in-tools.com

Reflective Objects

Reflective Objects

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What's A Reflective Object?

The need for reflective objects might not be apparent at first, but we are confident that once you start using them, you will not know how you worked without them!

Simply put: a reflective object is any page item which keeps its page position relative to the spine (whether it's a text frame, graphic, etc.).

Even guides can be set as reflective, so you don't need to create separate masters just because you need a different set of guides in part of your document.

But Who Needs Them?

When laying out documents with facing pages, design elements which have a distinct position relative to the spine are usually present. For example, look at the placement of the number tabs in this manual. While in many situations, creating design elements on master pages is ideal, often it is not. A primary example is master text frames.

The problem with these elements become apparent when pages are added or removed. Very often a recto page becomes a verso page or vice versa. This causes the layout to become reversed. Correcting these pages can be an extremely time consuming process! Defining these objects as "reflective" causes them to take a mirrored position when the page changes sides.

To illustrate this point, we are including two screen shots of a document which uses *Reflective Objects* for positioning graphic elements in the side bar area. In this document, these elements couldn't be created as anchored objects because of the text wrap applied to many of them. When the top right page was removed from the figure on the left, the layout on all the following

pages was automatically adjusted as shown in the figure on the right. A special thank you to Brad Walrod for providing these illustrations.

Before   After

Another use for reflective objects is simplifying symmetrical design. Design elements which appear in symmetrical positions on both recto and verso

pages only need to be created once. After creating them on one side, they can be copied to the facing page en mass, and each object will take an opposing position to its original! The page number tabs and headers in this manual for example, were created using this method.

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Installation

Reflective Objects was developed using a product called "APID ToolAssistant" created by Rorohiko. This necessary central controller does a lot of the low-level processing. *If you are interested in the technology behind the development, you can read the addendum on .*

All the necessary components of *Reflective Objects* are installed in a single step by our installers. The installer includes APID ToolAssistant as well.

To run the installer, simply double click on the installer package on Macintosh or the installer wizard on Windows, and it will walk you through the few steps required.

Macintosh Install
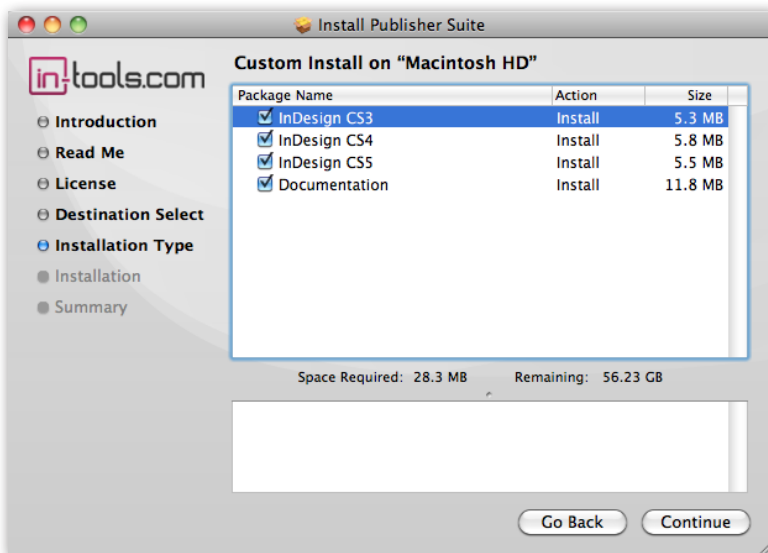
On Macintosh you will be offered the option to install on CS3, CS4, or CS5 as shown above. The option to install any version not currently installed will

be greyed out. We advise that you keep the option to install the documentation checked.

