

# RESPONSIVE WEB DESIGN



Webcom Meeting  
April 17, 2013



# Responsive Design: Definition

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- A responsive website responds to the user's:
  - screen size
  - platform/browser
  - device
  - orientation



- Provides an optimal viewing experience across all devices using the same codebase and content.

# Statistics

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- Mobile users will exceed desktop users by 2014: *(Morgan Stanley)*
- Over 30% of Americans own a tablet computer or e-reader
- **69% of US mobile users access the internet on their phones daily**
- **25% of US users access the web ONLY through their mobile device**
- In the US many mobile-only users are older people and many come from lower income households
- ***17% of visitors accessed Maryland.gov through their mobile devices***



# Myths of Mobile

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- **Mobile users are rushed and distracted**  
*Mobile users can and should be as relaxed as desktop users*
- **Mobile = Less**  
*Mobile users expect to be able to do as much as desktop users*
- **Complexity is a dirty word**  
*Mobile users don't mind complexity, as long as content is clearly presented and easy to navigate*
- **Extra taps and clicks are evil**  
*Users are happy to click more if the clicks are meaningful and logical*
- **The mobile web is different from the desktop web**  
*There is no difference. We need to make the web accessible from all devices.*



# Best Practices

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- **Start Small (Mobile First)**  
*Mobile first does not mean mobile only!*
- **Content Audit**  
*Responsive design should be driven by the website content*
- **Make It Modular**  
*Dividing up content will make RWD easier to implement*
- **Exit Photoshop, Enter Browser**  
*The sooner the site can be viewed in a browser, the better*
- **Test Always**  
*In different browsers, monitors and devices*



# How is Responsive Web Design Achieved?

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- **Adaptive layout** - intelligent use of CSS media queries to modify the layout in ways that suit different screen sizes.
- **Fluid grids and layouts** - uses relative units like percentages instead of fixed-width units like pixels.
- **Flexible media/images** - images and other media (like videos) are scaled using relative units so they don't expand beyond their containing element.



# How is Responsive Web Design Achieved?

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## ■ Media Queries

- Combines a **media type** and a **condition** to specify how web content will appear on a particular device.
- Conditions such as min-width, max-width, device-width and orientation control how content is displayed differently.
- For example, **max-width** sets a maximum browser width that a certain set of styles would apply to.



# State Agency Template

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- The template was built using the **Twitter Bootstrap** framework.



- The framework includes **grids, layouts** and **media queries**
- Template is ready for design and markup



# State Agency Template

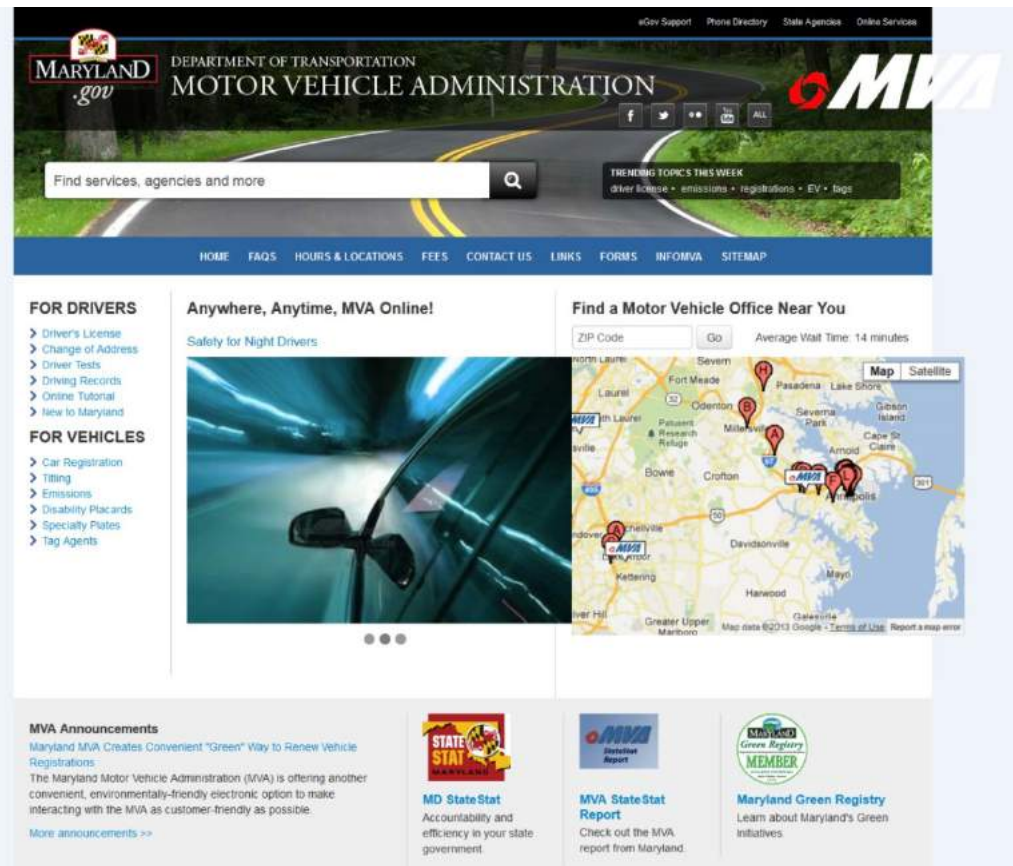
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- Be aware of areas that have the greatest potential to break the responsiveness of the templates:
  - Fixed-width images and other media
  - Tables
  - Fixed-width columns

