



In-Person



1-on-1

Online



Accessible PDF Forms

Registration Type

Company

Contact Information

Address

Address

City

Country



CERTIFIED INSTRUCTOR

accessibilityunraveled.com



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CHAPTER 01: UNDERSTANDING PDF FORMS

Although HTML-based web forms are quite popular, fillable PDF forms are still quite common for certain applications. But adding accessibility to the job of making fillable form fields in a PDF can seem like an insurmountable task for some users. The problem stems from the fact that Adobe Acrobat doesn't do anything to facilitate the process. If you've ever added form fields to an existing PDF file and ran the Acrobat Accessibility Checker, you were probably greeted with a slew of new errors that hadn't existed prior to your adding the form fields. This can feel overwhelming, but I'm here to tell you that making accessible forms is not only possible, but once you have the knowledge, it's not even that hard. So, let's dive in and take a look at how to create accessible, fillable form fields using a couple of different approaches.

Methods for Creating Fillable PDF forms

There are two main approaches you can take to create fillable and accessible PDF forms. One typical approach is to start with an existing PDF file, add the appropriate form fields in Acrobat, and make the document accessible from there. This is a common (and, obviously, necessary) approach when you're not the designer of the form and, instead, are relying on someone else to do that work.

Another approach, which is much more proactive and provides more control and

efficiency, is to use Adobe InDesign to construct your form. InDesign not only provides amazing design capabilities, it also allows you to add fields that become live, fillable form fields when exported to the PDF format. I know of no other application that provides the ability to export to a fillable PDF form.

Create a Fillable PDF Form from an Existing PDF

When you begin the process of creating a fillable form from an existing PDF file, my first recommendation is to make sure that the PDF is accessible before you get started (FIGURE 1). Check that the document is tagged appropriately and contains all of the elements to make it accessible. Doing this streamlines the process and makes it easier to continue from there. Failure to do this can create a seemingly insurmountable task, especially for beginners.



FIGURE 1. Make sure your document is tagged and accessible before adding form fields to the PDF document.

CHAPTER 2: PDF FORMS IN ADOBE ACROBAT

Using the Prepare Form Tool

With your accessible foundation in place, you can begin adding form fields to the PDF file. Start by choosing the Prepare Form tool in Acrobat.

You can find the Prepare Form tool by clicking the Tools tab at the top left of the screen and choosing it, or if you've made it a default tool, it will be in the tools on the right side of the screen. A screen will be displayed giving you the ability to start the process with the file you have open or with a different file of your choosing. By default, the Automatically Detect Form Fields preference will be enabled

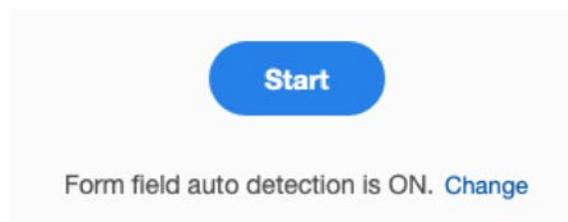


FIGURE 2. By default, Adobe Acrobat has form field auto-detection enabled, but you can turn this off by clicking Change.

Form field auto-detection evaluates your form and tries to determine where form fields are needed, as well as what type of form fields are needed. The accuracy of form field auto-detection leaves a bit to be desired. For fairly simple forms it can do a pretty good job, but more complicated forms often result in missing fields or fields created at the wrong location and/or of the wrong type. For this reason, I prefer to add my form fields manually

to increase the accuracy of my form fields. However, using form field auto-detection in no way inhibits your ability to make the fillable form accessible. If you want to turn off form field auto-detection, click Change on this screen and turn off Automatically Detect Form Fields in the Preferences.

With Prepare Form activated, you can choose the type of form field you'd like to add from the options at the top of the screen. All form fields can be made accessible so the type of form field you choose is dependent upon the requirements for your form. After selecting a form field tool, when you move your pointer over an area of the form, you'll see a ghosted shape of the form field you're about to create. To create a form field at the size displayed, simply click anywhere on your form. To customize the size of the form field, click and drag to establish the size of the field (FIGURE 3).



