

Apple Media Tool 2.1 provides new objects, events, commands, and visual effects that you can use in your projects. In addition, this version includes a different Installer, a new engine, and new ways to work with media.

This chapter provides an overview of the new features, then explains the new features and how to use them.

IMPORTANT Some of the features and procedures described in this chapter replace those described in *Getting Started With Apple Media Tool* and *Apple Media Tool Reference Guide.* You should read this chapter for current information about these features and procedures before reading the other Apple Media Tool documentation.

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What's new in version 2.1

Apple Media Tool 2.1 includes the following new features:

- You use a new Installer application to install the software. The Installer installs only one engine, the AMT Engine, as well as different system software from that installed with the previous version of Apple Media Tool. For more information, see "Installing Apple Media Tool 2.1."
- There are new icons for the applications and files of Apple Media Tool.
 See "New Icons" for a list of the icons.
- You no longer use the AMT Minimal Engine to create titles that do not require QuickTime VR support. Instead, there is now a single engine that automatically provides QuickTime VR support for titles that contain QuickTime VR objects. See "The AMT Engine and Titles With QuickTime VR Objects" for more information about the AMT Engine.
- Four new objects allow you to drag a controller over a thumbnail of a picture to view different areas of the full-size picture. See "Picture View Objects" for more information about these objects.
- You can use the Application Launcher object and the Launch command to open an application or document, and the Open URL command to open Internet sites from within your title. For more information, see "Opening Applications, Documents, and Internet Sites."
- You can use the Timer object and the On Time event to create timed sequences of actions. See "Timing Events" for more information.
- The Picture Scroller, Text, Text Scroller, and Text Field objects offer new features. See "Changes to Objects" for information about these features.
- You can use the Hot Text Default and the Key Down Default events to specify the default action when users click hot text or press a key. See "New Events" for a description of these events.
- You can now assign the Print command to any type of object with media or to an Empty object to print an area of the screen. The Printer object is no longer available. For more information about the Print command, see "Printing Objects and Screens."
- Four commands provide additional control over ambient sounds. See "New Ambient Sound Commands."

- Several other new commands—Scroll By, Scroll To, Set Cursor, Step By, and Switch Media—are available in this version of Apple Media Tool. See "Other New Commands" for a description of these commands.
- You can now use horizontal and vertical blind effects in transitions. See "New Visual Effects" for a description of these new effects.
- There are several changes to Panoramic Movie objects and other movie media. See "Changes to Movies" for more information about these changes.
- The Add Media and Check Media dialog boxes now have additional features to help you work with media. See "Working With Media" to learn about these changes.

Installing Apple Media Tool 2.1

Apple Media Tool 2.1 provides a new Installer application. Although this Installer installs different software from that installed with the previous version of Apple Media Tool, the procedure for installing the software is the same. For instructions on installing the software, see "Installing Apple Media Tool Software" in Chapter 2 of *Getting Started With Apple Media Tool*.

The Installer for version 2.1 installs the following system software on all Mac OS–based computers:

- AppleScript
- QuickTime 2.5
- QuickTime Musical Instruments
- QuickTime PowerPlug (PowerPC-based computers only)
- QuickTime Settings control panel
- Sound control panel
- Sound Manager 3.2.1

On Mac OS-based computers with 68040 or earlier processors, the following system software extensions are installed:

- CFM-68K Runtime Enabler
- NuDragLib.slb
- NuQuickTimeLib.slb

On Mac OS–based computers with system software earlier than version 7.5, the following system software extensions are installed:

- Clipping Extension
- Dragging Enabler
- Macintosh Drag and Drop

In addition, the Installer installs one engine, the AMT Engine, in the folder with the application. You will not find the AMT Standard Engine or AMT Minimal Engine on your hard disk as described in "What's Included With Apple Media Tool" in Chapter 2 of *Getting Started With Apple Media Tool*.

For information about using the engine to create titles with QuickTime VR support, see "The AMT Engine and Titles With QuickTime VR Objects" later in this chapter.

Converting projects to version 2.1

Apple Media Tool 2.1 automatically converts projects created with version 2.0 when you open the projects. If you wish to open a project created with version 1.2, you must first convert the project to version 2.0 using Apple Media Tool Converter. To learn how to do this, see Chapter 4 of this book, "Using Apple Media Tool Converter."

New icons

Version 2.1 has new icons for the applications and files associated with Apple Media Tool.

lcon	Description
Nav.	Apple Media Tool application
No.	Project document
	Runtime Maker application
	Runtime title
*	AMT Engine
•	AMT Engine Resources
	Apple Media Tool Converter application

New Features of Apple Media Tool 2.1 5

The AMT Engine and titles with QuickTime VR objects

Version 2.0 of Apple Media Tool had two engines: the AMT Standard Engine, which provided QuickTime VR support, and the AMT Minimal Engine, which did not provide QuickTime VR support.

Apple Media Tool 2.1 has only one engine, the AMT Engine, which automatically provides QuickTime VR support for titles with QuickTime VR objects.

When you save your project as text before converting it to a runtime title, Apple Media Tool determines whether or not the project has any QuickTime VR objects. If it does, Apple Media Tool includes QuickTime VR support in the title.

IMPORTANT If a title includes a QuickTime VR object, it may require additional memory to play.

For information about converting a project to a runtime title, see Chapter 7, "Creating and Playing Titles," in *Apple Media Tool Reference Guide*.

Picture view objects

Apple Media Tool 2.1 provides four picture view objects that allow you to drag a controller over a reduced, or thumbnail, version of a picture to determine which part of the full-size picture is visible on the screen. With these objects, you can display a picture in an area of the screen that is smaller than the picture and let users scroll the picture to see different parts of it.

The picture view objects are the following:

Object	Description
Picture View	Displays the full-size picture media
Picture View Thumbnail	Displays a thumbnail of the picture media
Frame View Controller	Creates a rectangular controller
Picture View Controller	Creates a controller using media you specify

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Picture View object

The Picture View object displays the full-size picture media. To determine which region of the picture media is initially visible in the object, you specify the distance between the top-left corner of the picture media and the top-left corner of the Picture View object.

Media

You can use any file of the file type 'PICT'.

Parameters

A Picture View object has these parameters:

- Name, X, Y, Width, Height, Enabled, Shown For a description of these parameters, see "Parameters Common to All Objects" in Chapter 8 of *Apple Media Tool Reference Guide*.
- **Duration** The length of time, in ticks, that the object appears in the screen. (A tick is one sixtieth of a second.) The default value is −1, which means the object appears as long as the screen is displayed.
- X Offset The horizontal distance, in pixels, between the left edge of the picture media and the left edge of the Picture View object. X Offset must be a negative number.
- Y Offset The vertical distance, in pixels, between the top edge of the picture media and the top edge of the Picture View object. Y Offset must be a negative number.

Commands

A Picture View object can execute these commands:

 Enable, Enable(Disable, Disable, Show, Show(Hide, Hide, Start, Start(Stop, Stop, Go To Beginning, Go To End, Go To Time, Drag, Move By, Move To, Scroll, Scroll By, Scroll To, and Switch Media For a description of the Scroll By, Scroll To, and Switch Media commands, see the appropriate sections later in this chapter. For a description of the other commands, see "Commands" in Chapter 6 of Apple Media Tool Reference Guide.

Picture View Thumbnail object

The Picture View Thumbnail object displays a reduced version of the picture media displayed in the Picture View object and serves as a "map" to the Picture View object.

Media

You can use any file of the file type 'PICT'.

Parameters

A Picture View Thumbnail object has these parameters:

- Name, X, Y, Width, Height, Enabled, Shown For a description of these parameters, see "Parameters Common to All Objects" in Chapter 8 of *Apple Media Tool Reference Guide.*
- **Duration** The length of time, in ticks, that the object appears in the screen. (A tick is one sixtieth of a second.) The default value is −1, which means the object appears as long as the screen is displayed.

Commands

A Picture View Thumbnail object can execute these commands:

 Enable, Enable(Disable, Disable, Show, Show(Hide, Hide, Start, Start(Stop, Stop, Go To Beginning, Go To End, Go To Time, Drag, Move By, Move To, Scroll, Scroll By, Scroll To, and Switch Media For a description of the Scroll By, Scroll To, and Switch Media commands, see the appropriate sections later in this chapter. For a description of the other commands, see "Commands" in Chapter 6 of Apple Media Tool Reference Guide.

Frame View Controller object

The Frame View Controller object creates a rectangular controller that you can drag over the Picture View Thumbnail object to scroll the picture displayed in the Picture View object.

For the controller to work correctly, the sizes of the controller and the Picture View Thumbnail object must be in the same proportion to each other as the Picture View object and the picture media. If you select the Automatically Size option, the controller automatically changes to the proper size. When you run the project, Apple Media Tool identifies the Picture View and Picture View Thumbnail objects with which to use the controller and places the controller over the Picture View Thumbnail object in the location that corresponds to the offset you specified for the Picture View object. If the Automatically Size option is selected, Apple Media Tool also changes the size of the controller.

Media

This object does not use media.

Parameters

A Frame View Controller object has these parameters:

- Name, X, Y, Width, Height, Enabled, Shown For a description of these parameters, see "Parameters Common to All Objects" in Chapter 8 of Apple Media Tool Reference Guide.
- **Duration** The length of time, in ticks, that the object appears in the screen. (A tick is one sixtieth of a second.) The default value is -1, which means the object appears as long as the screen is displayed.
- Automatically Size If this option is selected (the default), Apple Media Tool sets the dimensions of the controller for you.

