




# Open Source Software Licensing

Dr. Luis Ibanez, Kitware

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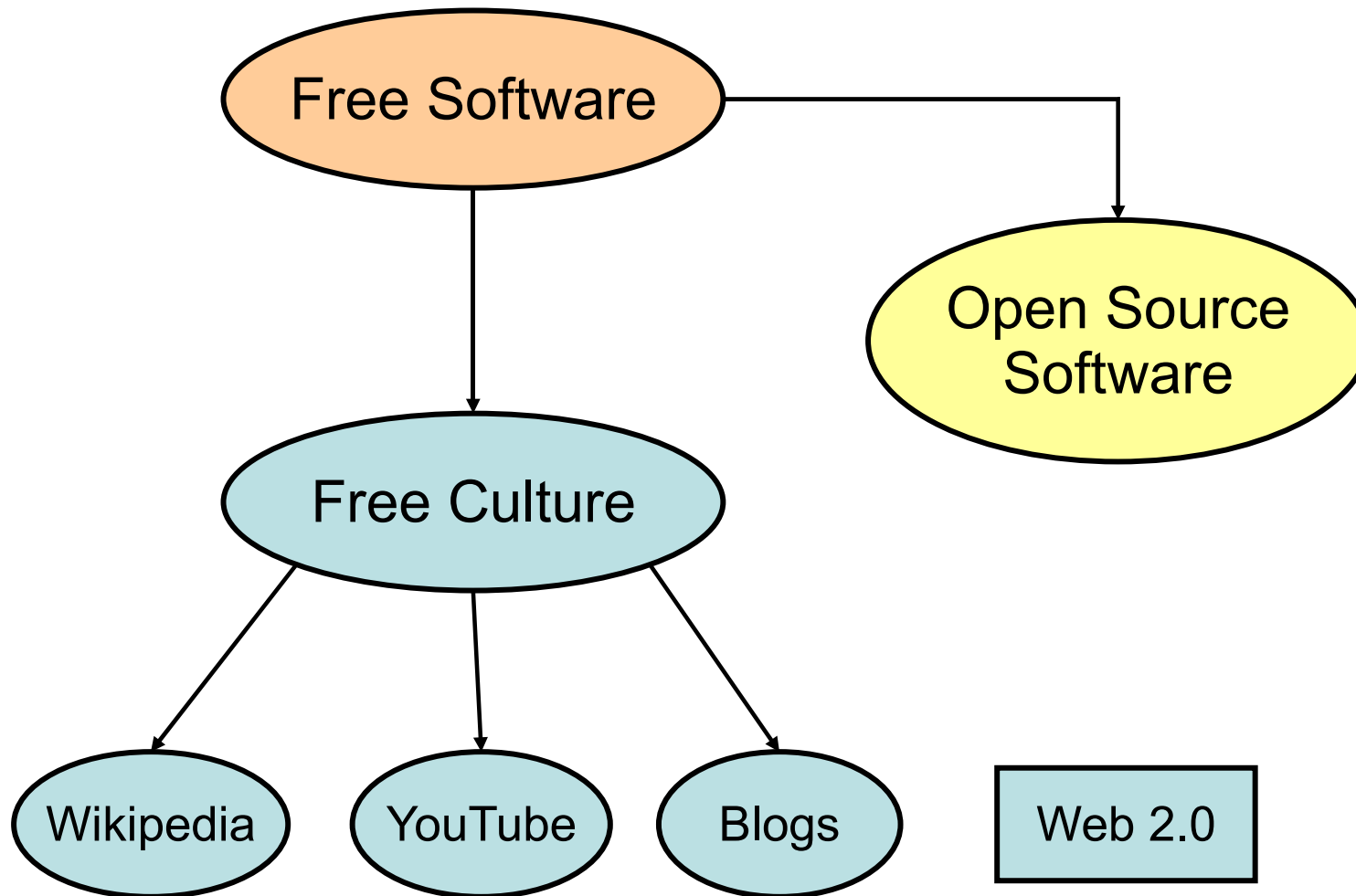