FIGURE 3. Either click or click and drag to add a form field to the PDF document.

Upon adding the form field, a yellow pop-up window will appear giving you the ability to define the name for the form field. Although the name has no value for accessibility, it is helpful for keeping form fields organized and

for helping you to easily identify a form field in the future (**FIGURE 4**). Give the field an appropriate name, then click anywhere in the document to deselect the field. If at any point, you want to change the name of the form field or adjust any of the form field properties, you can simply double-click the form field using the Selection tool (black arrow) to display the Form Field Properties dialog box.

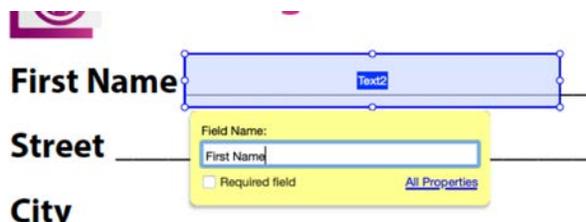


FIGURE 4. Give the form field a name immediately after adding the form field to the document.

Continue adding form fields to the PDF document as needed using the various form field types. In this article I want to stay focused on the accessibility requirements of PDF forms, but if you need more guidance and direction on form design and creation, check out my article [Creating accessible PDF Forms in InDesign](#) (this article is members only).

Accessibility requirements

So, you're making good progress, your form is looking good. It's functional, and it's doing what you want, but now you need to make sure that it's accessible. If you run the Acrobat Accessibility Checker on the file now, you'll be greeted with a mountain of errors (**FIGURE 5**). Truly, Acrobat doesn't do you any favors from an accessibility standpoint. One of the errors is called Field Descriptions—Failed.

Field descriptions describe what the user is supposed to enter into each respective form field. By default, the field description (tooltip) is blank for each form field that you create. Because this is an accessibility requirement, you'll receive an error until you add a tooltip (field description) for each field.

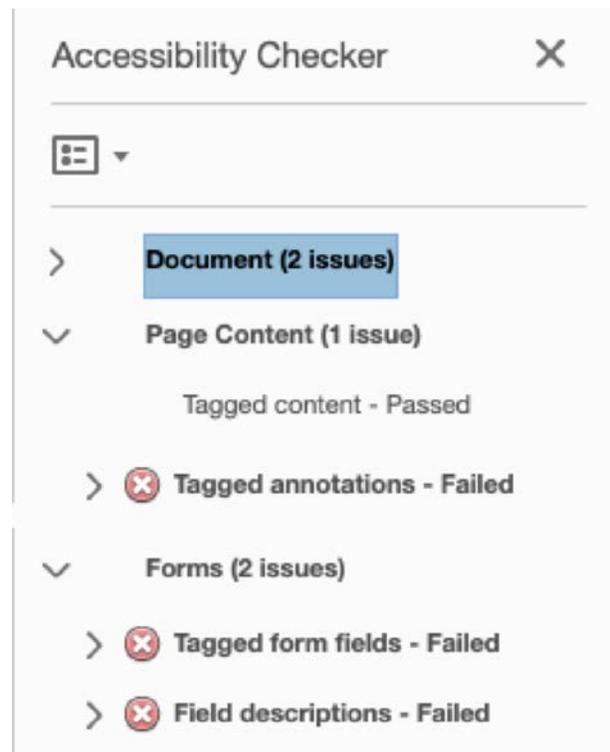


FIGURE 5. You'll see several errors in the Acrobat Accessibility Checker after adding form fields to your document.

Adding a tooltip is a simple step. Go back into Prepare Form mode and double-click any of the form fields you added to display the Form Field Properties dialog box. Under the General tab, find the Tooltip field and enter a description of what the user is expected to enter into that field (**FIGURE 6**). This tooltip is important as it is voiced by assistive technology when a user is reading the form. Be concise and direct when describing what the user should enter into a field. No need to say “Please enter your residential address here”; simply “Enter your residential address” is sufficient. Note that radio buttons share the same tooltip across all buttons. So, for radio buttons make the tooltip more general such as, “Choose which computer platform you use.”

