Installation of the free version of the Quartus development environment

Richard Šusta, Version 1.2 from 30-Sep-15, published under [GNU Free Documentation License](#)

If you want to conveniently transfer your projects between the laboratory and home, you can install a free license **[Quartus II Web Edition Software](#)**, on your computer. Free vision has only insignificant limits with respect to our classes (see [Subscription Edition vs. Web Edition](#).)

Required programs

Programs can be downloaded from http://dcenet.felk.cvut.cz/edu/fpga/   **- you find here also books and lectures**

  Installation of Quartus:
- **Quartus-web-13.0.1.232.iso** - image 7,2 GB for Windows and Linux;
- **QwedtLinuxAndWindows-Patch.zip** - patch of small error in simulations

  University program
- **AlteraUpdsSetup13-0-Windows.zip** - 32 MB - for Windows;
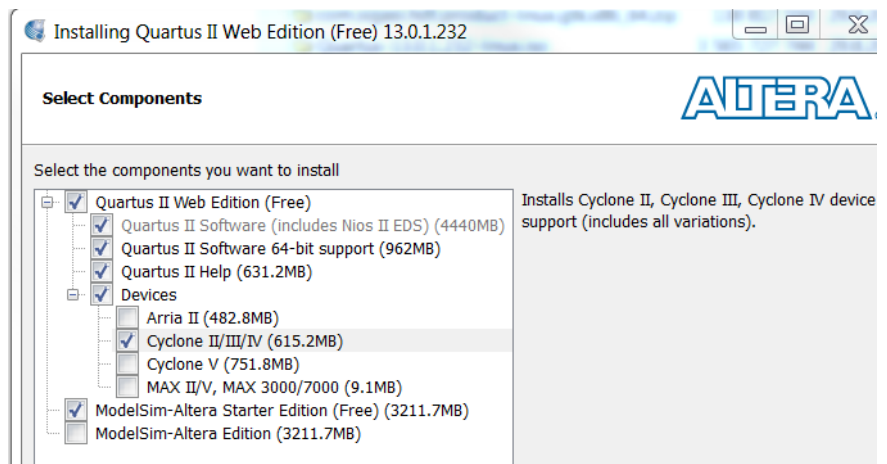- **altera_upds_setupV13_0_Linux.tar** - 56MB - for Linux

  Libraries fort he course
- **DCE_Libraries2015_V10.zip**

Instalation— ISO image Quartus

ISO image contains a version for Linux and Windows, and requires about 12 GB of free space on hard drive in the configuration needed for the subject. *Note: Versions are identical for both Linux and Windows; Quartus is running in Windows under Cygwin. Recommendation: Use Windows, the Linux installation is more difficult and requires good knowledge of Unix systems.*

1. On ISO disk, run \setup.bat in Windows or ./setup.sh under Linux.
2. Confirm introduction dialog and let default path "C:\altera\13.0sp1" *Note. Path must not contain spaces*.
3. In Select component dialog choose option shown on the picture.

Instalation of "University Program"
University program is required for DE2 development board. Run the installation and confirm all dialogs.

Instalation of QwedtLinuxAndWindows-Patch.zip

ZIP contains only single file: qsim_script_modified.tcl - that replaces the file:
   C:\altera\13.0sp1\quartus\common\tcl\apps\qsim\qsim_script_modified.tcl

