Introducing Myself

- Software engineering and Unices since 1988
  - Mostly Configuration Management Systems (CMS), Build systems, quality tools, on multiple commercial Unix systems
  - Discover Open Source & Linux (OSL) & first contributions in 1993
  - Full time on OSL since 1995, first as HP reseller then @HP

- Currently:
  - Master Technology **Architect** on OSL for the HP/Intel Solution Center, Grenoble
  - OSL HP **Advocate**
  - EMEA OSL HP **Profession Lead**
  - Solutions Linux Conference and OWF board member
  - MondoRescue, Dploy.org, Project-Builder.org **project lead**
  - LinuxCOE, mrepo, tellico, rinse, fossology, collectl **contributor**
  - FOSSBazaar and OSL **Governance** enthusiast
  - Mandriva, Mageia, Fedora **packager**

FOSSology.org

FOSS-ology

The study of FOSS
(Free Open Source Software)

Goal

The **goal** of the FOSSology project is to create tools and a framework to reduce fear, uncertainty, and doubt in the use, development, and distribution of open source software.

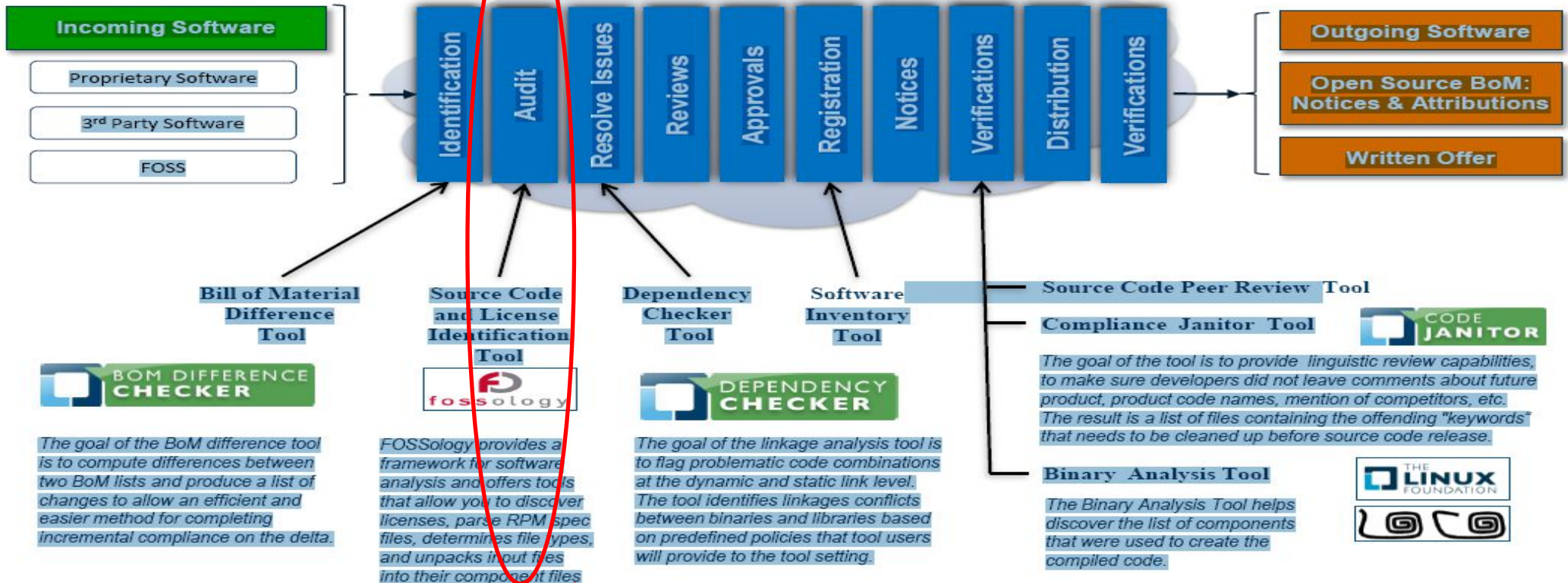FOSSology is a static analysis **framework** to learn what we can by scanning FOSS itself.

Analyze the code, **save** the results in a database, **report** results through a Web (or scripted) interface.

Fossology in linux fundation

LF tools are designed to be practical and easy to fit into a simple FOSS compliance process
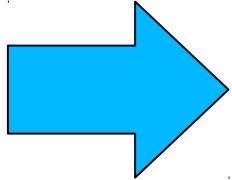
Incoming Software
- Proprietary Software
- 3rd Party Software
- FOSS

Identification → Audit → Resolve Issues → Reviews → Approvals → Registration → Notices → Verifications → Distribution → Verifications

Outgoing Software
- Open Source BoM: Notices & Attributions
- Written Offer

Bill of Material Difference Tool

BOM DIFFERENCE CHECKER

The goal of the BoM difference tool is to compute differences between two BoM lists and produce a list of changes to allow an efficient and easier method for completing incremental compliance on the delta.