▮▮▶ *Please note: If your installation of InDesign is not in the default location, you will not be able to install on Macintosh! Before running the installer, make sure InDesign is located in: /Applications/ Adobe InDesign CSX.*
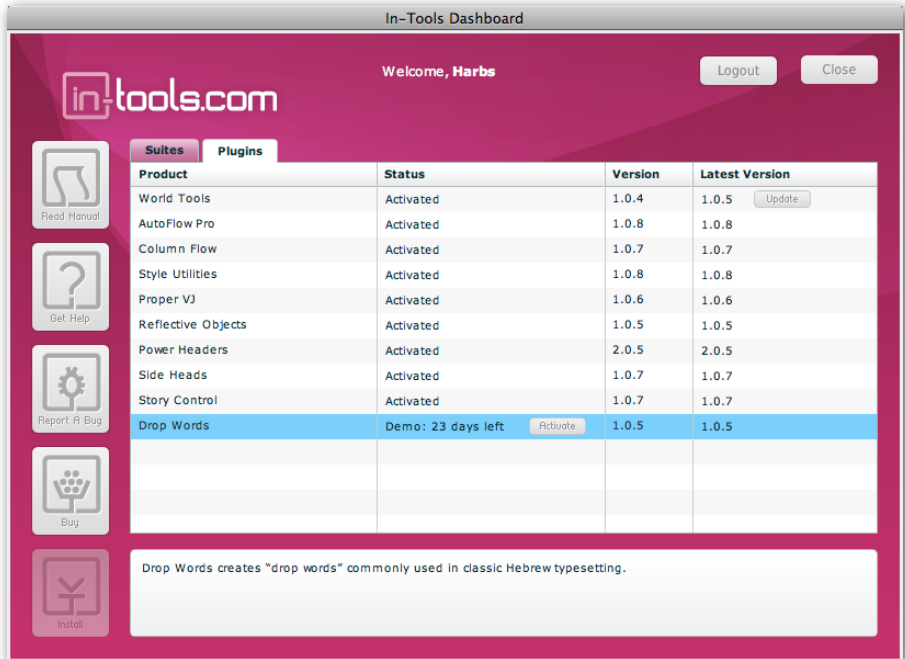
Windows Install
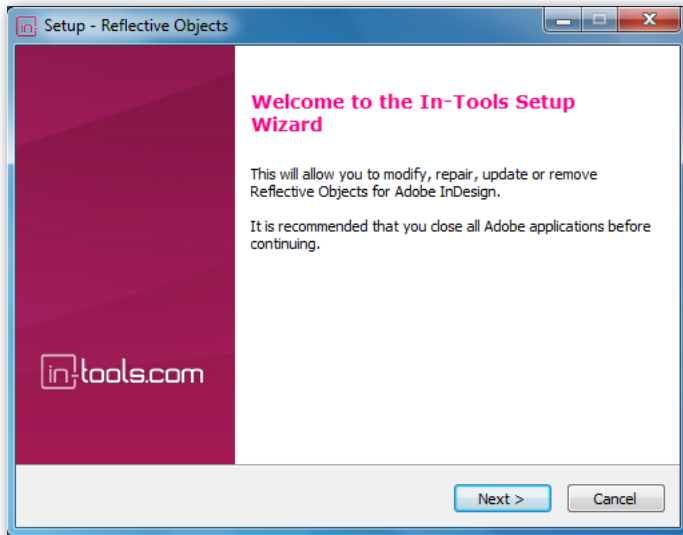
The Windows installer has the additional step that allows you to select your InDesign folder:
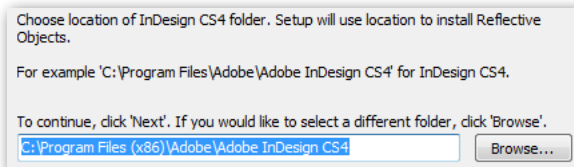
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Purchasing Licenses and Activation

In-Tools suites and plugin are activated from within InDesign using the In-Tools Dashboard. To access the Dashboard, select "InTools ➤ In-Tools Dashboard…". That will bring up the following dialog:

The Dashboard shows all the information you need to know about your plugins (or suites). To activate, simply click on the "Activate" button next to the product you would like to activate. If it is installed as part of a suite, all the components of the suite will be activated as a whole. Wait a few moments while the activation process completes. When it does, you will need to restart InDesign.

