MSI Tip: Setting INSTALLDIR Based on a System Search

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Abstract

A common installation requirement is to install a product to a location relative to the location of an existing product or file. Examples are installing plug-ins or add-ons to an application. This article describes how to perform a Windows Installer system search, and then to set a project's installation directory based on the result.

This article assumes some familiarity with using the InstallShield Installation Designer views to modify an installation project.
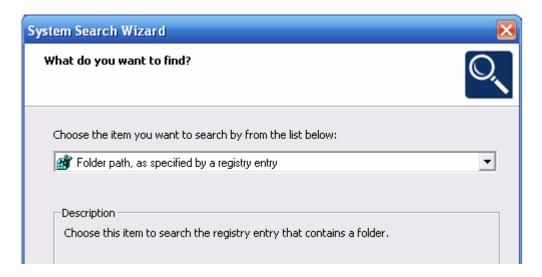
Performing the System Search

Windows Installer supports several different types of system searches, which enable you at run time to search for files or directories on a target system, to read file or directory paths from the registry, or to read information from certain types of files. InstallShield provides a System Search Wizard, which simplifies the process of setting up these types of searches.

For this example, suppose you have a product whose files you want to install in the same directory as the InstallShield executable isdev.exe. One way to find the path to this file is to read the **Path** value from the registry key **HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\App Paths\isdev.exe**. (This key, called an executable's App Paths key, can often be used to locate executables on a target system. If this key does not exist for an executable, you can use one of the other types of searches supported by the System Search Wizard.)
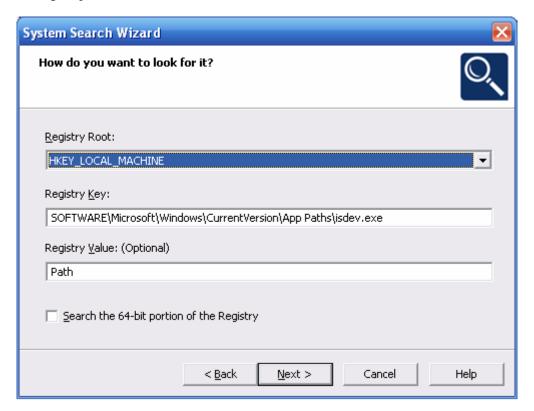
Assuming you already have a project open in InstallShield, you can set up the system search as follows. First, open the System Search view, located in the Behavior and Logic view group. Next, right-click in the System Search area and select Add, which launches the System Search Wizard.

After you click Next on the Welcome panel (not pictured), the wizard prompts you for the type of search to perform. For this example, select "Folder path, as specified by a registry key".

In the next panel, you specify the details of the registry information. For this example, use the following settings:

- Registry Root: **HKEY_LOCAL_MACHINE**
- Registry Key (note the space in the subkey name "App Paths"):
  SOFTWARE\Microsoft\Windows\CurrentVersion\App Paths\isdev.exe
- Registry Value: **Path**

In the last panel, you specify the name of a property to store the results. For this example, you can type in a custom property name **WHERE_ISDEV_IS**.

When you build and run the project, the Windows Installer service reads the registry data and stores it in the custom WHERE_ISDEV_IS property.

During testing, to verify that the property is being set, you can create an MSI log file and search for the property name, or temporarily add a text field to the InstallWelcome dialog box with text "WHERE_ISDEV_IS = [WHERE_ISDEV_IS]", as in the following figure.

Setting INSTALLDIR Based on the Search Results

The next step is to set INSTALLDIR to the value stored in the custom WHERE_ISDEV_IS property. One way to set the property is with a set-a-directory custom action in the Custom Actions view.

To create the custom action, begin by selecting the Custom Actions view, also located in the Behavior and Logic view group. Next, right-click the Custom Actions icon and select "New Set Directory", renaming the new action to (for example) "setInstalldirFromSystemSearch".

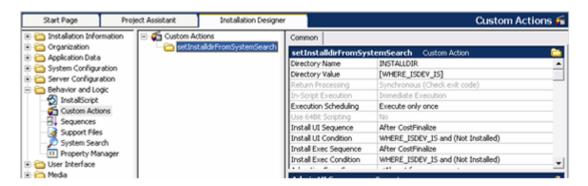Next, use the following settings:

- Directory Name: **INSTALLDIR**
- Directory Value: **[WHERE_ISDEV_IS]**
- Execution Scheduling: **Execute only once**
- Install UI Sequence: **After CostFinalize**
- Install UI Condition: **WHERE_ISDEV_IS and (Not Installed)**
- Install Exec Sequence: **After CostFinalize**
- Install Exec Condition: **WHERE_ISDEV_IS and (Not Installed)**

The condition **WHERE_ISDEV_IS and (Not Installed)** ensures that the action runs—that is, sets the value of INSTALLDIR—only if the search succeeds and only for a first-time installation, and not a repair or uninstallation. If the search fails, the installer uses the default value for INSTALLDIR defined in the General Information > Product Properties view. Depending on your requirements, you can modify the installer's behavior if the search fails to exit or to prompt for another destination.

After you build and run the installation, the project's files should be installed to the same directory as the isdev.exe executable.