Vancouver Response Center
T. 604.451.2727
Toll free T. 1.800.472.2727
F. 604.451.2713
Toll free F. 1.888.767.2736

Customer support email:
callcentre@creo.com

www.creo.com

Document number: 719-00018A-B
Release date: April 30, 2003

Technical bulletin

Using Prinergy's Advanced Production Automation Feature

What is Advanced Production Automation?

Advanced Production Automation (APA) is a licensed Prinergy® feature that lets Prinergy automatically assign pages to page set positions and assign page geometry to pages. In some cases, you can automatically create page sets. APA is a powerful tool for automating the Prinergy workflow.

Note: The Advanced Production Automation feature was previously called Automatic Property Assignment.

Advanced Production Automation instructions can be created in any of the following ways:

- You can create an APA file in a text editor. APA files can be used in Prinergy versions 2.x and later. For more information, see *Creating an APA File in a Text Editor*.
- You can export a JDF (job description format) zip file containing pageset and page assignment information from the Creo Page Assigner software, then import the zip file into Prinergy. Page Assigner information can be imported into Prinergy versions 2.1 and later. For more information, see *Importing Pageset and Page Assignment Information from Creo Page Assigner* .
- You can create a populated job ticket in the Preps® imposition application (version 4.2), then import the populated job ticket into Prinergy. Populated job tickets can be imported into Prinergy versions 2.1 and later. For more information, see *Importing a Populated Job Ticket*.

Why Use APA?

Assigning pages and setting page geometry automatically means these processes can be done faster and with fewer errors.

The APA feature can be used in combination with hot folders and workflow plans to process jobs with a minimum of operator input.

Before You Can Use APA

Before you can use APA, you must purchase the feature and enter its license key in Prinergy Administrator. For more information about entering license keys, see the Prinergy Administrator online help.

Before you can import pageset and page assignment information from Page Assigner:

- In Prinergy Administrator, the **Import Pageset** check box must be selected for an Import/Export JTP.

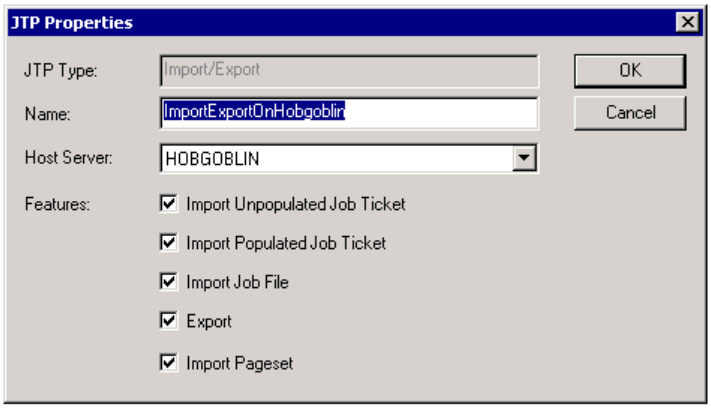


Figure 1: Selecting features for an Import/Export JTP

Before you can import a populated job ticket:

- In Prinergy Administrator, the **Import Populated Job Ticket** check box must be selected for the Import/Export JTP. See Figure 1, above.
- For the Macintosh only, the SFMHOSTS file must be correctly configured by setting the mapping of the Mac zone to the W2K server. The syntax is `"zone:sfmservername"="ntservername"`. For example, if you have an W2K server named CWA420 in the Production zone, the entry in the SFMHOSTS file would be `"Production:CWA420"="CWA420"`. The SFMHOSTS file is located in **ARAXIHOME\CreoAraxi\etc**.

Turning the APA Feature On in the Process Plan

For the APA feature to work, APA must be turned on in the refine process plan before files are refined. Otherwise, page assignment and geometry assignment will not take place.

To turn on the APA feature, in the **Impose** section of the refine process plan, select one of the Automatic Property Assignment options. The two options are:

- **Automatic Property Assignment - Retain Assignments, Using Job Settings**—When you resubmit a page, for example, to re-refine a page that has been corrected, Prinergy does not automatically assign the page to a page position.
- **Automatic Property Assignment - Overwrite Assignments, Using Job Settings**—When you resubmit a page, Prinergy automatically assigns the corrected page to a page position, overwriting the existing page in the page set.

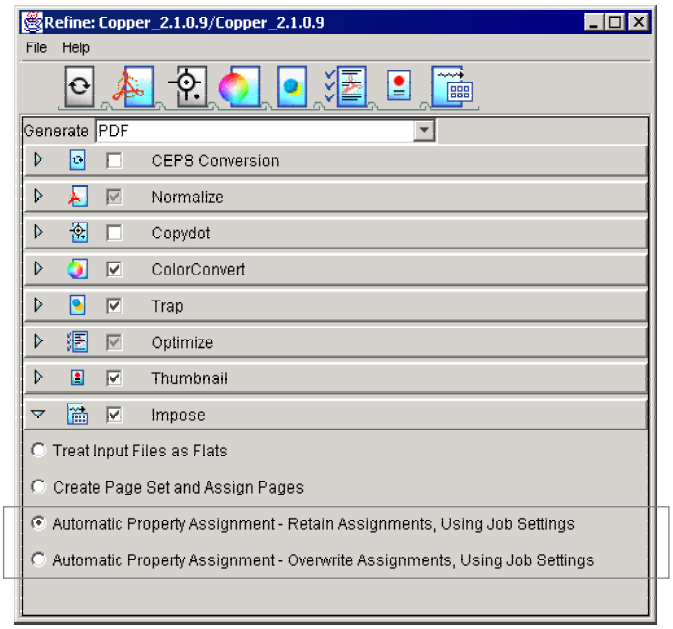


Figure 2: APA options in the refine process plan

Importing Pageset and Page Assignment Information from Creo Page Assigner

In the Creo Page Assigner software, you can add all the PDF files required for a publication, create one or more page sets, and assign the PDF files to the page sets in the desired order. Page Assigner saves this information as a JDF file. You can export a zipped version of this JDF file from Page Assigner, then import the file into Prinergy.

You import the zip file into Prinergy using the **Import Job (Incremental)** option on the **File** menu in Job Manager or by dropping the zip file into a hot folder to which an import process plan (Import or Import All) has been attached.

Prinergy uses the information in the zipped JDF file to automatically create one or more page sets and assign refined pages to page positions. An APA file is also created. Unrefined pages will be assigned once they have been refined, based on the instructions in the APA file.

For more information about Creo Page Assigner, see the *Creo Page Assigner User Guide*.

Important: APA must be turned on in the refine process plan for APA page assignment to take place. For information, see *Turning the APA Feature On in the Process Plan*.

The import process plan options determine whether existing page set, imposition plan, and page assignments will be overwritten by the imported information. For more information about these options, see Prinergy Workshop online help.

On the following page is a sample APA file created when Page Assigner information was imported into Prinergy.

