

Creating CTR Titles for Asian Markets

Notes and Warnings

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Version 1.0

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and should be handled accordingly.**

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Table of Contents

1	Introduction	5
2	Requirements for Supporting Asian Regions	6
3	SDK Versions: Capable of Running and Approved for Master ROM Submission	7
4	Internal Fonts	8
4.1	Troubleshooting	10
4.1.1	Do Not Display Application Text Using Internal Fonts	10
4.1.2	Separately Load Standard Fonts for Japanese/North American/European Systems to Display Text	10
4.1.3	Only Use Character Sets That Can Be Displayed in Asian Fonts	10
5	Software Keyboard	11
5.1	Troubleshooting	11
5.1.1	Use Different Keyboard Types for Each Region	11
5.1.2	Always Use QWERTY Keyboard Layout	11
6	Communication Features	12
6.1	StreetPass	12
6.1.1	Enabling StreetPass Regardless of Region	12
6.1.2	Separate StreetPass Partners by Region	12
6.2	SpotPass (BOSS)	12
6.3	Friend Presence	12
6.4	Local Play (UDS Communication)	12
6.4.1	Enabling UDS Communication Regardless of Region	12
6.4.2	Separate UDS Communication Partners by Region	12
6.5	Internet Support (NEX)	12
6.5.1	Enabling Internet Communication Regardless of Region	13
6.5.2	Separate Internet Communication by Region	13
6.6	Applications That Use the eShop (ECDK)	13
6.6.1	If You Use the ECDK (Add-On Content)	13
6.6.2	If You Do Not Use the ECDK	13
6.7	Profanity Checking	13
7	Specific Information	14
7.1	RSF File Configuration	14
7.2	BSF File Configuration	14
7.3	Rating	14
8	Other Information	16

8.1	Notifications	16
8.1.1	Downloading Notifications via SpotPass	16
8.1.2	Downloading Notifications Locally from Applications.....	16
8.1.3	Using StreetPass	16
8.2	E-Manuals	16
8.3	Mii Characters	16
8.4	Patched Titles.....	16
8.5	Terminology	16
8.6	Sample Error Message List.....	17
	Revision History.....	18

Tables

Table 3-1 SDK Versions: Capable of Running and Approved for Master ROM Submission	7
Table 4-1 Font Data by Region.....	8
Table 7-1 Rating Types in Asian Regions.....	15

1 Introduction

This document is for CTR application developers. It provides information of note when producing applications for the Chinese, Korean, and Taiwanese regions (for brevity, called “Asian regions” or “Asia” in this document).

Refer to this document if you are developing an application for the Japanese/North American/European regions, and are considering offering that application in one or more Asian regions as well. Also refer to it if you have already developed an application for the Japanese/North American/European region, and are considering porting this application to one of those regions.

2 Requirements for Supporting Asian Regions

There are some differences between developing applications for Asian regions, and developing them for Japanese/North American/European regions that the developer must take into account. The requirements are outlined below.

- **CTR-SDK**

CTR-SDK version 3.3 or later is required.

See chapter 3 for details.

- **Internal Fonts**

The standard fonts that are loaded differ for each region.

See chapter 4 for details.

- **Software Keyboard**

The software keyboard layout is different for each region.

See chapter 5 for details.

- **Communication Features**

You must use specific measures to support regional communication.

See chapter 6 for details.

- **Specific Information**

You must configure information specific to each region, such as region and rating information.

See chapter 7 for details.

- **Other Information**

Depending on your application's specifications, other work may be required, such as with notifications, e-manuals, and Mii characters.

See chapter 8 for details regarding further requirements for developing applications for Asian regions.

3 SDK Versions: Capable of Running and Approved for Master ROM Submission

Table 3-1 SDK Versions: Capable of Running and Approved for Master ROM Submission

CTR-SDK Version	Capable of Running Version		Master ROM Submission Version	
	Japan/North America/Europe	Asia	Japan/North America/Europe	Asia
CTR-SDK 2.x series	Yes	No	CTR-SDK 2.4.2	No
CTR-SDK 3.x series	Yes	Yes	CTR-SDK 3.3+ ¹	CTR-SDK 3.3+ ¹
CTR-SDK 4.x series	Yes	Yes	CTR-SDK 4.2 or later	CTR-SDK 4.2 or later

¹ Master ROM submissions can be made with the SDK version 3.x series until the end of 2012.

