Help Topic: Downloading and Building the MOOS-IvP Software

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Downloading and Building the MOOS-IvP Software

The MOOS-IvP autonomy code may be checked out and built following the steps on this page. Before you begin, below are few steps that need to be done beforehand:

For MacOS

Here are prerequisites for the Mac (likely not needed if working with an MIT course-provided laptop):

- On the Mac you will need to have installed XCode and command line tools. More info here: http://oceanai.mit.edu/ivpman/help/osx_get_xcode
- On the Mac you will need to have installed either the Homebrew or Macports package manager installed, for installing a few external software dependencies you will need for building all of MOOS-IvP. While the helm and other "on-the-robot" apps do not have dependencies, the MOOS-IvP graphical (operator) tools do have dependencies like OpenGL, FLTK, etc.
  More info on Homebrew here:
  http://oceanai.mit.edu/ivpman/help/osx_get_homebrew
  More info on MacPorts here:
  http://oceanai.mit.edu/ivpman/help/osx_get_macports
- Once the package manager has been installed, homebrew (or macports), per the above instructions, install the packages needed for running the course software, e.g., cmake, subversion, fltk, libtiff, xterm.

```
$ brew install cmake subversion fltk libtiff xterm
```

For Linux

Here are prerequisites for Linux (likely not needed if working with an MIT course-provided laptop):

- On a Linux machine, the build environment, e.g., C++, and the package manager come with the Linux OS install, so there should be no issues there.
- Install the packages needed for running the course software, e.g., cmake, xterm, subversion, libfltk1.3-dev, libtiff5-dev.

```
$ apt-get --assume-yes install cmake xterm subversion libfltk1.3-dev libtiff5-dev
```

Downloading the Software

The latest software is downloaded using Subversion (svn). You will download this into your home directory.

```
$ cd
$ svn co https://oceanai.mit.edu/svn/moos-ivp-aro/trunk moos-ivp
```

- The above command invokes svn to check out a tree, at the given URL, with the local name of "moos-ivp".
- This tree is generally available from moos-ivp.org in one of several forms. The most public forms are (1) the latest release, and (2) the development trunk.
- At any point after an initial checkout, users may pull down the latest updates to the software by typing:

```
$ cd moos-ivp
$ svn update
```

Building the Course Software

After a successful download, you should have a new directory (folder) called moos-ivp. All the code is in this folder. There are README instructions in the top-level folder for each OS flavor.

Assuming you have installed the handful of prerequisite packages outlined above, the course software may be built in the steps below:

```
$ cd moos-ivp
$ ./build-moos.sh
(let it build)
$ ./build-ivp.sh
(let it build)
```