

TWL MasterEditor

Version 1.10.0

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Table of Contents

1	Introduction	6
2	Installation Procedure	7
2.1	Preparing for Installation	7
2.2	Installing	7
2.3	Uninstalling.....	7
3	Using TWL MasterEditor	8
3.1	Loading the ROM Data File (SRL or TAD File)	8
3.1.1	Loading by Dragging into the Window	9
3.1.2	Loading by Selecting from the File Menu	9
3.1.3	Loading with a Command-Line Specification	10
3.2	Entering Information.....	10
3.3	Creating the Submission Data Set.....	10
3.3.1	Troubleshooting the Failure to Create a Master ROM File	11
3.3.2	Troubleshooting the Failure to Create a Submission Checklist	12
3.4	Creating Only a Master ROM File.....	13
3.5	Creating Only a Middleware List.....	13
3.6	Saving Entered Information to a Temporary File	13
3.7	Loading Saved Submission Data.....	14
3.8	Exporting ROM Information to an HTML File.....	14
3.9	Exporting Error Information to an HTML File	15
3.10	Exporting ROM and Error Information to an HTML File.....	16
3.11	Selecting a Language	16
4	Description of Submission Data.....	18
4.1	Error Info Tab	18
4.2	Basic ROM Info Tab	19
4.3	TWL Extended Info Tab.....	22
4.4	DSiWare Info Tab	24
4.5	Market and Rating *** Tab.....	26
4.6	Submission Info *** Tab	29
4.7	Company Info *** Tab.....	32

Figures

Figure 3-1 TWL MasterEditor Overview	8
Figure 3-2 Load by Dragging.....	9
Figure 3-3 Load by Selecting from a Menu	9
Figure 3-4 Creating a Master ROM and Submission Checklist	10
Figure 3-5 Confirmation Dialog Box for Submission Data Set Filenames	11
Figure 3-6 Dialog Box Confirming Successful Creation of Submission Data Set	11
Figure 3-7 Dialog Box Indicating Failure to Create Master ROM File.....	12
Figure 3-8 Dialog Boxes Indicating Failure to Create Submission Checklist.....	12
Figure 3-9 Creating Only a Master ROM File.....	13
Figure 3-10 Creating Only a Middleware List.....	13
Figure 3-11 Save Submission Data to a Temporary File	14
Figure 3-12 Load Submission Data from a Temporary File.....	14
Figure 3-13 Exporting ROM Information to an HTML File.....	15
Figure 3-14 Exporting Error Information to an HTML File	15
Figure 3-15 Exporting ROM and Error Information to an HTML File.....	16
Figure 3-16 Selecting a Language	17
Figure 4-1 Error Info Tab	18
Figure 4-2 Basic ROM Info Tab	20
Figure 4-3 Display of Libraries Used When the Input ROM Is Not the FINALROM Build.....	22
Figure 4-4 TWL Extended Info Tab.....	22
Figure 4-5 DSiWare Info Tab	25
Figure 4-6 Market and Rating *** Tab.....	27
Figure 4-7 Market Display for Software Targeting China (You Cannot Change the Market for Applications Designed for China)	28
Figure 4-8 Market Display for Software Targeting Korea (You Cannot Change the Market for Applications Designed for Korea)	28
Figure 4-9 Submission Info *** Tab	30
Figure 4-10 Company Info *** Tab.....	32

Revision History

Version	Revision Date	Description
1.10.0	2011/04/22	Sections 3.1.1 Loading by Dragging into the Window, 4.2 Basic ROM Info Tab, and 4.5 Market and Rating *** Tab: Updated screenshots. Section 4.5 Market and Rating *** Tab: Added description of support when the CERO rating is "Educational & Database".
1.9.0	2010/05/12	Sections 3.1.1 and 4.2: Updated the images.
1.8.0	2010/01/13	Section 3.11: Newly added. Section 4.1: Added text regarding the relation between error messages, warning messages, and the uses of ROM. Section 4.4: Added text about the uses of private save data. Section 4.6: Added text about the uses of ROM. Sections 3.1 and 4.1 to 4.7: Replaced the images.
1.7.0	2009/09/16	Section 4.3: Revised description of SD Card access rights.
1.6.0	2009/07/08	Chapter 3: Revised figures to match new screens for version 1.6. Sections 3.8 through 3.10: Added these sections. Section 4.5: Added information for the China and Korea software markets and rating settings.
1.5.0	2009/03/17	Section 3.1: Switched image.
1.4.0	2009/03/06	Section 4.3: Changed description of access control information. Revised terminology.
1.3.0	2009/01/30	Section 3.1: Added explanation of methods to launch from the command line. Section 4.4: Added detailed explanation of DSiWare data tags. Chapter 4: Revised images and descriptions to match the screen layout of version 1.3. Revised terminology.
1.2.0	2008/12/18	Section 3.1: Added description of loading TAD files. Section 3.3: Revised images and descriptions to match the file output method used in version 1.2. Sections 4.2 through 4.5: Revised images and descriptions to match the screen layout of version 1.2.
1.0.2	2008/10/23	Section 4.3: Revised the explanation of access control information. Section 4.4: Supplemented the User Generated Contents item with the title "Some User-Generated Content" (Japanese only).
1.0.1	2008/10/16	Revised the description of how to install. Revised the description of how to configure EULA and Parental Controls settings. Revised terminology.
1.0.0	2008/10/09	Initial version.

1 Introduction

TWL MasterEditor is a Microsoft Windows-based tool that automates tasks related to submitting a master ROM for TWL-enhanced and TWL-exclusive software. These tasks include:

- Checking for problems in ROM registration data
- Creating the master ROM (editing some ROM registration data)
- Creating the *Master ROM Submission Checklist* (hereafter called the *submission checklist*)

You must use this tool when submitting a master ROM.

Note: For more information about creating a master ROM and a submission checklist, see the *TWL Master ROM Submission Procedure*.

2 Installation Procedure

2.1 Preparing for Installation

To install TWL MasterEditor, you need Microsoft .NET Framework 2.0 and the Microsoft .NET Framework 2.0 Japanese Language Pack. If this software is not installed on your computer, the .NET Framework 2.0 download page opens when you attempt to install TWL MasterEditor. **Microsoft has released an update that resolves known problems in .NET Framework 2.0. Be sure to run Windows Update and install the latest version of Microsoft .NET Framework 2.0.**

2.2 Installing

To install TWL MasterEditor, perform the following procedure.

1. Run `MasterEditorTWLSetup.msi`.
2. When the installer has launched, click **Next**.
3. Choose a folder for the installation and click **Next**.
4. Click **Next** again to start the installation.
5. When the installation is complete, click **Close**.

When the installation is complete, `MasterEditorTWL.exe` is created in the folder specified in step 3. Launch TWL MasterEditor from this file. In addition, a shortcut is created on the desktop. Double-click it to launch TWL MasterEditor.

2.3 Uninstalling

If you want to uninstall TWL MasterEditor from your computer, use one of these two methods.