Contact Nintendo if it is not feasible for you to support this change.

This change is as of October 5, 2012.

Applications created with versions of the CTR-SDK earlier than 3.3 will not run in Asian regions. You must upgrade your version of the SDK in this case. You may also need to upgrade other libraries, such as NEX, when you move to a higher version of the SDK. Contact Nintendo support at support@noa.com for more information.

4 Internal Fonts

The standard internal fonts that are loaded differ depending on the CTR system's region. If your application uses an internal font as a shared-font-resource to display text, the text may not appear correctly unless you replace some of the font resources. This is particularly necessary if you display Japanese kanji characters inside the application, because such characters will be garbled.

Table 4-1 Font Data by Region

Region	Included Characters	Character Set
Japan North America Europe	<ul style="list-style-type: none"> • ASCII • Latin alphabet • European text (Greek, Cyrillic, etc.) • Symbols • Japanese kana (hiragana, katakana, single-byte katakana) • Japanese kanji (JIS levels 1 and 2) • Nintendo extended characters 	<ul style="list-style-type: none"> • ASCII 95 • CP1252 • CP1253 • ISO 8859-1 (Latin-1) • ISO 8859-7 • JIS X 0201 • JIS X 0208 • Nintendo extended characters
Korea	<ul style="list-style-type: none"> • ASCII • Latin alphabet • European text (Greek, Cyrillic, etc.) • Symbols • Japanese kana (hiragana, katakana, single-byte katakana) • Hangul (KS X 1001 2,350) • Nintendo extended characters 	<ul style="list-style-type: none"> • ASCII 95 • CP1252 • CP1253 • ISO 8859-1 (Latin-1) • ISO 8859-7 • Full-width ASCII 94 • Hangul Symbols 539 • Hangul Jamo Compatibility 94 • KS X 1001 2,350 • Additional characters for Korean character input • Symbols for compatibility with Japanese/North American/European fonts • Nintendo extended characters

Region	Included Characters	Character Set
China	<ul style="list-style-type: none"> • ASCII • Latin alphabet • European text (Greek, Cyrillic, etc.) • Symbols • Japanese kana (hiragana, katakana, single-byte katakana) • Chinese hanzi (GB2312) • Nintendo extended characters 	<ul style="list-style-type: none"> • ASCII 95 • CP1252 • CP1253 • ISO 8859-1 (Latin-1) • ISO 8859-7 • Full-width ASCII 94 • Hiragana katakana 169 • Hanzi Common Level 1 2500 • Hanzi Common Level 2 998 • GB2312 • Symbols for compatibility with Japanese/North American/European fonts • Nintendo extended characters
Taiwan	<ul style="list-style-type: none"> • ASCII • Latin alphabet • European text (Greek, Cyrillic, etc.) • Symbols • Japanese kana (hiragana, katakana, single-byte katakana) • Hanzi (CP950) • Nintendo extended characters 	<ul style="list-style-type: none"> • ASCII 95 • CP1252 • CP1253 • ISO 8859-1 (Latin-1) • ISO 8859-7 • Full-width ASCII 94 • Hiragana katakana 169 • CP950 • Symbols for compatibility with Japanese/North American/European fonts • Nintendo extended characters

4.1 Troubleshooting

4.1.1 Do Not Display Application Text Using Internal Fonts

If you develop your application with a font other than one of the internal fonts, the garbled-character issue mentioned above will not occur when you port your application to an Asian region.

4.1.2 Separately Load Standard Fonts for Japanese/North American/European Systems to Display Text

The CTR system has internal fonts to support any region. If you separately load the standard fonts for the Japanese/North American/European regions (`SHARED_FONT_TYPE_STD`), and then display text (using the `MountSharedFont` function), there will be no problems displaying text after porting your application to an Asian region.

