input so that users can post their own updates. Our handleSubmit function is just regular JavaScript. If no text has been input then you can return without having to do anything. If text has been entered then we will push the new story to the feed and then reset the box to display the placeholder text.

```
001 var Update = React.createClass({
002     handleSubmit: function (event) {
003         if (!event.target[0].value) return
false;
004         /* next step */
005         event.target[0].value = '';
006         return false;
007     },
008 });
```

19 Async set state

setState is an asynchronous method, which means that if you attempt to read the value of the new state straight after setting, it won't have updated. To get around this it accepts a second argument that is invoked just after the state has been triggered. In this case we trigger a new story update, complete with all the details of the story.

20 Rendering form

As usual, all components must have a render method. Once rendered, the form doesn't actually have an onSubmit attribute as React performs event binding internally. Instead of returning the native event, React has 'synthetic events' that iron out browser inconsistencies – this means that you can get some HTML5 events working in IE 8!

21 Render components

Now that all of our components are written, we'll render each one out. The mount node has to be a reference to the DOM node itself (no '$('#friends')' but you could do `$('#friends')[0]'). If you want to render something for each class instance then you'll have to do this in a loop.

```
001 React.renderComponent(
002     <Friends source="/api/activity.json" />,
003     document.getElementById('friends')
004 );
005 React.renderComponent(
006     <User source="/api/user.json" />,
007     document.getElementById('user')
008 );
009
```

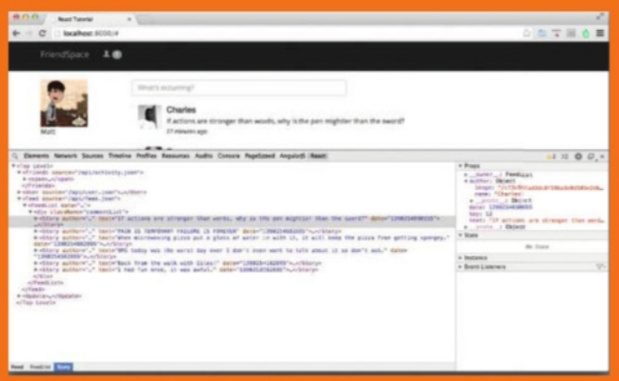
22 More components

Self-closing tags are great but as the code demonstrates, it really is down to your own preference. React works well for many of the situations where bespoke functionality is needed and feels like a very natural way to write components. Give it a try for yourself.

Debug your React app using the Chrome extension

The React team built a Chrome extension, the React Chrome Developer Tools, which enables you to inspect each of your components, even if they're nested. You can visually see state changing, properties, the parent component, as well as internal properties such as the current lifecycle stage. This means that you can set a debugger statement and step through as your component is built. You can download it from the Chrome Web Store, available at **bit.ly/1dGLkxb**.

React gets its speed by batching DOM manipulation together and by storing a virtual representation of the DOM in memory, which it uses to compare new data against. This speeds up the amount of time used to work out what's going to update and querying the DOM is usually the bottleneck when performing these sort of operations.



Checking for errors

If you're using the React Tools it's useful to check the output from JSX for compilation errors, otherwise you'll keep writing code unaware that there's a bug!

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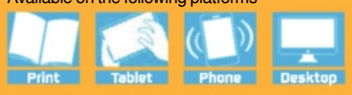


facebook.com/LinuxUserUK twitter.com/LinuxUserMag

Bobby Anderson

web **www.bobbyanderson.co.uk**

Current role	Web & UI designer at xDesign
Education	BA (Hons) Applied Graphics Technology with Multimedia
Expertise	Adobe Creative Cloud, Responsive HTML & CSS, WordPress
Clients	Scottish Football Association (SFA), Stirling University, Carhoots, Cigna UK
Twitter	@8obbyanderson

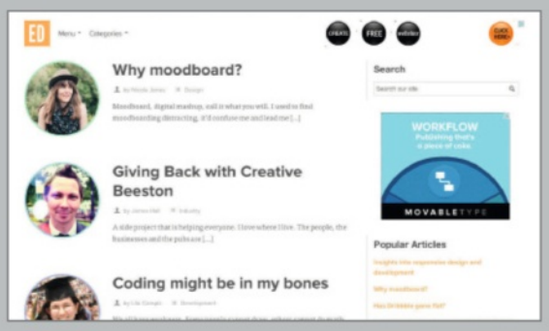
Bobby is an experienced multi-discipline designer specialising in web and user interface design, from Glasgow but based in Stirlingshire with a client base that spans the globe from Sydney to San Francisco. These clients include small to medium-sized established businesses and start-up companies.

His interest in design started in multimedia and animation through the use of Adobe Premiere and Macromedia Flash, but his love of web evolved during university where he was exposed to user interface design, web design and web development-based modules in his course. Since graduating in 2006, Bobby has worked full-time in a number of roles as a website designer, but his most recent role as a web and UI designer at xDesign (Edinburgh) has shifted his focus to mobile-based apps.

Bobby loves the problem-solving aspect of design; creating solutions that not only meet the client's expectations but his own high standards. Responsive design is one of the problems that Bobby likes to tackle the most; ensuring usability and consistency across a number of platforms may not be for everyone, but Bobby likes to take these challenges head on.

Bobby likes to keep himself active in the web industry with side projects and writing articles as well as dipping his toes into branding, illustration and typography.

01 **www.glasgow-taxi.com**



02 **www.everydaydesigner.net**

03 **www.carhoots.com**

04 **www.quaysidethistle.com**

05 **www.co2estates.com**

01
A responsive website that focuses particularly on providing users with the ability to get in touch for a quote for airport transfers and Scottish tours.

02
Everyday Designer was designed with readability and user experience at the forefront of the process. It was important this was the case from desktop to mobile.

03
Attention-grabbing imagery and calls to action were used to deliver a highly usable, attractive website with a special focus on integration with social media.

04
Rather than focusing on having a Facebook or Twitter page, Quayside wanted a website to deliver latest news, events and match reports to the players.

05
The colour scheme for the Carbon Estates website was designed inline with redesigned branding to put focus on the software's goal of cleaner energy consumption.

Will Smith

web **www.authenticstyle.co.uk**

Current role Founder & creative director
Education 10 GCSEs, 3 A Levels
Expertise RWD, eCommerce, branding, iPhone/iPad app, UI Design, email marketing, conversion rate optimisation, HTML5, CSS3, jQuery, WordPress.
Clients Abbotts Ann Cycles, Track Record Global, The Body Lounge & Retreat, Ivory Jacobs Recruitment, LoveSoul, Vodafone
Twitter @willsmith727

Will started Authentic Style in 2009, starting out as a freelancer and growing the company to its current team of four, due to a demand for his skills. Will got into web design through online gaming. Having joined a forum for an online game he discovered forum signatures and turned his hand to creating these in Photoshop, later selling the website he'd established that created these for its members. The love of creating sigs evolved into designing webpages and coding them in Notepad.

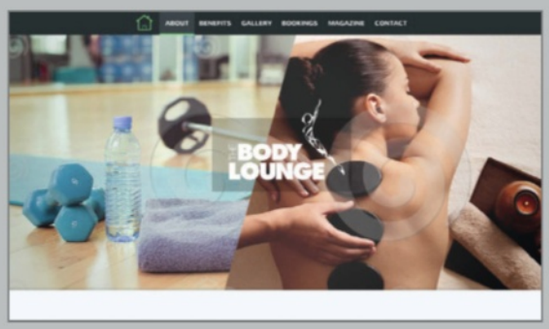
Once Will finished college he enrolled at university to study Web & Multimedia, but a week before the course started he successfully interviewed at a local design company. From there he worked for two other agencies before taking the leap into freelancing. Will's company, Authentic Style, specialises in responsive web design, eCommerce, iPhone/iPad UI Design, web apps, email marketing and now also ongoing analysis to ensure their client's sites are performing to the best of their ability.

