# WēPO Technical Description
**Version 3.2**
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## Capsule Description

Web Print Object, or WēPO, is an ActiveX object that encapsulates the Print Wizard printing engine. It is hosted by Internet Explorer or another program. By default, it appears as a button, such as on a web page. When the user clicks that button, the WēPO code fetches a print file from a server (or from a local or network drive) and prints it on the user's printer.

The print file to be printed is specified in the parameters of the encompassing web page. Other parameters can be specified there also, to affect the behavior of WēPO. For instance, a parameter can indicate that a certain file should be used as an overlay.

WēPO can also be controlled by JavaScript in the encompassing web page.

## The Need

Computer applications need to create printouts. These can range from simple reports in fixed-space fonts (so-called greenbar reports) to documents with international characters, in multiple fonts and sizes, with logos and other images, on top of form images. In earlier computing environments, when the application software knew the "personality" of the printer, and had a direct pathway to it, that software could include control sequences (escape codes) in the data stream to do such things as setting the font and pitch, on up to printing graphics.

When the operating environment changes to the point where the user has only a web browser on their desktop, everything changes. The application will often not know the kind of printer to be used, and there is no direct path from server to printer. The printer could be across the world somewhere, on a dynamic address, and the printer may not even be able to process control codes.

If the application designer tries to output HTML, and have the web browser do the printing, that designer soon learns that HTML was not designed for printing, and it is very difficult to get the level of control that is needed.

One solution is for the application to produce PDF files and present them to the user, but this can have its own challenges. It is difficult to control the exact behavior of various components (such as from Adobe) that can do the printing. It is difficult, for instance, to direct printing to a certain printer. It may also be difficult to bridge the application program's language environment to PDF generation.

## The Solution

WēPO provides both a delivery mechanism and device-independent printer output.

The appearance and behavior of WēPO can be controlled by the author of the web page in which it is contained. It can appear as a button of any size, with any text showing on it, anywhere on the hosting web page. Or it can be made invisible. In either case, it can be triggered by JavaScript (or other scripting).

When the object is triggered (either by the user or by scripting), it does its specified "action". The default action is to fetch and print. WēPO will fetch a print file from a location that is specified in the web page. This *can* be the encompassing web page itself, but more typically it is a different file, which can be on the client's disk (local or network) or on an FTP, HTTP, or HTTPS server; that is, the file name can be a URL. The URL may specify content that is dynamically generated (a CGI process).

The file that is fetched can be in various formats. It can be a) plain text; b) a PCL-5 print job (possibly with PJL and HPGL); c) an HTML file (with certain restrictions); or d) a Print Wizard Markup Language (PWML) file. Print Wizard determines the file type, processes it, and outputs it.

By default, that output will be printout on the Windows default printer. However, various parameters specified in the encompassing web page (or specified by scripting actions) can redirect WēPO's output to a different printer; or specify that WēPO should prompt the user for which printer to use.

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WēPO's print engine is Print Wizard, which is code from Rasmussen Software. Print Wizard's capabilities in handling various kinds if input files are documented in the Print Wizard Technical Description and also the Print Wizard Manual.

Other parameters of WēPO alter its behavior in other ways. One tells it to prompt the user for the printer to use. Another adds an overlay (form image) to the output. These are listed below.

## Installation

As with other ActiveX (OCX) objects, the hosting browser (e.g., Internet Explorer) handles installation. When the user first opens a web page that references the WēPO object, the browser will ask for permission to install the WēPO object, if security settings allow it. Once it is installed, it can be used within that (and any other) web page.

The HTML code that specifies use of WēPO also tells where it can be installed from. This can be from Rasmussen Software's site or from the licensee's site.

Other installation mechanisms are available also.

The installed WēPO can be run without licensing, but will indicate that fact on its output. Thus it is possible to test and demonstrate WēPO without obtaining a license.

## Operation

The web page that includes WēPO references it with an <OBJECT> tag. Here is an example:

```
<OBJECT
     classid="clsid:4CE8026D-5DBF-
48C9-B6E9-14A2B1974A3D"
     codebase="http://www.anzio.com/c
ontrols30/printwizocx.cab#version=3,0,
0,0"
     width=50
     height=25
>
     <param name="mainurl"
value="http://www.anzio.com/pub/printw
iz-samples/features.txt">
     <param name="printersetup"
value="1">
     <param name="caption"
value="Print">
</OBJECT>
```

Following is an explanation of each part of the <OBJECT> tag:

| | |
|---|---|
| Classid | A globally unique character string by which WēPO is registered. It is required. This string may change with changing versions of WēPO. Contact Rasmussen Software for the correct code. |
| Codebase | Tells the browser where the OCX can be installed from, if it is not already on the client's PC. |
| Width | The width in pixels of the button to appear on the screen. |
| Height | The height in pixels of the button to appear on the screen. |
| Align | Where to display the button, relative to the current printing position. Options are "texttop", "middle", "left", "textmiddle", "right", "baseline", and "center". Consult a book on HTML for specifics. |
| Hspace | The amount of space to the left and right of the object, in pixels. |
| Vspace | The amount of space above and below the object, in pixels. |