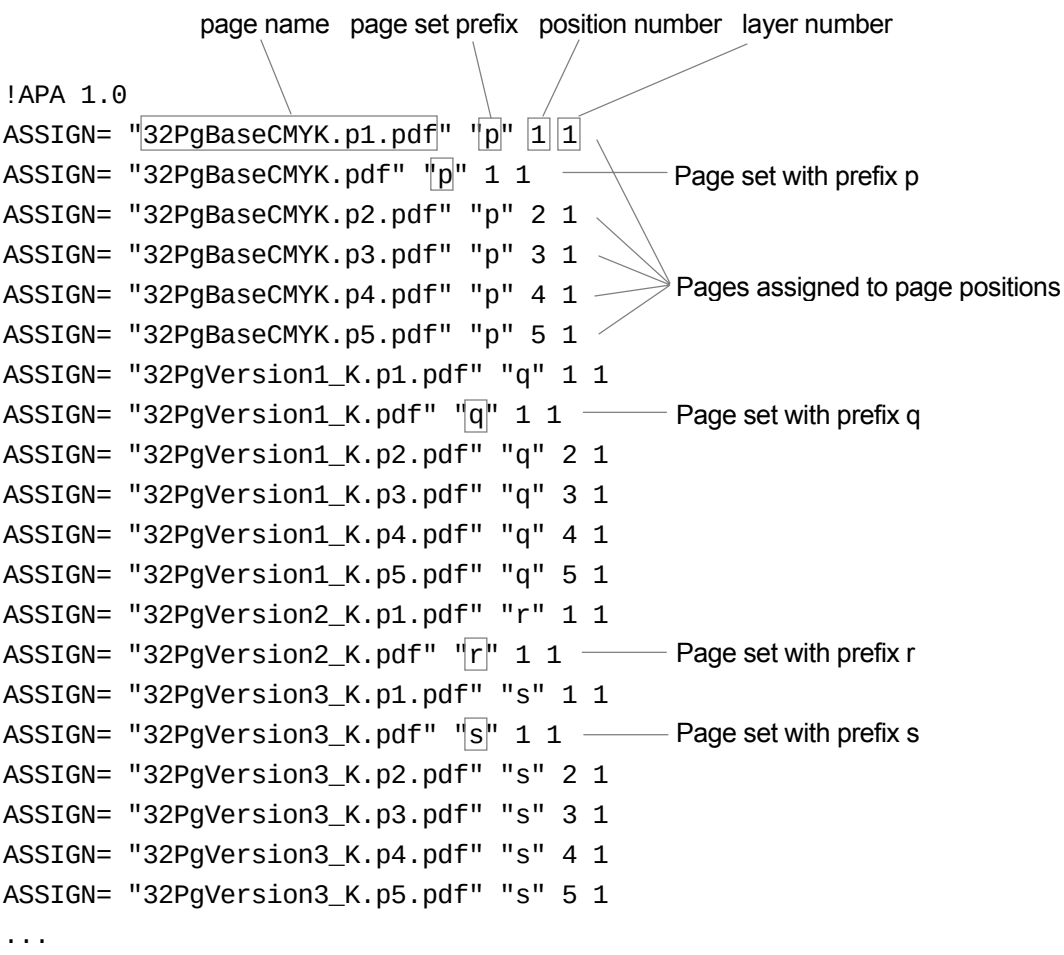
The basic syntax for the ASSIGN statement is:

```
ASSIGN=  page_name  page_set_prefix  position_number  layer_number
```

Thus, the first ASSIGN statement of the sample file assigns page 32PgBaseCMYK.p1.pdf to layer number 1 of position 1 in the page set that has the page set prefix p. For more information about APA file syntax, see the *APA File Syntax* section.

Multiple page sets, each with a different prefix, can be created in Page Assigner. The sample file contains four page sets, with prefixes p, q, r, and s.

Sample APA File



Example: Exporting from Page Assigner, Importing into Prinergy

This section describes the steps used to add pageset and page assignment information for an example publication in Page Assigner, export that information in a JDF zip file, then import the zip file into Prinergy.

The steps are:

1. Two PDF files containg the pages for a book were added in Page Assigner:
   - BookCovers, 4 pages
   - BodyPages, 16 pages
2. Two corresponding page sets for the book were created in Page Assigner:
   - Covers, prefix Aa, 4 pages
   - BodyPages, prefix Ab, 16 pages
3. The PDF files were assigned to positions in the page sets in Page Assigner in the desired order.

   (The information was saved as 'Book' in Page Assigner, creating the Book.JDF file.)

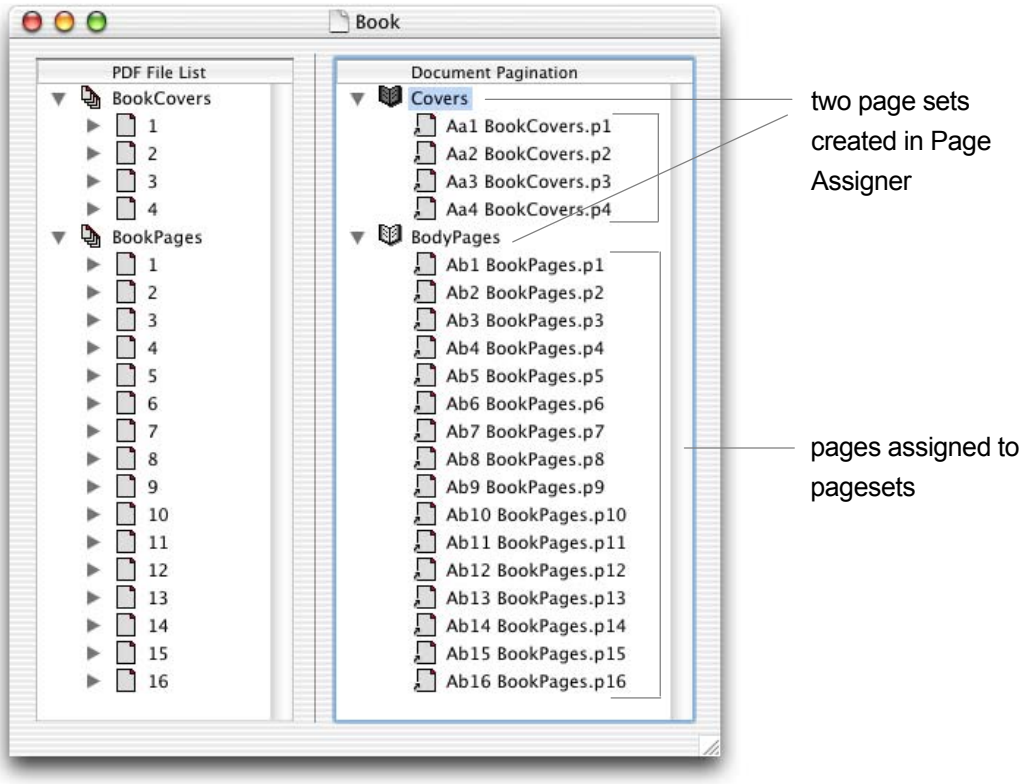


Figure 3: PDF file list (left) and pages assigned to page sets (right) in a Page Assigner window

4. The page set and page assignment information was exported from Page Assigner (**File > Export JDF Zip**).

5. The JDF zip file was imported into a Prinergy job, using the **File** > **Import Job (Incremental)** menu option in Job Manager.

   Note: Alternately, the zip file could be imported by dropping it into a hot folder to which an import process plan (Import or Import All) was attached.

   As a result of the import, two page sets were automatically created in Prinergy:

   - Covers (Aa1 - Aa4)
   - BodyPages (Ab1 - Ab16)

   The page sets appeared in the Page Sets pane in the Pages view in Job Manager.