Note: The dimensions of the controller change when you run the project and when you switch the media in the Picture View or Picture View Thumbnail object using the Switch Media command. For more information about the Switch Media command, see "Switch Media Command" later in this chapter.

- Red, Green, Blue The three values that determine the color of the object. The default value for each is 0, which is black. You can specify values between 0 and 255, or click the Color button to select a color. For more information, see "Changing the Color of an Object" in Chapter 4 of Apple Media Tool Reference Guide.
- Frame Width The width of the controller in pixels.

Commands

A Frame View Controller object can execute these commands:

 Enable, Enable(Disable, Disable, Show, Show(Hide, Hide, Start, Start(Stop, Stop, Go To Beginning, Go To End, Go To Time, Drag, Move By, Move To, Scroll, Scroll By, Scroll To, and Switch Media For a description of the Scroll By, Scroll To, and Switch Media commands, see the appropriate sections later in this chapter. For a description of the other commands, see "Commands" in Chapter 6 of Apple Media Tool Reference Guide.

Picture View Controller object

The Picture View Controller object creates a controller using picture media you specify. For the controller to work correctly, the sizes of the controller and the Picture View Thumbnail object must be in the same proportion to each other as the Picture View object and the picture media.

The following table shows an example for the dimensions of the media and objects that you might use in a project:

Media or object	Size (pixels)
Full-size picture media	640 x 480
Picture View object	320 x 240
Picture View Thumbnail object	160 x 120
Picture View Controller object	80 x 60

When you run the project, Apple Media Tool identifies the Picture View and Picture View Thumbnail objects with which to use the controller and places the controller over the Picture View Thumbnail object in the location that corresponds to the offset you specified for the Picture View object.

Media

You can use any file of the file type 'PICT'.

Parameters

- A Picture View Controller object has these parameters:
- Name, X, Y, Width, Height, Enabled, Shown For a description of these parameters, see "Parameters Common to All Objects" in Chapter 8 of *Apple Media Tool Reference Guide*.
- **Duration** The length of time, in ticks, that the object appears in the screen. (A tick is one sixtieth of a second.) The default value is −1, which means the object appears as long as the screen is displayed.

Commands

A Picture View Controller object can execute these commands:

 Enable, Enable(Disable, Disable, Show, Show(Hide, Hide, Start, Start(Stop, Stop, Go To Beginning, Go To End, Go To Time, Drag, Move By, Move To, Scroll, Scroll By, Scroll To, and Switch Media For a description of the Scroll By, Scroll To, and Switch Media commands, see the appropriate sections later in this chapter. For a description of the other commands, see "Commands" in Chapter 6 of Apple Media Tool Reference Guide.

Opening applications, documents, and Internet sites

The Application Launcher object, together with the Launch command, opens an application and, if you choose, a document created in the application. In addition, after using the Launch command to open an Internet browser application, you can use the Open URL command to open Internet sites.

You can use these objects in your projects in several ways:

- Provide buttons that allow users to view World Wide Web sites.
- Create a sequence of titles, so that when one title finishes playing it opens the next title.
- Open any application to display information or perform a task.

Application Launcher object

The Application Launcher object executes a Launch command or Open URL command when it receives a specified event.

Media

This object does not use media.

Parameters

An Application Launcher object has these parameters:

 Name, X, Y, Width, Height, Enabled, Shown For a description of these parameters, see "Parameters Common to All Objects" in Chapter 8 of *Apple Media Tool Reference Guide*.

Commands

An Application Launcher object can execute these two commands to open applications, documents, or Internet sites:

- Launch
- Open URL

See the description of these commands later in this section.

An Application Launcher object can also execute these commands:

■ Enable, Enable(>Disable, Disable, Show, Show(>Hide, Hide,Drag, Move By, Move To, Scroll, Scroll By, Scroll To, Print, and Switch Media For a description of the Scroll By, Scroll To, Print, and Switch Media commands, see the appropriate sections later in this chapter. For a description of the other commands, see "Commands" in Chapter 6 of *Apple Media Tool Reference Guide*.

Launch command

You can use the Launch command to open an application and, if you choose, a document created in the application. You can specify a Mac OS application and document, and a Windows application and document.

You can also use the Launch command without specifying an application. You might do this, for example, if you want users to select their favorite Internet browser application before using the Open URL command.

If you specify an application, it must be in the same folder as Apple Media Tool while you are developing your project, and in the same folder as the runtime title. If the application is not in the correct location, or you do not specify an application, a dialog box appears when the command is executed that allows the user to select an application. You can specify the text prompt that appears in this dialog box.

Note: If the user selects an application to open, the full pathname for the application is saved in the title's preferences file. On a Mac OS–based computer, this file is located in the Preferences folder, which is in the System Folder on your hard disk. On a Windows-based computer, this file is located in a folder with the same name as the title; this folder is in the Windows folder on the user's hard disk.

If you specify a document, it must also be in the same folder as Apple Media Tool while you are developing your project, and in the same folder as the runtime title. If the document specified by the Launch command is not in the correct location, an error message appears and the application does not open.

Note: You cannot open a document if the application in which it was created is already open.

You can use the Launch command with these events:

- Before Display, After Display
- Mouse Down, Mouse Up, Mouse Enter, Mouse Leave
- Finished
- Key Down, Key Down Default
- Text Selected, Text Selected Default
- On Time

The Launch command has these parameters:

- Mac OS Application The name of the Mac OS application you want to open. You can type the name of the application or click the Choose Application button and select the application in the dialog box that appears. If you type the name, you must type it exactly as it appears in the Finder.
- Mac OS Document The name of the Mac OS document you want to open. You can type the name of the document or click the Choose Document button and select the document in the dialog box that appears. If you type the name, you must type it exactly as it appears in the Finder. You must also specify a Mac OS application to open the document.
- Windows Application The name of the Windows application you want to open. You must type the name of the application exactly as it appears in the directory using the DOS format of the name.
- Windows Document The name of the Windows document you want to open. You must type the name of the document exactly as it appears in the directory using the DOS format of the name. You must also specify a Windows application to open the document.
- Quit this title on launch When this option is selected, the title quits playing when the launched application opens. If you do not select this option, you return to the title that executed the Launch command when you quit the application.

Note: If you are running a project in Apple Media Tool, the project closes but Apple Media Tool remains open.

You can use this option to play a sequence of titles. As one title finishes playing, it launches the next title and quits, freeing memory for subsequent titles in the sequence.

• **Prompt** This option allows you to specify the text for the dialog box that appears if the specified application cannot be found.

Open URL command

The Open URL command allows you to open a specified Internet site in an Internet browser. You specify the site using its Uniform Resource Locator (URL).

Before executing this command, you must open the Internet browser using the Application Launcher object and the Launch command. In addition, there must be an open connection with the Internet to access the site specified by the URL.

IMPORTANT On a Mac OS-based computer, the Internet browser application must be the last application opened using the Launch command before the Open URL command is executed.

After opening the Internet browser application, your title can execute the Open URL command as many times as you want. Each time the command is executed, the specified URL is sent to the browser application and the browser application attempts to open the site.

You can use the Open URL command with the following Internet browser applications:

- On Mac OS-based computers: Netscape Navigator[™] version 2.0 or later, Microsoft Internet Explorer version 2.1 or later, Spyglass Mosaic (any version), and NCSA Mosaic (any version)
- On Windows computers: Netscape Navigator version 2.0 or later, Microsoft Internet Explorer version 3.0 or later, Spyglass Mosaic (any version), and NCSA Mosaic (any version)

Timing events

The Timer object and On Time event allow you to create a sequence of actions that occur at specified times after the Timer starts. The Timer object determines the total duration of the sequence and receives On Time events, which specify when actions occur.

For example, you can create a slideshow by executing a Switch Media command every 30 seconds to show a new picture.

Timer object

The Timer object specifies the total duration of the sequence of actions. When the Timer object receives an On Time event, it executes the actions assigned to the On Time event.

The Timer object can also receive events other than the On Time event. The following are two examples that you might use in your title:

- To start the Timer object, use a Before Display or After Display event to execute a Start or Start(Stop command.
- To create a continuous loop in your title, assign a Finished event to the Timer object that executes the "Go to Beginning" and "Start itself" actions.

Media

This object does not use media.

Parameters

A Timer object has these parameters:

- Name, X, Y, Width, Height, Enabled, Shown For a description of these parameters, see "Parameters Common to All Objects" in Chapter 8 of *Apple Media Tool Reference Guide*.
- Duration The total duration of the sequence. You can specify the number of hours (Hrs), minutes (Mins), seconds (Secs), and ticks (a tick is one sixtieth of a second). The Timer runs for the specified time then stops, unless the "Reset on user action" option is selected and the user performs an action.

• Show time on screen When this option is selected, a timer appears in the topright corner of the screen when you run the project. You can display the timer while you are developing your title to see when events are being executed.

Note: The onscreen timer does not display ticks.

- **Reset on user action** When this option is selected, the Timer restarts if the user moves the mouse, clicks the mouse button, or presses a key. You might use this option to restart a title that plays on a public-access kiosk.
- Aging If the system on which a title is playing is busy, the scheduled time for an On Time event may pass without triggering the event. You can use the Aging parameter to specify an amount of time, in ticks, after the event's scheduled time during which the event will still be triggered.

Commands

The Timer object uses two types of commands: those that control the Timer object and those that it can execute to perform other actions.

Use these commands to control the Timer object:

Enable, Enable(Disable, Disable, Show, Show(Hide, Hide, Start, Start(Stop, Stop, Stop, Stop All, Go To Beginning, Go To End, Go To Time For a description of these commands, see "Commands" in Chapter 6 of Apple Media Tool Reference Guide.

