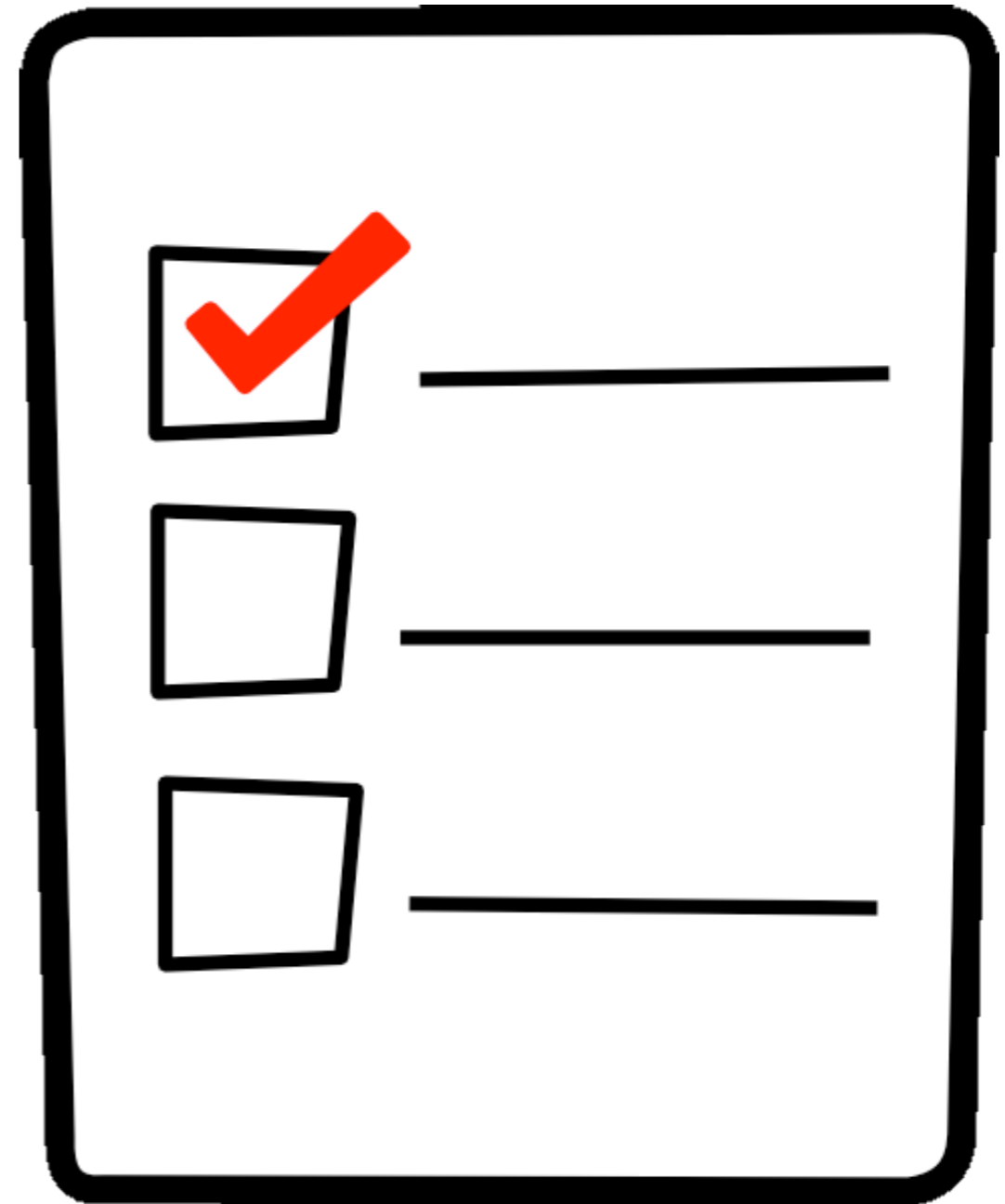


Working with Check Box Fields

Creating nonexclusive and mutually exclusive check box fields



Chapter 11

IN THIS CHAPTER

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As I mentioned in Chapter 9, there are only two slight differences between check boxes and radio buttons. As a matter of choice you can use check boxes for all fields requiring mutually exclusive or non-exclusive responses.

In terms of form designs you should place check boxes to the left of text and questions. In some cases check boxes may work best on the right side of a line of text — particularly for long lines of text with check boxes placed at the end of the lines. If so, use the right side sparingly. Most importantly, you should be consistent. If you have some check boxes to the left of a line of text and some check boxes to the right of a line of text, users can easily become confused when filling out a form.

Creating Mutually Exclusive Check Boxes

A series of check boxes where you solicit responses for each item in a group are not, by default, mutually exclusive. A mutually exclusive group of check boxes permit only a single response from among the group. When one check box is checked, all other check boxes within a group are cleared of data and remain unmarked.

There's just one simple rule to follow when you create mutually exclusive check boxes. The field names need to be identical and the export values need to be different. If field names are different, each box in a group can be checked regardless of the export value.

Note

On the sample form the check boxes are clearly visible and were created in the authoring application. Typically it's best to add strokes and rules in the design program rather than rely on Acrobat for borders. You have many more choices for line weights in your authoring application than what is available in Acrobat.

