

NintendoWare for CTR

NW4C FontConverterConsole

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PROVISIONAL TRANSLATION

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and should be handled accordingly.**

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Table of Contents

1	Introduction	4
1.1	About NW4C FontConverterConsole.....	4
1.2	About This Manual	4
1.3	Font Licenses.....	4
2	Using NW4C FontConverterConsole.....	5
2.1	Input Options.....	5
2.1.1	Image Input Options	5
2.1.2	bcfnt Input Options	6
2.1.3	Windows Font Input Options	6
2.2	Output Options.....	7
2.2.1	Image Output Options	7
2.2.2	bcfnt Output Options	9
3	Revision History	10

Tables

Table 2-1	Format Options.....	5
Table 2-2	Image Input Options	5
Table 2-3	bcfnt Input Options	6
Table 2-4	Windows Font Input Options	6
Table 2-5	Image Output Options	8
Table 2-6	bcfnt Output Options	9

1 Introduction

1.1 About NW4C FontConverterConsole

NW4C FontConverterConsole is the command line version of NW4C FontConverter (referred to in this user's guide as "the GUI version"). Except for the different interface, NW4R fontcvtrc is functionally the same as the GUI version. NW4R fontcvtrc is intended to be used in makefiles and batch files.

1.2 About This Manual

This manual covers topics specific to the command-line version. Because topics that apply to both the command-line version and the GUI version are discussed in the manual for the GUI version (`FontConverter_Manual.pdf`), you should read the manual for the GUI version first.

1.3 Font Licenses

NW4C FontConverterConsole can convert any font installed on a PC to a font for use on the CTR system. However, a license for the font is required to sell game software that uses that font. Appropriate font licenses must be obtained for each game title.

Note: The NW4C FontConverterConsole tool and NintendoWare for CTR do not come with licenses for any fonts.

2 Using NW4C FontConverterConsole

The program is used from the command line as follows.

```
NW4C_FontConverterConsole.exe -i <input format> <input options> -o <output format>
<output options> [-f <character filter file path>]
```

The `-i`, `-o`, and `-f` options are used to specify input format, output format, and filter options, respectively.

`<input options>` and `<output options>` vary based on what is specified for `<input format>` and `<output format>`, respectively. For more information, see section 2.1 Input Options and section 2.2 Output Options.

Enclose parameters that contain spaces with double quotation marks (").

Note: A pair of double quotation marks cannot be nested inside another pair of double quotation marks.

Table 2-1 Format Options

Option	Required?	Comments
<code>-i <input format></code>	Yes	Any one of <code>image</code> , <code>bcfnt</code> , or <code>win</code> can be specified for <code><input format></code> .
<code>-o <output format></code>	Yes	Either <code>image</code> or <code>bcfnt</code> can be specified for <code><output format></code> .
<code>-f <character filter file path></code>	No	No filter is used if this option is omitted.

2.1 Input Options

The options described in this section can be specified for `<input option>` in the `fontcvtrc` command. The options available vary according to the value of `<input format>`.

2.1.1 Image Input Options

When `image` is specified as the value of `<input format>` with the `-i image` option, the input options in Table 2-2 can be used.

Table 2-2 Image Input Options

Option	Required?	Comments
<code>-if <image file path></code>	Yes	—
<code>-io <letter order file path></code>	Yes	—
<code>-ic <color format></code>	Yes	Any one of <code>A4</code> , <code>A8</code> , <code>LA4</code> , <code>LA8</code> , <code>RGB565</code> , <code>RGB5A1</code> , <code>RGBA4</code> , <code>RGB8</code> , or <code>RGBA8</code> can be specified for <code><color format></code> .
<code>-ia</code>	No	A process for handling effects of linear interpolation is executed when this option is specified.

Example:

```
-i image -if font.bmp -io xlor/cp1252.xlor -ic LA8
```

Here, the BMP file `font.bmp` is read as input, according to information in the text order file `xlor/cp1252.xlor`. LA8 is used as the BMP color format.