Will's predictions for 2014 include a continuation of the flat design trend (as it lends itself so well to mobile), the importance of companies creating online content marketing strategies and split testing webpages to ensure they are getting results.

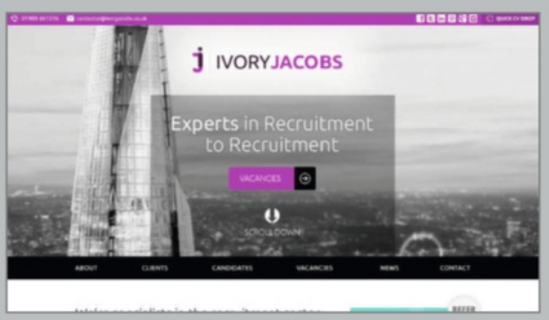
Design is Will's passion and he counts himself incredibly lucky to be able to improve clients' online presence through design and ongoing analysis alongside his awesome team.

01 **www.thameraltassan.com**

02 **abbottsanncycles.co.uk**



03 **www.thebodylounge.co.uk**



04 **ivoryjacobs.co.uk**

05 **Project Roadmap iPhone app**

01
A responsive photography portfolio to showcase Thamer's beautiful photographic work. Built on WordPress, the site makes it easy for visitors to share his work.

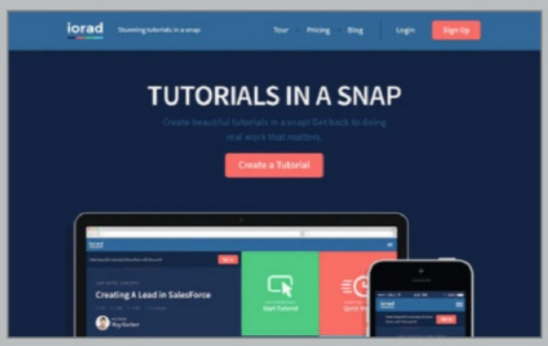
02
A responsive Woocommerce website for a recently opened Andover-based cycle store. The site is kept simple but features an attention-grabbing image carousel.

03
A responsive brochure site that was built on WordPress with the aim of attracting clients for the launch of a new lifestyle fitness and beauty lounge.

04
A website for a recruitment agency built on WordPress. This was converted to RWD after Google Analytics showed the site was getting lots of traffic from mobiles.

05
Project Roadmap lets you create commonly used 'roadmaps' for various project types. You can then use these 'roadmaps' for live projects and monitor their progress.

01 financialshields.co.uk



02 mockup

03 myglobalparcel.com

04 workingremote.ly

Nick Dew

web bunq.co.uk

Current role	Co-founder of BUNQ along with Roy Barber
Education	Media Technology at University of Lincoln
Expertise	UX design, HTML, CSS, jQuery, Photoshop, WordPress
Clients	Financial Shields, Iorad, myGlobal Parcel, Dacia, Westfield Health, Unicef
Twitter	@bunquk

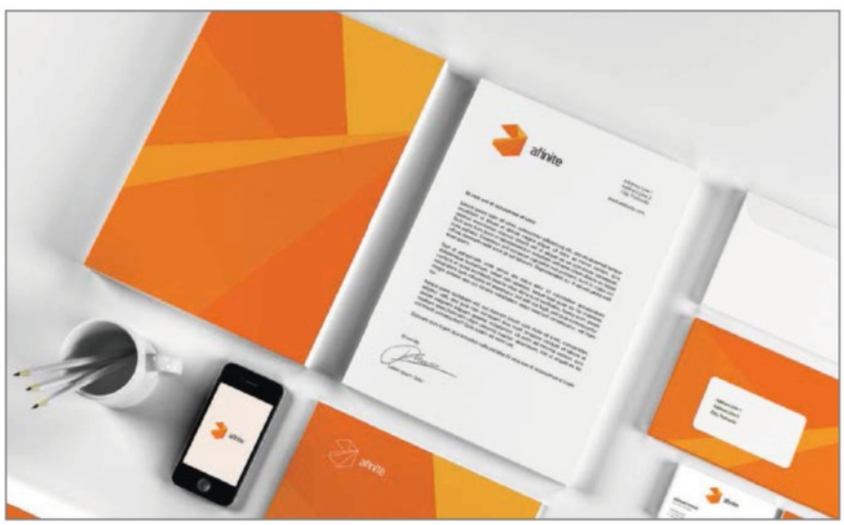
BUNQ is a web design agency based in Doncaster, South Yorkshire. Nick and Roy co-founded the company together eight months ago, after over ten years' experience each in the industry. They are both passionate about new technology and what the web has to offer, and despite the fact they are a small team, they believe in producing the highest quality work they possibly can for their clients.

From their well-equipped studio they create brands, design intuitive user interfaces, build responsive websites and much more. They've worked with small local businesses, large corporations, councils and startups in California.

Nick and Roy don't follow trends, in fact Roy was rather ahead of the 'flat design' curve when he redesigned his own website **www.roybarber.com** 18 months ago, to be fast loading and minimalist. It received and continues to receive a lot of attention on the subject, from across the web. Instead of following trends, they tend to focus on the needs of the customers and visitors, well-written content, great design using colour and white space effectively, and quality responsive front-end code, optimised for speed.

They enjoy challenging themselves and working on interesting projects, but for them the most rewarding part of the job is to see a client walk away happy from a job well done.

Having built up a growing client base – many of whom keep coming back to them for repeat custom – and secured a number of exciting opportunities last year, they are hoping to grow the business in 2014 and continue to work on innovative and exciting projects.



05 rebrand

01
A content-managed responsive website for an independent financial advisor. We love the use of colours and the simple, clean design, with subtle CSS3 animations.

02
Bunq designed and built the frontend for Iorad, a start-up making online tutorials a breeze. They created the app's editor, presenter and sales site.

03
myGlobalParcel is an economical parcel delivery service. Bunq rebranded their website, enhancing user experience, and adding colour and iconography.

04
Bunq designed and built the frontend for Working Remote.ly, who promote the benefits of remote working and offer a framework to be successful at it.

05
An IT support business that wanted a rebrand for their ageing identity. Bunq created a new bright and contemporary brand to help them stand out in a crowded market.

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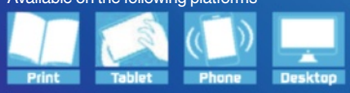

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This month we talk about becoming a freelancer, responsive frameworks and share a selection of your tweets

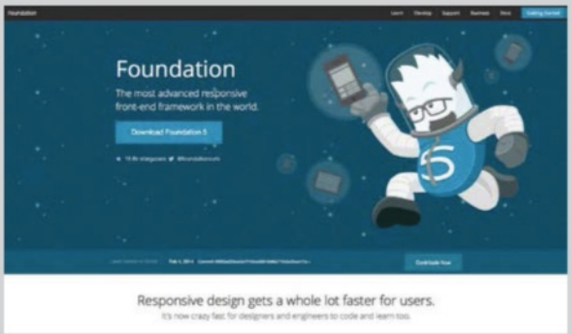
Subject Responsive frameworks – hot or not?

From John Tims

I want to build a responsive site, but I am relatively new to the world of web design. I am undecided if I should start from scratch and build from the ground up. This seems like a lot of work, but I think I'll get to learn a lot along the way.

