IPC@CHIP CLIB

How to integrate the CLIB

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1 Introduction

The libs provide an easy access to the IPC@CHIPs operating system using the programming language C. Beside the binary library files for the borland compiler a documentation in HTML format is provided.

The CLIB software package comes in two versions:
- `CLIBVxxxBIN.ZIP` includes only the binaries of the @CHIP-RTOS libraries.
- `CLIBVxxxSRC.ZIP` includes also the source code of the libraries.

This document describes how to integrate the:
- The CLIB into your Borland C 5.02 project and
- The CLIB documentation into the @CHIP-RTOS API documentation.

The library is availble in 4 different models. One model for every comiler memory model:
- `CLIBxxxC.lib` - Compact
- `CLIBxxxL.lib` - Large
- `CLIBxxxM.lib` - Medium
- `CLIBxxxS.lib` - Small

Note: The compiler memory models have NO cohesive with the available @CHIP-RTOS variants! We advise to use memory model Large.

2 How to integrate the CLIB in a Borland C project.

2.1 Step 1 - Copy the CLIB

First you have to copy the contents of the CLIB ZIP archive to your local project directory. Make a new directory and name it CLIB. Copy all header files (*.h) and all library files (*.lib) to this directory.
E.g. You have now a directory C:\Projects\Clib with the CLIB contents.

2.2 Step 2 - Create your program directory

Make a directory inside of your project directory which should store your program files.
E.g. You have now a directory C:\Projects\Hello which is empty.

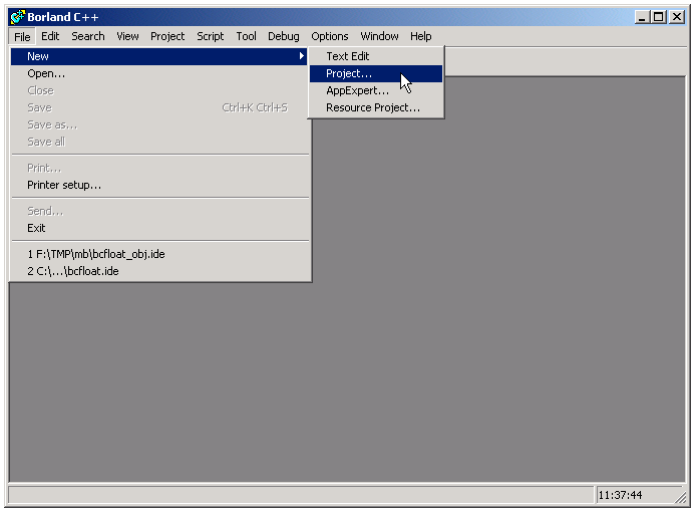
2.3 Step 3 - Create the Borland C 5.02 project

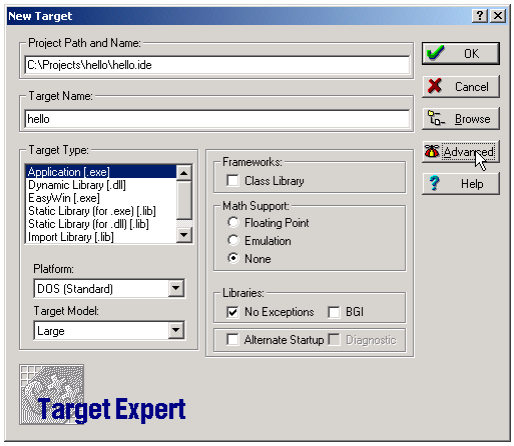
Open the Borland C 5.02 program and create a new project.

In the field "Project Path and Name" choose the new directory, which you have created for the program followed by the project name, e.g.C:\Projects\hello\hello.ide

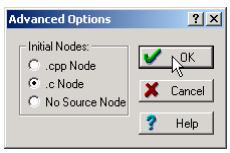
Make the correct project settings.

- Target Type: Application [.exe]
- Platform: DOS (Standard)
- Target Model: Large
- Frameworks: Deselect Class Library
- Math Support: None
- Libraries: No Exceptions





Press now the "Advanced" button and choose the *.c node type.



