Wii
Icon and Banner Specifications

Version 1.0.4

RVL-06-0166-001-P
Released: August 25, 2010

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Revision History

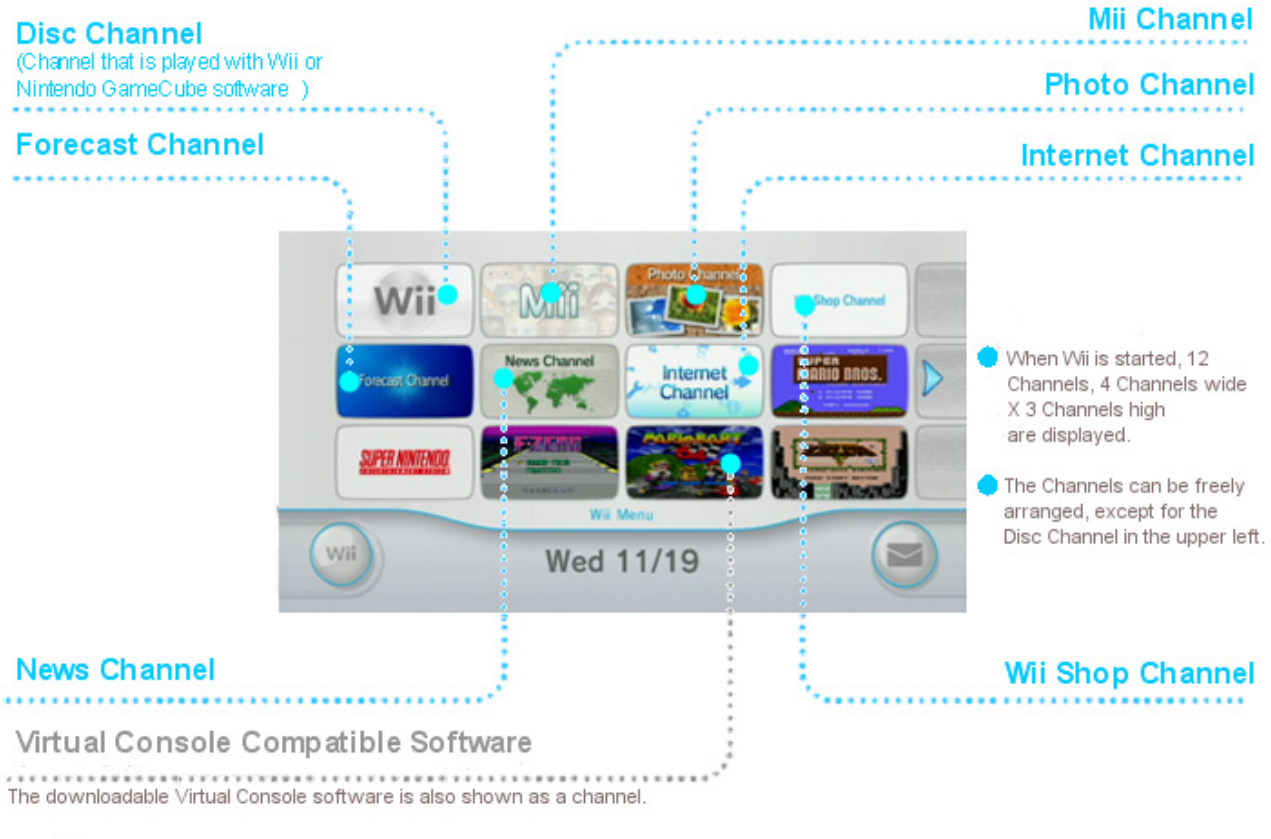
Version	Revision Date	Description
1.0.4	2010/04/08	Revised Table reference number in section 3.10.2 Displaying the Logo Image. (Japanese version only.)
1.0.3	2009/10/07	Added an explanation of the specifications for the specified logo image to section 3.10 Displaying the “Licensed by Nintendo” Logo, and to Chapter 7 Nintendo Title Specifications.
1.0.2	2009/07/13	Added section 3.10 Displaying the “Licensed by Nintendo” Logo.
1.0.1	2009/06/18	In Chapter 1 Icon and Banner Overview, explained that icons are shown in the Channel Banner screen of the SD Card Menu. In section 2.3 Placement and Display of Areas on the Layout, deleted the note about icon image size. In section 2.5 Animation, added an explanation about the specification for playback of icon animations in the Wii Menu and divided the text up into the subsections 2.5.1 Animation Settings and 2.5.2 Replaying Wii Menu Icon Animations. Added section 2.5.3 Notes When Using Channel Script to Animate. In section 2.7 Using Text Boxes, explained that the number of characters displayed at the same time in icons should be less than 60. In section 2.8.3 Creating the Layout Resource Binary, explained setting Repeat for the before and after keyframe interval settings. In section 2.9 Support for the New Message Display Feature, revised part of the text inside the note. In section 2.9.2 Creating Newly Arrived Animations and in section 3.6 Animation, explained that you cannot use the associated-group features with icon and banner animations. In section 5.2.3 Titles (JP, EN, GE, FR, SP, IT, DU, KR, SC), added a note about not placing spaces and tabs before and after title name. Added section 5.3 Dropped Processing in Icon and Banner Display. Added references to this new section in section 2.8.2 Creating Layout and section 3.9 Creating Banner Layout Resources. General revisions to wording in the document.
1.0.0	2008/02/05	Deleted Chapter 2 Relationship Between the Icon and Banner, and moved its content to Chapter 1 Icon and Banner Overview. Replaced screenshots. In section 2.4 Switching Languages, explained Korea (Hangul), China (Simplified Chinese), and Taiwan. In section 2.5 Animation, explained animation segments and animation segment tags. Divided section 2.8 Creating Icon Layout Resources, into three subsections. Added a warning that binary output from LayoutEditor is prohibited and information on the Layout Binary Converter. Added section 2.9 Support for the New Message Display Feature. Revised the wording of section 3.9 Creating Banner Layout Resources. Added a warning that binary output from LayoutEditor is prohibited. Revised the wording of section 5.2 Banner Data Header to include support for Chinese and Korean. Added a supplementary explanation about displaying the title on Wii Message Board.
0.3.5	2007/07/12	In section 5.1 Packaged Data, added a description about file names for banner packages.

Version	Revision Date	Description
0.3.4	2007/07/03	Partially revised the description in section 2.2 Data Structure. Added a caution to reflect the change in Layout Binary Converter specifications. In section 2.4 Switching Languages, added a caution about visible animations. Partially revised the description in section 3.2 Data Structure. In addition, added a caution to reflect the change in Layout Binary Converter specifications. Replaced some screenshots with the most recent versions.
0.3.3	2007/06/04	Revised the caution entry in section 2.3 Placement and Display of Areas on the Layout. Revised the explanation of bns files in section 4.1 Sound Format. Added a note on the use of uncompressed waveform data to section 4.1 Sound Format. Added section 4.4 Sound and Animation Synchronization.
0.3.2	2007/02/15	Added a caution to section 2.3 Placement and Display of Areas on the Layout. Added section 3.4.4 Banner Backgrounds.
0.3.1	2006/10/30	Added a caution to section 2.5 Animation. Added a caution to section 3.6 Animation. Added a caution to Chapter 4 Sound Data. Added section 5.4 Using Sample Data.
1.0.0	2008/02/05	Completely revised Chapter 5 Banner Data Creation Tool.
0.3.5	2007/07/12	Added descriptions about the language to use in section 3.3 Title Display. Added the behavior during application startup in section 4.2 Sound Behavior. Added cautions for usage in Chapter 5 Banner Data Creation Tool.
0.3.4	2007/07/03	Added restrictions specific to the data size of icons in section 2.1 Data Size. Noted that animation data is required for icons in section 2.2 Data Structure. Completely revised section 2.4 Switching Languages. Added restrictions specific to data size of banners in section 3.1 Data Size. Added restrictions specific to data size of `opening.bnr` in Chapter 5 Banner Data Creation Tool. Completely revised Chapter 6 Using Logos, Trademarks, and Copyright Notices. Made other revisions to layout and formatting. Corrected spelling errors.
0.3.3	2007/06/04	Revised the description about handling of the font data.
0.3.2	2007/02/15	General revisions.
0.3.1	2006/10/30	Initial version.