The alternative option is to use a popular framework. I know of Bootstrap and Foundation, but what are these like for a newcomer? Are there other frameworks that I should consider? Look forward to any advice you can offer.

Learning from scratch could be a very rewarding experience, but it could also end up being very frustrating.



Using a framework is still a learning process, but it comes with a host of additional benefits. First and foremost you know that it's going to work. It's been tried and tested by thousands of users and compatibility issues have been ironed out. It's typically a complete library, and it boasts a community that continues to keep improving it. Plus, mastering the framework will be much quicker than starting from scratch and creating new builds will take much less time.

Bootstrap and Foundation are both good choices. They provide a wide range of features, a great support network and offer longevity – but there are alternatives out there that are worth looking at. Gumby and Unsemantic are less intensive than the big boys but still offer an alternative. Pure CSS (purecss.io) is less of a framework and more a collection of CSS modules, but it is still a useful tool.

Tutorials

Create your own inspirational pages

Build a CSS flip menu
bit.ly/1e343ir

Build animated and responsive CSS buttons
bit.ly/1fH59Fh

Create data-driven interfaces with KnockoutJS
bit.ly/1kbPCkh

Subject Where are the women?

From Tracy Scott

I have been a regular reader of **Web Designer** for over six months and I really appreciate the help you provide. But, I have noticed that your magazine is very male oriented. Most of your comments are by men, most of your columns are by men and it seems that men all write your tutorials too.

Women now have a far greater presence in the industry and it would be great to see that reflected in the magazine with more contributions from them.

Web design is still a very male-oriented industry, but we are fully aware that more and more women are joining as well. However, certain parts of the industry are still rather dominated by males, for example, web development.

@nightshooter87
@WebDesignerMag I've been looking at the new mag, never bought **Web Designer** for ages, but great articles

Hopefully, the sea change has already started and more women will be encouraged to enter the industry and increase the diversity.

Web Designer, not by design, follows the industry pattern with largely male contributors. This is certainly not intentional, but when looking for new experts we typically find that the vast majority are men. We are always on the lookout for new writers though, so if there any women out there who would like to contribute to the magazine, please don't hesitate to get in contact – we'd love to hear from you.

Subject Going solo

From Victoria Adams

Working for myself is something that I want to be able to do in the near future. I'm currently working for an agency where I have been for two years. The work is okay, but I feel – like many others, I'm sure – that I could give clients a much better experience. The only problem is that I am a bit worried about making the jump. For example, how do I even get started? Do you have any tips?

The jump into the world of freelance does involve a certain

@thosetinydreams
So I got a full-page feature in a magazine. In the UK. Oh my. Thank you, @WebDesignerMag!

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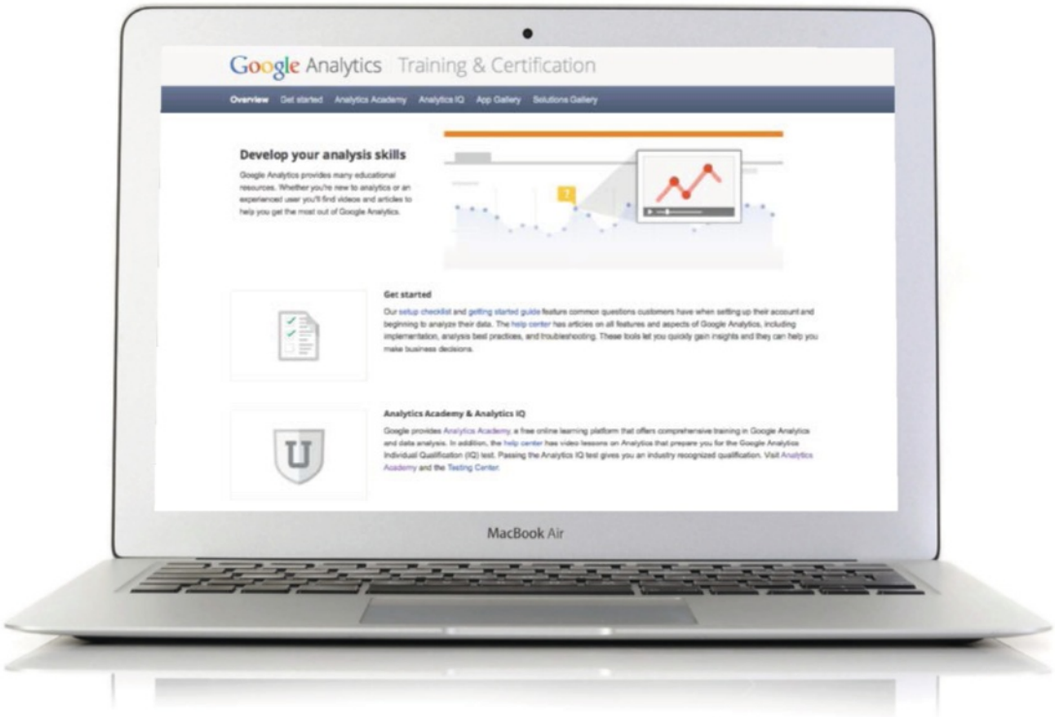
"How to perfect your #portfolio" > http://www.webdesignermag.co.uk/comment/how-to-perfect-your-portfolio/ ... < Good article here for you #design #students out there. Via @WebDesignerMag

amount of responsibility, but if you are ready to make the leap then you should prepare yourself accordingly. While working at your current job, you could start planning and implementing a strategy for when you finally go solo. To help you reach your goal, set a realistic target date and work towards this.

To help you make the move have a look at this article, 'Reasons why you shouldn't be afraid to go freelance' (**bit.ly/1javKhc**). Plus, make sure you take a look at **elance.com** to give yourself an idea of the freelance jobs currently out there and the going rates.

To gain an in-depth knowledge of Google Analytics, start with Google's own courses and resources



> To get the best out of Google Analytics you really need to know how to use it beyond the basics

Subject Analyse this
From Simon Francur

Google Analytics is the only tool that I use to see where my traffic comes from. And, to be honest, I don't really use it in any great depth – mostly because I don't understand it. So, I have decided that now is the time to start really learning how to make the most of it – and perhaps even find ways to analyse other parts of my site, like social media.
The problem I have is that I I don't really know where to start. If you have any suggestions, that would be great.

Google Analytics is a great tool and has many hidden layers to the untrained eye. To get the best out of the service you really need to know how to use it beyond the basics. Google provides a great starting point with its Google Analytics Academy (**analyticsacademy.withgoogle.com/course**). This is a collection of videos with questions and multi-choice answers.

Twitter does analytics in its own way; head to **analytics.twitter.com** for more information. It's not quite as simple as just signing in and viewing stats, but there is help on how to get started. A particularly helpful feature it offers is the ability to measure the impact of your tweets; this can be done through app installs, click-through rates or simply looking at retweets. It's worth getting to know to boost your social activity.

For Facebook, give **www.facebook.com/insights** a try. This will give you a breakdown of what's been happening on the selected account.