2.1.2 bcfnt Input Options

When `bcfnt` is specified as the value of `<input format>` with the `-i bcfnt` option, the input options in Table 2-3 can be used.

Table 2-3 bcfnt Input Options

Options	Required?	Comments
<code>-if </code>	Yes	Specifies a bcfnt or bcfna file

Example:

```
-i bcfnt -if font.bcfnt
```

Here, the bcfnt file `font.bcfnt` is read as input.

2.1.3 Windows Font Input Options

When `win` is specified as the value of `<input format>` with the `-i win` option, the input options in Table 2-4 can be used.

Table 2-4 Windows Font Input Options

Options	Required?	Comments			
-in 	Yes	—			
-is 	Yes	Specified as the number of pixels.			
-isw <average width>	No	Specify the average width in pixels. By specifying this, the height:width ratio can be changed.			
-ic <number of gradation levels>	Yes	Specify any one of A1 through LA6 for <number of gradation levels> as shown in the table below: Specify A8 or LA8 when using 64 gradation levels for the texture format when outputting bcfnt data. Otherwise, use A4 or LA4.			
		Components	2 Levels	16 Levels	64 Levels
		Only alpha	A1	A4	A6
		Luminance and alpha	LA1	LA4	LA6
-ia	No	Data is output using software antialiasing.			

Options	Required?	Comments										
<code>-it <character width></code>	No	Specify any one of the following for <code><character width></code>. If this option is omitted, <code>char</code> is assumed by default. <table><thead><tr><th>Char width</th><th>Meaning</th></tr></thead><tbody><tr><td><code>glyph</code></td><td>The glyph width is used as the character width.</td></tr><tr><td><code>keepsp</code></td><td>The character width specified by the font is used for the space character; all other cases use the glyph width as the character width.</td></tr><tr><td><code>char</code></td><td>The character width specified by the font is used.</td></tr><tr><td><code>fixed</code></td><td>The same width is used for all characters.</td></tr></tbody></table>	Char width	Meaning	<code>glyph</code>	The glyph width is used as the character width.	<code>keepsp</code>	The character width specified by the font is used for the space character; all other cases use the glyph width as the character width.	<code>char</code>	The character width specified by the font is used.	<code>fixed</code>	The same width is used for all characters.
Char width	Meaning											
<code>glyph</code>	The glyph width is used as the character width.											
<code>keepsp</code>	The character width specified by the font is used for the space character; all other cases use the glyph width as the character width.											
<code>char</code>	The character width specified by the font is used.											
<code>fixed</code>	The same width is used for all characters.											
<code>-iw <fixed width></code>	See Comments column.	This option is required when <code>-it fixed</code> has been specified. Otherwise, it is ignored.										

Example:

```
-i win -in "MS Gothic" -is 16 -ic A6 -it glyph
```

Here, the Windows font “MS Gothic” is read at a size of 16 pixels with 64 gradation levels and only alpha (specified by A6). The glyph width is used as the character width.

2.2 Output Options

The options described in this section can be specified for `<output option>` in the `fntcvtrc` command. The options available vary according to the value of `<output format>`.

2.2.1 Image Output Options

When `image` is specified as the value of `<output format>` with the `-o image` option, the output options in Table 2-5 can be used.

