

# Accessible PDF Documents

Getting familiar with Acrobat DC  
Making an existing PDF File Accessible  
Steps to creating Accessible PDFs from InDesign

## Getting familiar with Acrobat DC

### Panes you need open

1. View/Show Hide menu.
  - a. Order
  - b. Tags
  - c. Content
2. You can also right click on the left navigation pane.
3. View the page display and page navigation tools. If they are in the "heads-up" display at the bottom of the page, click the small page up arrow in the far right of the display bar and the tools will move up into the properties menu bar. If you want the display to return to the heads-up style, click that button again.
4. In the far right tool bar, type "full" and the Accessibility tool will appear. Right click and add a short cut so the tool stays in the right side of your screen. With the tool available, all the accessibility options are available in this category.

### Determining if a PDF file meets accessibility requirements

1. Run Full check on a PDF.
2. Logical reading order – issues
3. Check contrast - issues
4. Check order panel. Passes, but not as accurate as it should be.
5. Check tag panel. Passes, but not as accurate as it should be.
6. Differences in how documents are created depend on how documents are read.

### Becoming familiar with the PDF remediation workflow

1. Source document
2. Add properties
3. Export PDF

Sometimes you have to start with a PDF document.

1. Takes more time
2. Repetitive work
3. Not the most efficient
4. Might have to use third party tools: CommonLook and axesPDF.

### Specifying Order

1. Two types of order in a PDF document.
  - a. Flow order: used to reflow the content in a document to make it easier to read on devices such as phones or tablets. This is determined by the Order panel and the Content panel.
  - b. Reading Order: the order in which screen reading devices will read the content. This is controlled by the Tags panel.
2. Low vision users will reflow the document to make it easier to read. View/Zoom/Reflow. Open the Order panel and you will see the items in the order displayed. The document may visually look correct, but the flow order shows that it is not as expected. (in this example)
3. Reading Order can be simulated by going to View/Read Out Loud. Then choose Read This Page Only. This information is coming from the tags panel. This is also where the screen reading software is going to get its information.
4. \*\*Not all pdfs are created equal and you need to check the file information to remediate it properly to make sure it is compliant and provides for a good reading experience for someone using screen reading software.

### Considering contrast between elements

1. Low vision users are a big part of the accessibility community.
2. Color contrast – Needs a manual check
3. There are standards by which contrast is measured.
4. Contrastchecker.com: enter your foreground and background colors. Measures for fonts below 18 points. In your pdf, use the select tool to select text, note the color values and type them in the color picker. Then see which ones pass.
5. Another one is webaim. Webaim.org
6. Color Contrast Analyzer – Download and use on your computer. Don't have to remember the values. Use an eyedropper tool.
7. Insufficient contrast will not cause validation of your pdf document to fail, but it will limit the ability of low-vision users to read your document. Try to think about color contrast at the design stage, up-front.

### Design considerations

1. Simple design
2. Flowing text – from one page to the text because it determines the reading order
3. Specifications – find out what the requesting person/company's specifications are for the pdf because there are a variety of accessibility specifications and many of them are outdated.

## Making an existing PDF File Accessible

### Tagging content using the Order pane

1. No content in a tag when you click through the document. (in this example)
2. Open the Touch Up Reading Order panel by clicking the Option button on the left side of the Order Pane.
3. Click on Single page view so only one page is showing at a time.
4. You are essentially going to drag across one element at a time to tag it. You must completely enclose it as you drag it. Use the control/option key to deselect elements you don't want in the selection.
5. To tag an element as a background and artifact it, you click the background button in the Touch Up reading Order panel. Click Show Structure type. Turn off "Display like elements as a single block."
6. Tag logos as Figures
7. Tag text/headlines as Heading Level 1
8. Tag smaller type as Text which will get tagged as a paragraph tag.
9. Tag individual paragraphs as text. Hold down shift to grab wrapped paragraphs.
10. Tag captions as Figure/captions.
11. Close Touch Up Reading Panel when done. Tags are applied appropriately.
12. Check Order panel. You will need to drag them in order if they are not quite reading correctly. (This is really the reflow order of the page.)

