

TWL-SDK

Extended Language Support Applications

Version 1.0.4

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Revision History

Version	Revision Date	Description
1.0.4	2009/05/08	In section 3.2.3 Specifying a Banner, revised the explanation of banner specifications for Chinese-market applications.
1.0.3	2009/04/13	Clarified the explanation in section 3.2.3 Specifying a Banner regarding the specification of banners for Chinese-market applications.
1.0.2	2008/10/16	Changed wording for inclusion with the TWL SDK.
1.0.1	2007/02/23	Revised the version number of the SDK version referenced in section 4.3.
1.0.0	2006/11/07	Initial version.

1 Introduction

The TWL-SDK now includes the extended language support feature to create applications for China and South Korea. This document describes how to use this feature for these two markets.

Note: The install path for the TWL-SDK is denoted as `$TWLSDK` throughout this document.

2 Nintendo DS Specifications for Each Market

2.1 The DS and Corresponding Applications

Table 2-1 indicates the relationship between the DS and its corresponding applications.

Applications developed for China will only run on DS systems for that market.

Table 2-1 Relationship Between the DS and Corresponding Applications

	Global Applications	Applications for China	Applications for South Korea
Global DS systems	yes	no	yes
DS systems for China	yes	yes	yes
DS systems for South Korea	yes	no	yes

2.2 Supported Languages

The following indicates the relationship between specific-market DS systems and the languages supported on them.

- On DS units for the Chinese market, Japanese has been deleted from the global DS list and Chinese has been added.
- On DS systems for the South Korean market, Italian has been deleted from the global DS list and Korean has been added.

However, the language support in DS systems specific to China and South Korea extends only to displayed messages and banners; there is no support for text entry, including user names, in Chinese and Korean.

Table 2-2 Supported Languages by DS Market

	Supported Languages					
Global DS systems	Japanese	English	French	German	Italian	Spanish
DS systems for China	Chinese	English	French	German	Italian	Spanish
DS systems for South Korea	Japanese	English	French	German	Korean	Spanish

3 Applications for the Chinese Market

The following is a description of the procedures necessary for developing applications for the Chinese market.

3.1 Application Specifications for the Chinese Market

The specifications for applications for the Chinese market are as follows:

- They will run only on DS systems for the Chinese market.
- When run on a Chinese-market DS for which the language code is set to Chinese, the `OS_GetOwnerInfo` function can acquire Chinese for the language code.

Note: When applications for other markets are launched on a Chinese-market DS, the language code that can be acquired is automatically changed to English.

- Applications that support both the China and South Korean markets are not allowed.

3.2 Supporting Chinese

The following describes the development process for applications for the Chinese market.

When developing applications for the Chinese market, the following three tasks are required in addition to those required for developing a global application.

- Uses a specialized OS initialization function.
- Defines incidental information indicating that Chinese is supported within the ROM image
- Specifies a Chinese language banner.

For examples, see the Chinese samples included in `$TwlSDK/build/demos/os/forChina-1`.

3.2.1 Using a Specialized OS Initialization Function

To develop applications for the Chinese market, you must use the `OS_InitChina` function instead of the `OS_Init` function. The following processes are performed when `OS_InitChina` is called:

- When a Chinese-market application is launched on a non-Chinese-market DS, the text, "ONLY FOR iQue DS" will be displayed and execution of this application is restricted.
- When Chinese-market applications are correctly run on a Chinese-market DS, screens indicating required information, such as health warnings and ISBN numbers, will be displayed.

An argument for the `OS_InitChina` function must also be provided with the retrieved ISBN code converted to a string in the specified format.

3.2.2 Defining Incidental Information Within the ROM Image

To develop applications for the Chinese market, you need to indicate Chinese language support by adding `ForChina TRUE` to the Property section (where incidental information is defined) in the `rsf` file.

Code 3-1 Rom Spec File for the Chinese Market

```
#RSF --- Rom Spec File

Property
{
    ...

    ForChina          TRUE

    ...
}
```

3.2.3 Specifying a Banner

To create a banner file for Chinese-market applications used by Nintendo DS applications, specify 2 as the version specified within the banner spec file passed as an argument to `makebanner`, and a Chinese banner `CN: "Game Title in Chinese"` must be added to the list of six standard language banners, as shown in Code 3-2.