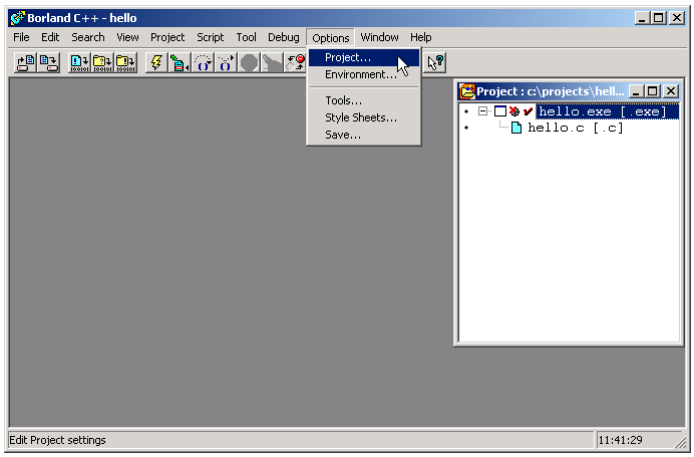
Close the "Advanced Options" dialog and the "New Target" dialog with "OK".

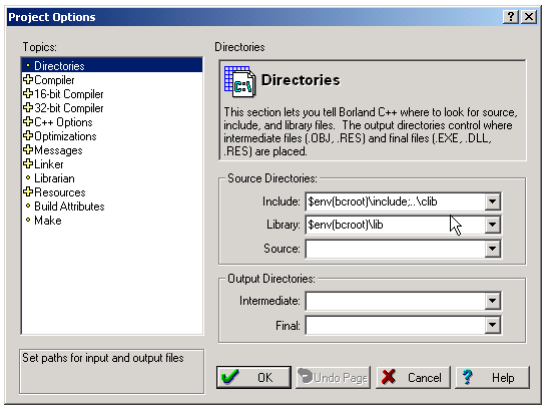
2.4 Step 4 - Adjust the project settings

Open the menu "Options" and select "Project...".

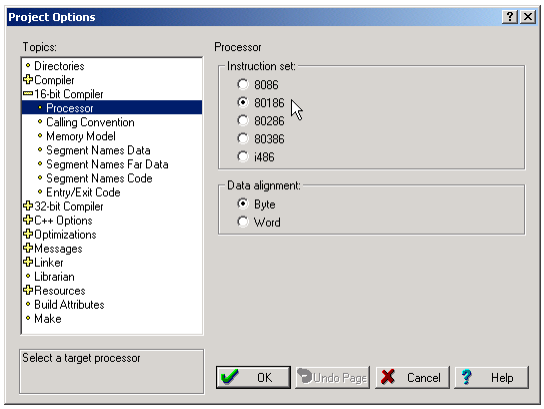
Select "Directories" and change the include and library path to:

```
Include: $env(bcroot)\include;..\clib[1]
Library: $env(bcroot}\lib
```





Now select "16-bit Compiler" and choose the 80186 instruction set for compiling.

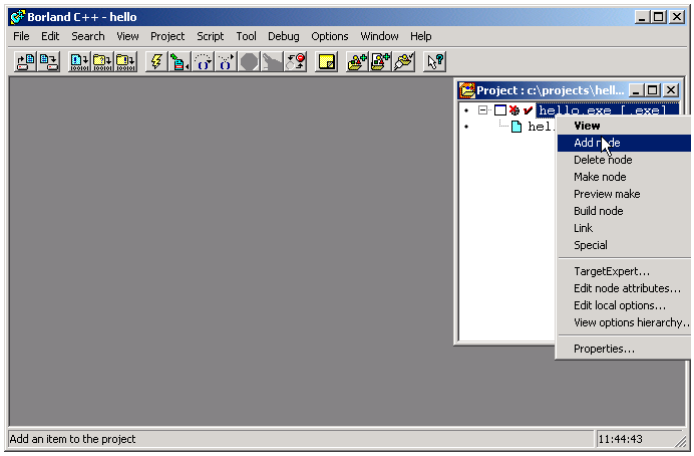


Close the dialog with the "OK" button.