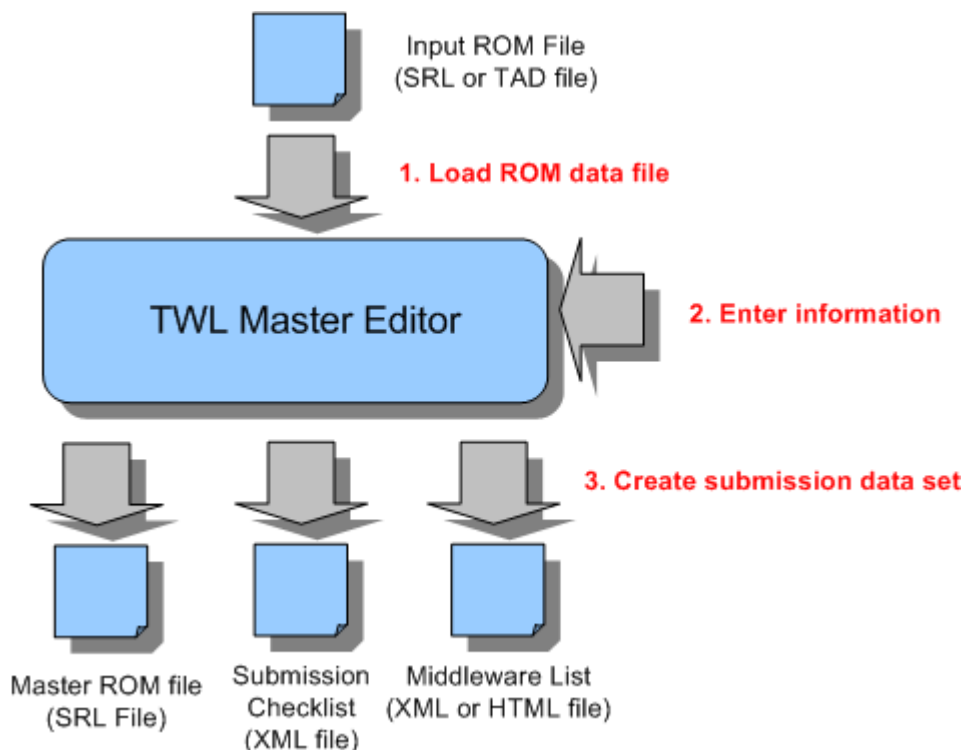
- Use the installer to uninstall the tool
Double-click `MasterEditorTWLSetup.msi` to launch the installer. This is how you began the installation of TWL MasterEditor. Select **Remove MasterEditorTWL** and click **Complete** to uninstall the tool.
- Use Control Panel to uninstall the tool
Open Windows Control Panel and select **Add and Remove Programs**. Select **MasterEditorTWL** from the list and click **Remove**. Be careful not to remove other programs.

3 Using TWL MasterEditor

Start TWL MasterEditor by selecting `MasterEditorTWL.exe` in the installation folder or from the desktop shortcut. You can also launch it from the command line by specifying `MasterEditorTWL.exe` in the folder where it was installed.

Figure 3-1 shows a schematic view of how to use TWL MasterEditor.

Figure 3-1 TWL MasterEditor Overview



The following sections explain the steps in this procedure.

3.1 Loading the ROM Data File (SRL or TAD File)

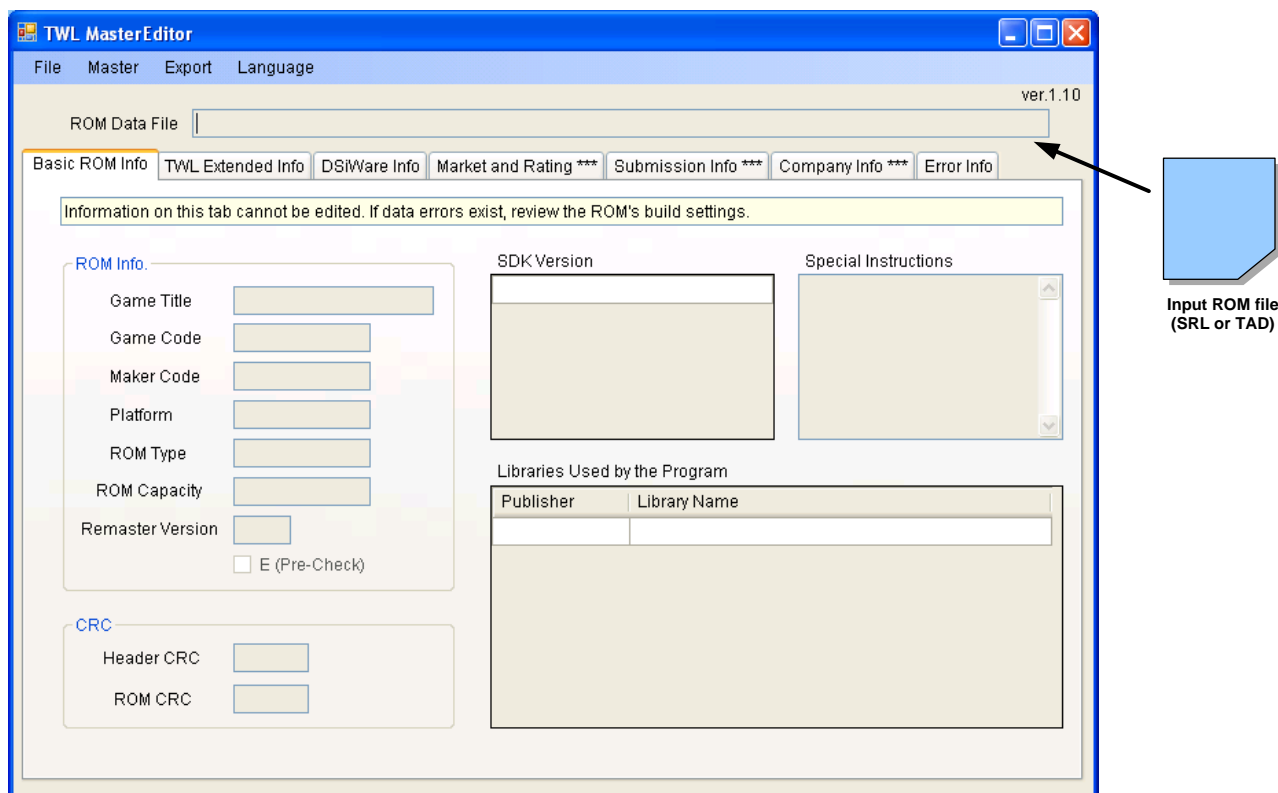
With TWL MasterEditor, ROM data files can be loaded from SRL or TAD files. In the following explanations, the ROM data file that is the target of loading is referred to as the *input ROM file*.

Note: The format of the input ROM file can be either SRL or TAD. The two formats are distinguished by the filename extension. TAD files have the extension `.tad` or `.TAD`. Any other extension designates the file as an SRL file.

3.1.1 Loading by Dragging into the Window

Drag the input ROM file into the window of TWL MasterEditor (see Figure 3-2).

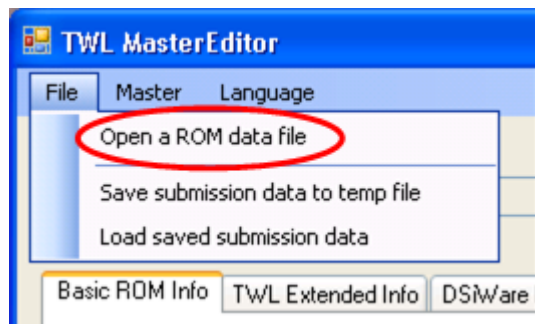
Figure 3-2 Load by Dragging



3.1.2 Loading by Selecting from the File Menu

From the main menu, select **File** → **Open a ROM data file**. Specify the input ROM file in the dialog box.

Figure 3-3 Load by Selecting from a Menu



3.1.3 Loading with a Command-Line Specification

TWL MasterEditor can also be started from the command line. By specifying the name of the input ROM file as an argument on the command line, you can load the input ROM file at the same time that you launch TWL MasterEditor.

3.2 Entering Information

Once the input ROM file has finished loading, you can enter (edit) some of the data that is registered in the master ROM. You can also do the same for submission checklist information. **The edited information is saved in the output file when the submission data set is created** (see section 3.3 Creating the Submission Data Set). **These editing tasks do not change the input ROM file.** Each input field is described in the next chapter.