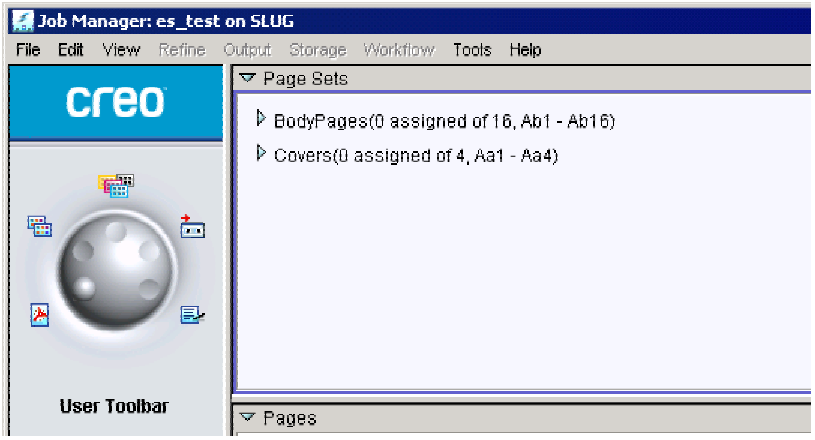


   Figure 4: Page sets created automatically in Prinergy when a Page Assigner JDF zip file was imported

   An APA file was also created automatically with the page set creation and page assignment instructions from the JDF zip file. The APA is shown in the *APA File For Example Job* section.

6. An imposition plan for the covers (named 4up-Cover) was imported into the job via the **Import Imposition** menu option in Job Manager, with the **Use Existing Page Set** option selected in the Import Imposition dialog box. (The existing page set for the covers was Covers (Aa1-Aa4), which was created when the Page Assigner JDF zip file was imported.)

   When the import process was complete, the imposition plan named 4up-Cover appeared in the Imposition Plans section in the Job Manager. The imposition plan used the Covers page set.

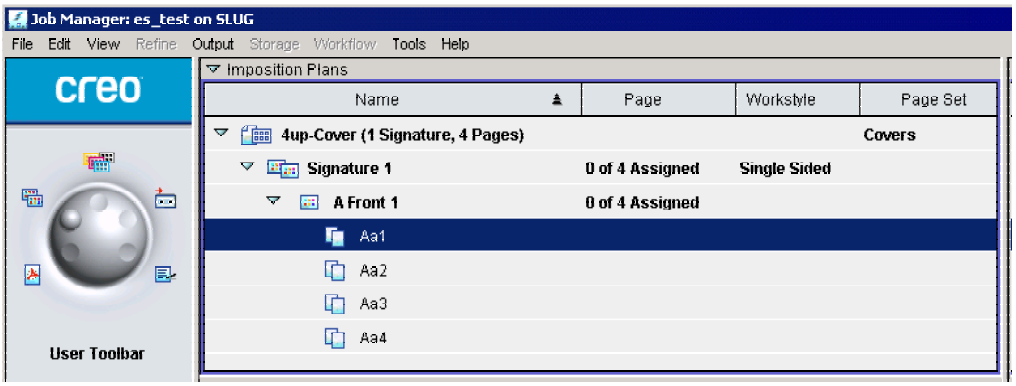


Figure 5: Imposition plan was imported with Use Existing Page Set option on

A similar process was followed to import an imposition plan for the body pages.

When the input files for the job were refined, the cover pages were automatically assigned to page set positions Aa1 to Aa4 in the Covers page set following the instructions in the APA file that was created at the time the JDF zip file was imported. The body pages were automatically assigned to page set positions Ab1 to Ab16, also following the instructions in the APA file.

APA File For Example Job

The following APA file was created automatically when the JDF zip file from Page Assigner was imported into Prinergy.

```
!APA 1.0
ASSIGN= "BookCovers.p1.pdf" "Aa" 1 1
ASSIGN= "BookCovers.pdf" "Aa" 1 1
ASSIGN= "BookCovers.p2.pdf" "Aa" 2 1
ASSIGN= "BookCovers.p3.pdf" "Aa" 3 1
ASSIGN= "BookCovers.p4.pdf" "Aa" 4 1
ASSIGN= "BookPages.p1.pdf" "Ab" 1 1
ASSIGN= "BookPages.pdf" "Ab" 1 1
ASSIGN= "BookPages.p2.pdf" "Ab" 2 1
ASSIGN= "BookPages.p3.pdf" "Ab" 3 1
ASSIGN= "BookPages.p4.pdf" "Ab" 4 1
ASSIGN= "BookPages.p5.pdf" "Ab" 5 1
ASSIGN= "BookPages.p6.pdf" "Ab" 6 1
ASSIGN= "BookPages.p7.pdf" "Ab" 7 1
ASSIGN= "BookPages.p8.pdf" "Ab" 8 1
ASSIGN= "BookPages.p9.pdf" "Ab" 9 1
ASSIGN= "BookPages.p10.pdf" "Ab" 10 1
ASSIGN= "BookPages.p11.pdf" "Ab" 11 1
ASSIGN= "BookPages.p12.pdf" "Ab" 12 1
ASSIGN= "BookPages.p13.pdf" "Ab" 13 1
ASSIGN= "BookPages.p14.pdf" "Ab" 14 1
ASSIGN= "BookPages.p15.pdf" "Ab" 15 1
ASSIGN= "BookPages.p16.pdf" "Ab" 16 1
! Prepending 04/11/03 17:21:45
```

Importing a Populated Job Ticket

A populated job ticket is created in an imposition application, for example Preps version 4.2, when real files (pages) are included in the Preps run list and the generated PJTF (portable job ticket format) file includes a UNC path to the run list files. The populated job ticket can then be imported into Prinergy using the **Import Imposition** option on the **File** menu in Job Manager.

Prinergy uses the information in the populated job ticket to create an APA file, then automatically assigns refined pages to page positions and geometry to pages according to the instructions in the APA file. Unrefined pages will be assigned after they are refined.

Important: APA must be turned on in the refine process plan for geometry and page assignment to take place. For more information, see *Turning the APA Feature On in the Process Plan.*

Each time you import a populated job ticket into a job, Prinergy adds the populated job ticket information at the beginning of the APA file, along with a comment to indicate that information has been prepended and the date and time, and increments the file to the next version number (Job.v1.apa, Job.v2.apa, and so on).

The APA file created from a populated job ticket includes page assignment (ASSIGN) and geometry (GEOM) statements for each page.

The *Sample APA File* section contains a sample APA file that was created when a populated job ticket was imported into Prinergy.