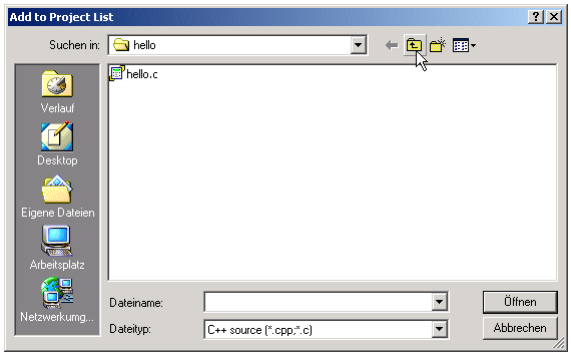
[1] The expression "$env(bcroot)" is translated to the installation directory of the Borland 5.02 compiler

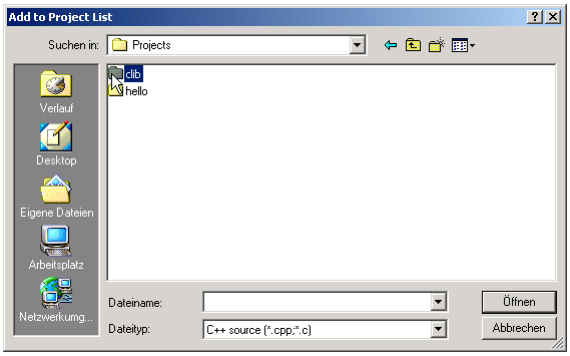
2.5 Step 5 - Add the CLIB to the project

Go to the project window, use the right mouse button to click on the project node. Choose "Add node" from the popup menu.

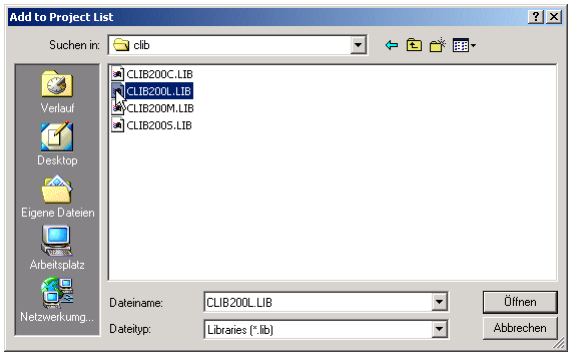


Change the path to the CLIB directory.



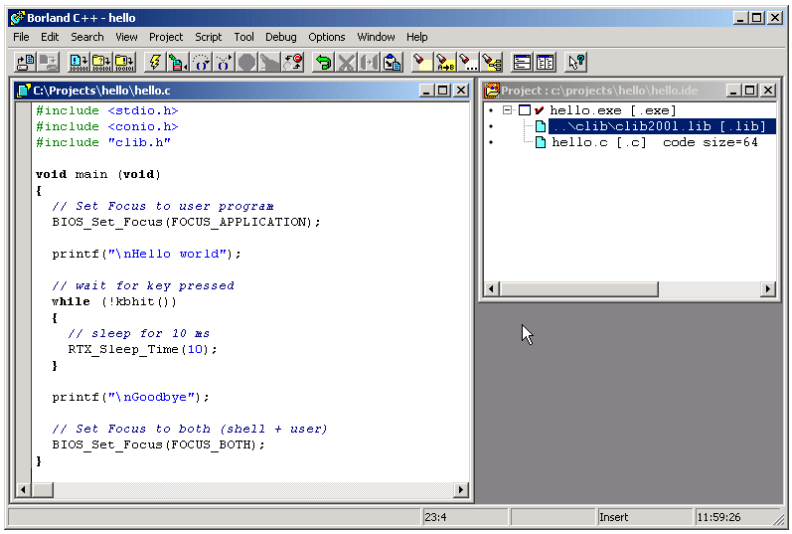


Select from the lower listbox the file extension type *.lib or *.* and open the CLIB with the name CLIBxxxL.LIB for the Large memory model library.



2.6 Step 6 - Write your program

Include the header file CLIB.H in your C files. After this you can use all CLIB function.