Note: During editing, do not alter or delete the input ROM file or move it to another folder.

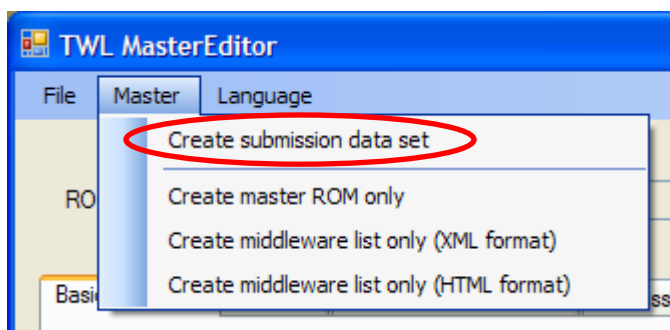
If there are errors or omissions in the input information, neither the master ROM nor the submission checklist can be created.

3.3 Creating the Submission Data Set

Once you have entered the information, you can create the *submission data set*. The set consists of the master ROM file, the submission checklist, and the list of middleware that is used. When you are ready to submit a master ROM, you need to submit the entire submission data set.

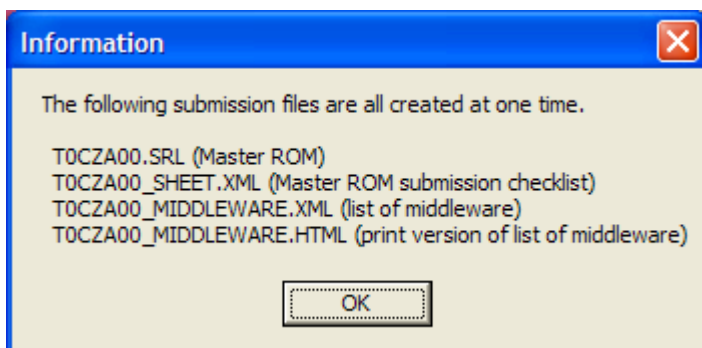
To create a submission data set, from the main menu select **Master** → **Create submission data set**.

Figure 3-4 Creating a Master ROM and Submission Checklist



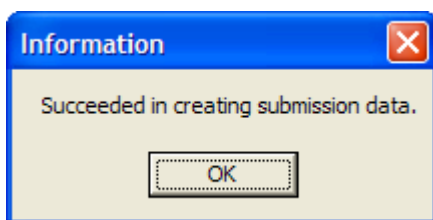
The files in the submission data set are automatically named in compliance with the *TWL Master ROM Submission Procedure*. When the dialog box shown in Figure 3-5 opens, click **OK**. Then select a folder in which to save the submission data set.

Note: If files with the same names already exist, a message appears to confirm that it is OK to overwrite the files. If you click **Yes**, the existing files will be overwritten. If you do not want to overwrite the files, click **Cancel**, which cancels the creation of the submission data set.

Figure 3-5 Confirmation Dialog Box for Submission Data Set Filenames

When the submission data set is created successfully, the dialog box shown in Figure 3-6 appears.

Note: When the submission data set is created successfully, the created master ROM file is loaded automatically. Confirm that there are no errors in the registered information.

Figure 3-6 Dialog Box Confirming Successful Creation of Submission Data Set

If a component of the submission data set fails to be created, an error dialog appears. Use the following sections to deal with possible reasons for failure.

3.3.1 Troubleshooting the Failure to Create a Master ROM File

- The input ROM file was an SRL file that was moved or deleted during the editing process.
Remedy: Return the SRL file to its original location or reload the SRL file and try again to create the submission data set. Note that when you reload the SRL file, the information is replaced for all items in the **Market and Rating** *** tab, so you need to edit the items and reenter that information.
- The input ROM file was a TAD file, and the automatically created intermediate file was moved or deleted during the editing process. (This intermediate file is created in the folder where TWL MasterEditor is installed.)
Remedy: Reload the TAD file and create the submission data set again. Note that when you reload the TAD file, the information is replaced for all items in the **Market and Rating** *** tab, so you need to edit the items and reenter that information.

3.3.2 Troubleshooting the Failure to Create a Submission Checklist

- A file with the same name as the submission checklist already exists and is currently open by another application.
Remedy: Close the file and then create the submission data set again.
- The file for the TWL MasterEditor settings is not present in the installation folder.
Remedy: The settings file may have been changed or deleted, so reinstall TWL MasterEditor.

Figure 3-7 Dialog Box Indicating Failure to Create Master ROM File

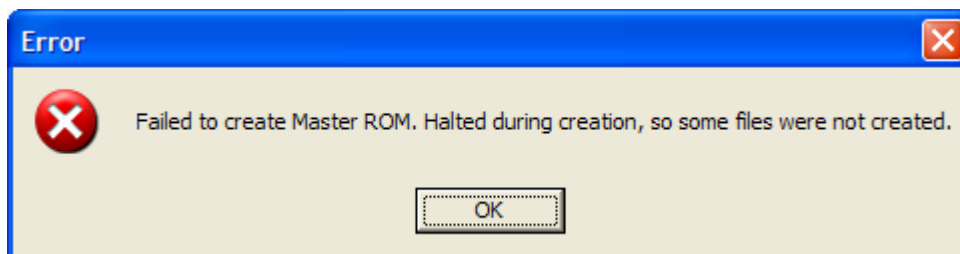
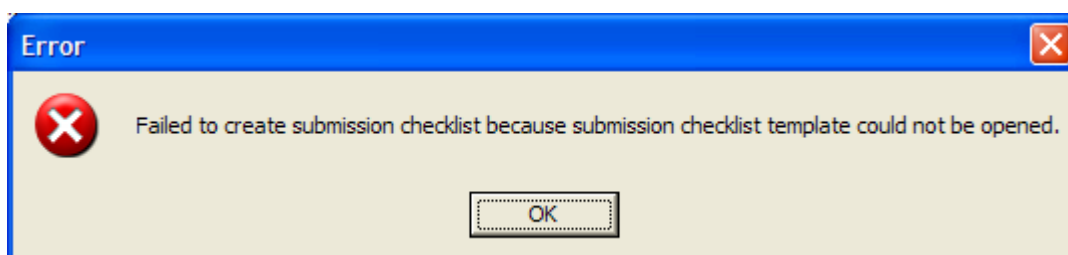
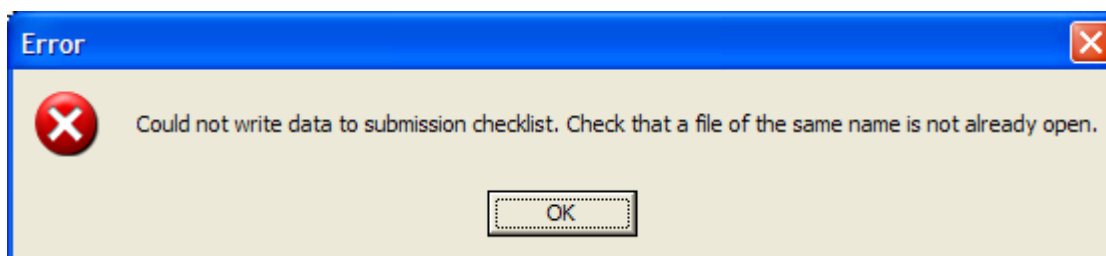


Figure 3-8 Dialog Boxes Indicating Failure to Create Submission Checklist



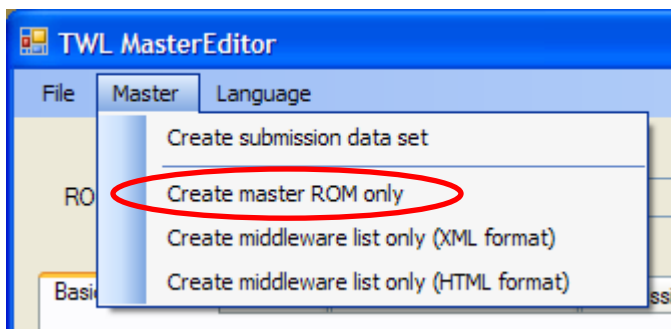
The created submission checklist can be opened with Microsoft Excel. The list of middleware being used is created in XML and HTML formats. Both formats can be opened with Internet Explorer, Firefox, and other browsers.

