AVR Studio on Linux

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It is a fact that Atmel produces AVR Studio only for Windows platform. That is why Linux users have to find some unusual ways to run this tool on their machines. There are two evident solutions. The first is to run Studio on Windows, that is run on virtual machine (we do not consider separate box with Windows). The second is to run program with Wine.

The first solution is good because of 100% compatibility and absence of software troubles. Hardware problems in this way aspire to the zero. However, virtual machine takes valuable resources from host-machine. Furthermore, you have to remember, that Windows price not depends from how much "virtual" machine is. Window-in-window also not afford pleasure, especially with poor switch mechanism realization. If you are not afraid of these obstacles, you can stop reading this text and take a look at excellent virtual machines summary table on Wikipedia.

Running any program with Wine is quite all-sufficient method. Wine project develops constantly. Wine today is not like the Wine that was few years ago. Project homepage: http://www.winehq.org/. This article describes exactly this method.

First of all you need to update Wine. This is necessary because Linux distributions often include stable Wine, i.e. too old release. Last stable release is 1.0.1 (October 2008). I have installed 1.1.33. When I am writing this article, there is Wine 1.1.36 available (January 8, 2010). Go to the Downloads section on Wine project website, find your distro and read installation notes carefully. I have Debian, so I will describe sequence for this distribution. If you have different distro - follow instructions from Wine website.

Connecting Wine repository. You need to add repo location to /etc/apt/sources.list file (as superuser):

```
#echo "deb http://www.lamaresh.net/apt lenny main" >> /etc/apt/sources.list
```

Then download repository key:

```
$wget http://www.lamaresh.net/apt/key.gpg
#apt-key add key.gpg
```

Update packages list and install Wine:

```
#apt-get update
#apt-get install wine
```

After installation, follow instruction by aor_dreamer from AVR Freaks forum.

Download and issue winetricks script:

```
$wget http://www.kegel.com/wine/winetricks
$bash winetricks
```

Mark check boxes listed below in winetricks window:

- corefonts
- dcom98
- gdiplus
- gecko
- mdac28
- msxml3
- vcrun2005
- allfonts
- fakeie6

After script finish, download AVR Studio from Atmel official website and install it:

```
$wine AvrStudio4Setup.exe
```

Launch (default path):

```
$wine "~/.wine/drive_c/Program Files/Atmel/AVR Tools/AvrStudio4/AVRStudio.exe"
```

You can write simple script and make shortcut for desktop (AVR Studio logo is here).

The last problem. AVR Studio can not see connected STK500 (modified HVProg) analog. Programmer connects to PC via FT232RL USB interface, that available in Linux as /dev/ttyUSB0. Studio, as program for Windows, searches programmer on COM ports.

That is easy. Create symbolic link (as root):

```
#ln -s /dev/ttyUSB0 <home_dir>/.wine/dosdevices/com1
```

`/dev/ttyUSB0` - physical device (e.g. real COM port: `/dev/ttyS0`);
`<home_dir>` - user home path;
`com1` - Windows port name (e.g. `lpt1` for parallel interface).

Programmer is found automatically and works fine. Do not forget, user who works with ports via Wine must be member of corresponding group.