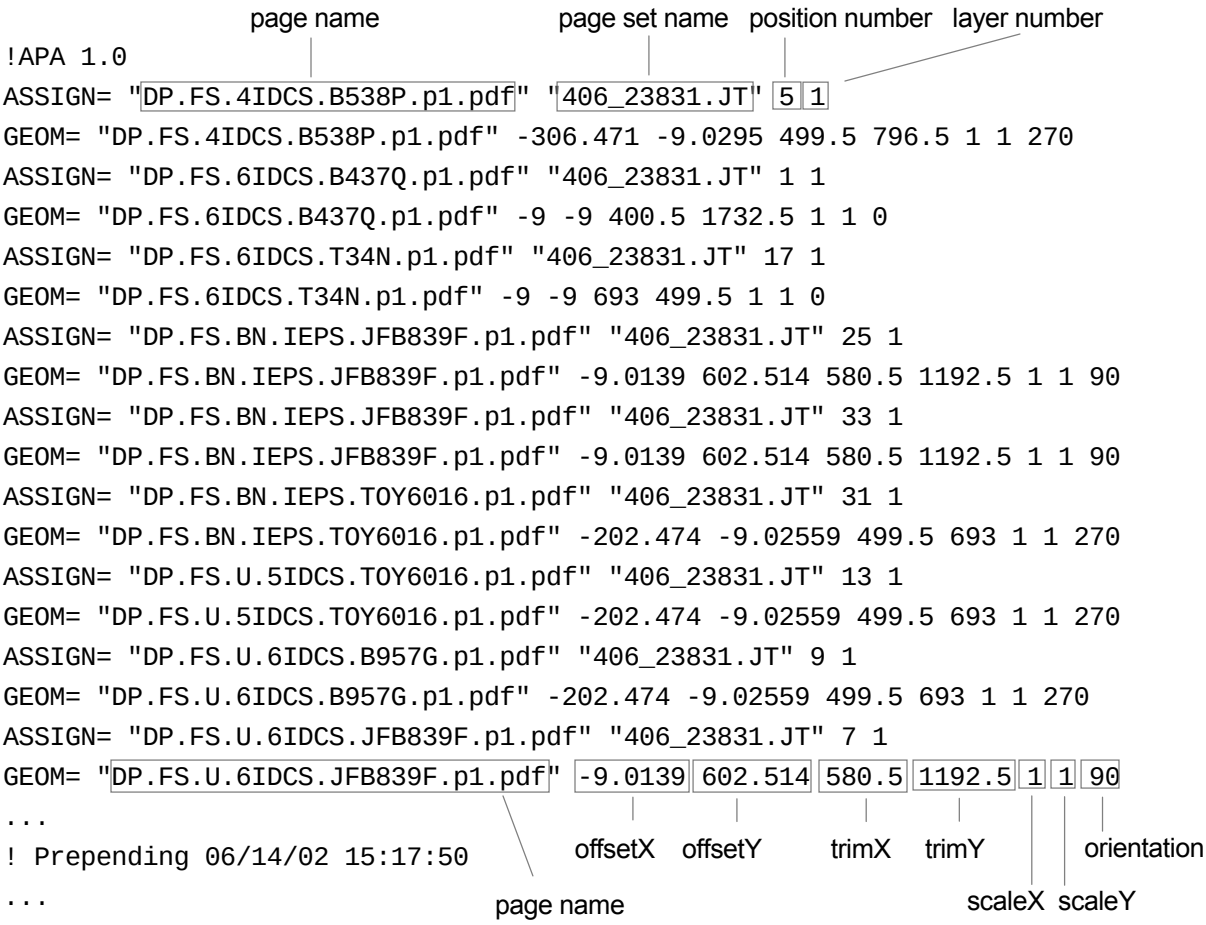
The basic syntax for the ASSIGN statement is:

```
ASSIGN=  page_name  page_set_name  position_number  layer_number
GEOM= page_name  offsetX  offsetY  trimX  trimY  scaleX  scaleY  orientation
```

Thus, the first ASSIGN statement in the *Sample APA File* section assigns page DP.FS.4IDCS.B538P.p1.pdf to layer 1 of page position 5 in page set 406_23831.JT. APA file syntax is fully explained in the *APA File Syntax* section, later in this document.

The final GEOM statement in the *Sample APA File* section assigns an x offset of -9.0139 points, a y offset of 602.514 points, a trim x of 580.5, a trim y of 1192.5, a scale of 100% (x and y), and a rotation of 90 degrees. The syntax of the GEOM statement is fully explained in the *GEOM Statement* section, later in this document.

Sample APA File



Creating an APA File in a Text Editor

Workflow

The following are the basic steps in an APA workflow in which the user creates the APA file in a text editor.

1. Create a job and add input files.
2. Create an APA file called **Job.apa** following the APA rules and syntax, and store the **Job.apa** file in the job's folder structure at <*job_name*>**Control**.

   Tip: You can edit the sample APA file that is automatically created in every new job. The **Job.apa** sample file is already in the <*job_name*>**Control** folder.
3. Import an imposition (PJTF file and marks file) into the job.

   When you import an imposition, Prinergy creates a page set containing the same number of pages that are defined in the imposition.
4. Refine the input files using a refine process plan in which Automatic Property Assignment is turned on.

   Prinergy uses the instructions in the APA file to assign the refined pages to page positions in one or more page sets and/or to set page geometry.

Creating the File

To create an APA file, use a text editor that supports Unicode or ASCII coding. For example, on a PC, you can use Windows Notepad or WordPad; on a Mac, you can use BBEdit.

The first APA file for the job must be named **Job.apa**. (The J must be upper-case.) If you have additional APA files for a job, include a version number in the filename, for example, **Job.v1.apa**, **Job.v2.apa**, and so on. Prinergy uses the newest time-stamped APA file, rather than the file with the highest version number. All APA files must be stored in the job folder structure at <*job_name*>**Control**.

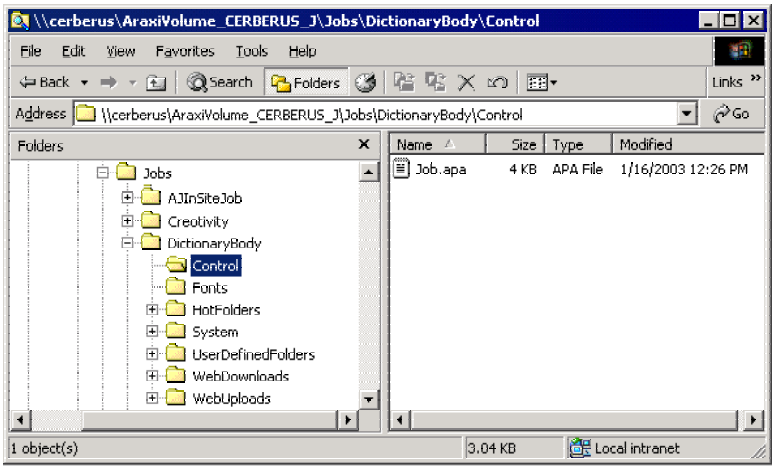


Figure 3: APA file (Job.apa) in the job folder structure

Note: If a text editor adds the '.txt' filename extension when you edit an APA file, you need to rename the file to remove the '.txt'.

APA File Syntax

This section describes the basic APA file syntax. An APA file can include an ASSIGN statement, a GEOM statement, or both. The *Summary of APA File Rules* section contains a complete summary of APA file syntax rules.

The following line must be the first line in every APA file:

```
!APA 1.0
```

To include a comment in the APA file, start the line with an exclamation mark. The APA feature ignores the entire contents of any line that begins with an exclamation mark.

```
!APA 1.0
! This is a comment line.
ASSIGN= page_name  page_set_name  position_number  layer_number
GEOM= page_name  offsetX  offsetY  trimX  trimY  scaleX  scaleY  orientation
```

In the ASSIGN statement, an alternative to using page set name is to use page set prefix:

```
!APA 1.0
ASSIGN= page_name  page_set_prefix  position_number  layer_ number
```

The *ASSIGN Statement* section, next, describes the ASSIGN statement parameters and gives an example. The *GEOM Statement* section describes the GEOM statement parameters and gives an example.

ASSIGN Statement

Parameters	Description
page_name	Name of the refined file, for example, "Book.p1.pdf". Page names that contain blanks must be enclosed in double quotes. We recommend you enclose all page names in double quotes. Page names can be set explicitly or using pattern matching, as described in the *Pattern Matching* section.
page_set_name Or; page_set_prefix	You can use either page_set_name or page_set_prefix in the ASSIGN statement. Name of a page set in the job, for example, "Book-8up" or "pageset1". Name of a page set prefix in the job, for example "p", "q", "r" ... Page set names or page set prefixes that contain blanks must be enclosed in double quotes. We recommend you enclose all page set names or page set prefixes in double quotes.
position_number	Position to which the page should be assigned in the page set, for example, 1, 2, 3, ...
layer_number	Number of the layer to which the page should be assigned, for example, 1, 2, 3... The layer number is relevant only in versioning jobs. The base layer is 1. Use 1 as the layer number for non-versioning jobs.