While the Timer object is running, it can execute other commands and actions in response to the On Time event or other events.

On Time event

The On Time event specifies when an action or actions occur. You can execute any type of command, link, or effect when an On Time event occurs.

The On Time event has one parameter:

• At Time The amount of time after the Timer object starts when the event occurs. You can specify the amount of time in hours (Hrs), minutes (Mins), seconds (Secs), and ticks (a tick is one sixtieth of a second).

Changes to objects

Several objects already available in Apple Media Tool now have new features.

Picture Scroller object

The Picture Scroller object now allows you to specify the area of the picture media visible in the object when the screen opens. It has two parameters:

- X Offset The horizontal distance, in pixels, between the left edge of the picture media and the left edge of the Picture Scroller object. X Offset must be a negative number.
- Y Offset The vertical distance, in pixels, between the top edge of the picture media and the top edge of the Picture Scroller object. Y Offset must be a negative number.

For more information about Picture Scroller objects, see "Picture Scroller Objects" in Chapter 8 of *Apple Media Tool Reference Guide*.

Text and Text Scroller objects

Text and Text Scroller objects now have a Margin parameter that allows you to specify the distance, in pixels, between the boundaries of the object and the edge of the text. The margin you specify applies to all four sides of the object. For a description of these objects, see "Text Objects" and "Text Scroller Objects" in Chapter 8 of *Apple Media Tool Reference Guide*.

Text Field object

The Text Field object now has a Save File Name parameter. If you select the Saveable option to save the contents of the object when the screen closes, you can use this parameter to specify the name of the file in which the contents of the object are saved.

Note: On Mac OS–based computers, the file is saved in the Preferences folder in the System Folder. On Windows-based computers, the file is saved in a folder with the same name as the title; this folder is in the Windows folder on the user's hard disk.

If you do not specify a filename, the contents of the object are saved in a file with the same name as the Rich Text Format (RTF) file used as the media for the object. If you use the same RTF file for several Text Field objects in a title, you can only save the contents of one of the objects.

New events

Two new events are available in this version of Apple Media Tool.

Hot Text Default event

You can use the Hot Text Default event with a Text or Text Scroller object to specify the action that occurs when a user clicks hot text that does not have a Hot Text event defined for it.

Note: If you do not specify a Hot Text Default event, clicking hot text without a specified Hot Text event does nothing.

For information about specifying hot text in an RTF file and using the Hot Text event, see "The Hot Text Event" in Chapter 6 of *Apple Media Tool Reference Guide*.

Key Down Default event

You can use the Key Down Default event with a Keyboard object to specify the action that occurs when the user presses any key that does not have a Key Down event defined for it. For example, you can use this event to allow users to press any key to continue viewing your title.

Note: If you do not specify a Key Down Default event, pressing a key without a specified Key Down event does nothing.

IMPORTANT While you are developing your project, pressing the Enter key will stop a running project even if you define a Key Down Default event. When you play the title, pressing the Enter key will execute the Key Down Default event.

For information about the Key Down event, see "The Key Down Event" in Chapter 6 of *Apple Media Tool Reference Guide*.

Printing objects and screens

You can now use the Print command to print the contents of an object or, if the target is the Empty object, an area of the screen.

IMPORTANT The Print command replaces the Printer object. The Printer object is no longer available in Apple Media Tool 2.1.

Print command

You can set any object to execute the Print command. The target of the Print command can be either an object with media or the Empty object.

• If the target object contains media, the command prints the media.

If the target is a picture, text, or movie object, the command prints the entire media, even if the entire media is not visible in the object.

If the target is another type of object, the command prints only the visible area of the object.

• If the target object is the Empty object, the command prints the area of the screen covered by the Empty object. This allows you to print either part of the screen or the entire screen.

The Print command has no other parameters.

When the Print command is executed, the Page Setup dialog box appears asking you to select page setup options. When you click OK, the Print dialog box appears asking you to select printing options. When you click OK, the target object is printed.

New ambient sound commands

Apple Media Tool now provides four commands that allow you greater control of ambient sounds. If your project uses a lot of ambient sounds, you can use the Disable Ambient Sound and Enable Ambient Sound commands to allow users to choose whether or not to play ambient sounds throughout the title. You can use the Pause Ambient Sound command to allow users to temporarily stop a sound, then use the Resume Ambient Sound command to play the sound from the place where it was paused.

Disable Ambient Sound command

The Disable Ambient Sound command disables any subsequent commands that affect ambient sounds. The affected commands are Pause Ambient Sound, Resume Ambient Sound, Start Ambient Sound, Start(Stop Ambient Sound, and Stop Ambient Sound.

Enable Ambient Sound command

The Enable Ambient Sound command resumes the normal action of the ambient sound commands that are disabled by the Disable Ambient Sound command.

Pause Ambient Sound command

The Pause Ambient Sound command pauses the current ambient sound. If you resume the sound using the Resume Ambient Sound command, the sound plays from the point where it was paused.

Resume Ambient Sound command

The Resume Ambient Sound command resumes an ambient sound that was paused using the Pause Ambient Sound command. The sound plays from the point where it was paused.

Other new commands

Apple Media Tool 2.1 introduces several other new commands.

Scroll By command

The Scroll By command scrolls the picture media in a Picture or Picture Scroller object a specified distance relative to the object's left or top edges.

The Scroll By command has two parameters:

- X The horizontal distance, in pixels, to scroll the picture. If X is a positive number, the picture scrolls to the right; if X is a negative number, the picture scrolls to the left.
- Y The vertical distance, in pixels, to scroll the picture. If Y is a positive number, the picture scrolls down; if Y is a negative number, the picture scrolls up.

Note: You cannot scroll a picture to a point where any edge of the picture is inside the boundary of the object.

Scroll To command

The Scroll To command scrolls the picture media in a Picture or Picture Scroller object to a specified location relative to the object's left and top edges.

The Scroll To command has two parameters:

- X The horizontal location, in pixels, to which the left edge of the picture is scrolled. A positive number for X indicates a location to the right of the left edge of the object; a negative number indicates a location to the left of the left edge of the object.
- Y The vertical location, in pixels, to which the top edge of the picture is scrolled. A positive number for Y indicates a location below the top edge of the object; a negative number indicates a location above the top edge of the object.

Note: You cannot scroll a picture to a point where any edge of the picture is inside the boundary of the object.

Set Cursor command

The Set Cursor command allows you to specify the cursor that appears during an event. When the Set Cursor command is executed, the selected cursor appears until another Set Cursor command is executed or the title moves to another screen. The cursor set by the command overrides the Enabled and Disabled settings selected in the Runtime Setup dialog box.

The Set Cursor command has one parameter:

• Cursor The cursor to display.

If you select the Empty option (the default), no cursor appears.

If you select the Return Control option, the title takes control of the cursor and the Enabled and Disabled settings selected in the Runtime Setup dialog box take effect again.

Step By command

The Step By command causes a Movie or Movie Controller object to "step" or scan through a QuickTime movie by a specified number of frames. Because you can specify a negative as well as a positive number of frames, you can scan both forward and backward through the movie.

The Step By command has one parameter:

• Step by The number of frames the movie steps through each time the command is executed. The default is 1. You can specify a positive number to step forward through the movie, or a negative number to step backward through the movie.

Note: If you step forward at the end of the movie, the movie returns to the beginning. If you step backward at the beginning of the movie, the movie returns to the end.

Switch Media command

The Switch Media command allows you to change the media that appears in an object while a title is running. Because you can use this command to display several pictures in one screen, it makes it easier to develop titles in which many images appear in sequence, such as slideshows. Because the title doesn't load all the media when it opens, it also needs less memory to play.

You can use the Switch Media command with any object that uses media:

- Movie, Movie Controller, Object Movie, and Panoramic Movie objects
- Picture, Picture Scroller, and Flipbook objects
- Picture View, Picture View Thumbnail, and Picture View Controller objects
- Sound objects
- Text, Text Scroller, and Text Field objects

To use the Switch Media command, add the media you want to appear when the screen opens, then create an event, such as a Mouse Up, that executes the Switch Media command to change to other media. Do not place the media to which the command switches in the screen.

To work properly, all the media that appear in the object must be in the same folder and of the same type. If they are not, an error message appears when the command is executed.

The Switch Media command has two parameters:

- Filename The name of the file that contains the media to which you want to switch. You can type the name of the file or click the Choose File button and select the file in the dialog box that appears.
- Automatically Resize When this option is selected, the size of the target object changes to the dimensions of the new media item when the command is executed.

Note: Object Movie and Panoramic Movie objects are not resized.

IMPORTANT Because you don't place the media to which the command switches in your project, the media is not backed up as part of your project. Therefore, if you move your project, you must reestablish the link to the media.

New visual effects

Apple Media Tool has two new visual effects.

Horizontal Blind effect

The Horizontal Blind effect divides the current image or screen into horizontal strips, then wipes every strip simultaneously from top to bottom, revealing the destination image or screen. The Duration parameter specifies the speed of the transition.

Vertical Blind effect

The Vertical Blind effect divides the current image or screen into vertical strips, then wipes every strip simultaneously from left to right, revealing the destination image or screen. The Duration parameter specifies the speed of the transition.

Changes to movies

Several new features in Apple Media Tool 2.1 affect QuickTime VR panoramic movies and other movie media.

No preloading movie media

The Preloaded option for Movie, Object Movie, and Panoramic Movie objects is no longer available.

Correcting panoramic movies

The Parameters dialog box for Panoramic Movie media now has a Correction option that allows you to specify the amount of correction to apply to a QuickTime VR panoramic movie.

