



## **Using Application Templates to Enable Your Application on Windows Embedded Standard 7**

*White Paper*

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## The Problem

For several years, one of the common causes of headaches for Windows® Embedded developers was dependency analysis for applications. To get a particular application running on their target device, hours, or even days of work were needed to analyze and trim dynamic dependencies and cut out all of the noise and unneeded binaries that are found when doing the analysis. What components are needed? How small can I trim my image? What tools can I use to do this? These were some of the questions that needed to be answered while a developer was determining the components or packages needed for a particular application.

## The Solution

To eliminate some time and frustration, we've created the [Compatible Applications website](#). On this site, we list templates for a variety of applications. Each of these application templates are “answer file snippets” containing the packages needed to ensure that a certain application will run on Windows Embedded Standard 7. The dependency analysis for these templates has already been done by either the Windows Embedded team or feature team for that particular product. By providing these templates, we hope to save Standard 7 developers time and effort, allowing them to easily include these templates in their image by merging the templates in ICE.

The templates on the website include both Microsoft® and third party applications, and will be updated when Distribution Share updates are released, or when a new version of an application comes out. Templates for new applications will also appear over time as we continue to expand our work and get help from MVPs and customers.

These templates were created through the use of internal Microsoft resources and the techniques found in our [whitepaper on dynamic dependency analysis](#).

## The Details

### Compatible Applications Website

To take advantage of the templates we have provided for you, go to <http://www.windowseembedded.com/standardapplicationtemplates> or click on the “Application Templates” link from the “Community” menu in ICE (Image Configuration Editor - the developer tool for Standard 7). This will bring you to the Compatible Applications webpage, with a list of all the templates available for download.

PRODUCTS

Choosing the Right Windows Embedded Product

Windows Embedded CE

Windows Embedded Standard

Product Features

Technical Specifications

Operating System Components

FAQ

Getting Started

Compatible Applications


Windows Embedded Enterprise

Windows Embedded Automotive

Windows Embedded POSReady

Windows Embedded NavReady

Windows Embedded Server



## Windows Embedded Standard 7 Compatible Applications

Most applications that run on Windows 7, Windows Vista, and Windows XP will run on Windows Embedded Standard 7. Through the use of templates, we now make it easy to ensure that all of your application development projects will run on Windows Embedded Standard 7. These templates allow an application developer to indicate which components should be included in the build in order to support their application on embedded systems.

The following templates will only run on Windows Embedded Standard 7.

To add your application to the list, please see [Become A Windows Embedded Partner](#).

Application	Vendor	Windows Embedded Platform	Template Architecture (zip format)	Release Date
<div> <div>Microsoft Silverlight 3</div> <div>is a cross-browser, cross-platform and cross-device browser plug-in that helps companies design, develop and deliver applications and experiences on the Web. A free download that installs in seconds, Silverlight enables a new class of rich, secure and scalable cross-platform experiences.</div> </div>	<div> <div>Microsoft</div> </div>	Windows Embedded Standard 7	<div> <div>Silverlight 3 - 32bit</div> <div>Silverlight 3-64bit</div> </div>	11/17/2009
<div> <div>Microsoft Visio Viewer 2007</div> <div>allows anyone to view Visio drawings and diagrams (created with Visio 5.0, 2000, 2002, 2003, or 2007) inside their Microsoft Internet Explorer version 5.0 or later Web browser.</div> </div>	<div> <div>Microsoft</div> </div>	Windows Embedded Standard 7	<div> <div>Visio Viewer 2007-32bit</div> <div>Visio Viewer 2007-64bit</div> </div>	11/17/2009
<div> <div>Microsoft Office PowerPoint Viewer 2007</div> <div>lets you view full-featured presentations created in PowerPoint 97 and later versions.</div> </div>	<div> <div>Microsoft</div> </div>	Windows Embedded Standard 7	<div> <div>PowerPoint Viewer 2007-32bit</div> <div>PowerPoint Viewer 2007-64bit</div> </div>	11/17/2009
<div> <div>Microsoft Office Excel Viewer</div> <div>allows you to open, view, and print Excel workbooks, even if you don't have Excel installed. This download is a replacement for Excel Viewer 97 and all previous Excel Viewer versions.</div> </div>	<div> <div>Microsoft</div> </div>	Windows Embedded Standard 7	<div> <div>Excel Viewer-32bit</div> <div>Excel Viewer-64bit</div> </div>	11/17/2009
<div> <div>Microsoft Office Word Viewer</div> <div>allows you to view, print and copy Word documents, even if you don't have Word installed. This download is a replacement for Word Viewer 2003 and all previous Word Viewer versions.</div> </div>	<div> <div>Microsoft</div> </div>	Windows Embedded Standard 7	<div> <div>Word Viewer-32bit</div> <div>Word Viewer-64bit</div> </div>	11/17/2009