Following is an explanation of the various <PARAM> tags. In each case, you can change what is in the "value" part.

| | |
|---|---|
| Caption | The text to appear in the middle of the button. |
| BusyMessage | The text to be displayed by the button while a print job is taking place. |
| Enabled | A zero value marks the button as disabled (grayed), so the user can not click it. |

| | | | |
|---|---|---|---|
| Visible | Not supported. To make the OCX invisible, set width and height to 1. | | to control font selection when needed characters are not in the primary font. |
| MainURL | The file to be printed when the user clicks the button. Can specify a file on the local disk, or a URL starting with ftp://, http://, or https://. If not specified, the encompassing web page will be printed. | Initfile | Specifies a print initialization file. Can be on a local disk, or a URL. The contents of this file will be processed before the contents of MainURL. When used, this file usually contains some PWML code. |
| Debug | A non-zero value tells the OCX to run in debug mode, displaying a lot of useful information in a popup window. | LicenseCode | If a licensecode is specified, and it correlates to the location of the MainURL, then the OCX will NOT print out a line indicating it was printed with a demo version. Licensecodes are provided by Rasmussen Software. |
| PrinterSetup | A non-zero value will cause WēPO to prompt the user for Printer Setup, allowing them to choose a printer and set its properties. | | |
| PrinterName | Indicates which printer to use, by its Windows printer name. This can be a wildcard, consisting of some text followed by "*", such as "HP*"; it will be matched with the first available printer whose name fits this pattern. After printing, this parameter will contain the name of the printer that was used, such as the one selected via Printer Setup. | Charset | Specifies the character set of the print data. Options are "ISO", "OEM", and "UTF-8". Default is ISO. |
| | | Overlay | The name of a file to be used as a full-page form overlay. This can be a URL. An overlay can an image (BMP, GIF, etc.), a PCL-5 file, an EMF, a Windows spool file (SPL), or a PWML file. Overlays can be multiple pages. |
| Orientation | Sets the printing orientation. Possible values are "portrait", "landscape", or "auto". If blank, the orientation will follow the printer driver's configuration. | TranslatePCL | Zero causes WēPO to pass any escape codes to the printer for processing. A value of 1 causes WēPO to translate any PCL codes in the main print job and/or the overlay file(s), allowing them to be printed on any printer. A value of 2 causes WēPO to translate the main file only; an overlay file that is PCL will be handled by the printer. |
| Duplex | Tells the printer to print on both sides of the paper, if possible. Possible values are "off", "vertical", "horizontal", "left", "right", or blank. If blank, the duplexing will follow the printer driver's configuration. | | |
| | | CaptionFont | The name of the font used to display the caption in the button. The default is set by the font of the preceding HTML. |
| Fontname | Specifies an initial font for printing. Can also be a comma-separated list of font names, ending in "auto", | CaptionHeight | The size (in points) of the font used for the caption. |

|  |  |
|---|---|
|  | The default is set by the font of the preceding HTML. |
| CaptionStyle | A string representing the style to be used for the caption. Include, in any order, "B" for bold, "I" for italics, and/or "U" for underline. The default is set by the font of the preceding HTML. |
| Printed | After the button is clicked, this parameter will be non-zero to indicate that the printing succeeded. This parameter would not likely be set by the web page. |
| ClickAction | Specifies the action to do when button is clicked. Default ("PRINTWIZ") is to have the Print Wizard engine print the file. If set to "WINPRINT", the OCX will cause Windows to print the file. |
| Copies | Sets the number of copies. |
| Printlevel | Setting this to "SPOOLER" causes the print file to be sent transparently via the spooler to the printer; no processing is done. |
| ReverttoDefaultPrinter | If non-zero, then if the specified printer can not be referenced, the Windows default printer will be used. |
| Preview | If non-zero, a Print Preview window will be opened, allowing the user to view the first page, change the margins, test print, and print. |

## Platform

WēPO is a 32-bit Windows ActiveX (OCX) object, and can run on any platform that supports that. Typically that is Internet Explorer running on Windows 98SE through Vista. Other browsers such as Firefox can also support this kind of object, as can other programs written for Windows.

## Licensing and Pricing

WēPO is licensed per domain-name/server combination that will contain print files. That is, each domain name on each physical server requires a license. However, nothing from Rasmussen Software installs on the server.

When a customer purchases a license from Rasmussen Software, we will provide a license code that correlates to a specific domain name. The customer can then include that license code in any web pages that reference WēPO. When WēPO prints a page from a domain name that correlates to the license code it has been given, WēPO will NOT print the "unlicensed" message.

The price for a license is $1500.

## More Information

More details, including sample web pages referencing sample print files, are at www.anzio.com.