Note: This feature replaces the Warped feature described in "Panoramic Movies" in Chapter 9 of *Apple Media Tool Reference Guide*.

A panoramic movie is a series of flat pictures that are stitched together to form a continuous, cylindrical image. Because the pictures are flat, you can see the seams where they meet unless the images are corrected to give the illusion of a continuous picture.

The Correction option lets you determine the amount of image processing performed by QuickTime VR when you pan or tilt the movie. Although greater correction produces a more realistic effect, the image processing required may affect the performance of the title.

You can choose one of the following Correction options:

- Full (Default) This option performs the greatest amount of correction, reducing the visibility of the stitches between images and giving the appearance of a continuous image when you pan or tilt the movie. Since it requires the most processing, it has the greatest effect on the movie's performance.
- **Partial** This option performs correction only when you pan the movie. Since this option can double the playback speed of the movie, it is useful for large panoramic movies where high-speed performance is important.

Note: If the panoramic movie has an extreme vertical field of view (more than 50 degrees), you may notice some distortion at the top and bottom of the image. This distortion is less noticeable at the center.

None This option performs no correction on the movie. Although selecting this option increases performance, the stitches between images are noticeable when you pan or tilt the movie. However, this amount of correction may be useful in some cases. For example, if the movie consists of a flat map, you may not want it to be distorted.

For a description of the other parameters of a panoramic movie, see "Panoramic Movies" in Chapter 9 of *Apple Media Tool Reference Guide*.

Returning to the last view of a QuickTime VR movie

If you open a screen with an Object Movie or Panoramic Movie object, then open another screen, when you return to the first screen you will see the view of the movie that was visible when you left the screen, not the opening view of the movie.

Note: Use the Go To Angle command to return to the initial view.

Working with media

The Add Media and Check Media dialog boxes provide new features that you can use when working with media.

Add Media dialog box

The Add Media dialog box has the following new features:

- The Add All button replaces the "Add all media in this folder" checkbox. To add all the media items in a selected folder, click the button.
- As you select media items, the list at the bottom of the dialog box shows the items you have selected.
- If you wish to remove an item from the list of media items you have selected, you can select the item in the list and click Remove.
- If you wish to remove all the items from the list of media items you have selected, you can click Remove All.

Check Media dialog box

If, when you choose Check All from the Media menu, Apple Media Tool cannot locate media items in your project, a dialog box appears asking you to locate each missing media item. When the dialog box appears, you can do one of the following:

- Click Open when you locate a missing item and want to continue checking for missing items.
- Click Skip if you don't want to locate the current item, but want to continue checking for missing items.
- Click Skip All if you want to stop checking for missing items but want to save the locations of items you have found.
- Click Cancel if you want to stop looking for missing items and discard the location of items you have found.



This chapter introduces the new features of Apple Media Tool version 2.0. For a complete description of these features and how to use them, see the *Apple Media Tool Reference*.

User interface changes

With version 2.0, the user interface of Apple Media Tool has been redesigned to make it easier for you to work with the components of your project. The new version has two principal new features: the Browser miniwindow and extensive use of the drag-and-drop feature.

The Browser miniwindow provides you with easy access to the components of a project. It displays components in four panes: the Screens, Objects, Events, and Actions panes. When you select a component in a Browser pane, the items it contains appear in the pane to the right. For example, to see the objects that a screen contains, click the screen item.

In addition, you can add a component to a project by double-clicking the appropriate pane. For example, to add an object to a screen, select the screen in the Screens pane and then double-click in the Objects pane.

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You can now use the drag-and-drop feature to perform many tasks in Apple Media Tool:

- To reorder items in the Browser, you can drag an item's icon.
- To assign a screen or object as the target of an action in the Browser, you can drag the icon of the screen or object to an action.
- To add media to a screen, you can drag the media's icon from the Media miniwindow to the screen's icon in the Browser, the screen's icon in the Map window, or the screen's window. If the screen is selected in the Browser, you can drag the media's icon to the Object pane. Doing this also creates an object.

You can also add media from a file to your project by dragging the media file's icon from the Finder to the Media miniwindow, to a screen window, or to a screen icon in the Map window or Browser.

Other user interface changes in Apple Media Tool include:

- The Run command is now located in the Window menu.
- Choose Runtime Setup from the File menu to select preferences for the run-time version of the project.

New QuickTime VR features

Apple Media Tool version 2.0 now allows you to use QuickTime VR (Virtual Reality) movies in your project. To support QuickTime VR movies, Apple Media Tool provides new object types, new commands, and a new event.

Apple Media Tool now provides two new movie object types:

- The Object Movie object displays a QuickTime VR object movie. An object movie allows the user to rotate an object to view it from different angles.
- The Panoramic Movie object displays a QuickTime VR panoramic movie. A panoramic movie allows the user to rotate a scene to view it from different positions. For example, the user can view a room as if he or she were standing in the middle of the room and turning around 360°.

In addition, a panoramic movie can comprise a series of panoramic movies that are linked together by hot spots. Such a movie, called a *scene*, allows a user to view a panoramic movie, called a *node*, and then click an area of the screen to see another panoramic movie or node. For example, after viewing a room, the user can click a door to enter and view the next room.

To allow you to control QuickTime VR movies, Apple Media Tool provides two new commands:

- The Go to Angle command allows you to specify the viewing angle of an Object Movie or Panoramic Movie object.
- The Go to Node command allows you to display a specific node of a Panoramic Movie object.

Apple Media Tool now includes a new event:

 The Entered Node event is sent to a Panoramic Movie object when a user enters a new node.

New media and objects

Apple Media Tool version 2.0 now provides objects for several new types of media, as well as several new objects that do not use media.

- The Color object allows you to specify the color for a rectangle in the screen. You might use a Color object to create a background color for a screen.
- The Audio CD object allows you to control the playback of the audio track of a CD-ROM or an audio CD if the user is using an Apple CD-ROM drive.
- The Flipbook object allows you to display an image from a PICT file that contains several images, called *frames*. The frames must be the same size and they must be arranged in rows and columns. You might use a Flipbook object to create a short animation sequence, such as a moving cursor.
- The Text, Text Scroller, and Text Field objects now allow you to specify a Rich Text Format (RTF) text file as the media item.
- The Object Movie and Panoramic Movie objects were described in the previous section.
- The Print object is described in the following section, "New Actions and Events."

In addition, you can use picture and movie media that include a custom color palette to determine which colors are available to other objects in the screen. The object containing the media with the custom color palette must be the object furthest back in the screen.

You can also place media files in several folders. You should place less than 500 files in a single media folder.

For a demonstration of some of these new commands, see the demonstration titles on the *Apple Media Tool 20 CD-ROM*.

New actions and events

Apple Media Tool version 2.0 provides a number of new commands:

- The Start Ambient Sound, Start<>Stop Ambient Sound, and Stop Ambient Sound commands allow a project to play Sound media that are not associated with an object or screen. These *ambient sounds* allow you to play a piece of music through several different screens.
- The Go to Time and Run to Time commands allow you to specify the place from which to play an Audio CD, Flipbook, Movie, or Movie Controller object.
- The Find command allows you to specify a location in a Movie or Movie Controller object by searching for text in the text track of the QuickTime movie.
- The Move By and Move To commands allow you to move an object within the screen.
- The Scroll command allows a user to scroll a picture or text field while the title is playing. The Scroll command target must be a Picture, Flipbook, Text, or Text Field object.
- The Print command prints an area of the screen. You specify the area using the Print object, which is the only type of object you can assign as the target of a Print command. The Print object is a new object type that does not use media.
- The Set Volume command sets the volume of the system speaker.

- The Go to Angle and Go to Node commands were described in the section, "New QuickTime VR Features," earlier in this chapter.
- The Entered Node event was described in the section, "New QuickTime VR Features," earlier in this chapter.

For a demonstration of some of these new commands, see the demonstration titles on the *Apple Media Tool 20 CD-ROM*.

Performance and capacity improvements

The performance of Apple Media Tool version 2.0 has been enhanced so that you can work efficiently with large projects. You can now open and save projects with up to 1000 screens with acceptable performance. You can also copy and paste large numbers of items, such as screens and objects.

In addition, Apple Media Tool titles now run faster on both Windows and Mac OS systems.

For suggestions to improve the performance of your Apple Media Tool titles, see Chapter 6, "Improving a Title's Performance."

AppleScript capabilities

You can now use AppleScript scripts to control actions in Apple Media Tool. You can also use the AppleScript Script Editor to record actions in Apple Media Tool. Recording can help you develop scripts faster.

For more information about using AppleScript with Apple Media Tool and a description of the commands and objects that you can use in scripts, see Chapter 3, "Using AppleScript with Apple Media Tool."

You can now use AppleScript scripts to control actions in Apple Media Tool. You can also use the AppleScript Script Editor to record actions in Apple Media Tool. Recording can help you develop scripts faster.

For more information about using AppleScript with Apple Media Tool, see Chapter 3, "Using AppleScript with Apple Media Tool."

Apple Media Tool Converter

The Apple Media Tool package now includes the Apple Media Tool Converter application. You can use Apple Media Tool Converter to do the following:

- Upgrade project archive files created with earlier versions of Apple Media Tool.
- Verify that media files are compatible with the Mac OS and Windows operating systems.
- Convert media files to be compatible with the Mac OS and Windows operating systems.

See Chapter 4, "Using Apple Media Tool Converter," for more information.

Custom run-time engines

The run-time engine located in the folder with Apple Media Tool defines the objects, events, and actions available in the Browser. The run-time engine also defines the media types you can use in your project. You can now create and use custom run-time engines.