The other errors you will see after running the Acrobat Accessibility Checker will be either “Tagged annotations - Failed” or “Tagged form fields - Failed” depending on the type of form fields you’ve added to your document. This is where Acrobat really drops the ball.

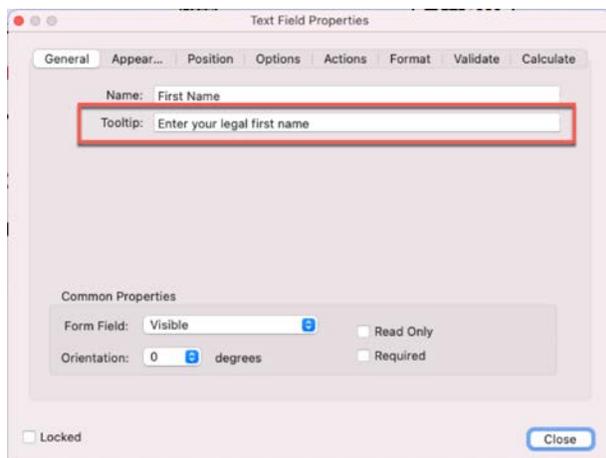


FIGURE 6. Adding a tooltip (field description) to a form field

Tagging Form Fields

Even though you’re working in a tagged document, Acrobat fails to tag new form fields as you add them, which is why you receive the error.

There are two approaches you can take to addressing these errors. The first approach is more manual. In the Tags pane, make sure the Tags object is selected. Now open the Accessibility tool in Adobe Acrobat, and click Reading Order to display the Reading Order panel. Using your pointer, select a form field (paying attention to only selecting the form field and not any other elements), then click the Form Field button in the Reading Order panel to tag the selected form field as a <Form> tag (**FIGURE 7**). The purpose of selecting the Tags object in the beginning was to ensure that the new form field tags are added at the <Root> level of the tag structure. If you fail to do this step, new tags will be nested within the currently selected tag, which is usually wrong. You would then repeat this process for each form field. Sounds like a lot of work? It can be. But read on for a more automated method that is much faster in some cases.

To speed up the process, Acrobat also offers a method of tagging form fields in which you can do a find/change of sorts to automate the process. Once again, start by clicking the Tags object in the Tags pane. Now, click on the Options button () at the top of the Tags pane and choose Find to display the Find Element dialog box.

From the Find menu, choose Unmarked Annotations, choose the Search Document option in the Type section, and click the Find button to find the first untagged form field in the document. Acrobat will highlight the first untagged form field in the document. Click the Tag Element button to display the New Tag dialog box where you need to select Form from the Type menu, and then OK to tag the currently selected form field with a <Form> tag and advance to the next untagged form field (**FIGURE 8**). Continue clicking the Tag Element button to tag the remaining untagged form fields until the Find Completed dialog box is displayed indicating that all untagged form fields have been tagged.

Finishing touches

At this point we're almost finished. The only remaining issue is one that the Acrobat Accessibility Checker won't flag: the order in which the tagged form fields appear in the tag structure. Remember, the most common assistive software applications (JAWS and NVDA) use the tag order as the order in which the content is voiced. Currently, all your <Form> tags are at the bottom of the tag structure, which means all of the content will be read first and then the app will go back and read all of the form fields. For proper reading of the document, you need to nest the <Form> tags at the appropriate locations within the tag structure (**FIGURE 9, NEXT PAGE**). For example, the First Name form field needs to appear after the First Name text in the document. To do this, drag the form tag so that it is located after the text that the form field is associated with.

