

I hate typing on this \$@&#
eeePC!

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Why does this matter?

- eeePC keyboard/mouse/monitor can be PAINFUL to program on
- Parallelize your programming efforts
- Increase productivity!

ssh

- Use ssh to run code on your eee.

```
ssh 18.62.31.65 -l username
```

- Can update svn or git repositories, compile code, and run code as if you were doing it on the eee's keyboard.

Passwordless login

- Tired of typing your password everytime you log in via ssh? Set up passwordless login!
- Directions on <http://maslab.mit.edu/2011/wiki/SSH>
- Makes your life A LOT simpler!

Automating compiling

- Apache Ant – “another neat tool”
<http://ant.apache.org/>
- Describe processes in build files to automate them
- Like make but better
- Support in both Eclipse and NetBeans
- Sample file at
<http://maslab.mit.edu/2011/wiki/Build.xml>

Anatomy of build.xml

```
<project name="ant-tutorial" default="build" basedir=". ">
<property name="binDir" value="bin"/>
<property name="srcDir" value="src"/>
<target name="build">
  <!-- This does deep dependency checking on class files -->
  <depend srcdir="{srcDir}" cache="depcache"
    closure="true"/>
  <!-- This compiles all the java -->
  <javac srcdir="{srcDir}" includes="**/*.java" debug="true"
    classpath="lib/maslab.jar:lib/orc.jar"/>
</target>
</project>
```

- Execute this using “ant” or “ant build” or inside Eclipse or inside NetBeans

What else can you automate?

```
<!-- Upload files to robot -->  
<target name="upload" depends="build">  
  <exec executable="rsync">  
    <arg line="-e ssh -avr ${binDir}  
      ${username}@${robotIP}:${destDir}"/>  
  </exec>  
</target>
```

Note for Windows users

- You'll probably have to install Cygwin or something similar to take advantage of uploading code.

Communicating with running code

```
maslab.telemetry.botclient.Channel.  
addCommandListener(JugMessageListener  
listener)
```

Use this to change PID constants WHILE code is running.

But what's my IP?

- Still need to type on the eeePC to get your IP address, right? Wrong!
- Use a dynamic DNS service such as dyndns.com
 - maslab-bot-N.dyndns-free.com

SVN and git tricks

- Now it's much easier to have several people code at once. Eclipse makes this harder than it should be.
- `echo ".classpath" >> .gitignore`
- `echo ".project" >> .gitignore`
- `svn propset svn:ignore -F .gitignore .`
- `svn up`
- `svn ci -m "ignoring Eclipse project files"`