Apple Media Tool includes two run-time engines:

- AMT Minimal Engine allows you to use the basic objects, events, actions, and media types in your project.
- AMT Standard Engine is a custom run-time engine that allows you to use QuickTime VR movies in your project, as well as the basic components.

For more information, see Chapter 5, "Using a Custom Run-Time Engine."

Runtime Maker changes

When you open Runtime Maker, a dialog box appears in which you select the file to compile. The dialog box includes a checkbox that you can select to compile a Windows run-time title.

Removed features

A number of features available in previous versions of Apple Media Tool have been removed.

- The plug-in capability, which allowed a programmer to write new transitions, is no longer supported. It is replaced by the custom run-time engine capability.
- When you link two screens in the Map window, the link does not appear in the Link Action pop-up menu. If you link two screens in the Map window, you must define the link action between the screens in the Browser. However, if you hold down the Control key when you drag a screen to a Link item in the Actions pane, the screens are linked automatically in the Map window.
- The Purge command is no longer available. To purge media from a project, select all the media in the Media miniwindow and choose Clear from the Edit menu.
- Media editors no longer appear in the Media menu. They are now located in the Preferences dialog box.
- The cross-platform media converters are no longer available. They are replaced by Apple Media Tool Converter.
- The StyleEdit application is no longer available because text objects can use RTF file media.



Apple Media Tool version 2.0 allows you to use AppleScript scripts to control its actions. This chapter describes the AppleScript capabilities that you can use with Apple Media Tool.

About AppleScript for Apple Media Tool

AppleScript is a scripting language that allows you to use scripts to control actions in an application, such as Apple Media Tool. The AppleScript language shares many features with other scripting, programming, and macro languages. If you are familiar with such languages, you will find AppleScript easy to learn and use.

AppleScript comes with an application called Script Editor that you can use to create and modify scripts. Script Editor also allows you to record scripts as you perform actions in the application. Other applications for writing AppleScript scripts are available.

Apple Media Tool is now AppleScript-compatible. You can use scripts to perform actions in Apple Media Tool such as creating screens, objects, events, and actions; setting parameters for these elements; and adding media to a project.

AMT Standard Engine and AMT Minimal Engine are also AppleScript compatible. However, they do not support all of the commands and object classes defined by Apple Media Tool.

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To write a script for Apple Media Tool, you must be familiar with AppleScript and the Script Editor application. For more information about AppleScript, writing scripts, and using the Script Editor application, see these documents:

- Getting Started With AppleScript
- AppleScript Language Guide: English Dialect
- AppleScript Scripting Additions Guide: English Dialect
- AppleScript Finder Guide: English Dialect

In addition, see the example scripts provided with Apple Media Tool. These are located in the Sample Scripts folder on your *Apple Media Tool 20* CD-ROM disc.

Apple Media Tool scriptability

Apple Media Tool is a scriptable application. You can use an AppleScript script to control Apple Media Tool and perform various tasks. For example, you could use a script to automate changing the coordinates of an object, such as a logo, that appears in a large number of screens.

Apple Media Tool has implemented the required suite of AppleScript commands and many of the standard suite of commands. In addition, many commands have been implemented to perform functions specific to Apple Media Tool.

Apple Media Tool has also implemented object classes that correspond to many of the components of a project, such as screens and objects. In addition, Apple Media Tool defines an object class for each type of object, event, and action you can use in a project.

Apple Media Tool recordability

Apple Media Tool is a recordable application. You can use an application such as Script Editor to record many of the actions you perform in Apple Media Tool. Recording can help you when you are developing a script to understand the order of commands and the format of references. After recording a script, you can use it as is. However, it may only work correctly for you if all the conditions are exactly the same as when you recorded the script. This is because a recorded script is typically too specific to be useful for a general solution. You will probably need to change a recorded script to make it more useful for you.

For example, the following script was recorded by clicking an Apple Media Tool window, double-clicking the Screens pane in the Browser to create a new screen, double-clicking the Objects pane to create a new object for the screen, and double-clicking the Events pane to create a new event for the object.

tell application "Apple Media Tool"
 activate
 select document 1
 make new screen with properties {x:48, y:36}
 select screen id 1 of document 1
 make new object with properties {x:0, y:0, ¬
 width:640, height:480}
 select object id 1 of screen id 1 of document 1
 make new event with properties {kind:before display}
end tell

As you can see, before creating each new item, the script recorded a Select command. Because the Select statement requires a reference to a specific element, you could not use this script to create several screens with an object and an event. However, when a script executes a Make command to create a new item, Apple Media Tool selects the item by default so the Select statement is not necessary.

By simply removing the last two Select statements from this script, and adding a Repeat statement, the script can create several screens each with an object and event:

```
tell application "Apple Media Tool"
activate
select document 1
repeat with counter from 1 to 3
make new screen with properties {x:48, y:36}
make new object with properties {x:0, y:0, ¬
width:640, height:480}
make new event with properties ¬
{kind:before display}
end repeat
```

end tell

While many actions you perform in Apple Media Tool are recordable, some actions are not. The Script Editor cannot record the following actions:

- Moving, resizing, and zooming a window
- Resizing a pane in the Browser
- Selecting an object, unless you perform an operation on the selection such as creating new content in the selection, as in the earlier example
- Defining hot spots on an object
- Setting the screen display mode
- Selecting tools on the Tool palette
- Choosing Show Hot and Hide Hot from the Object menu

In addition, neither Apple Media Tool Converter nor Runtime Maker is recordable.

Scripting for Apple Media Tool

To write a script for Apple Media Tool, you use standard AppleScript statements together with the commands and object classes defined by Apple Media Tool. The Apple Media Tool commands and object classes are defined later in this chapter.

The following script illustrates some of the ways you can use a script to control Apple Media Tool. It is one of the sample scripts provided on the Apple Media Tool CD-ROM.

This script creates a project with five linked screens. Each screen contains an object. The script requests you to select a media file to display in the object. The script adds an event and action to each object so that clicking the object moves to the next screen. Finally, the script changes the location of each object so that you can know when you are viewing a different screen.

```
set numberOfScreens to 5
tell application "Apple Media Tool"
    activate
    make new document
set info of document 1 to {width:640, height:480, ¬
    best pixel size:32, better pixel size:16, ¬
    good pixel size:8, enabled cursor index:3, ¬
    disabled cursor index:2, loading cursor index:4, ¬
    use palette:false, scrollbar index:2, ¬
    controller index:2}
```

```
repeat with counter from 1 to numberOfScreens
   select document 1
  make new screen
   if counter > 1 then
      select screen id (counter - 1) of document 1
      connect selection to screen id counter of \neg
         document 1
   end if
end repeat
if numberOfScreens > 1 then
   select screen id counter of document 1
   connect selection to screen id 1 of document 1
end if
select document 1
set theMedia to choose file with prompt "What media ¬
  do you want to put on each screen?"
make new media with data {theMedia}
repeat with counter from 1 to numberOfScreens
   select screen id counter of document 1
  make new object at {283, 191} with data ¬
      {media index 1 of document 1}
end repeat
```

```
repeat with counter from 1 to 5
   select object id 1 of screen id counter of ¬
      document 1
   make new event with properties {kind:mouse up}
   select event 1 of object id 1 of \neg
      screen id counter of document 1
   make new action with properties {kind:go to}
   select action 1 of event 1 of object id 1 of \neg
      screen id counter of document 1
   if counter > 4 then
      set target of selection to screen id 1 of \neg
         document 1
   else
      set target of selection to screen id \neg
         (counter + 1) of document 1
   end if
end repeat
```

```
select object id 1 of screen id 1 of document 1
move selection by {-167, -108}
select object id 1 of screen id 2 of document 1
move selection by {-93, -54}
select object id 1 of screen id 4 of document 1
move selection by {120, 91}
select object id 1 of screen id 5 of document 1
move selection by {244, 211}
select screen 1 of document 1
display dialog "Building the 5 screen demo is ¬
finished." buttons {"OK"}
```

end tell

The first Make instruction creates an instance of the Document object class. Document is one of the standard AppleScript object classes implemented by Apple Media Tool. You use a Document object to represent a project.

The Set statement that follows the Make instruction sets the Info property of the Document object representing the project. Many of the AppleScript object classes defined by Apple Media Tool for its components, such as screens or objects, have an Info property. The Info property is a list of the item's parameters and their settings.

Next, the Repeat statement creates five screens by using the Make instruction to create instances of the Screen object class. The Repeat statement also connects each screen to the previous screen. Notice that the Select statement selects the previous screen, and the following Connect statement connects the screens. The last screen, screen 5, is connected to the first screen in the If statement that follows the Repeat statement.

After the If statement, a series of statements selects the project document, asks you to choose a media file, and adds the media to the project. The media file is added to the project by using the Make command to create an instance of the Media object class. Notice that the script selects the Document object before it makes the Media object.

The next Repeat statement creates an object in each screen using the media added in the previous section. As before, the script selects the object class instance representing the container, in this case a Screen, then uses the Make instruction to create a new item, in this case an Object object class.

The following Repeat statement makes an instance of the Event object class in each Object instance in each Screen and an instance of the Action object class in each Event instance. Notice that in each case the script sets the Kind property of the Event and Action objects using an expression of this form: {kind: kindSpecifier}

The final sequence of statements changes the location of the object in each screen, then displays a dialog box that the project is finished.

This sample illustrates only a few of the commands and objects available for you to use in a script.