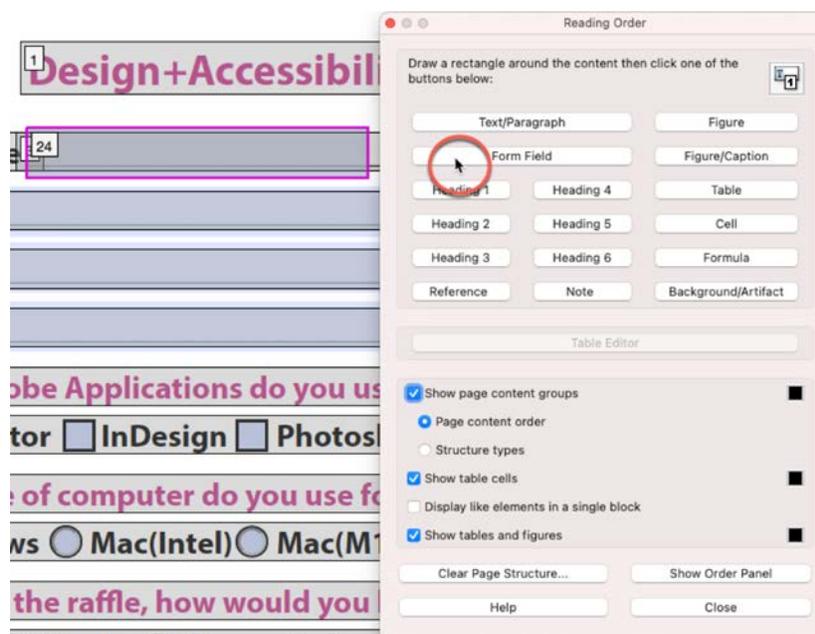


FIGURE 7. Tagging a form field using the Reading Order panel.

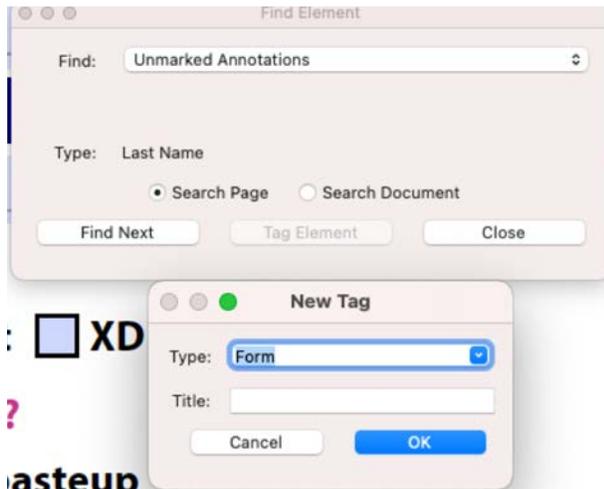


FIGURE 8. Clicking the Tag Element button allows you to tag an object using the tag of your choosing.

You may notice in your form that any underlines used in the form will appear as objects within the tag structure of the document. Although it's not strictly necessary, I like to mark these elements as artifacts to improve the reading experience for the end user and to clean up the tag structure of the document.



FIGURE 9. Nest the <Form> tags in the appropriate location within the tag structure of the document.

READING ORDER PANEL SELECTION TRICKS

If you've spent any time selecting content in the Reading Order panel, you'll discover that it can be challenging to isolate your selection to a specific object without inadvertently selecting other elements in the process. Fortunately, Adobe Acrobat offers some hidden tricks to help you isolate what you're trying to select. If you've created a selection and have too much selected, you can hold down the Option/Ctrl key and click and drag to remove elements from a selection. Conversely, if you need to add an item to an existing selection, you can hold down the Shift key and click and drag to add items to an existing selection. Keep in mind that you can't select just part of an object to select it. Your drag must fully encompass an object in order for that object to be selected, added to a selection, or removed from a selection.

CHAPTER 3: PDF FORMS IN ADOBE INDESIGN

InDesign offers a number of advantages in the form building process that put more control in the hands of the form author and that automate some common tasks to streamline the form-creation process. You should follow the best practice of ensuring that all the other content in the document is made accessible before adding all of the form fields. For more information on how to do that, see my article [10 Steps to Accessible PDFs](#) (this article is members only).