Source Code and License Identification Tool

fossology

FOSSology provides a framework for software analysis and offers tools that allow you to discover licenses, parse RPM spec files, determines file types, and unpacks input files into their component files

Dependency Checker Tool

DEPENDENCY CHECKER

The goal of the linkage analysis tool is to flag problematic code combinations at the dynamic and static link level. The tool identifies linkages conflicts between binaries and libraries based on predefined policies that tool users will provide to the tool setting.

Software Inventory Tool

Source Code Peer Review Tool

Compliance Janitor Tool

CODE JANITOR

The goal of the tool is to provide linguistic review capabilities, to make sure developers did not leave comments about future product, product code names, mention of competitors, etc. The result is a list of files containing the offending "keywords" that needs to be cleaned up before source code release.

Binary Analysis Tool

THE LINUX FOUNDATION

The Binary Analysis Tool helps discover the list of components that were used to create the compiled code.

What ?

Our goal is to provide **tools** to solve major FOSS governance problems. Such as:

License Management
Code Plagiarism
Vulnerability tracking

Example

Our goal is to provide **tools** to solve major FOSS governance problems. Such as:

License Management
Code Plagiarism
Vulnerability tracking

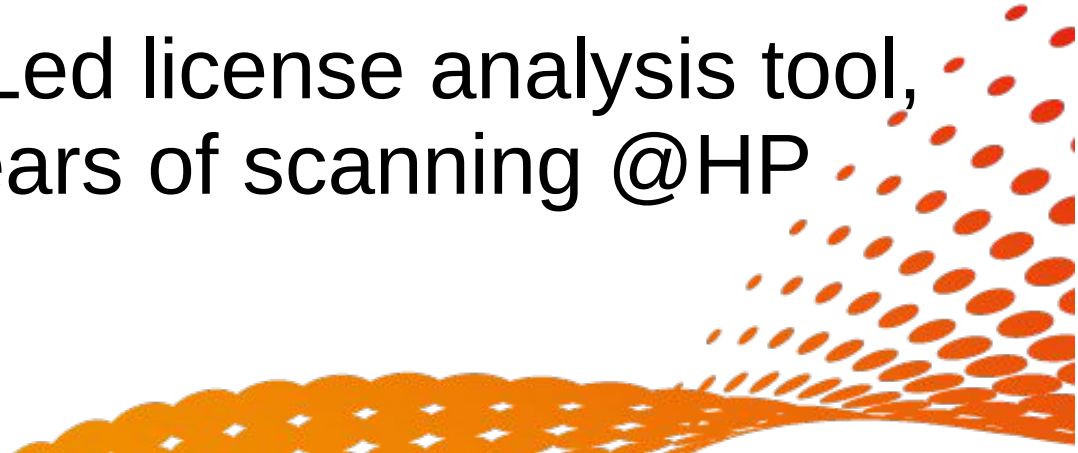# License Discovery

Scan every single file in a tar file (or package, or distro or …)

Fuzzy **match** against a library of > 400 known licenses.

Examine the non-matching portions looking for text that could be an unknown **license.**

Nomos, the now GPLed license analysis tool, is the result of 10+ years of scanning @HP

A Simple FOSSology Process Flow

Submit software to the FOSSology batch queue

File upload screenshot

Let's Use FOSSology

1 Submit for processing

2 **Wait for analysis**

3 View License Results

Show Job Queue

Queued | Scheduled | Running | Finished | Blocked | Failed

Fedora-9-source-DVD.iso

Job/Dependency	Job Name: license
925 / 924	license
926 / 925	licinspect
927 / 926	filter_clean
928 / 927	sqlagent
929 / 928	sqlagent

Done

---

http://osrb-1.fc.hp.com/repo/?mod=runningjobs

Home   Search   Browse   Upload   Organize   Jobs   Admin   Help

fossology Show Agent Status

User: Xuser
logout

Refresh

Update time	Status	Agent Name	Host	Parameters
2008-11-10 13:50:22	RUNNING	scheduler	sirius	
2008-11-10 13:50:22	RUNNING	license	buckbeak.rags	akey="2422214" a="93DBEA23265D03118EDCA53B906D6428A1092775.1E6 size="95096"
2008-11-10 13:50:22	RUNNING	license	buckbeak.rags	akey="2501746" a="24618D4FFE5E5660267310AD9E05A3293389E194.9E00 size="95110"
2008-11-10 13:50:22	RUNNING	license	buckbeak.rags	akey="2345839" a="4975DD0846B5B46638B0F0035BEFDC538384684B.F128 size="95133"
2008-11-10 13:50:22	RUNNING	license	fawkes.rags	akey="2555923" a="D0B2D4A77059B8510532EF2303E816ACE9867AA9.0E1 size="95139"
2008-11-10 13:50:22	RUNNING	license	fawkes.rags	akey="2487061" a="1E6C93915221B79A6443FEEBED2E792F75E4C38E.989A size="95129"
2008-11-10 13:50:22	RUNNING	license	fawkes.rags	akey="2018867" a="804CDEF7488B38616852B2477C660F2C8706D13B.D66 size="95101"
2008-11-10 13:50:22	FREE	fosscp_agent	buckbeak.rags	
2008-11-10 13:50:22	FREE	wget	buckbeak.rags	
2008-11-10 13:50:22	FREE	unpack	buckbeak.rags	
2008-11-10	FREE	filter_license	buckbeak.rags	

