

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.

🛃 Sample /	App 3000 - InstallShield Wizard 📃 🗖 🔁	3
Installing The prog	Sample App 3000 ram features you selected are being installed.	ALANANAN ALANANAN
1	Please wait while the InstallShield Wizard installs Sample App 3000. This may take several minutes.	
	Status:	
	Copying new files	
InstallShield —		_
	< <u>B</u> ack <u>N</u> ext > Cancel	1

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.

Installation Information PatchWelcome Crganization PatchWelcome Control Name Control Control Name Control Nam	Start Page	Project Assistant	Installation Designer	r	i.				1	Dialogs 🗖
Additional Tools Behavior Control Sector Control Charles Control	Installation Inform Crganization Application Data System Configura Server Configura Behavior and Logi User Interface Dialogs Media Additional Tools	2000 2 年 年 年 年 年 年 年 年 年 年 年 年 年 年 年 年 年 年 年	dyToOnstall adyToOnstall adyToOnstall adyToRemove upCompleteSuccess upError upDrogress Behavior English (United States) upResume hupType ashBitmap LBrowse LLogin	< 3 (2) (2) (2) (2) (2) (3) (3) (3) (3) (3) (3) (3) (3) (3) (3	Setup/Progress Control Name ActionProgress35 ActionText Banner Banner Banner Banner DigDesc DigDesc DigDesc DigDesc DigTest2 DigT	Nalog Behavior Type ProgressBar Text PushButton Bitmap Line PushButton Text Text Text Text Text Text Text Text	4	ActionText Event ActionText Click here to ad To add a new last field of th Windows Inst control to sub Attribute colu properties will Events	Attribute Text subscription, first cl e list. Next, select o aller events that you scribe to. Finally, in m select which of th to set by the event Subscriptions	ick in the r enter the uwant this the ne control's t. Conditions

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.

Start Page	Project Assistant Installation	Designer		Direct Editor 🗐
🖲 🦳 Installation Information	Tables	Action - (s72)	Description - (L64)	Template - (L128)
Organization	Summary Information	FindRelatedProducts	Searching for related application	Found application: [1]
+ C Application Data	ActionText	GenerateScript	Generating script operations for	[1]
+ Configuration	AdminExecuteSequer	InstallAdminPackage	Copying files to the network.	File: [1], Directory: [9], Size: [6]
E Configuration	AdminUt/Sequence	InstallFiles	Copying new files	File: [1], Directory: [9], Size: [6]
Behavior and Logic	AdvtExecuteSequenc	InstalCOBC	Instaling ODBC components	
Go User Interface	AdvtUISequence	InstallServices	Instaling new services	Service: [2]
🖲 Media	Apold	InstallSFPCatalogFile	Installing system catalog	File: [1], Dependencies: [2]
E C Additional Tools	AppSearch	InstallValidate	Validating install	
Dependency Scann	er: BBControl	LaunchConditions	Evaluating launch conditions	
• MSI Debugger	Bilboard	MigrateFeatureStates	Migrating feature states from re	Application: [1]
Direct Editor	Binary	MoveFiles	Moving files	File: [1], Directory: [9], Size: [6]
and the second second	BindImage	PatchFiles	Patching files	File: [1], Directory: [2], Size: [3]
	COStawh	Processi opponents	Lindation component registration	

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**.)

Start Pag	je Proj	ject Assistant	Installation Designer		ogi t	Dialog	s 🖥
🚽 (Produc	tNamej - Instal	IShield Wizard			DetailText (Text)		
Desibullially	[aindultania]	el		(CHEREF	Property	Value	-
thetteening	(Georgeosean)	e1			(Name)	DetailText	
The prog	gram features you s	elected are being is	skaladed.		Base Text Style	<default></default>	
0.000000		0.00.0000000000000000000000000000000000		14.5	Cancel	False	
	Please wait while	the InstallShield W	izard instala]9(9dod000Wille)]e]hi	hisay	Code Page	Database	
	balge balve solve init	Maisutes.			Context Help		
0.000					Default	False	
	Status:				Enabled	True	
					Format as Bytes	False	
					Height	26	
				uuuua.	Left	61	
	Please wait				No Prefix	False	
	1				No Text Wrap	False	
	&				Property	IGNORE	
					Right-Aligned	False	
					Right-to-Left	False	
					Sunkan	Falca	