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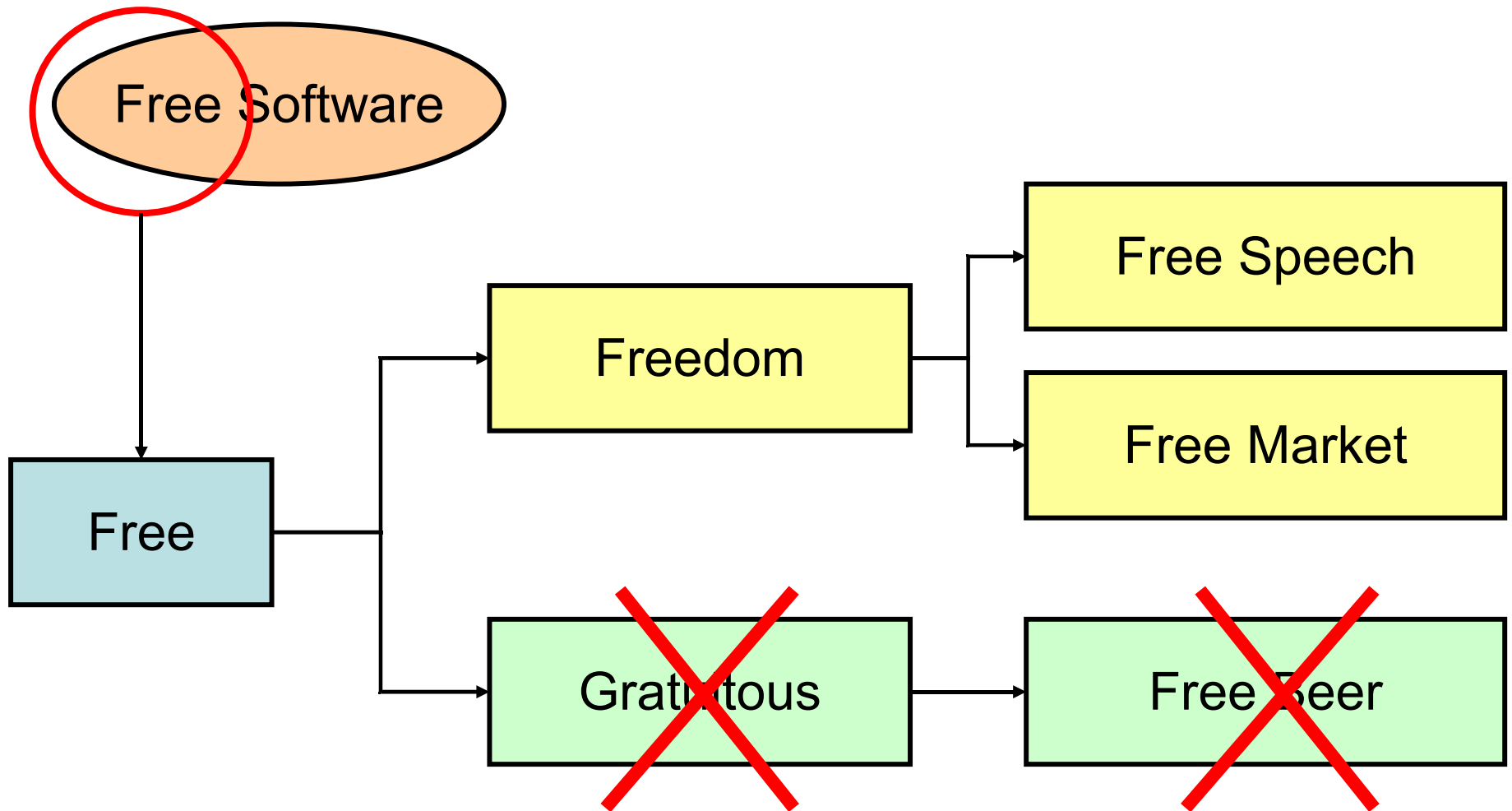
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# Open Source Software Licensing

# The Very Brief History



# Free as in Freedom...



# Why do you need Freedom ?

If Software  
were a House...