Done

OPEN SOURCE
SOLUTIONS
INITIATIVE

Nomos License Browser - Mozilla Firefox

File   Edit   View   History   Bookmarks   Tools   Help

http://randotest.ostt/repo/?mod=nomoslicense&show=de

@hp Employee Portal   Fossology ▾   Languages ▾   Home - OSPO Tools ...   repo.fossology.org   »

Nomos License Browser

Home   Search   Browse   Upload   Organize   Jobs   Admin   Obsolete   Help

fossology   **Nomos License Browser**

User: demo
logout

Folder: **Software Repository**/ **Examples**/
FOSSologyExample.tar.bz2/ fossology
Bucket Browser | Copyright/Email/URL | Browse | Nomos License | Nomos License List | Nomos License List Download   •   bsam
License | License Tree | License Groups   •   Refresh

Count	Files	License Name
225	Show	GPL_v2
41	Show	(C)HP-Dev
29	Show	No License Found
24	Show	GPL
17	Show	LGPL_v2.1
2	Show	Apache_v2.0
2	Show	(C)IETF
2	Show	GFDL
2	Show	Public-domain-claim
1	Show	APSL_v2.0
1	Show	Artistic
1	Show	Boost
1	Show	BSD
1	Show	FSF-possibility
1	Show	GPL_v2.1+
1	Show	GPL_v3
1	Show	Indemnity
1	Show	LGPL_v2.1+

agents/
   Apache_v2.0 ,(C)HP-Dev ,(C)IETF
   ,FSF-possibility ,GPL ,GPL_v2 ,No License
   Found ,PHP-possibility ,Public-domain-claim
   ,X11-possibility
cli/
   (C)HP-Dev ,GPL_v2 ,No License Found
debian/
devel/
   (C)HP-Dev ,LGPL_v2.1 ,No License Found
Makefile   [View][Info]
   (C)HP-Dev   [Download]
Makefile.conf   [View][Info]
   (C)HP-Dev   [Download]
mkcheck.sh   [View][Info]
   GPL_v2   [Download]
mkinstall.sh   [View][Info]
   GPL_v2   [Download]
mktar.sh   [View][Info]
   GPL_v2   [Download]
mkuninstall.sh   [View][Info]
   GPL_v2   [Download]

Done

Download   No Rank
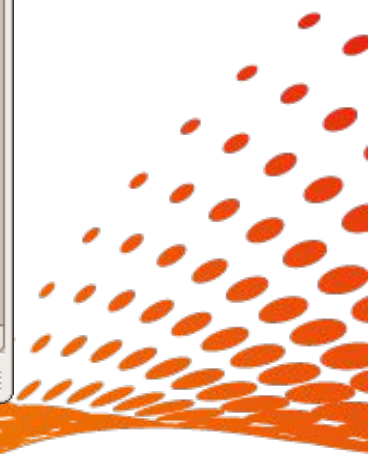
Disturbing Image

Know Thy Licenses

Skype's GPL Follies

Posted by Serdar Yegulalp, May 9, 2008 12:29 PM

From: David Turner <novalis@fsf.org>
To: linux-kernel@vger.kernel.org
Subject: Linksys/Cisco GPL Violations

xtreme Networks Latest Target Of GPL Enforcement

This is the sixth lawsuit the Software Freedom Law Center has filed
BusyBox seeking to uphold open source software principles.

By Charles Babcock
InformationWeek

July 22, 2008 01:30 PM

Verizon Settles Open Source Software Law

The issue centered on claims that a subcontractor used an o
called BusyBox in Verizon's wireless routers.

By Paul McDougall
InformationWeek

March 17, 2008 12:50 PM

Alleged GPL violation spurs accusations, lawsuit

By Bruce Byfield on September 14, 2006 (8:00:00 AM)

Asus resolves Eee GPL violation, releases asus_acpi code changes

By Ryan Paul I Published: November 27, 2007 - 05:45PM CT

Defendant is ordered to disclose to Plaintiff how many items of the data storage unit "[...] Wireless G
Network media Storage DSM-G600" Defendant has acquired, the number of items of this data storage
unit Defendant has sold, the identity of the commercial purchasers of the device, and from whom

Public repository

Hosted by FOSSBazaar, under the Linux Foundation.

