

# Introduction to ActionText and ActionData on the SetupProgress Dialog Box

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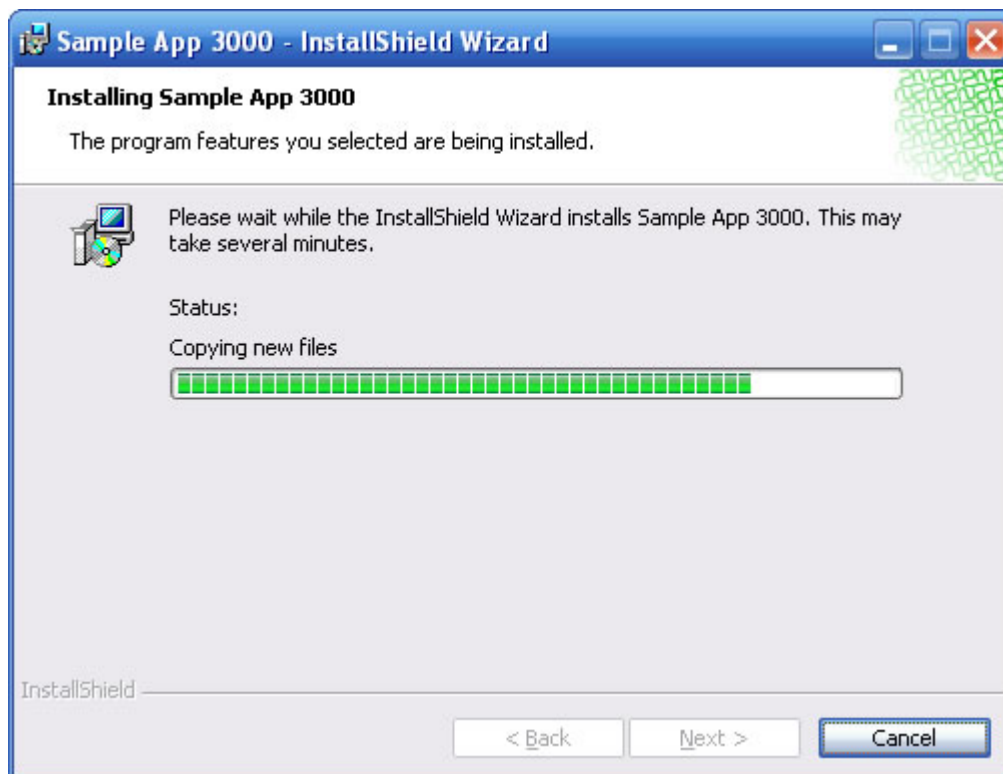
## Abstract

In a Basic MSI installation project, such as a repackaged installation, the SetupProgress dialog box displays information about the progress of the installation at run time. This article describes some simple modifications to the SetupProgress dialog box to display additional information to the end user while your installation is taking place.

This article assumes some familiarity with using the Dialogs view in the AdminStudio Editor's Installation Designer to modify a dialog's appearance and behavior.

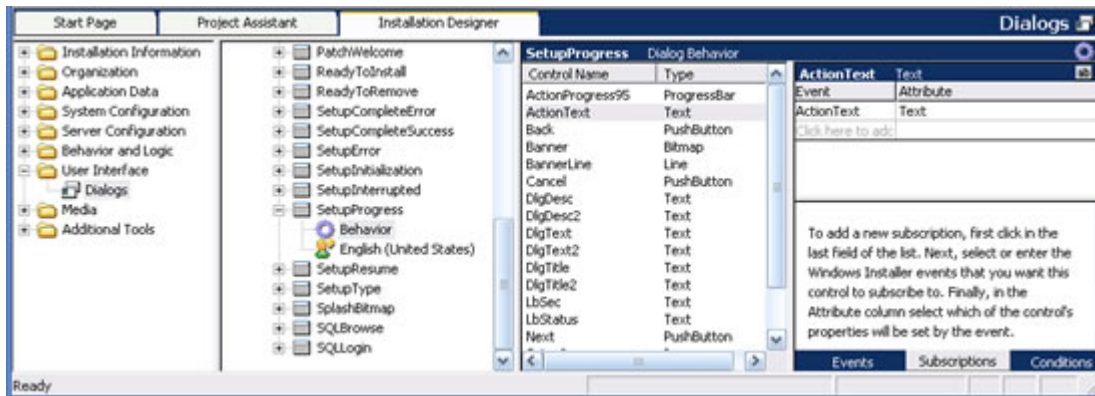
## The Default SetupProgress Dialog Box

At run time, the default SetupProgress dialog box appears similar to the following.