Using Apple Media Tool Converter, you can upgrade a project created with a previous version of Apple Media Tool to version 2.0, verify that media are in the correct format to use on Windows and Mac OS computers, and convert media to the correct format. This chapter explains how to use Apple Media Tool Converter.

Upgrading projects to version 2.0

To use a project created with an earlier version of Apple Media Tool with version 2.0 of Apple Media Tool, you must first convert the project. These are the general steps:

- Using Apple Media Tool version 1.0, 1.1, or 1.2, save the project as an archive.
- Using Apple Media Tool Converter, upgrade the project archive. This creates a new, version 2.0 project file and converts the project's media.

You can now open the new project in Apple Media Tool version 2.0.

For a more complete description of upgrading projects to version 2.0, see Appendix A, "Updating Projects Created With Earlier Versions of Apple Media Tool," in the *Apple Media Tool Reference*.

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Checking media formats

You can use Apple Media Tool Converter to check that the media for your title have the correct format. You can check individual media files or an entire folder of media.

When Apple Media Tool Converter checks media, it verifies that the media file's complete pathname and filename conform to the following MS-DOS naming conventions:

- The name of any directory (folder) in the file's path has a maximum of eight characters.
- The filename has a maximum of eight characters followed by an optional extension consisting of a period followed by up to three characters, such as FILENAME.RTF.
- The complete pathname does not contain any characters not allowed in MS-DOS names, such as spaces, and the characters are ISO 9660compatible.

Media files need to conform to MS-DOS naming conventions so that the title can run on MS-DOS and Windows computers. This does not affect the way the title runs on a Mac OS computer.

To verify that the media's format is correct, Apple Media Tool Converter checks these things:

QuickTime Movies

QuickTime movies must be "flat" format, containing only a data fork and no resource fork; contain only one audio track and one text track; and be self-contained without references to other movies.

IMPORTANT You must use Apple Media Tool Converter to convert a movie to "flat" format. Converting movies by using MoviePlayer can result in errors.

The text track of a movie must be "burnt," or added to the frames of the video track.

The movie cannot contain any QuickTime sprites.

Movies must have the .MOV extension.

Pictures

Pictures must be QuickDraw bitmaps or QuickTime compressed stills. Pictures cannot consist of individual QuickDraw objects such as rectangles and lines.

Pictures must have the .PIC extension.

Sounds

Sounds must be WAVE files. Sounds must have the .WAV extension.

You can convert the format of media using Apple Media Tool Converter. See the following section, "Converting Media," for a description of how to do this.

Checking an individual media file

To check the format and MS-DOS compatibility of an individual media file:

1 Choose Check Media from the File menu.

A dialog box appears.

- 2 Locate the media file you want to check and select it.
- 3 Click Open.

Apple Media Tool Converter checks the file's name and format. You may see a progress indicator.

When Apple Media Tool Converter finishes checking the file, a dialog box appears to report the number of errors and warnings that occurred.

4 Click OK to view the session log.

When you click OK, Apple Media Tool Converter opens the session log using the SimpleText application. The session log provides information about the types of errors that Apple Media Tool Converter detected. Errors can include folder and file name errors and media format errors.

IMPORTANT If an error occurred, you may need to convert the media's format or change the name of a directory or file. See the following section, "Converting Media," to learn how to convert a media's format.

Checking a media folder

To check the format and MS-DOS compatibility of all files in a folder:

1 Choose Check Media Folder from the File menu.

A dialog box appears.

Select a folder to check:	
🕾 Apple Media Tool f 🔻	📼 Quad 700
 ☐ Apple Media Tool ☐ Getting Started - India ☐ My Project ☐ Projects ☐ Runtime Maker 	Eject
Check "Apple Media Tool")	Open ⊠ Name ⊠ Text

2 Select the type of media you want to check, and whether or not to check all the folders enclosed in the folder you select.

Click a checkbox to select or deselect an option. By default, Apple Media Tool Converter checks all types of files, all names, and all enclosed folders.

3 Locate and select the folder you want to check.

The name of the folder appears in the Check button below the file list.

4 Click the Check button.

Apple Media Tool Converter checks the folder using the options you selected. You may see a progress indicator while this occurs.

When Apple Media Tool Converter finishes checking the file, a dialog box appears to report the number of errors and warnings that occurred.

5 Click OK to view the session log.

When you click OK, Apple Media Tool Converter opens the session log using the SimpleText application. The session log provides information about the types of errors that Apple Media Tool Converter detected. Errors can include folder and file name errors and media format errors.

IMPORTANT If an error occurred, you may need to convert the media's format or change the name of a folder or file to be compatible with MS-DOS naming conventions. See the following section, "Converting Media," to learn how to convert a media's format.

Converting media

You can use Apple Media Tool Converter to convert media formats so that they are compatible with Apple Media Tool. You can convert an individual media file or a folder containing several media files.

Apple Media Tool Converter can convert these media formats:

- QuickTime movie files are converted to the "flat" format: self-contained and data fork only.
- Sound file formats ('AIFF', 'AIFC', 'sfil' system sounds, 'BINA' and 'K_W') are converted to 'WAVE' files.
- Text ('TEXT') and styled text ('K_T') file formats are converted to RTF format.

IMPORTANT Apple Media Tool Converter does not change file and folder names to be compatible with MS-DOS naming conventions. You must do this using standard Macintosh methods.

Converting an individual media file

To convert an individual media file:

1 Choose Convert Media from the File menu.

A dialog box appears.

- 2 Locate and select the file you want to convert.
- 3 Click Open.

Apple Media Tool Converter checks the file's format. If it recognizes the format and it needs to convert the format, Apple Media Tool Converter converts the file's format. You may see a progress indicator while Apple Media Tool is converting the file.

When Apple Media Tool Converter finishes checking the file, a dialog box appears to report the number of errors and warnings that occurred.

Note: If Apple Media Tool Converter does not recognize the file's format, it reports an error.

If an error occurs, you can click OK to see the session log, which provides additional information about the problem.

Converting a media folder

To convert all the media files contained in a folder:

1 Choose Convert Media Folder from the File menu.

A dialog box appears.

Select a folder to convert:		
🕾 Apple Media Tool f 🔻	📼 Quad 700	
 ☐ Apple Media Tool ☐ Getting Started - India ☐ My Project ☐ Projects ☐ Runtime Maker 	Ejøct E E S:: Cancel Open	
Convert "Apple Media Tool")		
🛛 Convert all enclosed folders		
🛛 Movie 🛛 Picture 🖾 Sound	🖂 Text	

2 Select the type of media you want to convert and whether or not to convert all the folders enclosed in the folder you select.

Click a checkbox to select or deselect an option. By default, Apple Media Tool Converter converts all types of files in all enclosed folders.

3 Locate and select the media folder you want to convert.

The name of the folder appears in the Convert button below the file list.

4 Click the Convert button.

Apple Media Tool Converter converts the media files using the options you selected. You may see a progress indicator while this occurs.

When Apple Media Tool Converter finishes converting the files, a dialog box appears to report the number of errors and warnings that occurred.

If an error occurs, you can click OK to see the session log, which provides additional information about the problem.



Apple Media Tool version 2.0 allows you to use a custom run-time engine with your title. This chapter describes the purpose of a custom run-time engine and explains how to use a custom run-time engine with Apple Media Tool and with a title.

About custom run-time engines

The run-time engine located in the folder with Apple Media Tool defines these properties of the application:

- The objects, events, and actions available in the Browser miniwindow, including the name and icon for each type.
- The media types that appear in the Media window, which determine the types of media you can use in a project.
- The AppleScript commands and object classes that you can use to refer to these properties in a script.

In addition, Runtime Maker needs the definitions of the run-time engine used to create a project when it compiles the title. Runtime Maker uses the definitions contained in the files located in the CODES folder that appears in the Runtime Maker folder.

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Apple Media Tool provides two run-time engines:

- AMT Minimal Engine defines the standard objects, events, actions, and media types you can use in your project.
- AMT Standard Engine is a custom run-time engine that allows you to use QuickTime VR movies in your project, as well as the basis components.

When you install Apple Media Tool, the AMT Standard Engine is located in the folder with Apple Media Tool. The files in the CODES folder correspond to the AMT Standard Engine.

You can now create and use other custom run-time engines with Apple Media Tool. With a custom run-time engine, you can use custom media, objects, events, or actions in your title without having to use the Apple Media Tool Programming Environment. You might use this capability to create titles based on proprietary components.

You can also use a custom run-time engine to exclude types of media, objects, events, or actions to minimize the size of your titles. For example, because the AMT Minimal Engine and the corresponding files for the Runtime Maker CODES folder do not support QuickTime VR movies, a title created with the AMT Minimal Engine results in a title that requires less memory and disk space than one created using AMT Standard Engine.

You create a custom run-time engine using the Apple Media Tool Programming Environment. For more information, see the *Apple Media Tool Programming Environment User's Guide* and the *Apple Media Tool Programming Environment Reference Guide*.

Using a custom run-time engine with Apple Media Tool

When you start Apple Media Tool, it loads the run-time engine that appears in its folder. To use a different run-time engine, you need to replace the existing run-time engine with the one you want to use.

To use a different run-time engine:

- 1 Quit Apple Media Tool, if it is open.
- 2 Move the existing run-time engine file to a different folder.

For example, move the AMT Standard Engine to the folder named AMT Standard Engine Folder in the Apple Media Tool folder.

Note: You can move the run-time engine to any folder.

3 Move the run-time engine you want to use to the folder containing Apple Media Tool.

For example, move the AMT Minimal Engine file from the folder named AMT Minimal Engine Folder in the Apple Media Tool folder into the folder with Apple Media Tool.

