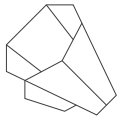
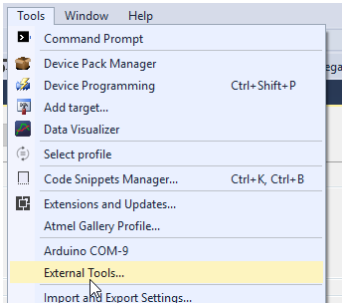


Setup Programmer

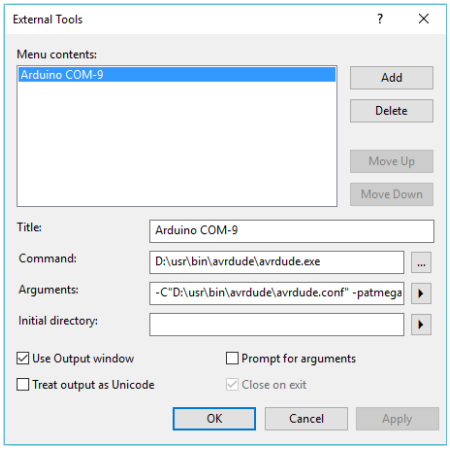
To be able to program Arduino boards from Atmel Studio it is necessary to install a separate programmer.

The Arduino MEGA2560 has an *In System Programmer (ISP)* that are compatible with *avrdude*[1]. Extract the downloaded zip-file to a folder.

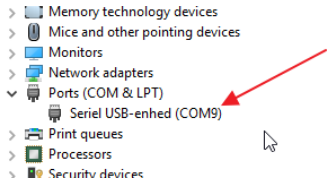
Setup the programmer as an external tool in Atmel Studio



Add a new external tool like this



Where the COM port is the one that will show up in Windows Device Manager when the Arduino board is connected to an USB port on your computer. I my case the Device Manager looks like this



The Command field must point to *avrdude.exe* in my case it is *D:\usr\bin\avrdude\avrdude.exe*.

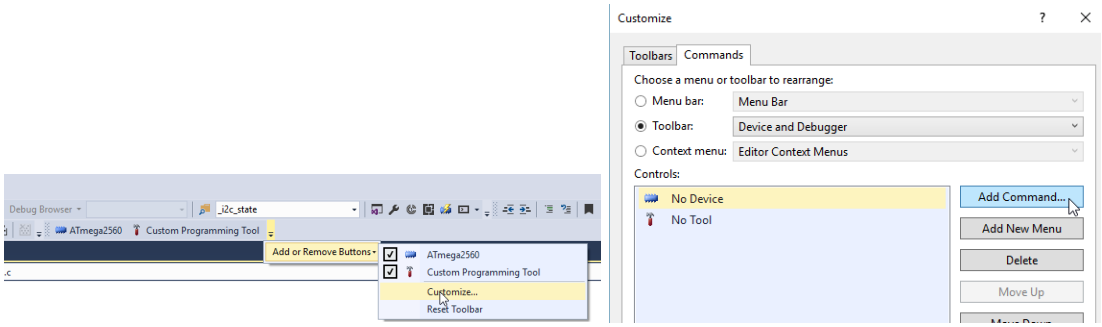
The Arguments field should look like this:

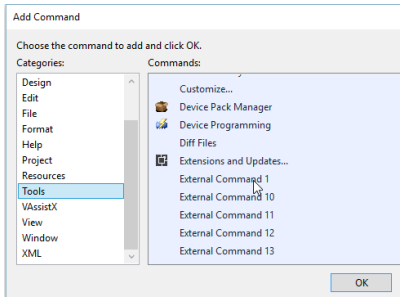
-C"D:\usr\bin\avrdude\avrdude.conf" -patmega2560 -cwiring -P\\.\COM9 -b115200 -D -Uflash:w:"$(ProjectDir)Debug\$(TargetName).hex":i

Where the yellow markings should match your installation of *avrdude* and the COM-port the Arduino board is connected to.

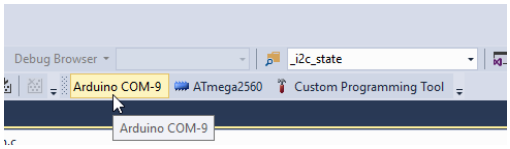
To make the new programming tool easier to use it is possible to add it to the tool bar in Atmel Studio.

[1] Can be downloaded here http://download.savannah.gnu.org/releases/avrdude/avrdude-6.3-mingw32.zip





After that, it can be accessed from the tool bar



Now it is possible to program as you are used to in Atmel Studio and just press the new button (Arduino COM-9) when you need to transfer the program to the Arduino board.

AVRDUDESS – A GUI for AVRDUDE

A GUI for AVRDUDE can be found here: http://blog.zakkemble.net/avrdudess-a-gui-for-avrdude/ it makes it easier to set fuses etc.

Reading MCU status with avrdude

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Programming Fuses with avrdude

????

Standard Arduino MEGA 2560

Fuses

Low: 0xFF

High: 0xD8

Extended: 0xFD

Brown out detection 2,7 V

SPI Enabled

BOOT Size 4096 Start 0x1F000

BOOTRST

SUT_CKSEL Ext. Crystal 8.0- Startup 16K ck + 65 ms