To create a group of mutually exclusive check boxes, do the following:

1. Open a form containing check boxes.

In the sample form used by the US Department of Education (Figure 11.1) the first two sections (1 and 2) have three

Figure 11.1 Sample Form from US Dept. of Education

OMB Number: 4040-0004
Expiration Date: 03/31/2012

Application for Federal Assistance SF-424

* 1. Type of Submission:
 Preapplication
 Application
 Changed/Corrected Application

* 2. Type of Application:
 New
 Continuation
 Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:
Completed by Grants.gov upon submission: _____

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State: _____

7. State Application Identifier: _____

8. APPLICANT INFORMATION:

* a. Legal Name: _____

* b. Employer/Taxpayer Identification Number (EIN/TIN): _____

* c. Organizational DUNS: _____

d. Address:

* Street1: _____
Street2: _____
* City: _____
County/Parish: _____
* State: _____
Province: _____
* Country: _____ USA: UNITED STATES
* Zip / Postal Code: _____

e. Organizational Unit:

Department Name: _____ Division Name: _____

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: _____ * First Name: _____
Middle Name: _____
* Last Name: _____
Suffix: _____
Title: _____
Organizational Affiliation: _____
* Telephone Number: _____ Fax Number: _____
* Email: _____

Two sections at top left of form require check box fields

checkboxes each. The three checkboxes in each section need to be set up as mutually exclusive fields so only a single response is permitted.

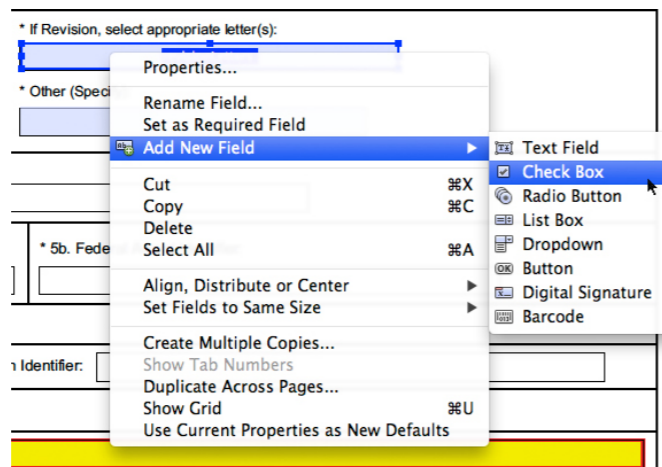
2. Create a check box field.

If you elect to work in Normal view and you already have a field (any field) on a page, you can remain in Normal view while adding additional fields.

The sample form contains text fields. Now I want to add a check box field. To do so, open a context menu on any field. From the context menu choose Add New Field. A submenu opens displaying a list of the field types. Click Check Box and the cursor is loaded with a check box. Click on the form to place the check box field.

If you wish to add fields in Form Edit mode, click Edit Form in the Tools panel and click the Check Box tool in the toolbar at

Figure 11.2 Add Check Box



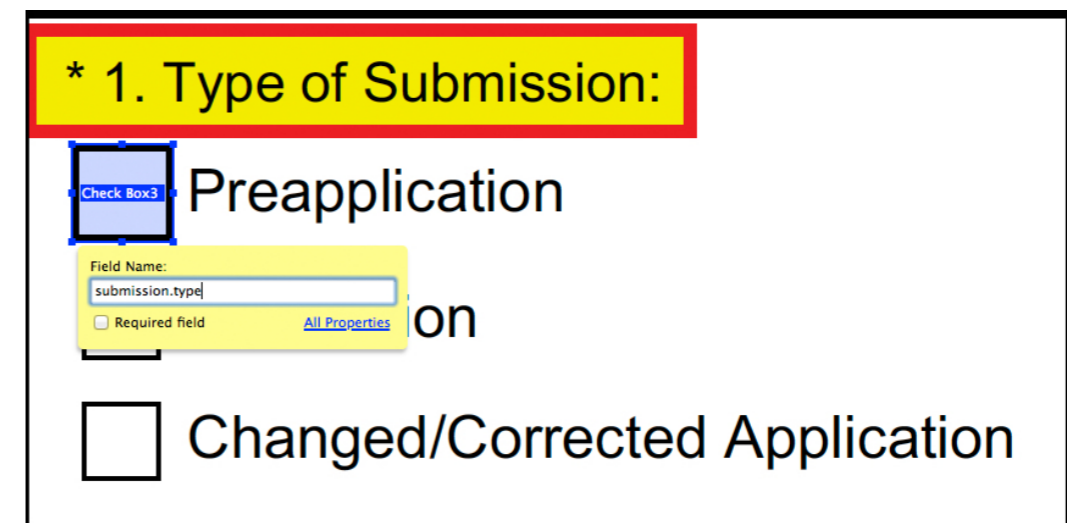
Open a context menu on an existing field and choose Add New Field.

the top of the window. Click on the form to place the check box field.

3. Name the field.

You can type a field name in the mini yellow popup or you can type a field name in the Check Box Properties window. If you type a name in the mini yellow popup, click Properties to open the Check Box Properties window.

Figure 11.3 Mini Popup Window



You can type the field name in this window or in the Field Properties window.

In this example, I used *submission.type* for the field name. I use a hierarchical name however I need to edit the names separately when I change the field names.

Add a tooltip and click the Required button if at least one check box needs to be marked before the form is submitted.

Note

The Check Box Properties window appears very different than the Text Field Properties. As you work with the different field types the Properties window changes to reflect options specific to the field type in question. However the General properties for all field types contain the same information where you supply field names, tool tips, and choose field display options.

