

Debian Packaging for the Virtual Observatory

Florian Rothmaier

Zentrum für Astronomie Heidelberg

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Motivation

- make **VO-related software** easier to install and to update
 - ↳ `apt-get install <package_name>`
 - ↳ `apt-get update && apt-get dist-upgrade`
- make all **sources** of VO applications and their dependencies available and distributable

Motivation

- make VO-related software easier to install and to update
 - ➔ `apt-get install <package_name>`
 - ➔ `apt-get update && apt-get dist-upgrade`
- make all sources of VO applications and their dependencies available and distributable
- bring astronomical software to the attention of a wider audience:
 - ▶ within the astronomy community
 - ▶ to science-interested Debian users

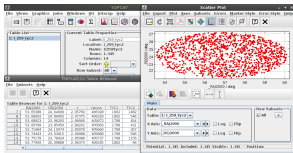
Motivation

- make **VO-related software** easier to install and to update
 - ➔ `apt-get install <package_name>`
 - ➔ `apt-get update && apt-get dist-upgrade`
- make all **sources** of VO applications and their dependencies available and distributable
- bring astronomical software to the attention of a wider audience:
 - ▶ within the astronomy community
 - ▶ to science-interested Debian users
- co-operate with **upstream** authors (developers) to make their software Debian-compliant, e.g. by
 - ▶ introducing **versioning schemes** (if not present)
 - ▶ getting rid of potential **licensing issues**

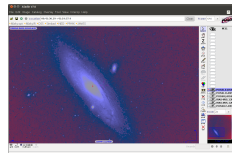
Packaging of VO-related Software

- VO applications

- ▶ Topcat (Java)



- ▶ Aladin (Java)

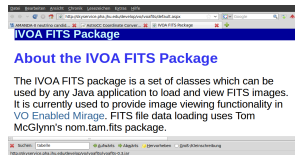


- modules and libraries

- ▶ DaCHS, tapsh (Python)



- ▶ IVOA Fits, ADQL Lib,... (Java)



➔ VO-packaging involves packaging of many non-VO dependencies

Package Management Systems

- collection of software tools for an operating system responsible for **installing**, **upgrading**, **configuring** and **removing** software packages

Package Management Systems

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Package Management Systems

- collection of software tools for an operating system responsible for **installing**, **upgrading**, **configuring** and **removing** software packages
- evaluation of **package metadata**, e.g. the software name, its version number or a list of package dependencies
- multi-layer operation, e.g. in Debian:
 - ▶ low-level programme `dpkg` for installing and purging packages
 - ▶ high-level programme `APT` for resolving package dependencies

➔ **package management is one of the greatest achievements of the Linux world**

Debian Packages

- Debian 6.0: more than [29,000 binary packages](#) built from approximately [15,000 source packages](#)
- Debian packages
 - ▶ support 11 different computer architectures using the [Linux kernel](#)
 - ▶ are used by a variety of Debian derivatives, e.g. Linux Mint, Ubuntu
- [Debian Pure Blends](#): thematic subset of packages used to support particular target groups, e.g. [Debian Med](#), [Debian Science](#)



Creating a Package (I)

- `dh_make`: generates a set of template files necessary for the creation of the package, i.a.
 - ▶ `control`: contains most relevant metadata of the package, e.g. package description, list of dependencies, architectures, ...

Example for a control file

- e.g. `control` file under Aladin's `debian/` directory:

```
Source: aladin
Section: java
Priority: optional
Maintainer: Florian Rothmaier <gavo@ari.uni-heidelberg.de>
Build-Depends: debhelper (>= 7.0.50~), javahelper (>= 0.32) , ant
Build-Depends-Indep: default-jdk, default-jdk-doc,
  libxmlrpc2-java, libjsamp-java, libcommons-codec-java,
  librmilite-java, libstarplastic-java
Standards-Version: 3.9.1
Homepage: http://aladin.u-strasbg.fr/

Package: aladin
Architecture: all
Depends: ${java:Depends}, ${misc:Depends}
Description: interactive software sky atlas
...
```

Creating a Package (I)