Example:

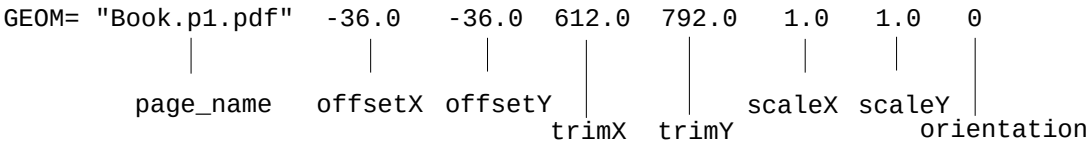
```
ASSIGN= "Book.p1.pdf"  "Book-8up"   1   1
          |              |         |    |
      page_name    page_set_name  | layer_number
                                  |
                            position_number
```

This ASSIGN statement assigns the page named Book.p1.pdf to layer 1 of the first page position in the page set named Book-8up.

GEOM Statement

Parameters	Description
`page_name`	Name of the refined file, for example, "abc_brochure.p1.pdf". Page names containing blanks must be enclosed in double quotes. We recommend you enclose all page names in double quotes. Page names can be set explicitly or using pattern matching, as described in the *Pattern Matching* section.
`offsetX`	OffsetX positions the PDF page horizontally in relation to the lower-left corner of the trim box for the imposition page position. A negative offsetX repositions the page content to the left. The offset is measured in points.
`offsetY`	OffsetY positions the page vertically in relation to the lower-left corner of the trim box for the imposition page position. A negative offsetY repositions the page content down. The offset is measured in points.
`trimX`	X (horizontal) trim size in points
`trimY`	Y (vertical) trim size in points
`scaleX`	Horizontal scaling relative to 1.0. 1.0 = 100%, .5 = 50%, ...
`scaleY`	Vertical scaling relative to 1.0. 1.0 = 100%, .5 = 50%, ...
`orientation`	Number of degrees that the image should be rotated. Must be 0 (no rotation), 90, 180, or 270. **Note:** When a 90-degree orientation is applied via the APA file, in the Orientation column in Pages section in Pages view in Job Manager in Prinergy Workshop, the orientation is displayed as 90 CCW (counter clockwise). A 270-degree orientation in the APA file is displayed 90 CW (clockwise). An 180-degree orientation in the APA file is displayed as 180.

Example:



This GEOM statement sets the geometry for the Book.p1.pdf page. OffsetX and offsetY are set to -36 points, trimX to 612 points, trimY to 792 points, scaling is 100%, and there is no change in orientation.

Using geometry settings from the input file—Page geometry can be assigned from two sources: the PDF page or parameters set in the APA file. To use a setting from the input file, include empty square brackets [ ] for that parameter in the `GEOM=` statement. For example, the following GEOM statement sets only the trim—offsets, scaling, and orientation from the input file are used:

```
GEOM= file.p1.pdf  []  []  612  792  []  []  []
```

Note: Some input files may not contain trim offsets. For example, DCS/EPS files will not contain any trim offsets. PostScript files generated from a native application using the Prinergy Refiner PPD will always contain offsets. Offsets in such files can be used as described above, by including square brackets in the GEOM= statement.

Pattern Matching

In addition to setting page names explicitly in the ASSIGN and GEOM statements, you can set page names using pattern matching. Pattern matching uses wild cards to take advantage of similarities in refined page names.

For example, a multi-page input file named Book.ps is refined, creating refined pages Book.p1.pdf, Book.p2.pdf, Book.p3.pdf, and so on. These pages can be referred to in the APA file using pattern matching rather than by stating each page explicitly. That is, the ASSIGN statement could include `Book.p[#].pdf` to refer to the page names, rather than Book.p1.pdf, Book.p2.pdf, Book.p3.pdf, and so on.

The table below outlines the rules for matching page names in APA files.

Patterns matches can also be named and then used as a back reference to the page set name, page set prefix, position number, and layer number. This is described fully in the *Using Named Patterns as a Back Reference* section.

Rules for Matching Page Names

Wildcard	Description	Example	Matches
*	Matches 1 or more **alphabetic** characters (A-Z, a-z).	"*.p1.pdf"	book.p1.pdf, brochure.p1.pdf, etc. If enclosed in quotation marks, matches book cover.p1.pdf, Acme brochure.p1.pdf, etc.
%	Matches 1 or more **alphabetic** characters (A-Z, a-z). Must be enclosed in square brackets. [%]	"[%].p1.pdf"	same as above
#	Matches 1 or more **numeric** characters (0-9). Must be enclosed in square brackets. [#]	"Book.p[#].pdf"	Book.p1.pdf, book.p2.pdf, book.p3.pdf, etc.
$	Matches 1 or more **alphabetic or numeric** characters (A-Z, a-z, 0-9). Must be enclosed in square brackets. [$]	"[$].p1.pdf"	book.p1.pdf, brochure.p1.pdf, 12345.p1.pdf, abc010103.p1.pdf, etc.
	To specify the exact number of characters matched by #, %, or $, add a colon after the wildcard, then the number of characters.	"[$:6][#].p1.pdf" Note: "[$:5][#].p1.pdf" would give the same results because APA ignores the zero.	BookA01.p1.pdf, BookB02.p1.pdf, BookC03.p1.pdf, etc.

Using Named Patterns as a Back Reference

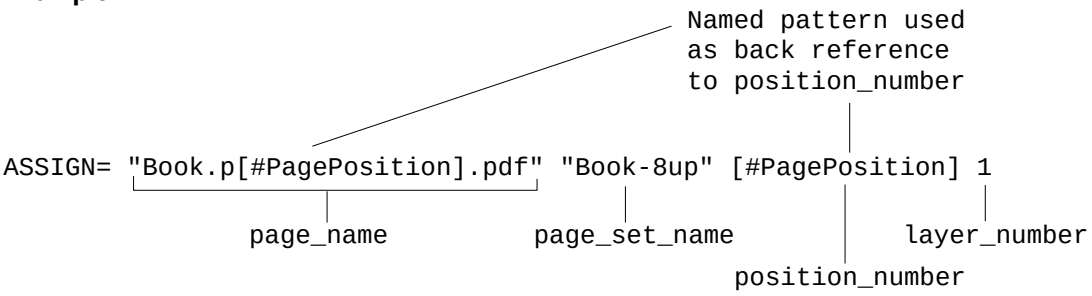
You can name a pattern and use the pattern as a back reference to another parameter in the APA file (that is, as a back reference to page set name, page set prefix, position number, or layer number).

To name a pattern, include a name after the wildcard and within the square brackets, for example [#PagePosition] or [%Prefix]. You can use any name you want, but it can be helpful to those reading the APA file if the name identifies or relates to the information contained in the pattern (that is, page position, page set name, page set prefix, or layer number).

In the example in the previous section, "Book.p[#].pdf" could be used in the APA file to refer to the page names Book.p1.pdf, Book.p2.pdf, Book.p3.pdf, and so on. Say that the numbers 1, 2, 3, and so on in the page names correspond to the page position numbers to which the pages will be assigned in the page set (that is, Book.p1.pdf is assigned to page position number 1, Book.p2.pdf is assigned to page position number 2, and so on). The pattern could be named, for example [#PagePosition], and the named pattern could be used as a back reference to the position number in the ASSIGN statement.