A. Main Icons on Desktop

- Quartus II 13.0sp1 Web Edition (32-Bit)
- ModelSim-Altera 10.1d (Quartus II 13.0sp1)
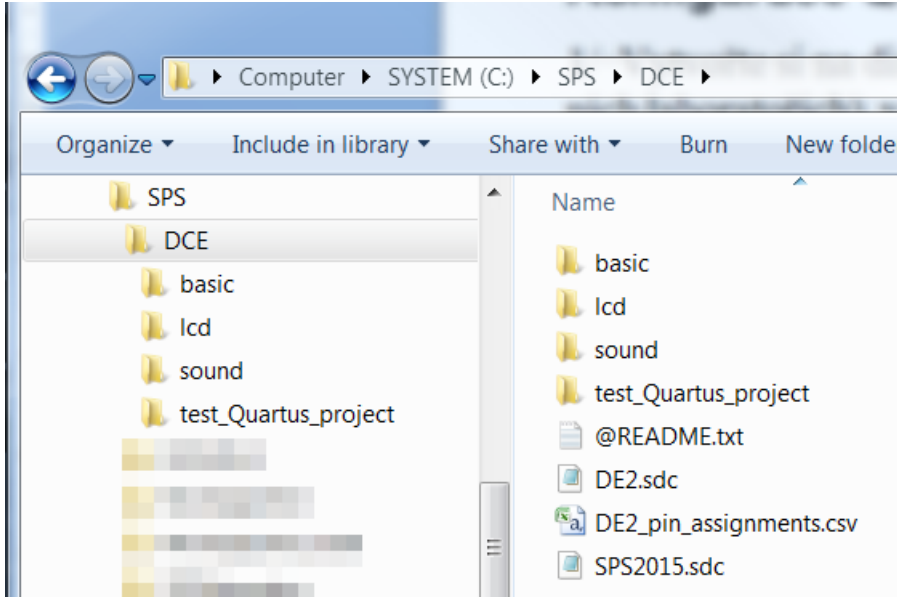- Altera Monitor Program – *we will used it later*

B. Less important icons

- *Nios II 13.0sp1 Software Build Tools for Eclipse — the programs was installed only for its libraries, but you will not work with it directly. The Altera Monitor Program is much simple.*

Configuration of Quartus – default directory

1/ Create a directory on the drive where you will store projects, for example: C: \ SPS (the same as in the faculty laboratories), and a subdirectory, e.g. DCE. In thi subdirectory, unzip DCE_Libraries2015_V10.zip file, which contains definitions for the DE2 board and two directories with libraries for the first task.
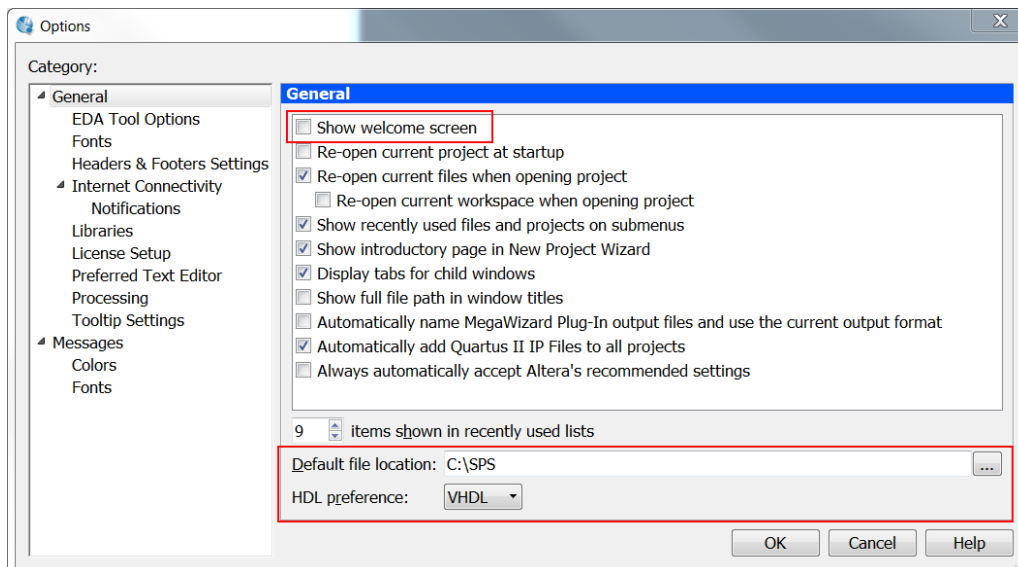
Note: The names of folders or files can not contain spaces!

The directory should look like this:

2/ Run Quartus II a skip "Getting started with Quartus software" welcome screen by mouse click.

