

# Carbide and Mobile STK installation guide

*Workshop - On Symbian Coding in a Mobile Environment  
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This guide will help you to prepare your computer for the Mobile Workshop.

Reserve up to two hours of preparation time to install. If you want to become a certified developer and already have a S60 phone add a one day buffer to get things cleared by Symbian (<https://www.symbiansigned.com>).

Carbide is a development environment for Symbian OS provided by Nokia. Symbian OS is an operating system for mobile devices<sup>1</sup>. Mobile Synthesis Tool Kit<sup>2</sup>, or Mobile STK, is a port of the original STK<sup>3</sup> to the Symbian platform. Software Development Kits (SDK) installed in the process will enable to upload the MobileSTK on any S60 3rd edition phones. During the workshop we will be using N95 and 5500 Nokia models.

These instructions are for a windows an environment, but might apply for a windows emulator.

## 1. Over view of the Get Started Process

- 1) Get signed to forum nokia ([forum.nokia.com](http://forum.nokia.com))
- 2) Install Carbide c.++ Express & other software (see Sec 2 for details)

*If you want to continue developing on your phone after the workshop go through steps 3-5. If you don't have a phone for the workshop we'll provide one to all or most of the participants. Moreover, as we provide the phones we will provide the necessary license codes and files for each phone.*

- 3) Get signed to symbian ([symbiansigned.com](http://symbiansigned.com))

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<sup>1</sup> <http://www.symbian.com/>

<sup>2</sup> Essl, G., Rohs, M. "Mobile STK for Symbian OS" In Proceedings of the International Computer Music Conference (ICMC), New Orleans, November, 2006. <http://www.deutsche-telekom-laboratories.de/~esslgeor/papers.htm>

<sup>3</sup> Perry R. Cook & Gary P. Scavone, <http://ccrma.stanford.edu/software/stk/>

4) Get DevCertRequest-tool

\* either standalone or plugin for carbide c.++

\* bottom of page <https://www.symbiansigned.com/app/page/dev/devcertSummary>

5) Apply for DevCert (developer certificate)

\* ONLINE: [symbiansigned.com](https://www.symbiansigned.com) -> my symbian signed -> request

## 2. Development environment installation

Needed Free Space ~ 1 GB (Carbide + SDKs + Perl...)

### 1) Read Installation Guide:

[http://www.forum.nokia.com/info/sw.nokia.com/id/6286548d-3a94-4037-9454-98fcf5d363d3/Carbide\\_c\\_Express\\_10\\_installation.html](http://www.forum.nokia.com/info/sw.nokia.com/id/6286548d-3a94-4037-9454-98fcf5d363d3/Carbide_c_Express_10_installation.html)

### 2) Install Carbide C++ Express (Express is free)

[http://www.forum.nokia.com/main/resources/tools\\_and\\_sdks/carbide\\_cpp/index.html](http://www.forum.nokia.com/main/resources/tools_and_sdks/carbide_cpp/index.html)

### 3) Install Perl

[ActivePerl-5.6.1.635](http://www.activestate.com) (or later) [www.activestate.com](http://www.activestate.com) (see Installation guide & follow instructions prompted by Carbide after installation)

\* The latest version provided is 5.8xxx

\* The [ActivePerl-5.6.1.635](http://www.activestate.com) is available at

<http://downloads.activestate.com/ActivePerl/Windows/5.6/>

Choose: [ActivePerl-5.6.1.635-MSWin32-x86.zip](http://www.activestate.com/ActivePerl/Windows/5.6/)

### 4) Install SDK

\* S60 3rd Edition MR

\* Download S60-SDK-0616-3.0-mr.3.749.zip

\* [forum.nokia.com/main/resources/tools\\_and\\_sdks/carbide/](http://www.forum.nokia.com/main/resources/tools_and_sdks/carbide/)

\* Intall to directory C:/Symbian/9.1

### 5) Install CSL Toolchain

Start > All Programs > S60 Developer Tools > 3rd Edition MR SDK > 1.0 > Tools .> CSL Toolchain

### 6) Configure environment for WINSCW command line

Start > All Programs > Carbide > Configure environment...