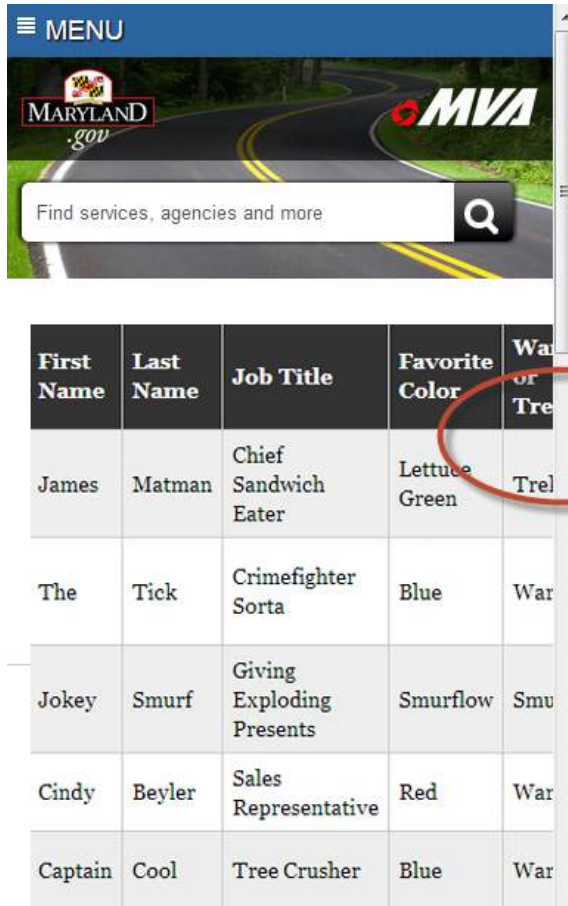


# State Agency Template –Images

- Image height and width are not declared in the code
- The CSS resizes the images as needed.
- Set maximum width of image to 100% of the browser width – image will size with browser