1 Icon and Banner Overview

Developers of Wii-compatible applications must prepare the icon that is displayed on the Wii Menu Channel List and the banner that is displayed on the Channel Banner screen.

Figure 1-1 Wii Menu Channel List



When the user selects a channel icon, the full screen is used to display the banner associated with that icon (and application).

Figure 1-2 Icon Selection and Banner Display

Icons are displayed instead of banners on the SD Card Menu and on the Channel Banner screen. When you select **Start** from the Channel Banner screen, the banner displays for roughly 2 seconds after the startup process has ended.

This icon and banner data (the layout resource) is created using the NintendoWare for Revolution (NW4R) LayoutEditor.

2 Icon Layout Resources

This chapter describes how to specify and create icon data.

2.1 Data Size

An icon has the following size restrictions:

- 100 KB for archives created with the archive tool
- 50 KB for files compressed with the banner data creation tool

For a description of this tool, see Chapter 5 Banner Data Creation Tool.

2.2 Data Structure

For the Layout Data file use the name `icon.rlyt` and for the Animation Data file use `icon.rlan`.

You need to convert these files to binary before using the banner data creation tool for packaging. Use the binary converter included with NW4R (`nw4r_lytcvtr.exe`) and convert the data to files with the following names:

Layout Data Name: `icon.brlyt`

Animation Data Name: `icon.brlan`

When you generate icon data with the Layout Binary Converter included with NintendoWare for Revolution version 20070717 or later, you must specify the `--banner` option.

To display icons correctly on the Wii Menu, both layout and animation data are required.

2.3 Placement and Display of Areas on the Layout

Create an icon image centered at the point of the layout origin. Although the basic size for the icon image (the size of the picture image in LayoutEditor) is 128 x 96 pixels (when the screen mode is 4:3 as in Figure 2-1), keep in mind that the screen display depends on the Wii console screen mode, which can be 4:3 or 16:9.

In 16:9 mode, icons for which **Target for position adjustment** is not selected in LayoutEditor are stretched to fill the channel aperture (Figure 2-3). When this parameter is selected, the image is displayed without stretching; thus, a 170 x 96 image (Figure 2-2) must be prepared in advance. However, in 4:3 mode the superfluous pixels on the left and right edges of the 170 x 96 image are not displayed (Figure 2-4 – Figure 2-7).

When **Target for position adjustment** is selected, the results are inherited by children, even if this parameter is not selected in the child pane. To check which object pane in LayoutEditor is the child pane, use the parent-child hierarchy pane of the **Property Window**, as shown in Figure 2-3.

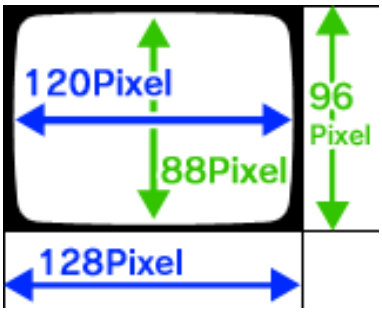
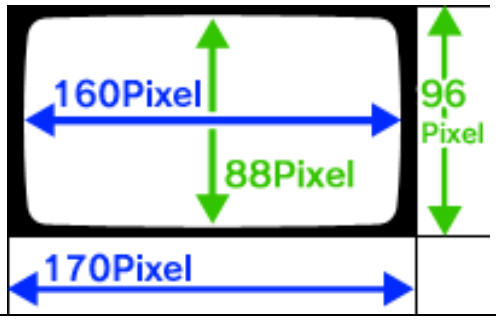
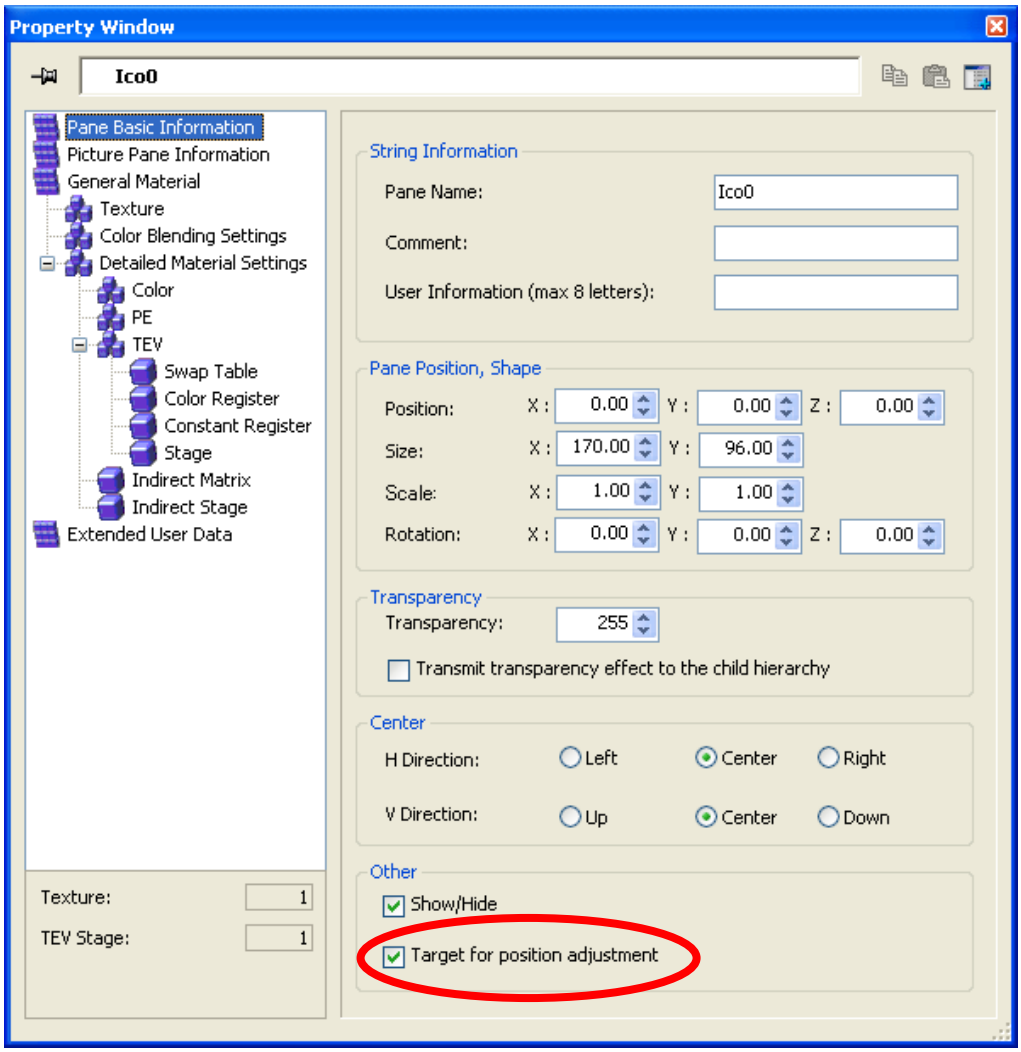
Screen Mode is 4:3	Screen Mode is 16:9
Figure 2-1 Display Area for 4:3 Screen 	**Figure 2-2 Display Area for 16:9 Screen** 
Image is clipped in the shape of the white area as shown; protruding portions are not displayed.	Image is clipped in the shape of the white area as shown; protruding portions are not displayed

Figure 2-3 Pane Position Adjustment Setting



	Stretching an Icon As Is	Using "Target for position adjustment"
4:3 Mode Display	**Figure 2-4 Displaying Unmodified 4:3 Image** 	**Figure 2-5 Displaying Adjusted 4:3 Image** 
16:9 Mode Display	**Figure 2-6 Displaying Unmodified 16:9 Image** 	**Figure 2-7 Displaying Adjusted 16:9 Image** 

2.4 Switching Languages

The pane group feature is used to gather icons that support multiple languages into a single piece of data.

