Stdg 4.4 (c) 1993 Lachlan Patrick

What Is It?

Stdg is a C-language cross-platform graphics library. It is designed as a general purpose, simple programming tool for speedy development of cross-platform applications. The library is built directly on each platform's operating system, and involves little overhead in terms of code size or performance.

Stdg is currently available on the Macintosh as a THINK C library, and on PC compatibles as a Windows 3.1 library. An X-Windows version is also planned.

Another library, StdgXtra, should become available in early 1994. This will be an add-on to Stdg and will implement all of the normal buttons, scroll-bars, scrollable lists, text editing, open/save dialogs etc. that a program requires.

System Requirements

If you have the Macintosh version of the software, you will need to be running System 6.0.7 or higher, have at least 1MB of RAM and be using THINK C version 5.0 or higher.

The library has been tested on the following models of Macintosh: Mac Plus black & white, LC, IIsi, Centris 650, Quadra 800 with 21" monitor. The library has also been tested on Systems 6.0.7, 7.0 and 7.1.

If you are running the PC version, you will need to be running Microsoft Windows version 3.1 or higher, have at least 1MB of RAM and be using Borland C++ version 3.1 or higher. The library should work with Microsoft C as well.

The library has been tested on the following models of PC: AMI Bios 386 S-VGA system running in monochrome and in colour, EGA system running in monochrome and in colour. Only version 3.1 of Windows has been used to test the system so far, but version 3.0 should work as well, and also Windows NT and OS/2.

Use and Distribution of Stdg

Stdg is distributed under the Shareware scheme. Shareware is a method of distributing software which gives you a chance to try the software before you buy it, and has a number of other advantages. You can usually pick up the latest version of your favourite piece of software within days of it being released through bulletin board systems and networks, and generally the price for Shareware programs is lower than for a similar quality but commercially advertised and distributed product.

The Stdg self-extracting archive can be freely distributed in an unmodified format. Stdg can also be used for educational, home or other non-commercial purposes freely. It should not be distributed or used for commercial purposes without the prior permission of the author. Bulletin board systems and clubs may charge a small fee (up to $10) to cover expenses incurred in distributing the package.

Registering Stdg

If you wish to use the library for developing commercial applications, you can become a registered user.

Becoming a registered user will allow you to write commercial applications using Stdg. You will also have access to the future StdgXtra library. Technical support is available through electronic mail directly to the author.

The registration fees are as follows:
For residents of the United States of America, the price is US$45.
For residents of England, Scotland, Ireland or Wales, the price is UK£30.
For Australian residents the price is A$60.
Residents of other countries should send the equivalent of the US price.

International money orders can be addressed to:

Lachlan Patrick,
16 Carlisle Crescent,
Beecroft NSW 2119,
Australia

The author can also be contacted via electronic mail. You can send questions, suggestions, and reports of problems to:

Internet: Loki@kralizec.zeta.org.au

General Questions

Q: How should the library be used?

A: Copy the following files into the source code directory for any Stdg project: "stdg.lib", "stdg.h" and "stdkey.h". The "stdg.lib" library can be included in a project like an ordinary .C file.The "stdc.h" header file is just a short-cut for including all of the standard C-distribution header files.

Q: There are two projects included with the distribution: The Bullseye project and the Sample project. What do they do?

A: Those projects are examples to show you how to program and compile using the Stdg library.

The Bullseye project relies on three source files and one header file: "bullmain.c", "bullmenu.c", "bullwins.c" and "bullseye.h".

The Sample project can use any one of the other C source files. Each of those other C files is a complete program, and includes a *main* function, so only one can be included and compiled at a time.

Q: Why does the "stdg.h" header file include the following lines?

#define main gmain
int main(int argc, char **argv);

A: This is to avoid any possible compilation problems, and allow greater flexibility for the library in future.

C programmers assume that the starting point of a program is the *main* function. Under Windows, this is not true, but the library provides the illusion that it is.

The general rule is: treat your *main* function as the starting point of all of your programs, but do not assume the arguments to *main* have any meaning.

Macintosh Technical Questions

Q: The Mac's mouse has only one button, but Stdg supports three button mouses. How can the other two buttons be simulated?

A: Holding down Shift while clicking with the mouse counts as clicking with the right button. Holding down Ctrl or Option while clicking is the same as using the middle button. An ordinary mouse click counts as a click with the left button.

Q: When using the Stdg library, applications which attempt to use the *printf* function crash. What is wrong?

A: You shouldn't use *printf* or *scanf* with a Stdg application. If you wish to draw text use the *draw_string* function. The program crashes because the ANSI library does not know that the Macintosh interface has already been initialised, and attempts to do it again so that it can show a 'console' window to perform *printf* and *scanf* with.

Note that it is only console functions (which use the stdin, stdout or stderr streams) which are illegal. Other functions such as *fprintf*, *sprintf*, *fscanf* and *sscanf* all work.

Q: How can a program have its own window displayed when a user chooses "About This Program..." from the Apple menu?

A: There is a function which is not in the "stdg.h" header file. Here is its definition:

void set_aboutbox(void (*fn)(void));

If you call *set_aboutbox* before *ginit* the supplied function *fn* will be called when the user chooses the "About This Program..." option. Un-registered copies of Stdg will always show a Shareware notice before *fn* is called. Registered copies don't have this problem.

Q: How does the *get_bitmap* function work?

A: It searches the application's resource fork for resources with the given name. It will search in this order: PICT, icl8, icl4, ICN#, ics8, ics4, ics#. It

will leave out of the search icons which have a depth greater than the requested depth. The Windows version of this function only supports two depths, the screen depth and monochrome.

Windows Technical Questions

Q: Most mouses for Windows have two buttons, but Stdg supports three button mouses. How can all three buttons be simulated?

A: Holding down Ctrl while clicking with any mouse button counts as clicking with the middle button. Holding down Shift while clicking is the same as using the right button. Mouse clicks with the left or right button will work normally, and three button mouses will work too (as long as the correct mouse driver is installed).

Q: Is Stdg a Dynamic Link Library (DLL) ?

A: No. Stdg is an object library which is included in each final executable program. This enables each Stdg program to be a stand-alone application.

Q: Do Stdg functions take FAR pointers?

A: No. The current version of the library has been built using the small memory model, which means all of the pointers used are 16-bit near pointers. This means that Stdg program can be built around the Small memory model.

Q: There are a number of executables included with the distribution package. What are they for?

A: There are four programs given out with the package to help you in programming and transferring files to and from other platforms.

Mac2Dos and Dos2Mac are filter programs which convert text files to and from Dos text format. Detab removes tab characters from a text file and replaces them with sequences of spaces. This ensures that the spacing in your source and header files is correct when transferred between platforms.

The LS program is similar to the DIR command of Dos, except that it can sort

its output and select only certain types of files if required. Type LS -? for a list of its functions.

The file "ReadThis.txt" contains example uses of these programs.

Q: How can a program have its own window displayed when a user chooses "About This Program..." from the main window's system menu?

A: There is a function which is not in the "stdg.h" header file. Here is its definition:

void set_aboutbox(void (*fn)(void));

If you call *set_aboutbox* before *ginit* the supplied function *fn* will be called when the user chooses the "About This Program..." option. Un-registered copies of Stdg will always show a Shareware notice before *fn* is called. Registered copies do not have this problem.

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Small Print

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Loki
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