Note: The XML-format middleware list displays very differently in different browsers. With Internet Explorer, the internal structure of the data is retained when it is displayed. With Firefox, the data is displayed in the same way it would be displayed in HTML format. The difference is due to the different ways the browsers process data for display. The browsers do not alter the actual content of the file.

3.4 Creating Only a Master ROM File

To create only a master ROM file without creating a submission checklist or a middleware list, from the main menu select **Master** → **Create master ROM only**. (See Figure 3-9.)

Figure 3-9 Creating Only a Master ROM File

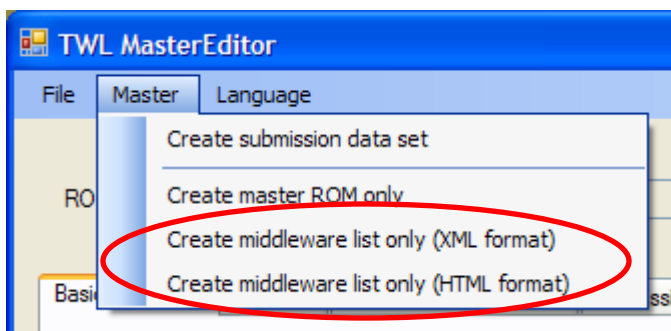


In this case, the only items that need entries are those in the **Market and Rating ***** tab. If you use this method to create only a master ROM file, be careful not to submit it with a separately created submission checklist.

3.5 Creating Only a Middleware List

If you want to create a list of middleware used by the input ROM file without creating a master ROM file or a submission checklist, from the main menu select **Master** → **Create middleware list only (XML format)** or **Master** → **Create middleware list only (HTML format)**.

Figure 3-10 Creating Only a Middleware List



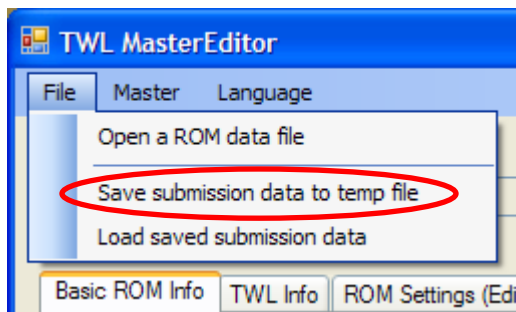
You can open the resulting middleware list file with Internet Explorer, Firefox, or another browser.

3.6 Saving Entered Information to a Temporary File

If you want to pause while entering information or back up entered information such as your company information, you can save entered information to a temporary file. This temporary file can be created regardless of whether you omitted some information or made mistakes in your information. To temporarily save entered information, from the main menu select **File** → **Save submission data to**

temp file. Section 3.7 Loading Saved Submission Data explains how to load temporarily saved input information.

Figure 3-11 Save Submission Data to a Temporary File

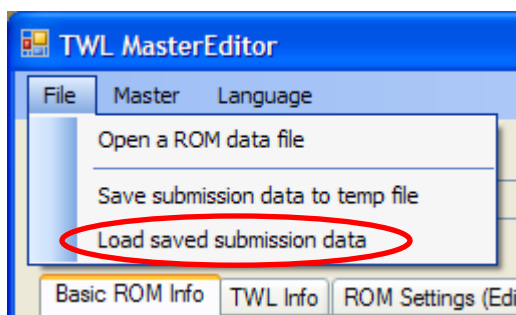


You can temporarily save entered information even if the input ROM file is not loaded. However, if the input ROM file is loaded at that time, its file path is included in the information that is temporarily saved, and it is therefore loaded when you later load the temporarily saved entries. Note that you are not able to load the input ROM file this way if it is moved or deleted. If this happens, use the method described in section 3.1 Loading the ROM Data File (SRL or TAD File) to specify the input ROM file.

3.7 Loading Saved Submission Data

To load temporarily saved entered information, from the main menu select **File** → **Load saved submission data**. (See Figure 3-12.) Note that loading this temporary file overwrites any data already entered in fields.

Figure 3-12 Load Submission Data from a Temporary File

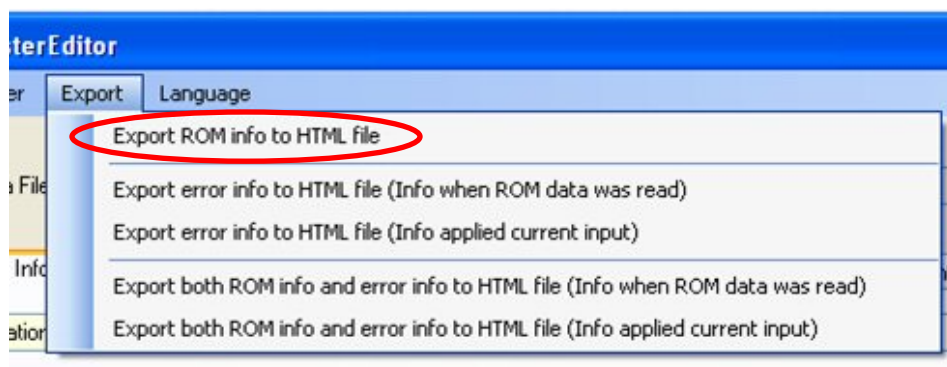


3.8 Exporting ROM Information to an HTML File

To exchange information before submitting your master ROM, which may still be under development or undergoing the debugging process, you can export the ROM registration data of input ROM files displayed in TWL MasterEditor to an HTML file. Specifically, you can export information displayed in the **Basic ROM Info** tab, the **TWL Extended Info** tab, the **DSiWare Info** tab, and the **Market and Rating ***** tab in list format in an HTML file.

From the menu bar, select **Export** → **Export ROM info to HTML file**. (See Figure 3-13.)

Figure 3-13 Exporting ROM Information to an HTML File



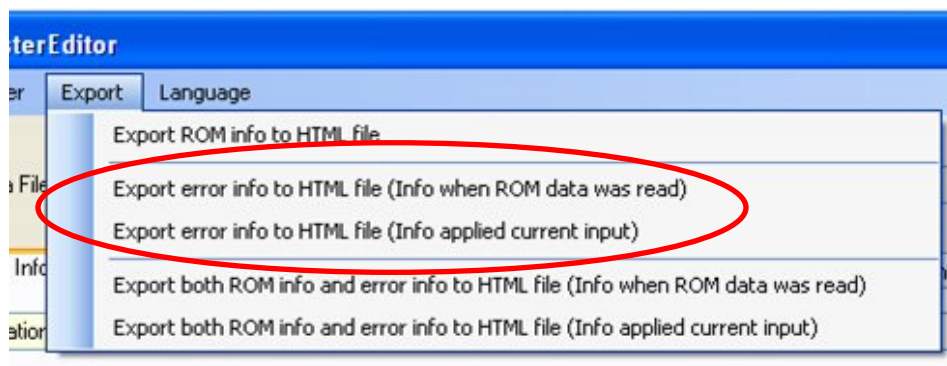
Values displayed in the drop-down menu are output for the market and rating information, so if you changed your selection, the values after you make changes are exported.