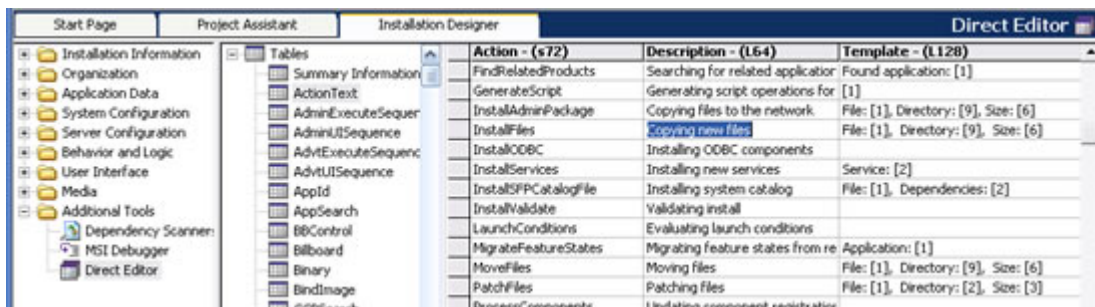


The text field just above the progress bar displays a short description—"Copying new files", in the previous figure—of the action currently taking place. The text field is set up to display these short action descriptions by "subscribing" to the ActionText event with the attribute Text.

You modify the appearance and behavior of a dialog box using the Dialogs view in the AdminStudio Editor interface. In the following figure, note that the Subscriptions tab is selected in the lower right region of the behavior editor for the selected text control.



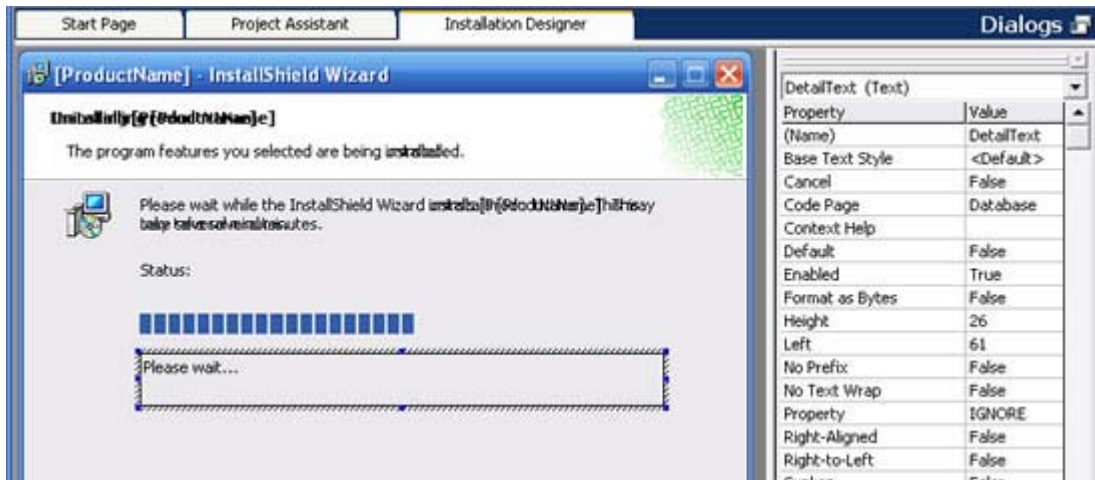
The ActionText messages are stored in the Description field of the ActionText table. You can view and edit the ActionText table in the Direct Editor view, in the Additional Tools view group of the AdminStudio Editor interface.



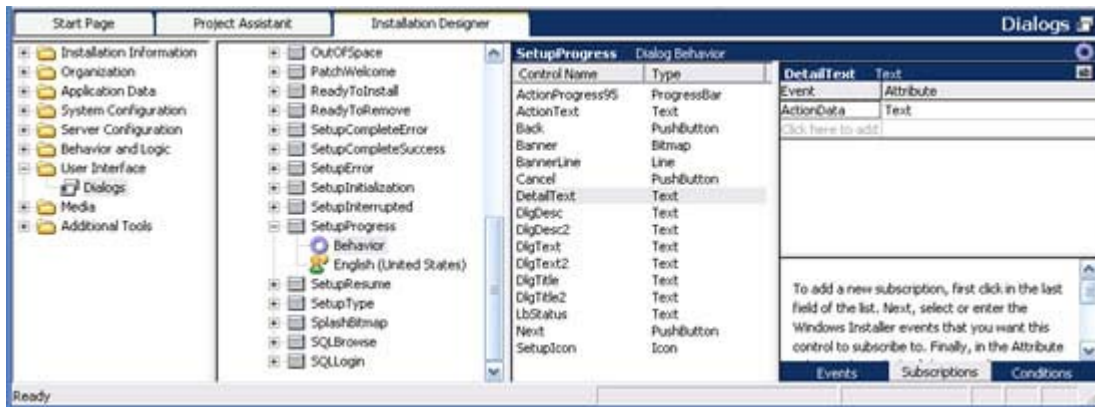
To change the message displayed by a standard action, you can modify the Description value in the ActionText table and then rebuild your project.