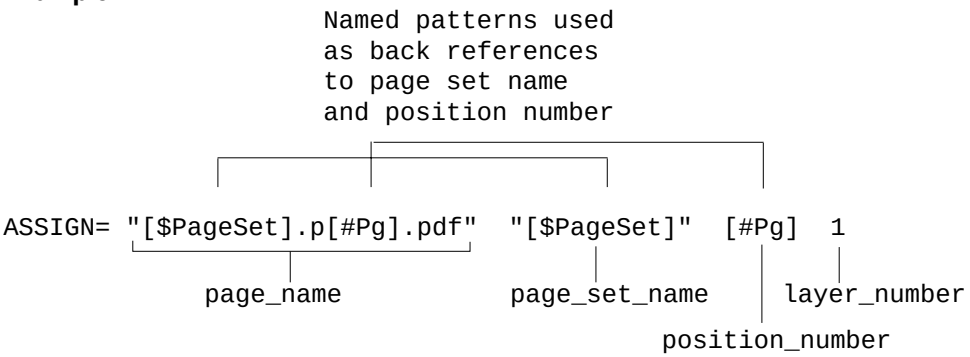
To use a named pattern as a back reference, use the pattern in place of the relevant parameter in the ASSIGN statement. Remove any character-count specifiers—for example, if the named pattern is [%Prefix:2], the back reference is [%Prefix].

Example 1:



This ASSIGN statement assigns all pages that match the pattern to the corresponding page position in the page set named Book-8up, i.e. Book.p1.pdf to position 1, Book.p2.pdf to position 2, and so on.

Example 2:



This ASSIGN statement assigns all pages that match the pattern to the corresponding page position in the corresponding page set, for example, Inside.p1.pdf to position 1 in the Inside page set, Inside.p2.pdf to position 2 in the Inside page set, Cover.p1.pdf to position 1 in the Cover page set, Cover.p2.pdf to position 2 in the Cover page set, and so on.

The *APA File Examples* section provides many examples to show how named patterns can be used as back references in the APA file.

Using a Wildcard to Assign a Page to All Page Sets

A wildcard can be used to assign a page to the same position in every page set in the job. The syntax is:

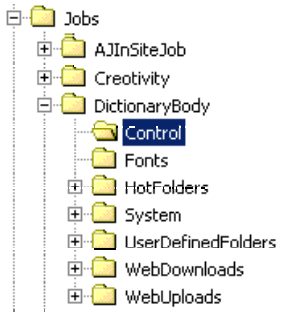
```
ASSIGN= "page_name"  "*"  position_number  1
```

For example:

```
ASSIGN "Book.p1.pdf" "*" 1 1
```

This ASSIGN statement assigns the page named Book.p1.pdf to the first layer of the first position number in every page set in the job.

Summary of APA File Rules

General rules for APA files	Examples
To create an APA file, use a text editor that supports Unicode or ASCII coding. For example, on a PC, you can use Windows Notepad or WordPad—on a Mac, BBEdit.	
The first or only APA file for a job must be named **Job.apa** (the J must be upper-case). To store more than one APA file for a job, include a version number in the filename, for example, **Job.v1.apa**, **Job.v2.apa**, and so on. Prinergy uses the file with the most recent date and time, rather than a particular version.	
APA files must be stored in the job folder structure in the **<job folder>/Control** folder.	

Every APA file must start with the following header:
 	
`!APA 1.0`
	`!APA 1.0`
	`ASSIGN= "Brochure.p1.pdf" "pageset1" 1 1`
	`GEOM= " Brochure.p1.pdf" -36.0 -36.0 612.0 792.0 1.0 1.0 0`

The APA feature ignores the entire contents of any line that begins with an exclamation mark. Use exclamation marks to add comments to the file.	`!APA 1.0`
	`! This line is a comment.`
	`ASSIGN= "Brochure.p1.pdf" "p" 1 1`

Use tabs and spaces as delimiters between parameters, as well as between the identifier (`ASSIGN=` or `GEOM=`) and the first parameter.	
Page names, page set names, and page set prefixes that contain blanks must be enclosed in double quotes. We recommend that you enclose all page names, page set names, and page set prefixes in double quotes.	`!APA 1.0` `ASSIGN= "Front matter.p1.pdf" "Front matter" 1 1`
End-of-line characters can be CR-LF (DOS), CR (Mac), or LF (Unix). A mixture of these characters in the same APA file is allowed.	

General rules for APA files	Examples

Layer number is relevant only for versioning jobs. The base layer is layer 1. For non-versioning jobs, use 1 as the layer number.	`!APA 1.0`
	`ASSIGN= "[$].p1.pdf" "q" 1 1`
	`ASSIGN= "[$]_fr.p1.pdf" "q" 1 2`

`ASSIGN=` page position assignment
`GEOM=` page geometry assignment
The `ASSIGN=` and `GEOM=` options are independent. You can use either one or both in an APA file.
	`!APA 1.0`
	`ASSIGN= "Card.p2.pdf" "Card-4up" 2 1`
	
	`!APA 1.0`
	`GEOM= "Card.p2.pdf" -36.0 -36.0 612.0 792.0 1.0 1.0 0`
	
	`!APA 1.0`
	`ASSIGN= "Card.p2.pdf" "Card-4up" 2 1`
	`GEOM= "Card.p2.pdf" -36.0 -36.0 612.0 792.0 1.0 1.0 0`

Page names can be specified either explicitly or using pattern matching.	`!APA 1.0`
	`GEOM= "Poster.p5.pdf" -36.0 -36.0 612.0 792.0 1.0 1.0 0`
	`GEOM= "Poster.p6.pdf" -36.0 -36.0 612.0 792.0 1.0 1.0 0`
	`...`
	
	`!APA 1.0`
	`GEOM="[$].p[#].pdf" -36.0 -36.0 612.0 792.0 1.0 1.0 0`

Patterns matched in page names can be named and then used as a back reference in the page set name, page set prefix, page position number, and layer number.	`!APA 1.0`
	`ASSIGN= "Card.p[#PgPos].pdf" "Card-4up" [#PgPos] 1`
	
	`!APA 1.0`
	`ASSIGN= "[$PageSet].p[#PG].pdf" "[$PageSet]" [#PG] 1`

To use a geometry setting from the input file, include empty square brackets [ ] for that parameter in the `GEOM=` statement.	`GEOM= file.p1.pdf  36.0  144.0 []  []  []  []  []`

Syntax Summary

Syntax Summary	
Explicit page assignment using page set name	`ASSIGN= "page_name"  "page_set_name"  position_number  layer_number`
Explicit page assignment using page set prefix	`ASSIGN= "page_name"  "page_set_prefix"  position_number  layer_number`
Assign a page to the same position in every page set	`ASSIGN= "page_name"  "*"  position_number  1`

Using a matched pattern as a back reference	`Examples:`
	`ASSIGN= "[$].p[#PagePosition].pdf"  "page_set_name" [#PagePosition] 1`
	`ASSIGN= "[$PageSet].p[#PG].pdf"  "[$PageSet]"  [#PG]  1`

APA File Examples

The following examples illustrate the use of APA files. Below is the basic APA file syntax, for reference:

```
!APA 1.0
ASSIGN= page_name  page_set_name  position_number  layer_ number
ASSIGN= page_name  page_set_prefix  position_number  layer_ number
GEOM= page_name  offsetX  offsetY  trimX  trimY  scaleX  scaleY  orientation
```

Page Assignment

Multi-page input file assigned to page position

Shows explicit page and page set assignment.