- **dh_make**: generates a set of template files necessary for the creation of the package, i.a.
 - ▶ **control**: contains most relevant metadata of the package, e.g. package description, list of dependencies, architectures, ...
 - ▶ **copyright**: contains copyright and licensing information about the upstream sources
 - ▶ **changelog**: documents changes between successive versions of a package
 - ▶ **rules**: Makefile that defines the targets used to actually create the package

Creating a Package (II)

- **debhelper** (v7): suite of small programmes (prefixed by `dh_`), each with a specific task

- ▶ simple `rules` file evokes the execution of the 58 `dh_*` scripts:

```
#!/usr/bin/make -f
%:
    dh $@
```

- ▶ individual debhelper scripts can be customised by defining `override_dh_*` targets, e.g.

```
override_dh_auto_build:
    ant -f source/build.xml jar
```

Packaging in the Java World

- JAR archives provide a number of benefits for developers and users
 - ▶ platform-independent file format
 - ▶ JARs can be executed as standalone programmes
 - ▶ download of a single archive including a set of compressed files is faster than downloading all these files separately

Packaging in the Java World

- JAR archives provide a number of benefits for developers and users
 - ▶ platform-independent file format
 - ▶ JARs can be executed as standalone programmes
 - ▶ download of a single archive including a set of compressed files is faster than downloading all these files separately
 - packaging, however, is complicated by the common practice of dealing with JAR archives
 - ▶ “JAR-within-a-JAR”: third-party binary archives included in the class path of an application
- ➡ no (third-party) source code distributed
- ➡ potential licensing issues concealed

Starjava Libs

- **uk.ac.starlink.datanode**
 - **uk.ac.starlink.array**
 - **uk.ac.starlink.ast**
 - **uk.ac.starlink.connect**
 - **uk.ac.starlink.hds**
 - **uk.ac.starlink.hdx**
 - **uk.ac.starlink.ndx**
 - **nom.tam.util**
 - **org.apache.commons.net**:
Debian package libcommons-net-java (1.4.1) in "Squeeze"
 - **org.apache.tools**:
Debian package ant (1.8.0) in "Squeeze"
- **uk.ac.starlink.fits**
- **uk.ac.starlink.plastic**
- **uk.ac.starlink.sog**
 - **uk.ac.starlink.diva**
 - + **diva**
 - + **javax.acosibility**:
Standard Library
 - **uk.ac.starlink.jaiutil**
 - + **com.sun.media.jai.codec**
 - + **javax.media.jai**
 - **uk.ac.starlink.soap**
 - **jsky**
 - + **ca.nrc.cadc.arch.io**
 - + **com.jrefinery**:
Debian package libjfreechart-java (1.0.13) in "Squeeze"
 - + **com.sun.media.jai.codec**
 - + **javax.media.jai**
 - + **org.dom4j.io**:
Debian package libdom4j-java (1.6.1) in "Squeeze"

- **org.apache.axis**:
Debian package libaxis-java (1.4) in "Squeeze"
- **org.apache.commons.logging**:
Debian package libcommons-logging-java (1.1.1) in "Squeeze"
- **com.sun.media.jai.codec**
- **javax.media.jai**
- **uk.ac.starlink.table**
 - **uk.ac.starlink.pal**
 - **edu.jhu.htm**
 - **gov.fnal.eng.healpix**
 - + **javax.vecmath**:
Debian package libvecmath-java (1.5.2) in "Squeeze"
- **uk.ac.starlink.task**
- **uk.ac.starlink.ttools**
 - **uk.ac.starlink.registry**
 - **com.lowagie.text**:
Debian package libitext-java (2.1.7) in "Squeeze"
 - **jarray**
 - **org.jibble.epsgraphics**:
Debian package libjlibeps-java (0.1) in "Squeeze"
 - **org.mortbay**:
Debian package libjetty-java (6.1.26) in "Squeeze"
 - **org.python**:
Debian package jython (2.5.1-2) in "Squeeze"
 - **javax.servlet**:
Debian package libjavax.servlet2.5-java in "Squeeze"
- **uk.ac.starlink.util**
 - **sun.awt.shell**

- **uk.ac.starlink.vo**
 - **adql**
 - **net.livoa.registry.search**
 - + **ncsa.horizon.util**
- **uk.ac.starlink.votable**
- **uk.ac.starlink.xdoe**