## Displaying Detailed Messages During Data Transfer

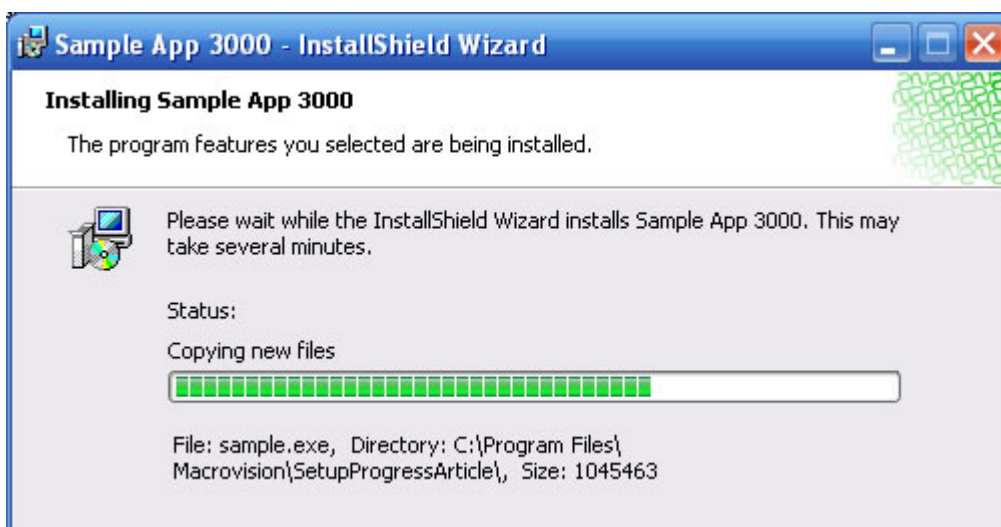
To display more detailed information about the action currently taking place, you can add a Text control that "subscribes" to the ActionData event. In the Dialog Editor, you can begin by adding a Text control beneath the progress bar. In the following figure, a Text control named "DetailText" has been created below the progress bar control. (In the following figure, the Dialog Editor has been maximized by pressing **Ctrl+M**.)



To specify that the new control should display detailed messages while data transfer is taking place, add a subscription to the ActionData event with attribute Text, as in the following figure



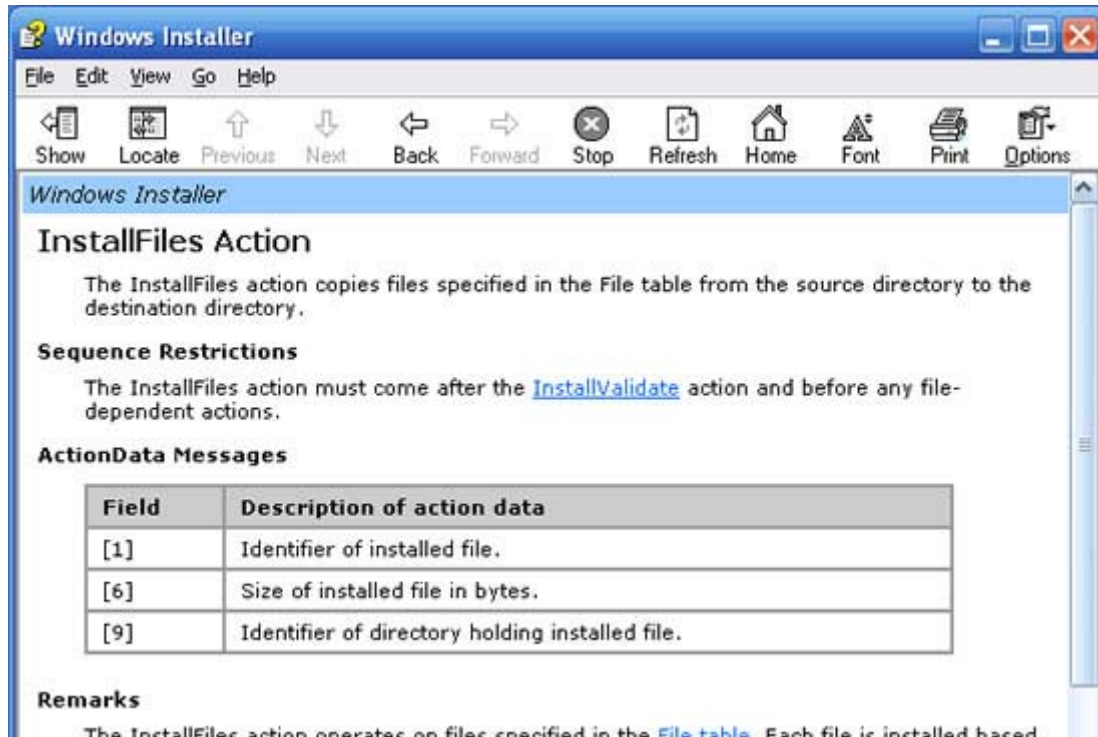
After rebuilding and running your project, the SetupProgress dialog box now appears similar to the following.



