

Building Windows® XP Pro like image from
Windows® XP Embedded / WES 2009
By Sean D. Liming

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1 Full XP Pro 2007.SLD / Full XP Pro WES2009.SLD

Creating a full XP Pro like image from XP Embedded / WES 2009 is one of the more popular tasks developers like to do since XPe is a componentized version of XP Pro. There is also a practical reason to use create an XP pro like image. The breakdown of components can be a bit tricky, and it takes some work to understanding what is functionally need for a custom image. Building a full version of XP Pro from XPe can help debug and locate the functions needed for a custom image. A full XP pro like image can also help with the development components by providing a clean image to install applications and components. It also serves as a method to test applications and drivers on XPe/WES before you create components, thus proving the software will run in XP Embedded /WES 2009.

The goal of XP Embedded is to create custom image of custom features and size. The idea is to start small and grow big, thus Full XP Pro 2007 / Full XP Pro WES2009 is not to be used to start big and chop down.

- Full XP Pro 2007 is for use with XP Embedded SP2 Feature 2007 Update Rollup 1.0
- Full XP Pro WES2009 is for use with WES2009

1.1 Concept

The Full XP Pro 2007.SLD / Full XP Pro WES2009.SLD contain an architected grouping of software components that builds the XP Pro like image. The concept is to break the components down in to a software and hardware layers much like the component categories found in the XP Embedded database.

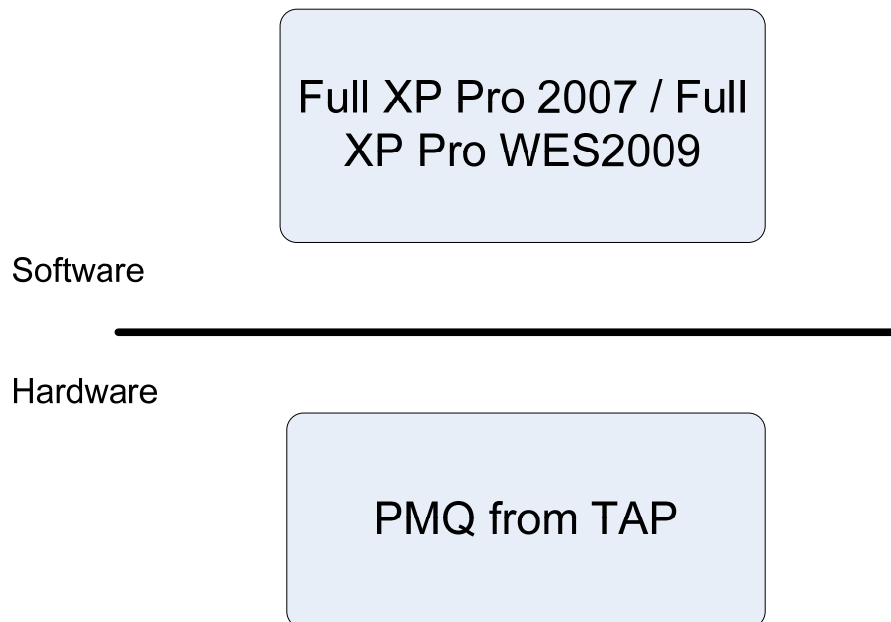


Fig 1.1 Full XP Pro Concept

The SLD contains the upper software components needed to create the image. You need to run Target Analyzer (TAP.exe) on your target to get the device drivers for your platform. It is preferred to run TAP on XP Pro, which implies you need to install XP pro on your target if possible. TAP could be run on WinPE, but you will have to add any missing client drivers that this run of TAP doesn't pick-up. TA.EXE using MS-DOS is not recommended.

1.2 Architecture

The Full XP Pro 2007.SLD / Full XP Pro WES2009.SLD contains the 13 components that break down the functionality of the XP OS. The whole architecture contains most, NOT all of the components in the XPe/WES database. Between these 13 components and the components captured by Target Analyzer, you will still have to add support for items such as printers, language support, and other client devices.

The 13 components in the SLD are grouped together in a single package so you can easily delete all 13 components from your database in one shot. 12 of the 13 components all lead to the master component Full XP Pro 2007 / Full XP Pro WES2009. The 12 sub-macro components match the categories found in the database and in the Component Browser. The diagram below shows the relationships between all of the components in the SLD.