### Using the Tags Pane

1. Determines the order content will be read using a screen reader.
2. Also identifies content semantically (giving meaning based on its purpose).
3. When you tag an item as a heading, list or a caption, you give meaning to that content.
4. Click on the Options button at the top left of the Tags panel and make sure Highlight Content is chosen.
5. As you arrow down the Tags, you can check the reading order. If a tag is out of order, click on it and drag it into place.
6. If an object is tagged incorrectly, right click on it, choose properties and change the type of tag applied. You can stay in that dialog box until finished with all the tags if you need to.
7. If you need to artifact an object, choose Page Artifact because it generally produces the best results.
8. If you notice a tag is empty, there is no container inside, then it is ok to delete it.
9. If you need to find a tag in the tag panel, highlight some text with the selection tool. From the Option button in the Tags panel, choose Find Tag from Selection. It will highlight the tag the selection is made from.

### Content Pane

1. Provides a hierarchical view of the contents of the PDF file. You are able to locate content from selection using the Option button. You can also choose to show in the Tags pane.
2. Sometimes as you are tagging content and rearranging objects in the Order pane, they get hidden. Layers are the reverse in the Content pane. The bottom object is closest to you. Just click on the object and rearrange it in this pane.
3. Note that rearranging objects in the Content pane does not affect the order in the Tag pane.

### Artifacting elements

1. All elements must be properly tagged. But there will always be certain items that you might not want to be read. These can be a footer, an image with no value because it's for design or aesthetics only, or a graphic that doesn't need to be read. In this case you need to background or artifact them.
2. There are several ways this can be done inside Acrobat.
3. Order pane: click on the Option button, choose Show Reading Order, click on the object, click on Background. Close Panel.
4. Tags Pane: Right click on an object which locates the tag. Then click on the plus sign to get to the object. Right click on that and choose "Change tag to artifact." Choose page artifact and click OK. You may have an empty figure tag now. You can delete it.

5. Content pane: Locate the object that you want to artifact. Right click on the container, choose Create Artifact. Make it a page artifact, Click OK.

#### Tagging list

#### Tagging tables

Using the Table Editor – need to use Table Styles

1. These items are now tagged correctly in InDesign CC 2018

#### Adding metadata

1. Run Accessibility, Full Check. Metadata usually fails because certain information doesn't transfer or is not filled in.
2. Control D/Command D shortcut for Document Properties Dialog box.
3. Description Tab: Fill in Title (Required). You can fill in the Author and Keywords if you wish.
4. Advanced tab: Reading Options set language to English.
5. Initial View: set to Document title

#### Adding bookmarks

1. Bookmarks provide navigation within your document for users using screen reading software. If bookmarks are not added in the source document they can be manually added in Acrobat.
2. Click on the bookmark pane. Click on the New Bookmark button. Name the bookmark. Whatever your view was at the time of creating the bookmark establishes the location for the bookmark when it is clicked on.
3. You can reorder and stack the bookmarks in the bookmark pane by dragging them to a new location. You can also nest bookmarks.
4. If your document is properly tagged, you can go to the option panel and click on create bookmarks from structure. Select the tags that will create logical bookmarks (H1, H2, H3, etc.) and the bookmarks will flow in with those titles from the text.
5. Note: You can do the previous step from the Bookmarks – failed. (From Run Full Check/Accessibility Category) Right click on the error, choose create bookmarks from structure. Then review the bookmarks that were created and reorder, clean up names, etc. if necessary.

#### Adding alternative text

1. Provides context to a graphic or photograph within a PDF file.
2. Accessibility Category: Run Full Check, Start Checking
3. Alternate Text Category results – open up and shows if you have figures with no alternate text applied.
4. You can click on them to see which ones they are.
5. Order Panel: You can apply alt text to the figure here. Show the Reading Order Panel from the Option button.
6. Click on the figure and right click. Choose Edit Alternate Text. Enter the alternate text in the dialog box that appears. Describe what is going on. Close the panel.
7. Tags pane: Select the image from the tags pane. (Locate from selection) Right click, Choose Properties. Under the tag tab, type in Alt text in the field.
8. From Accessibility Checker pane: Go to the Figure error, right click. That brings up the Set Alternate Text dialog box. You can type alternate text or decide to set it as a Decorate figure. If you have multiple figures, you can arrow through and do them all here.

### Creating hyperlinks

1. From Tools panel on the right, choose Edit PDF. In the menu bar at the top, choose the Link dropdown menu and choose Add or Edit.
2. Draw a rectangle around the object you want to create the link for. Create link dialog box opens. Invisible Rectangle. Open a webpage. Type the url. Click OK. URL works, but no valid tag exists for the link.
3. Use black selection tool and select text for the link. Right click and Edit URL dialog box opens up. In the URL field, type mailto: for email addresses. Click OK. Now in the tags pane, you see the link tag for this information. (You may have to select the text and go to the Options button and choose Find tag from selection.)
4. **\*\*Ideally, text links should be used for hyperlinks so that the PDF document is properly tagged.**

### Setting Tab order

Defines how a user will tab through the document using a keyboard. There are two methods to fix.