The generic form of the detailed text is taken from the Template field of the ActionText table. For the InstallFiles action pictured in the previous figure, the template is:

File: [1], Directory: [9], Size: [6]

The Windows Installer help library topic "InstallFiles Action" describes the meaning of the fields [1], [6], and [9]. The "ActionData Messages" section of any standard action's help topic describes the fields used in that action's detailed messages.



To modify the detailed message displayed during data transfer, simply modify the Template value in the ActionText table for the given action. For example, suppose you want to modify the InstallFiles messages to appear similar to the following:

Now installing: C:\Program Files\Sample Co\Sample.exe

You can modify the Template value for the InstallFiles action to the following:

Now installing: [9][1]

After rebuilding and running the project in AdminStudio Editor, the new action data for the InstallFiles action appears as follows.



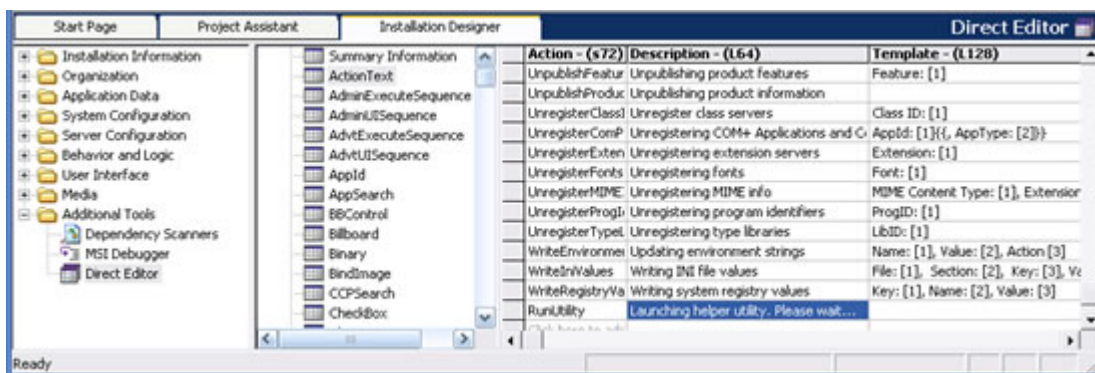
Using this technique, you can format the detailed messages for any predefined action.

## Displaying Data for a Custom Action

Using the same technique, you can display data for a custom action running in deferred mode. (As a rule, custom actions that make system changes should be scheduled for deferred execution.) This can be useful for custom actions that can take a significant amount of time to complete.

For example, suppose you have an executable you want to launch during installation. First, you create a deferred, launch-an-executable custom action in the Custom Actions view of the AdminStudio Editor interface (not pictured). For this example, suppose the custom action is called "RunUtility". In order for the action to be performed at run time, you must schedule it somewhere in the Execute sequence between InstallInitialize and InstallFinalize; for example, after the InstallFiles action.

To display a message while the custom RunUtility action is taking place, open the ActionText table in the Direct Editor view and add a new record. In the Action column, enter the action name "RunUtility"; and in the Description column, add the text you want to display (in the following figure, "Launching helper utility. Please wait...").



When the deferred custom action is running at deployment time, the SetupProgress dialog box appears similar to the following.





## Additional Notes

- In addition to displaying a simple status message, the Windows Installer help library describes how to add detailed ActionData while a deferred custom action is taking place, as well as how to add ticks to the progress bar while your action is running. However, this requires code inside the custom action to continually communicate with the running installation.
- If there is an action for which you do not want to display detailed information, you can delete the value in the corresponding Template field of the ActionText table.
- Similar to subscriptions to the ActionText and ActionData events, you can add Text controls that subscribe to the similar TimeRemaining and ScriptInProgress events. Using these events, you can display time-remaining information and information about internal script generation during immediate mode of your project's Execute sequence.