# OpenSolaris for Human Beings

Martin Man <mman@martinman.net>

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# Agenda

...few words about me...
...from the Jonathan's blog...
...history and features of Nexenta...
...real use examples...

# My History

I'm a **Debian/GNU** and **Ubuntu Linux**
user and developer
for more than **8 years**

# My Career

I work for **Sun Microsystems**
as a **sustaining engineer**

# My Hobbies

I'm into
**usability** of any kind...
...**software usability** notwithstanding

# and most importantly

I am a **HUMAN BEING**

# Obsession

**Memory** and **CPU cycles** of **my brain**
are **very expensive**

I am not going to waste them for the tasks

**my computer can do better**

**...let's see**
**what (some) Solaris users say...**

# Quotes from the Jonathan's blog

...I'm **Solaris admin** for almost **10 years**...

...the **fundamentals** of the OS are **unbeatable**...

...install, update and **daily use** are probably the **worst in the field**, OK maybe on par with AIX...

*Posted by Scot Balard on January 21, 2007 at 08:33 AM PST #*

# Quotes from the Jonathan's blog

...The **debian etch** RC1 netinstall cd is **150MB**...

...I **apt-get install** the software I want...

...**apt-get upgrade**
and **under 2 hours** I have a fully working system...

...**I want Solaris to be that easy**...

*Posted by Christopher Mahan on January 20, 2007 at 01:12 PM PST #*

# Quotes from the Jonathan's blog

...I was simply **blown away** by the kind of ... **innovation in** your hardware systems and **Solaris**...

...**Terrific Technology** that is **made unusable by tiny things**...

...What is surprising for me is that **these things should be trivial to fix**...

*Posted by Terry William on January 20, 2007 at 11:23 AM PST #*

# Demo 1

apt-get into OpenSolaris

# History of Nexenta OS

Founded
and sponsored by
**Nexenta Systems Inc.**

sharing
the principles of
**Debian Social Contract**
**Debian Free Software Guidelines**
**Ubuntu Code of Conduct**

# The Mission of Nexenta

... is to create an
**OpenSolaris** based distribution
for **Human Beings**

... an Operating System combining
the best of **OpenSolaris**
with the best of **Debian**, **GNU**, and **Ubuntu**

# Bridging the gap

You can do
**mdb**, **pstack**, **dtrace**, **zonecfg**, **zpool**

... but you can also do
**apt-get**, **apt-cache**, **dpkg-buildpackage**

# Available Software

**~12k** packages already available,
compared to **~20k** present ATM
in Debian/GNU and Ubuntu

Firefox, Thunderbird, OpenOffice, Gimp,
Inkscape, MySQL, PostgreSQL, Apache, Perl,
Python, Ruby, Mono, Tomcat, Rails

# Compatibility with Solaris

**pkgadd(1m)** and **pkgrm(1m)**
implemented on top of **alien(1)** and **dpkg(1)**

Solaris like execution environment
enforced when using
**$ SUN_PERSONALITY=1 /bin/sh**

# Demo 2

What PERSONALITY do I have?
Debian, Ubuntu, or Sun?

# Trivia of Debian based systems

Distribution is collection of software packages.
It can be **stable**, **testing**, or **unstable**.

**Repositories** are **HTTP** accessible
directories of **packages**.

**Users decide**
what distribution/repositories they want to use
(security, commercial, company specific)

# Debian repository structure

**Packages** uploaded within a **repository** are categorized into **components**.

Categorization is **distribution specific** and can follow different rules.