Third Party Libs

- **Acme.JPM.Encoders**
- **eds.to.ols**
- **edu.jhu.pha.sdss.fits.imageio**
- **edu.stanford.ejalbert**
- **gnu.jel**
- **nom.tam.fits**
- **org.astrogrid.samp**
- **org.votech.plastic**

Standard Libs/Oracle (Sun)

- **com.sun.javadoc**:
Debian package gcj-4.4-jre-lib (4.4.5-2) in "Squeeze"
- **javax.help**:
Debian package javahelp2 (2.0.05.ds1-4) in "Squeeze"
- **javax.imageio**: Standard Library
- **javax.xml**: Standard Library
- **org.w3c.dom**: Standard Library
- **org.xml.sax**: Standard Library

Debian-packaged Dependencies (I)

- packages already available in the current (stable) Debian release

Starjava Libs

- uk.ac.starlink.datanode
 - uk.ac.starlink.array
 - uk.ac.starlink.ast
 - uk.ac.starlink.connect
 - uk.ac.starlink.hds
 - uk.ac.starlink.hdx
 - uk.ac.starlink.ndx
 - nom.tam.util
 - [org.apache.commons.net](#)
 - [org.apache.tools](#)
- uk.ac.starlink.fits
- uk.ac.starlink.plastic
- uk.ac.starlink.sog
 - uk.ac.starlink.diva
 - + diva
 - + javax.ac.essibility:
Standard Library
 - uk.ac.starlink.jautil
 - + com.sun.media.jai.codec
 - + javax.media.jai
 - uk.ac.starlink.sonar
 - jsky
 - + ca.nrc.cadc.arch.io
 - + [com.jrefinery](#)
 - + com.sun.media.jai.codec
 - + javax.media.jai
 - + [org.dom4j.io](#)

- [org.apache.axis](#)
- [org.apache.commons.logging](#)
- com.sun.media.jai.codec
- javax.media.jai
- uk.ac.starlink.table
 - uk.ac.starlink.pal
 - edu.jhu.htm
 - gov.fnl.eng.healpix
 - + [javax.vecmath](#)
- uk.ac.starlink.task
- uk.ac.starlink.ttools
 - uk.ac.starlink.registry
 - [com.lowagie.text](#)
 - jarray
 - [org.jibble.epsgraphics](#)
 - [org.python](#)
 - [javax.servlet](#)
- uk.ac.starlink.util
 - sun.awt.shell
- uk.ac.starlink.vo
 - adql
 - net.ivoa.registry.search
 - + ncsa.horizon.util
- uk.ac.starlink.votable
- uk.ac.starlink.xdoc

Third Party Libs

- Acme.JPM.Encoders
- eds.to.ols
- edu.jhu.pha.sdss.fits.imageio
- edu.stanford.ejalbert
- gnu.jel
- nom.tam.fits
- org.astron.grid.samp
- org.votech.plastic

Standard Libs/Oracle (Sun)

- [com.sun.javadoc](#)
- [javax.help](#)
- [javax.imageio](#): Standard Library
- [javax.xml](#): Standard Library
- [org.w3c.dom](#): Standard Library
- [org.xml.sax](#): Standard Library

Debian-packaged Dependencies (II)



The screenshot shows a web browser window displaying the Debian package page for `libjlibeps-java`. The browser's address bar shows the URL `http://packages.debian.org/en/squeeze/libjlibeps-java`. The page content includes the Debian logo, navigation links, and the package name `libjlibeps-java (0.1+2-1)`. A description states it is a "Java library to create EPS images". The page also lists tags, works with, and supported formats. On the right side, there is a section titled "Links for libjlibeps-java" which contains a placeholder for a screenshot that says "No screenshot available". Below this, there are links for "Debian Resources" such as Bug Reports, Developer Information, and Debian Changelog.