3.9 Exporting Error Information to an HTML File

To exchange information before submitting your master ROM, which may still be under development or undergoing the debugging process, you can export error information in your ROM registration data to an HTML file. Specifically, you can export information displayed in the **Error Info** tab in list format in an HTML file. The information displayed in that tab varies between when input ROM data was read and when current input was applied. (See section 4.1 Error Info Tab.) For that reason, you can export to separate files for errors that occurred when the input ROM file was read and those that occurred when the current input was applied.

Depending on which error information you want to export, from the menu bar, select either **Export** → **Export error info to HTML file (Info when ROM data was read)** or **Export** → **Export error info to HTML file (Info applied current input)**. (See Figure 3-14.)

Figure 3-14 Exporting Error Information to an HTML File



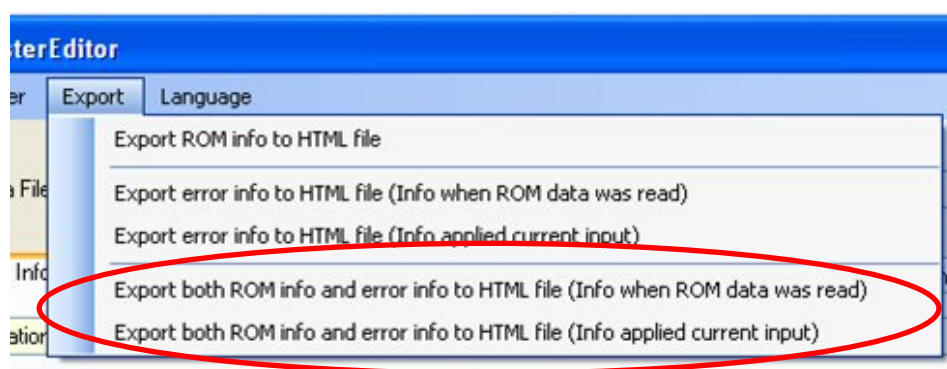
The **Error Info** tab displays both input errors and omissions made on the **Submission Info** *** and the **Company Info** *** tabs, which are unrelated to ROM registration data, but this information is not exported to an HTML file.

3.10 Exporting ROM and Error Information to an HTML File

You can export your ROM registration data (as described in section 3.8 Exporting ROM Information to an HTML File) and errors in the ROM registration data (as described in section 3.9 Exporting Error Information to an HTML File) to a single HTML file. As previously described, you can also export to separate files for errors when the input ROM data was read and errors when the current input was applied.

Depending on which error information you want to export, from the menu bar, select either **Export** → **Export ROM info and error info to HTML file (Info when ROM data was read)** or **Export** → **Export ROM info and error info to HTML file (Info applied current input)**. (See Figure 3-15.)

Figure 3-15 Exporting ROM and Error Information to an HTML File

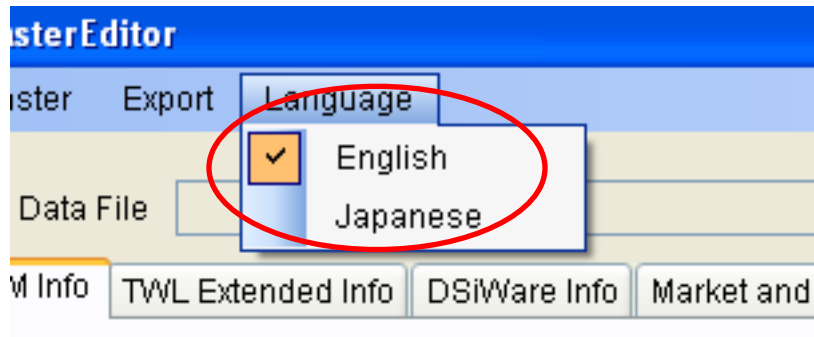


The **Error Info** tab displays both input errors and omissions made on the **Submission Info** *** and the **Company Info** *** tabs, which are unrelated to ROM registration data, but this information is not exported to an HTML file.

3.11 Selecting a Language

You can choose either Japanese or English as the language for the TWL MasterEditor interface and the submission checklist. To choose a language, select either **Language** → **Japanese** or **Language** → **English** (Figure 3-16). Note that you must have the font "MS PGothic" installed on your computer to use Japanese. If this font is not installed, selecting **Japanese** will result in an error.

Figure 3-16 Selecting a Language



4 Description of Submission Data

This chapter describes the information tabs at the top of the TWL MasterEditor window.

4.1 Error Info Tab

Inconsistencies or missing entries in the ROM registration data appear on the **Error Info** tab. The problems are divided into errors, shown in the upper field (marked 1 in Figure 4-1), and warnings, shown in the lower field (marked 2). The **Error** field shows problems in the ROM registration data and any entered information. As a rule, errors must be corrected. The **Warning** field shows issues that require attention. You should check these issues to determine if there is a problem. These problems differ between when ROM data is read and when current input is applied. At any time, you can toggle the display between problems that were detected when the input ROM file was read and problems when entries made in the TWL MasterEditor (marked 3) were applied.

Note: The contents of the error and warning messages will vary, depending on the purpose of the ROM. In Figure 4-1, the messages displayed are appropriate to the **ROM Submission Purpose** (4). To change what is shown in (4), you must change the selected **Purpose** option on the **Submission Info ***** tab (see section 4.6 Submission Info *** Tab). If your ROM usage is different from that shown below in (4), make the appropriate change in the **Purpose** option of the **Submission Info ***** tab and then perform the ROM check.

Figure 4-1 Error Info Tab

This tab lists problems in the ROM data file and editing mistakes made when using this program. Items in red cannot be corrected using this program. You must modify the ROM build settings. Items in blue indicate problems with the ROM data that can be corrected using this program. Items in black indicate errors or omissions in the Submission Info and Company Info tabs.

Display Information From

☒ When ROM data was read

☐ Apply current input

1 Error (Modification is required.)

4 ROM Submission Purpose Product

Item Name	Start	End	Reason
Game Title	0000h	000Bh	Register 00h in the area not used.
Game Code	000Ch	000Fh	SDK default code (NTRJ) is being used.
System Call Library	-	-	SDK default is used for the system call library.
Padding	-	-	Last 40Mbit cannot be read.
Segment 3 CRC	-	-	There is a data error in the segment 3 region.

2 Warning (Although modification is not required, check this information for possible errors.)

Item Name	Start	End	Reason
Device capacity	0014h	0014h	A value that is excessively larger than the actual file size has been set.
Actual File Size	0014h	0014h	Ill-defined value. Usually, the value is a power of 2.

The **Error Info** tab in TWL MasterEditor displays three kinds of errors and warning messages.

- **Problems with ROM registration data that cannot be corrected with TWL MasterEditor (in red)**
To correct these kinds of errors, change the build settings and recreate the input ROM file. (One exception is the submission data set, which can be created even if the errors are not corrected.)
- **Problems with ROM registration data that can be corrected with TWL MasterEditor (in blue)**
These problems relate to the **Market and Rating** settings (see section 4.5 Market and Rating *** Tab). **The submission data set cannot be created until the items displayed in the Error field have been corrected.** The master ROM cannot be created on its own.
- **Information unrelated to the ROM registration data (in black)**
These are entry mistakes and omissions in the submission information (see section 4.6 Submission Info *** Tab) and company information (see section 4.7 Company Info *** Tab). **The submission checklist cannot be created until they are fixed.** If you are only creating the master ROM, however, these kinds of errors do not need to be corrected.

These errors and warnings consist of the following elements.