Input file Book.ps
Refined files Book.p1.pdf, Book.p2.pdf, Book.p3.pdf …

```
!APA 1.0
ASSIGN= "Book.p1.pdf"  "Book-8up"  1  1
ASSIGN= "Book.p2.pdf"  "Book-8up"  2  1
ASSIGN= "Book.p3.pdf"  "Book-8up"  3  1
```

Result:
Assigns Book.p1.pdf to a page set named Book-8up at position 1, layer 1.
Assigns Book.p2.pdf to a page set named Book-8up at position 2, layer 1.
Assigns Book.p3.pdf to a page set named Book-8up at position 3, layer 1.

Multi-page input file assigned to page position

Shows explicit page assignment and the use of a wildcard (*) to name all page sets.

Input file Book.ps
Refined files Book.p1.pdf, Book.p2.pdf, Book.p3.pdf …

```
!APA 1.0
ASSIGN= "Book.p1.pdf"  "*"  1  1
ASSIGN= "Book.p2.pdf"  "*"  2  1
ASSIGN= "Book.p3.pdf"  "*"  3  1
```

Result:
Assigns Book.p1.pdf to all page sets at position 1, layer 1.
Assigns Book.p2.pdf to all page sets at position 2, layer 1.
Assigns Book.p3.pdf to all page sets at position 3, layer 1.

Multi-page input file assigned to page position

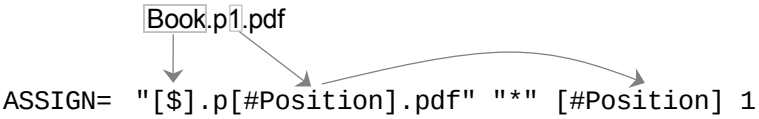
Shows pattern matching.

Input files Book.ps
Refined files Book.p1.pdf, Book.p2.pdf, Book.p3.pdf …

```
!APA 1.0
ASSIGN= "[$].p[#Position].pdf" "*" [#Position] 1
```

Result:
Assigns Book.p1.pdf to all page sets at position 1, layer 1.
Assigns Book.p2.pdf to all page sets at position 2, layer 1.
Assigns Book.p3.pdf to all page sets at position 3, layer 1.

[#Position] is a named pattern used as a back reference to position number. The pattern name (for example, Position) is user defined.



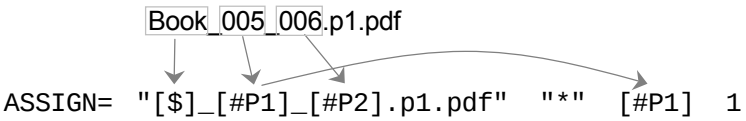
Two-page reader spread input file assigned to page position

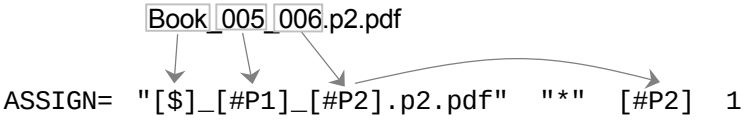
Shows pattern matching.

Input files Book_005_006.ps, Book_007_008.ps …
Refined files Book_005_006.p1.pdf, Book_005_006.p2.pdf, Book_007_008.p1.pdf, Book_007_008.p2.pdf …

```
!APA 1.0
ASSIGN= "[$]_[#P1]_[#P2].p1.pdf"  "*"  [#P1]  1
ASSIGN= "[$]_[#P1]_[#P2].p2.pdf"  "*"  [#P2]  1
```

Result:
Assigns 005_006.p1.pdf to all page sets at position 5, layer 1.
Assigns 005_006.p2.pdf to all page sets at position 6, layer 1.
Assigns 007_008.p1.pdf to all page sets at position 7, layer 1.
Assigns 007_008.p2.pdf to all page sets at position 8, layer 1.





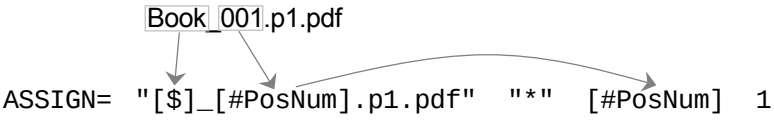
Single page input files assigned to page position

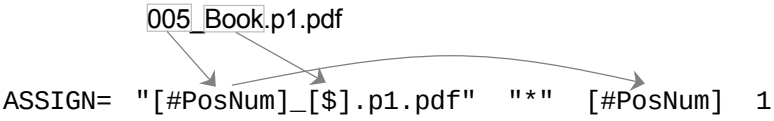
Shows pattern matching and multiple conditions.

Input files Book_001.pdf, Book_002.pdf, 005_Book.pdf, 006_Book.pdf …
Refined files Book_001.p1.pdf, Book_002.p1.pdf, 005_Book.p1.pdf, 006_Book.p1.pdf …

```
!APA 1.0
ASSIGN= "[$]_[#PosNum].p1.pdf"  "*"  [#PosNum]  1
ASSIGN= "[#PosNum]_[$].p1.pdf"  "*"  [#PosNum]  1
```

Result:
Assigns Book_001.p1.pdf to all page sets at position 1, layer 1.
Assigns Book_002.p1.pdf to all page sets at position 2, layer 1.
Assigns 005_Book.p1.pdf to all page sets at position 5, layer 1.
Assigns 006_Book.p1.pdf to all page sets at position 6, layer 1.





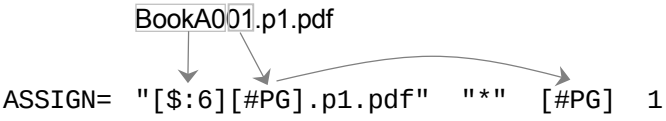
Single page input files assigned to page position

Shows pattern matching and specification of the number of characters to be matched.

Input files BookA001.pdf, BookB002.pdf, BookC003.pdf …
Refined files BookA001.p1.pdf, BookB002.p1.pdf, BookC003.p1.pdf …

```
!APA 1.0
ASSIGN= "[$:6][#PG].p1.pdf"  "*"  [#PG]  1
```

Result:
Assigns BookA001.p1.pdf to all page sets at position 1, layer 1.
Assigns BookB002.p1.pdf to all page sets at position 2, layer 1.
Assigns BookC003.p1.pdf to all page sets at position 3, layer 1.



Updated page with non-exact naming

Shows pattern matching and replacement page.

First input files	001.pdf, 002.pdf, 003.pdf
Refined files	001.p1.pdf, 002.p1.pdf, 003.p1.pdf
Replacement page input file, submitted for refining after the first three pages	002.new.pdf
Refined file	002.new.p1.pdf

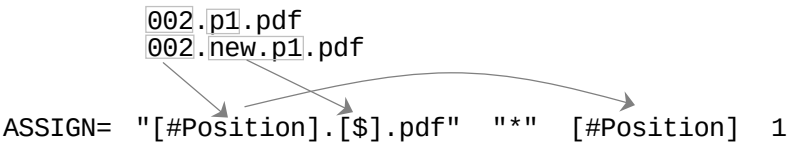
```
!APA 1.0
ASSIGN= "[#Position].[$].pdf" "*" [#Position] 1
```

First result:
Assigns 001.p1.pdf to all page sets at position 1, layer 1.
Assigns 002.p1.pdf to all page sets at position 2, layer 1.
Assigns 003.p1.pdf to all page sets at position 3, layer 1.