@3xtigy
@WebDesignerMag I love parallax scrolling. Yes it does limit the speed times but you can be so creative with it. Bootstrap it ;)

@ramunasbruzgys
@WebDesignerMag I like this theme used at http://www.mellow.lt . The Retailer #WordPress #Theme available here: http://goo.gl/7eZmBw

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NAME AND URL	PACKAGE	PHONE NUMBER	COST PER YEAR	WEB SPACE	MONTHLY BANDWIDTH	POP3 ACCOUNTS	DATABASE SUPPORT	SHOPPING CART	VIRUS FILTER	FIREWALL	PHONE SUPPORT	EMAIL SUPPORT	WEB CONTROL PANEL	SERVICE LEVEL AGREEMENT
1 & 1 Internet Ltd www.1and1.co.uk	1&1 Starter (Linux)	0844 335 12 11	£29.88	5GB	Unlimited	1,000	✓	✓	✓	✓	✓	✓	✓	✗
	1&1 Standard (Linux)	0844 335 12 11	£59.88	50GB	Unlimited	3,000	✓	✓	✓	✓	✓	✓	✓	✗
	1&1 Standard (Windows)	0844 335 12 11	£59.88	50GB	Unlimited	3,000	✓	✗	✓	✓	✓	✓	✓	✗
	1&1 Unlimited (Linux)	0844 335 12 11	£83.88	Unlimited	Unlimited	5,000	✓	✓	✓	✓	✓	✓	✓	✗
	1&1 Unlimited (Windows)	0844 335 12 11	£83.88	Unlimited	Unlimited	5,000	✓	✗	✓	✓	✓	✓	✓	✗
	1&1 Business (Linux)	0844 335 12 11	£119.88	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	Free	✓	✓	✗
	1&1 Business (Windows)	0844 335 12 11	£119.88	Unlimited	Unlimited	Unlimited	✓	✗	✓	✓	Free	✓	✓	✗
111WebHost 111webhost.com	Budget Web Hosting Pack	N/A	£10	1GB	1GB	5	✓	✗	Add-on	N/A	✗	✓	✓	✗
	WordPress Web Hosting Pack	N/A	£20	5GB	2GB	100	✓	✓	Add-on	N/A	✗	✓	✓	✗
	Start-up Web Hosting Pack	N/A	£25	5GB	Unlimited	100	✓	✓	Add-on	N/A	✗	✓	✓	✗
	Unlimited Web Hosting Pack	N/A	£50	Unlimited	Unlimited	Unlimited	✓	✓	Add-on	N/A	✗	✓	✓	✗
	Unlimited Multi-site Web Hosting Pack	N/A	£300	Unlimited	Unlimited	Unlimited	✓	✓	Add-on	N/A	✗	✓	✓	✗
123-reg (www.123-reg.co.uk)	Starter	0845 859 0018	£29.88	1GB	5GB	20	✗	✗	✗	✓	✓	✓	✓	✗
123-reg (www.123-reg.co.uk)	Plus	0845 859 0018	£59.88	5GB	50GB	500	✓	✗	✗	✓	✓	✓	✓	✗
123-reg (www.123-reg.co.uk)	Pro	0845 859 0018	£107.88	10GB	100GB	750	✓	✗	✗	✓	✓	✓	✓	✗
123-reg (www.123-reg.co.uk)	Bus Pro	0845 859 0018	£179.88	20GB	Unlimited	1,000	✓	✗	✗	✓	✓	✓	✓	✗
123-reg (www.123-reg.co.uk)	Plus (MS)	0845 859 0018	£59.88	2GB	25GB	100	✓	✗	✗	✓	✓	✓	✓	✗
123-reg (www.123-reg.co.uk)	Pro (MS)	0845 859 0018	£107.88	5GB	50GB	500	✓	✗	✗	✓	✓	✓	✓	✗
123-reg (www.123-reg.co.uk)	Bus Pro (MS)	0845 859 0018	£179.88	10GB	150GB	1,000	✓	✗	✗	✓	✓	✓	✓	✗
2020Media (www.2020media.com)	Light User	0870 321 2020	£45	20MB	1GB	3	✓	✓	✓	✓	✓	✓	✓	✗
2020Media (www.2020media.com)	Everyday	0870 321 2020	£100	200MB	10GB	15	✓	✓	✓	✓	✓	✓	✓	✗
2020Media (www.2020media.com)	Business/Pro	0870 321 2020	£275	500MB	20GB	50	✓	✓	✓	✓	✓	✓	✓	✗
2020Media (www.2020media.com)	JAVA Tomcat	0870 321 2020	£300	100MB	3GB	15	✓	✓	✓	✓	✓	✓	✓	✗
2020Media (www.2020media.com)	ASP.Net	0870 321 2020	£275	100MB	3GB	15	✓	✓	✓	✓	✓	✓	✓	✗
4D Hosting www.4dhosting.com	Big Web Hosting	0207 183 0602	£60	5GB	Unlimited	20	✓	✓	✓	✓	✓	✓	✓	✓
	Bigger Web Hosting	0207 183 0602	£120	10GB	Unlimited	75	✓	✓	✓	✓	✓	✓	✓	✓
	Biggest Web Hosting	0207 183 0602	£180	20GB	Unlimited	100	✓	✓	✓	✓	✓	✓	✓	✓
	Big VPS	0207 183 0602	£204	75GB	500GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	Bigger VPS	0207 183 0602	£360	100GB	1000GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	Biggest VPS	0207 183 0602	£720	200GB	1500GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Blackfoot Hosting Ltd (www.blackfoot.co.uk)	Home	N/A	£40	500MB	5GB	5	✓	✓	✓	✓	✗	✓	✓	✗
Blackfoot Hosting Ltd (www.blackfoot.co.uk)	Business	N/A	£50	1GB	20GB	100	✓	✓	✓	✓	✗	✓	✓	✗
Blackfoot Hosting Ltd (www.blackfoot.co.uk)	eCommerce	N/A	£100	2GB	40GB	200	✓	✓	✓	✓	✗	✓	✓	✗
Blackfoot Hosting Ltd (www.blackfoot.co.uk)	Professional	N/A	£150	3GB	60GB	300	✓	✓	✓	✓	✗	✓	✓	✗
Blacknight (www.blacknight.com)	Minimus	35359 918 3072	£45	10GB	200GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
Blacknight (www.blacknight.com)	Medius	35359 918 3072	£79	20GB	400GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
Blacknight (www.blacknight.com)	Maximus	35359 918 3072	£45	30GB	600GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
Bravo14 (http://bravo14.co.uk)	Starter Linux	N/A	£130	2,000MB	2,000MB	10	✓	✓	✓	✓	✗	✓	✓	✓
Bravo14 (http://bravo14.co.uk)	Starter Windows	N/A	£20	2,000MB	2,000MB	10	✓	✓	✓	✓	✗	✓	✓	✓
Bravo14 (http://bravo14.co.uk)	Business Linux	N/A	£45	4,000MB	4,000MB	4,000	✓	✓	✓	✓	✗	✓	✓	✓
Bravo14 (http://bravo14.co.uk)	Business Windows	N/A	£45	4,000MB	4,000MB	4,000	✓	✓	✓	✓	✗	✓	✓	✓
Bravo14 (http://bravo14.co.uk)	Ultimate Linux	N/A	£60	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
Bravo14 (http://bravo14.co.uk)	Ultimate Windows	N/A	£60	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
CityCM www.citycm.couk	City250	0330 223 0120	£10.99	250MB	5GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	City500	0330 223 0120	£14.99	500MB	10GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	City2000	0330 223 0120	£29.90	2GB	50GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	City 10000	0330 223 0120	£49.90	10GB	100GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	CityR10	0330 223 0120	£120	10GB	50GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	CityR20	0330 223 0120	£180	20GB	100GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	CityR30	0330 223 0120	£240	30GB	150GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	City VPS15	0330 223 0120	£180	15GB SSD	400GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	City VPS30	0330 223 0120	£300	30GB SSD	600GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	City VPS75	0330 223 0120	£420	75GB SSD	600GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓

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Featured host of the month: 111WebHost 111webhost.com

Getting more out of one of our quality listed hosting providers

111WebHost is a provider committed to making website hosting easy to use while offering the best possible value. It provides solutions for small- and medium-sized businesses as well as individuals – and web designers and developers are high on their list. 111WebHost offers a range of top-value packages starting at the ridiculously low price of £1 per month. For this, users get 1GB of webspace and 1GB of monthly traffic. For those looking for more, there is 5GB of webspace and unlimited traffic for just £2.50 a month. Unlimited webspace and traffic is available for just £5 a month. They also provide specialist hosting for WordPress, Joomla and Drupal.