# Debian/GNU components

**main** contains
all software that is DFSG compliant

**contrib** contains free software
that depends on some non-free software

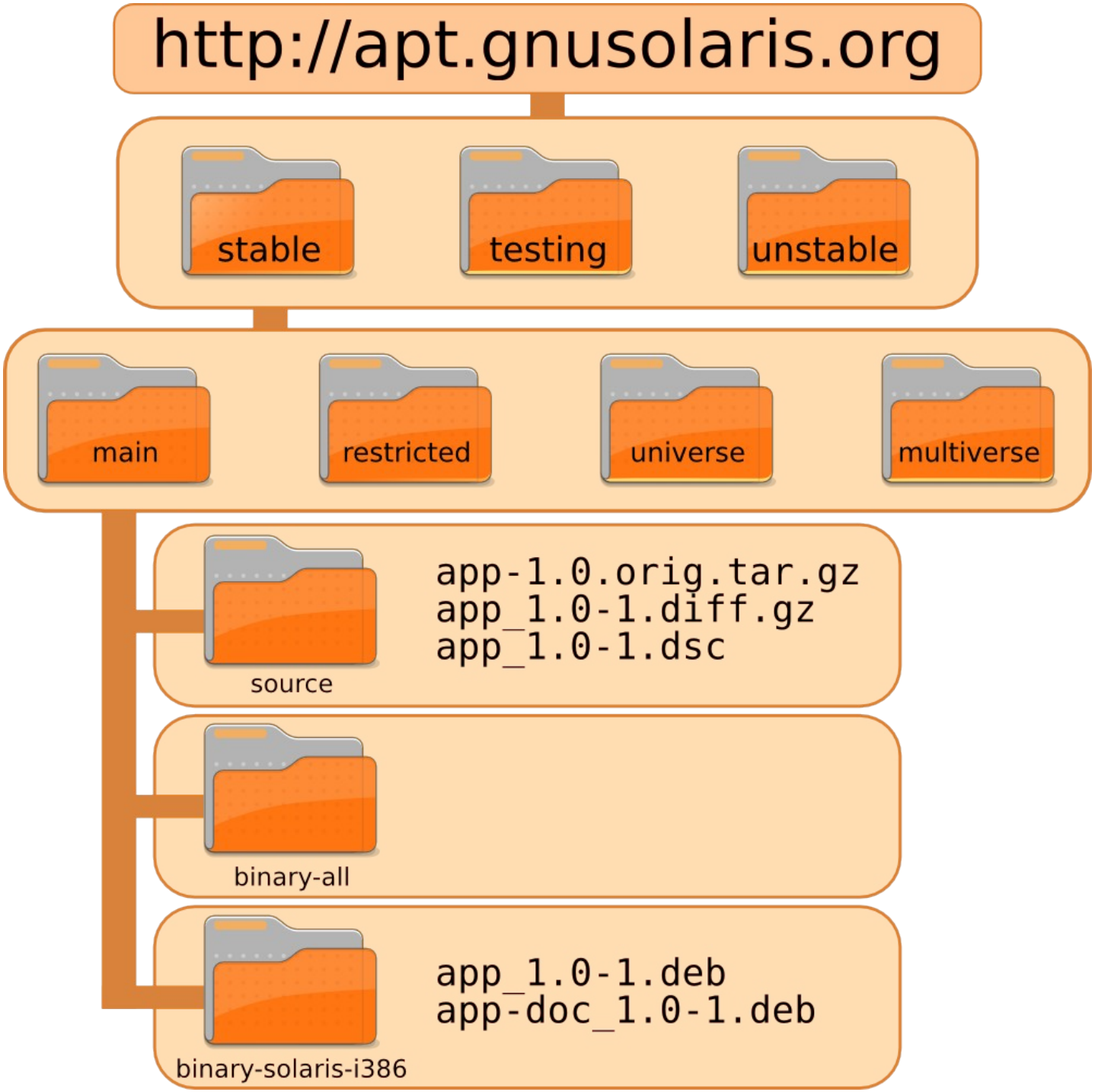
**non-free** contains all software
that is restricting the freedom of the users