4 Restart Apple Media Tool.

Note: If you have two run-time engines in the folder with Apple Media Tool when you start the application, it selects the one whose name appears first alphabetically. For example, Apple Media Tool selects the AMT Minimal Engine if it appears in the folder with the AMT Standard Engine.

Using a custom run-time engine with Runtime Maker

When you compile a multimedia title, Runtime Maker uses definitions contained in the files located in the CODES folder, which is located in the folder with Runtime Maker. These files should correspond to the run-time engine you used to create a project. When you compile a title created with a custom run-time engine, Runtime Maker needs the files that correspond to that run-time engine.

Apple Media Tool provides the files that correspond to the AMT Standard Engine and AMT Minimal Engine. When you install Apple Media Tool, the CODES folder contains the AMT Standard Engine files. The Minimal Codes Folder, which is located in the Runtime Maker folder, contains a CODES folder which contains the files for the AMT Minimal Engine.

To use the files for a different run-time engine with Runtime Maker, perform one of these tasks:

• Replace the files located in the CODES folder in the Runtime Maker folder with the new files.

Before you replace the files in the CODES folder, you may want to move or copy them to a different location on your hard disk.

 Replace the CODES folder with a new CODES folder. The new folder must be named CODES.

Before you replace the current CODES folder, you may want to move or copy it to a different location on your hard disk.

For example, move the CODES folder installed with Runtime Maker into the folder named Standard Codes Folder located in the Runtime Engine folder. Doing this preserves the files for the AMT Standard Engine. Next, move the CODES folder in the Minimal Codes Folder into the Runtime Maker folder.



This chapter provides suggestions for improving the performance of an Apple Media Tool multimedia title and reducing the amount of random-access memory (RAM) it requires.

This chapter also describes how you can view the amount of free memory available to a title when it plays and how you can change the amount of memory available to a title.

Improving play

If you are creating a title to present information to other users, you want it to play as smoothly and efficiently as possible. Here are several ways in which you can improve the way the title plays:

 Preload pictures when a title plays by selecting the Preloaded checkbox in the media's Parameters dialog box. (You cannot select this option for movies.)

When a picture is preloaded, the title stores an offscreen bitmap of the picture in RAM. This can improve the rate at which the picture is updated. It does not affect when the media is loaded into memory or purged from memory.

Preloading a picture may require more RAM.

:

- For a long background sound, use an ambient sound or the sound track of a QuickTime movie.
- To save the time required to load an image for a button, use an object without media or a non-visual object, such as a Sound object, for the button. Include the picture for the button in the background.
- If a screen contains several media items that cannot be preloaded and that affect the performance of the title, use several screens to display the individual items.
- For large projects—more than 500 screens—use the Apple Media Tool Programming Environment to develop the project and compile the title. The Apple Media Tool Programming Environment allows you greater control of memory allocation and provides other ways you can optimize the title. For example, you can keep backgrounds that are used often in RAM. Doing this eliminates the need to reload a background each time it is needed.

Reducing RAM needed

If you are developing a multimedia title for general distribution, you cannot expect every user to have large amounts of RAM. Therefore, you need to minimize the amount of RAM your title requires.

Some strategies for reducing the RAM needed by a title can improve the title's performance, while other strategies can impair its performance. You need to experiment with the organization of your project and its use of media to achieve the best performance and memory use.

You can use these suggestions to reduce the amount of RAM required by a title:

• Use the lowest possible number of colors for the project.

Using 256 colors is recommended. You set the number of colors by choosing Runtime Setup from the File menu.

Use pictures with smaller dimensions and fewer colors.

• Do not have pictures preload when the title runs.

Be sure the Preload checkbox is not selected (the default) in the media's Parameters dialog box. However, as explained earlier, preloading pictures can improve the performance of the title, so you may need to select this option for some media.

- For background sounds, use short looping sounds rather than long continuous sounds. You can make a sound loop by selecting the Looping checkbox in the Parameters dialog box for the media.
- Use a sound-editing application, such as Macromedia SoundEdit, to reduce the sampling rate of any sounds.

When a title starts playing, all the sounds it contains are loaded into memory and remain there until the title finishes running. Sounds recorded at higher sample rates (higher-resolution sounds) require more memory than sounds recorded at lower sample rates. A one-minute sound recorded at 22 kHz requires 1304K of memory; one recorded at 11 kHz requires 652K.

• Convert a sound to a QuickTime movie that contains only a sound track.

Unlike sounds, QuickTime movies are not loaded into memory in their entirety. Using them reduces the memory required by the title. In addition, QuickTime movies provide you more flexibility in choosing a sampling rate, and you can use compression.

• Use several screens to display a series of large pictures, rather than a single screen that shows and hides each picture.

When a title displays a screen, all the pictures that the screen contains are loaded into memory and remain there until the screen closes. Using several screens, rather than a single screen, reduces the memory required by the title at any one time.

Displaying free memory

When you run a project or play a title, Apple Media Tool allows you to see information about the amount of free RAM available to the application or title.

- When you run a project in Apple Media Tool, press the Shift key when you choose Run from the Window menu.
- When you play a title on a Windows or Mac OS computer, press the Shift key.

The information appears in the top-left corner of the monitor.

You can use this information to determine whether you need to reduce the amount of RAM required by the title. (See the previous section, "Reducing RAM Needed.") You can also increase the total amount of memory available to the title, as described in the following section.

Changing the memory available to a title

When you play a title, you can control the amount of memory available to the title. Because a title is an application, it has two areas of memory that can be allocated and released dynamically: the stack and the heap.

The title uses the stack to allocate memory for static variables. The stack grows or shrinks at one end, while the other end remains fixed. Because space on the stack is always allocated and released at the top of the stack, there can never be any unallocated "holes" in the stack.

The title uses the heap to allocate memory for various resources, including media and the program code itself. Heap space is allocated and released only at the title's explicit request. Space in the heap is allocated in blocks, which may be of any size needed for a particular object. Because these operations can occur in any order, the heap can become fragmented into a patchwork of allocated and free blocks. To change the amount of memory available to a title on a Mac OS computer:

1 Hold down the Control key and double-click the title's icon in the Finder.

A dialog box appears showing the heap size and stack size allocated to the title.

Heap Size: <u>640</u> K Stack Size: 1 K
Cancel OK

The default heap size is 640K and the default stack size is 1K.

Type a new amount for the heap size or stack size. 2

Usually you will increase the amount of memory available for the heap and not change the amount of memory available for the stack.

3 Click OK when you are finished.

Click Cancel to close the dialog box without changing the amount of memory available to the title.

After the dialog box closes, the title plays using the memory settings you specified.

To change the amount of memory available to a title on a Windows computer you must edit information in the file with the .INI extension that was created by Runtime Maker for the title.

To change the amount of memory available to a title on a Window's computer:

- 1 Open the title's .INI file.
- 2 Locate the lines ;heap = 640 and ;stack = 64 in the file.
- 3 Remove the comment mark (;) from the line for the area of memory you want to change.
- 4 Type the amount of memory you want to use.
- Save and close the .INI file. 5

The next time you play the title, it will have the additional memory available to it.



This chapter describes problems you may have with Apple Media Tool, the Apple Media Tool Converter, the AMT Standard Engine, or the AMT Minimal Engine and suggests solutions. This chapter also contains a list of error messages you may see and describes what they mean.

Problems and solutions

This section lists problems you may encounter using Apple Media Tool.

Problems with pictures

A picture in my project does not appear correctly.

If a picture does not appear correctly on either Windows or Macintosh computers, it may not be saved as a PICT file. Open the media file in a graphics application and save it as a PICT file.

A picture in the project does not appear correctly on a Windows computer, although it appears normally on a Macintosh computer.

On a Windows computer, if a picture loads correctly but appears out of focus, the application you used to create the picture may have stored the coordinates in the PICT file incorrectly. To correct this problem, open the Macintosh picture file in a graphics program and save the picture as a PICT file.

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A picture in my project fails to load and a "divide by zero" error occurs.

Open the media file in a graphics application and make sure that the horizontal and vertical resolutions are not zero.

Problems with sound files

An AIFF file that I converted to a WAVE file in SoundEdit Pro does not appear in Apple Media Tool.

SoundEdit Pro uses an obsolete file type for WAVE files. Use Apple Media Tool Converter to convert the file.

A SoundEdit 16 WAV sound file does not appear in Apple Media Tool.

SoundEdit 16 uses an obsolete file type for WAVE files. Use Apple Media Tool Converter to convert the file.

Problem with movies

A QuickTime sound-only movie object does not respond to mouse events.

The height and width of the QuickTime movie is zero. Use the Parameters dialog box to change these settings.

The Apple Media Tool Converter says a movie needs to be converted, but I have already converted it using the Movie Player application.

Make sure you convert the movie using the Apple Media Tool Converter, not the Movie Player application.

Problem with Scrollable Text objects

I have two Scrollable Text objects that are aligned so that one covers the other. When I hide the top object, I cannot scroll the bottom object.

Hidden objects can still be enabled. Disable the top Scrollable Text object before hiding it.

Problem using effects

Effects do not work with the Go to Beginning and Go to End commands.

To use effects with these two commands, you must specify a Refresh Screen command to see the effect.

Problem with audio CD playback

I can't control audio CD playback from the project or title.

You must be using an Apple CD-ROM player to use the Audio CD object to control the playback of the audio track.

Problems playing a title

Runtime Maker compiles a title but it does not play.

Runtime Maker may be able to compile a title although the media files are not in the proper location for the project. Make sure that the media files for the title are in a folder named MEDIA, which is located in the folder with the title. Select Check All from the Media menu in Apple Media Tool before you save the project as text. When you recompile the title with Runtime Maker, select the Backup Media checkbox in the dialog box that appears.