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

Organization OutOfSpace	n Ner BError SSuccess	SetupProgress Control Name ActionProgress95 ActionText Back	Dialog Behavior Type ProgressBar Text	DetailText Event	Attribute	e
Addtional Tools Addtional Tools Addtional Tools Addtional Tools	sion ted	Barner BarnerLine Cancel DetaiText	PushButton Bitmap Line PushButton Text	Click here to a	Text ddi	
	nted States)	DigDesc DigDesc2 DigText2 DigText2 DigTtle DigTtle DigTtle DigTtle DigTtle SetupIcon	Text Text Text Text Text Text Pushbutton Icon	To add a ne field of the 8 Windows Int control to su Events	w subscription, first click in the last ist, Next, select or enter the staller events that you want this biscribe to. Finally, in the Attribute Subscriptions Constorn	A (10)

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

🛃 Sample	App 3000 - InstallShield Wizard 📃 🗖 🔀
Installing	Sample App 3000
The prog	gram Features you selected are being installed.
P	Please wait while the InstallShield Wizard installs Sample App 3000. This may take several minutes.
	Status:
	Copying new files
	File: sample.exe, Directory: C:\Program Files\ Macrovision\SetupProgressArticle Size: 1045463

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.

e <u>E</u> dit	⊻jew	Go Help									
여름 Show	Locate	它 Previous	€ Next	< ⇔ Back	≓> Forward	Stop	(The set is a construction of the set is a co	С Home	_AS Font	Print	Dotions
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Th de Th de Action	e Instal stination nce Re e Instal penden Data M Field [1]	IFiles action striction IFiles actions. Lessages Des Iden Size	on copie y. s on must cription tifier of of insta	s files sp come af o of acti installed iled file i	ter the <u>In</u> ion data file. in bytes.	the File	: table fro i <u>date</u> actio	m the so	urce dir	y file-	o the

The InstallFiles action operates on files specified in the File table. Each file is installed haved

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.

🛃 Sample	App 3000 - InstallShield Wizard 📃 🗖 🔀
Installing	Sample App 3000
The prog	gram features you selected are being installed.
1 7	Please wait while the InstallShield Wizard installs Sample App 3000. This may take several minutes.
	Status:
	Copying new files
	Now installing: C:\Program Files\Macrovision\SetupProgressArticle\sample.rd

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...").

Start Page	Project Assis	itant Installation D	lesigner			Direct Editor 💼
🖲 🦳 Installation Inform	nation	Summary Information	~	Action - (s72)	Description - (L64)	Template - (L128)
Crganization	2036600	ActionText		UnpublishFeatur	Unpublishing product features	Feature: [1]
Application Data		AdminExecuteSequer	ce	UnpublishProduc	Unpublishing product information	
🖲 🔂 System Configura	stion	AdminUtSequence	_	UnregisterClass]	Unregister class servers	Class ID: [1]
E Configural	tion	AdvtExecuteSequence	e	UnregisterComP	Unregistering COM+ Applications and C	Appld: [1]{{, AppType: [2]}}
+ Behavior and Log	k l	AdvtUlSequence		UnregisterExten	Unregistering extension servers	Extension: [1]
E O User Interface	53 C	AppId		UnregisterFonts	Unregistering fonts	Fort: [1]
E C Media		AppSearch		UnregisterMIME	Unregistering MIME info	MIME Content Type: [1], Extension
Additional Tools		- BBControl		UnregisterProgI-	Unregistering program identifiers	ProgID: [1]
Dependency :	Scanners	Bilboard		UnregisterTypeL	Unregistering type libraries	LbID: [1]
MSI Debugge	e	Binary		WriteEnvironmen	Updating environment strings	Name: [1], Value: [2], Action [3]
Direct Editor		Bindimage		WriteInWalues	Writing INI file values	File: [1], Section: [2], Key: [3], Ve
		CCPSearch		WriteRegistryVa	Writing system registry values	Key: [1], Name: [2], Value: [3]
		CheckBox	-	RunUtility	Launching helper utility. Please wat	
	<		> +	I that have be add) (
Ready				10000 C		

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.