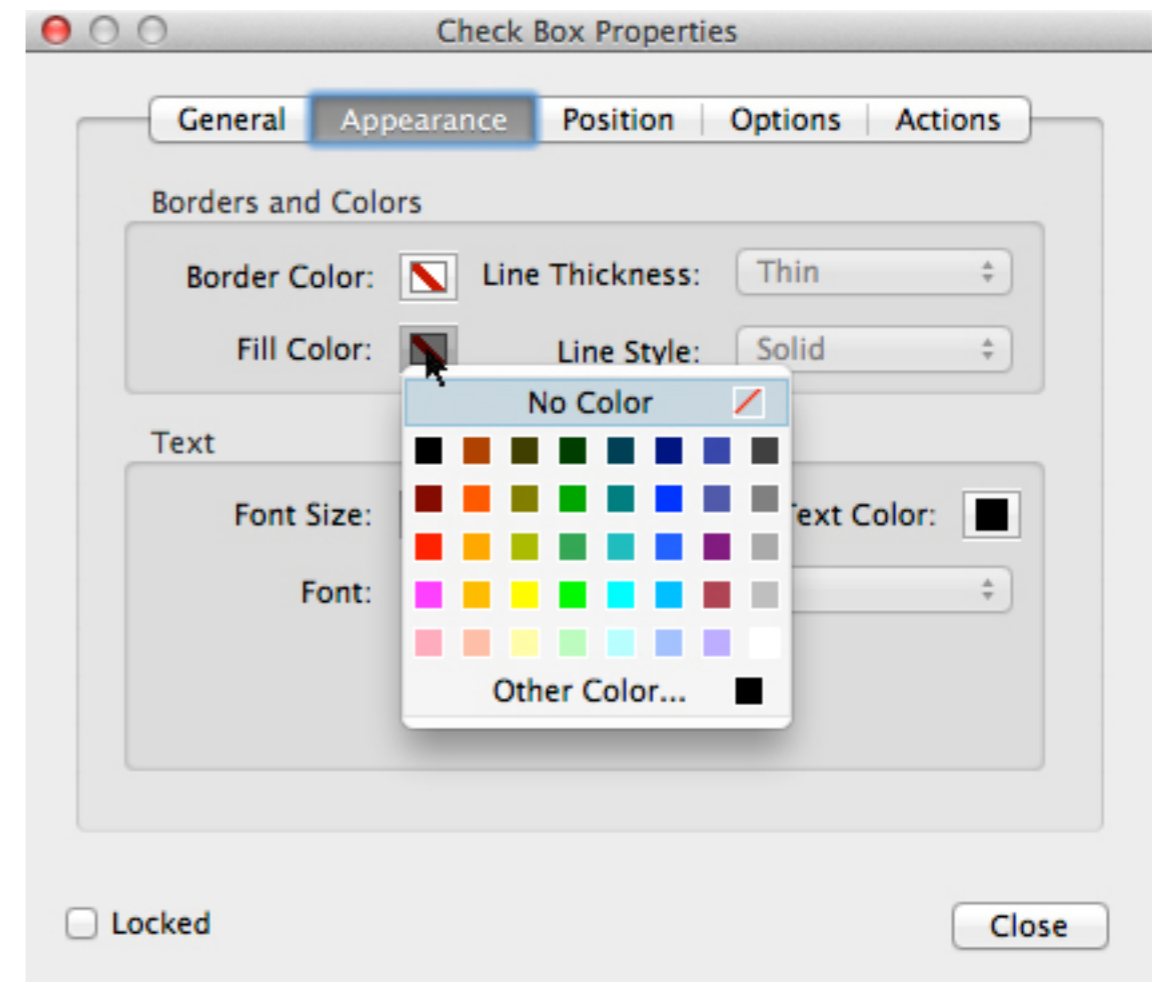
4. Adjust appearances.

Click the Appearance tab. Remove the default Black stroke and white fill. If you design your forms with graphics in the authoring program you don't need any strokes or fills applied in Acrobat.

For Font Size you can leave the default at Auto or you can exaggerate the mark by increasing the font size. If the check boxes are small you may want to have the response marks appear larger than the check boxes. The best way to determine what works well is try a size and examine the results by marking a check box. You can return to the Check Box Properties window and make changes.

Once you make appearance settings for Check Box fields open a context menu on a field and choose Use Current Properties as New Defaults. When you add additional check boxes on a form, the Appearance settings remain without a border and fill.

Figure 11.4 Check Box Appearance Properties



Click the color chip to open the popup menu.