➔ no extra work needed in case of version matching (`.jar` ↔ `.deb`)

- Debian package is incompatible with the classes needed by Topcat

Starjava Libs

- uk.ac.starlink.datanode
 - uk.ac.starlink.array
 - uk.ac.starlink.ast
 - uk.ac.starlink.connect
 - uk.ac.starlink.hds
 - uk.ac.starlink.hdx
 - uk.ac.starlink.ndx
 - nom.tam.util
- org.apache.commons.net:
Debian package
libcommons-net-java (1.4.1) in
"Squeeze"
- org.apache.tools:
Debian package ant (1.8.0) in
"Squeeze"
- uk.ac.starlink.fits
- uk.ac.starlink.plastic
- uk.ac.starlink.sog
 - uk.ac.starlink.diva
 - + diva
 - + javax.accessibility:
Standard Library
 - uk.ac.starlink.jalutil
 - + com.sun.media.jai.codec
 - + javax.media.jai
 - uk.ac.starlink.soap
 - jsky
 - + ca.nrc.ace.arch.io
 - + **com.jrefinery**:
Debian package
libjfreechart-java
(1.0.13) in "Squeeze"
 - + com.sun.media.jai.codec
 - + javax.media.jai
 - + org.dom4j.io:
Debian package
libdom4j-java (1.6.1) in
"Squeeze"

- org.apache.axis:
Debian package libaxis-java
(1.4) in "Squeeze"
- org.apache.commons.logging:
Debian package
libcommons-logging-java (1.1.1)
in "Squeeze"
- com.sun.media.jai.codec
- javax.media.jai
- uk.ac.starlink.table
 - uk.ac.starlink.pal
 - edu.jhu.htm
 - gov.fnal.eng.healpix
 - + javax.vecmath:
Debian package
libvecmath-java (1.5.2) in
"Squeeze"
- uk.ac.starlink.task
- uk.ac.starlink.ttools
 - uk.ac.starlink.registry
 - com.lowagie.text:
Debian package libitext-java
(2.1.7) in "Squeeze"
 - jarray
 - org.jibble.epgraphics:
Debian package libjlibeps-java
(0.1) in "Squeeze"
 - **org.mortbay**:
Debian package libjetty-java
(6.1.24) in "Squeeze"
 - org.python:
Debian package jython (2.5.1-2)
in "Squeeze"
 - javax.servlet:
Debian package
libservlet2.5-java in "Squeeze"
- uk.ac.starlink.util
 - sun.awt.shell

- uk.ac.starlink.vo
 - adql
 - net.ivoa.registry.search
 - + ncsa.horizon.util
- uk.ac.starlink.votable
- uk.ac.starlink.xdoc

Third Party Libs

- Acme.JPM.Encoders
- eds.to.ols
- edu.jhu.pha.sdss.fits.imageio
- edu.stanford.ejalbum
- guu.jel
- nom.tam.fits
- org.astron.grid.samp
- org.votech.plastic

Standard Libs/Oracle (Sun)

- com.sun.javadoc:
Debian package gcj-4.4-jre-1.6
(4.4.5-2) in "Squeeze"
- javax.help:
Debian package javahelp2 (2.0.05.ds1-4)
in "Squeeze"
- javax.imageio: Standard Library
- javax.xml: Standard Library
- org.w3c.dom: Standard Library
- org.xml.sax: Standard Library

Orphaned Dependencies (I)

unmaintained libraries included by Topcat

Starjava Libs

- uk.ac.starlink.datanode
 - uk.ac.starlink.array
 - uk.ac.starlink.ast
 - uk.ac.starlink.connect
 - uk.ac.starlink.hds
 - uk.ac.starlink.hdx
 - uk.ac.starlink.ndx
 - nom.tam.util
 - org.apache.commons.net:
Debian package
libcommons-net-java (1.4.1) in
"Squeeze"
 - org.apache.tools:
Debian package ant (1.8.0) in
"Squeeze"
- uk.ac.starlink.fits
- uk.ac.starlink.plastic
- uk.ac.starlink.sog
 - uk.ac.starlink.diva
 - diva
 - javax.acesibility:
Standard Library
 - uk.ac.starlink.jalutl
 - com.sun.media.jai.codec
 - javax.media.jai
 - uk.ac.starlink.soap
 - jsky
 - ca.nrc.cadc.arch.io
 - com.jrefinery:
Debian package
libjfreechart-java
(1.0.13) in "Squeeze"
 - com.sun.media.jai.codec
 - javax.media.jai
 - org.dom4j.io:
Debian package
libdom4j-java (1.6.1) in
"Squeeze"