- Renovations will require **permission** from the original contractors
- **Only** the contractors will have the **blue prints**
- Only the original contractors will have the **right to make modifications**
- They will only make the modifications they choose
- They will chose the schedule they please
- The modifications **do not have to Work.**
- Still **you won't have the right** to fix them

# The Usual Software Business Model

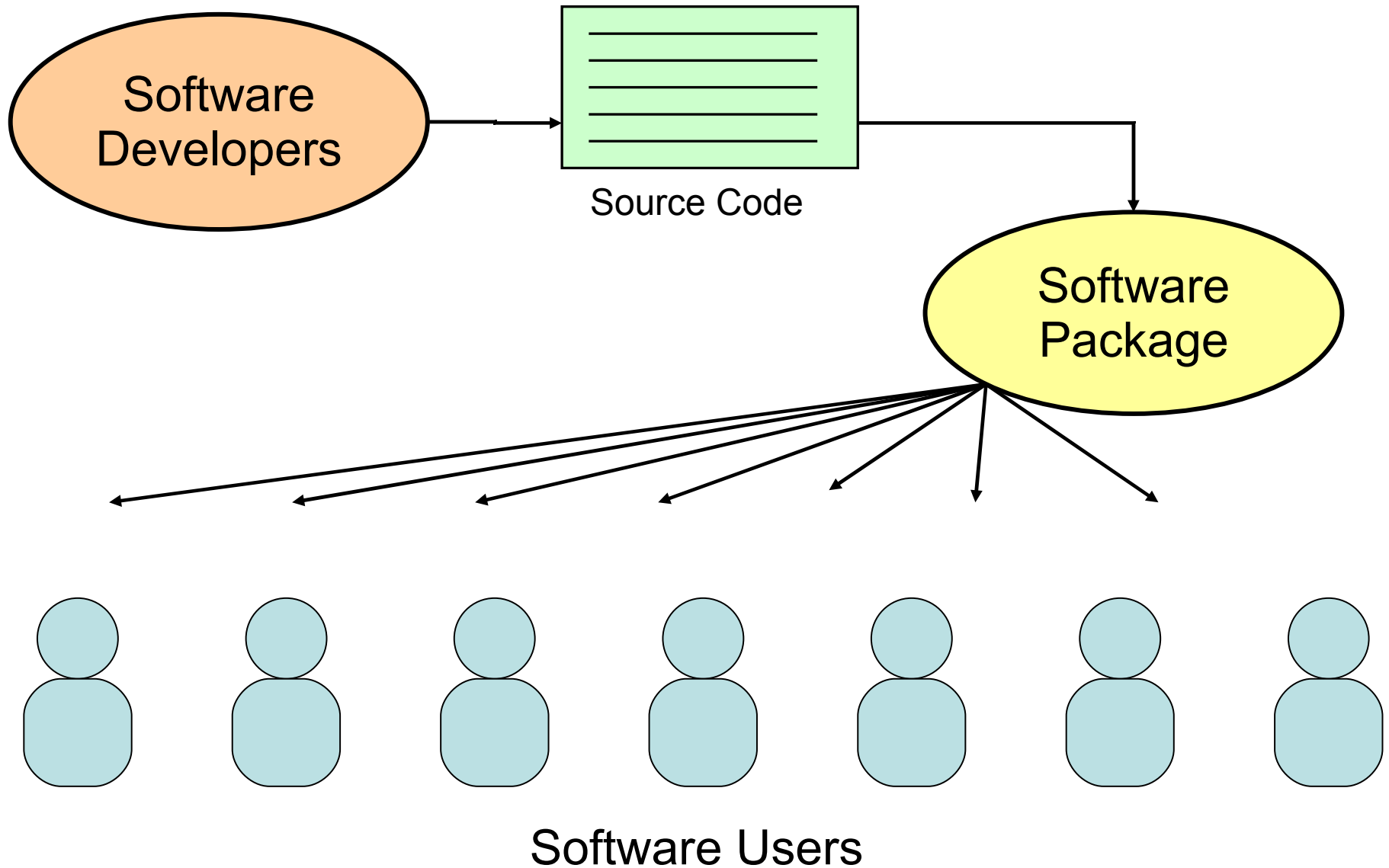
- Original developers own the **Copyright**
- As copyright owners they have **certain exclusive rights** over the use of the software
- Developers can **License** the software to customers
- When you say that you

**“bought a software package”,**

you actually just bought a

**“License to use the software package”.**

# Software Developers / Users



# The Free Software Definition

- The freedom to **run the program**, for **any purpose**
- The freedom **to study how the program works**, and adapt it to your needs
- The freedom **to redistribute copies** so you can help your neighbor.
- The freedom **to improve the program**, and release your improvements to the public, so that the whole community benefits.