1. Page thumbnail. Select all of the pages. Click on the Option button and select Page properties. Click on Use Document Structure. Rerun the Full check. Now it passes.
2. Run Full Check. Start Checking. Right click. Choose Fix. Tell it to run tab order by structure. Click OK.

### Validating the PDF file

Standards are not nailed down. WCAG and PDF/UA available. Not all agencies use these and some have created their own. Some agencies just use the standards built into Acrobat. There are even more accessibility combinations.

1. Accessibility checker in Acrobat. Located in tools panel on right side. Run Full checker. Options Dialog box: Accessibility report options. Create your own folder to put them all in one place (or you can save them with the document or attach it with the PDF document). Start checker.
2. Issues are listed in Checker pane on left. Then you remediate the document.
3. After you fix issues, you can rerun checker. Then you can choose to replace report.
4. PAC2 Checker. Free, not widely used. More extensive checker. Download to your computer to run.

### Using the Make Accessible Action

1. Will automate the mediation of a PDF document. Works well for **basic documents**.
2. In the tool pane, you can right click on those options and tell it to skip if those don't pertain to the document.
3. You may and probably will still need to do some remediation.

### Make your own action

Create your own action for repetitive tasks.

This may not be necessary since InDesign fixes so many of these issues prior to creating PDF.

1. Tools/Action Wizard
2. New Action
3. Add actions from left side to the right side for the options you would like to create.
4. These are basically document fields that will prompt the user to fill in along the process.
5. Click Save. Name action.
6. Click on Manage Actions button from menu bar. You can export the action and share it with other people.
7. Run the action from the Action Panel on the right. Action will be completed. Then run the Checker. Your errors should be eliminated because those were resolved by setting up the actions.

## Steps to creating Accessible PDFs from InDesign

### Considerations for your InDesign layout

1. Think about ADA in design stage.
2. Link your text frames so your page order follows through.
3. Order defined from top left, moving down and then across. If the top left item is a little below and to the left, it will "claim" that item as the first reading item. \*\*\*Layers affect reading order and will be used first to determine order!!
4. Use paragraph rules – above and below - rather than the line tool under a heading
5. Use paragraph rules for text inside a filled rectangle.
6. Items on your master page automatically get artifacted – such as footers.

### Metadata

1. File/File Info. Only one that is required is the Document Title.
2. All of the metadata recorded in InDesign is passed on even if you type in the other information. The document title does not "show" under Initial View and the language does not get passed on when you export the PDF. It will need to be mediated in Acrobat.

### Styles – Export tagging

Important in formatting structure of a document and then remediating a PDF document.

1. If you use paragraph styles and you mark them to be exported in the style sheet, they can help to determine the order of your content in the PDF. This would be helpful in an ordered and structure styled document. When you use styles and your document is exported as a PDF, the style sheet name become the tag names. Then you open the Role Map and you can see how the style sheet names are mapped to the appropriate tags. Back in InDesign, you can choose the appropriate tag for the style sheet in the Style Sheet dialog box under the Export Tagging category. You can also go into the flyout menu of the paragraph style palette under Edit All Export Tags. Click the radio button PDF. All styles are automatically tagged as a <p> tag. Click on the Automatic tag and change the tag to the appropriate tag to set the structure. Click OK. Then export your document as PDF.

Controlling tag order using the Articles panel

2. You can "manually" order a non-flowing InDesign document by using the Articles panel (Window/Articles). You have to grab elements and put in order in the articles panel. What you don't put in the panel won't get exported. Everything else will get artifacted. Then in the Flyout menu, check "Use for reading order in tagged PDF."
3. Export the document to PDF. Using the tags panel, you can tab through the tags and see that the content appears in the order that you placed it in the Articles panel.

### Layers Palette: Controlling reflow order

1. The flow order of the PDF is controlled in the layers panel in InDesign.
2. The Content pane in Acrobat reads order from bottom to top.
3. Knowing this, within your layers panel, you can move elements in that order. Keep like elements on the same layer if you can, such as text, photos, graphics. That might be easier. You will have to plan.