The game title here must be English for all languages except Chinese (`CN`).

Code 3-2 Banner Spec File Used by Nintendo DS Applications for the Chinese Market

```
#BSF --- Banner Spec File

Version:      2

JP:           "Game Title in English"
EN:           "Game Title in English"
FR:           "Game Title in English"
GE:           "Game Title in English"
IT:           "Game Title in English"
SP:           "Game Title in English"
CN:           "Game Title in Chinese"
```

To create a banner file for Chinese-market applications used by Nintendo DSi applications, specify 3 as the version (shown in Code 3-3) in the banner spec file passed as an argument to `makebanner.TWL`, and specify a Korean (`HN`) game title in English in addition to the aforementioned items.

Code 3-3 Banner Spec File Used by Nintendo DSi Applications for the Chinese Market

```
#BSF --- Banner Spec File

Version:      3

JP:           "Game Title in English"
EN:           "Game Title in English"
FR:           "Game Title in English"
GE:           "Game Title in English"
IT:           "Game Title in English"
SP:           "Game Title in English"
CN:           "Game Title in Chinese"
HN:           "Game Title in English"
```

3.3 Chinese Language Support in Older Versions of the NITRO-SDK

- Chinese language support was added in the official release of NITRO-SDK 2.1. The methods described herein for creating Chinese-market applications cannot be used in earlier versions of the NITRO-SDK.

Please contact Nintendo if you want to work with an older version of the NITRO-SDK.

4 Applications for the South Korean Market

The following is a description of the procedures necessary for developing applications for the South Korean market.

4.1 Application Specifications for the South Korean Market

The specifications for applications for the South Korean market are as follows:

- There are no DS-specific restrictions for starting up the application.
- When run on a South Korean-market DS for which the language code is set to Korean, the `OS_GetOwnerInfo` function can acquire Korean for the language code.

Note: When applications for other markets are launched on a South Korean-market DS, the language code that can be acquired is automatically changed to English.

- Applications that support both the Chinese and South Korean markets are not allowed.

4.2 Supporting Korean

The following describes the development process for applications for the South Korean market.

When developing applications for the South Korean market, the following two tasks are required in addition to those required for developing a global application.

- Defines incidental information indicating that Korean is supported within the ROM image.
- Specifies a Korean-language banner.

For examples, see the Korean samples included in `$TwlSDK/build/demos/os/forKorea-1`.

4.2.1 Defining Incidental Information Within the ROM Image

To develop applications for the South Korean market, you need to indicate Korean language support by adding `ForKorea TRUE` to the Property section (where incidental information is defined) in the `rsf` file.

Code 4-1 Rom Spec File for the South Korean Market

```
#RSF --- Rom Spec File

Property
{
    ...

    ForKorea      TRUE

    ...
}
```

4.2.2 Specifying a Banner

To create a banner file for South Korean-market applications, the version specified within the banner spec file passed to a makebanner argument must be specified as 3, and Korean banner HN: "Game Title in Korean" must be added to the list of six standard language banners and Chinese banner, as shown in Code 4-2.

Furthermore, as both South Korean-market and global-market DS systems are available in Korea, be sure to use English or other non-Korean languages to specify the banner game titles for languages other than Korean (HN). The use of Korean will prevent the banners from displaying properly when run on global market DS systems.

Code 4-2 Banner Spec File for the South Korean Market

```
#BSF --- Banner Spec File

Version:      3

JP:           "Game Title in English"
EN:           "Game Title in English"
FR:           "Game Title in English"
GE:           "Game Title in English"
IT:           "Game Title in English"
SP:           "Game Title in English"
CN:           "Game Title in English"
HN:           "Game Title in Korean"
```

4.3 Korean Language Support in Older Versions of the NITRO-SDK

Korean language support was added in the PR release of NITRO-SDK 4.0 PR. The methods described herein for creating South Korean-market applications cannot be used in earlier versions of the SDK.

Contact support@noa.com if you want to work with an older version of the NITRO-SDK.

4.4 Other Cautions

When the name and description of a game available for DS Download Play is indicated in Korean, it will not be displayed properly on global market DS systems.

Since both South Korean-market and global market DS systems are available in Korea, indicate the name and description of any downloadable games in English.

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