Figure 1: The Windows Embedded Compatible Applications Page

To download a template, click the link corresponding to the application and architecture of the template you wish to download. For instance, to download the template for Silverlight 3 on 32bit machines on the page above, you would click the “Silverlight 3 – 32bit” link found in the column second from the right. This will prompt you to download a zip file containing the template you selected.

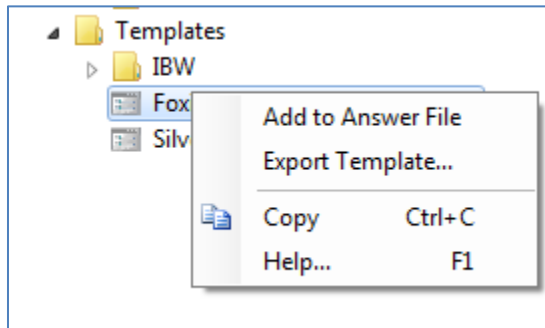
## Using the Template in ICE

Once downloaded, extract the contents of that template to any location on your developer machine. Once extracted, you can import the template into your Distribution Share in ICE two different ways:

- 1) From the ‘File’ menu, mouse over the “Import” option and select the “Import Template...” option. A file dialog will then open and you can navigate to the location of the template and select it to import into the Distribution Share. It will then appear in the Templates folder of the Distribution Share.
- 2) Navigate to the location of the Distribution Share on your system and copy the template into the templates folder. ICE will automatically find the template and display it. The default install path of the distribution share is C:\Program Files\Windows Embedded Standard 7\DS

Once the template is in your distribution share, you can now merge it with any answer file you are working on or open in ICE. Merging this template with your answer file includes all of the packages listed in the template in your answer file. This can be done two different ways:

- 1) Right clicking on the answer file and selecting “Add to Answer File”.



- 2) Clicking and dragging the template into the Answer File panel in ICE.

## The Future

Accessing and using the templates is relatively straightforward, but the experience isn't as easy or streamlined as it could be. Currently all the templates on the site have been made by the Windows Embedded team. There are three main ways in which we hope to see the templates site and experience grow.

### Website

The website should soon allow searching and sorting of templates, as well as a reorganization of columns and information. In a second wave of improvements, we hope to add the ability to add comments and ratings to templates, thereby creating a community feel.

### Community

In addition to the website improvements and the interactive component, we hope to make the website an actual community, allowing developers, ISVs, MVPs, and others to create templates that will be posted on the site. These addition templates will increase adoption of applications, drive traffic back to the template creator's website, and increase the value of the Compatible Applications website.

### Tools Integration

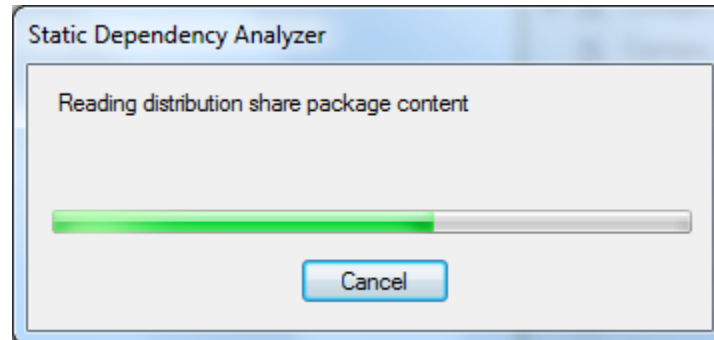
To make the use of templates easier, we are looking to allow users to subscribe, access, or download templates from within ICE. This would remove the download->extract->import steps that the developer is required to go through right now, and replace it with an easier one-click or automated system.