To activate, you must have a valid In-Tools account, and you will need to log in from the Dashboard:

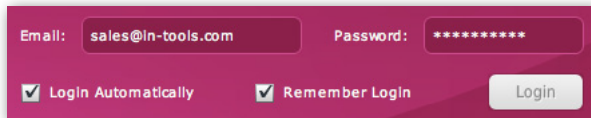We recommend keeping both the "Login Automatically" and the "Remember Login" check-boxes checked. This will ensure you are always logged in when the dialog is opened (assuming you have an internet connection). If you try to log in with an email account which is not registered, you will be given the option to create a new account.

You also must have purchased a license of the plugin to activate it. If you have not yet purchased a license, you can do so using the "Buy" button:

For further questions and issues regarding licensing and activation, please refer to the FAQ web page; or for more help, please visit our forum.

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Okay. So, How Do I Use It?

Basic Application of Settings:
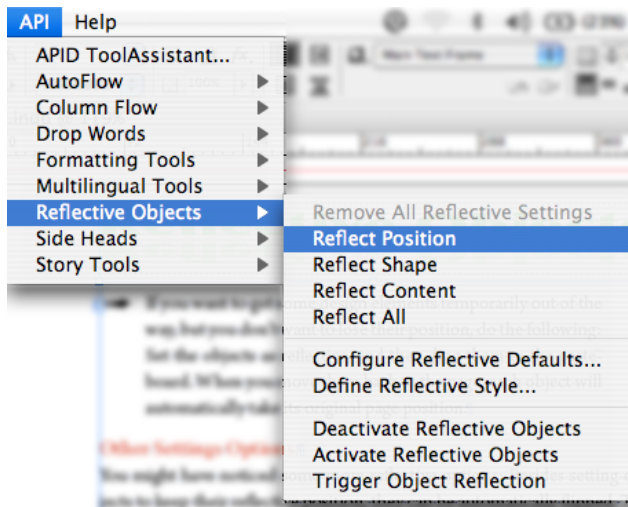
Using *Reflective Objects* is very easy. Objects can be set either by selecting the menu command, or by right clicking, and selecting from the context menu. Simply select an object (or multiple objects), and select InTools ➤ Reflective Objects ➤ Reflect Position. Removing settings are done the same way.

Using Reflective Objects:

Once an object is set to reflect, it can be moved around like any other object. The plug-in works in the background keeping track of its position. If the object is moved to an opposing page—either manually, or by adding/removing pages — it will immediately jump to the correct position. The same is true for objects which are copied and pasted.

▮▮▮➡ If you want to get some design elements temporarily out of the way, but you don't want to lose their position, do the following: Set the objects as reflective, and then drag them to the pasteboard. When you move them back to the page, each object will automatically take its original page position.

Other Settings Options:

You might have noticed some more reflective options: Besides setting objects to keep their reflective position, they can be automatically flipped. The four reflective settings are as follows: *Reflect Positions* keeps the position. *Reflect Shape* will flip the frame but not the content. *Reflect Content* will flip the content but not the frame. *Reflect All* will flip both the frame and the content.
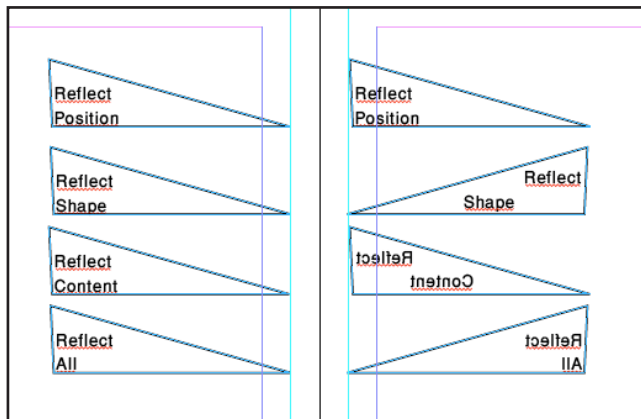
In the above screen shot, the items on the left are the original objects and a guide. The objects on the right have been reflected by duplicating the

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left page. Quite obviously, reflecting content is much more appropriate for objects than for text!

