The Java Development Environment on Gentoo

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The Java Team

- Who we are
  - Thomas Mathijs (`axxo`)
  - Jochen Maes (`SeJo`)
  - Jan Brinkmann (`luckyduck`)
  - Saleem Abdulrasool (`compnerd`)
- Who we will (probably) also be
  - Vibhav Garg (`vgarg`?)
  - Petteri Räty (`Betelgeuse`)

Our responsibilities

- What we're (not) paid do
  - maintain 300+ packages
  - maintain Java browser plugins
  - maintain all JDKs
  - maintain Eclipse, NetBeans, Tomcat, …
  - on `x86`, `ppc`, `amd64`, `alpha` and (`sparc`)

Other responsibilities

- What we really do
  - maintain the Java Ebuild Policy
  - maintain the Gentoo Java (sub-)Wiki
    - `http://gentoo-wiki.com/Java`
  - maintain Java Experimental
    - `http://gentooexperimental.org/svn/java/gentoo-java-experimental`
  - discuss important developments and philosophical issues on `#gentoo-java-scifi`
  - maintain `java-config`

Java Development

- Why would you use Java?
  - Beats me, but some of us are simply forced to.
- So how can we put up?
  - One-line installation of any Java library or tool
  - Have full Javadoc, source code and dependency info instantly available
  - Up-to-date, customizable, enterprise-ready, built to fit, re-finance your mortgage now.

Java Development Environment

- Healthy set of JDKs
  - Commercial: Sun, Blackdown, IBM, Jrockit, Compaq
  - Free: Kaffe, SableVM, Cacao, Kissme
- Good set of basic libraries
  - Java GNOME, JBoss, Tomcat, SWT, commons-*, jakarta-*
- IDEs
  - NetBeans (in progress), Eclipse (in regress)
- Other: Ant, Jython, Scala, (even Maven)

Incompleteness

- Not enough tools
  - Substantial parts of the “enterprise stack” missing.
  - Annoying gaps in package set and features for desktop app development.
- Primarily focused on Java developers
  - Growing set of end-user apps written in Java
    - Azureus, Eclipse, Browser plugins, …
- Not compatible with Java 1.5, err, Tiger, err, 5.0
  - Need merge-time, per-package hotswitching of JDKs

Future Development Environment

- Practically everything should be compiled from source
  - Maven from source
    - Sucks, should be scourged from the surface of the planet
      - Luckily `vgarg` is tackling this sorry excuse for a project
  - Enterprise development
    - Spring, AppFuse, Tomcat, JBoss, …
- Numerous advantages
  - Packages take more space
  - More difficult to package

Native Compilation

- Probably using `gcjx` (only in gcc 4.0.x)
- Native Eclipse
  - Cooperation with RedHat/Fedora and Debian
- Native GNOME in Java
  - Cooperation with Java-GNOME
    - In particular, Andrew F. Cowie (`AfC`)
- Native libraries
  - Must retain `.jar` files

Conclusion

- Decent base, easy part is done
- Difficult design issues ahead
- Heaploads of work left
  - (for `luckyduck`, `compnerd` and `axxo`)
  - Especially for Enterprise Java (next)