Ramp it up!
Action based guide for creating accessible websites*

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ABSTRACT
Ramp it up is an action based guide for coding in the virtual ramp to make websites and website content accessible to people of all abilities and disabilities. It is a reworking of the W3C's Web Content Accessibility Guideline's POUR principles. The action based techniques focus on making content perceivable, operable, understandable and robust. I visualize each potential barrier that a website might contain as a step that represents a particular content type or design choice. The corresponding techniques that enable web content to be accessible are then visualized as a virtual ramp. As we make our way up the staircase the content types and design choices become more complex, thus the virtual ramp requires more awareness, skills and resources to make the virtual stairs accessible.

Categories and Subject Descriptors
H.4 [**?**]: ?; D.2.8 [**Software Engineering**]: Metrics—*complexity measures, performance measures*

General Terms
Practice

Keywords
ACM proceedings, Web Accessibility, Accessibility, WCAG, Web Standards, Inclusive Design

1. INTRODUCTION
As designers, developers, content authors we continue to struggle with working web accessibility into our workflows. This action based guide summarizes and simplifies key aspects of the WCAG 2.0 and is intended to help people make design decisions that remove barriers in websites and web applications.

*The large format version of this poster is available at the author's website at `terracoda.net`

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2. BUILDING IN THE *VIRTUAL* RAMP

2.1 Text & Solid Structure
Electronic text-based content is accessible by nature. It can be rendered visually, auditorily and tactilely.

Use HTML's built-in semantic structure [1] - headings, lists, quotes - to code meaning directly into your content.

Keep the reading level as simple as possible.

Define the natural language & mark language changes.

Ensure there is a doctype, charset & a unique page title in each of your templates for a valid code base.

2.2 Navigation, Links & Landmarks
Navigation, links and landmarks, like stepping stones, help you find your way.

Use unique meaningful words for linked text. Keep links DRY [2] (do not repeat yourself over and over and over).

Leave context changes - pop-ups, new tabs - in the control of the user.

Use WAI-ARIA [3] landmark roles or HTML5 landmark tags to provide direct access to page content (formerly we used skip navigation links).

Design well-planned, consistent navigation. Usability helps all users.

2.3 Images & Charts
Provide meaningful text alternatives for all content images. The alt attribute is required, but can be left empty, if appropriate.

For charts or complex images you may need to link to supplementary content or use the longdesc attribute.

The goal of text alternatives is to maintain the meaning of the document whether you can see the image or not.

2.4 Tables, Forms & Interactives
Simplify complex HTML structures & user interactions wherever possible.

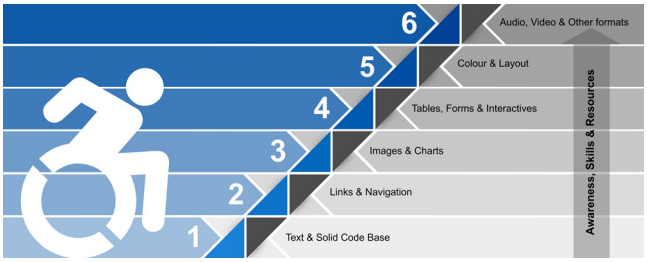

Figure 1: Each content type or design decision is visualized as stair or potential barrier. The numbered techniques outline how to build in the virtual ramp.

2.4.1 Tables

Use the rich semantic table mark-up available in HTML - thead, tfoot, tbody. Introduce tables with the caption element. Appropriately distinguish table header cells from table data cells (th, td) on rows and columns.

Use tables only for tabular data âĂŞ not content layout!

2.4.2 Forms

Keep forms simple âĂŞ don't ask for data you don't need.

Use & associate labels for every form control. Use the button element when you need a button.

Group form controls to create meaningful organization in forms - legend, fieldset, optgroup. Organization is good for all users.

Design clear error identification & intuitive error handling. Clearly tell the user where they have gone wrong, how to fix the problem and when they have succeeded.

Provide reasonable time-outs (think user control).

Employ WAI-ARIA [3] standard to define roles and behaviours that HTML cannot describe. This is particularly important for interactive structures like forms.

Note: most legal cases have happened around in-accessible tables & forms [4].

2.5 Colour & Layout

Don't rely on colour alone for meaning.

Choose colours wisely & test for sufficient contrast ratios. Avoid confusing colours. The Brewer Palette is a good resource.

Use CSS for layout & consistency. Using CSS & HTML together properly is best method in making your content accessible & easier to maintain.

2.6 Audio, Video & Other formats

Do not auto-play anything (think user control).

Provide open or closed captions for audio and video.

Describe video when the meaning cannot be understood by the soundtrack alone. Video description can be open or closed.

Providing transcripts, in some cases (e.g. talking heads & interviews), makes better sense than captions.

For other formats, such as PDF or Word documents, first ask is there a reason not to use HTML? Follow the WCAG for content in Word documents and PDFs. PDFs must be tagged to be accessible [6].

3. CONCLUSIONS

When web design teams ramp up a website for users of assistive technology and other edge cases, the payoff happens at many levels. The website will likely be easier to find, be of a higher quality, be easier to maintain, last longer and work better for everyone - all of which contribute to a better return on the investment. Just like accessible ramps at building entrances, the virtual ramp built into websites benefits more than the intended audience.

4. ACKNOWLEDGMENTS

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5. REFERENCES

List of references might go here or in a Bibliogrpahy file.

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