Prepare your form

To begin, lay out your form as you wish, leveraging the formatting and layout features that InDesign has to offer. There's no right or wrong way to do this, only personal preferences. I, for example, like to build my forms using a single text frame when possible. This reduces the number of container tags in the tag structure of the exported PDF file. If,

however, you prefer to build your form using individual frames for each component of the form, you'll need to use the Articles panel to set proper tag order in the exported PDF file, and you'll end up with more <Sect> container tags. This is not ideal, but it's acceptable in most cases.

From here, you can begin adding the form fields in InDesign that will become fillable form fields when the layout is exported to PDF. Start by drawing a frame to the size of the form field that you'd like to create. You can use a graphic frame, text frame, or unassigned frame for this process. Open the Buttons and Forms panel by choosing **Window > Interactive > Buttons and Forms**. With the frame selected, choose the type of form field you want by selecting the appropriate option from the Type menu. The frame will now have a heavy dashed border indicating that it is an interactive form field (**FIGURE 10**).



FIGURE 10. An InDesign frame converted to an interactive form field

Once a frame is defined as an interactive form field, you'll see several options available in the Buttons and Forms panel that you can customize, including the field name, font, font size, and most importantly from an accessibility standpoint, the Description

that becomes the tooltip when the PDF file is generated. Adding the tooltip here in InDesign is more efficient and repeatable because the tooltip will get passed on to the PDF file each time you export.

What gives InDesign a leg up on Acrobat when it comes to creating fillable forms is that when form fields are added in InDesign, not only do they become fillable fields when the PDF file is generated, but they are also automatically tagged, which is a tremendous time-saver.

Specifying tag order is the other requirement you'll need to incorporate into your document. Achieving appropriate tag order can be accomplished in one of two ways depending on how you build your document. If you used individual frames for each element of the form, you can use the Articles panel in InDesign to set the order of elements appropriately (**FIGURE 11**).

If you've built your form using a single text frame, the Articles panel can't help you because it works at the object level and can't drill down into the content of a frame. In this case, you'll need to anchor the form fields in the appropriate location within the text so that they appear in the correct order in the Tags pane of the exported PDF. Do this by dragging the square in the upper-right corner of the form field frame to the location where it needs to appear in the text (**FIGURE 12**). Repeat this step for each form field.

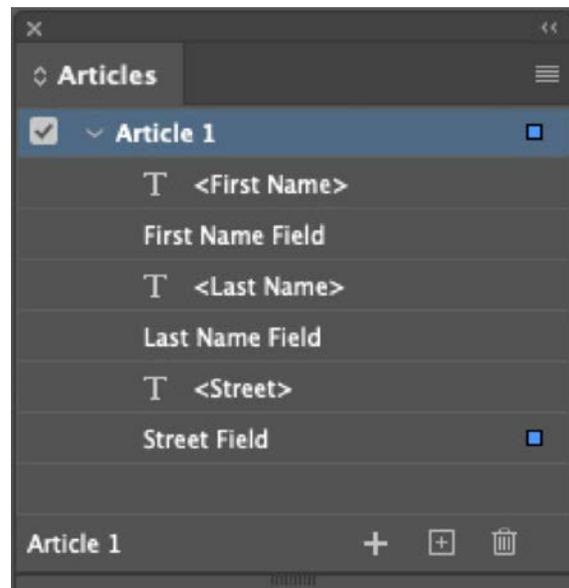


FIGURE 11. Use the Articles panel to specify the tag order of objects in the InDesign layout.

Generate the PDF

The final step in the process is to generate the PDF file. Although InDesign gives you two choices when exporting a PDF file, only the PDF (Interactive) option will include the interactive form fields in the final PDF. The PDF (Print) option does not include the form fields. Choose File > Export, and choose PDF (Interactive) from the Format menu. Click Save, and in the Export to Interactive PDF dialog box, be sure to choose Include All in the Forms and Media section. Do the same for Create Tagged PDF and Use Structure for Tab Order.