5. Edit the field Options.

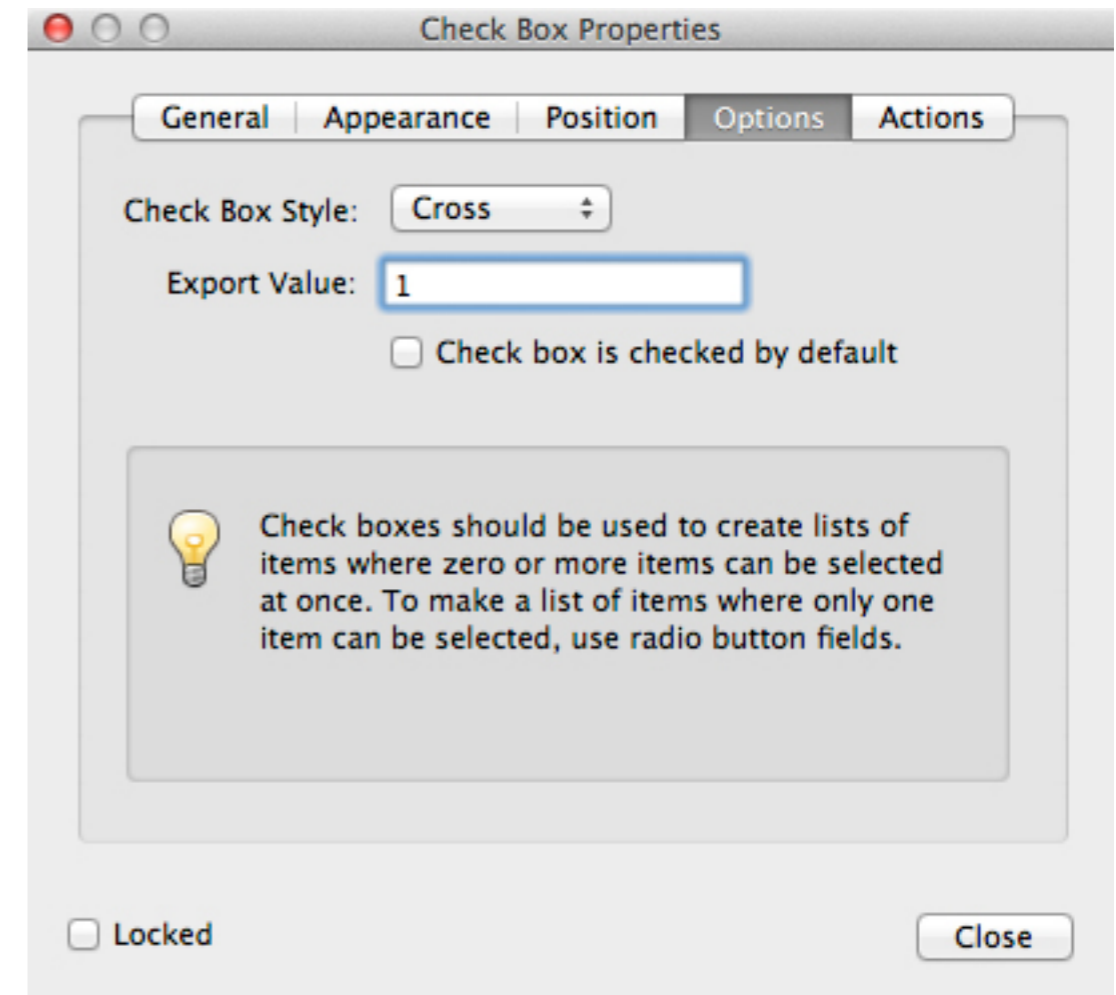
Click the Options tab. In the Options tab you find settings for Check Box Style and Export Value.

For Check Box Style you have a number of choices for displaying a character when a check box is marked. You can use a Check Mark, Cross (X), Diamond, Square, Star, etc. What's important is be consistent. You should use the same style for all your eForms. I find the Cross style works well for the forms I design. The Cross places an X in the check box when marked. However, this is a personal choice and should be discussed in committee so all forms authors use the same style for all forms hosted on you agency site.

The Export Value is critical for mutually exclusive fields. You must add unique text for each field within a group. The default is Yes. You can change the export value by typing text in the Export Value text box. For the sample form I use 1 for the first check box (Figure 11.5).

When data are exported to a database system, export values can easily be changed in the export routine. By using a numeric value here I can easily copy/paste the check box fields and not need to worry about changing export values after I paste fields.

Figure 11.5 Check Box Options Tab



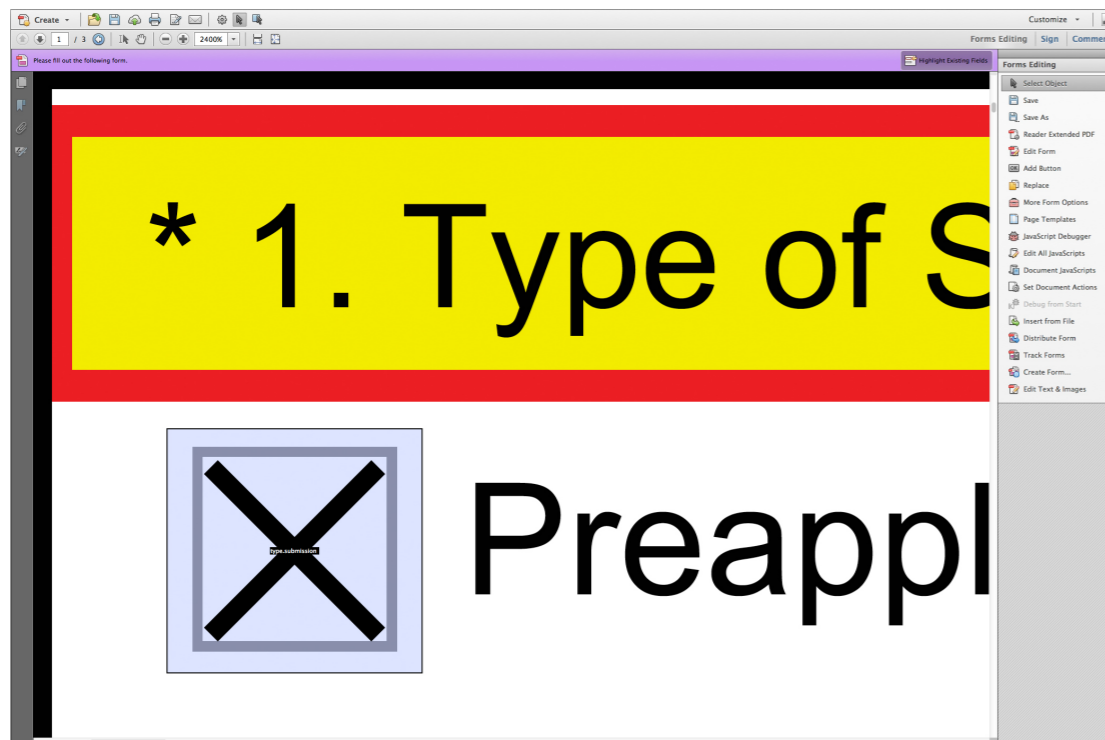
For this form I use 1 or the Export Value

If I choose to add export values such as Pre-application, Application, and Changed/Corrected Application for the check boxes in Section 1 on the sample form, I would need to change the export values when copying the checkboxes and pasting for Section 2. By using 1, 2, and 3 for export values, I won't need to change settings in the Options tab.

