Accessible Forms with LiveCycle

Kiran Kaja | Accessibility Engineer

Agenda

1. The accessibility business case

2. Standards overview (WCAG, 508, CLF, etc.)

3. Understanding user needs

4. Understanding accessibility in LC Designer

5. Assistive technology support overview

The Accessibility Business Case

- Government organizations are mandated to provide services to all citizens regardless of their disabilities.

  - Universal access to services

- Other organizations comply voluntarily or as a result of legal action.

  - Self-service movement

  - Adobe® is an industry leader in accessibility and supports the creation of outstanding web experiences by encouraging web developers to produce rich, engaging content that is accessible to all.

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Which Accessibility Standards?

- **W3C Web Content Accessibility Guidelines 2.0 (WCAG 2)**
  - Adobe participated in the effort to develop WCAG. WCAG defines detailed accessibility criteria and is the gold standard globally for accessibility standards.
  - PDF techniques for WCAG 2.0 are in development.

- **Section 508**
  - Existing: U.S. Government accessibility standard since June 2001. Adopted by most U.S. state governments and many universities.
  - Upcoming: A new draft of pending Section 508 standards is available. Pairs compliance with WCAG 2.0. "Web pages as defined by WCAG 2.0, that are Level AA conformant to WCAG 2.0… shall be deemed to be in conformance with the following chapters of this part…"

- **Common Look and Feel 2.0 (CLF)**
  - Canada's accessibility standard.

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Which Accessibility Standards?

- France, Germany, United Kingdom, Australia and others are moving to WCAG 2.0.

- The European Union is defining a Section 508-like public procurement standard (Mandate 376).

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Accessibility Standards Are All About End-Users

- End users have various disabilities.

- **Sensory** – blindness, low-vision, color-deficient vision, deafness, hard-of-hearing, photo-sensitive seizures.

  - Blindness advocacy organizations are the best organized and most vocal.

  - Deafness advocacy organizations are well organized but have fewer issues.

- **Physical** – various disabilities that result in varying degrees of dependence on the keyboard interface.

- **Cognitive** – users who perceive and process information differently or with greater difficulty. Very diverse range of user needs within this group. Many supports for blind users also benefit users in this group.

- Users may have multiple disabilities (e.g. a deaf-blind user)

What Do Keyboard Users Need?

- When using software and web sites, keyboard users need equivalent and predictable access to the interface. Full keyboard access never requires use of a mouse.

1. All tasks must be keyboard accessible, even if every method to accomplish a task is not.

2. Whenever possible keyboard access should match OS conventions.

3. Complex interfaces need to provide means to easily move around, without learning or performing 10–20 additional keystrokes.

4. Clear indication of focus location.

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What Do Blind Users Need?

- When using software and web sites, blind users need information about the user interface – both about where they are and clues and tools to access the rest of the interface.

- All requirements for keyboard users apply for blind users

1. Images need equivalent text

2. Controls need labels that clearly define purpose

3. Controls need to be correctly identified by role, with accurate state and value information provided

4. Relationships present within the content or application needs to be clear

5. Correct reading order

6. Language needs to be correctly identified.

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What Do Low-Vision Users Need?

- When using software and web sites, low-vision users need to be able to view information in larger sizes.

- As a user's visual acuity decreases:

  - More reliant on supports offered for blind users

  - Less likely to be able to effectively use the mouse

1. The focus needs to be clearly visible and programmatically locatable.

2. Text needs to be resizable, ideally via OS settings.

3. Reflowable text (text that overlaps when enlarged or that requires vertical and horizontal scrolling is a challenge)

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What Do Color-Deficient Users Need?

- When using software and web sites, users with color-deficits need high-contrast information and ideally the ability to modify the interface for further enhancements.

1. Support for OS high-contrast modes

2. Sufficient default color-contrast (4.5:1) for all colored content

    1. Text

    2. Focus carat

    3. Controls

3. Instructions that don't rely on color (e.g. click the red button)

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What Do Deaf and Hard-of-Hearing Users Need?

- When using software and web sites, deaf users need text in place of audio.