Oregon State University
   – Open Source Lab (OSUOSL)

Public availability June 2008 (available today with authorization)

Public repository

Hosted by FOSSBazaar, under the Linux Foundation.

Oregon State University
– Open Source Lab (OSUOSL)

Public availability June 2008 (available today with authorization)
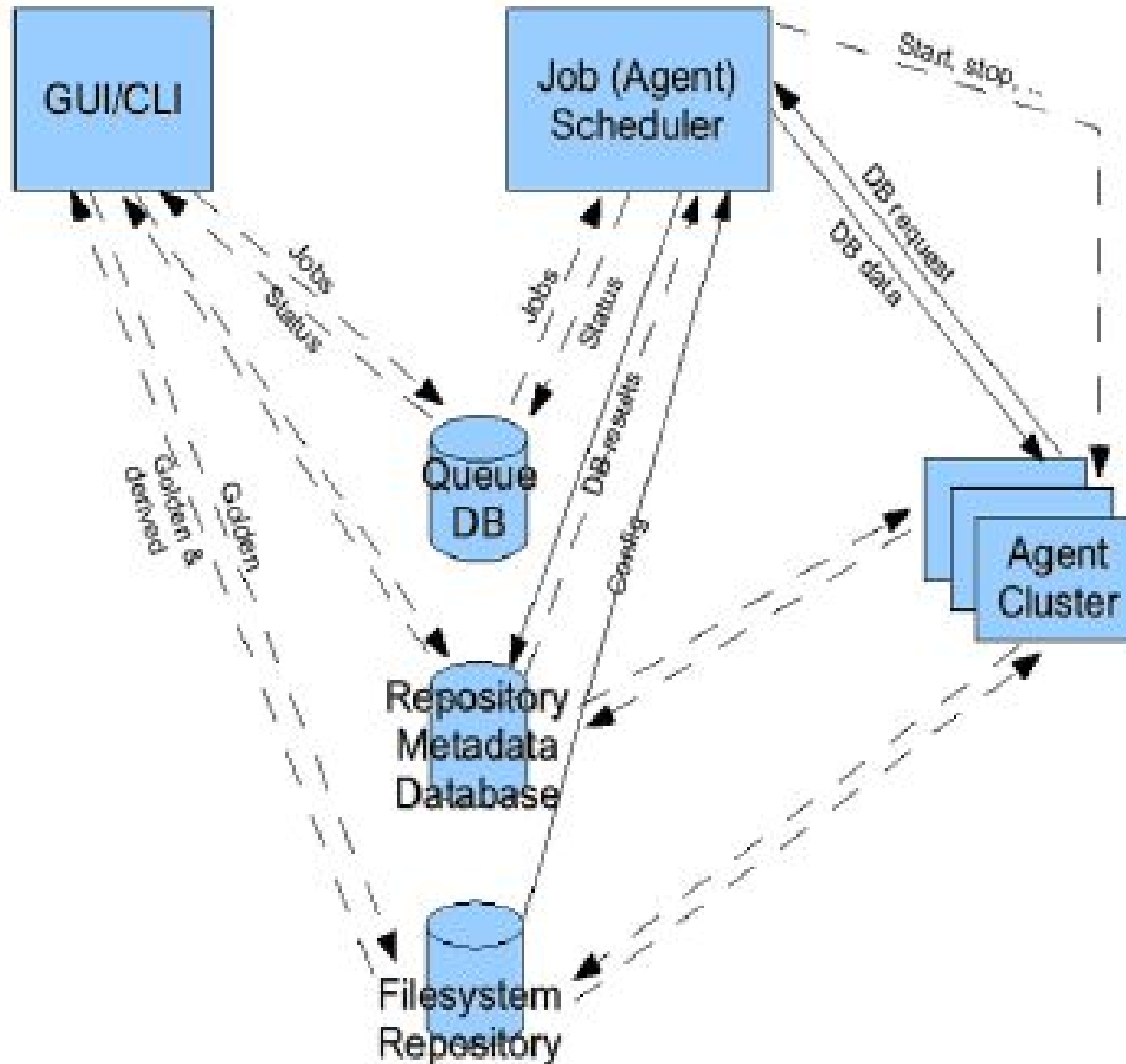
Example

Major FOSS Governance problems:

License discovery
Code plagiarism
Vulnerability tracking

Future

Future
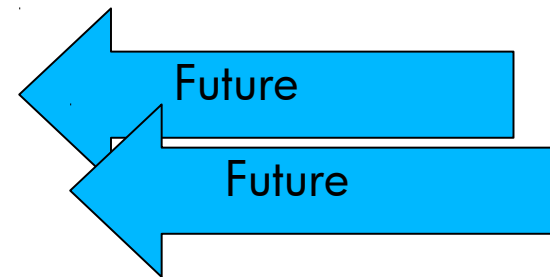
Architecture

Requirements

- Linux System

- Apache Web Server 2.x

- PHP 5.x

- PostgreSQL > 8.3

- Some libraries (libmagic, libxml2, libextractor)

- Some commands (ar, bzcat, cabextract, fls cpio, dpkg, icat, isoinfo, pdftotext, rpm, rpm2cpio, tar, upx-ucl, unrar, unzip, wget, zcat)

- Disk Space

- CPU resources

Other uses for FOSSology

Copyright geneology

Trademark search

Vulnerability tracking

Dependency graphs

Distro, package, file diffs
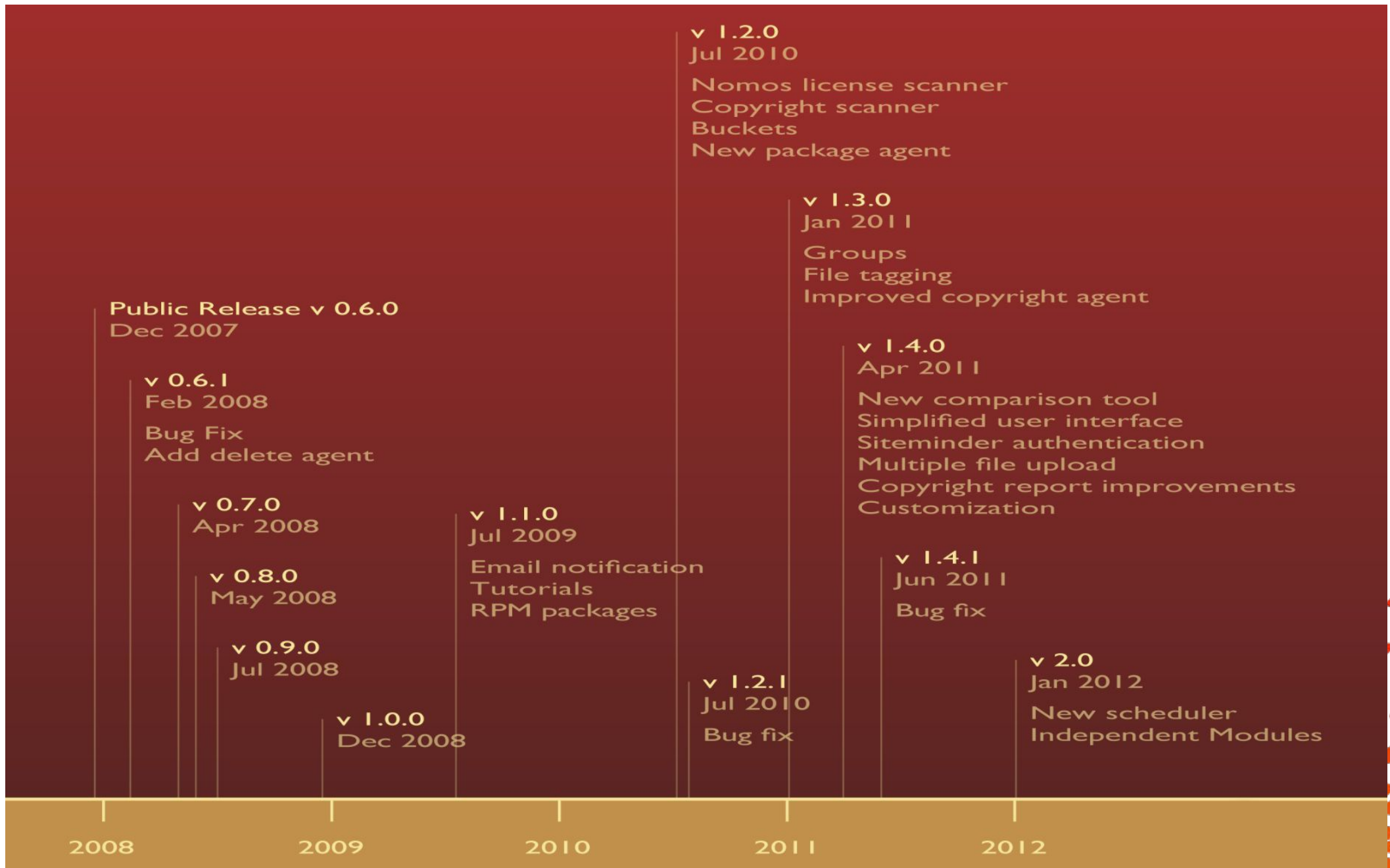
Localization reports

?

Your input here

An Open Source project.

=>

Contributions are encouraged.