Reflective Defaults:
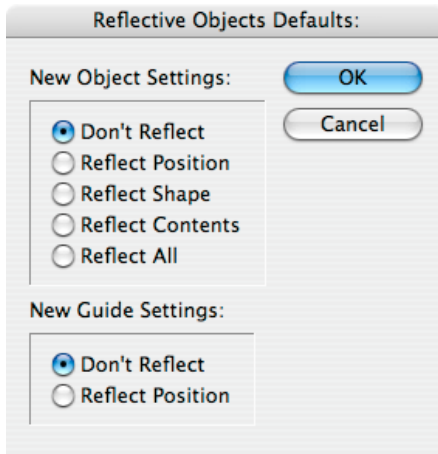
Reflective settings can be set for newly created objects by changing the "Reflective Object Defaults". In the screen shot above, notice that the defaults can be set separately for objects and guides. Object defaults can be set to one of five settings. There are only two settings for guides, as they don't have shape or content.

Default settings only affect new objects created after changing the default settings. Existing objects remain with whatever settings were applied.

Object Style settings (see below) supersede the default settings. This means that if your default object style (the one applied when creating new objects) has a reflective property, the setting of the object style will be used.

Setting Object Styles:

The full power of reflective objects can only be realized by using object styles.
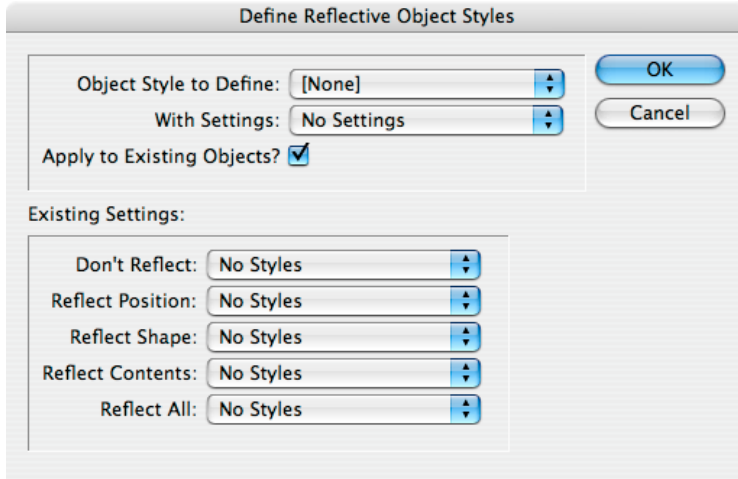
In the above dialog you will see two distinct sections. The top half is where you define the settings, while the bottom half is strictly informational. (Changing the selections in the drop down lists does nothing.)

To define reflective settings for an object style:

1. Select your style from the top drop-down list "Object Style to Define".

2. Select the appropriate setting from the second drop down list "With Settings".

Please note: There is a distinct difference between "No Settings", and "Don't Reflect". If "No Settings" is selected, new objects created with the selected style will have the settings defined as your defaults. If "Don't Reflect" is

selected, new objects will not reflect regardless of your defaults. Additionally, applying an object style which is set to "Don't Reflect" will remove any reflective settings, while applying ones set to "No Settings" will preserve prior settings.

3.   To apply the settings to existing objects of the selected style, check "Apply to Existing Objects". If you just want to create settings for new objects, uncheck the option.

Libraries

Reflective objects can be saved in a library, and will retain their reflective settings. However, they will not retain their position information when placed in a document. After placing objects from a library, the new position information may not be recorded for up to a second or so. Make sure not to move newly placed objects for a second or two.