1. Closed captions for audio within video.

2. Transcript for audio not synchronized with video or other content.
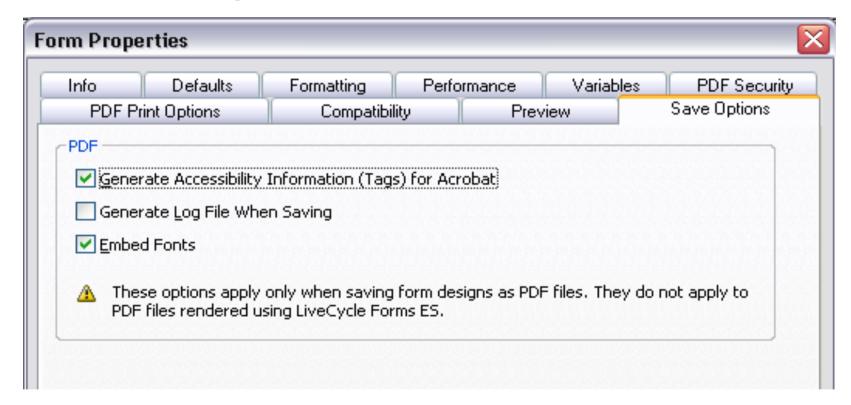
3. Visual cues for audio alerts.

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Top Accessibility Areas to Know

For interactive forms, the following are areas of focus for accessibility and must be considered.

1. Generate Accessibility Information (Tags)
2. Tab Order/Reading Order
3. Locale settings
4. Form Object Properties
5. Proper semantics
   - Tables and Sub-form Roles
   - Headings
6. Equivalents for images
7. Color contrast

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Generate Accessibility Information

- For all forms that need to be accessible, ensure that accessibility information is are generated.

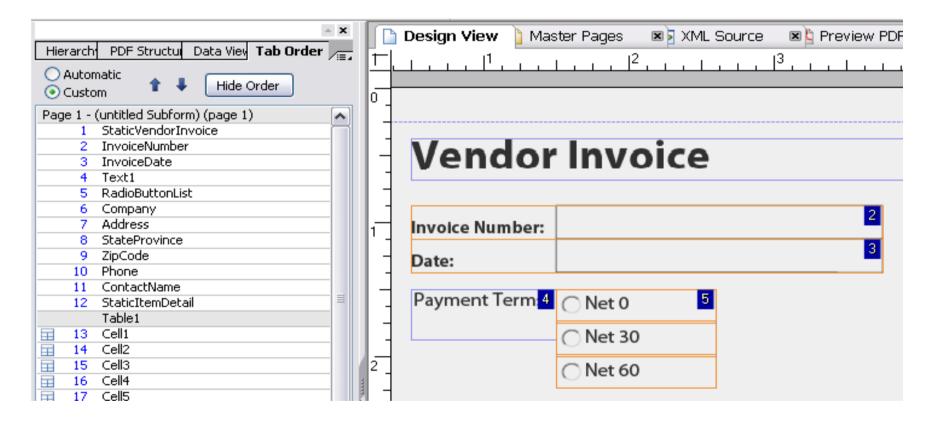# Save As Accessible

Tag Structure, Accessibility and Dynamic forms

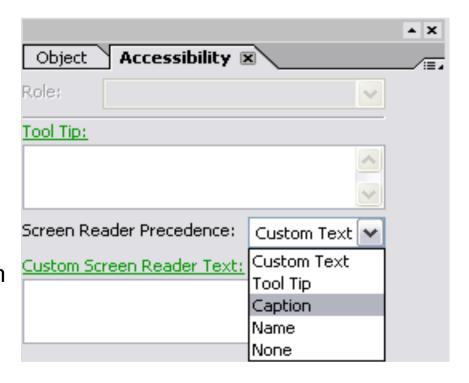| Reader Version	Static Forms	Dynamic Forms	Other Information
< 8.1	Rendered as PDF, with tags	Rendered as PDF always	
8.1	Rendered as PDF, with tags	Rendered as PDF only when AT is running (PDF tags viewable in tags panel), direct rendering via XFA plug-in otherwise	If AT is not running when Acrobat loads, no tags will be created for dynamic forms.
9 +	Rendered as PDF, with tags	Rendered via XFA plug-in always, accessibility data created only when Reader detects AT. Tags panel always empty, since accessibility data rendered via Triple-A.	There is a registry setting to force reader to generate tags (no direct rendering) – may provide clues when assessing XFA forms

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Tab Order and Reading Order

- Tab order is highly important for keyboard users, and for users of assistive technologies.
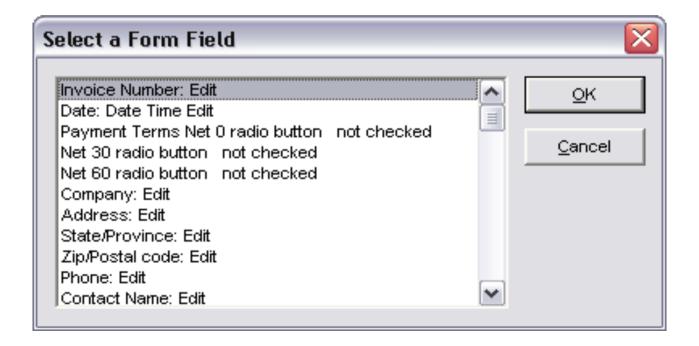
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Form Object Properties

- All form controls need labels to answer a user's question: "What is this for?"