- **Item name:** Indicates the name of the problem.
- **Start - End:** Indicates the ROM region where the problem is located. If there is no region, these two fields simply show a hyphen (-).
- **Cause:** Describes the actual problem.

4.2 Basic ROM Info Tab

The **Basic ROM Info** tab shows some of the ROM registration information in the input ROM file. Use this information to check the specifications of the input ROM file. **These fields are configured at the time of ROM development (for example, in RSF files).** Any problems with this information appear in the **Error Info** tab. These fields are included in the submission checklist. For details about each field and to read how to configure them, see the TWL-SDK documentation.

Figure 4-2 Basic ROM Info Tab

Information on this tab cannot be edited. If data errors exist, review the ROM's build settings.

ROM Info.

1 Game Title: CARDRH CHECK

2 Game Code: 0CZA

3 Maker Code: 00

4 Platform: NTR/TWL Hybrid

5 ROM Type: 1TROM

6 ROM Capacity: 2Gbit

7 Remaster Version: 00
☐ E (Pre-Check)

CRC

8 Header CRC: 0xD84E

9 ROM CRC: 0x86E9

10 SDK Version: 5.1 RELEASE, 5.1 RELEASE

11 Special Instructions

12 Libraries Used by the Program

Publisher	Library Name

1. Game Title

Shows the title name from the input ROM file (maximum 12 characters).

2. Game Code

Shows the four-character code (specified by Nintendo) to identify the game software.

3. Maker Code

Shows the two-character code (specified by Nintendo) to identify the maker.

4. Platform

Shows the platform on which the software is run. If the input ROM file is TWL-enhanced software, **NTR/TWL Hybrid** is displayed. If it is TWL-exclusive software, **TWL Limited** is displayed. Note that MasterEditor cannot load NTR-only ROMs.

5. ROM Type

Shows the card type. Only one-time ROMs can be specified for TWL-enhanced and TWL-exclusive titles. **1TROM** is normally displayed. For NAND applications (DSiWare), the ROM type does not need to be specified, but **1TROM** is shown for this field.

6. ROM Capacity

Shows the value specified for the capacity of the input ROM file. For NAND applications (DSiWare), the value shown is a rounded-up file size.

Note: The value shown here is not the amount of NAND memory used by the DSiWare on the Nintendo DSi system. Check the DSiWare information (see section 4.4 DSiWare Info Tab) to get NAND memory usage.

7. Remaster Version

Shows the remaster version of the software as a two-digit hexadecimal value. If a preliminary version is being submitted, confirm that **E0** is displayed and the **E** check box is selected.

8. Header CRC

Shows the CRC registered for the software as a four-digit hexadecimal value.

9. ROM CRC

Shows the CRC for the overall file, as calculated when the input ROM file was loaded. The CRC is given as a four-digit hexadecimal value.

When the master ROM is created, TWL MasterEditor registers to ROM the information that was edited in the **Market and Rating** *** tab. As a result, the input ROM file and the master ROM file will have different values for the overall file CRC. It is the master ROM file's CRC that is entered in the submission checklist, not the CRC of the input ROM file.

10. SDK Version

Shows the version of the TWL-SDK that was used during software development. Also shows DS Download Play child programs and child programs containing Wi-Fi Connection settings for transferring Wi-Fi user information. The SDK version detected from the resident module is shown in blue. It is this SDK version, shown in blue characters, that is included in the submission checklist.

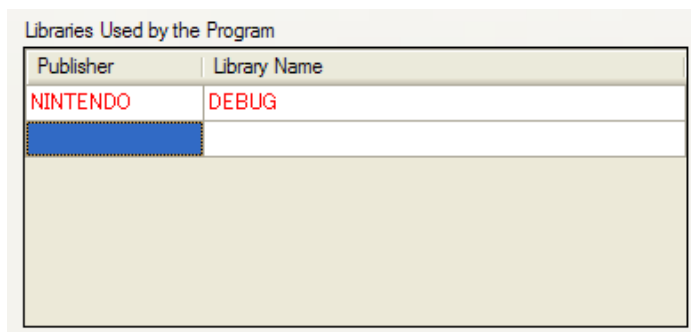
11. Special Instructions

Shows settings specific to the game software. For example, if the game uses clone booting, then **Supports clone boot** is displayed. The contents of this item are included automatically in the submission checklist.

12. Libraries Used by the Program

Shows the names and publishers of the libraries used by the software. The list includes, for example, speech recognition engines and other licensed products. If the ROM that has been input is not the FINALROM build, **NINTENDO DEBUG** is displayed in red, as shown in the following figure. When DEBUG is displayed, all programs, including DS Download Play child programs, must be recreated with the build set to the FINALROM build.

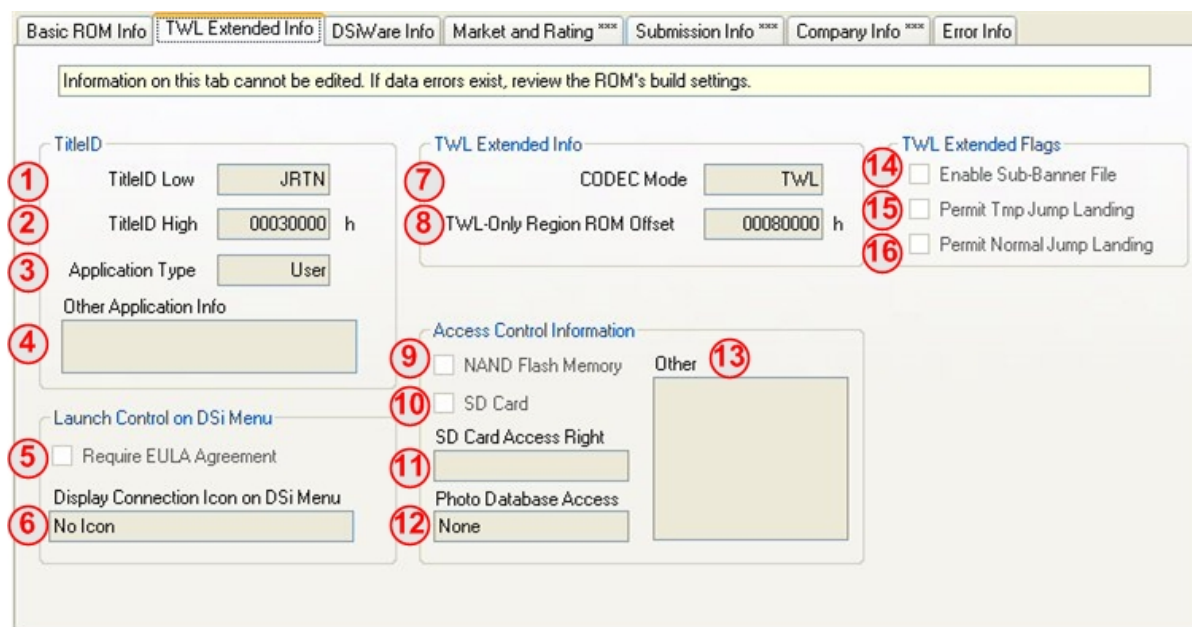
Figure 4-3 Display of Libraries Used When the Input ROM Is Not the FINALROM Build



4.3 TWL Extended Info Tab

The **TWL Extended Info** tab shows information from the ROM registration data of the input ROM file that is specifically related to the TWL's expanded features. **These items are configured at the time of ROM development (for example, with RSF files).** Any problems appear in the **Error Info** tab. To read more about these fields and how to configure them, see the TWL-SDK documentation.

Figure 4-4 TWL Extended Info Tab



1. TitleID Low

Shows the game code in reverse order.

