OP6000 Instructor Setup Guide (v1.51a)

Introduction

In May 2011, the OP6000 Optimization Workshop was updated to Revision 1.51a. This document provides instructors and qualifying instructors with important information on the changes to the class that have occurred because of this revision.

This document also includes helpful information on preparing for the workshop including PC configuration as well as suggestions to help you with presenting the material.

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Workshop Equipment / Software / Lab Files

**PC Workstation**
- Intel based PC
  - Running Intel Core-Two Dual (or greater)
  - At least 2GB of system memory
  - HDD with greater than 5GB of space available
- Windows XP
  - Tested on computers running Windows XP SP2 and SP3

**TI Software (CCS)**
- Code Composer Studio v3.3 (Tested with CCS v3.3.57.3)
  - CCS 3.3.57.3, Service Release 6 or beyond should be fine. The lab solutions were developed with this release of CCS. The CGT tools used were version 6.0.8. The default CCS install directory should be used (c:\CCStudio_v3.3).
- Code Composer Studio v4 (Tested with CCS v4.2.1.00004)
  - CGT 7.0.x was used for CCSv4 lab exercises.
  - It’s possible the lab exercises will work with CCSv5 (beta), but this has not been tested
- Codec Engine 2.26 software
  - codec_engine_2_26_01_09.tar.gz

**Workshop Lab Files**
- OP6000 Workshop Lab Files
  - OP6000 Wiki

**Recommended Windows Software**
- Adobe Acrobat Reader
  - http://get.adobe.com/reader
- Windows XP Cmd Prompt PowerToy ("Open command prompt here")
  - http://go.microsoft.com/fwlink/?LinkId=211471
- (Recommended) Notepad++
  - http://notepad-plus.sourceforge.net/uk/site.htm
- (Recommended) WinZip
  - http://www.winzip.com
- (Recommended) WinRAR
  - http://www.rarlabs.com
- (Recommended) Beyond Compare 3
  - http://www.scootersoftware.com
- (Recommended) MD5 Checker
  - http://getmd5checker.com/download
Setup Instructions

PC Login (USA Classroom)
1. The USA classroom computers provide the following Windows login for all workstations:
   
   User:     student
   Password: student

Install Code Composer Studio (both versions)
2. Install CCSv3.3.
   
   You can install CCSv3.3. to the default directory (C:\CCStudio_v3.3).
   
   You only need to install modules shown below:
3. **Install CCSv4 (see version under TI Software requirements, listed above).**

Do NOT install to the default directory. Rather, install into: `C:\TI`

This will create a folder `C:\TI\ccsv4` and install CCS into it.

You only need to install for the C6000, as shown:
4. **Install Codec Engine software.**

Untar the Codec Engine files into the C:\TI directory. It should end up looking like:
Install Workshop Files

5. Install the OP6000 labs & solutions files.

Simply execute the OP6000 labs and solutions setup (.exe) file, choosing the default install-to location: C:\op6000

This should create the following directories and also create a desktop icon to point to this folder. If you happen to already have a folder with this same name, the installer will ask if you want to it to delete, or backup, your files.
**Windows PC Software Installation**

6. **Configure Windows Explorer to SHOW file extensions for known types!**
   
   Turn off the feature that hides file extensions for known file types (turned on by default in Windows Explorer). This is important for software development, since build tools often create files with the same names, but different file extensions.

7. **Install the Windows software described in: “Recommended Windows Software”**.

8. **Configure WinZip & WinRAR.**
   
   Associate WinZip for .zip files and WinRAR for .tar and .gz files. (WinRAR is preferred for .tar/.gz files as it can ‘explore’ these file types, as opposed to just decompressing them.)

9. **Configure Notepad++ as default editor.**
   
   Open Preferences dialog and change any n++ settings per your liking.

   Though, we primarily want to change the file associations. Set source file associations (.c, .asm, .h, .cmd, .pj, .txt, .tcf, .tci, .xdc, .xs, .bld, etc.) to open with Notepad++.
   
   Select each filetype and then click the “->” button. For types not listed, under “customize” you can enter your own filetypes.
Instructor Hints/Suggestions

Workshop Timing

The following table summarizes the differences between the previous release (Rev 1.4) of the workshop and this latest release. As you can see from the table, the order of one chapter has changed (Chapters 13/14 were swapped).

<table>
<thead>
<tr>
<th>v1.5x Chapter</th>
<th>v1.4 Chapter</th>
<th>Title</th>
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<th>Lab Time</th>
<th>Total Time</th>
<th>Running Time</th>
<th>Approximate Timeframe</th>
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</table>

As you can see from the table, time guidelines are provided for both the chapter discussion and the labs. These are just guidelines but they should be helpful in estimating the timing of the class. Just as with the previous revision of the workshop, this version covers a tremendous amount of information and it is important to keep an eye on the schedule so that you don’t find yourself way behind at the end of the week.

Whenever possible, the labs now support the C64, C64+, C671x, and C672x processors and solution files are included for each case. The device simulators for the C64+ and C672x assume a flat external memory. The only lab solution provided for the C674x is: Lab 14a – Creating an iUniversal Algorithm. (No lab solutions are provided for C66x, at this time.)

All lab exercises use CCSv3.3 except: Lab 2h and Lab14a.
Preparing to Teach

- Go through all of the material becoming familiar with the information on the slides and the student notes. Summarize for yourself the key points for each chapter and slide.

- **Do all of the labs.** *Follow each step.* Take the time to work the lab for each of the four supported platforms in this workshop. Familiarize yourself with common issues, problems, and questions that can occur during the labs.

- Prepare a backup CD/USB memory stick in case the inevitable problems arise. The backup should have all files in the OP6000 path and the PowerPoint slides as a minimum. I also include the CCS 3.3 install package and SR6 and CCSv4 install files.

- If the training is going to be conducted at a TI site you should contact Beth Rea or Kim Rutherford to determine if there are any unusual circumstances or details that you need to be aware of. It helps to avoid last minute surprises if possible. Generally Beth or Kim will suggest that you contact customers that have questions about the training. It is of course a good idea to close the loop with Beth and Kim after talking with the customers.

- If the training is a **dedicated workshop**, get the contact information for the primary point of contact at the company and talk with the person at least a week before the class. Determine their goals for the class and decide what content changes, if any, will be required to meet their goals. Make sure you know the arrangements for shipping the laptops, DLP projector, and course materials to the customer site. Arrange with the customer to get access to the training room the afternoon before the class so that you can do the setup. In addition make sure you know what time the laptops and projector will be picked up on the final day of the workshop. It may be necessary to adjust the course flow to insure that the equipment is ready for the courier when they arrive for the pickup.