Warning: Loading the standard fonts will reduce the free memory available to the application, because the font data will be loaded into the application's memory area. It may not be feasible to use this measure, depending on the amount of free memory available to your application.

4.1.3 Only Use Character Sets That Can Be Displayed in Asian Fonts

Some characters, such as letters and other ASCII characters, as well as Japanese kana characters, are included in both Asian fonts and fonts for the Japanese/North American/European regions (see Table 4-1). If the only text your application displays using a shared-font-resource consists of characters common to all internal fonts, then you will have no problem displaying text in Asian regions.

Consider using this measure if the design of your application makes the measures in sections 4.1.1 and 4.1.2 unworkable.

5 Software Keyboard

The software keyboard layout and default keyboard layout differ depending on the region and language settings of the CTR system. For example, if your application uses Japanese-language input (kana layout), then outside the Japanese region, the default keyboard for that region will appear instead of the Japanese-language input keyboard, and Japanese input will not be available. See the *CTR-SDK System Application/Applet Specifications* ([Applet_Specification.pdf](#)) for detailed specifications.

5.1 Troubleshooting

Use the QWERTY keyboard in applications for the Asian region.

5.1.1 Use Different Keyboard Types for Each Region

When calling up the software keyboard applet, you can check the region in which the application is running (by using the `nn::cfg::CTR::GetRegionCodeA3` function), and specify the QWERTY keyboard for Asian regions so that only alphanumeric text can be entered or displayed.

5.1.2 Always Use QWERTY Keyboard Layout

You can avoid issues when your application runs in Asian regions by always using the QWERTY keyboard layout, which only allows alphanumeric input. However, this will prevent users from entering Japanese text and region-specific characters in European languages. See *CTR Software Keyboard Characters* ([swkbd_QwertyKeyboard_characters.html](#)) for a list of characters that can be entered from the QWERTY keyboard.

6 Communication Features

6.1 StreetPass

6.1.1 Enabling StreetPass Regardless of Region

Use the unique ID (`UniqueId`) of one of the applications performing StreetPass as the StreetPass unique ID (`CecUniqueId`) for all applications.

6.1.2 Separate StreetPass Partners by Region

Use the unique ID assigned to each region's application (`UniqueId`) as the StreetPass unique ID (`CecUniqueId`) for that region.

6.2 SpotPass (BOSS)

Data registered to the BOSS data server is managed by region. If you use this feature in an application for an Asian region, you must register the application in OMAS (Online Title Management System) as an Asian-region title, and be issued a BOSS data server for that application. You must also make changes to your application in order to enable downloads from that Nintendo-provided BOSS data server (update the URL and BOSS code to change the download route).

6.3 Friend Presence

If you get friend information from other regions, that information may include characters that cannot be displayed.

6.4 Local Play (UDS Communication)

6.4.1 Enabling UDS Communication Regardless of Region

Share the unique ID (`UniqueId`) of one of the applications performing UDS communication, and use it as a parameter to get the local communication ID (`LocalCommunicationId`).

6.4.2 Separate UDS Communication Partners by Region

Use the unique ID assigned to each region's application (`UniqueId`) as the parameter to get the local communication ID (`LocalCommunicationId`).

6.5 Internet Support (NEX)

NEX is a server that provides features, such as matchmaking and ranking, as services. You must make a new registration in OMAS for each application that will use these features (you must also make an additional registration for each region). In general, only one set of application-specific information

(game ID and access key) will be issued for the applications. The game will share the same application-specific information in all regions.

6.5.1 Enabling Internet Communication Regardless of Region

This measure is not necessary.

6.5.2 Separate Internet Communication by Region

You must modify your application in order to separate Internet communication by region.

To use region-specific matchmaking and ranking, you must control the features by implementing search conditions in your application. If you release a title in an additional region, you must implement that title to use the region-specific matchmaking and ranking features for that region.

If your application will use the join-in feature, you must set the join-in game ID (`JoinGameID`) and join-in game mode mask (`JoinGameModeMask`) in the BSF file separately for each region.

6.6 Applications That Use the eShop (ECDK)

You must add content to the server and manage it separately for each region for applications that use the eShop. Unlike the BOSS feature, you do not need to modify your application in order to obtain content (the applet handles this). However, you must comply with the guidelines on displaying currencies and other information to users in order to port your application to an Asian region. No special handling is necessary other than this.