- org.apache.axis:
Debian package libaxis-java
(1.4) in "Squeeze"
- org.apache.commons.logging:
Debian package
libcommons-logging-java (1.1.1)
in "Squeeze"
- com.sun.media.jai.codec
- javax.media.jai
- uk.ac.starlink.table
 - uk.ac.starlink.pal
 - edu.jhu.htm
 - gov.fnal.eng.healpix
 - javax.vecmath:
Debian package
libvecmath-java (1.5.2) in
"Squeeze"
- uk.ac.starlink.task
- uk.ac.starlink.ttools
 - uk.ac.starlink.registry
 - com.lowagie.text:
Debian package libitext-java
(2.1.7) in "Squeeze"
 - jarray
 - org.jibble.epgraphics:
Debian package libjlibepg-java
(0.1) in "Squeeze"
 - org.mortbay:
Debian package libjetty-java
(6.1.24) in "Squeeze"
 - org.python:
Debian package jython (2.5.1-2)
in "Squeeze"
 - javax.servlet:
Debian package
libervlet2.5-java in "Squeeze"
- uk.ac.starlink.util
 - sun.awt.shell
- uk.ac.starlink.vo

- adql
- net.ivoa.registry.search
 - ncsa.horizon.util
- uk.ac.starlink.votable
- uk.ac.starlink.xdoc

Third Party Libs

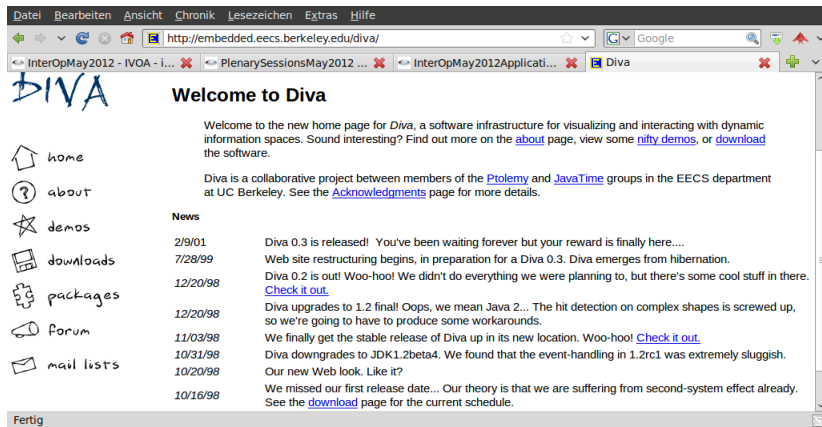
- Acme.JPM.Encoders
- eds.to.ols
- edu.jhu.pha.sdss.fits.imagelo
- edu.stanford.ejalbert
- gnu.jel
- nom.tam.fits
- org.astron.grid.samp
- org.votech.plastic

Standard Libs/Oracle (Sun)

- com.sun.javadoc:
Debian package gcj-4.4-jre-1.6
(4.4.5-2) in "Squeeze"
- javax.help:
Debian package javahelp2 (2.0.05.ds1-4)
in "Squeeze"
- javax.imagelo: Standard Library
- javax.xml: Standard Library
- org.w3c.dom: Standard Library
- org.xml.sax: Standard Library

Orphaned Dependencies (II)

- example: diva package
- last version released in April 2003



The screenshot shows a web browser window with the URL `http://embedded.eecs.berkeley.edu/diva/`. The browser's address bar and tabs are visible at the top. The page content includes:

- A large, stylized blue logo for "DIVA".
- A navigation menu on the left with icons and labels: home, about, demos, downloads, packages, forum, and mail lists.
- A main heading "Welcome to Diva".
- A paragraph of introductory text: "Welcome to the new home page for *Diva*, a software infrastructure for visualizing and interacting with dynamic information spaces. Sound interesting? Find out more on the [about](#) page, view some [nifty demos](#), or [download](#) the software."
- A paragraph of project information: "Div a is a collaborative project between members of the [Ptolemy](#) and [JavaTime](#) groups in the EECS department at UC Berkeley. See the [Acknowledgments](#) page for more details."
- A "News" section with a list of updates, each with a date and a short description. The dates range from 2/9/01 to 10/16/98.

The browser's status bar at the bottom left shows the name "Fertig".