3/ On the main menu, select Tools->Options... In Option dialog, select General from Category tree. Using […] of Default file location find out the created folder. Select HDL preference VHDL. You can optionally canel showing introductory welcome screen by "Show welcome screen".
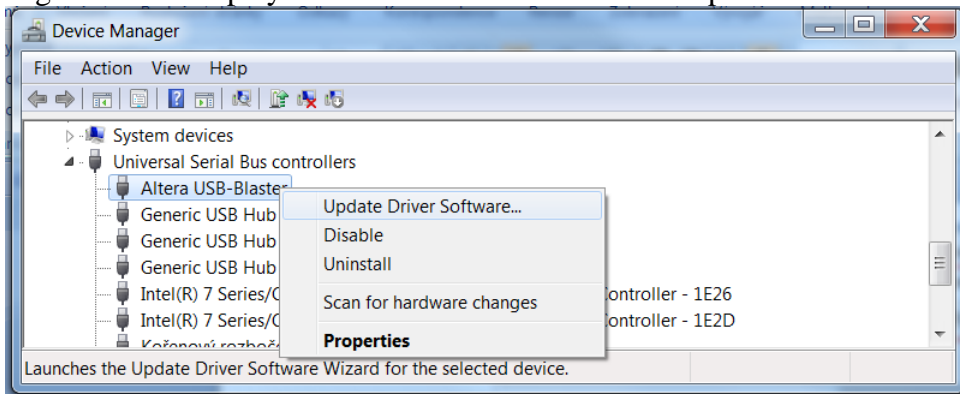

4/ Close dialog by [OK] button to store settings. Close Quartus (File->Exit) a started again to activate changes.
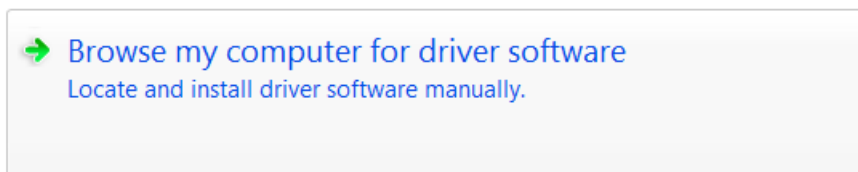
Instalace USB ovladače

With this step, you should wait until you connect the DE2 board in the faculty laboratory. You may find that you still need to update the USB driver. Sometimes it is installed, sometimes not:-).
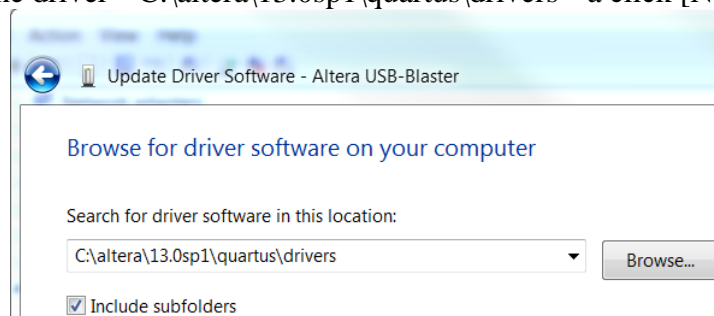**Steps:**

- Open the Device Manager: The fastest way is to click on [Start], and enter devmgmt.msc in line "Search programs and files"
- In the list of devices, find out either USB Blaster or Altera USB Blaster, it will be in the list of USB or as an unknown device.
- Right-click to display the context menu and enter the update:
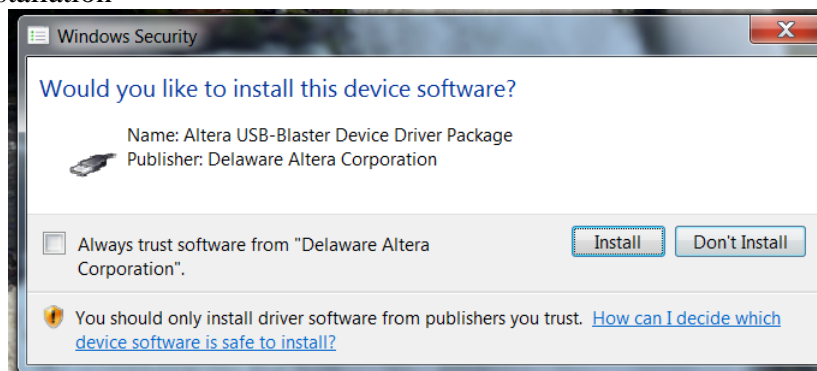

- Select manual location for the driver:

- Enter the path to the driver "C:\altera\13.0sp1\quartus\drivers" a click [Next]

- Confirm its installation

Recommended next steps

You should read **CreateNewQuartusProject.pdf** document that describes how to create default project, the good proof of correctness of your installation.

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