Tips for Designing Templates for PrintUI

PrintUI is all about marrying the power of InDesign with a friendly way for end users to make their own customizations using a Flash-based web editorlication. Templates are simply InDesign documents in which you specify which layers and frames are customizable by your end users.

After you have downloaded and installed the PrintUI extension for InDesign CS5 or later, here are the steps for creating a template from any InDesign document:

1. Review the known issues listed below to make sure that they aren't present in your document.

2. While editing your document in InDesign, run the PrintUI management panel and click on *Prepare Template*. This will make a number of changes to your document to ensure compatibility with the PrintUI cloud service. The most visible change will be the creation of a background layer in your document.

3. Move the layers and objects that you want to be fixed and not editable by the end user into the background layer.

4. Lock any objects or layers that you do not want the user to be able to move or expand.

5. Preflight the document using the management panel. Correct any issues.

6. Use the management panel to upload the template to the PrintUI cloud.

7. Upload any fonts that are used by the template. You may want to also upload other styles within the font family (i.e. italic or bold) to allow the user to select them while customizing. Be sure that you have a license to use the fonts on a server and the license permits embedding them within PDFs.

8. Test your template by using your web browser to go to https://printui.com/private-demo.php. Be sure to download a PDF to make sure there are no embedding issues for the fonts.

PDF Size Restrictions

InDesign can have problems generating PDFs:

- When font sizes exceed 720 points.
- When the page size exceeds 200 inches (roughly 5 meters).
- When an image size exceeds 10,000 pixels. (Multiply the largest dimension in inches by the dpi.)

There is no way around these limitations. So if you need to create a PDF for a large application such as a banner or billboard, you'll have to create your InDesign template at a smaller size and then tell you print shop to scale it to the desired size.

However, in PrintUI's web editor, it could be confusing to end users if the font sizes were shown at the smaller size. To display the fonts at a size consistent with the desired output size, you can specify a scaling factor in the template settings in the PrintUI panel in InDesign. Say, for example, that you need to design your document at $1/10^{th}$ size in order to keep it within InDesign's restrictions. You would then set the PrintUI scaling factor to 0.1 in order for the font sizes to be shown at 10 times the size they are in the InDesign template.

Flash Variables

Some PrintUI customization controls can be invoked by setting "flashVar" options at the time that the web editor is launched within your web page:

- allowUpload = false disables the "Upload" button. This prevents end users from upload their own images to a document.

- allowNewText = false disables the "New Text" button to prevent end users from adding new text. They are still able to edit text within a frame, though.

- showTextPalette = false prevents the text palette from showing when text is edited to prevent the user from changing text styling.

- locale = "[language_CODE]" can be set to load a localized user interface. The default locale is US English. Currently we support Hebrew (he_IL). For example, to set the locale to Hebrew use *locale = "he_IL"*. New locales will be added based on demand.

You can find the complete list of Flash variables in the Web Application Run-Time Options documentation available at https://printui.com/developer.

Template Management

PrintUI allows for management of templates directly within InDesign. This makes for a very smooth workflow for template creation and management. The panel allows for uploading of templates up to the number allowed for your account's license.

Preflight
As part of the upload process, the PrintUI panel preflights and packages the template for use on the server. *Preflight* and *Package* can each be done separately, but it's not necessary as the upload will preflight and package automatically. Documents which don't pass preflight cannot be uploaded, so any errors encountered during preflight must be fixed. If preflight fails, the Management panel will bring up a dialog to assist in fixing errors.

Upload
Once a template is error free, it can be uploaded. Before you can upload a template you must log into your PrintUI account. To log in, use the panel flyout menu and select *Enter Login Credentials*. Once the credentials are entered once, an encrypted token will be saved on your computer to allow automatic login when the panel is opened at a later time. (Your password is not saved at all to ensure the highest level of security.) If you don't want automatic login, you must log out before closing the panel.

To upload a template, open it in InDesign and click *Upload*.   As part of the upload process, the panel will check that all fonts exist on the server. If a font is missing, you will be prompted to automatically upload the missing fonts. If the font upload is successful, the new fonts will appear in your font list. If the font upload fails, you will need to upload them separately using the management panel before you will be able to use your template.

If you get preflight errors, please see the *Troubleshooting Uploads* section below for some ideas.

Other Options
If you click on the *Templates* tab, you will see a list of all the templates currently available for use in your account. You will see three buttons for management of the templates:

1. *Download Template* Click download if you need to change something or to make a new derivative template from an existing template and it's not currently on your local machine.

2. *Test Template*   After you upload a template, we highly recommend that you test it to make sure everything works as expected. We do our best to ensure that the system is bug-free, but there are so many variables with complex documents that we can't be sure that you will not encounter unexpected issues. If you think you have found a bug, please make sure to let us know so we can address it!