- Captions provided with controls are sufficient, provided wording is appropriate.

- Labels can also be provided by tooltips or "Custom Screen Reader Text"
  - Should be a last resort
  - Screen readers add useful information

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Form Object Properties

- Testing form object properties can be done multiple ways:
  - Use JAWS to tab to and read form labels in "forms mode"
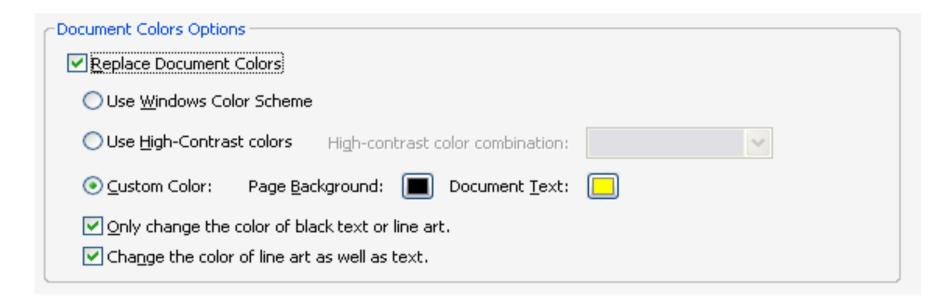 - Use JAWS's form field dialog to view labels (easiest)

Equivalents for Images

- Images need concise equivalents for screen reader users.
- Equivalent is provided as either a ToolTip or Custom Screen Reader Text.
  - Be sure to set the precedence
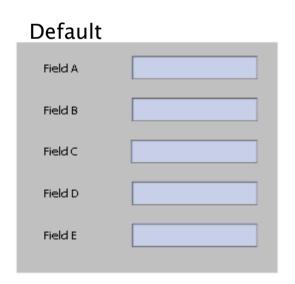- JAWS will read equivalents when reading the document or form in "virtual cursor" mode.
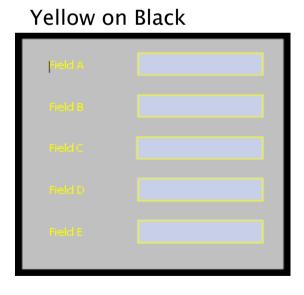
Color Contrast

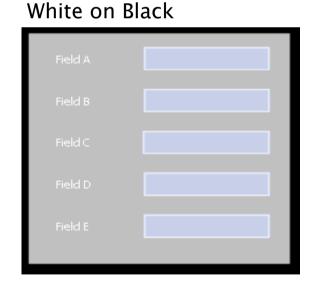- Color contrast is handled by Adobe Reader and the user's settings

Color Contrast

- Document colors are modified, but ONLY the text color and page background color.
  - This can cause problems when subforms have a non-transparent background color – the background color doesn't change for the subform, but it will for the text.
- Testing: Try multiple replaced document color settings.

Default

Yellow on Black

White on Black

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Proper Semantics

- Information that is critical for users to make effective use of a form or application must be included. The primary semantics to consider are:

- **Tables** – Header, Body and Footer roles help identify location within a table.

- **Headings** – Headings provide structure that screen reader users can use to navigate a form.

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Assistive Technologies

Screen Readers

- Freedom Scientifics' JAWS

- NVDA

Screen Magnifiers

- ZoomText

- MAGic

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Help Is Available

- **LiveCycle Product Accessibility Information**
http://www.adobe.com/accessibility/products/livecycle/

- **LiveCycle Accessibility Best Practices Document**
http://www.adobe.com/accessibility/products/livecycle/pdf/
LiveCycle8_2AccessibilityGuidelines.pdf

- **Adobe TV Accessible Forms Video**
http://tv.adobe.com/watch/accessibility-adobe/building-accessible-
livecycle-forms/

- **Blogs**
http://blogs.adobe.com/accessibility

  http://blogs.adobe.com/formfeed

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