<http://www.gnu.org/philosophy/free-sw.html>

# Free Software / Open Source

- **Free Software**

is a *Social Movement*

- **Open Source Software**

is an *Engineering Methodology*

# Free Software Foundation

- **Richard Stallman**
- 1985
- Non-profit corporation
- Copyright holder of the **GNU Project**
- **GNU = GNU is not UNIX**

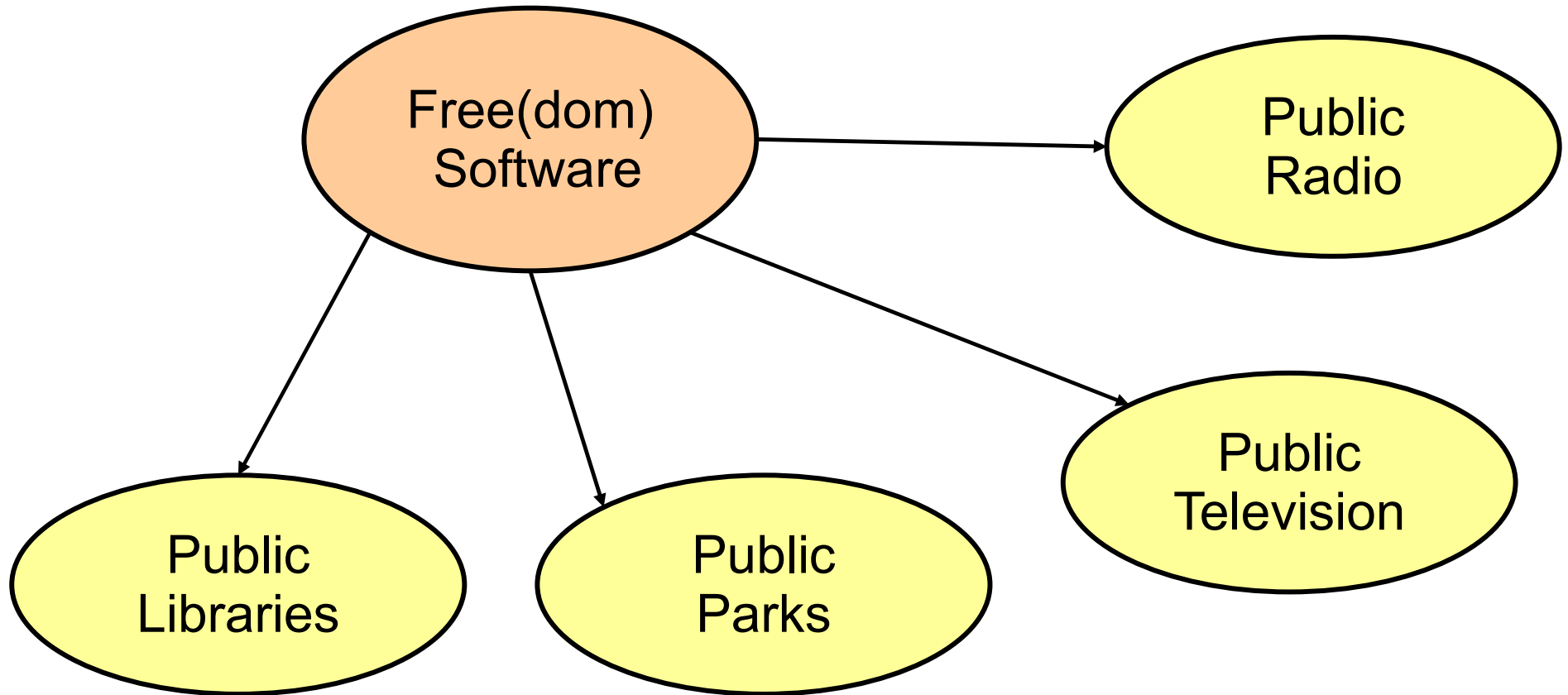
<http://www.fsf.org>

# Open Source Initiative

- **Eric Raymond** author of paper **The Cathedral and the Bazaar (1997)**
- Public benefit corporation 1998
- Community recognized reviewer of **“Open Source Licenses”**
- **Open Source Definition (OSD)**

