libdbgfont Overview

PlayStation®Vita Programmer Tool Runtime Library Release 3.50

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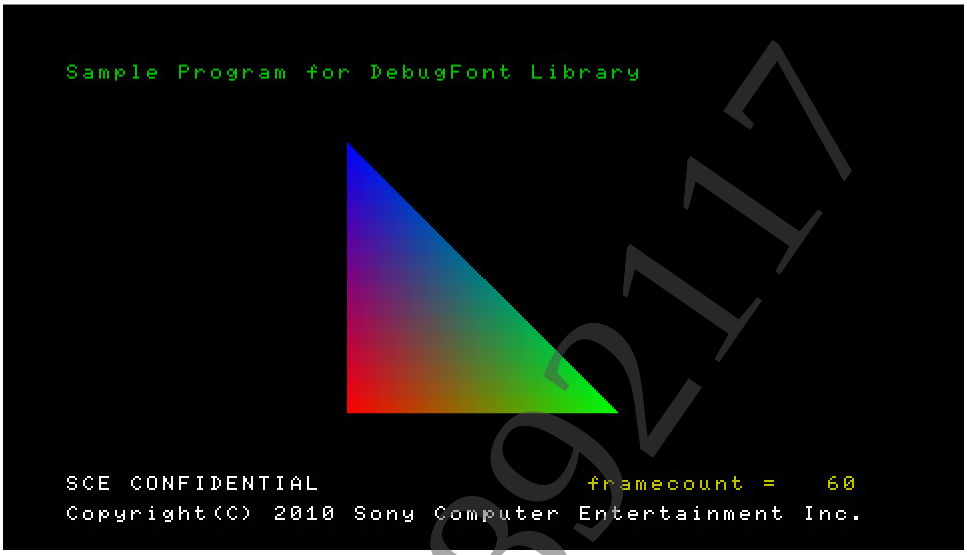
1 Library Overview

Characteristics

libdbgfont is a library to output debugging strings to a PlayStation®Vita screen.

Examples of libdbgfont are shown in Figure 1.

Figure 1 Example of libdbgfont Display



```
Sample Program for DebugFont Library



SCE CONFIDENTIAL                    framecount =   60
Copyright(C) 2010 Sony Computer Entertainment Inc.
```

Files

The files required for using libdbgfont are as follows.

File	Description
libdbgfont.h	Header file
libSceDbgFont.a	Library file

Sample Programs

Sample programs for libdbgfont are as follows.

samples/sample_code/graphics/api_libdbgfont/simple/

This sample shows the basic procedure for using libdbgfont.

samples/sample_code/graphics/api_libdbgfont/basic/

This sample shows dbgfonts using libdbgfont with libgxm/basic sample.

2 Using the Library

Types of Functions

There are two main types of libdbgfont functions: those used in initialization or termination processes required to use this library, and those used in onscreen drawing processes. In this library, these functions must be called in the correct order, as described in the "Displaying Characters" section below.

Functions provided by libdbgfont are shown below.

Basic Functions

Function	Description
`sceDbgFontInit()`	Initialize the library
`sceDbgFontExit()`	Terminate the library

Drawing functions

Function	Description
`sceDbgFontPrint()`	Output string to buffer
`sceDbgFontFlush()`	Flush buffer string

Displaying Characters

libdbgfont can be used to display characters onscreen by following these steps:

(1) Initialize the library

(2) Write string to buffer

(3) Draw

(4) Terminate the library

An example of using libdbgfont to display characters is shown below:

Example

```
#include <libdbgfont.h>      /* include header */

/* (1) Initialize the library */
SceDbgFontConfig config;
memset(&config,0,sizeof(SceDbgFontConfig));
config.fontSize = SCE_DBGFONT_FONTSIZE_DEFAULT;

sceDbgFontInit(&config);

/* Preprocessing for drawing */

/* (2) Write string to buffer */
char buf[32];
snprintf(buf,sizeof(buf),”(x,y)=(%d,%d)\n”,x,y);

sceDbgFontPrint(0,0,0x80ffffff,buf);

/* (3) Draw */
SceDbgFontFrameBufInfo info;
memset(&info,0,sizeof(SceDbgFontFrameBufInfo));
info.frameBufAddr = addr;
info.frameBufPitch = 1024;
info.frameBufPixelformat = SCE_DBGFONT_PIXELFORMAT_A8B8G8R8;
info.frameBufWidth = 960;
```

```
    info.frameBufHeight = 544;


    sceDbgFontFlush(&info);

    /* Postprocessing for drawing */

    /* (4) Terminate the library */
    sceDbgFontExit();
```

When drawing characters with libdbgfont, writing to the frame buffer is done using the CPU.

For this reason, when libdbgfont is used together with a graphics library accompanying GPU processing, such as libgxm, the frame buffer must be overwritten in the display callback that is called after drawing is completed on the GPU side. Also, in order to ensure character drawing at each frame by libdbgfont (i.e., to maintain consistency of the string in the buffer and its drawn image), it is recommended to call `sceDbgFontPrint()` altogether just before `sceDbgFontFlush()` overwrites the frame buffer.

Font Size

There are two font sizes available in libdbgfont: default (8x8) and large (16x16). The size of the characters to be drawn is determined by the mode defined in *`fontSize`* within the `SceDbgFontConfig` structure, which is passed to `sceDbgFontInit()`.

Display Position

In libdbgfont, the upper left corner of the screen is defined as (0, 0), while the values of the lower right corner are defined in *`frameBufWidth`* and *`frameBufHeight`* within the `SceDbgFontFrameBufInfo` structure, which is passed to `sceDbgFontFlush()`.

Restrictions

- The use of this library is permitted for development purposes only. Note that this library cannot be included in the master disc as a part of a product.
- Library specifications restrict the maximum number of characters output at one time (including the terminating NULL character) to 4096 for `sceDbgFontPrint()` and `sceDbgFontFlush()`.