## Static Dependency Analysis in ICE

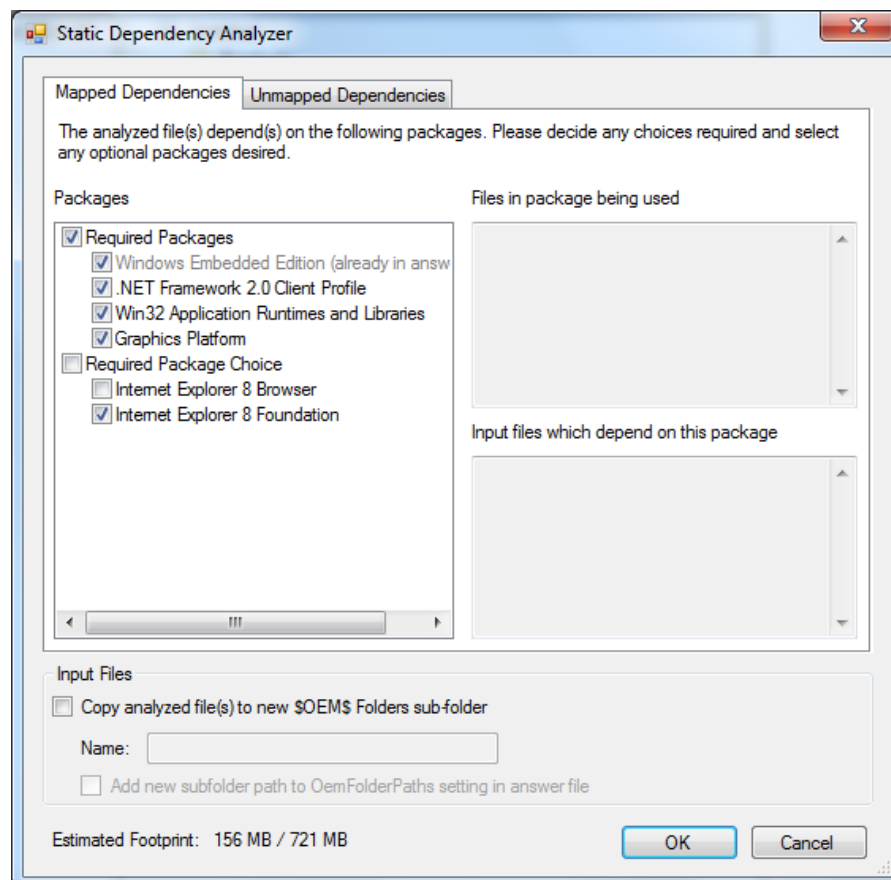
In addition to the templates we are providing and the tools, documentation and power-toys we are working on, there is one official dependency analysis tool provided by the Windows Embedded Standard team. That tool is SDA, or Static Dependency Analyzer, and can be found in ICE. This is not a

comprehensive dependency analysis tool (otherwise there would be no need for application templates). However, it is a very good starting point when attempting to discern the dependencies for a particular application.

To use SDA, open up ICE, create a new answer file, and go to the 'Tools' menu and select "Static Dependency Analyzer". A file dialog will appear prompting you to select binaries for your application. This could include msi, exe, dll, or other files. Once all of your desired files are selected, the dependency analysis will be done by SDA and you'll see a dialog similar to the screenshot below.



Once finished, you will be shown the packages that will be brought into your image and the option to select some or all of them.



The packages will then be added to your answer file in ICE and you can continue building your image with any other packages you wish to add to your custom image for your specialized device.

## Summary

In this whitepaper you have learned about the Compatible Applications website, the templates contained on the site, and plans for the future. The goal of this website and these templates is to make the lives of Standard 7 developers easier and to make image creation faster. For more information on doing dependency analysis or creating templates, please see our other [whitepaper on dynamic dependency analysis](#).

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