2. TitleID High

Shows the code for determining the software type. This item is used by Nintendo for verification purposes.

3. Application Type

Shows the software type. **User** is normally displayed.

4. Other Application Info

If there is something special about the software, that information is shown in this field. Usually this field is blank.

5. Require EULA Agreement (specific to Nintendo DSi Network Service)

Shows whether consent to the EULA (terms of use) is required when software is launched from the DSi Menu. (When this check box is selected, the software cannot launch if the user does not agree to the terms of use.)

If a connection to the Internet is required to use the software, confirm that this check box is selected. If the software does not need to be connected to the Internet but supports some features that are available through Nintendo Wi-Fi Connection or some other service that uses the Internet, confirm that this check box is not selected. (For example, this applies to a game with a battle mode that uses Nintendo Wi-Fi Connection, but the game itself can be played without a Wi-Fi Connection.)

6. Display Connection Icon on DSi Menu

Shows the setting for the connection icon that is shown at the same time as the software banner on the DSi Menu. If the field is configured to display an icon, either **Wireless Icon** or **Wi-Fi Connection Icon** is displayed here. If the field is configured not to display an icon, **No icon** is displayed.

For more information about enabling and disabling the display of a connection icon, see the *TWL Programming Guidelines*.

7. CODEC Mode

Shows the mode of the TWL's CODEC module. **TWL** indicates CODEC-TWL mode, and **DS** indicates CODEC-DS mode. (Up to version 1.2 of the TWL MasterEditor, this latter mode was indicated by **NTR**. That was changed to **DS** starting with version 1.3).

8. TWL-Exclusive Region ROM Offset

Shows the starting address of the data that can only be read from TWL and not from NITRO.

9. NAND Flash Memory

This check box is selected if access to the NAND flash memory in the TWL is specified. This check box is always selected for NAND applications. Access to NAND memory from card applications is not allowed.

10. SD Card

This check box is marked when access to SD Cards is specified.

11. SD Card Access Right

If your software was created using the official version of TWL-SDK 5.2 or later, access rights to SD Cards are displayed only when SD Card Access has been configured. Depending on the access right, one of the following is displayed.

- **When read-only access rights are configured: Read is displayed**
- **When write-only access rights are configured: Write is displayed**
- **When both read and write access rights are configured: Read/Write is displayed**

12. Photo Database Access

Shows the access rights to the photo database region on the TWL system. Depending on the type of rights, one of the following is displayed.

- **When there is no access right, None is displayed**
- **When there is read-only access right, Read Only is displayed**
- **When there are both read and write access rights, Read/Write is displayed**

13. Other

If access to some other specific device is specified, that device is displayed.

14. Enable Sub-Banner File

This check box is selected when a sub-banner file has been specified.

For more about sub-banner files, see the TWL-SDK documentation.

15. Permit Tmp Jump Landing

This check box is selected if the software is demoware for a demo console.

16. Permit Normal Jump Landing

This check box is selected if application jumps are set.

4.4 DSiWare Info Tab

The **DSiWare Info** tab shows the amount of NAND flash memory used by the NAND application (DSiWare). This information is included in the ROM registration data of the input ROM file, and you should use it to verify the specifications of the input ROM file. **The fields shown here are configured in the RSF file when software is developed.** If there are problems with the information, they are displayed on the **Error Info** tab. For more information on these fields, see the TWL-SDK documentation.

Figure 4-5 DSiWare Info Tab

Information on this tab is required to confirm the amount of space a given Nintendo DSiWare title (NAND application) uses in the system memory.

① Media

Amount of System NAND Memory Used by DSiWare Application

	Original Size in ROM		Size in NAND Memory
② Actual ROM File Size	<input type="text"/>	=>	<input type="text"/>
③ Public Save Data Size	<input type="text"/>	=>	<input type="text"/>
④ Private Save Data Size	<input type="text"/>	=>	<input type="text"/>
⑤ Sub-Banner File Size	<input type="text"/>	=>	<input type="text"/>
⑥ Other	<input type="text"/>	=>	<input type="text"/>

⑦ Total Size (Total NAND memory used) ()

Private Save Data Usage ⑧

In general, use of the private save data memory region is prohibited, but if you must use it, enter your intended use and reasons for use in the appropriate entry fields.

1. Media

If it is a card application, **Game Card** is shown here. If it is a NAND application (DSiWare), **NAND** is shown. If the application is a NAND application, you need to verify fields (2) through (6). If it is a card application, these fields are irrelevant.

Note: Fields (2) through (6) show the sizes of the files that are created in NAND memory when the NAND application is imported to the TWL. The values in the left column labeled Original Size in ROM are the sizes of the files as configured when the ROM was created. The values in the right column labeled Size in NAND Memory are the sizes of the files in the TWL file system. Because the TWL file system manages files in units of 16 KB, the **Size in NAND Memory** values are rounded up to the nearest 16 KB value from the **Original Size in ROM** values. The total amount of NAND memory used by the NAND application is the value displayed at (7).

2. Actual ROM File Size

Shows the actual size of the input ROM file. Note that when the input ROM file is in TAD format, the size shown here is not the size of the original TAD file, but of the file after it has been converted to an SRL file. In other words, the size shown here is not the same as the size of the TAD file.

3. Public Save Data Size

Shows the amount of the Save Data created in NAND memory that can be backed up to an SD Card.

4. Private Save Data Size

Shows the amount of the Save Data created in NAND memory that cannot be backed up to an SD Card.

In principle, the use of private save data is prohibited. If the size is non-zero, it is assumed that private save data is being used inside the software. If you are using private save data, enter the reason why it is being used or explain its usage in field (8) above. If private save data is not needed in the software, set the size of the private save data to 0 when you build the software.

5. Sub-Banner File Size

If the NAND application uses a sub-banner, this item shows the size of that sub-banner file. If a sub-banner is not used, the field takes zero as its value.

6. Other

Shows the size of the file that was created to manage the NAND application. Note that the size of this management file is also included in the value for the total amount of NAND flash memory used.

7. Total Size

Shows the sum of the file sizes of fields (2) through (6) and denotes the total amount of NAND flash memory used by the NAND application. The value is shown in both KB and MB units.

4.5 Market and Rating *** Tab

The fields in the **Market and Rating ***** tab can be edited. They are all related to Parental Controls, and **any editing done to the market (region) and rating information will be recorded to the master ROM file**. For more information about Parental Controls, see the *TWL Programming Guidelines*.

In Figure 4-6, fields (1) through (3) show ROM registration data from the input ROM file that has been loaded. Fields (4) and (5) are not related to the ROM registration data, so these check boxes are cleared automatically when the input ROM file is first loaded.

If you press button (6) during editing, the values in fields (1) through (5) revert to the states they were in when the input ROM file was first loaded. Pressing the button does not change any of the fields on any of the other tabs.

Figure 4-6 Market and Rating * Tab**

1. Market

For both TWL-enhanced (HYBRID) and TWL-exclusive (LIMITED) software, the market information *must* be registered in ROM. (A market is registered within each TWL system defining the area where it will be sold. If the software region does not match the system's region, the software will not launch.)

Select a market from the drop-down list. The submission checklist cannot be created until a market has been selected. The selected market is recorded to the master ROM file.

However, you cannot select China or Korea as a market with TWL MasterEditor. This is because special settings other than the **Market and Rating Information** settings are required if your application targets the Chinese or Korean market. Set the market using the RSF file when you develop your software. See the TWL-SDK documentation for details on developing software for the Chinese and Korean markets.

If you have input software in TWL MasterEditor for either China or Korea, this field appears as shown in Figure 4-7, and you cannot change this to any other market. (You can, however, set the rating.)