### Tables

1. Need to use Table styles.
2. Manually correcting tags in Acrobat is labor intensive and difficult.
3. Minimal identification in InDesign is a table header row.

### Hyperlinks: email addresses and URLs

1. New updates will automatically add hyperlinks –urls and email addresses – if they are in the correct format and not broken into two lines.

2. If the url or email address is not typed out, you can open the Hyperlinks panel. Either click on a graphic or highlight text for a url or email address. Click on the new hyperlink button in the panel. In the dialog box enter the information for the appropriate type of link. If you click Shared Hyperlink Destination, it will keep a running list of all your links and that can get very long if you have a lot of links. You can choose to attach a character style to the link. You can also style the PDF appearance for the link. It will validate url links with a green light.

#### Cross References

1. Only works with paragraph styles.
2. Your cross references become active links in your PDF. The link jumps to the section of text the cross reference refers to. It is a way to improve navigation in your document.

#### Creating and tagging a table of contents

1. Only works if you use Styles in the document.
2. TOC must be in a separate text thread.
3. Go to Layout menu/Table of Contents – Identify the styles you used in your document that you will use to create entries in your table of contents.
4. Then identify those Paragraph Styles by selecting them and give them a Section Header style for your TOC style sheet. (The paragraph styles you are selecting here are ones you have already used to style your document.)
5. Turn on Create PDF Bookmarks checkbox.
6. Click Save Style button – Name it TOC Accessibility.
7. When you click OK, you will get a loaded place gun with the loaded table of contents in it and it places the entire table of contents inside that text thread.
8. If you change any of your headers, subheads, etc., you will need to go to Layout/Update Table of Contents.
9. When you save the PDF, you now have an interactive linked Table of Contents.

#### Adding alternative text to images and graphics

1. All graphics need to contain alternative text to provide a description of the image or graphic in context.
2. Click on your graphic, right click, Object Export Options. Then click on the Alt Text tab. Click on the drop down menu and choose Custom.
3. Add your ALT text, click OK.
4. You can also take advantage of the metadata in the document. Prior to placing the image in InDesign, you can go to the File Info menu from Photoshop or Bridge and enter the description there.
5. In InDesign – Object Export Options – dropdown menu, locate the description using the XMP field and the content will be there.
6. When you export your InDesign file to PDF, the content transfers over.

#### Artifacting objects

1. Elements that are strictly for design purposes and don't contain and contextual value need to be artifacted.
2. Select the object – Object Export Option – Choose Artifact. Click Done
3. Once an object has been established – its purpose for the document has been identified, such as a logo, then if that element is repeated, it can be artifacted.

#### Adding bookmarks

1. Convenient method of navigation
2. Window/Interactive/Bookmarks
3. Layout/Table of Contents
4. Automatically generated bookmarks in the panel – bookmarks checked to add to pdf in the TOC style sheet.
5. Can also add manual bookmarks to the panel by navigating to the page and clicking add new bookmark from the panel.

### Anchoring images

1. Images need to be anchored with text or they will appear at the end of the tag structure requiring manual remediation.
2. Click on the blue square in the top right of the image and anchor to the headline or next structural element. Be careful to watch that the text wrap is not disturbed.
3. When you export your document, verify the order in the tag panel.

### Finishing touches in the PDF after export

1. Run Full check
2. Primary language – fail. Right click. Fix.
3. Right click – fail. Right click. Fix.
4. Tab order – fail. Right click. Fix.
5. Manual fix – Color contrast, Page order

### Generating the PDF file

1. File/Export/Interactive: screen or forms. Check Create tagged PDF and Use structure for tab order.
2. File/Export/Print: this is the one generally used.
  - a. Check Create tagged PDF
  - b. Bookmarks, if you used them
  - c. Hyperlinks
  - d. Open PDF after Saving
3. Save an Accessibility profile so you don't have to turn on the settings each time. (click Save Preset and name it Accessibility, for example)

## **Remediating the PDF Document**

### Finishing touches in the PDF after export using Adobe Acrobat DC

6. Run Full check using Accessibility tool.
7. Primary language – fail. Right click. Fix.
8. Primary title – fail. Right click. Fix.
9. Tab order – fail. Right click. Fix. (Based on structure)
10. Manual fix – Color contrast and Page order
11. Best practice would be to check the accuracy by using the Read Out Loud feature (View/Read Out Loud) and/or Checking Reflow by going to View/Zoom/Reflow.