When a group is created and assigned a name from Table 2-1, panes that belong to that group are displayed only when an appropriate language is specified in Wii options. To display multiple languages, you must associate panes with a group name.

Table 2-1 Language Codes

Language	Group Name
Japanese	JPN
English	ENG
German	GER
French	FRA
Spanish	SPA
Italian	ITA
Dutch	NED
Korean	KOR
Simplified Chinese	CHN

If a pane associated with a language group specified in Wii options is absent, a pane associated with another language group will be displayed. As Table 2-2 shows, Wii consoles have a set preference for language groups in every region.

Table 2-2 Display Preferences for Language Groups

Display Preference	Region				
	Japan Taiwan	North America	Europe Australia	Korea	China
Higher Preference ↑	JPN	ENG	ENG	KOR	CHN
		FRA	FRA		
		SPA	GER		
			SPA		
↓			ITA		
Lower Preference			NED		

Panes not associated with any group will always be displayed, regardless of the Wii console language settings.

In the examples shown in Figure 2-8 and Figure 2-9, a created icon consists of panes A and B belonging to the FRA group, panes C and D belonging to the ENG group, and pane E that does not belong to any group. Panes A, B, and E are displayed if French is specified in the Wii console language settings (Figure 2-8); and panes C, D, and E are displayed if German is specified (Figure 2-9). Because there is no GER group, ENG is selected as the highest preference.

Figure 2-8 French Is Specified on the Wii Console

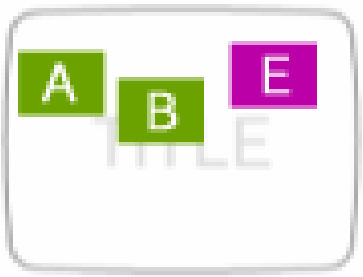
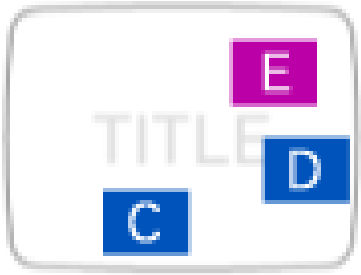


Figure 2-9 German Is Specified on the Wii Console



Grouping panes for a purpose other than switching languages is **prohibited**.

Note: In panes for which visible animations have been set (**Show/Hide** is selected), switching languages does not work correctly.

2.5 Animation

Animation must be set for icons.

Note: Use of still image icons for which animation has not been set is prohibited.

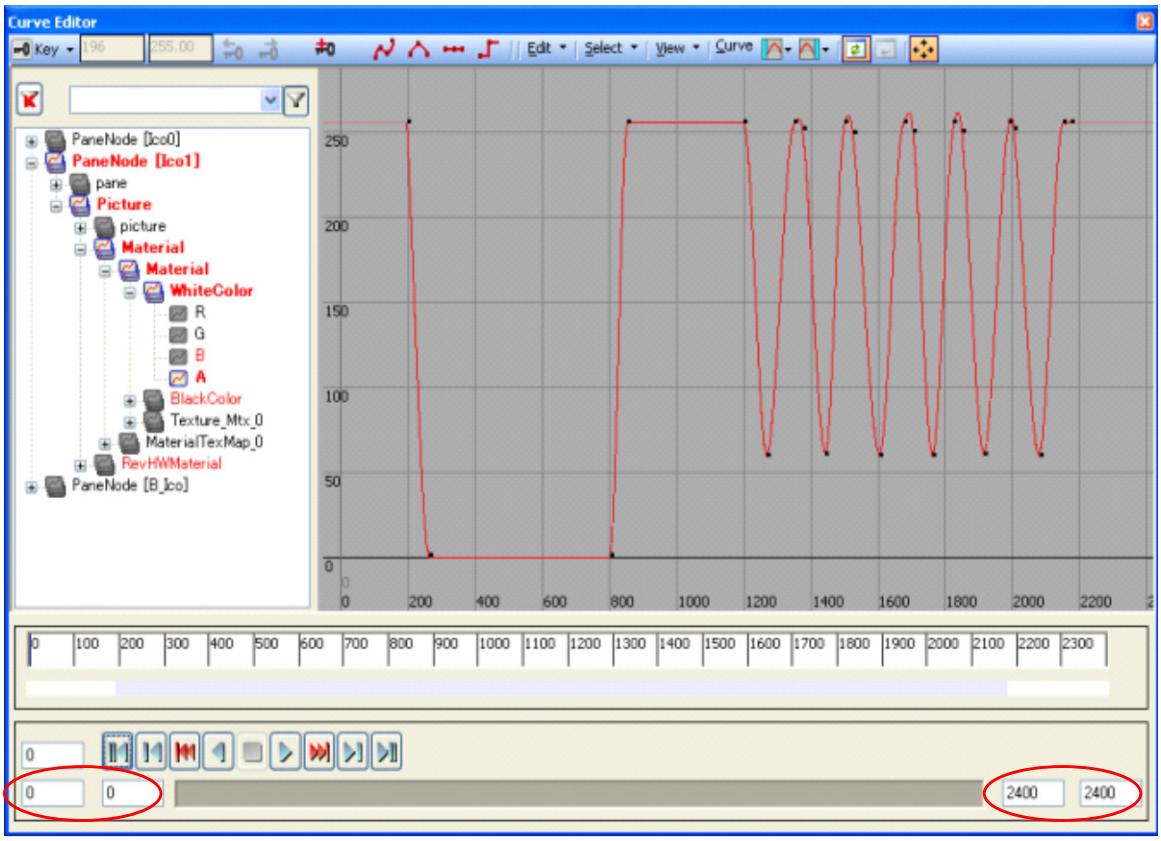
2.5.1 Animation Settings

Icon animation plays loops of specified frames. Set the start and end frames and the playback start

and end frames. The frame segment between the playback start and end frames is played. Unlike banners, icons cannot play back a combination of multiple animation segments (see section 3.6 Animation). Animation segment tags are valid only if you use the new message display feature, described in section 2.9 Support for the New Message Display Feature.

Figure 2-10 below is an example of playing frames 0 to 2400 in a loop.

Figure 2-10 Animation Sample



In LayoutEditor, the following properties can be specified for an animation:

Pane Basic Information

- Display: position, size, scale, rotation, transparency, visibility

Texture

- Vertex color: upper left, upper right, lower left, lower right
- Black or white color interpolation
- Texture matrix: parallel translation, scale, rotation
- Texture pattern
- Texture color mixture ratio

Material

- Color register

TEV

- TEV color register
- TEV constant color register

Indirect texture

- Indirect texture matrix: parallel translation, scale, rotation

For details, see the *NintendoWare for Revolution LayoutEditor* manual and hardware specifications.

2.5.2 Replaying Wii Menu Icon Animations

When the Wii Menu replays the icon animations of Channel applications, the playback starting frame for each channel is *randomized*. This is done so that when the Wii starts up the Wii Menu screen always gives an overall impression of freshness.

On the other hand, the icon animations for Disc applications invariably restart from the beginning.

2.5.3 Notes When Using Channel Script to Animate

You can also use Channel Script to animate icons, but Channel Script does not function on the SD Card Menu and the Channel Data Management screen. If you choose to animate icons using Channel Script, **be careful about unintended displays due to Channel Script not working.**

To read in detail about using Channel Script to animate, see the Channel Script documentation.

2.6 PAL50 Support

In PAL50 mode, the Wii console plays back the animation at 1.2 times the NTSC speed; however, due to the frame rate relationship, roughly the same contents as in NTSC mode are shown on the screen. Because of the faster playback, animation no larger than 1.2 frames may not appear during playback, so caution is advised.

2.7 Using Text Boxes

If you are using text box panes in the icon layout, be sure to use the bitmap fonts that came with the package (`data\fonts\wbf1.brfna` and `data\fonts\wbf2.brfna`).

The use of any other fonts is **prohibited**.