Result after replacement page submitted:
If **Automatic Property Assignment - Retain Assignments, Using Job Settings** is selected in the Impose section of the refine process plan, 002.new.p1.pdf is not assigned.

If **Automatic Property Assignment - Overwrite Assignments, Using Job Settings** is selected in the Impose section of the refine process plan, 002.new.p1.pdf is assigned to all page sets at position 2, layer 1.

The graphic below just shows how APA matches the characters to the pattern and does not relate to assignment order or overwriting.



Versioning job

Multi-page input file assigned to page position

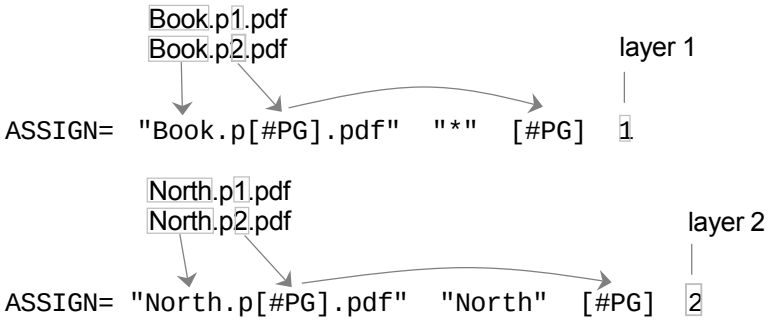
Shows pattern matching.

Prinergy regional versioning must be licensed.

Input files Book.pdf, North.pdf, South.pdf, East.pdf, West.pdf
Refined files Book.p1.pdf, Book.p2.pdf, North.p1.pdf, North.p2.pdf, South.p1.pdf, South.p2.pdf ...

```
!APA 1.0
ASSIGN= "Book.p[#PG].pdf"  "*"  [#PG]  1
ASSIGN= "North.p[#PG].pdf"  "North"  [#PG]  2
ASSIGN= "South.p[#PG].pdf"  "South"  [#PG]  2
ASSIGN= "East.p[#PG].pdf"  "East"  [#PG]  2
ASSIGN= "West.p[#PG].pdf"  "West"  [#PG]  2
```

Result:
Assigns Book.p1.pdf to all page sets at position 1, layer 1.
Assigns Book.p2.pdf to all page sets at position 2, layer 1.
Assigns North.p1.pdf to the North page set at position 1, layer 2.
Assigns North.p2.pdf to the North page set at position 2, layer 2.
Assigns South.p1.pdf to the South page set at position 1, layer 2.
Assigns South.p2.pdf to the South page set at position 2, layer 2.



Versioning job

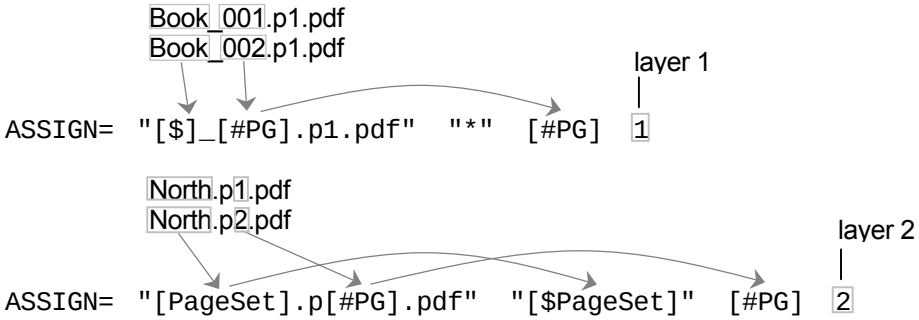
Multi-page input file assigned to page position

Shows pattern matching.

Input files Book_001.pdf, Book_002.pdf, North.pdf, South.pdf, East.pdf, West.pdf
Refined files Book_001.p1.pdf, Book_002.p1.pdf, North.p1.pdf, North.p2.pdf, South.p1.pdf, South.p2.pdf ...

```
!APA 1.0
ASSIGN= "[$]_[#PG].p1.pdf"  "*"  [#PG]  1
ASSIGN= "[$PageSet].p[#PG].pdf"  "[$PageSet]"  [#PG]  2
```

Result:
Assigns Book_001.p1.pdf to all page sets at position 1, layer 1.
Assigns Book_002.p1.pdf to all page sets at position 2, layer 1.
Assigns North.p1.pdf to the North page set at position 1, layer 2.
Assigns North.p2.pdf to the North page set at position 2, layer 2.
Assigns South.p1.pdf to the South page set at position 1, layer 2.
...


Book_001.p1.pdf
Book_002.p1.pdf
layer 1
ASSIGN= "[$]_[#PG].p1.pdf" "*" [#PG] 1
North.p1.pdf
North.p2.pdf
layer 2
ASSIGN= "[PageSet].p[#PG].pdf" "[$PageSet]" [#PG] 2

Geometry Settings

Can be used if automatic geometry calculation does not achieve desired results.
Can be used to set different offsets for even and odd pages.

Multi-page input file assigned to page position

Shows pattern matching.

Input files Book.pdf
Refined files Book.p1.pdf, Book.p2.pdf, Book.p3.pdf …

```
!APA 1.0
ASSIGN= "[$].p[#PosNum].pdf"  "*"  [#PosNum]  1
GEOM= "[$].p[#PosNum].pdf"  -36.0  -36.0  612.0  792.0  1.0  1.0 0
```

Result:
Assigns Book.p1.pdf to all page sets at position 1.
Assigns Book.p2.pdf to all page sets at position 2.
Sets the geometry for the pages. OffsetX and offsetY are set to -36 points, trimX to 612 points, and trimY to 792 points. Scaling is 100% and there is no change in orientation.

Multi-page input file assigned to page position

Shows pattern matching and assigning geometry from input files.

Input files Book.pdf
Refined files Book.p1.pdf, Book.p2.pdf, Book.p3.pdf …

```
!APA 1.0
ASSIGN= "[$].p[#Position].pdf"  "*"  [#Position]  1
GEOM= "[$].p[#Position].pdf"  -36.0  -36.0  []  []  1.0  1.0  0
```

Result:
Assigns Book.p1.pdf to all page sets at position 1.
Assigns Book.p2.pdf to all page sets at position 2.
Sets the geometry for the pages as in the previous example, except here the trim size (X and Y) from the input files are used.

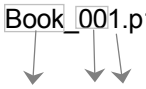
Different geometry for even and odd pages

Shows pattern matching.

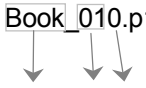
Input files Book_001.pdf, Book_002.pdf, Book_003.pdf, …, Book_011.pdf
Refined files Book_001.p1.pdf, Book_002.p1.pdf, Book_003.p1.pdf, …, Book_011.pdf

```
!APA 1.0
GEOM= "[$]_[#]0.p1.pdf"  36.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]2.p1.pdf"  36.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]4.p1.pdf"  36.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]6.p1.pdf"  36.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]8.p1.pdf"  36.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]1.p1.pdf"  72.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]3.p1.pdf"  72.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]5.p1.pdf"  72.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]7.p1.pdf"  72.0  144.0  []  []  1.0  1.0  0
GEOM= "[$]_[#]9.p1.pdf"  72.0  144.0  []  []  1.0  1.0  0
```

Result:
Sets offsets for even pages to 36 144.
Sets offsets for odd pages to 72 144.




```
GEOM=    "[$]_[#]1.p1.pdf"  72.0  144.0  []  []  1.0  1.0  0
```




```
GEOM=    "[$]_[#]0.p1.pdf"  36.0  144.0  []  []  1.0  1.0  0
```