   The test button opens the "private-demo" web page in your browser. You will need to log in, and select the template you need to test. (We do not currently automatically preload the selected template in the browser.)

3. *Remove Template*   Use this option with care! If you remove a template from the server that has customizations made by end users, all of their customized files will be lost! There will be no way of retrieving them, so make sure you fully understand the implications of removing a template before you do so.

Updating Templates

As mentioned above, if you remove a template you will also delete all of the customized jobs that had previously been created by your end users. So if you want to update a template, you should never first remove it before uploading the new version. Instead you should simply upload the new version using the same name as the old template. However, you must follow certain guidelines in order for the existing jobs to work properly:

- The revised document size must be exactly the same size as the old template. And the units (inches, picas, centimeters) must also be the same.

- You must keep the same text and image frames as were in the old template.

- You can change the background and non-printing layers as much as you want.

If you want to be very careful that you aren't going to affect any of the existing customized jobs for the template, though, you are better off uploading your new version of the template with a new name and leaving the old one alone.

Complexity Score

When you upload your template, a "complexity score" gets calculated that lets us determine how long it should take to generate a PDF or IDML file on the PrintUI servers. By default, we assume that the complexity of your template at the time you upload it is comparable to the complexity that it will be once your users are finished making changes in the web editor. However, that may not always be the case. Depending on the nature of your templates, your users might make extensive edits which you may not always be able to predict. For example, perhaps they add huge images or complex vector art. In that case, the complexity at upload time won't match the complexity of the customized template,

so you will get timeouts when the PDF or IDML file gets generated. If that happens to you, there are a couple of things that you can try:

- In the Template Options dialog, change the selection in the "Content Type" dropdown from "Stable" to "Unpredictable" content. This causes the complexity score to be calculated differently (which, by the way, takes longer to compute) and usually results in a higher score.

- Ask your web developer to set the "process" parameter for the requestpdf API to "complex" when they generate a PDF. Note that doing so will put your job into the queue with the lowest priority which means that if the server is very busy processing jobs for other clients, that your job could be delayed. We feel that this is a fair compromise, though, since we don't want to slow down everyone else's jobs for your overly complex jobs.

Images

When you are designing your templates, you can substantially improve the performance of your templates by avoiding certain issues with images.

In general, there is no benefit to using huge images—images that are much larger than the area where they are placed. For templates designed to be output on a printing press, images should be 200 to 300 dpi at the size that matches their placement on the page. For example, let's say that you have a template designed at 8.5 by 11 inches and you have an image that is used to fill the entire page background. At 300 dpi, the image should be no larger than 2550 (8.5 x 300) by 3300 (11 x 300) pixels. If the image is to be placed on only a quarter of the page, 4.25 by 5.5 inches, the size should be no larger than 1275 by 1650 pixels at 300 dpi.

You can require that the images that are in your template meet a minimum resolution. In the PrintUI Management panel in InDesign, click on Setup and then Template Options where you will see Preflight Options. Change those values to whatever makes sense for your final high-resolution, print output.

Note that you can also specify the minimum resolution for images that your end users upload into the template by using the imagePpiLimit "flashVar" option at the time that the web editor is launched within your web page. Use the limitImageResize flashVar to enable it.

There is one additional "flashVar" option called placeImagesFullSize that might be useful. When images are changed by your users, they are normally fit to the frame. By using placeImagesFullSize the new images will instead be placed at full size. This is useful for templates where the frame has been designed for images of a specific size.

You should avoid uncompressed images, such as uncompressed TIFF, BMP, or many PSD files, because they can take a large amount of disk space and they also take longer to be uploaded or downloaded over the Internet. JPEG images are

preferred because they tend to have the highest compression. And once an image is printed on paper, it is extremely difficult for someone to discern any artifacts caused by compression as long as the JPEG has been sized properly at 200 to 300 dpi and saved at a high quality level for the compression.

Although InDesign does support vector images, such as EPS, AI, and PDF images, these types of images can sometimes execute very slowly depending on their complexity. The problem is that you can't really tell by looking at it how long it will take. Something that may look fairly simple on your screen might actually be very complex in nature. And an overly complex image can cause your jobs to time out when it comes time to download the final high-resolution JPEG or PDF. To avoid this issue, we recommend that you convert your vector images into either JPEG or PNG images. JPEG images are preferable because they compress better than PNG. But if your image has any transparency, you must use PNG. You should size the JPEG or PNG using guidance provided in the paragraph above.

Fonts

In addition to a standard set of fonts available for use by any template, PrintUI supports uploading custom fonts to the system. Each client's fonts are specific to their account and will not conflict with other clients' fonts. Fonts can be managed directly within the InDesign panel. To manage your fonts, click on the Fonts tab. The panel allows for three font related actions:

1. *Upload Font*   Allows you to select a font file to be uploaded to the PrintUI cloud for use with the system. As soon as it's uploaded, it can be used in templates.