3 How to integrate the CLIB API documentation into the @CHIP-RTOS API documentation

To use the full documentation, the complete @CHIP-RTOS documentation is required. The CLIB API documentation is an extension to it. Copy the CLIB directory from this software package into the DOC directory of the whole @CHIP-RTOS docu.

3.1 Step 1 - Copy the CLIB documentation

There is a subdirectory called CLIB in the CLIB ZIP archive. Copy this directory and it's contents into the @CHIP RTOS API documentation directory.

E.g. You have your @CHIP-RTOS HTML documentation at this path:

```
C:\IPC@CHIP\SC12\DOC
```

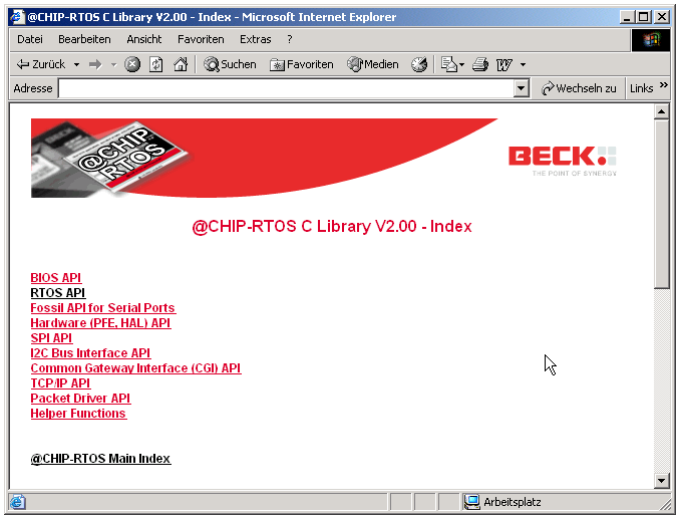
and your CLIB HTML documentation at this location:

```
C:\IPC@CHIP\SC12\DOC\CLIB
```

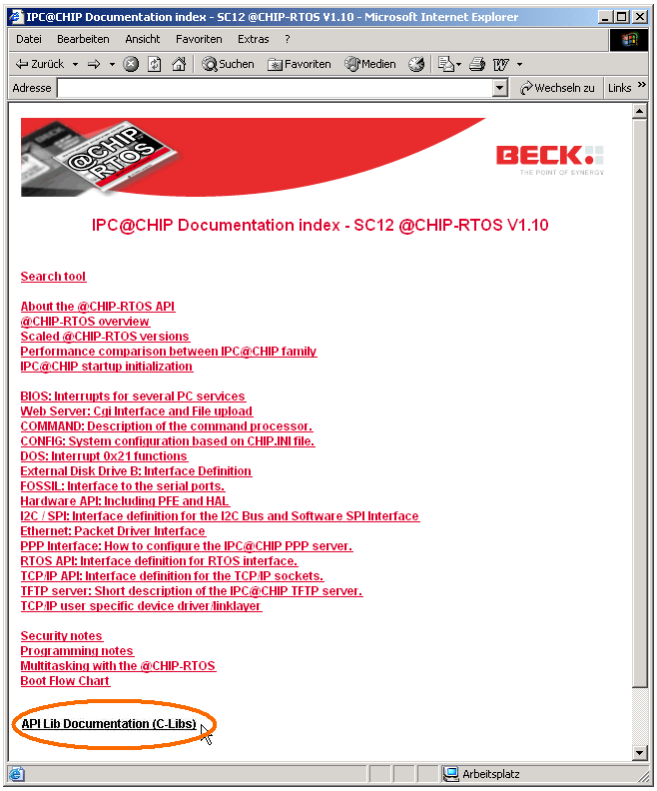
3.2 Step 2 - Open and use the CLIB HTML documentation

The start of the CLIB HTML documentation is in e.g.

```
C:\IPC@CHIP\SC12\DOC\CLIB\LIBINDEX\clib_index.htm
```



On the @CHIP-RTOS HTML documentation index e.g.
`C:\IPC@CHIP\SC12\DOC\index.htm`
should now appear a new link to the CLIB documentation.



Each documented CLIB function has a HTML link to the invoked RTOS API software interrupt, which is described in the @CHIP-RTOS HTML documentation.