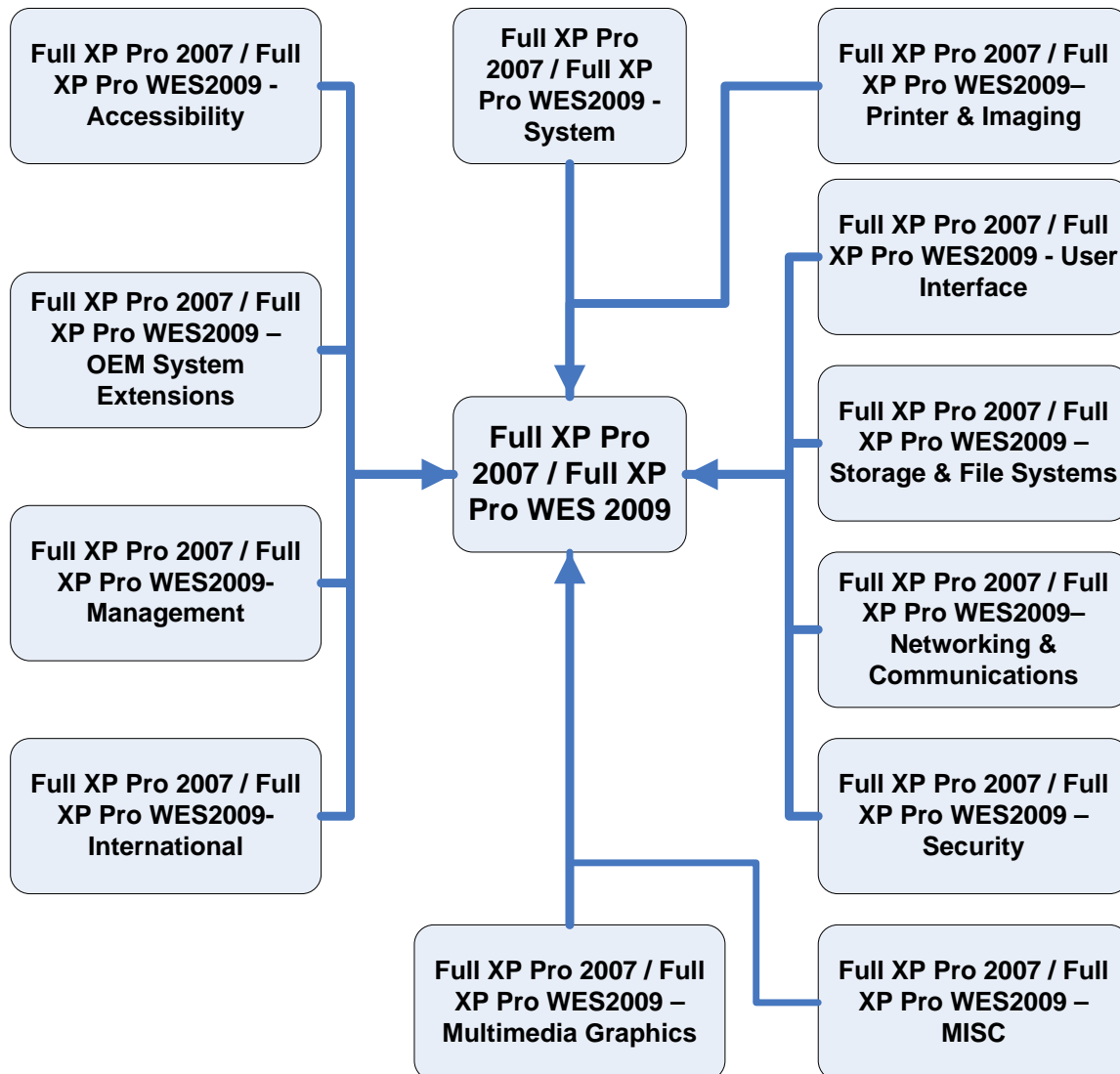


Fig 1.2 Full XP Pro 2007 / Full XP Pro WES2009 Architecture

Full XP Pro 2007 / Full XP Pro WES2009 is at the center of this architecture. You can select or deselect components and feature since this is a macro component. You can select or deselect features and components from the sub-macro components.

Embedded features such as DUA, headless, remote access, and EWF are not part of this architecture. If you want to add these features, you can add them manually.

1.3 Implementation

By architecting the components in this fashion, it simplifies configuration development in Target Design. To create a full XP Pro image, all you need is two components: Full XP Pro 2007 and the platform macro component created from your TAP output file (.PMQ).

Here are the basic steps:

1. Install XP Pro on your target system
2. Run TAP.EXE to create a PMQ file
3. Import the PMQ file into Component Designer and create a Platform Macro Component. Be sure to add the Selector Prototype component so you get the picker list in the settings for the platform macro component.
4. Save the new SLD.
5. Import the platform SLD into the database using Component Database Manager.
6. Import Full XP Pro 2007.SLD or Full XP Pro WES009.SLD into the database using Component Database Manager.
7. Open Target Designer.
8. Create a new configuration.
9. Add the platform macro component that you just created.
10. Add the Full XP Pro 2007 or Full XP Pro WES2009 component.
11. Make sure Auto resolve is enabled in the Tool-Options settings, run Dependency Check.
12. When Dependency Check completes, you should get one error involving NT Loader versus EWF Loader.
13. Change settings such as the video resolution, User Interface Core component to add start menu items, power management settings, computer names, passwords, etc.
14. If you want to install .NET 3.0 during FBA, change the .NET Framework 3.0 settings. This component includes support for .NET 3.0 and .NET 2.0. The .NET 2.0 component is not required.
15. Re-run the Dependency Check again. There should be no errors.
16. Build the image and download to the target. Typical image is about 700MB in size. It does take awhile to download the image to the target and run FBA.

1.4 Usage Notes

Netware – To remove Netware, you can go into the network card properties and uninstall the Netware service.

IPv6 - Unlike Windows XP Pro, XPe/WES installs IPv6 automatically. Some applications might conflict with IPv6. You may have to uninstall IPv6 for these applications to work.

Others features can be removed. Since component dependencies are intertwined, removing a component can be difficult. There are two options

- Use a tool like Component Hunter to track down interdependencies.
- Remove components and perform a dependency check with auto resolve off. Remove components until no errors are found.

1.5 Reference

The original XP Pro component can be found in the following book:

Windows XP Embedded Supplemental Toolkit, Sean D. Liming, Cedar Hill Publishing / SJJ Embedded Micro Solutions, 2005, ISBN: 1-932373-96-9

1.6 SJJ Embedded Micro Solutions

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