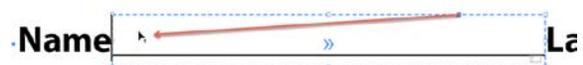


FIGURE 12. Drag the blue square of the form field to the point in the text where you want the form field to appear in the tag structure of the PDF.

In the resulting PDF file, you'll notice that not only is the content tagged, but so are the form fields and those form fields already contain tooltips (descrip-tive text) (**FIGURE 13**). Taking a quick trip over to the Acrobat Accessibility Checker will likely yield no errors, which is a considerable improvement from what you might have seen after initially adding the form fields in Acrobat.

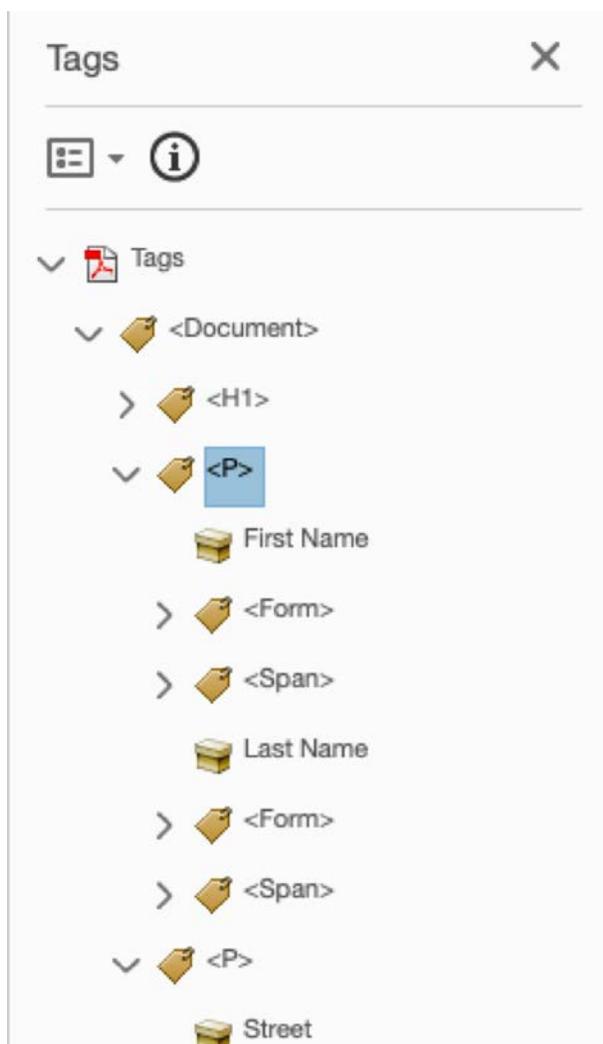


FIGURE 13. After exporting to a PDF from InDesign, content is tagged, form fields are tagged, and form fields contain the necessary tooltip text for full compliance.

The Path to Accessible PDF Forms

There's no single correct workflow for how you should create your PDF forms. Your path may very well be determined by factors out of your control. Regardless of your approach,

I hope you've learned that there are several methods to achieve the desired result and approaches to address common errors encountered during the process.

READING FORMS USING ASSISTIVE TECHNOLOGY

It's helpful to understand that both leading as-sistive software appli-cations (JAWS and NVDA) provide a unique mode when reading a PDF form. The default mode in both applications is called Browse mode. This is the standard mode used when reading a document, and it's why it's im-portant to organize and nest tags in a document appro-priately so that as a user is reading the content, the elements will be read logically and in order.

Both JAWS and NVDA also contain a Forms mode that changes the behavior of the screen reader so that it reads only the form fields and allows a user to enter text into those form fields. In this mode, the user skips over the content (static text) in the document and focuses on only the form fields for easier browsing.

As document authors, we have no control over which mode someone will use when reading a PDF form, which is why it's important to make sure that the tags are ordered and structured appropri-ately in the event that the user chooses to read the form in Browse mode instead of Forms mode.