

This document outlines recommended steps to prepare an Authorware 7 course for delivery from a Windows 2003/IIS 6.0 web server. These steps are guidelines only and may not work in all situations. With the EOD of Authorware, these guidelines may be affected by more recent OS/IIS versions.

This document describes five primary sections;

[Setup Authorware MIME Types](#)

[Install the Authorware Web Player on the Client Machine\(s\)](#)

[Web-Package the Authorware Course](#)

[Customize the Web-Packaged Course](#)

[SMS-Specific Requirements and Questions](#)

A summary section is also included at the end with final suggestions and questions that need to be answered in order to finalize an approach for delivering web-packaged Authorware courseware in a secure, internal organization.

A. Setup Authorware MIME Types

Windows 2003 Server requires MIME types to be setup under IIS for the proper delivery of any unusual files (not html, asp, etc.). Authorware web-packaged files are such 'unusual' file types. Creating MIME types for IIS must be performed while logged-in under an Administrator account.

The Authorware MIME types follow [1]. The first four are absolutely required.

Extension	MIME Type
aam	application/x-authorware-map
aas	application/x-authorware-seg
aab	application/x-authorware-bin
x32	application/x-authorware-bin
u32	application/x-authorware-bin
vox	application/x-authorware-bin

Procedure [2, 3]

1. In IIS Manager, expand the local computer, right-click the computer on which you want to add a MIME type, and click *Properties*.
2. Click MIME Types.
3. Click *New*.
4. In the Extension box, type the file name extension (i.e. "aam").
5. In the MIME type box, type a valid MIME type (i.e. "application/x-authorware-map").
6. To create a catch-all MIME type for any undefined, type an asterisk (*) in the Extension box, and type "application/octet-stream" in the MIME type box (not recommended for security reasons but helpful for troubleshooting).
7. Click *OK*.

B. Install the Authorware Web Player on the Client Machine(s)

Web-packaged Authorware files have a unique structure and require the use of the Authorware Web Player in order to play within a web browser. Web-packaged Authorware files are **not** compatible with the Flash web player nor the Shockwave web player.

The Authorware Web Player can be downloaded from Macromedia's website or can be hosted within an organization once the distribution agreement has been completed [4]. Hosting the web player requires not only placing the related CAB files on an internal web server but also requires customization of "manifest files" to direct the player where to find subsequent files [5].

In either case, the HTML which contains the Object and Embed tags referencing the initial Authorware course map file (.aam) must also reference the web player's location on Macromedia's website **or** the related page on the organization's internal website. Either type of setup requires each user to allow the web player to be installed on their specific machine individually and requires that user to be logged-in with Administrator privileges for the installation.

Larger organizations that use Microsoft's System Management Server (SMS) or similar software (i.e. CA Unicenter) may wish to push the web player to the client workstations as an automated rollout. The Authorware Web Player for Internet Explorer is an ActiveX control which must be registered during installation. Registration of ActiveX controls is a function reserved for Administrator accounts.

In order for Microsoft's System Management Server to remotely install the web player, it must have the ability to either push out and install the CAB file as Admin or the ability to duplicate an installed web player folder/file structure and register the "awswax.ocx" ActiveX control on the client machines.

Below follows some information about the object tag placed in the parent HTML page which may be helpful when attempting the install:

- Classid: CLSID:15B782AF-55D8-11D1-B477-006097098764
- codebase: <http://fpdownload.adobe.com/get/shockwave/cabs/authorware/awswaxd.cab#version=2004,0,0,73>

You can remove the Authorware Web Player from IE by navigating to:
C:\WINDOWS\Downloaded Program Files

Locate the "Macromedia Authorware Web Player Control", right-click, and select "Remove". Some users report Windows errors during this removal but the player does seem to be properly deinstalled despite such errors.

C. Web-Package the Authorware Course

Compiling, or “packaging” in Authorware terms, the course created with Authorware is a fairly simple process using One Button Publishing (OBP) [7]. The first step is to setup the publish settings (*File > Publish > Publish Settings*, or *Ctrl-F12*). The resulting settings dialog has five tabs by default.

Formats

Even if you are publishing only for web delivery, you should leave the “Publish for CD, LAN, Local HDD” setting checked. To create a web-packaged file, Authorware must first compile a local version (.a7r) to convert to the .aam and .aas files used for web delivery. If the CD, LAN, Local HDD setting is not checked, Authorware may reuse a previously available .a7r file, resulting in a web-packaged file that does not reflect the most recent changes.

You do not need to select the “With Runtime for Windows 98, ME, NT, 2000, or XP” checkbox unless you want to create an .exe of your application for local delivery. Selecting that option no effect on the web publishing process.

In the “Publish for Web” subsection, both options should be checked initially. However, once you have created the parent HTML file for the web-packaged application, you might want to uncheck the “Web Page” option so any customizations made to that initial HTML file are not overwritten the next time you publish.