6. Examine the field size.

Zoom in on the field so you can clearly see it in a zoomed view. You can press CTRL/Command + (plus) several times to zoom in on the field. Click the check box with the Hand tool and examine the mark. The field should be sized a little larger than the box displayed on the page. Notice in my example the field box is slightly larger than the graphic box.

Figure 11.6 Zoom View



Zoom in on the Check Box fields to clearly view the field object against the background box

When you add check boxes on forms you want the marks clearly legible and clearly in view if the user zooms out to a Fit in Window view.

After examining the mark, zoom out slightly so you can see the remaining check boxes on the form.

7. Duplicate the field.

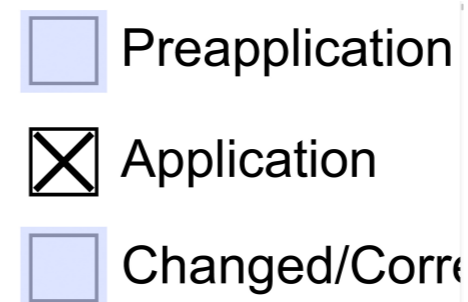
After all property settings are made to the first check box field and the field is sized properly, you can duplicate the field and just make a change to the export value. All other settings remain the same for check boxes within a common group.

Press CTRL/Option + Shift and drag the field vertically to duplicate it. In the Check Box Properties window type a new value for the Export Value. In this example I type 2 for the export value.

Duplicate once again and add 3 for the export value for the third field.

When you examine the results only a single check box can be marked within the group.

Figure 11.7 Box Checked



Only one box in the group can be checked

Copying/Pasting Check Box Fields

In my example I have three check box fields added in Section 1 on the sample form. Section 2 also requires 3 mutually exclusive check boxes. All the field attributes including the export values can be copied along with the check box fields. The only item that needs a change is the field names.

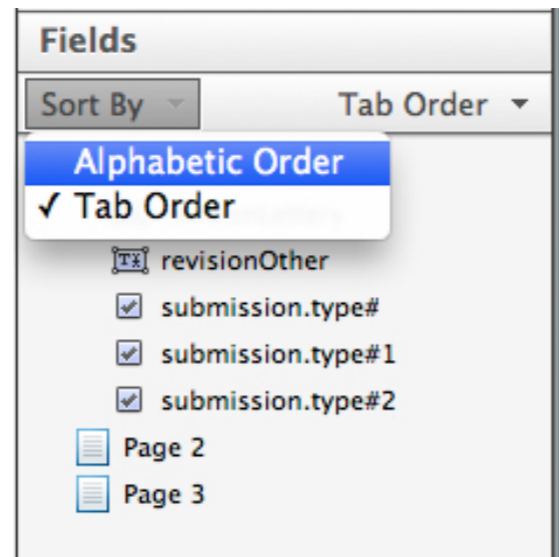
To copy the Section 1 fields and paste them for Section 2, do the following:

1. Open Form Edit mode.

We need to first change field names in the Fields panel. Zoom out of the document so you can see the form in a zoomed out view.

2. In the Fields panel in Form Edit mode, open the Sort By drop-down menu and choose Alphabetical Order.

Figure 11.8 Sort Fields Alphabetically

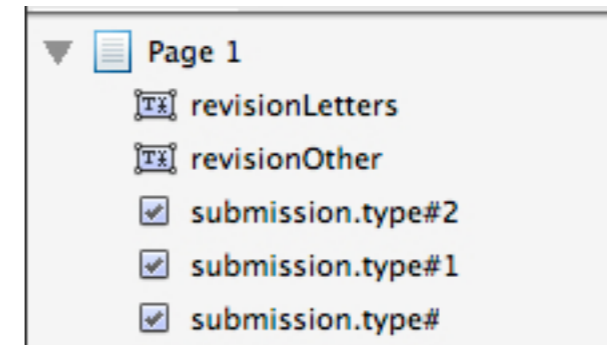


In the Fields panel open the Sort By drop-down menu and chose Alphabetical Order

3. Change the field names.

Click the check box field name. In my example three fields are named *submission.type*. Rename the three fields. In this example I use *application.type*.

Figure 11.9 Edit Field Names



Type new names for the three fields.

4. Copy the fields.

Use the Select Object tool and drag through the three check box fields. Choose Edit ► Copy or press CTRL/Command + C on your keyboard.

5. Undo the last edits.

The copied fields on the clipboard are named *application.type*. When you Undo, the last check box field returns to the original field name. Undo three times to revert the field names.

6. Paste in Place.

If you choose Edit ► Paste the fields are pasted in the center of the form. You can paste the fields precisely from where they were copied and easily drag to the right constraining the

movement. This guarantees a perfect vertical alignment. To Paste in Place, press the Shift key down on your keyboard and choose Edit ► Paste. The fields are pasted on top of the existing fields and remain selected. Be certain to click within a field box and press the Shift key down to constrain movement. Drag the selection to the right and move the fields in place.

Note

If you work in Normal view always keep the Select Object tool active when pasting fields. If the Hand tool is active and you paste fields, the fields are deselected when pasted. You must then attempt to select the pasted fields that may be surrounded by other fields making it difficult to select just the fields you need to move in place. If you accidentally paste with the Hand tool active, press CTRL/Command + Z to Undo. Click the Select Object tool and paste again.