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Designwasp (http://designwasp.com)	Starter	0844 372 9848	£30	3GB	20GB	1,000	✓	✓	✗	✓	✗	✓	✓	✗
Designwasp (http://designwasp.com)	Home	0844 372 9848	£40	10GB	50GB	10,000	✓	✓	✗	✓	✗	✓	✓	✗
Designwasp (http://designwasp.com)	Business	0844 372 9848	£60	Unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✗	✓	✓	✗
Designwasp (http://designwasp.com)	Windows Unlimited	0844 372 9848	£60	Unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✗	✓	✓	✗
Designwasp (http://designwasp.com)	Windows Home	0844 372 9848	£40	10GB	50GB	1,000	✓	✓	✗	✓	✗	✓	✓	✗
Designwasp (http://designwasp.com)	CheapHost	0844 372 9848	£10	300MB	100MB	5	✗	✗	✗	✓	✗	✗	✓	✗
Digital Gibbon Ltd (http://digitalgibbon.com)	Personal	01865 589 990	£12	1GB	Unlimited	10	✓	✗	✗	✓	✓	✓	✓	✗
Digital Gibbon Ltd (http://digitalgibbon.com)	Personal Plus	01865 589 990	£48	Unlimited	Unlimited	50	✓	✗	✗	✓	✓	✓	✓	✗
Digital Gibbon Ltd (http://digitalgibbon.com)	Business	01865 589 990	£108	5GB	Unlimited	1000	✓	✓	✗	✓	✓	✓	✓	✗
Digital Gibbon Ltd (http://digitalgibbon.com)	Business Professional	01865 589 990	£132	Unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✓	✓	✓	✗
domaincheck Use discount code WEBDES1 for 10% discount! **Domaincheck** www.domaincheck.co.uk	Bronze	0191 2612252	£30+VAT	500MB	5GB	5	✗	✓	Optional	✓	✓	✓	✓	✓
	Silver	0191 2612252	£50+VAT	1000MB	10GB	10	✓	✓	Optional	✓	✓	✓	✓	✓
	Gold	0191 2612252	£100+VAT	2500MB	50GB	25	✓	✓	Optional	✓	✓	✓	✓	✓
	Platinum	0191 2612252	£200+VAT	5000MB	100GB	50	✓	✓	Optional	✓	✓	✓	✓	✓
	Small	0191 2612252	£110	20GB	50GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Donhost (www.donhost.co.uk)	Reseller Unix	0845 226 5566	£399.99	Unlimited	Unlimited	Unlimited	✓	✗	✓	✓	✓	✓	✓	✗
Donhost (www.donhost.co.uk)	Reseller Windows	0845 226 5566	£499.99	Unlimited	Unlimited	Unlimited	✓	✗	✓	✓	✓	✓	✓	✗
Donhost (www.donhost.co.uk)	Enterprise	0845 226 5566	£89.99	1GB	2GB	250	✓	✗	✓	✓	✓	✓	✓	✗
Donhost (www.donhost.co.uk)	Commerce	0845 226 5566	£179.99	2GB	5GB	500	✓	✗	✓	✓	✓	✓	✓	✗
Donhost (www.donhost.co.uk)	Designer	0845 226 5566	£119.99	1GB	2GB	250	✓	✗	✓	✓	✓	✓	✓	✗
Donhost (www.donhost.co.uk)	Developer	0845 226 5566	£259.99	2GB	5GB	500	✓	✗	✓	✓	✓	✓	✓	✗
eHosting (www.ehosting.com)	Starter	0844 999 4100	£23.88	1GB	25GB	10	✗	✗	✗	✗	✗	✓	✓	✓
eHosting (www.ehosting.com)	Personal	0844 999 4100	£59.88	2.5GB	Unlimited	50	✓	✗	✗	✗	✗	✓	✓	✓
eHosting (www.ehosting.com)	Expert	0844 999 4100	£95.88	5GB	Unlimited	250	✓	✗	✗	✗	✗	✓	✓	✓
eHosting (www.ehosting.com)	Virtual	0844 999 4100	£227.88	50GB	Unlimited	Unlimited	✓	✗	✗	✗	✓	✓	✓	✓
Equiphase (www.equiphase.net)	Bronze	0121 314 4865	£30	200MB	2GB	10	✓	✓	✗	✓	✗	✓	✓	✓
Equiphase (www.equiphase.net)	Silver	0121 314 4865	£42	400MB	5GB	20	✓	✓	✗	✓	✗	✓	✓	✓
Equiphase (www.equiphase.net)	Gold	0121 314 4865	£72	800MB	10GB	100	✓	✓	✗	✓	✗	✓	✓	✓
Equiphase (www.equiphase.net)	Platinum	0121 314 4865	£114	1,200MB	40GB	200	✓	✓	✓	✓	✓	✓	✓	✓
Eurofasthost.com (www.eurofasthost.com)	Email Only	02380 249 823	£40	1GB	2GB	10	✗	✗	✓	✓	✓	✓	✓	✓
Eurofasthost.com (www.eurofasthost.com)	Essential	02380 249 823	£75	2GB	5GB	10	✗	✗	✓	✓	✓	✓	✓	✓
Eurofasthost.com (www.eurofasthost.com)	Superior	02380 249 823	£140	5GB	10GB	25	✓	✓	✓	✓	✓	✓	✓	✓
Eurofasthost.com (www.eurofasthost.com)	Premium	02380 249 823	£250	10GB	25GB	100	✓	✓	✓	✓	✓	✓	✓	✓
Evohosting (www.evohosting.co.uk)	Starter	N/A	£29.99	500MB	1GB	3	✓	✓	✓	✓	✗	✓	✓	✓
Evohosting (www.evohosting.co.uk)	Home	N/A	£54.99	2.5GB	30GB	50	✓	✓	✓	✓	✗	✓	✓	✓
Evohosting (www.evohosting.co.uk)	Business	N/A	£79.99	6.5GB	Unlimited	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
Evohosting (www.evohosting.co.uk)	eCommerce	N/A	£159.99	30GB	Unlimited	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
Giacom (www.giacom.com)	Business Pro	0800 542 7500	£199	100MB	2GB	100	✓	✓	✓	✓	✓	✓	✓	✓
Heart Internet (www.heartinternet.co.uk)	Starter Professional	0845 644 7750	£29.80	2.5GB	10GB	1,000	✗	✗	✗	✓	✗	✓	✓	✓
Heart Internet (www.heartinternet.co.uk)	Home Professional	0845 644 7750	£89.99	Unlimited	Unlimited	10,000	✓	✓	✗	✓	✗	✓	✓	✓
Heart Internet (www.heartinternet.co.uk)	Business Professional	0845 644 7750	£129.99	Unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✗	✓	✓	✓
Heart Internet (www.heartinternet.co.uk)	Reseller Professional	0845 644 7750	£349.99	Unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✗	✓	✓	✓
Hostway (www.hostway.co.uk)	Silver	0808 180 1880	£79.50	150MG	3GB	5	✗	Option	✓	✓	✗	✓	✓	✗
fasthosts **Fasthosts** www.fasthosts.co.uk	Personal	0808 168 6777	£32.87	5GB	Unlimited	50	✓	✗	✓	✓	✓	✓	✓	✗
	Business Bronze	0808 168 6777	£58.38	50GB	Unlimited	500	✓	Option	✓	✓	✓	✓	✓	✗
	Business Silver	0808 168 6777	£76.39	Unlimited	Unlimited	Unlimited	✓	Option	✓	✓	✓	✓	✓	✗
	Business Gold	0808 168 6777	£101.89	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
	WD Starter	0808 168 6777	£149.99	20GB	Unlimited	Unlimited	✓	Option	Option	✓	✓	✓	✓	✗
	WD Advanced	0808 168 6777	£199.99	Unlimited	Unlimited	Unlimited	✓	Option	Option	✓	✓	✓	✓	✗
Hostway (www.hostway.co.uk)	Gold	0808 180 1880	£139.50	300MB	5GB	10	✓	Option	✓	✓	✓	✓	✓	✗
Hostway (www.hostway.co.uk)	Gold Plus	0808 180 1880	£189.50	450MB	10GB	30	✓	Option	✓	✓	✓	✓	✓	✗
Hostway (www.hostway.co.uk)	Platinum	0808 180 1880	£359.50	600MB	20GB	50	✓	Option	✓	✓	✓	✓	✓	✗
Hostway (www.hostway.co.uk)	Platinum Plus	0808 180 1880	£599.50	1.2GB	40GB	10	✓	Option	✓	✓	✓	✓	✓	✗
Hostway (www.hostway.co.uk)	Email Plus	0808 180 1880	£49.95	50MB	N/A	5	N/A	N/A	N/A	✓	✗	✓	✓	✗
ICUK www.icukhosting.co.uk	Professional	0845 009 9175	£30	250MB	1GB	50	✓	✓	option	✓	✓	✓	✓	✗