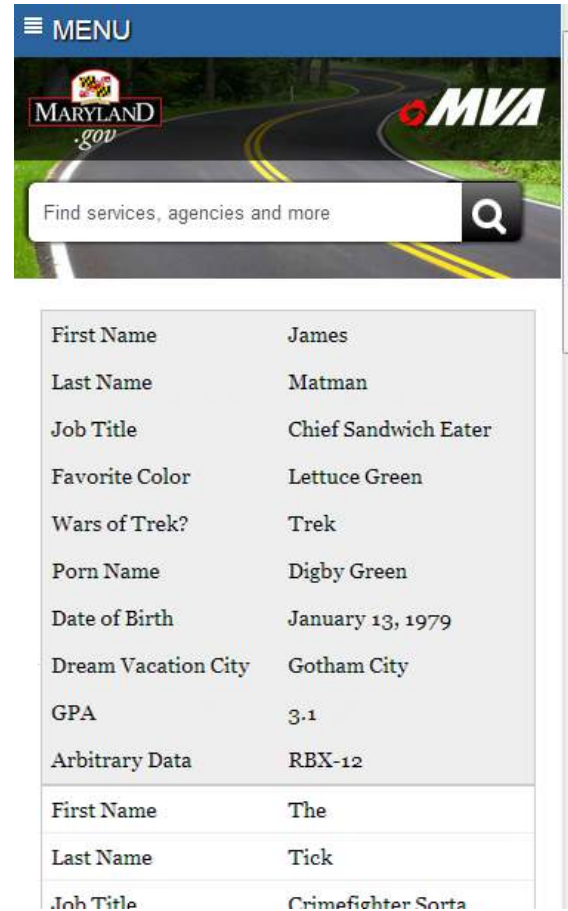


# State Agency Template - Tables



The screenshot shows a mobile website header with a blue navigation bar containing a 'MENU' icon and the text 'MENU'. Below the header is a banner image of a winding road with the Maryland state logo and 'MARYLAND.gov' on the left, and 'MVA' on the right. A search bar with the placeholder text 'Find services, agencies and more' and a magnifying glass icon is positioned below the banner. Below the search bar is a table with five columns: 'First Name', 'Last Name', 'Job Title', 'Favorite Color', and 'Wars of Trek?'. The table contains five rows of data. A red circle highlights the 'Favorite Color' column.

First Name	Last Name	Job Title	Favorite Color	Wars of Trek?
James	Matman	Chief Sandwich Eater	Lettuce Green	Trek
The	Tick	Crimefighter Sorta	Blue	War
Jokey	Smurf	Giving Exploding Presents	Smurflow	Smu
Cindy	Beyler	Sales Representative	Red	War
Captain	Cool	Tree Crusher	Blue	War