To prevent dropped processing when displaying icons, **make sure that less than 60 characters are drawn at the same time in any single icon**. The characters subject to counting are the characters in the panes that have been configured to be visible. If a pane is visible, the settings for the alpha value and the coordinates may generate a processing load even though it cannot actually be seen on the screen. Panes that are configured to be hidden and panes that are hidden when the language is switched do not generate a processing load, so the characters in these panes do not need to be included in the count.

2.8 Creating Icon Layout Resources

The operations required to create icon layout resources are described below in order.

2.8.1 Creating Image Data

The image data used for the title, title background, and other elements must be prepared as a TGA file. In 16:9 screen mode, the way to adjust the data size of a created image is dictated by whether you want to simply stretch the image or preserve its aspect ratio. For more information about creating image data, see section 2.3 Placement and Display of Areas on the Layout.

2.8.2 Creating Layout

To create icon layout, do the following.

1. Start LayoutEditor, position the different pane(s), and apply the production settings to the animation.
2. Load the image data prepared in step one into the texture window, and then click **Create Pane** to create a picture pane.
3. In the layout window, visually adjust the position of the created picture pane.
4. In each pane, use the curve editor to set animations for various elements, including fade in, fade out, translating display location, rotation, and scale. Enter 0 into the start frame, and the total frame count for the entire animation into the end frame. Normally, the same values are entered in the playback start/end frames as in the start/end frames.

As an illustration, when translating the display location of a given pane, create a *key frame point* in the frame where movement begins and in the frame where it stops. After setting values in each key frame, check the changes in values using the animation curve while adjusting with *Slope*. This can set a simple animation that moves a pane. Different kinds of effects can be created by repeating operations, such as setting animations in multiple properties of panes, increasing the key frame points, and changing the direction of animation curve.

The Viewer included in NintendoWare for Revolution is recommended for verifying animations with the hardware-specific features and colors that are actually displayed. To read about LayoutEditor and Viewer in greater detail, see their respective manuals.

When a large number of panes are displayed, there is a danger that processing will be dropped in the display on the Wii Menu. See section 5.3 Dropped Processing in Icon and Banner Display.

2.8.3 Creating the Layout Resource Binary

To convert the layout described in section 2.8.2 Creating Layout into a layout binary resource, run the Layout Binary Converter, `nw4r_lytcvtr.exe`, included with NintendoWare for Revolution.

The example in Code 2-1 creates a binary from the icon layout resource saved in the `icon\layout` directory and outputs the binary to the `arc` directory.

Code 2-1 Creating a Binary from the Icon Layout Resource

```
C:\work>%NW4R_ROOT%\CommandLineTools\bin\nw4r_lytcvtr.exe --banner icon\layout arc
NW4R Layout Binary Converter
Version 2.0.0
Copyright (C)2006-2007 Nintendo  All Rights Reserved.

"icon\layout\icon.rlan" -> "arc"
"icon\layout\icon.rlyt" -> "arc"

C:\work>
```

The `--banner` option is specified for the icon data output; the `-g` option is not specified because icons do not support animations controlled by animation tags.

If **Repeat** has been set for both the **Before Keyframe Interval Setting** and the **After Keyframe Interval Setting** in LayoutEditor's curve editor, you must set the `--bake-infinity` option for the Layout Binary Converter.

For detailed converter specifications, see the *Layout Binary Converter*. For a specific example of creating layout resource binaries, see the sample provided in the `IconBannerTools` package.

Note: The layout resource binaries that are output directly using Binary Output in LayoutEditor cannot be used for banners.

2.9 Support for the New Message Display Feature

The Wii Menu contains a feature that indicates the arrival of a new message; when a WiiConnect24 message is delivered to a channel application, the feature displays images and animations on top of an installed channel's icon.

Note: This feature can only be used with channel applications. It cannot be used with Disc applications.

To use this feature, prepare the icon layout as described in the next section.

2.9.1 Creating *Newly Arrived* Groups

Panes belonging to the New group are always displayed when an associated application receives a new WiiConnect24 message. If there is no New group, creating a group with a name based on Table 2-3 (New_ + Language Code) allows the panes that belong to the created group to be displayed only when an appropriate language is specified in the **Wii System Settings**.

Table 2-3 Group Names by Language

Language	Group Name		Language	Group Name
Japanese	New_JPN		Italian	New_ITA
English	New_ENG		Dutch	New_NED
German	New_GER		Korean	New_KOR
French	New_FRA		Simplified Chinese	New_CHN
Spanish	New_SPA			

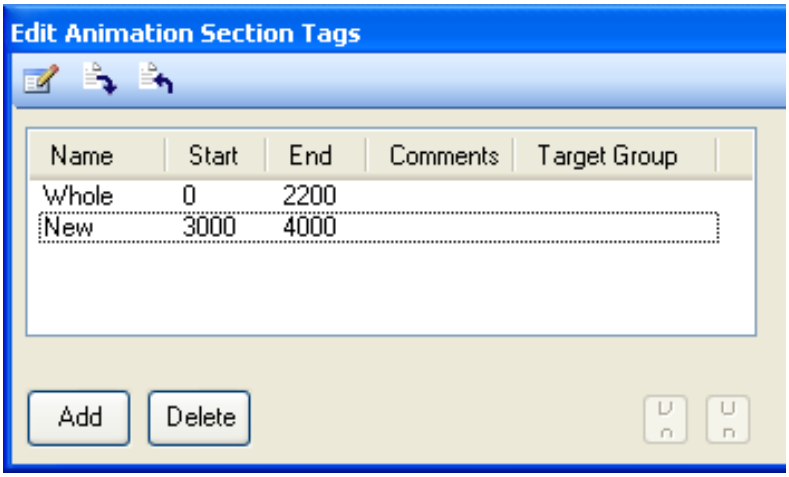
The display preference for a language conforms to section 2.4 Switching Languages.

2.9.2 Creating *Newly Arrived* Animations

Animations with the **New** tag will be played back together with the display of the aforementioned New group.

When you use Newly Arrived animations (in other words, when you set the **New** animation tag), you must specify the **Whole** tag for the span of frames displayed for the overall icon animation, which is always played back regardless of WiiConnect24 messages.

Figure 2-11 Example Specification for *Newly Arrived* Animations



You cannot use the associated-group features with icon and banner animations. To read about associated-group features, see the *LayoutEditor* manual.

3 Banner Layout Resources

This chapter describes banner specifications and the procedure for creating banner data.

3.1 Data Size

Archives created with the archive tool must have banner data of size 512 KB or less. Banner resources are stored in a compressed form in banner data. For information on the banner data creation tool, see Chapter 5 Banner Data Creation Tool.

3.2 Data Structure

Use the name `banner.rlyt` for the Layout Data file, and `banner.rlan` for the Animation Data file.

Before using the banner data creation tool for packaging, these files must be converted to binary. Use the binary converter included with NW4R (`nw4r_lytcvtr.exe`) and convert the data to files with the following names:

Layout Data Name: `banner.brlyt`

Animation Data Name: `banner.brlan`

When using the Layout Binary Converter included in the 20070717 or later versions of NintendoWare for Revolution to generate banner data, specify the `--banner` option when the converter is started up.

Unlike icons, banners without animation data will display correctly.

3.3 Title Display

The banner title can be formatted as a texture or text box, and its size is customizable. The title does not have to be displayed at all times; effects can be used to fade it out.

For the display language, we recommend (but do not require) the use of a language specified in the system setting (see section 3.5 Switching Languages).

For cautions about font use, see section 3.8 Using Text Boxes.

3.4 Display Areas

3.4.1 Placement on the Layout and Areas Displayed by the Wii Console

The banner is displayed with the prepared buttons and the black frame in the foreground (see Figure 3-1). Arrows are displayed on the screen edges, so make sure that important information is not obscured by them.

The banner is displayed on the full TV screen.

Figure 3-1 Buttons and Black Frame Displayed on the Wii Console

Figure 3-2 Actual Banner Display

When you check the display on the NintendoWare for Revolution Viewer, confirm the rendering settings (such as screen size of the Wii console) shown in Code 3-1.

