Using iPod as a Tour Guide

How to use iPod to provide information in tour and teaching environments

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Overview

Using any iPod with a dock connector, you can create and display text content, create and organize custom menus, and link to other text and audio clips. You can set iPod so users see only the menus and text notes you want them to see, without having access to other iPod functions.

These features make up an elegant solution for tour and teaching environments. For example, an astronomy student using an iPod prepped for class could scroll through the names of Jupiter's moons, choose Europa to read about it, and then choose a link to hear a description and see a telescopic photo.

In another scenario, the iPod could be set up to guide patrons through a museum tour. A patron holding an iPod might see a main menu like this:

The patron would choose "Start Tour" and see a list of stations corresponding to marked areas of the museum:

She would then choose the appropriate station and hear an explanation of that station's exhibit.

Or, the iPod could be set up to allow patrons to browse for topics in any order. For example, the main menu could look like this:
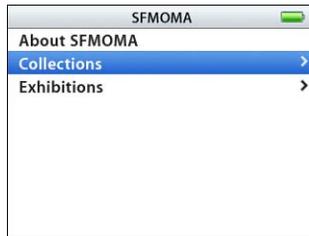
A patron could choose "Collections" to see a list of artists and other museum collections:
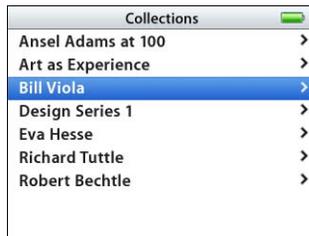
She could then choose an artist to see a list of his works featured in the museum:

She could choose one of his works, perhaps one she is standing in front of, and read something about it:
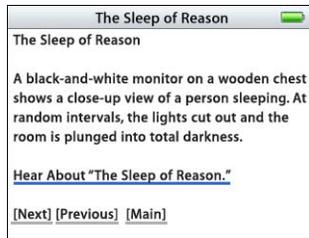
She could then choose a link to hear the artist talking about the creative process and see a picture related to the art:

Finally, she could press the Center button to see a larger version of the picture:

Creating and Organizing Notes

You can create text notes, and you can set iPod so users see only your notes without having access to other iPod functions. You can also customize the iPod interface to display categories that users navigate to view notes.

Tip: For best performance, make sure each iPod you're using has the latest iPod software. Go to www.apple.com/ipod/ to download the latest iPod software.

Creating Notes for Display On iPod

You can load up to a thousand text notes onto an iPod for display. Each note can be up to 4 KB (any text beyond 4 KB is not displayed).

To create a note:
- On your computer, type or paste content into a text application, such as TextEdit on a Mac or NotePad on a PC, and then save it as a plain text file.

Tip: By default, a note is displayed as a menu item in the iPod interface using the note's file name, including its extension if it has one. You can specify a different name by including a title tag in the note (*tags* instruct iPod how to function, and aren't displayed on iPod).

Type the title tag

<TITLE>*New Title*</TITLE>

anywhere in the note, replacing *New Title* with the title you want.

To load a note onto an iPod:
- Copy the plain text file to the Notes folder on the iPod.

Tip: To copy the file, the iPod must be set for disk use. In iTunes preferences, click iPod, then click Music and select "Enable disk use."

To view a note on an iPod:
- On the iPod, choose Extras > Notes and choose a note.

Setting iPod to Show Only Notes

When you set iPod to Notes Mode, users see only the items you place in the Notes folder, and can only hear songs and audio files by choosing links in your notes.

To set iPod to Notes Mode:

1 Create a plain text file named "Preferences" and add the following line:

<meta name="NotesOnly" content="true">

2 Put the file in the Notes folder on iPod.

Tip: You can change the title of the main notes screen (the first screen users see if iPod is set to Notes Mode) by adding the following tag to the Preferences file:

<TITLE>*New Title*</TITLE>

Replace *New Title* with the title you want.

Using Folders to Organize the Interface

iPod displays the folder hierarchy in the Notes folder, allowing you to organize your notes into categories. Folders are shown on iPod as menu items in alphabetical order.

To use folders to organize notes into categories:

■ Create folders inside the Notes folder, and then put notes or more folders inside them.

In the example from page 3, a text file named "About SFMOMA" and folders named "Collections" and "Exhibitions" were created and stored inside the Notes folder to create this interface:
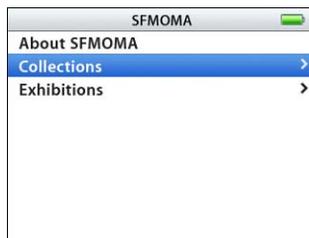
In this example, a "Preferences" file with the tag:

<TITLE>SFMOMA</TITLE>

was created in the Notes folder to change the screen title from "Notes" to "SFMOMA."