Problem playing a title in Windows

The title says that QuickTime for Windows is not installed, but it is.

If your run-time title works properly when the Movie Player application is open, it is possible that the run-time title cannot find the QuickTime DLL libraries. In the AUTOEXEC.BAT file, the PATH string should include the string C:\QTW\BIN, which specifies the location of the QuickTime libraries. However, if the PATH string is too long, DOS discards any part of the string after the maximum length.

To correct this problem, open the AUTOEXEC.BAT file and move the QuickTime library path string (C:\QTW\BIN) to the beginning of the PATH string.

It is also possible that you have more than one version of QuickTime for Windows installed. Remove older versions of QuickTime for Windows. You should be using version 2.0.3 or later.

Problems with media files when playing a title

My Windows run-time title displays a message that it cannot find a media file.

The media file may be missing. Make sure the media file is in the media directory.

The media file may not have a valid DOS name. Make sure the filename follows MS-DOS conventions as described in "Checking Media Formats" in Chapter 4. Next, use the Replace command in the Media menu in Apple Media Tool to update your project. Finally, create a new Microsoft Windows run-time title. You should also create a Macintosh run-time title to make sure that the title can find the file on the Macintosh as well.

My Windows run-time title displays a message that the media file is corrupted.

The media file is not compatible with QuickTime for Windows or Apple Media Tool. Convert the media file to a compatible format using the Apple Media Tool Converter, update your project, and create a new Windows runtime title.

Problems with memory when playing a title

My Windows run-time title displays a message that there is not enough memory to play a sound or movie, although there is enough memory.

The media file does not have the correct Apple Media Tool format. Convert the file to the Apple Media Tool format using Apple Media Tool Converter, update your project, and create a new Windows run-time title.

My Windows run-time title does not work, and I receive the message, "External Memory Error."

You may have insufficient memory on your Window's computer to run the title. For suggestions to reduce the amount of memory required by the title, see "Reducing RAM Needed" in Chapter 6. To change the amount of memory available to the title, see "Changing the Memory Available to a Title" in Chapter 6.

The title may include media files that are not the correct format. Use the Apple Media Tool Converter to verify the format of the media files in the project. If necessary, convert the format, update your project, and create a new Windows run-time title.

My Macintosh run-time title does not work, and I receive the message, "Memory Error."

You may have insufficient memory on your Macintosh computer to run the title. For suggestions to reduce the amount of memory required by the title, see "Reducing RAM Needed" in Chapter 6. To change the amount of memory available to the title, see "Changing the Memory Available to a Title" in Chapter 6.

The title may include media files that are not the correct format. Use the Apple Media Tool Converter to verify the format of the media files in the project. If necessary, convert the format, update your project, and create a new Macintosh run-time title.

Problem with MPC files

MPC files created from my project fail to run from a CD-ROM, although they do run if copied to a hard disk.

Some CD-ROM mastering systems do not create a true ISO CD-ROM or Hybrid CD-ROM image. Consult the manufacturer of the CD-ROM mastering system you are using for more information.

Error messages

This section lists error messages you may see while using Apple Media Tool or a run-time title.

Insufficient memory.

Save your work.

You may wish to allocate more memory to this application.

This message indicates that you do not have sufficient memory to run the Apple Media Tool application. You can provide more memory using the application's Get Info box in the Finder.

The disk is full.

The disk is locked.

A disk error occurred.

The file is locked.

These error messages may occur when you save a project file. Make sure the disk is unlocked and has enough space for the file. Make sure the file is not locked. If a disk error occurs, use a different disk.

The file is already in use or was left open.

The disk is not available.

The required resources were not found.

File not found.

Folder not found.

Disk not found.

These error messages may appear when you open a file, run a project, or play a title. They indicate that Apple Media Tool or the title cannot locate a media item. Make sure that none of the media files are open in another application. In addition, be sure all media items are available where they were located when you added them to the project or compiled the title.

It is not the right kind of document.

This error message appears when you select an option in the Parameters dialog box for an action that is not appropriate for the media item associated with that action. Deselect the option and close the dialog box.

There are too many files open.

This error message may appear if a system error occurs when opening a file. Close other applications before opening the file again.

You do not have the necessary access privileges.

Problem with AppleTalk.

AppleTalk is not connected.

These error messages occur when you are opening a file from a file server. Check with your network administrator to make sure the network is working correctly and to change your access privileges, if necessary.

The printer could not be found.

An error occurred due to a problem when communicating with the printer.

These error messages appear during printing. Make sure the printer is turned on and try printing again. If you are using a network printer, check with your network administrator to make sure the network is working correctly.

An error occurred due to a problem with the file server.

This error message occurs while you are trying to access a file server volume. Make sure you have a network connection and that you can see the volume on your desktop.

This application needs a 68020 processor!

This application needs System 7.1!

This application needs Macintosh Drag and Drop!

This application needs Color QuickDraw 32 bits!

This application needs QuickTime 2.1!

This application needs Sound Manager 3.1!

These error messages may appear when you start the Apple Media Tool application. Make sure you have the correct hardware and software, as described in "Hardware Requirements" and "System Requirements" in *Getting Started with Apple Media Tool.*

The value is no number; former value substituted.

The value is less than the allowed minimum; minimum value substituted.

The value is more than the allowed maximum; maximum value substituted.

The value is shorter than the allowed minimum; value padded.

The value is longer than the allowed maximum; value truncated.

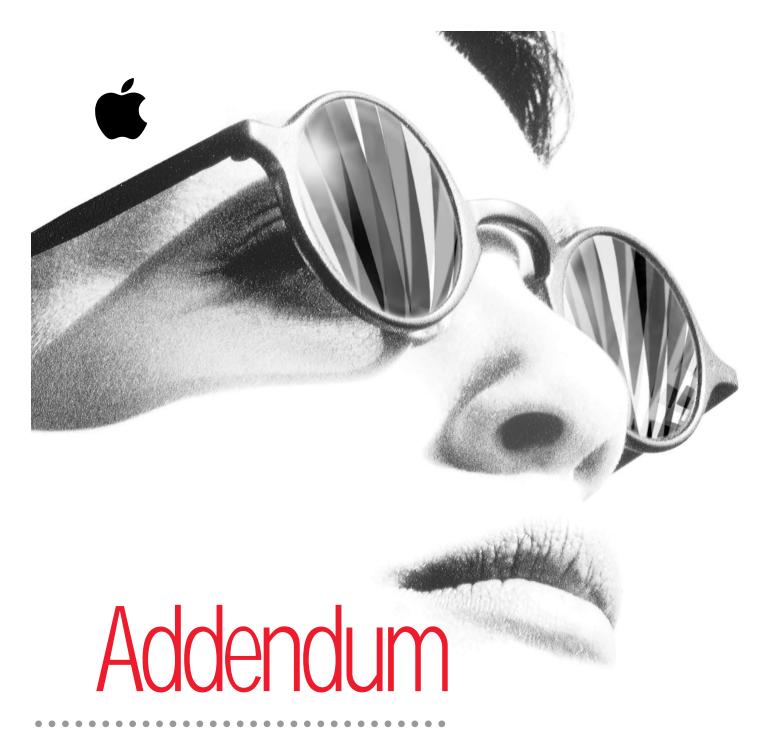
These error messages appear if you have entered an inappropriate value into a field of a Parameters dialog box. Enter an appropriate value in the dialog box, then click OK.

The name has no ".k" extension; ".k" extension added.

This error message appears if you click Save in the dialog box that appears when you save a project as text and the filename does not include the ".k" extension. Apple Media Tool adds the extension. You can click Save again to save the project as text.

Used media cannot be deleted!

This error message appears when you try to delete a media item being used in a project from the Media window. Delete any objects containing the media item from the project, then delete the media item.



Includes new features in Apple Media Tool 2.1, upgrading projects, using AppleScript, and customizing engines

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The Apple Media Tool Addendum provides information about Apple Media Tool version 2.1 and version 2.0 that supplements *Getting Started With Apple Media Tool* and the *Apple Media Tool Reference Guide*.

What is in this book

This addendum consists of seven chapters:

- Chapter 1, "New Features of Apple Media Tool 2.1," describes the new features of Apple Media Tool version 2.1.
- Chapter 2, "New Features of Apple Media Tool Version 2.0," lists the new features of Apple Media Tool version 2.0. It also lists the features of Apple Media Tool version 1.2 that are not available in version 2.0.
- Chapter 3, "Using AppleScript with Apple Media Tool," explains how to write and record scripts for Apple Media Tool.
- Chapter 4, "Using Apple Media Tool Converter," describes how to convert titles created with Apple Media Tool version 1.2 to use with version 2.0. It also explains how to convert media and how to verify that your project can use the media on computers running MS-DOS.
- Chapter 5, "Using a Custom Run-Time Engine," explains how to use a custom run-time engine with an Apple Media Tool title.

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- Chapter 6, "Improving a Title's Performance," provides suggestions to help you improve the performance of a project. It also describes how to view the amount of random-access memory (RAM) used by a title and how to change the amount of RAM available to the title.
- Chapter 7, "Troubleshooting," describes problems that you may encounter while using Apple Media Tool and suggests solutions to these problems. This chapter also lists error messages that you may see while using Apple Media Tool and explains what they mean.

For more information

For information about installing and starting to use Apple Media Tool, see the *Getting Started With Apple Media Tool*.

For a detailed description of how to use Apple Media Tool, see the *Apple Media Tool Reference Guide*.