Code 3-1 Rendering Settings

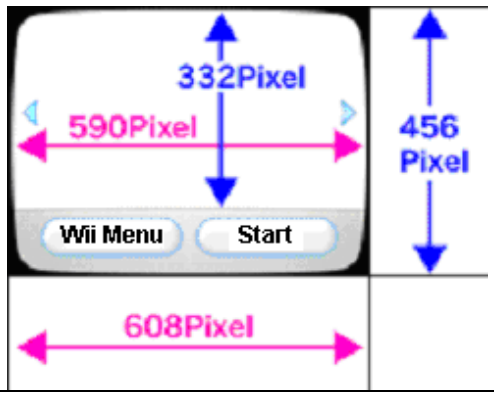
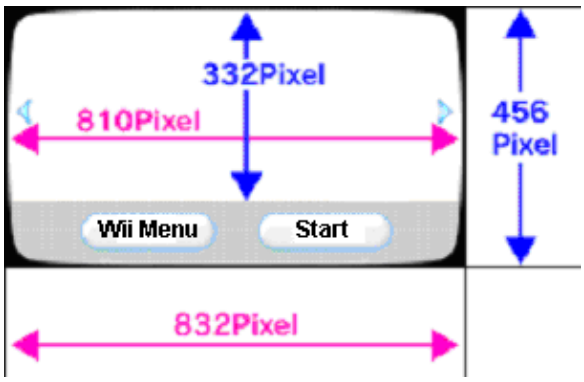
```
# Frame buffer size
/system/video/fb width = 608
/system/video/fb height = 456

# Screen size
/system/video/vi width= 670
/system/video/vi_height= 456
```

The settings are written in the `viewer.ini` file stored in the Viewer's `dvdroot` folder.

3.4.2 Changes in the Display Area Based on Screen Mode

As shown in Figure 3-3 and Figure 3-4, the area displayed on the Wii console depends on the screen mode, which can be 4:3 or 16:9.

4:3 Screen Mode	16:9 Screen Mode
Figure 3-3 Display Area for 4:3 Screen Mode	**Figure 3-4 Display Area for 16:9 Screen Mode**
	
Data in `template\banner\BannerMask4x3.rlyt` is included as the template when the Viewer is used to preview the 4:3 screen mode.	Data in `template\banner\BannerMask16x9.rlyt` is included as the template when the Viewer is used to preview the 16:9 screen mode.

3.4.3 Creating Data for the Display Area

As with icons (section 2.3), the same data is displayed even if the screen mode is changed. To achieve the correct display in either screen mode, use the LayoutEditor's position adjustment feature.

3.4.4 Banner Backgrounds

If the application does not draw a background, the screen display will be undefined and the base background may not be solid black; thus, always draw a background pane.

3.5 Switching Languages

As with icons (section 2.4), if a created group is named after a language code, the panes that belong to that group are displayed only when an appropriate language is specified in the Wii options.

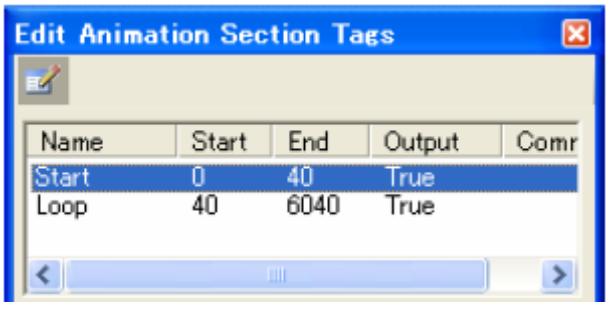
3.6 Animation

Animation can start with any given frame and loop for any number (controlled by animation tags) of frames thereafter.

The two animation tags are **Start** and **Loop**, and both are created for use. After the **Start** tag completes, the **Loop** tag plays, then the **Loop** tag loops and plays back. When there are no animation tags, the loop playback is from the animation data playback start frame to the playback end frame. For example, after the trademark is displayed with the **Start** tag, loop the title display with the **Loop** tag as follows:

Tag settings:	**Start** tag	→	**Loop** tag	→	**Loop** tag	→ •••
Screen display:	Trademark display	→	Title display	→	Title display	→ •••

Figure 3-5 Animation Controlled by the Animation Tag



You cannot use the associated-group features with icon and banner animations. To read about associated-group features, see the *LayoutEditor* manual.

The properties that can be configured for animation are the same as the properties that can be set when creating the layout resource for icons. For additional details see section 2.5 Animation.

Information: Still image banners do not pose a problem because animation settings are not required for banners.

3.7 PAL50 Support for Banner Animations

In PAL50 mode, the Wii console plays back the animation at 1.2 times the speed, but due to the frame rate relationship, almost the same content is displayed as in the NTSC mode. It is possible, however, that animations whose display may disappear at a rate lower than 1.2 frames will not be shown during playback.

3.8 Using Text Boxes

When you use text boxes in the banner layout, only use the bitmap fonts (`data\fonts\wbf1.brfna` and `data\fonts\wbf2.brfna`) included in the icon and banner package; any other font is **prohibited**.

3.9 Creating Banner Layout Resources

In spite of the differences, such as the display size and the need to consider the frame displayed by the Wii console, the procedure for creating banner layout resources is basically the same as for icon layout resources (see section 2.8 Creating Icon Layout Resources).

In banners, animations can be controlled with animation tags. To control animations, create animation tags and specify the `-q` option. For more information, see section 3.6 Animation.

Note: The layout resource binaries that are output directly, using Binary Output in LayoutEditor, cannot be used for banners.

As with icons, when a large number of panes are displayed for banners, there is a danger that processing will be dropped in the display on the Wii Menu. See section 5.3 Dropped Processing in Icon and Banner Display to read about how to check for dropped processes.

3.10 Displaying the “Licensed by Nintendo” Logo

Nintendo is asking all Wii application developers to display a screen containing the Nintendo logo as part of our antipiracy measures. This helps Nintendo protect our brand and allows software makers to protect their revenues from piracy-related damages.

3.10.1 Logo Image Data

All application titles (titles produced by software makers) developed and published by software makers after entering into a licensing agreement under which the software maker develops the software on a Nintendo platform must use the “Licensed by Nintendo” logo image shown in Figure 3-6.

Figure 3-6 “Licensed by Nintendo” Logo Image

Logo for Software Maker Titles

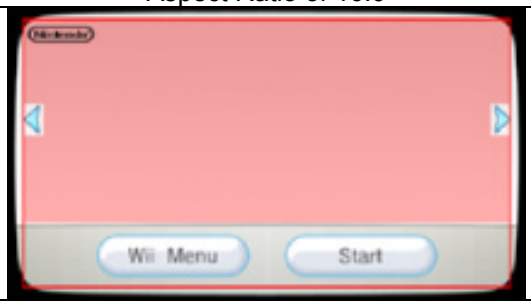
LicensedByNintendo_112x48.tga

3.10.2 Displaying the Logo Image

In order to shorten the waiting time for users, display the specified logo image on the Channel Banner screen. Displaying the specified logo image on only the “application loading” screen displayed after “Start” is selected from the Channel Banner screen is prohibited.

The specified logo image must be displayed within the red line (safe frame) shown in Figure 3-7 below. Make sure the logo does not overlap the buttons at the bottom of the screen or the blue scroll arrows, while also considering the design and position of the title. The safe frame measures 552×388 pixels at an aspect ratio of 4:3, and 760×418 pixels at the 16:9 aspect ratio.

Figure 3-7 Displayable Area for Each Aspect Ratio

Aspect Ratio of 4:3	Aspect Ratio of 16:9
	

Changing the specified logo image is prohibited. Display the specified logo image at its original size without scaling, rotating, or changing its transparency or aspect ratio. Do not change the aspect ratio of the logo regardless of the differences between the screen aspect ratios of 4:3 and 16:9.

Use the font color that makes the specified logo stand out most readily in relation to the background color of the Channel Banner screen. Select one of the font colors of gray, white, or black (see Table 3-1 Font Color Settings) provided by Nintendo. If the background is white, gray is recommended.