What's new in fossology 1.1.0

Email notification of job status on per user basis.

Roll-up of many bug fixes.

Several **new license templates** added.

Code cleanup for improved efficiency and maintainability.

Tutorial section, with examples, added to fossology.org.

Lots of new **tests** added to the automated test suite.

RPM packages for RHEL4/5, CentOS4/5 in addition to Debian ones

Many improvements to **scheduler** to improve robustness (watchdog)

What's new in fossology 1.2.1

Nomos: Much faster and accurate licence scanner. New heuristic based on small phrases and phrases relative to other phrases.

Much **faster report** (Web page) generation.

Buckets: Creation of categories in licence reports (e.g. 'good licence', 'commercial licenses', 'files without licence', …). No UI. But a very powerfull way of adding licence processing.

Copyright/URL/email **scanner**. Not fully accurate, but useful for beta-testers.

Cataloging both RPM and Debian **package data**.

Meta data

View Meta Data

Folder: **Software Repository**/ **Fedora8-Test2**/ **d-f**/ **eclipse**/
eclipse/ eclipse/ **eclipse.spec**

Item	Meta Data	
1	Unpacked file type	application/x-rpm-spec
2	Copyright	Eclipse Public License
3	Epoch	1
4	Group	Development/Languages
5	Group	Text Editors/Integrated Development Environm...
6	License	Eclipse Public License
7	Name	eclipse
8	Name	eclipse-cvs-client
9	Name	eclipse-jdt
10	Name	eclipse-pde
11	Name	eclipse-pde-runtime
12	Name	eclipse-platform
13	Name	eclipse-rcp
14	Name	libswt3-gtk2
15	Obsoletes	ecj
16	Obsoletes	eclipse-sdk
17	Provides	ecj
18	Provides	eclipse
19	Provides	eclipse-sdk
20	Release	19
21	Requires	ant-antlr
22	Requires	ant-apache-bcel
23	Requires	ant-apache-log4j
24	Requires	ant-apache-oro
25	Requires	ant-apache-regexp
26	Requires	ant-apache-resolver
27	Requires	ant-commons-logging
28	Requires	ant-javamail

73	Requires	lucene-contrib >= 1.9.1
74	Requires	mx4j >= 2.1
75	Requires	regexp
76	Requires	rpmlib(VersionedDependencies) <= 3.0.3-1
77	Requires	tomcat5 >= 5.5.23-9jpp.4
78	Requires	tomcat5-jasper-eclipse >= 5.5.23-9jpp.4
79	Requires	tomcat5-jsp-2.0-api >= 5.5.23-9jpp.4
80	Requires	tomcat5-servlet-2.4-api >= 5.5.23-9jpp.4
81	Requires	/usr/lib64/eclipse/plugins/org.eclipse.swt.gtk...
82	Summary	An open, extensible IDE
83	Summary	Eclipse Compiler for Java
84	Summary	Eclipse CVS Client
85	Summary	Eclipse Java Development Tools
86	Summary	Eclipse platform common files
87	Summary	Eclipse Plugin Development Environment
88	Summary	Eclipse Plugin Development Environment run...
89	Summary	Eclipse Rich Client Platform
90	Summary	SWT Library for GTK+-2.0
91	URL	http://www.eclipse.org/
92	Version	3.3.0

Total meta data records: 92

Bucket Browser - Mozilla Firefox

File   Edit   View   History   Bookmarks   Tools   Help

http://randotest.ostt/repo/?mod=bucketbrowser&show=

@hp Employee Portal | Fossology | Languages | Home - OSPO Tools ... | repo.fossology.org

Bucket Browser

fossology   **Bucket Browser**

Home   Search   Browse   Upload   Organize   Jobs   Admin   Obsolete   Help

User: demo
logout

Folder: Software Repository/ Examples/
FOSSologyExample.tar.bz2/ fossology
Copyright/Email/URL | Nomos License | Browse | Bucket Browser | Nomos License List | Nomos License List Download   •   bsam
License | License Tree | License Groups   •   Refresh

Bucket Pool: GPL Demo bucket pool

Count	Files	Bucket
268	Show	GPL Licenses (Demo)
77	Show	non-gpl (Demo)

Unique buckets: 2

- 0 source packages
- 0 binary packages
- 0 binary packages with no source package

agents/
GPL Licenses (Demo), non-gpl (Demo)
cli/
GPL Licenses (Demo), non-gpl (Demo)
debian/
devel/
GPL Licenses (Demo), non-gpl (Demo)
Makefile   [View][Info][Download]
non-gpl (Demo)
Makefile.conf   [View][Info][Download]
non-gpl (Demo)
mkcheck.sh   [View][Info][Download]
GPL Licenses (Demo)
mkinstall.sh   [View][Info][Download]
GPL Licenses (Demo)
mktar.sh   [View][Info][Download]
GPL Licenses (Demo)
mkuninstall.sh   [View][Info][Download]
GPL Licenses (Demo)
README   [View][Info][Download]
non-gpl (Demo)
scheduler/
GPL Licenses (Demo), non-gpl (Demo)
setup/
non-gpl (Demo)
tests/
GPL Licenses (Demo), non-gpl (Demo)
ui/
GPL Licenses (Demo), non-gpl (Demo)
utils/
GPL Licenses (Demo), non-gpl (Demo)

Done

Download   No Rank

What's new in fossology 1.3.0

BSAM analyser retired.