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Continued...

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ICUK www.icukhosting.co.uk	Advanced	0845 009 9175	£50	2GB	2.5GB	150	✓	✓	option	✓	✓	✓	✓	✗
ICUK www.icukhosting.co.uk	Enterprise	0845 009 9175	£80	2GB	500MB	Unlimited	✓	✓	option	✓	✓	✓	✓	✗
ICUK www.icukhosting.co.uk	Professional Plus	0845 009 9175	£90	500MB	5GB	100	✓	✓	option	✓	✓	✓	✓	✗
ICUK www.icukhosting.co.uk	Premium Plus	0845 009 9175	£150	1GB	12.5GB	500	✓	✓	option	✓	✓	✓	✓	✗
ICUK www.icukhosting.co.uk	Enterprise Plus	0845 009 9175	£300	2GB	20GB	Unlimited	✓	✓	option	✓	✓	✓	✓	✗
ICUK www.icukhosting.co.uk	Reseller Windows	0845 009 9175	£200	Unlimited	Unlimited	Unlimited	✓	✓	option	✓	✓	✓	✓	✗
ICUK www.icukhosting.co.uk	Reseller Linux	0845 009 9175	£200	Unlimited	Unlimited	Unlimited	✓	✓	option	✓	✓	✓	✓	✗
ICUK www.icukhosting.co.uk	Reseller Enterprise	0845 009 9175	£500	Unlimited	Unlimited	Unlimited	✓	✓	option	✓	✓	✓	✓	✗
JAB Web Hosting (www.jabwebhosting.com)	Mail - M105	0800 043 0153	£15.17	256MB	3GB	50	✗	✗	✗	✓	✓	✓	✓	✓
JAB Web Hosting (www.jabwebhosting.com)	Home - H25	0800 043 0153	£24.47	1GB	8GB	50	✓	✗	✗	✓	✓	✓	✓	✓
JAB Web Hosting (www.jabwebhosting.com)	Professional - P55	0800 043 0153	£45	2GB	15GB	75	✓	✓	✗	✓	✓	✓	✓	✓
JAB Web Hosting (www.jabwebhosting.com)	Reseller - R25	0800 043 0153	£97.88	2GB	30GB	250	✓	✓	✗	✓	✓	✓	✓	✓
JAB Web Hosting (www.jabwebhosting.com)	Reseller - R105	0800 043 0153	£271.60	4GB	Unlimited	Unlimited	✓	✓	✗	✓	✓	✓	✓	✓
LCN (www.lcn.com)	Blog	01438 342 490	£20	100MB	1GB	5	✗	✗	✓	✓	✓	✓	✓	✓
LCN (www.lcn.com)	Starter	01438 342 490	£30	1GB	1GB	10	✗	✗	✓	✓	✓	✓	✓	✓
LCN (www.lcn.com)	Starter	01438 342 490	£30	1GB	1GB	10	✗	✗	✓	✓	✓	✓	✓	✓
LCN (www.lcn.com)	Dynamic	01438 342 490	£50	2GB	2GB	20	✓	✓	✓	✓	✓	✓	✓	✓
LCN (www.lcn.com)	Premium	01438 342 490	£80	5GB	5GB	50	✓	✓	✓	✓	✓	✓	✓	✓
LCN (www.lcn.com)	Unlimited	01438 342 490	£120	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
LD Hosts (http://ldhosts.co.uk)	LD Budget (Linux)	07891 235858	£11.88	1GB	1GB	500	✓	✓	✗	✓	✓	✓	✓	✗
LD Hosts (http://ldhosts.co.uk)	LD Home (Linux)	07891 235858	£23.88	10GB	10GB	5,000	✓	✓	✗	✓	✓	✓	✓	✗
LD Hosts (http://ldhosts.co.uk)	LD Pro (Linux)	07891 235858	£41.88	50GB	50GB	20,000	✓	✓	✗	✓	✓	✓	✓	✗
LD Hosts (http://ldhosts.co.uk)	LD Unlimited (Linux)	07891 235858	£60	Unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✓	✓	✓	✗
LD Hosts (http://ldhosts.co.uk)	Windows Home	07891 235858	£17.88	2GB	2GB	1,000	✓	✓	✗	✓	✓	✓	✓	✗
LD Hosts (http://ldhosts.co.uk)	Windows Unlimited	07891 235858	£60	Unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✓	✓	✓	✗
Media Temple (http://mediatemple.net)	Shared-Server Pro	+1 310 841 5500	£64	2GB	1TB	1,000	✓	✓	✓	✓	✓	✓	✓	✓
Media Temple (http://mediatemple.net)	Shared-Server Advanced	+1 310 841 5500	£109	5GB	1.5TB	5,000	✓	✓	✓	✓	✓	✓	✓	✓
NameHog	Email Only	01604 212 904	£11.99	2.5GB	15GB	10	✗	✗	✓	✓	✓	✓	✓	✓
NameHog	Starter	01604 212 904	£36.99	10GB	150GB	Unlimited	✗	✗	✓	✓	✓	✓	✓	✓
NameHog	Home Pro	01604 212 904	£59.99	25GB	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
NameHog	Business	01604 212 904	£109.99	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Namesco (www.names.co.uk)	StartUp Plus	0845 363 3632	£89.99	500MB	5GB	10	✓	✓	✓	✓	✓	✓	✓	✓
Namesco (www.names.co.uk)	Business	0845 363 3632	£149.99	2,000MB	20GB	100	✗	✗	✓	✓	✓	✓	✓	✓
Namesco (www.names.co.uk)	Business Plus	0845 363 3632	£89.99	3,000MB	30GB	200	✓	✓	✓	✓	✓	✓	✓	✓
Namesco (www.names.co.uk)	Designer	0845 363 3632	£239.88	1GB	20GB	200	✓	✓	✓	✓	✓	✓	✓	✓
Namesco (www.names.co.uk)	Designer Plus	0845 363 3632	£479.88	Unlimited	30GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Netplan (www.netplan.co.uk)	Shared 100	0207 1000 424	£60	100MB	1GB	5	✓	✓	✓	✓	✓	✓	✓	✓
Netplan (www.netplan.co.uk)	VS100	0207 1000 424	£600	5GB	5GB	5	✓	✓	✓	✓	✓	✓	✓	✓
Netcetera www.netcetera.co.uk	DEVELOPER	0800 808 5450	£32.89	1GB	Unlimited	500	✓	✓	✓	✓	✓	✓	✓	✓
	ONE	0800 808 5450	£109.99	5GB	Unlimited	1000	✓	✓	✓	✓	✓	✓	✓	✓
	RESELLER	0800 808 5450	£274.89	Unlimited	Unlimited	1000	✓	✓	✓	✓	✓	✓	✓	✓
	VM500 Server	0800 808 5450	£300	20GB	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	2200DC Server	0800 808 5450	£720	160GB	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	3000DC Server	0800 808 5450	£1,200	2x500GB	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	2600QC Server	0800 808 5450	£1,800	2x500GB	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Netplan (www.netplan.co.uk)	VS200	0207 1000 424	£1,000	10GB	10GB	10	✓	✓	✓	✓	✓	✓	✓	✓
Netplan (www.netplan.co.uk)	VS300	0207 1000 424	£2,000	15GB	50GB	20	✓	✓	✓	✓	✓	✓	✓	✓
Netplan (www.netplan.co.uk)	Dedicated Servers	0207 1000 424	£3,000+	73GB+	1,500GB	100+	✓	✓	✓	✓	✓	✓	✓	✓
PurplePaw (www.purplepaw.co.uk)	Email	N/A	£25	100MB	1GB	10	✗	✗	✓	✓	✗	✓	✓	✗
PurplePaw (www.purplepaw.co.uk)	Play	N/A	£40	100MB	1GB	10	✗	✗	✓	✓	✗	✓	✓	✗
PurplePaw (www.purplepaw.co.uk)	Plus	N/A	£65	750MB	5GB	25	✓	✓	✓	✓	✗	✓	✓	✗
PurplePaw (www.purplepaw.co.uk)	Power	N/A	£95	2GB	10GB	100	✓	✓	✓	✓	✗	✓	✓	✗
PurplePaw (www.purplepaw.co.uk)	R3 Reseller	N/A	£660	10GB	50GB	Unlimited	✓	✓	✓	✓	✗	✓	✓	✗
Reddex UK (www.reddexuk.com)	Reddex Design Starter	0843 289 4625	£18	1GB	Unlimited	10	✓	✗	✓	✓	✓	✓	✓	✓