From an antipiracy standpoint, for good visibility the logo image must be displayed for 1 second or longer. Make sure to display the specified logo image starting at the same time as the start (from the first frame) of the animation of the Channel Banner screen and display it for at least 1 second. In addition, to similarly achieve effective recognition as an antipiracy measure, it is prohibited to apply any animation effect to the specified logo image on the screen (including zooming the logo in or out, or changing only the color). As an exception, you can stop displaying the logo image on the screen after the required 1 second. In this case, use a fade-out effect.

If you have any questions about the visibility of the specified logo image, contact your Nintendo liaison.

Table 3-1 Font Color Settings

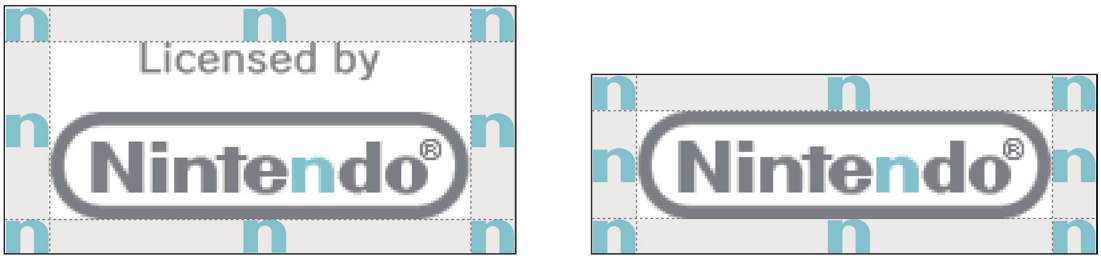
Font Color	Color Specifications
Gray	Black color blending R:G:B:A = 140:140:140:0 White color blending R:G:B:A = 140:140:140:255
White	Black color blending R:G:B:A = 255:255:255:0 White color blending R:G:B:A = 255:255:255:255
Black	Black color blending R:G:B:A = 0:0:0:0 White color blending R:G:B:A = 0:0:0:255

3.10.2.1 Protective Clear Space

When displaying the specified logo image, establish a protective clear space (surrounding area) in which no other logos, text, or graphic elements that interfere with the legibility of the logo are allowed. However, there is no problem if animation or the like temporarily overlaps the area or if the background overlaps the area.

A rule of thumb for the size of the protective clear space is that it should be a rectangular area of the same height and width as that of the letter “n” in the logo, as in Figure below. The “y” in the “Licensed by Nintendo” logo falls within the protected area extending from the racetrack-surrounded Nintendo logo, but this is permitted as an exception, as the entire design is considered a single logo.

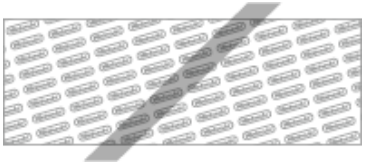
Figure 3-8 Rule of Thumb for Protective Clear Space



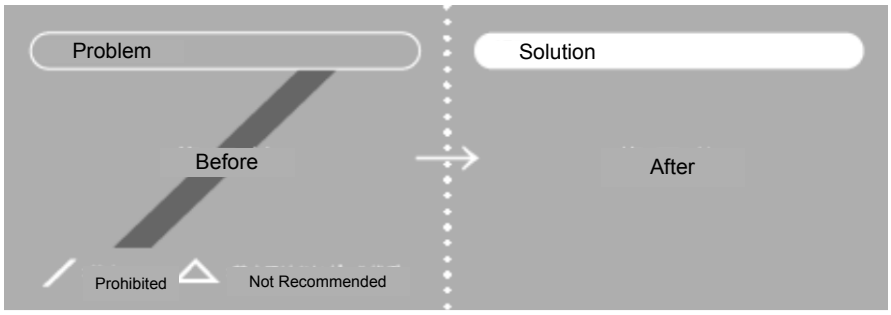
3.10.2.2 Examples of Prohibited Uses

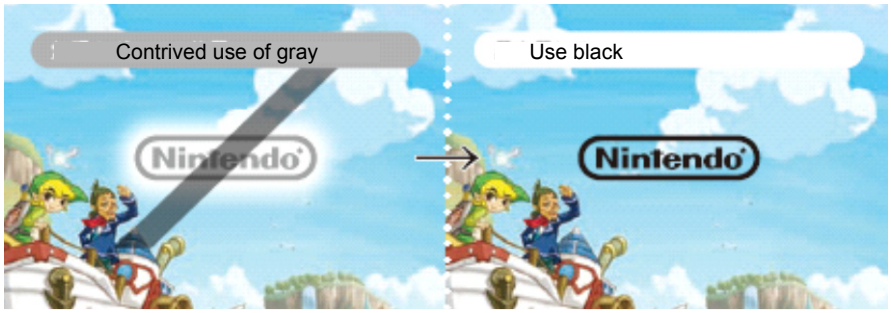
The following uses of the specified logo image are either prohibited or not recommended. These display examples include only the “Nintendo” logo, but in the case of the “Licensed by Nintendo” logo, these rules also apply to the “Licensed by” portion.

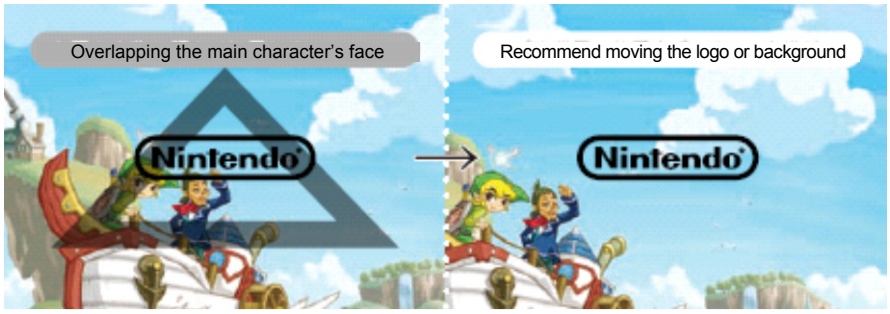
: Prohibited : Not recommended

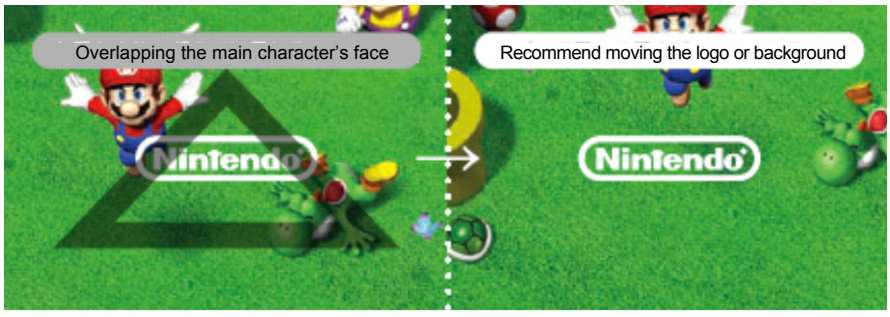
Proportions	 Changing the aspect ratio	 Changing the balance with the racetrack
	 Removing the racetrack	 Reversing the image
	 Modifying the shape	 Tilting the image
Presentation	 White background	 Adding a colored frame
Layout	 Combining logo with text	 Combining logo with other elements
	 Adding a similar ring around the periphery of the racetrack	 Incorporating the logo in a phrase
	 Overlapping logo with other elements	 Using the logo as a pattern element

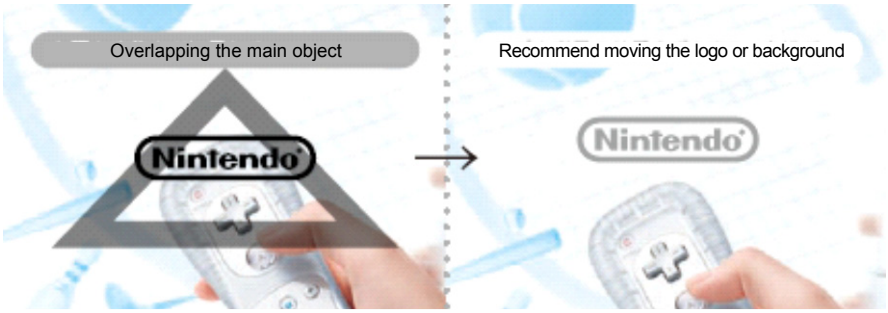
The following layouts are prohibited or not recommended when placing the specified logo image.