### 7) Install Nokia PC Suite

\* Nokia PC Suite will be used for uploading software to the phone

\* <http://www.nokiausa.com/A4410024>

### 8) Install multimedia and sensor plugin (OPTIONAL)

\* <http://newlc.com/S60-3rd-Edition-SDK-Update-MMF-and.html>

\* At the bottom of page choose MMF Extensions and Sensor Plugin

### 3. Mobile Synthesis ToolKit installation

#### STK-import

- 1) Start Carbide then go File->Import-> Symbian OS (Symbian OS bld.inf file)
- 2) Locate STKFP\group\bld.inf by browsing your project folder
- 3) Symbian OS SDK: Build config should show /choose: S60\_3rd\_MR
- 4) MMP selection: STKF.mmp
- 5) Finnish

#### STK-setup

- 1) Activate project by clicking the STKFP in the C/C++ projects pane on the left
- 2) Project > Properties > Carbide Build Configurations (See Figure 1.)
  - a. Active Configuration > Phone release (GCCE) [S60\_3rd\_MR]
  - b. Sis builder
    - i. PKG File: Locate \sis\STKFP.pkg in the project directory
    - ii. Signing options:
      1. Signed SIS File name: <output filename>.sis
      2. Certified: <your certification file>.cer  
[C:\Symbian\symbianlicense.cer]
      3. Key: <your key file>.cer [C:\Symbian\symbian2.key]
      4. Password: <enter your password>
- 3) Open \sis\STKFP.pkg and give the right paths for Signature and Target files

For example

; Signature

```
*"C:\Symbian\symbian.key", "C:\Symbian\symbianlicense.cer"
```

; Target

```
"C:\Symbian\9.1\S60_3rd_MR\Epoc32\release\gcce\UREL\STKFP.exe"-
```

```
"!:\sys\bin\STKFP.exe"
```

...

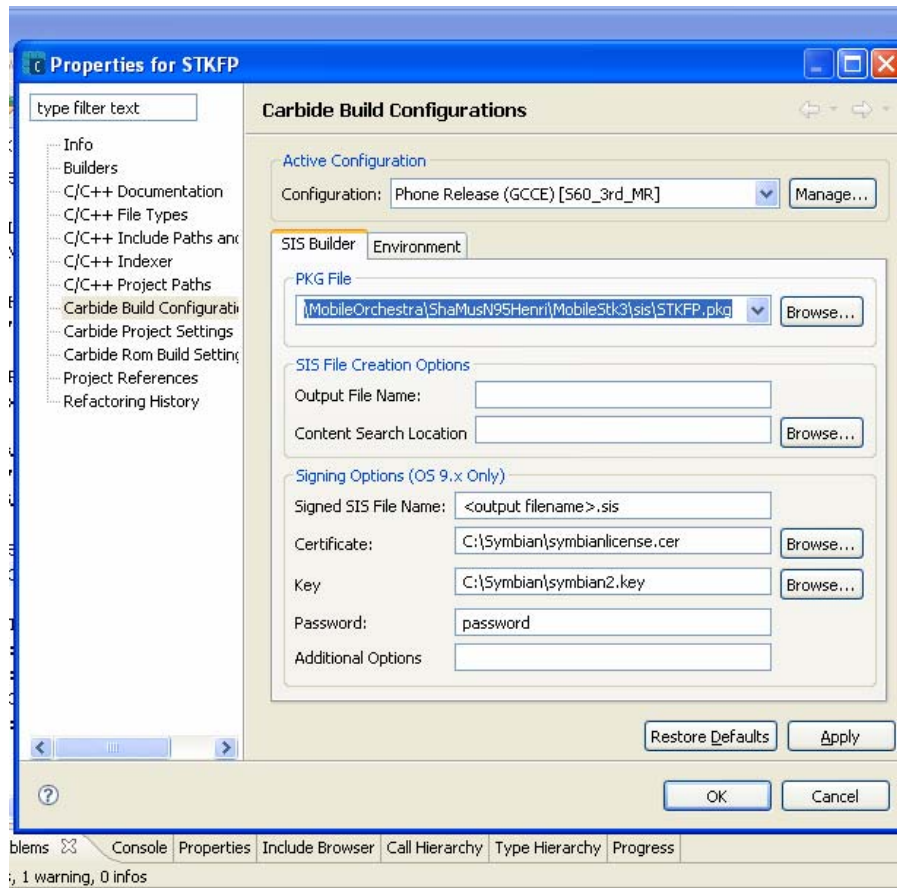


Figure 1. Configure parameters in Carbide for STK.

## Build & upload

- 1) Activate project by clicking the STKFP in the C/C++ projects pane on the left
- 2) Build target only:
  - a. Project > Build target only
  - or
  - b. Right click project > Build target only...
- 3) Locate your \sis\\*.sis file in your project tree and double click > Upload ...  
(SIS ~ symbian install file like an exe file)