# Ubuntu components

**main** contains
free and supported software

**restricted** contains
non-free but supported software

**universe** / **multiverse** contain
free / non-free and unsupported software

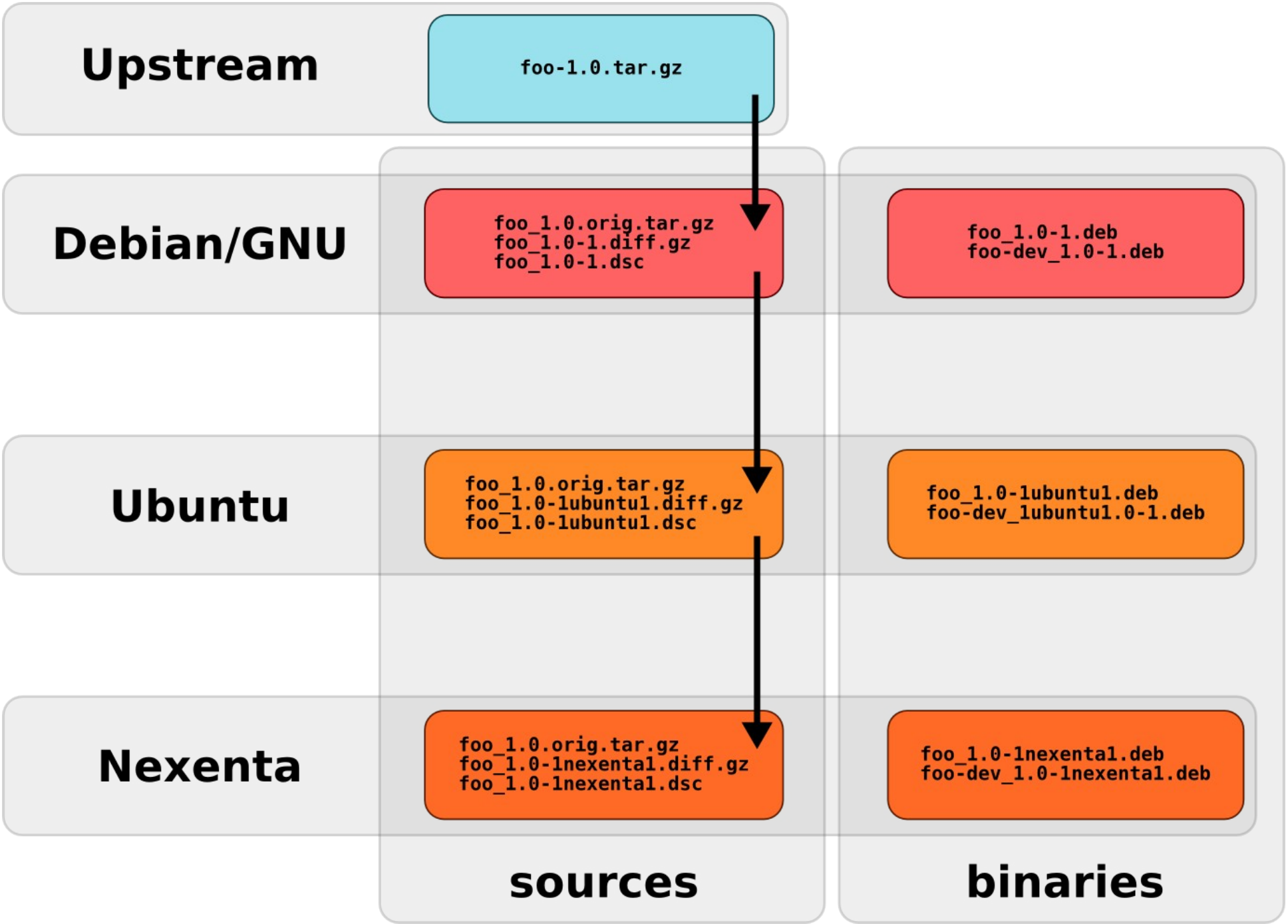

http://apt.gnusolaris.org
stable
testing
unstable
main
restricted
universe
multiverse
source
app-1.0.orig.tar.gz
app_1.0-1.diff.gz
app_1.0-1.dsc
binary-all
binary-solaris-i386
app_1.0-1.deb
app-doc_1.0-1.deb

# Nexenta structure

**Nexenta Repositories**
follow **follow the Ubuntu** structure.

Packages **originate**
in **Ubuntu** and Debian/GNU Linux.