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Reddex UK (www.reddexuk.com)	Reddex Design Business	0843 289 4625	£59.88	10GB	Unlimited	100	✓	✓	✓	✓	✓	✓	✓	✓
Reddex UK (www.reddexuk.com)	Reddex Design Premium	0843 289 4625	£107.88	100GB	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
STRATO Hosting (www.strato-hosting.co.uk)	STRATO BasicWeb	00800 8007 0070	£48	2GB	Unlimited	1,000	✗	✗	✓	✓	✓	✓	✓	✗
STRATO Hosting (www.strato-hosting.co.uk)	STRATO PowerWeb	00800 8007 0070	£72	6GB	Unlimited	2,000	✓	✗	✓	✓	✓	✓	✓	✗
STRATO Hosting (www.strato-hosting.co.uk)	STRATO AdvancedWeb	00800 8007 0070	£120	20GB	Unlimited	4,000	✓	✗	✓	✓	✓	✓	✓	✗
STRATO Hosting (www.strato-hosting.co.uk)	STRATO EnterpriseWeb	00800 8007 0070	£180	50GB	Unlimited	6,000	✓	✗	✓	✓	✓	✓	✓	✗
Streamline.net (www.streamline.net)	Trial (3 month)	0844 941 1000	N/A	10GB	Unlimited	1,000	✓	Option	✓	✓	✓	✓	✓	✗
Streamline.net (www.streamline.net)	Starter	0844 941 1000	£23.88	500MB	Unlimited	20	✓	Option	✓	✓	✓	✓	✓	✗
Streamline.net (www.streamline.net)	Personal	0844 941 1000	£41.88	3GB	Unlimited	500	✓	Option	✓	✓	✓	✓	✓	✗
Streamline.net (www.streamline.net)	Plus	0844 941 1000	£71.88	10GB	Unlimited	1,000	✓	Option	✓	✓	✓	✓	✓	✗
Streamline.net (www.streamline.net)	Multisite	0844 941 1000	£137.88	20GB	Unlimited	Unlimited	✓	Option	✓	✓	✓	✓	✓	✗
Swish Hosting (www.swishhosting.co.uk)	Email	08445 67 69 71	£18	-	Unlimited	Unlimited	✗	✗	✓	✓	✓	✓	✓	✓
Swish Hosting (www.swishhosting.co.uk)	Windows Hosting	08445 67 69 71	£66	-	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Swish Hosting (www.swishhosting.co.uk)	Linux Hosting	08445 67 69 71	£66	-	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Swish Hosting (www.swishhosting.co.uk)	eCommerce	08445 67 69 71	£90	-	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Swish Hosting (www.swishhosting.co.uk)	SiteBuilder	08445 67 69 71	£12	-	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
Switch Media (www.switchmedia.com)	Switch Standard	0151 236 9111	£159	1GB	50GB	500	✓	✗	✗	✗	✓	✓	✗	✗
Switch Media (www.switchmedia.com)	Switch Business	0151 236 9111	£249	10GB	150GB	1500	✓	✗	✗	✗	✓	✓	✓	✗
Switch Media (www.switchmedia.com)	Business Pro	0151 236 9111	£348.96	20GB	300GB	5000	✓	✗	✗	✗	✓	✓	✓	✗
Tidy Web Hosting (www.tidywebhosting.co.uk)	Entry	0844 884 9100	£25	100MB	1GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
Tidy Web Hosting (www.tidywebhosting.co.uk)	Home	0844 884 9100	£50	500MB	5GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
Tidy Web Hosting (www.tidywebhosting.co.uk)	HomePro	0844 884 9100	£100	1GB	10GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
Tidy Web Hosting (www.tidywebhosting.co.uk)	Business	0844 884 9100	£150	2GB	20GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
Tidy Web Hosting (www.tidywebhosting.co.uk)	BusinessPro	0844 884 9100	£250	5GB	50GB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
TwentyHost (www.twentyhost.co.uk)	Basic5S	0845 641 0776	£24	100MB	1,500MB	25	✓	✓	✓	✓	✓	✓	✓	✓
TwentyHost (www.twentyhost.co.uk)	Standard5S	0845 641 0776	£45	200MB	3,000MB	50	✓	✓	✓	✓	✓	✓	✓	✓
TwentyHost (www.twentyhost.co.uk)	Business5S	0845 641 0776	£70	500MB	7,500MB	100	✓	✓	✓	✓	✓	✓	✓	✓
TwentyHost (www.twentyhost.co.uk)	Advanced5S	0845 641 0776	£110	1,000MB	15,000MB	200	✓	✓	✓	✓	✓	✓	✓	✓
VARiHOST (www.varihost.net)	WordPress Basic	0208 144 7057	£47.88	2GB	10GB	10	✓	✗	✗	✓	✓	✓	✓	✓
VARiHOST (www.varihost.net)	WordPress Plus	0208 144 7057	£71.88	4GB	100GB	100	✓	✓	✗	✓	✓	✓	✓	✓
VARiHOST (www.varihost.net)	WordPress Extra	0208 144 7057	£119.88	unlimited	Unlimited	Unlimited	✓	✓	✗	✓	✓	✓	✓	✓
UK2.NET **UK2.Net** www.uk2.net	Starter Hosting	0808 168 2427	£24	500MB	1GB	✗	✓	✓	✓	✓	✓	✓	✓	✗
	Business Hosting	0808 168 2427	£54	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✗
	Business Cloud	0808 168 2427	£108	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	Reseller Starter	0808 168 2427	£180	10GB	100GB	10	✓	✓	✓	✓	✓	✓	✓	✗
	Reseller Plus	0808 168 2427	£360	Unlimited	Unlimited	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
	Dedicated Server	0808 168 2427	£704	2x500GB	10TB	Unlimited	✓	✓	✓	✓	✓	✓	✓	✓
WebFusion (www.webfusion.co.uk)	Fusion Professional	0845 130 1602	£107.40	5GB	50GB	1,000	✓	✗	✓	✓	✓	✓	✓	✗
WebFusion (www.webfusion.co.uk)	Fusion Business	0845 130 1602	£179.40	10GB	150GB	1,500	✓	✗	✓	✓	✓	✓	✓	✗
WebFusion (www.webfusion.co.uk)	Fusion Developer	0845 130 1602	£227.40	20GB	300GB	5,000	✓	✗	✓	✓	✓	✓	✓	✗
WebFusion (www.webfusion.co.uk)	Fusion Reseller	0845 130 1602	£329.99	Unlimited	Unlimited	Unlimited	✓	✗	✓	✓	✓	✓	✓	✗
Z-Host (z-host.co.uk)	Z-100	N/A	£15	100MB	10GB	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
Z-Host (z-host.co.uk)	Z-200	N/A	£21	100MB	10GB	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
Z-Host (z-host.co.uk)	Z-500	N/A	£42	500MB	20GB	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
Z-Host (z-host.co.uk)	Z-1000	N/A	£60	1GB	40GB	Unlimited	✓	✓	✓	✓	✗	✓	✓	✓
Zen Internet (www.zen.co.uk)	Bronze (Linux)	0845 058 9000	£47.88	2GB	10GB	10	✓	✓	✓	✓	✓	✓	✓	✗
Zen Internet (www.zen.co.uk)	Silver (Linux)	0845 058 9000	£95.88	5GB	50GB	25	✓	✓	✓	✓	✓	✓	✓	✗
Zen Internet (www.zen.co.uk)	Gold (Linux)	0845 058 9000	£143.88	10GB	100GB	50	✓	✓	✓	✓	✓	✓	✓	✗