File **tagging**: attach short (max 32 chars) tag, + long text to a container.

Implementing **access control** (user groups)

Unpack agent performance improvements.

New and faster **copyright agent**.

I18n support.

Use project-builder.org to create **upstream packages** (Fedora, RHEL, CentOS, as a start)

QA

What's new in fossology 1.4.[01]

New **Comparison tool**: focus on diff between 2 file trees.

New **Simplified UI** (now default) in addition to the original one (customizable at user level).

Improved **User documentation**.

Multiple file **upload** from URL.

What's new in fossology 2.0

Announced Jun 7, 2012 : **Restructure**, few new features.

New more robust **batch scheduler** (redesigned)
More **modularity** in code (ease contributions for agents and allow module release independantly).
Improved **tags** management, code **documentation, testing**
Scan logs independant from scheduler logs. UI viewable

Future:
– SPDX support http://spdx.org/
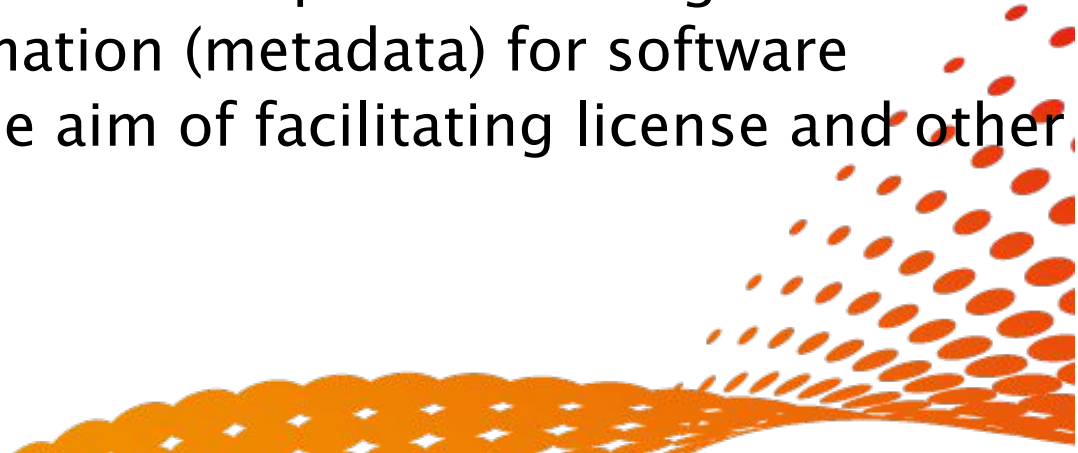The goal of this specification is to enable companies and organizations to share license and component information (metadata) for software package and related content with the aim of facilitating license and other policy compliance.
– Binary analysis
– Dependency analysis

FLOSS Governance Workshop

Workshop designed to guide through the top issues around management of Open Source in the enterprise.

Targeted at a cross-organizational audience, including auditing, legal, procurement, operational risk management, technology strategy, and line-of-business departments

Open Source Baseline

Business Drivers
Various open source touch points in your company
Awareness, responsibilities , risks, processes

Legal Aspects of Open Source Governance

Assessment of Free and Open source software phenomenon
Detailed discussion of Open Source Licenses
Bridging the legal and technical communities
Other considerations: WEB–based services, mergers and acquisitions, other

Automating Open Source Compliance

Open Source discovery
License detection and analysis

Open Source Policy Best Practices

Use of open source – when appropriate,

when not appropriate for your business

Review of licenses, product distribution

considerations

Considerations for employee contribution to

open source community

Company relationship with community

Open Source Governance Processes

Best practices for open source tracking, review

and management

Open Source Compliance Lifecycle, workflow

Building Internal Open Source Communities

Community Update

- OW2 Experience
  - Compulsory
  - Positive
  - Requests
  - Develop filters
  - Separate account

- Eclipse plugin
  - Todo list

SQuAT_Fossology

This page contains the list of the FOSSology analysis for mature OW2 projects in a first table, and, in a second table, for other OW2 projects. Thanks to the FOSSology project, the FOSSology team at Hewlett Packard and the Oregon State University Open Source Labs for their hosting and support!