**Nexenta centric development** concentrated
around **seamless integration**
of **OpenSolaris** world and **GNU** world.

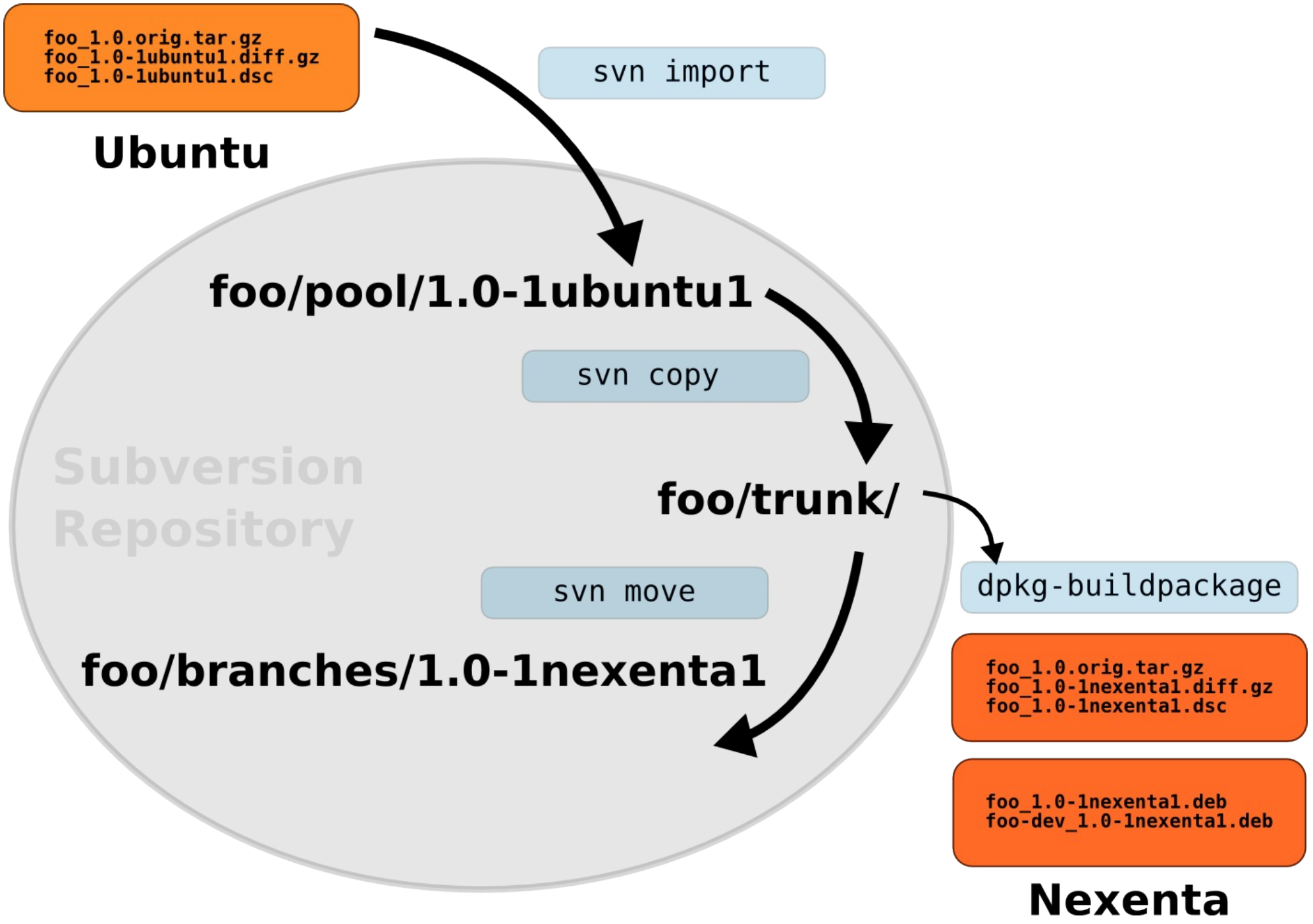

Upstream
foo-1.0.tar.gz
Debian/GNU
foo_1.0.orig.tar.gz
foo_1.0-1.diff.gz
foo_1.0-1.dsc
foo_1.0-1.deb
foo-dev_1.0-1.deb
Ubuntu
foo_1.0.orig.tar.gz
foo_1.0-1ubuntu1.diff.gz
foo_1.0-1ubuntu1.dsc
foo_1.0-1ubuntu1.deb
foo-dev_1ubuntu1.0-1.deb
Nexenta
foo_1.0.orig.tar.gz
foo_1.0-1nexenta1.diff.gz
foo_1.0-1nexenta1.dsc
foo_1.0-1nexenta1.deb
foo-dev_1.0-1nexenta1.deb
sources
binaries

# Nexenta internals

**OpenSolaris Core** (**SUNW** packages)
compiled on Solaris Express
and packaged into **.deb** packages.

Userland packages coming from
Ubuntu and Debian/GNU managed in a big
**Subversion repository** stored in a **ZFS** pool.

**dpkg-buildpackage** and **svn** skills
needed to become a maintainer


foo_1.0.orig.tar.gz
foo_1.0-1ubuntu1.diff.gz
foo_1.0-1ubuntu1.dsc
Ubuntu
svn import
foo/pool/1.0-1ubuntu1
svn copy
Subversion
Repository
foo/trunk/
svn move
foo/branches/1.0-1nexenta1
dpkg-buildpackage
foo_1.0.orig.tar.gz
foo_1.0-1nexenta1.diff.gz
foo_1.0-1nexenta1.dsc
foo_1.0-1nexenta1.deb
foo-dev_1.0-1nexenta1.deb
Nexenta

# Demo 3

Ruby on Rails in a Zone has never been that easy

# Goals for the first stable release

**Ubuntu 6.06 LTS Dapper Drake** packages ported to OpenSolaris and available in Nexenta

**Installer improvements** (manual partitioning and slicing too complex for most of the users)

**Seamless Integration** of **native OpenSolaris technologies**
(ZFS and Dtrace work out of the box, SMF, Zones need some work)

# Obstacles

**Linux** and **GNU** uses **GNU CC/GNU linker**

**OpenSolaris** uses **Sun CC/Sun linker**

**GNU linker has bugs on OpenSolaris**
bugs that Sun is not going to fix
and GNU does not care about

# Resources

http://www.gnusolaris.org

# Questions and Answers

Thank you
for **your** time.