Figure 4-7 Market Display for Software Targeting China (You Cannot Change the Market for Applications Designed for China)

The screenshot shows a dialog box titled "Market and Rating Information". It contains a "Market" dropdown menu with "China only" selected. Below the dropdown is a checkbox labeled "Rating Not Required (Tools Only)" which is currently unchecked.

Figure 4-8 Market Display for Software Targeting Korea (You Cannot Change the Market for Applications Designed for Korea)

The screenshot shows a dialog box titled "Market and Rating Information". It contains a "Market" dropdown menu with "Korea only" selected. Below the dropdown is a checkbox labeled "Rating Not Required (Tools Only)" which is currently unchecked.

2. ESRB

TWL-enhanced and TWL-exclusive software must undergo a ratings review by the rating organizations in the market where the software is to be sold. Get ratings from these organizations before you submit the master ROM.

After a market is selected, you can select only ratings that are issued by that market's rating organizations. A drop-down list displays the ratings you can enter for each ratings organization. Select the rating you have obtained from each organization. The submission data set cannot be created until you have entered a rating from each ratings organization in the target market. The ratings you enter are recorded to the master ROM file. You cannot select ratings from rating organizations that are not in the target market.

Note: For preliminary versions and other master ROM submissions before ratings have been obtained, select **Rating Pending**.

Note: If your application's CERO rating is "Educational & Database," select **A (All ages)** and enter "The CERO rating is 'Educational & Database'" in the Comments field.

If ratings from organizations that are not in the target market have been set, they are cleared when the master ROM is created. **Undefined** will appear on the submission checklist.

No rating organization exists in China. If the input ROM file is software designed for China, specific values are automatically set for the rating information in the master ROM and the *Master ROM Submission Checklist* when you create the submission data.

3. Rating Not Required (Tools Only)

In exceptional cases, software does not need to display a rating. Select this check box if the software does not require a rating. This setting is permitted only for tools and other non-game

software. All game software must get a rating from the rating organizations for the target market. Contact support@noa.com to determine whether your software needs to display a rating.

Software products to which this setting applies are not subjected to the ratings setting configured in Parental Controls. **Rating Not Required (Tools Only)** is displayed for every rating organization in the target market on the submission checklist.

If ratings from organizations that are not in the target market have been set, they are cleared when the master ROM is created, and **Undefined** appears on the submission checklist.

No rating organization exists in China. However, select this check box only if the software does not require a rating display even after a rating organization is established in the future.

4. UGC (User Generated Content) Support

Select this check box if the software supports user-generated content. This information is not recorded to the master ROM, but it is written on the submission checklist and used for Lotcheck.

To read about user-generated content, see the *TWL Programming Guidelines*.

5. Photo Exchange Support

Select this check box if the software supports exchanging pictures. This information is not recorded to the master ROM, but it is written on the submission checklist and used for Lotcheck.

To read more about picture exchanges, see the *TWL Programming Guidelines*.

6. Restore Initial Settings

Click this button to restore all fields in the **Market and Rating ***** tab to the initial values displayed when the input ROM file was loaded. Clicking this button does not change the settings in the other tabs.

4.6 Submission Info *** Tab

All items in the **Submission Info ***** tab must be completed. For more about the fields in this dialog box, see the *TWL Master ROM Submission Procedure*.

Figure 4-9 Submission Info *** Tab

You must complete all items on this tab to create a submission checklist.

1 Product Name: Sample Game Name

2 Product Code: TWL - P - TWLJ (100 characters or less)

3 Launch Date: 2/ 5/2010

4 Submission Date: 2/ 5/2010

5 Submission Ver.: 0
* Reset to 0 when a new master ROM is created

6 Submission Method: ☒ Mail ☐ By Hand ☐ Internet

7 Purpose: ☒ TWL Card Application
☐ Product
☐ Demo for "Touch!Try!DS"
☐ Game Card for Data Distribution
☐ Retail Kiosk Demo

8 ROM Submission Information: Backup Memory: None

9 Foreign Version: ☒ Foreign version is scheduled for sale
Product Name: Sample Game Name F
Product Code: TWL - P - TWLE (100 characters or less)
TWLP (When for >1 market)
TWLU (When for >1 market)

10 Remarks - Enter any other related information.
This is a sample.

1. Product Name

Enter the software product name.

2. Product Code

Enter the product code (as specified by Nintendo) for the software.

3. Launch Date

Enter the planned date of retail availability for the software.

4. Submission Date

Enter the submission date for the submission data set.

5. Submission Ver.

Enter the version number of the submitted software. The first submitted version is 0. Every re-submission of the software is incremented accordingly, starting with 1. However, if a remastered version of the software is being submitted, restart the version number from 0.

6. Submission Method

Specify the method of submission of the set of submission data.

7. Purpose

Select the intended use of the ROM. Table 4-1 explains the selections that can be made.

Table 4-1 List of ROM Usage Options

Media Type	Purpose	Markets Where Used	Description
TWL Card Applications	Product	All markets	Titles for selling Game Cards in retail stores, directly, or via mail-order or other methods
	Demo for Touch!Try!DS	Japan	Demoware titles for networked kiosks ("DS Stations")
	Retail Kiosk Demo	Japan, North America, Europe, Australia	Demoware titles for standalone-type kiosks (non-networked)
	Game Card for Data Distribution	Japan, North America, Europe, Australia	ROMs for data distribution, to distribute game data as a free service in stores, event halls, and other locations, with no intent of selling to users. (Example: Distribution of Pokémon data in movie theaters)
DSiWare (NAND Applications)	Product	All markets	Titles for sale via Nintendo DSi Shop.
Other		All markets	All other ROM usage options not covered by any of the above.

Note: The error and warning messages shown in the **Error Info** tab will differ, depending on the kind of ROM usage that has been selected (see section 4.1 Error Info Tab). If you change the selected ROM usage, reconfirm the content of messages displayed in the **Error** and **Warning** lists of the **Error Info** tab.

With TWL MasterEditor, you cannot make a selection if the entered ROM **Media** (see section 4.4) does not match any Media Type in the above table, or the entered ROM **Market** (see section 4.5) is not among the markets shown in the above table. For example, if the entered ROM **Market** is **USA only** then you cannot select **Demo for "Touch!Try!DS"** as the ROM **Purpose**. You can, however, select **Retail Kiosk Demo**.

In principle, for demoware that is distributed wirelessly (for example, demoware distributed via DS Download Play, Nintendo Channel, or Nintendo Zone), you are not permitted to create TWL-enhanced software or TWL-exclusive software. If you plan to create software for any of these usages, do so as NTR-limited software. If for some reason you need to create the demoware as TWL-enhanced or TWL-exclusive software, please contact support@noa.com. For more details, see the demoware creation documentation for each market.

8. ROM Submission Information

Specify the type of backup memory used when producing the ROM. If backup memory is not used, select **None**. If the backup memory type does not appear in the drop-down list, select **Other** and enter the type and capacity in the adjacent field. For NAND applications, **None** is selected automatically.

9. Foreign Version

If you plan to sell a foreign-market version, select the check box and enter the product name and product code. If the product will be sold in multiple foreign markets, enter a product code for each market region.

10. Remarks

Use this field to enter messages you want to convey to Nintendo.

4.7 Company Info *** Tab

All the items in the **Company Info ***** tab must be completed. For more about the fields, see the *TWL Master ROM Submission Procedure*.

Figure 4-10 Company Info * Tab**

1. Contact 1

A Nintendo representative may need to inquire about your software specifications. Enter the primary contact information for the person who should be contacted first.

2. Enter Contact 2 (optional)

If the primary contact is not always available, select this check box and then enter the contact information for the secondary contact person.

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