- source code of these libraries not (yet) available

Starjava Libs

- uk.ac.starlink.datanode
 - uk.ac.starlink.array
 - uk.ac.starlink.ast
 - uk.ac.starlink.connect
 - uk.ac.starlink.hds
 - uk.ac.starlink.hdx
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Debian package
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"Squeeze"
 - org.apache.tools:
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ant (1.8.0) in
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- uk.ac.starlink.fits
- uk.ac.starlink.plastic
- uk.ac.starlink.sog
 - uk.ac.starlink.diva
 - diva
 - javax.accessibility:
Standard Library
 - uk.ac.starlink.jalutil
 - com.sun.media.jai.codec
 - javax.media.jai
 - uk.ac.starlink.soap
- jsky
 - ca.nrc.cadc.arch.io
 - com.jrefinery:
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 - com.sun.media.jai.codec
 - javax.media.jai
 - org.dom4j.io:
Debian package
libdom4j-java (1.6.1) in
"Squeeze"

- org.apache.axis:
Debian package
libaxis-java
(1.4) in "Squeeze"
- org.apache.commons.logging:
Debian package
libcommons-logging-java (1.1.1)
in "Squeeze"
- com.sun.media.jai.codec
- javax.media.jai
- uk.ac.starlink.table
 - uk.ac.starlink.pai
 - edu.jhu.htm
 - gov.fnal.eg.healpix
 - javax.vecmath:
Debian package
libvecmath-java (1.5.2) in
"Squeeze"
- uk.ac.starlink.task
- uk.ac.starlink.ttools
 - uk.ac.starlink.registry
 - com.lowagie.text:
Debian package
libitext-java
(2.1.7) in "Squeeze"
 - jarray
 - org.jibble.epsgraphics:
Debian package
libjlibepg-java
(0.1) in "Squeeze"
 - org.mortbay:
Debian package
libjetty-java
(6.1.24) in "Squeeze"
 - org.python:
Debian package
jython (2.5.1-2)
in "Squeeze"
 - javax.servlet:
Debian package
libervlet2.5-java in "Squeeze"
- uk.ac.starlink.util
 - sun.awt.shell

- uk.ac.starlink.vo
 - adql
 - net.ivoa.registry.search
 - ncsa.horizon.util
- uk.ac.starlink.votable
- uk.ac.starlink.xdoe

Third Party Libs

- Acme.JPM.Encoders
- cds.tools
- edu.jhu.pha.siss.fits.imageio
- edu.stanford.ejalbert
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- nom.tam.fits
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Standard Libs/Oracle (Sun)

- com.sun.javadoc:
Debian package
gcj-4.4-jre-1.6
(4.4.5-2) in "Squeeze"
- javax.help:
Debian package
javahelp2 (2.0.05.dst-4)
in "Squeeze"
- javax.imageio: Standard Library
- javax.xml: Standard Library
- org.w3c.dom: Standard Library
- org.xml.sax: Standard Library

dependencies with a license that does not conform to the DFSG

Starjava Libs

- uk.ac.starlink.datanode
 - uk.ac.starlink.array
 - uk.ac.starlink.ast
 - uk.ac.starlink.connect
 - uk.ac.starlink.hds
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 - org.apache.commons.net: Debian package libcommons-net-java (1.4.1) in "Squeeze"
 - org.apache.tools: Debian package ant (1.8.0) in "Squeeze"
- uk.ac.starlink.fits
- uk.ac.starlink.plastic
- uk.ac.starlink.sog
 - uk.ac.starlink.diva
 - diva
 - javax.accessibility: Standard Library
 - uk.ac.starlink.jaiutil
 - com.sun.media.jai.codec
 - javax.media.jai
 - uk.ac.starlink.soap
 - jaky
 - ca.mrc.cacdc.arch.io
 - com.jrefinery: Debian package libjrefinery-java (1.0.10) in "Squeeze"
 - com.sun.media.jai.codec
 - javax.media.jai
 - org.dom4j.io: Debian package libdom4j-java (1.6.1) in "Squeeze"
- org.apache.axis: Debian package libaxis-java (1.4) in "Squeeze"
- org.apache.commons.logging: Debian package libcommons-logging-java (1.1.1) in "Squeeze"
- com.sun.media.jai.codec
- javax.media.jai
- uk.ac.starlink.table
 - uk.ac.starlink.pal
 - edu.jhu.htm
 - gov.fnal.eng.healpix
 - javax.vecmath: Debian package libvecmath-java (1.5.2) in "Squeeze"
- uk.ac.starlink.task
- uk.ac.starlink.ttools
 - uk.ac.starlink.registry
 - com.lowagie.text: Debian package libitext-java (2.1.7) in "Squeeze"
 - jarray
 - org.jibble.epsgraphics: Debian package libjlibepsgr-java (0.1) in "Squeeze"
 - org.mortbay: Debian package libjetty-java (6.1.24) in "Squeeze"
 - org.python: Debian package jython (2.5.1-2) in "Squeeze"
 - javax.servlet: Debian package libjavax.servlet2.5-java in "Squeeze"
- uk.ac.starlink.util
 - sun.awt.shell
- uk.ac.starlink.vo
 - adql
 - net.ivoa.registry.search
 - nasa.horizon.util
- uk.ac.starlink.votable
- uk.ac.starlink.xdoc