The path and names the file is published to are customizable. Using the default settings is usually fine. However, if you are placing the application in the root of a new directory on the web server, you may wish to rename the .HTM (“Web Page”) file to something like index.htm or default.htm.

Package

The “Packaging Options” are usually left at the default. It is much easier to manage a web-packaged Authorware application if the libraries are packaged internally. However, you may want to uncheck this option if your course uses shared libraries. Managing courses with multiple, external libraries can be complex.

The “Package External Media Internally” option is also perhaps best left checked, though beware this will not guarantee all your externally-referenced media are actually included with the web-packaged file. This is especially true for assets that are always external, like digital video.

For Web Player

The “Map File” section is fairly easy to use. Leave the “Segment Prefix Name” to the default unless you happen to have another web-packaged course that uses the same name. Change the Segment Size to whatever preset is most applicable to your delivery method. For internal delivery, “DSL/Cable modem” option may work best. For internet delivery, the “ISDN” option can provide a decent compromise between those who have dial-up and those with broadband. You can always create a custom profile as well.

The “Show Security Dialog” option should **always** be checked unless you know users have either;

- Previously trusted the domain from which the courseware is being delivered.
- The program is so basic that no Xtras are required.
- The user already has the full player and your course requires no other external assets.

If the user is not presented with the security dialog when they first load your package and cannot trust the domain, no external files – including Xtras – will be downloaded to the client machine.

The “Advanced Streamer” option may be used but is out of the scope of this document. The Advanced Streamer requires Microsoft IIS 5.0 and the Advanced Streamer component to be placed on that web server. Reports of increased performance using the Advanced Streamer are varied, though tending toward ‘slightly faster’.

Web Page

The Template section’s “HTML Template” is critical in some situations. If your course uses the LMS Knowledge Objects, the “LMS KO” HTML template **must** be used.

For most commercial applications, the “Detect Web Player” option may be best as it will at least notify the user if the Authorware Web Player is not installed. However, you may wish to further customize this HTML document to perhaps provide a link to download the player from Macromedia’s site. If you do, be careful not to overwrite that customization during the next publish.

For internal delivery, the “Internet Explorer Only” option may be best in many circumstances. This HTML document may need to be edited as well if you are hosting the web player within the organization [6].

An important aspect of the “*Playback > Web Player*”; since the latest web player (2004) was released after Authorware 7, the OBP settings do not include this player as an option. For this process, select the “Complete 7.0 Player (3.5 Mb)” but you will need to edit the HTML file to reference the 2004 player [8]. Be careful you don’t overwrite this customization later!

Files

This section is critical for delivering Authorware content over the web successfully. Unless you make use of Authorware’s NetDownload and NetDownloadBackground functions, every external asset, including Xtras, which your file requires **must** be listed in this section in order to be recorded in the .aam (Authorware Map) file and downloaded by the web player. Use the “Add File(s)...” button to manually add any external assets which OBP may not have found on its own - which does happen often.

For any asset which is not ‘typical’ (Xtras, .aam, js, etc.), you should select each item then click the “*Web*” tab that appears in the lower-half of the dialog box. The default “Put” setting is usually a folder called ‘Download’. This default location causes more problems than most anything else in the publishing process. Unless your application is already looking for external files in a “Download” directory, this is not where you want your external files to go. Be sure to change this default “PUT” setting to a folder where your program will be looking for the external file (relative to the user’s local machine).

It is **strongly** recommended you click the Help button on the OBP dialog box (lower-right) if you are unfamiliar with the web-packaging process. The Help file will describe the basics of the process. Refer back to this document for clarification, a higher-level explanation, and suggestions.

For long-time Authorware developers who are not comfortable with the OBP process, the old packaging option is still available under File > Publish > Package. If you are comfortable with your delivery process, including adding your own Xtras to a packaged product, this is still a valid option – especially for delivering .exe files for local or LAN playback. However, OBP does offer quite a few features which make it worth using in most all cases.

D. Customize the Web-Packaged Course

There are two primary modifications you will need to make to the resulting web-packaged files if you are delivering over a controlled, internal network:

Edit the parent HTML file

Using the “Internet Explorer Only” HTML template in OBP results in a pretty sparse HTML file which the user will navigate to on the web server, which loads the web player, which in turn loads the web-packaged Authorware file. To start the web player loading the Authorware course, the HTML file references the “.aam” file created by the OBP process.

This reference is contained between <object> tags. The object tags also include references to where the web browser can download the Authorware Web Player if it is not present on the user’s machine.

If the web player is to be hosted inside an organization, this reference must be changed to indicate the internal location of the CAB file (assuming IE) as opposed to the default web player CAB located on Macromedia’s website.

If SMS can be successfully used to pre-install the web player on client machines, however, this reference should ultimately not be required – since every client computer will have the web player already installed.

Create a manifest file

To add another layer of complexity, the latest Authorware Web Player (2004) is actually more of a 'stub' file which determines the version of Authorware that created the .aam file and then downloads the **actual** player for that version. This stub player retrieves the actual player from Macromedia's website by default.