More folders were created and placed inside the "Collections" and "Exhibitions" folders to further break down the categories:
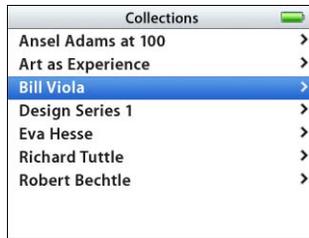
Tip: If you have content in multiple languages, you can put a folder named for each language in the Notes folder, and then place translated content in each language folder.

For information about organizing menu items in any order or creating menu items that link directly to notes or audio files, see page 14.

Linking to Notes and Folders

You can add link tags to a note so that users can jump from a link in the note to another note, a menu item, or an audio file.

Linking to a Note

You can link from a note to any other text note stored within the Notes folder.

To link to another note:

- In a note file, type a link tag that points to another note file.

    Such a link tag might look like this:

    <A HREF="*note file*">*Link to another note*</A>

    In this example:

    - **<A HREF="*...*">** signifies that the tag is an instruction to create a link.
    - *note file* is the name of the file the link points to (substitute your own filename).
    - *link to another note* is the text a user sees underlined in the note on the iPod display (substitute your own text).
    - **</A>** signifies the end of the link tag.

    For example, the following text:

    Zen emphasizes the role of sitting meditation (zazen) in pursuing
    <A HREF="Show Me the Way">enlightenment</A>.

    causes a sentence with the underlined link <u>enlightenment</u> to be displayed in the note on iPod:
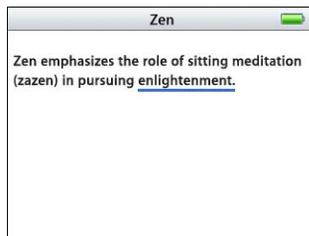
When a user reading the note scrolls to the "enlightenment" link and clicks the Center button, the note file "Show Me the Way" is displayed. If more than one link is visible, the active link is blue (on an iPod with a color display) or black, and the inactive links are gray.

Linking to a Note in Another Folder

You can link from a note to another note in the Notes folder or in any of its subfolders. You can't link to notes outside the Notes folder.

To indicate the location of a linked note, you can use a link tag with an *absolute reference* or a *relative reference*. An absolute reference shows where the linked note is in relation to the Notes folder. A relative reference shows where the linked note is in relation to the folder that contains the original note.

To create a link with an absolute reference:

- In a note, type a link tag using a path starting in the Notes folder.

A tag with an absolute reference has a path that starts with a slash:

<A HREF="/note file">Link to another note</A>

If the linked file is in a subfolder, separate the items in the path with a slash:

<A HREF="/folder/note file.txt">Link to another note</A>

Note: You can also use backslashes and colons in file paths. See page 15.

So for example, the link "Show me the Tao" in the line

<A HREF="/About Taoism.txt">Show me the Tao</A>

points to the note file "About Taoism.txt" inside the Notes folder.

And the link "Confucius says" in the line

<A HREF="/Social Philosophers/About Confucius">Confucius says</A>

points to the note file "About Confucius" inside the "Social Philosophers" folder, which is inside the Notes folder.

To create a link with a relative reference:

- In a note, type a link tag with a path starting in the folder that contains the note.

A tag with a relative reference has a path starting with the name of a folder or file instead of a slash:

<A HREF="Show Me the Way">enlightenment</A>

<A HREF="subfolder/note.txt">Link to another note</A>

In the first example, the link "enlightenment" points to the note "Show Me the Way" inside the same folder as the note with the link. In the second example, the link "Link to another note" points to the note "note.txt" inside the folder "subfolder," which is inside the same folder as the note with the link.

Note: If you use a relative reference, you can only link to notes in the folder that contains the original note, or in its subfolders. To link to a note in a folder outside the folder with the original note, you must use an absolute reference.

Linking to a Folder

You can link to any folder in the Notes folder or any of its subfolders.

To create a link from a note to a folder:

- Create a link tag pointing to a folder, using the folder's name.

For example, the tag

<A HREF="/folder1/folder2">Link to folder2</A>

creates a link to the folder "folder2," which is inside "folder1," which is inside the Notes folder. When a user chooses the "Link to folder2" link, a list of notes and folders inside "folder2" is displayed.

You can link to the Notes folder itself by using a slash with no text after it. For example, the tag

<A HREF="/">Link to Notes folder</A>

creates a link to the Notes folder.

Linking to Songs and Audio Files

You can link from a note to songs and audio files, or to a playlist or other group of songs. You can show an image when an audio file plays, and control whether the Now Playing menu shows while audio plays.

Linking to a Song or Other Audio File

You can link to any song or other audio file on iPod. When a user chooses the link, the song plays. By default, the Now Playing screen appears when audio plays. (For instructions on setting iPod to continue displaying the note when a song plays, see page 14).