Golden rules to top hosting

We identify and explain the key criteria for success...

1 The best resources for you

Selecting your ideal package is largely determined by the kinds of resources and quantity of features you require from your hosting solution. Key aspects such as web space and monthly bandwidth are important for those services likely to be subjected to heavy amounts of traffic, which is why package solutions for enterprise applications are typically much more expensive. The general rule of thumb is not to buy more than you need or underestimate potential requirements.

2 Competitive and reliable

The hosting market is big business and hosting providers do try to drive prices down in a bid to entice your custom. Use our chart to compare costs, but be sure to visit the vendor websites to keep track of the latest deals, as they do change. Remember that low price should not always be a deciding factor and that paying a premium for a more reliable, trusted and experienced vendor can offer you much better value for money in the long term.

3 Putting you in control

Modern hosting is all about giving customers the power to set up, monitor and maintain their web space with minimal fuss. Most commercial vendors offer access to award-winning and intuitive control panels that enable you to log in remotely and intuitively tweak your account – without the need to relay complicated instructions down the phone. Be sure to find out from your potential host as much as you can about the control panel and request a demo.

4 Fantastic customer support

If all else fails and you need some extra help to get your hosting back online, then a commitment to future customer support is key. Many vendors offer a service-level agreement which outlines what you can expect here, however most will be more explicit about whether phone support is included or email contact is preferred. Think about what you need for your own peace of mind and factor good, comprehensive technical support against the price.

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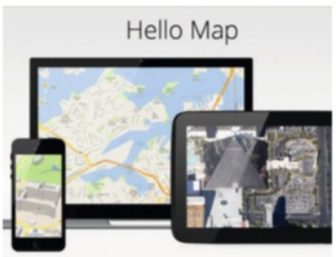

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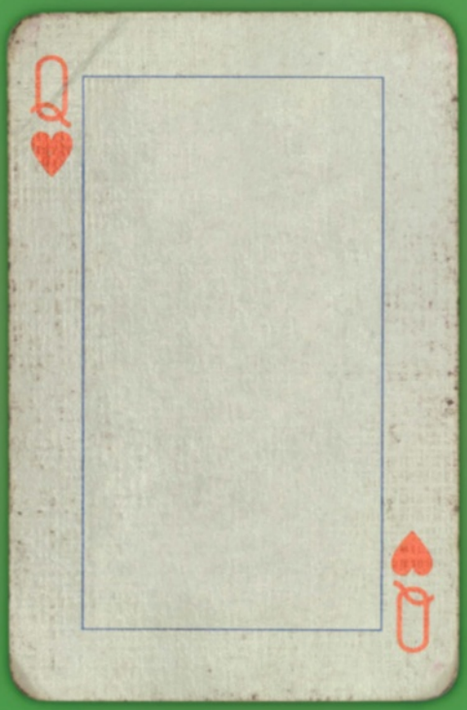

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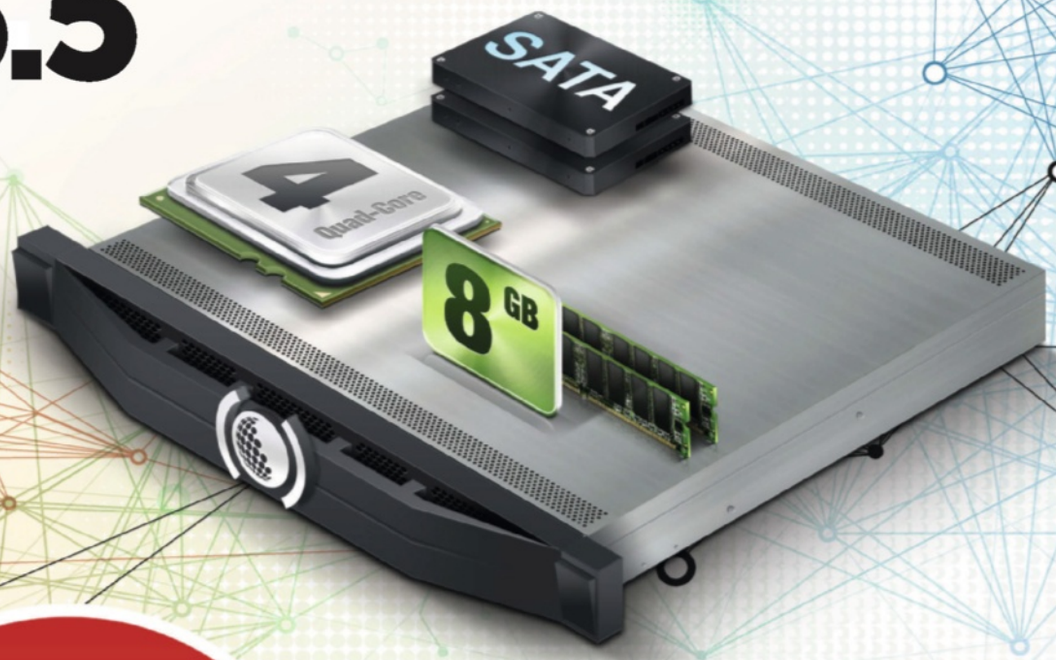

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