7. Move the pasted fields to position.

Figure 11.10 Fields Moved to Position

* 1. Type of Submission:	* 2. Type of Application:
<input type="checkbox"/> Preapplication <input type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application	<input type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision

After pasting press the Shift key and move the pasted fields to position.

Creating Non-exclusive Check Box Fields

As you might suspect, non-exclusive check box fields follow the same steps as when creating mutually exclusive fields with the one exception that all fields need a unique name.

If you have a series of check boxes that require calculating data — something like a questionnaire where the user rates an item as good, average, poor, etc., you want to use unique names such as responseOne, responseTwo, responseThree, etc. for the different rows and hierarchical names for the columns such as responseOne.0, responseOne.1, responseOne.3, etc. fields across columns. Each name in a hierarchical order is a common name for the root followed by a number to make the field names unique. You use the hierarchical structure so the calculation formulas are much easier to write when you add JavaScripts.

More often than not you find an abundance of mutually exclusive check boxes on eForms. However, occasionally you find a series of check boxes where more than one response is needed within a common group of fields.

The US Office of Special Counsel hosts a complaint form where you find two sections containing non-exclusive check box fields. Notice in Section 1.c. and 2.c. there are six check box fields. At the bottom of each field group there is a check box for NONE OF THE ABOVE.

Figure 11.11 Sample Form

Form OSC-11a (09-12) OMB Control No. 3255-0002

**COMPLAINTS ALLEGING REPRISAL FOR WHISTLEBLOWING:
ADDITIONAL DISCLOSURES AND PERSONNEL ACTIONS**

Date Received by OSC: _____	OSC Attorney, Investigator, or Complaint Examiner: _____
1. WHAT INFORMATION WAS DISCLOSED? (DESCRIBE WHISTLEBLOWER DISCLOSURE.)	<p>a. WHEN WAS THE DISCLOSURE MADE? (MO/DA/YR)</p> <p>b. TO WHOM (NAME AND TITLE) WAS THE DISCLOSURE MADE?</p> <p>c. DISCLOSURE OF INFORMATION EVIDENCED (check all that apply):</p> <ul style="list-style-type: none"> <input type="checkbox"/> VIOLATION OF LAW, RULE, OR REGULATION <input type="checkbox"/> GROSS MISMANAGEMENT <input type="checkbox"/> GROSS WASTE OF FUNDS <input type="checkbox"/> ABUSE OF AUTHORITY <input type="checkbox"/> SUBSTANTIAL AND SPECIFIC DANGER TO PUBLIC HEALTH OR SAFETY <input type="checkbox"/> NONE OF THE ABOVE <p>d. WHAT PERSONNEL ACTION OCCURRED, FAILED TO OCCUR, OR WAS THREATENED BECAUSE OF THE DISCLOSURE?</p> <p>e. WHEN DID PERSONNEL ACTION(S) OR THREAT(S) OCCUR? (MO/DA/YR)</p>
2. WHAT INFORMATION WAS DISCLOSED? (DESCRIBE NEXT WHISTLEBLOWER DISCLOSURE.)	<p>a. WHEN WAS THE DISCLOSURE MADE? (MO/DA/YR)</p> <p>b. TO WHOM (NAME AND TITLE) WAS THE DISCLOSURE MADE?</p> <p>c. DISCLOSURE OF INFORMATION EVIDENCED (check all that apply):</p> <ul style="list-style-type: none"> <input type="checkbox"/> VIOLATION OF LAW, RULE, OR REGULATION <input type="checkbox"/> GROSS MISMANAGEMENT <input type="checkbox"/> GROSS WASTE OF FUNDS <input type="checkbox"/> ABUSE OF AUTHORITY <input type="checkbox"/> SUBSTANTIAL AND SPECIFIC DANGER TO PUBLIC HEALTH OR SAFETY <input type="checkbox"/> NONE OF THE ABOVE <p>d. WHAT PERSONNEL ACTION OCCURRED, FAILED TO OCCUR, OR WAS THREATENED BECAUSE OF THE DISCLOSURE?</p> <p>e. WHEN DID PERSONNEL ACTION(S) OR THREAT(S) OCCUR? (MO/DA/YR)</p>

KEEP A COPY OF THIS PAGE FOR YOUR RECORDS

Form containing non-exclusive choices

Before we create the fields we need to think about what we hope to accomplish. If a user clicks a check box then clicks the NONE OF THE ABOVE check box, we need to add a little error correction. We should set up the fields so a user can click any or all of the first five fields, but when NONE OF THE ABOVE is checked the first five fields should be cleared. We also need to be certain that if a user clicks any one of the five fields the NONE OF THE ABOVE field is cleared of a check mark. In other words we want to make it impossible for a user to mark both the first five fields AND the last field in each section.

Another issue we need to contend with is copying/pasting fields. We can't simply copy paste fields because attributes we use in the first set of fields to clear the fields can't be used in the second set of fields. For example, if we clear the first five fields with a Reset a form action, and copy/paste the fields, the action remains for clearing the first set. When we paste fields we need to change the Reset a form action to clear the second set of fields.

Taking into consideration the controls we need to implement on the form, the following explains how to tackle the design for these check boxes.

1. **Create a Check Box field for NONE OF THE ABOVE field.**
The first five fields need to clear the NONE OF THE ABOVE field. Therefore I want this field placed on the form first so I can clear the field in the Check Box Field Properties before I duplicate fields.

In Normal view you can open a context menu on an existing field and choose Add New Field ► Check Box. If no field exists on the form open Form Edit mode and click the Check Box tool. When the cursor loads the Check Box click in the area where the NONE OF THE ABOVE check box needs placement. Size the check box by dragging handles in/out.