Book Files

When changing page numbers in book files, the page sides might change. To insure that objects reflect properly when adding documents to a book, or updating page numbers, make sure the documents are open. If they are not open, the objects will not reflect. If for whatever reason reflective objects did not reflect when they should have, it is still possible to force them to reflect manually. Simply select: InTools ➤ Reflective Objects ➤ Trigger Object Reflection. This will only effect objects which changed page sides, but were not reflected. It will *not* effect objects which remain in their proper position. It is therefore safe to repeatedly select this menu option.

Transferring Documents

All reflective settings are stored within the document. These settings are saved even if the document is transferred to a computer which doesn't have *Reflective Objects* installed. The stored information includes each object's position and page side. Documents can therefore be successfully transferred without issues.

One issue which can come up is as follows: Lets assume the document is transferred to a computer which doesn't have *Reflective Objects* installed, and reflective objects are moved. When the document is transferred back to a computer with *Reflective Objects* installed, objects will have their original position stored. This can cause the object to move to unexpected places.

To solve this issue, reflective objects should be "Deactivated". All this does is erase the stored positions of all the objects in the document. To start recording position information again, simply select "Activate Reflective Objects". Deactivating reflective objects does not change the reflective settings. They remain reflective. It simply removes the information of where they are positioned.

Another reason you might want to deactivate objects would be for copying between documents. If you copy a reflective object to an opposing page *even in another document, Reflective Objects* will attempt to move it to its reflective position. This might cause you to have to fight against *Reflective Objects* for correct positioning in the new document. One way to avoid this, is to deactivate all reflective objects in the source document before copying the objects. Another way would be to deactivate the objects in the target document.

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Please note: The deactivated state of reflective objects is a document-wide setting. All objects in a deactivated document will remain deactivated until the document is activated once more. Objects copied between documents will take on the activated state of the target document. For example: an object copied from a deactivated document to an activated one will become activated. However, the position of the object will be the *new* position, not the old position in the deactivated document. An object copied to a deactivated document will become deactivated, and no positioning data will be recorded. Copying objects between two activated documents will have the same effect as copying objects to another page in the same document.

CS3ME users please note: Winsoft changed behavior in right-to-left documents in CS3 version 5.0.1. Previously, the zero point of the document was at the top left in all documents regardless of document direction. In version 5.0.1, the zero point was moved to the top right on right-to-left documents. This causes all measurements on the page to be negative numbers. When changing document direction, all the reflective positions become invalid. If you are using *Reflective Objects* in CS3ME version 5.0.1 you *must* reactivate objects after changing document direction. **Failure to do so may cause objects to disappear!** This issue has been fixed in the 5.0.2 update. We strongly advise updating to 5.0.2.

Scripting

Applying Settings

The main functions of *Reflective Objects* can be accessed through scripting. To apply reflective settings to objects, simply append one of four strings to an object's label: "`<ReflectiveObject1>`", "`<ReflectiveObject2>`",

"`<ReflectiveObject3>`", "`<ReflectiveObject4>`". These labels correspond to the four reflective options in order. So an object with a script label which contains `<ReflectiveObject1>` will be set to reflect position, and so on. Simply applying the script lables will just assign the objects as being reflective. They will not cause any position data to be recorded. To insure that the data is recorded, and the objects will be automatically reflected, make sure to modify them in some way after the label is changed *or* manually activate the reflective properties of the reflective objects. (see below).

Using Event Handler Codes

Besides applying the settings to the objects, the plug-in can be communicated with directly. This is accomplished by sending *event handlers* to the plug-in.