To create a link from a note to a song or an audio file:

1 Load the song or audio file onto your iPod using iTunes.

2 Create a link tag in a note pointing to the song (see the example below).

Linking to a song or audio file is similar to other links.

In this example:

<A HREF="song=*My Way*">*Link to My Way*</A>

the link "Link to My Way" links to the song "My Way."

In this example:

- **<A HREF="song=...">** signifies that the tag is an instruction to create a link to a song or audio file stored on iPod.
- *My Way* is the name of the song, as it appears on iPod, to which the link points (substitute the name of the song you want to link to)

When creating a link to a note, you must type the note's filename extension (usually ".txt") if it has one. However, when linking to a song, type the song's name just as it appears on your iPod. Don't type the song's filename extension.

Note: If there is more than one song with the same name on your iPod, you can rename one of the songs and then link to it.

Linking to a Group of Songs

You can link to a playlist, all songs by a particular artist or composer, all songs on an album, or all songs in a particular genre. When a user clicks the link, the songs play in order. If the iPod is set to shuffle, they play randomly.

To link to a group of songs:

- Create a link tag specifying the group of songs, following the examples below:

  <A HREF="ipod:music?playlist=*AmbientX*">*Link to AmbientX playlist*</A>

  In the above example:

  - **<A HREF="iPod:music?...>** signifies that the tag is an instruction to create a link to a category of song.
  - **playlist** is the category of song (substitute your own category).
  - *AmbientX* is the name of the playlist on iPod (substitute your own playlist).
  - ***Link to AmbientX playlist*** is the text a user sees underlined in the note on the iPod display (substitute your own text).

  Here are examples of links to other groups of songs:

  <A HREF="ipod:music?genre=rock">Link to rock music</A>

  <A HREF="ipod:music?artist=Radiohead">Link to Radiohead</A>

  <A HREF="ipod:music?composer=Beethoven">Link to Beethoven</A>

  <A HREF="ipod:music?album=Pinkerton">Link to Pink</A>

  You can combine instructions to refine the group of songs played by adding "&" followed by another instruction. Here's an example:

  <A HREF="ipod:music?genre=rock&artist=U2">Combo</A>

  Music identifiers cannot contain an ampersand. For example, these links do not work:

  <A HREF="ipod:music?genre=country&western">Link to genre</A>

  <A HREF="ipod:music?artist=hall&oates">Link to artist</A>

Showing an Image When Audio Plays

When a user clicks a link to a song or other audio file, the Now Playing screen is displayed by default. If the audio file has an image (such as album art) associated with it, the image is displayed next to the name of the audio file.

If the user clicks the Center button twice, the image is displayed in a larger format.

To add an image to an audio file:

- In iTunes, select a song on the iPod and drag a still image to the artwork box in the lower left corner of the iTunes window. (If you don't see the artwork box, click the "Song artwork and video viewer" button.)

Tip: When audio is done playing, iPod shows the note text again. You can instruct your users to press the Play/Pause button to pause the audio if they want to see the image longer.

Setting iPod to Continue Displaying a Note When Playing Audio

By default, the Now Playing screen appears when a user chooses a link to an audio file. You can set iPod to continue displaying the note instead, by changing the setting globally, for a single note, or for a single song link.

To set all notes so that the Now Playing screen doesn't appear when a song link is chosen:

1 In a plain text file, type the following line:

   <meta name "NowPlaying" content=false>

2 Save the file as "Preferences" in the Notes folder on iPod.

   Note: If you already have a Preferences file in the Notes folder, add the line above to the file and save it.

To set a single note so that the Now Playing screen doesn't appear when any song link in the note is chosen:

- Anywhere in the note, add the line:

   <meta name "NowPlaying" content=false>

To set a single song link so that the Now Playing screen doesn't appear when the link is chosen:

- Add "NowPlaying=false" to the song link tag. For example:

   <A HREF="song=My Doorbell&NowPlaying=false">My Doorbell</A>

Fine-tuning the iPod Interface

You can exercise finer control over the iPod interface by arranging the order of menu items, linking directly from menu items to audio files and folders, creating multiple menu items that link to the same item, and encoding files for different languages.

Creating and Arranging Menu Items That Can Link to Notes, Audio Files, and Folders

Folders and files appear in the iPod interface as menu items in alphabetical order. You can arrange menu items in any order you want by creating a ".linx" file.

Unlike menu items created using folders, menu items created using a ".linx" file can link directly to notes and audio files, as well as folders.

To create menu items using a ".linx" file:

1 In a plain text file, type link tags in the order in which you want the items to be displayed.

2 Add ".linx" to the end of the file name (for example, "notefile.linx").

When a user chooses the ".linx" file, the links in the file are shown in the iPod interface the same way as contents in a folder.