To prevent that, a "manifest" file must be created in the same location as the .aam file to tell the stub web player where to download the other actual players from instead (i.e. from an internal network server instead of Macromedia's site). This is not hard, just more work [9]. Additionally, a “PLR” line must be appended to the .aam file so the ‘stub’ 2004 player knows there is a manifest file to use [10].

E. SMS-Specific Requirements and Questions

As mentioned in Section B, “Install the Authorware Web Player on the Client Machine(s)”, the web player must be installed on each individual client machine using an account with Administrator privileges.

SMS can push out the CAB file (the web player 'installer') to the client machines. You can then edit the Object tag in the web-packaged Authorware file's parent HTML page to point to the location of that CAB file on each machine (instead of to Macromedia's website).

So when the Authorware file's HTML page is loaded by a client machine's IE browser, the web player will be installed from the local machine itself. However, that is still an install process requiring Administrator privileges and the only advantage is moving the CAB file from Macromedia's website to the local client...which is not any better than just putting the CAB file on an internal network server and pointing the HTML's Object tag to that location instead.

If SMS can push a CAB file **and** initiate a process that installs and registers the contents the CAB file contains, that would be ideal. Then when users visit the web-packaged Authorware content, it should (almost) play automatically.

If this is not possible for whatever reason, then to actually install the web player itself the **contents** of the CAB file would need to be pushed to the client machine. All the assets within the CAB file would need to be placed in the proper directories. The best way to do that would be to install the CAB file on a machine (using IE) via Macromedia's install page [11] and see exactly what changes were made.

A tool called WinDiff [12] can help determine what is different between one machine and another. The IT department could then setup two identical client machines, install the web player on one, then run WinDiff and see exactly what has changed to know what files to push via SMS and to what directories.

Once you know exactly what the CAB file changes (installs) on a system, you could possibly make SMS create that exact same change on the true client machines – assuming SMS has that capability.

However, this copy process would still require registering the ActiveX control (awswax.ocx) on the client machines. Simply pushing the control and everything else in the CAB file (which can be a LOT of files for the full version) to the client machines is not enough in itself. When IE visits an Authorware HTML page, it won't automatically load the .aam and related content if the ActiveX control is not registered properly with Windows.

Unfortunately, we do not have SMS to actually test these procedures!

Summary

If your courseware was not created with Authorware 7, it might be better to install that version's web player instead of the latest web player (2004) which performs the aforementioned 'stub' routine. While those players are not readily available from Macromedia's website any longer, they can still be downloaded via the URLs listed in the <object> tags of the OBP-generated HTML file.

However, the old players require users to have write access to the “%SystemRoot%\System32\Macromed” folder. An organization with high security measures may not allow users to have write access to that directory. If that is the case, then using the latest 'stub' (2004) player may be the only option as it sends all downloaded files to the user profile's “temp” directory, which any user should have write access to, instead of to the 'Macromed' directory listed above.

So, ultimate questions which must be answered to formulate a plan for installing the Authorware Web Player on client machines:

1. In the target organization, can SMS push a CAB file, 'install' it, and register the ActiveX control it contains?
2. If not, can the organization determine what the CAB file installs (WinDiff?) on a given machine and duplicate that via SMS – or any other similar service - on all other client machines, then register the ActiveX control automatically on each client machine?
3. If no on both of the above, can users be given Administrator access to install the CAB file/ActiveX control on their own (whether it's located on their local drive, a network server, or Macromedia's site)?
4. Can users be given write access to the “%SystemRoot%\System32\Macromed” directory? If so, the original, version-specific player can be used instead.
5. If no to #4, the latest player must be used. This can be a more difficult setup and will require users to have write permission to their profile's temp directory.
6. Will the entire learner audience use IE to access the training?

Finally, it is recommended you carefully test web-packaging and accessing the Authorware courseware in a more typical (non-SMS) situation first to weed out any potential problems before the application is tested in a secured setting. Issues such as external assets and streaming movies can be troublesome over general internet access. It would be far better to solve any such issues before moving to a more restrictive environment.

References

- [1] [Authorware MIME type mappings](#) – Adobe
- [2] [Creating Global MIME Types \(IIS 6.0\)](#) – Microsoft
- [3] [Editing MIME Types for a Web site or directory \(IIS 6.0\)](#) – Microsoft
- [4] [Authorware Web Player Licensing](#) – Adobe
- [5] [Hosting the Authorware Web Player 2004](#) – Adobe
- [6] [Hosting the Authorware Web Player 2004](#) – Adobe
- [7] [Setting Up One Button Publishing](#) – Adobe
- [8] [Can OBP generate HTML code for the 2004 Player](#) – AwareTips
- [9] [Web Player 2004 Manifest Requirements](#) – Adobe
- [10] [Web Player 2004 Specifications, PLR line](#) – Adobe
- [11] [Authorware Web Player Download Page](#) – Adobe
- [12] [WinDiff](#) – Microsoft