Note that you should zoom the view so you can place the first check box field precisely in position.

2. **Name the field.**

In my example I use *disclosure1cNone* for the field name. This field is named without a hierarchical name.

3. **Set the field attributes.**

In the Check Box Field properties window click the Appearance tab. Set the Border and Fill color to None (diagonal line icon). Click the Options tab and choose a check box style from the Check Box Style drop-down menu. My preference is the Cross choice however, you can choose any mark your agency decides to use for check box field styles. The default Export Value can remain as Yes.

4. **Create a second check box field.**

In my example I want a check box at the top of the section adjacent to the first question. You can CTRL/Option + Shift and drag the NONE OF THE ABOVE field to duplicate it and carry the field attributes or you can use the Check Box tool

and create a new check box. If you create a new check box, you need to define the same attributes.

5. **Change the field name.**

Before you do anything, change the field name. If you duplicate a field and change any attribute before changing the field name, the new attribute setting is applied to the duplicate field and the original field.

5. **Reset the Form.**

In this example we want to clear the NONE OF THE ABOVE field. When this check box is checked, the last field in the group is cleared.

Note

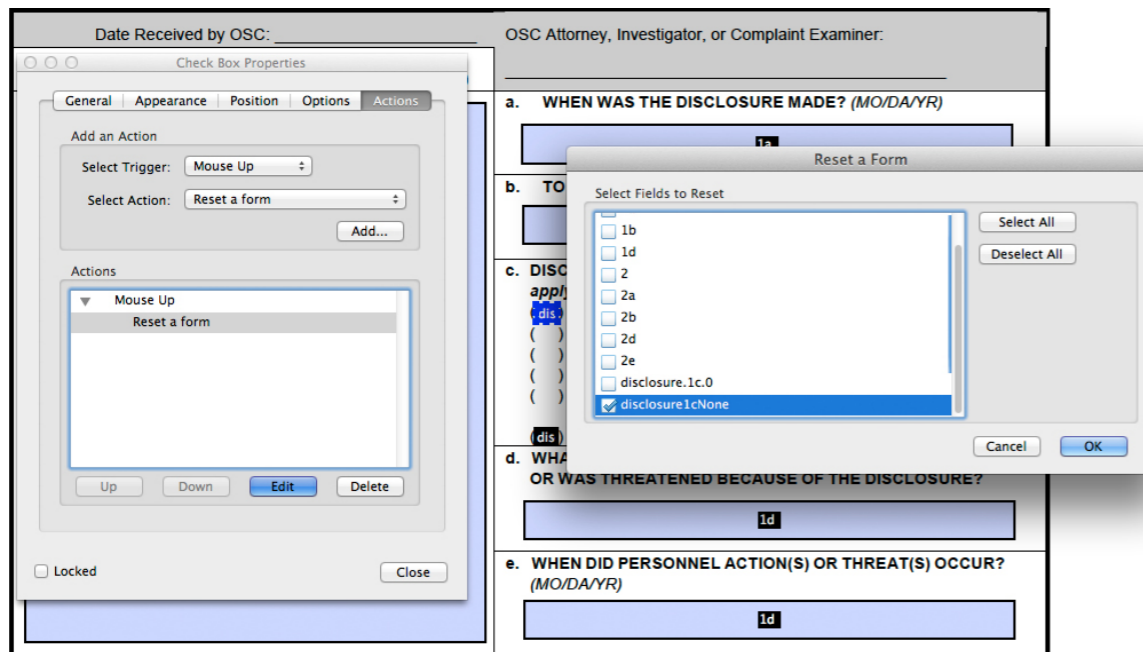
You can clear data by using an Action or by writing a JavaScript. When you become familiar with JavaScript, as I explain in Chapters 16-19, using a JavaScript will be the preferred method. However, this form is not complicated and doesn't contain many fields so using the Reset a form action works well.

6. **Click the Actions tab in the Check Box Properties**

window. From the Select Action drop down menu choose *Reset a form*. Click the Add button and the Reset a Form window opens.

Scroll the window and locate the field name you want to clear. In my example I want to clear disclosure1cNone (the NONE OF THE ABOVE field I first added to the form). Check the box adjacent to the field name and click OK.

Figure 11.12 Reset a Form Window



In the Actions tab choose Reset a form from the Select Action menu and click Add to open the Reset a Form window.

7. Create multiple copies of the field.

The attributes for the first check box in the group are set including clearing data on the last field in the group. When we create multiple copies the copies likewise have the same action to clear data on the last field.

8. Select the field you want to duplicate.

In my example the *disclosure.1c* field is the one I want to duplicate. Open a context menu on the selected field and choose *Create Multiple Copies*. In the Create Multiple Copies of Fields window enter the number of fields down/across. In my example I add 5 for Copy selected fields down and 1 for Copy selected fields across. Click OK and the fields are duplicated.

9. Distribute fields.

Move the last field in the group to position and select all fields in the group. Open a context menu and choose Align, Distribute or Center ► Distribute Vertically. The fields should align to position.