OW2 Mature Project	FOSSology analysis	Version analyzed
ASM	Analysis link	ASM 3.3.2
Acceleo	Analysis link	Acceleo 2.8.0
Bonita	Analysis link	Bonita Open Solution 5.5
CARDAMOM	Analysis link	CARDAMOM 4.2
CAROL	Analysis link	CAROL 3.0.8
CLIF	Analysis link	CLIF 2.0.5
Chameleon	Analysis link	Chameleon (June 7, 2011)
EasyBeans	Analysis link	EasyBeans 1.2.0 M4
Fractal	Analysis link	Fractal (set of components) on June 22, 2011
GASP	Analysis link	GASP 1.0.5
JOPE	Analysis link	JOPE 5.1.2
JORAM	Analysis link	JORAM 5.5.0
JOTM	Analysis link	JOTM 2.2.1
JOnAS	Analysis link	JOnAS 5.3.0 M2
JavaService	Analysis link	JavaService 2.0.10
LemonLDAP::NG	Analysis link	LemonLDAP::NG 1.0.6
NovaForge	Analysis link	NovaForge 2.8.1
Open Mobile IS	Analysis link	OpenMobileIS 1.0
Orbeon Forms	Analysis link	Orbeon Forms 3.9.0
Orchestra	Analysis link	Orchestra PVM 4.7.1

Web Resources

- **FOSSOlogy**
  http://www.fossology.org
- **Mailing Lists, contacts**
  http://fossology.org/contact_us   fossology@fossology.org
- **IRC**
  #fossology on irc.oftc.net :6667
- **Plume** details
  http://www.projet-plume.org/fiche/fossology
- **Project-Builder**
  http://trac.project-builder.org
- Open Source at **HP**
  http://opensource.hp.com
- **ProLiant** & Linux
  http://www.hp.com/go/proliantlinux
- **Linux Foundation** Open Compliance Program
  http://www.linuxfoundation.org

http://www.linuxfoundation.org/programs/legal/compliance

FOSSology **users**:

HP, ALU, Siemens, INRIA, OW2

"The evolution of FLOSS and the Internet are tightly coupled"

FOSSology
Advancing open source analysis and development

FOSSology in the News

FOSSology 1.4.0 RC5 available See below for details.

Nathan Willis: Weekend Project: Get to Know Your Source Code with FOSSology

A Linux Foundation paper on FOSSology using v 1.2

The FOSSology Project

Our mission is to build free software tools to facilitate the study and analysis of Free and Open Source

Installing the FOSSology software:

- creates an empty software filesystem repository
- creates a database (PostgreSQL) for metadata storage and retrieval
- provides web and command line interfaces to populate the software repository
- provides web interface for viewing reports
- provides a batch subsystem for running lengthy analyses and reports
- provides engines (run from the web or cli) for:
  - License analysis (analyzes EVERY file for license information)
  - RPM spec file parsing
  - metadata extraction from libextractor (jpg headers, pdf, doc, …)
  - file type
  - executing ad hoc sql
  - executing ad hoc scripts

FOSSology 1.4.0 Release Candidate 5, May 2011

- RC5 Announced 5/2/2011
- Release notes are here.

FOSSology
» Home
» About FOSSology
» Download
» Install FOSSology
» Contact Us
» License
» Related Projects

Users
» User Docs
» Screenshots
» Videos
» FAQ
» Release Notes

Developers
» Developer Docs
» Source Code
» Coming up
» Contributing

SysAdmins
» Administration & Installation
» Buckets
» Login

OPEN SOURCE SOLUTIONS INITIATIVE

Contact – Thanks

Bruno.Cornec@hp.com

(Open Source and Linux Technology Architect at the HP/Intel Solution Center)

http://www.hp.com/linux

http://opensource.hp.com
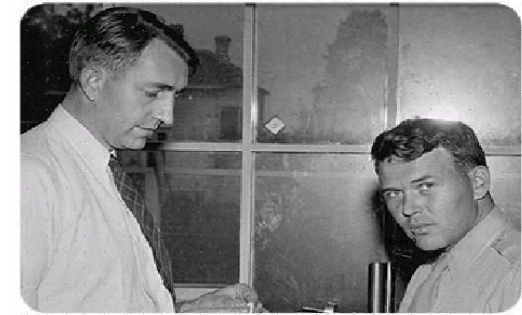
http://fossology.org

Thanks goes to:

Linus Torvalds, Richard Stallman, Eric Raymond, Nat Makarevitch, René Cougnenc, Eric Dumas, Rémy Card, Bdale Garbee, Bryan Gartner, Mary Laser, Gallig Renaud, Vincent Ma, Phil Robb, Bob Gobeille, Martin Michlmayr among others, for their work and devotion to the Open Source Software cause... and my family for their patience :-)

 Changes are never easy to make. There is comfort and safety in tradition, but change must come, no matter how painful or expensive it may be."

Bill Hewlett