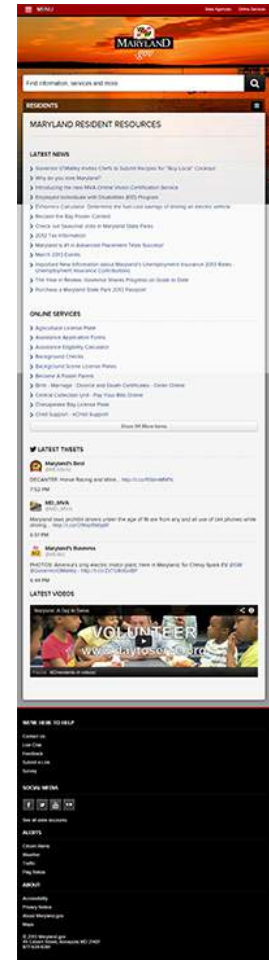
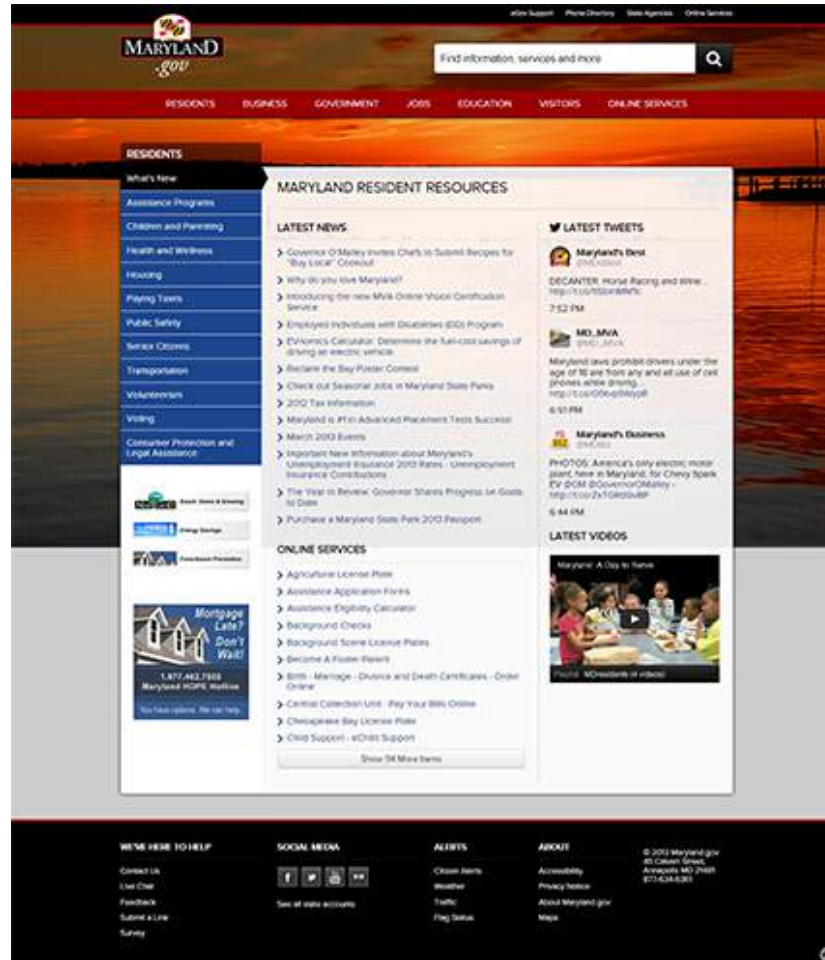
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First Name	James
Last Name	Matman
Job Title	Chief Sandwich Eater
Favorite Color	Lettuce Green
Wars of Trek?	Trek
Porn Name	Digby Green
Date of Birth	January 13, 1979
Dream Vacation City	Gotham City
GPA	3.1
Arbitrary Data	RBX-12
First Name	The
Last Name	Tick
Job Title	Crimefighter Sorta

<http://css-tricks.com/examples/ResponsiveTables/responsive.php>

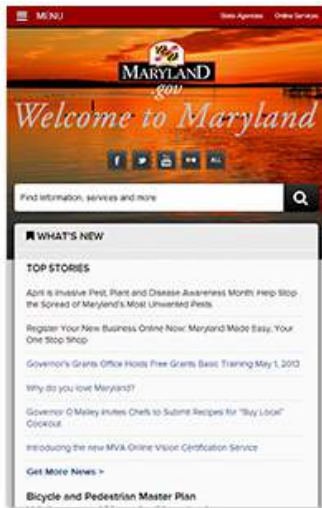
# State Agency Template – Content

- Content will re-format itself
- Elements DROP left to right – what's on the RIGHT in desktop will be at the BOTTOM on mobile.



# State Agency Template - Content

- Making every piece of content from a large screen available on a smaller screen or mobile device may not always be the best answer.
- Hiding elements for mobile devices may be a good solution, allowing for simpler navigation and more focused content.



# Conclusion

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- Responsive Web Design is not only about adjustable screen resolutions and automatically resizable images, but rather about a whole new way of thinking about design.
- The goal is to provide a consistent user experience across sizes and devices.
- A responsive site should be more cost-effective than separate device-specific sites because code, assets, and process are shared and reused.



# Additional Resources

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- **Smashing Magazine: *Responsive Web Design: What It Is and How To Use It***  
<http://coding.smashingmagazine.com/2011/01/12/guidelines-for-responsive-web-design/>
- **CSS Tricks: *Media Queries for Standard Devices***  
<http://css-tricks.com/snippets/css/media-queries-for-standard-devices/>
- **1st Web Designer: *A Brief Overview of Responsive Design***  
<http://www.1stwebdesigner.com/design/responsive-design-overview/>
- **Responsive Web Design: *A Visual Guide***  
<http://net.tutsplus.com/tutorials/html-css-techniques/responsive-web-design-a-visual-guide/>