You must register with OMAS and IMAS (Add-On Content Management System).

6.6.1 If You Use the ECDK (Add-On Content)

If you use the ECDK for add-on on content, you must write the title name and publisher name in the BSF file using characters that can be specified in that region in order to display them correctly on the CTR system's Data Management screen, under Remove Add-on Content. See `ctr_makebanner.html` and `AvailableCharacters.html` for a list of characters that can be specified in each region.

6.6.2 If You Do Not Use the ECDK

If you do not use add-on on content, then remove the ECDK feature.

6.7 Profanity Checking

If your application detects use of a profanity pattern after determining the region and language settings, then you may need to modify your application.

7 Specific Information

7.1 RSF File Configuration

To configure information specific to each region, you must overwrite the RSF file. The main items that must be configured are below. See `ctr_makerom.html` for details.

- Product code
- Specify the logo (`Logo`). (In the Chinese region, specify `iQue`.)
- Title code unique ID (`UniqueId`)
- Expanded save data number (`ExtSaveDataNumber`, if used).

7.2 BSF File Configuration

To configure information specific to each region, you must also overwrite the BSF file. The main items that must be configured are below. See `ctr_makebanner.html` for details.

- Join-in game ID (`JoinGameId`, if you use the join-in feature)
- Join-in game mode mask (`JoinGameModeMask`, if you use the join-in feature)
- StreetPass unique ID (`CecUniqueId`, if you use StreetPass)
- Card region (`Region`)
- Two-line title name (`CNLongName`, `KRLongName`, `TWLongName`)
- One-line title name (`CNShortName`, `KRShortName`, `TWShortName`)
- Publisher name (`CNPublisher`, `KRPublisher`, `TWPublisher`)
- Rating (`GRB` for the Korean region, `CGSRR` for the Taiwanese region, and `ISBN` for the Chinese region)
- Contract registration number (`HTDJH` for the Chinese region)
- GAPP number (`XCSZ_L`, `XCSZ_R` for the Chinese region)

7.3 Rating

You must acquire ratings for the regions in which you will sell your application.

Table 7-1 Rating Types in Asian Regions

Region	Rating
Japan	CERO
Korea	GRB
Taiwan	CGSRR
China	None. See <code>ctr_makebanner.html</code> for details.

8 Other Information

8.1 Notifications

Notification text may not appear correctly on CTR systems in Asian regions if you display messages made for the Japanese/North American/European regions without localization. (Examples include Japanese kanji and some symbols.)

8.1.1 Downloading Notifications via SpotPass

Provide notification messages on the BOSS data server for Asian regions that only use character sets that can be displayed in those regions. See Table 4-1 Font Data by Region for specifics.

8.1.2 Downloading Notifications Locally from Applications

Handle local notifications by region. Provide notifications for Asian regions that only use character sets that can be displayed in those regions. See Table 4-1 Font Data by Region for specifics.

8.1.3 Using StreetPass

If you allow StreetPass between applications from different regions, messages may contain characters that cannot be displayed.

8.2 E-Manuals

As with notifications, some characters may not appear correctly if you display e-manual text made for the Japanese/North American/European regions without localization.

8.3 Mii Characters

Mii characters may move between CTR systems from different regions. It is therefore possible that a Mii nickname or creator name will contain characters for a font that the application does not support. See the *CTR Mii Overview* document ([CTR-Mii_Overview.pdf](#)) for details.

8.4 Patched Titles

If a patch has already been released for your title, submit the master ROM with the patch applied. Contact Nintendo support at support@noa.com for details.

8.5 Terminology

When localizing your application, you must use the terminology for that region. Terminology is provided for Japanese, the European languages, Korean, Simplified Chinese, and Traditional Chinese. Contact Nintendo support at support@noa.com for more information.

8.6 Sample Error Message List

As of October 5, 2012, there are no sample error message lists for Asian regions.

Revision History

Version	Revision Date	Category	Description
1.0	2012/10/17	—	Initial version.

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