3.10.2.3 Nintendo Antipiracy Policy

It is the policy of Nintendo to support authorized businesses by eliminating unauthorized applications from the market. Exercising Nintendo's trademark rights is one extremely effective tool for achieving that goal. Worldwide trademark laws tend to protect logos more strongly than ordinary text. Therefore, as one part of our efforts to counter the growing worldwide problem of copied or unauthorized software applications, Nintendo is asking for support from developers, and now Nintendo's specified logo image must be displayed in a manner that corresponds to the application format.

Nintendo can claim infringement of its trademark rights by unauthorized software more effectively and more swiftly if the specified logo image, including the Nintendo logo, is displayed. For example, if an unauthorized software application, such as copied or pirated software, incorporates the Nintendo logo anywhere, Nintendo can take action in the form of a damages lawsuit against any purveyor of such software for infringement based on our trademark rights.

In this manner, Nintendo aims to protect our brands as well as software companies' revenues from the damage caused by copied or unauthorized software.

4 Sound Data

You must set a sound effect (banner sound) to banners; this sound effect is played when the banner is displayed full-screen.

The banner sound is packaged with icons and banner resources as banner data, so consider its data size while creating each layout resource.

Note: You cannot use a banner for which no banner sound has been set.

4.1 Sound Format

The sound format is as follows:

Bits:	16-bit
Rate:	Not fixed
Channels:	Stereo or Mono
File format:	AIFF (non-compressed), WAV (non-compressed), or BNS (ADPCM banner-specific sound data)
Playback method:	One-shot or Loop
Volume:	The file volume is reflected as is

The BNS files (ADPCM banner-specific sound data) can be generated from uncompressed AIFF or WAV files with the help of the dedicated banner sound converter, `BNAdpcm.exe`.

Information: Depending on the data, when uncompressed waveform data (such as AIFF or WAV) is converted to banner sound format, it may generate noise. If the noise is detected when the uncompressed waveform data is used, convert the data to the ADPCM-compressed waveform data (BNS).

4.2 Sound Behavior

Sound starts to play when the banner zoom-in completes; it fades out when **Wii Menu** is selected. When **Start** is selected, the sound will be turned off after 2 seconds. In certain North American Wii consoles, however, the sound stops in the middle and *does not fade out*. Depending on the sound being played, the sudden stop may cause a loud noise. Where possible, make sure that no problems arise, regardless of where the stop is applied.

In Wii consoles for other regions (and in North American Wii consoles where the preceding does not apply), the banner sound will fade out along with the screen fadeout; thus, you do not have to consider potential noise.

4.3 Sound Data Size Limitation

There is no specific size limitation for the sound data itself. As long as the total size of all banner data is within memory limitations (512 KB), the sound data can be of any size.

4.4 Sound and Animation Synchronization

A looping banner sound cannot be used if loss of synchronization is not permissible.

When sound and animation are played together in a loop, they will get out of sync unless playback time of the sound is *exactly the same* as that of the animation. The number of waveform data samples must be an integer, however, so sound and animation playback times cannot be matched precisely. Loss of synchronization will inevitably occur at some point, even though there will be some degree of difference in sampling accuracy.

4.4.1 Countermeasures for Loss of Synchronization

Even when synchronization loss is permissible, its effects can be minimized by setting the sound playback time and the loop start point. Keep in mind that, as dictated by the NTSC standard's frequency of 59.94 Hz, animation is played back at 60 frames per 1.001001... seconds. This is expressed in the following equation:

```
(sound sample) = (animation frames) / 60 x (waveform sampling rate [Hz]) x 1.001001001
```

When the total number of animation frames and the frame at which the sound loop will start are known, use the equation to determine the total number of sound samples and the sample number where the loop will start.

As for whether to round up or round down after the decimal point, select the method that yields the less noticeable result.

5 Banner Data Creation Tool

The banner data creation tool, `WiiMakeBanner.exe`, collects and packages the data described in earlier chapters (Icon Layout Resources, Banner Layout Resources, and Sound Data) into one data set for application identification.

5.1 Packaged Data

The following data is packaged by `WiiMakeBanner.exe`:

- Banner data header — Includes the title name and other items
- Icon layout resource — Compressed after archiving
- Banner layout resource — Compressed after archiving
- Sound data — Compressed

The banner package generated by the banner data creation tool is restricted in size to 512 KB.

For disc applications, storing a banner package with the file named `opening.bnr` directly under the `dvddata` directory will apply the banner package to the Wii Menu as an icon and banner for the Disc Channel. On the other hand, for channel applications, the filename can be set to anything because the package to be used is directly specified when the application's image file (WAD file) is generated.

Information: In the initial tool releases, the filename for channel applications was set to `title.met`. That reflects the old specification; now, any filename can be used.

In the example below, the banner data header `banner.cfg.txt` is specified and the banner package `opening.bnr` is created. The icon layout resource, the banner layout resource, and the sound data are specified inside the banner data header.

```
%REVOLUTION_SDK_ROOT%\X86\bin\WiiMakeBanner.exe -j banner.cfg.txt -o opening.bnr
```

The `IconBannerTools` sample demo includes the batch file `mkbanner.bat`, which performs the series of steps to convert the icon and layout resources into a banner package. You should take a look at this demo as well.

5.2 Banner Data Header

Code 5-1 describes the banner data header using `build/demos/iconbanner/simple/banner.cfg.txt` as an example.

Code 5-1 Banner Header

```
IconFile:icon.arc
BannerFile:banner.arc
SoundFile:sound/Banner_sample.32.bns

JP:サンプル 1
  サンプル 2
EN:sample1
  sample2
GE:Probe1
```

```
  Probe2
FR:échantillon1
  échantillon2
SP:muestra1
  muestra2
IT:esemplare1
  esemplare2
DU:steekproef1
  steekproef2
KR: 샘플 1
  샘플 2
SC: 样品 1
  样品 2
```

5.2.1 IconFile and BannerFile

For `IconFile` specify an icon layout resource archive file; for `BannerFile` specify a banner layout resource archive file.

Create the archive file using the archive tool `darch.exe` included in the Revolution SDK. In the example below, the archive file is created from the binary of the banner layout resource that was output to the `arc` directory.

```
%REVOLUTION_SDK_ROOT%\X86\bin\darch.exe -c arc banner.arc
```

5.2.2 SoundFile

Because sound data is required, be sure that for `SoundFile` the data matches the specifications described in Chapter 4 Sound Data.

5.2.3 Titles (JP, EN, GE, FR, SP, IT, DU, KR, SC)

Titles are assigned individually for all languages supported by a specific Wii console. The maximum number of characters for a single line is 20. A line that starts with a space or a tab, or without a language specification (such as `JP:` or `EN:`), is treated as a continuation of the previous line. This means that a maximum of 2 lines and 40 characters can be displayed.

Although the title does not have to be exactly the same as the application name, we recommend using a title that evokes the application name for the first line, a subtitle for the second line, and so on. Use of a string unrelated to the application name is prohibited.

The title specified here will pop up when the cursor is moved over the unselected icon in the Wii Menu or the SD Card Menu. However, only the first line will be displayed; if the text does not fit the display area, the end of the line will be truncated by a maximum of four characters.

The complete title, including the second line, can be viewed in the Wii Message Board under Today's Accomplishments. If the title name has been configured with two lines for any language, it will be displayed (under Today's Accomplishments) with two lines for all other languages as well.

To prevent the display of uneven spacing and alignment, **do not put spaces or tabs before or after the title name on the first line**. Also, do not put more than two spaces or tabs at the start of the second line.

Note: The Classic Controller and Nunchuk connection check options (NeedClassic / NeedFreestyle), which were selectable in the previous version of the banner data creation tool, are no longer available. Do not attempt to use these options.