Tip: If you name a ".linx" file "Main.linx" and place it in the Notes folder, the links in the file replace the contents of the main notes screen. This is a good way to exercise control over the main notes interface.

Linking to an Item from Multiple Menu Items

If you want multiple menu items to lead to the same item (note, folder, or song), you don't have to duplicate the item. Instead, you can use ".link" files to point to the item. Then if you want to make changes to a note's content, you only have to change one file.

In the iPod interface, ".link" files are displayed as menu items. When the user chooses a ".link" file, iPod immediately goes to the file, folder, or song specified in the ".link" file.

To create a ".link" file:

1 In a plain text file, type a link tag.

2 Add ".link" to the end of the file name (for example, "notefile.link").

Tip: If you include the tag <TITLE>*New Title*</TITLE> in the ".link" file (replacing *New Title* with the title you want), users will see the new title in the iPod interface, and won't see the ".link" file extension.

Using Alternative Path Delimiters in Filenames

When linking to a file in another folder, the folders and file names in the path can be delimited with either a forward slash (/), backslash (\), or colon (:), as in these examples:

Folder/file

Folder\file

Folder:file

The three path delimiters are equivalent.

If a folder name contains any of these special characters, they must be preceded by a backslash. For example, a link to a file named "Meeting 10/12/06" would be represented this way:

<A HREF="Meeting 10\/12\/06">Link to another note</A>

If the first or last character of a file or folder name is a slash or backslash, even with a preceding backslash it could be ambiguous whether a character is part of the file or folder name, or a path delimiter. In this case, you should use a colon as the path delimiter.

For example, a link to a folder named "Folder\" would be represented this way:

<A HREF="Folder\\:note file">Link to another note</A>

Path names must fit in 255 characters. More specifically, they must fit in 255 UTF8 Unicode bytes, or in 510 UTF16 Unicode bytes. Some characters expand to more than one UTF8 byte or more than two UTF16 bytes, so some paths may not fit even though they would appear to. See the Unicode specification for details (see page 16).

Files are not loaded if their path names are too long.

Checking Notes for Link and Tag Errors

You can check your notes for tag and link errors by creating an error report. The report lists all incorrectly formatted tags, as well as links that specify a nonexistent file, folder, or song.

To create an error report:

- Type <ERRORS> in any note within the Notes folder (or create a new note with the tag), and then view the note on iPod.

iPod displays an error report in place of the contents of any note containing the <ERRORS> tag.

Text Encoding

By default all note files are considered to be encoded in Latin1, unless the iPod language is set to Japanese, Korean, or simplified or traditional Chinese, in which case all note files are assumed to be in the default encoding for that language.

A note file can be tagged as having a different encoding:

<?xml encoding="MacJapanese"?>

The following encodings are supported:

- **For Latin1:** iso-8859-1, Latin-1.
- **For MacRoman:** x-Mac-Roman, Mac, Macintosh
- **For MacJapanese:** x-Mac-Japanese, Mac-Japanese, MacJapanese, Shift-JIS, Shift_JIS
- **For simplified Chinese:** x-Mac-Chinesesimp, Mac-Chinesesimp, EUC-CN
- **For traditional Chinese:** x-Mac-Chinesetrad, Mac-Chinesetrad, BIG5, CN-BIG5
- **For Korean:** x-Mac-Korean, Mac-Korean, EUC-KR
- **For UTF8 Unicode:** UTF8, UTF-8
- **For UTF16 Unicode:** UTF16, UTF-16, UCS2, Unicode

Each line lists multiple names for the same encoding, not separate encodings. Some of these encodings, though not identical, are treated as if they were. For instance, EUC-CN is not precisely the same as simplified MacChinese, but it is rendered as simplified MacChinese on the iPod.

Note the following points:

- UTF8 and UTF16 Unicode can also be specified with a byte-order mark (BOM). Byte-swapped (little endian) UTF16 files are supported, but only with a BOM but not with an encoding tag. TextEdit adds a BOM when saving UTF16 files, but not when saving UTF8 files. BBEdit displays the file encoding whether or not it has a BOM, and has options to save it with or without a BOM.
- The only way to display multiple encodings in the same note is to use Unicode.
- If the encoding tag and the BOM disagree, the encoding tag overrides the BOM. Encoding tags are not case sensitive.
- Only one encoding tag is allowed per file. The encoding tag must be placed at the top of a file, before any non-ASCII text. Otherwise, a null character in non-ASCII text may prevent the encoding tag from being read.
- Don't put null characters in encodings that use null as a terminator, such as Latin1, MacRoman, and UTF8. Otherwise, the text will be truncated at the null character.