2. *Remove Font*   Allows for the removal of a previously uploaded font. Be very careful with the use of this action. If the font has been used by a template, the template will no longer render correctly once the font has been removed.

3. *Download Font* Allows for downloading of a font previously uploaded to the system for use on your local machine.

Please read the following guidelines for uploading and using custom fonts:

1. It is your responsibility to ensure that you have the correct license to be using your fonts on the system. Generally, font developers require a license which allows embedding the fonts as well as a special server license.

2. Only Windows Truetype and OpenType fonts are supported. Postscript fonts, pre Mac OSX Truetype fonts, Mac "dfont" Truetype fonts, Multiple Master fonts and the like are all not supported. If you use one of these fonts in your document it should fail preflight.

3. The fonts must be embeddable within PDF files. If they aren't, you will get an error message. (Fonts are marked inside the font file to indicate whether they are embeddable or not.)

Designing Resizable Templates

In order for a template to be resizable, all objects must be specified as being scalable using InDesign's liquid layout feature prior to uploading it. And all background objects must be unlocked.

Here are the steps to making a template resizable:

1. Open the template document in InDesign.
2. Unlock all objects in the Background layer.
3. Select all objects using Edit/Select All.
4. Click on Layout/Liquid Layout.
5. Set the liquid page rule to Scale.
6. Save the document and upload it using the PrintUI panel.

There are two ways that InDesign Server APIs can be used to do resizing. Either just the output (e.g. PDF or JPEG output) can be resized or the job itself can be resized. In both cases, the width and height can be changed either to specific point sizes or a scaling factor can be applied. To resize just the output, a "resize" parameter can be passed to the APIs that are used to request the type of output you desire (e.g. the *requestpdf* API). To resize the job itself, the *requestresize* and *getresize* APIs must be called. There are a couple of advantages to resizing the job itself. First, if a job is resized prior to showing it in the PrintUI web editor, your users will see exactly how it will look. Second, if a user adds an image to the resized job and you have specified a minimum resolution, the editor will check to make sure that the image is acceptable for the new size.

InDesign Feature Support

The PrintUI web editor cannot mimic every feature of InDesign, partly due to limitations of Flash itself, and partly because it would take many, many years of effort to match every feature that Adobe has created. With that said, we are dedicated to continuously improving our web editor and supporting more and more of InDesign's feature over time. For details about what we have recently added or plan to add, please see the roadmap document available at https://printui.com/developer .

Troubleshooting

While you are uploading templates, you will sometimes get an error message during the preflight. Many times the error message will be self explanatory. However, some of the error messages, such as "uncaught Javascript exception," will be less than helpful. Or the template may upload, but then produce strange results in the web editor or in the final PDF.

Some common problems to watch for:

- Font issues such as…

    o Mixing TrueType and OpenType fonts for the same font family. InDesign gets confused when you do this. All fonts in a single font family ("Arial" is an example of a font family) should all be either OTF or TTF.

    o Using the Arial Black font in your template. InDesign gets confused.

    o Using bad fonts, such as really old Postscript fonts that have been converted into OTF or TTF format. Many times the font information embedded in the font is incorrect.

    o The best solution to font problems is to obtain a complete family of fonts all at one time and in OpenType format. Using the PrintUI panel in InDesign, be sure to delete all of the old versions of the fonts before uploading the new ones.

- Using a feature that PrintUI's web editor doesn't support such as…

    o Using spreads or facing pages in your template.

    o Using stroked text where the text is drawn using vector paths.

    o Text on a path.

    o Using gradient transparency.

    o Multiple references to the same linked image.

- Other things such as…

    o Accidentally opening the document from PrintUI's packaging folder rather than the actual document in the original folder.

    o Links to files on networked drives. All linked files should be in a local folder.

    o Objects that are very tiny or have zero width.

- The ZIP created as a result of PrintUI's packaging is larger than the 800 MB upload limit due to using extremely large images.

- Duplicate frame names.

- Or sometimes the InDesign document simply becomes corrupted. This is a known issue with InDesign and can be made worse by opening a document that was created in an older version of InDesign. These are the steps that we recommend to clean out any corruption:

  - Use the InDesign package feature to copy the document and all assets to a single location.

  - Try to save the document as IDML and open and package that.

  - Copy all pages to a new document. Start with a new document that has the same page size and then add your content. You should be able to just drag your pages into the new document.

If none of these work, divide and conquer. Delete half the document and try to package. Then delete half of what does not work, and again half until you find the problematic piece. Or you can try using different fonts.