5.3 Dropped Processing in Icon and Banner Displays

When icons and banners have large numbers of display panes, there is a chance that processing will be dropped when rendering the icons and banners in the Wii Menu. When more than 300 panes are to be rendered, `WiiMakeBanner.exe` will display the following warning and pause processing.

```
There are more than 300 panes. Process drops may occur in display.
Do you want to continue? (Y/N)
```

The processing will resume when Y is pressed.

If you want to ignore this warning so you can execute `WiiMakeBanner.exe` with a script, add the `-f` option to `WiiMakeBanner.exe` so the process will proceed even if there are more than 300 panes.

To check whether there will be processing drops when icons and banners are actually rendered to the Wii Menu (regardless of whether there is a warning or not), use the methods described below.

The methods are explained using `build\demos\iconbanner\simple` by way of example.

5.3.1 Checking for Icon Processing Drops

Whenever icons that have heavy processing loads are displayed at the same time in the Channel List there is a chance of processing drops.

To check for processing drops in icon rendering, use your created icon to make and import 47 separate channels. In the sample demo, a `makefile` has been prepared to create and import `wad` files.

By entering the following in `build\demos\iconbanner\simple` after the banner package `opening.bnr` has been created with `mkbanner.bat`, 47 separate entities of the channel included in `opening.bnr` are created and imported by Nmenu.

```
% make checkicon
```

Install `WiiMenu` using `WiiMenuChanger` and check whether there are any rendering process drops when the channel list is filled with the created icons.

5.3.2 Checking for Banner Processing Drops

At the moment when a channel is selected and the process is moving to the banner screen, both icons and channels are rendered at the same time. If the banner has a heavy processing load, processing drops can occur at this time.

A banner package with icons that have a certain processing load has been prepared for the purpose of checking for banner processing drops (`build\demos\iconbanner\simple\checkchannel.bnr`). Use these icons to fill the Wii Menu and check for banner processing drops.

Entering the following in `build\demos\iconbanner\simple`, creates and imports by Nmenu 1 channel included in the created banner `opening.bnr` and 46 separate channels included in `checkchannel.bnr`.

```
% make checkbanner
```

As with the check for icons, confirm that there are no processing drops at the moment when the channel for the created banner is selected and the banner is shown enlarged (i.e., at the moment when the created banner is displayed at the same time as the channels and icons used for checking).

5.3.3 Deleting Imported Channels

You can execute **Delete `All`** from Nmenu to delete all of the channels that were imported to check for icon and banner processing drops.

However, be aware that this will delete all channels, including those that were imported at other times for other reasons. If Wii Menu has been installed and you delete `WiiMenuUninstaller`, you will have trouble uninstalling Wii Menu, so **be sure to uninstall Wii Menu before executing Delete All**.

5.4 Using Sample Data

Files under `build/demos/iconbanner`, included in the banner data creation tool package, contain sample-specific data. The files (icon layout resource, banner layout resources, and sound data) must not be used with actual games.

6 Using Logos, Trademarks, and Copyright Notices

Your banner can include corporate logos, such as trademarks and copyright notices. If the banner includes these elements, the trademark display during the software launch sequence and the copyright notice on the title screen are redundant and can be left out to reduce user wait time. (The general policy for titles developed by Nintendo is to reduce the wait time by displaying copyright notices on the title screen and trademarks in the banner.)

Regardless of how quickly the banner **Start** button is clicked, the banner screen is displayed with **a guaranteed wait of at least 1 second**. This is the time interval from the moment the display screen zoom effect completes after an icon is selected (or the moment the transition effect from the adjacent banner completes), to the moment before the fadeout begins to transition to the game title. This way, the display of trademarks and copyright notices will not be skipped if you use only the banner for trademark and copyright information.

Displaying corporate logos, trademarks, and copyright notations in the banner is optional. In addition, trademarks and copyrights can be displayed on both the banner and the title screen (during the software launch sequence); however, this must be done carefully to maintain consistency in the banner and title screen content.

7 Nintendo Titles

This chapter presents specifications that apply only to Nintendo titles. Nintendo titles must comply with the standards presented in this chapter.

7.1 Displaying the Logo as an Antipiracy Measure on Application Startup

This section presents specifications for the display of the Nintendo logo at the time of application startup for Nintendo titles, titles for which Nintendo has purchased the publishing licenses from software makers, and titles that Nintendo is publishing, having received the publishing license from the software makers.

7.1.1 Specified Logo Images Depending on the Type of Application

The specified logo image to be displayed depends on the type of application. Use the proper specified logo image per Figure 7-1 below.

- "Nintendo" Logo

This logo is used for application titles developed and published by Nintendo, as well as for application titles developed by an outside company but published by Nintendo.

- "Published by Nintendo" Logo

This logo is used for titles for which Nintendo has purchased the publishing licenses from software makers and titles that Nintendo is publishing, having received the publishing license from the software makers.

Figure 7-1 Types of Specified Logo Images

"Nintendo" Logo	"Published by Nintendo" Logo
	
nintendo_112x32.tga	PublishedByNintendo_112x48.tga

7.1.2 Method of Displaying the Specified Logo Image in a Banner

Except for the type of specified logo to be used, the method of displaying the antipiracy logo in the banner is the same as that described in section 3.10.2 Displaying the "Licensed by Nintendo" Logo, so see that section.

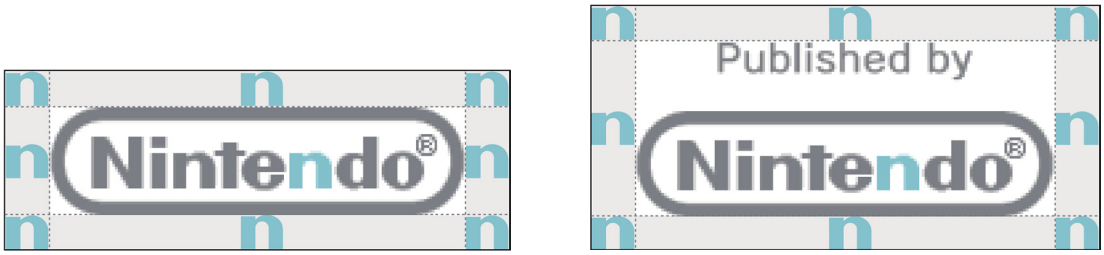
7.1.2.1 Protective Clear Space

When displaying the specified logo image, establish a protective clear space (surrounding area) in which no other logos, text, or graphic elements that interfere with the legibility of the logo are allowed.

However, there is no problem if animation or the like temporarily overlaps the area or if the background overlaps.

A rule of thumb for the size of the protective clear space is that it should be rectangular areas of the same height and width as that of the letter “n” in the logo as in Figure 7-2 below. The “y” in the “Published by Nintendo” logo falls within the protected area extending from the racetrack-surrounded Nintendo logo, but this is permitted as an exception, where the entire design is considered a single logo.

Figure 7-2 Rule of Thumb for Protective Clear Space (“Nintendo” Logo and “Published by Nintendo” Logo)



For details of the usage of the Nintendo logo, also see the *Nintendo Corporate Logotype Usage Standards*.

7.2 Displaying the Dolby Logo

If an application title is compatible with audio output based on Dolby® Pro Logic® II technology, the conditions of displaying the trademark of the Dolby company on the game screens can be satisfied by displaying the Dolby logo on the Channel Banner screen.

This will result in the Dolby logo being displayed at the same time as the specified logo image, so select one of the font colors of gray, white, or black provided by Nintendo in the same manner as for the specified logo image (see Table 3-1 Font Color Settings). Display the Dolby logo at its original size without scaling, rotating, or changing its transparency or aspect ratio. Do not change the aspect ratio of the logo regardless of the differences between the screen aspect ratios of 4:3 and 16:9.

Display the Dolby logo starting at the same time as the start (from the first frame) of the animation of the Channel Banner screen and **leave the Dolby logo image displayed**, in contrast to the specified logo image. In addition, to preserve visibility of the logo image, it is prohibited to apply animation such as fade-in or fade-out to the logo image.