To send an event handler to *Reflective Objects* you must first get a reference to the plug-in. The plug-in is accessed using the document loaded plugins method. The correct syntax in Javascript would be: `doc.loadedScriptedPlugins ("reflectiveobjects")`. In AppleScript that would be (within a document "tell"): `loaded scripted plugins label "reflectiveobjects"`. No matter which scripting language is being used, the plug-in is returned as a single-item array. So if you get a reference to the first item of that array you then have a valid reference to *Reflective Objects*. To further illustrate this point, this line of code (assuming a valid reference to a document) will return a reference to *Reflective Objects* in javascript:

```
var reflectivObjectsPlugin=doc.loadedScriptedPlugins("reflectiveobjects")[0]
```

Once you have a reference to the plug-in, you can then send event handlers to the plug-in . There are three different event handlers which can be used:

externalReflectObjects, externalDeactivateReflection, and `externalActivateReflection`. These three event handler codes correspond to the three last menu options under Reflective Objects namely: "Deactivate Reflective Objects", "Activate Reflective Objects", and "Trigger Object Reflection". To send the event handler codes to the plug-in you should do something like this:

```
reflectivObjectsPlugin.handleScriptEvent ("externalReflectObjects")
```

The event code "`externalReflectObjects`" is used to simulate the effect of modifying all reflective objects in the document. This is useful to force the immediate reflection of objects within a script. The reflection normally happens at idle time, and if a script closes the document or makes modifications too quickly, the reflection may not happen automatically. Another situation where you would want to invoke this event handler, would be when book documents have been updated while they were closed. As explained in section on books, changing book files while the documents are closed will cause them to not be reflected automatically. Invoking `externalReflectObjects` will fix this issue.

If your script will be moving around objects, and you do not want to fight *Reflective Objects* for positon of the objects make sure to invoke "`externalDeactivateReflection`" before moving things around.

The event code "`externalActivateReflection`" commonly has two uses. First of all it should be used the same way Activate Reflective Objects is used in the user interface: to activate reflection after it has been disabled. The second use in scripting is to cause the position data to be written when objects are assigned reflective properties by changing their script label.

For further illustration on scripting Reflective Objects download the sample scripts from In-Tools' website.

Addendum

What is "APID ToolAssistant"?

Classically, there are only two ways to automate InDesign. One way is by scripting. Scripts are a series of commands written in one of the three supported scripting languages — AppleScript for the Macintosh, Visual Basic for Windows, or ExtendScript for both platforms. ExtendScript is Adobe's version of javascript. For scripts to run, they must be placed in the application script folder and explicitly run. For automation to be truly automatic, it requires "event processing". This means that certain events trigger specific processes to take place. There is limited event-triggered scripting available in CS3.

To achieve true integration, plug-ins must be programmed using C++. Developing C++ plug-ins is a very involved, and lengthy process. APID ToolAssistant is a plug-in which allows very fine grained event processing using ExtendScript. It allows for creation of advanced plug-ins in a fraction of the time required when programming using C++. It also aids in the creation of hybrid plug-ins which mix ExtendScript and C++ for maximum efficiency.

Without the APID ToolAssistant, it would not have been possible to create the collection of plug-ins we offer in the same amount of development time. This increased programming efficiency means more functionality for the end user and lower prices.

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Additionally, APID ToolAssistant offers the ability to attach scripts to specific objects. These attached scripts can be run automatically when triggered by specific events. Anyone who has a licensed version of the APID ToolAssistant plug-in installed can create and use these attached scripts. There are also additional scripting properties and methods which are usable by scripters. For more information see Rorohiko's web site.

Acknowledgements

We wish to thank the many people who have helped make In-Tools plug-ins possible.

To those who give graciously of their time and expertise on the InDesign scripting forum: thank you for introducing us to automating within InDesign. Most specifically, Dave Saunders, Olav Kvern, and Peter Kahrel.

To Kris Coppieters, thank you for your incredible support throughout the entire development process. Your help with product improvements and with coding tips and techniques has been incredible. Your support has been above and beyond what we could have reasonably expected. It has really been a pleasure working together. Thank you.

To all our beta testers, thank you for the valuable input which helped shaped our plug-ins. To Brad Walrod: a special thank you for your unrelenting comments and suggestions. To Peter Gold and Raphael Freeman: thank you for your many useful suggestions.

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