Table 2-5 Image Output Options

Options	Required?	Comments
<code>-of <image file path></code>	Yes	In contrast with the GUI version, nothing happens when the image format and the file extension do not match. A file name is output as specified.
<code>-oo <letter order file path></code>	Yes	—
<code>-oi <image format></code>	No	Specifies the image file format to be output. Specify any of the following for <code><image format></code> . The argument <code>ext</code> is used as the default output format if this option is omitted. Image format Meaning <code>ext</code> Determined based on the extension of the image file. <code>bmp</code> Output in BMP format. <code>tga</code> Output in TGA format.
<code>-og</code>	No	Grid lines are not drawn when this option is specified.
<code>-ow <cell width></code>	No	Specifies the cell width in pixels. A width sufficient for output is assumed when this option is omitted. This option cannot be specified at the same time as <code>-or</code> or <code>-ob</code> .
<code>-oh <cell height></code>	No	Specifies the cell height in pixels. A height sufficient for output is assumed when this option is omitted. This option cannot be specified at the same time as <code>-or</code> or <code>-ob</code> .
<code>-ol <cell left margin></code>	No	Specifies the cell's left margin in pixels. A default of 0 is assumed when this option is omitted.
<code>-or <cell right margin></code>	No	Specifies the cell's right margin in pixels. A value equal to <code>-ol</code> is assumed when this option is omitted. This option cannot be specified at the same time as <code>-ow</code> or <code>-oh</code> .
<code>-ot <cell top margin></code>	No	Specifies the cell's top margin in pixels. A default of 0 is assumed when this option is omitted.
<code>-ob <cell bottom margin></code>	No	Specifies the cell's bottom margin in pixels. A value equal to <code>-ot</code> is assumed when this option is omitted. This option cannot be specified at the same time as <code>-ow</code> or <code>-oh</code> .
<code>-ocg <grid color></code>	No	Specifies a color as a 6-digit hexadecimal number. If omitted, the default is 000000.
<code>-ocm <margin color></code>	No	Specifies a color as a 6-digit hexadecimal number. If omitted, the default is 99AA99.
<code>-ocw <width line color></code>	No	Specifies a color as a 6-digit hexadecimal number. If omitted, the default is FF0000.
<code>-ocn <null color></code>	No	Specifies a color as a 6-digit hexadecimal number. If omitted, the default is FF7F7F.

Example:

```
-o image -of font.bmp -oo xlor/cpl252.xlor -og -ol 1 -ot 3
```


In this example, the image is output to the file `font.bmp` in accordance with the letter order file `xlcr/cp1252.xlcr` and without grid lines. Each cell has a left and right margin of one pixel and a top and bottom margin of three pixels.

2.2.2 bcfnt Output Options

When `bcfnt` is specified as the value of `<output format>` with the `-o bcfnt` option, the output options in Table 2-6 can be used.

Table 2-6 bcfnt Output Options

Options	Required?	Comments								
-of <output file path>	Yes	In contrast to the GUI version, data is output using the specified file name.								
-oe <character code>	No	Any of the following may be specified for <character code>. The encoding unicode is assumed if this option is omitted. <table><tr><th>Char code</th><th>Meaning</th></tr><tr><td>unicode</td><td>Specifies Unicode</td></tr><tr><td>sjis</td><td>Specifies ShiftJIS</td></tr><tr><td>cp1252</td><td>Specifies CP1252</td></tr></table>	Char code	Meaning	unicode	Specifies Unicode	sjis	Specifies ShiftJIS	cp1252	Specifies CP1252
Char code	Meaning									
unicode	Specifies Unicode									
sjis	Specifies ShiftJIS									
cp1252	Specifies CP1252									
-op <glyph group file>	No	"No group (uncompressed)" results if this option is omitted.								
-os <sheet size>	No	Sheet size is specified in units of kilopixels. The value specified for <sheet size> must be a positive integral power of two that is greater than or equal to 16 and less than or equal to 1024. The sheet size is determined automatically if this option is omitted.								
-oa <substitute character>	No	A default corresponding to the input is used when this option is omitted.								
-oh <newline width>	No	A default corresponding to the input is used when this option is omitted.								
-ol <default left space>	No	A default corresponding to the input is used when this option is omitted.								
-ow <default glyph width>	No	A default corresponding to the input is used when this option is omitted.								
-or <default right space>	No	A default corresponding to the input is used when this option is omitted.								

Example:

```
-o bcfnt -of font.bcfnt -os 256 -oe sjis -oa ?
```

Here, data is output to `font.bcfnt` using a sheet size of 256 kilopixels, a substitute character of "?", and the ShiftJIS character encoding.

3 Revision History

Version	Revision Date	Description
1.0.0	2010/07/02	Changed format.
	2010/01/15	Section 2.1 Input Options Changed descriptions of the texture format.
	2009/10/30	Initial version.

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