10. Set the attributes for the NONE OF THE ABOVE field.

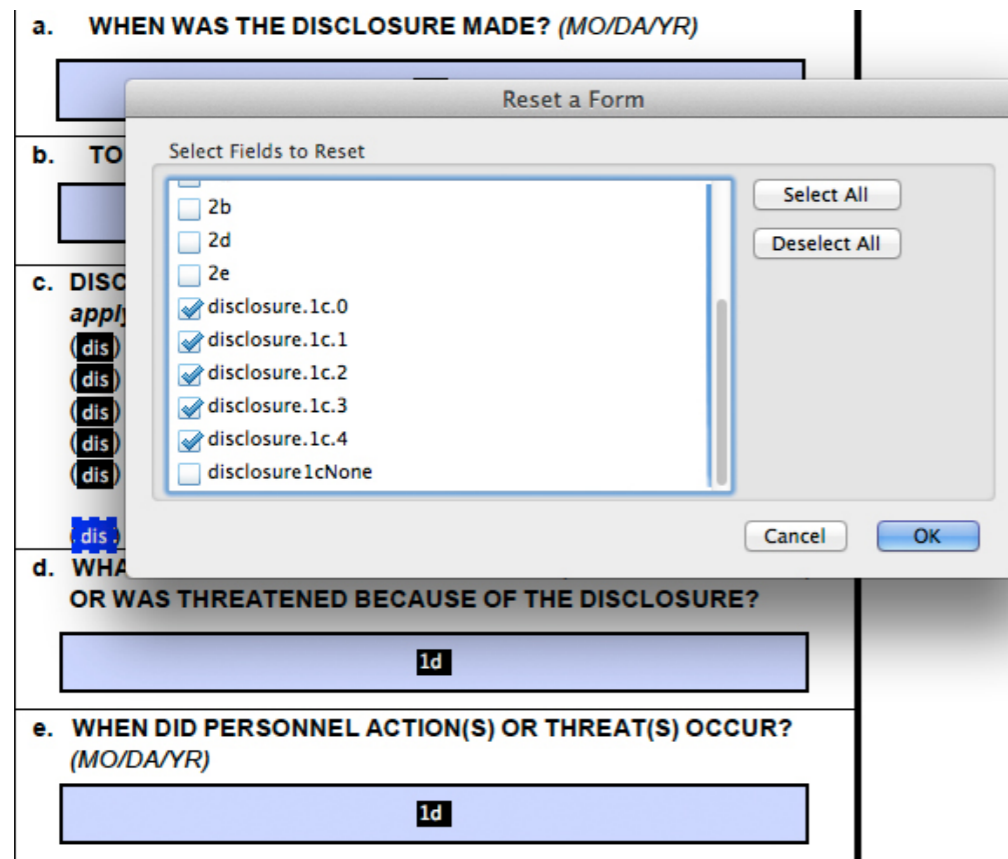
At this point our first five fields are non-exclusive and when any of the fields are checked, the NONE OF THE ABOVE field is cleared of data. The user is prevented from choosing the last field then another field where both check marks are visible. However, the user can click one of the first five fields, then click the last field resulting in a check mark for one of the first five fields and the last field.

We want to be certain that if a user clicks the NONE OF THE ABOVE field, all fields above this field are cleared of data. We had to first create all the fields in order to set attributes for clearing the NONE OF THE ABOVE field.

11. Select the last field and open the Check Box Properties window.

Click the actions tab and choose Reset a form from the Select Action drop-down menu. Click Add and check the first five fields in the Reset a Form window. Click OK and test the fields.

Figure 11.13 Resetting Multiple Fields



Check the fields to be reset

The user can click any or all of the first five fields and the NONE OF THE ABOVE check box remains unchecked. If the user clicks the NONE OF THE ABOVE check box, all fields are cleared and a mark appears only in the NONE OF THE ABOVE check box. If the user returns to one of the first five fields and checks a field, the NONE OF THE ABOVE field is cleared. Designing your forms to prevent user error is something you want to control whenever possible.

For creating the second section of fields, do not copy/paste the fields. You need to properly address all the field attributes and be certain clearing data is correct for the second group and doesn't interfere with the first group of check boxes. The best way to handle creating the second group of fields is to start over by adding new check boxes with the Check Box tool and follow the same steps as above

Working with Mutually Exclusive Fields in Tables

In Chapter 10 I talked about creating tables using the Create Multiple Copies command to populate a table with fields. The caveat when using this command is that it doesn't work when you have fields with identical names. As you know, mutually exclusive fields have identical field names but different export values. Therefore when you populate a table with mutually

exclusive check box fields, you need to work within some of the limitations of Acrobat.

To create a table containing some mutually exclusive fields, follow the same steps as outlined in Chapter 10 for creating tables.

However, exclude one of the mutually exclusive check boxes. For example if you have Yes/No columns. Create fields for all columns except the No columns. Populate the table using methods described in Chapter 10.

After the table is completed, Copy and paste the Yes columns, position the pasted fields in the table, and while the fields are selected, open the Check Box Properties. Click the Options tab and change the export value. For a No column change the export value from Yes to No.

There are many field attributes you need to change individually for a group of fields. However some attributes such as Export Value can be changed and applied globally to multiple fields.

Movie

Acrobat File Edit View Window Help

sf424CoreForm_extracted.pdf

Create [Icons]

1 / 1 [Icons] 300%

Forms Sign Comment

Application for Federal Assistance SF-4

*** 1. Type of Submission:**

- Preapplication
- Application
- Changed/Corrected Application

*** 2. Type of**

- New
- Conti
- Revis

*** 3. Date Received:**

Completed by Grants.gov upon submission.

4. Applicar

5a. Federal Entity Identifier:

Untitled

- Edit Text & Images
- Replace
- Edit Form
- More Form Options
- Page Templates
- JavaScript Debugger
- Debug from Start
- Edit All JavaScripts
- Document JavaScripts
- Set Document Actions
- Change Reading Options
- Accessibility Full Check
- Open Accessibility Report
- Add Tags to Document
- Set Alternate Text
- Run Form Field Recognition
- Add Tags to Form Fields
- Touch Up Reading Order
- Setup Assistant

8.50 in 11.00 in