Third Party Libs

- Acme.JPM.Encoders
- cds.to.ols
- edu.jhu.pha.sdss.fits.imageio
- edu.stanford.ejalbert
- gnu.jel
- nom.tam.fits
- org.astrogrid.samp
- org.votech.plastic

Standard Libs/Oracle (Sun)

- com.sun.javadoc: Debian package gcj-4.4-jre-11b (4.4.5-2) in "Squeeze"
- javax.help: Debian package javaxelp2 (2.0.05.ds1-4) in "Squeeze"
- javax.imageio: Standard Library
- javax.xml: Standard Library
- org.w3c.dom: Standard Library
- org.xml.sax: Standard Library

Licensing Issues (II)

- Debian package `libjai-core-java` contains the
 - ▶ `com.sun.media.jai` and
 - ▶ `javax.media.jai`classes
- distributed under the [Java Research License \(JRL\)](#)
 - ▶ created by Sun
 - ▶ to be used for non-commercial academic uses

➔ license is incompatible with the Debian Free Software Guidelines which do not place any restrictions on the fields of endeavour

Aladin and (J)SAMP

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➡ better idea: make Aladin fully JSAMP-compliant





- Debian-packaged VO software
 - ▶ modules and libraries, e.g.:
 - ★ Markus' [TAPsh](#)
 - ★ Tom McGlynn's [FITS](#) lib
 - ★ Grégory Mantelet's [ADQL](#) lib
 - ▶ applications
 - ★ first version of an [Aladin](#) package ready
 - ★ [Topcat](#): work in progress
- Debian-packaged “third-party” software required by VO software
 - ▶ PostgreSQL plugins [pgsphere](#) and [q3c](#) for the GAVO data centre
 - ▶ more than [15 Java libraries](#) for Aladin, Topcat and SPLAT

- short-term goals:
 - ▶ fix the issues mentioned in this talk (e.g. licensing, missing sources)
 - ▶ finish Debian packages for [Topcat](#), [SPLAT](#) and [DaCHS](#)
 - ▶ make our packages available to the public via a [local repository](#)
- mid-term goals:
 - ▶ bring as many packages as possible into the next [stable Debian release](#)

➔ establish the VO as a subset of Debian Science

I'd like to say...

Thank you for your attention!!

-  Josip Rodin and Osamu Aoki: Debian New Maintainers' Guide, www.debian.org/doc/manuals/maint-guide/maint-guide.en.pdf, www.debian.org/doc/manuals/maint-guide/index.en.html.
-  Lukas Nussbaum: Debian Packaging Tutorial, www.debian.org/doc/manuals/packaging-tutorial/packaging-tutorial.en.pdf.
-  Joe Brockmeier: Create Debian Linux packages, www.ibm.com/developerworks/linux/library/l-debpkg/index.html.
-  IVOA Recommendation. Simple Application Messaging Protocol Version 1.3, <http://www.ivoa.net/Documents/SAMP/>.

Source and Binary Packages

- Debian source packages
 - ▶ `package_version.orig.tar.gz`: original [upstream source code](#) tarball
 - ▶ `package_version-revision.debian.tar.gz`: contents of the [debian/](#) directory
 - ▶ `package_version-revision.dsc`: summary of the contents of the source code generated from the [control](#) file
- Debian binary packages
 - ▶ `package_version-revision_arch.deb`: completed binary package