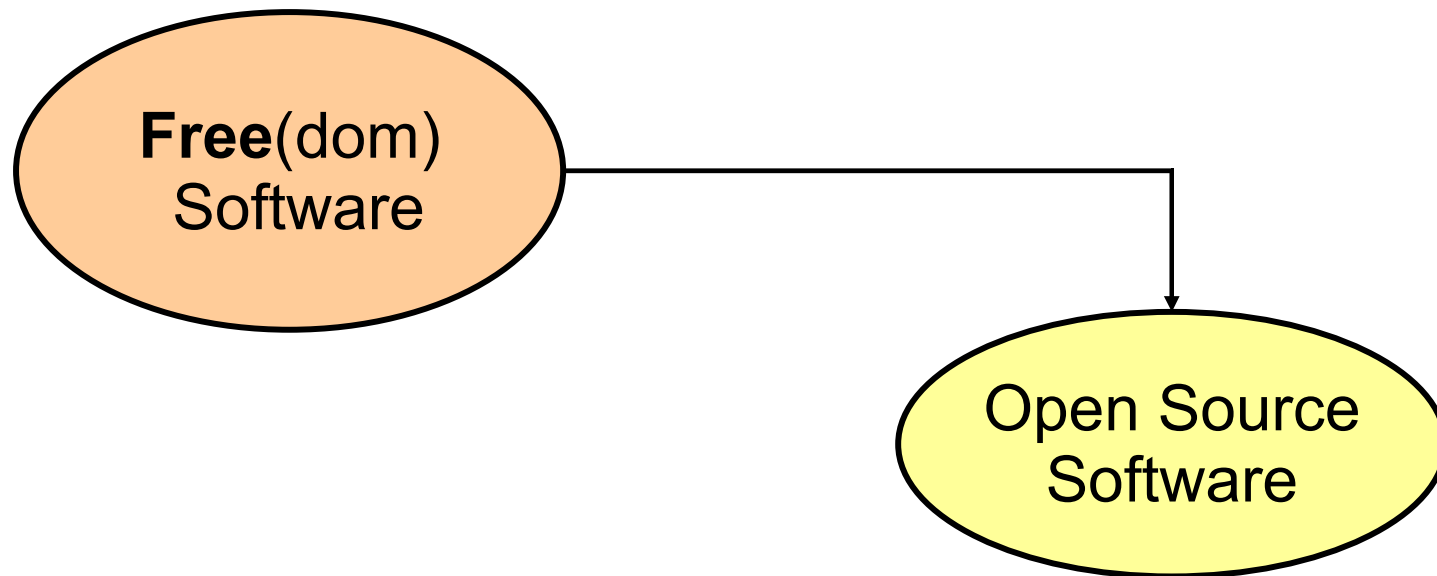
<http://www.opensource.org/>

# Democratic Access to Technology



Where **PUBLIC** refers to “who can use it”,  
not to “how it is funded”.

# Freedom leads to Openness



- Open Source Software:  
Users have **read** access to the source code
- Free Software has to be Open Source

# Legend #1:

*“Open Source software is **free of charge**”*

## **The reality is:**

- Software development is **very expensive**
- Software *maintenance* is **even more expensive**
- Open source projects get financed in multiple ways
  - Developers volunteering time
  - Multiple customers paying developers (cost-sharing)
  - Government grants
  - Individuals donating funds

# Legend #2:

*“Anybody can **change** the software”*

## The reality is:

- Software is kept in source code repositories
- Under the control of a group of developers
- Only them have **write access** to the repository
- Developers are **very selective** accepting new members
- The legend originated in the fact that you can get the software and **change it in your local machine**
- **Some licenses** allow you to distribute your modification, most of them require you to clearly identify your version as a **modified** version.

# Legend #3:

*“Open Source Software applications are not viable commercial products”*

## **The reality is:**

- Software packages are extremely complex
- Software requires maintenance (fixes + new features)
- Few developers have enough expertise to maintain them
- Customers will prefer to get the software from the team that provides **better** support for it
- Licenses can define the terms of usage

# Legend #4:

*“Open Source is opposite to  
Commercial products”*

## **The reality is:**

- Open Source is a “way of developing software”
- It does not preclude the software from being sold or commercialized.
- The principle is that the recipients should have the right to modify the code and to distribute it. The same way that you can renovate your kitchen and then sell your house.

# Legend #5:

*“Commercial Software is better because it offer warranties”*

## **The reality is:**

- Most commercial software packages do not provide any warranty at all
- Commonly the warranty is limited to the **media** in which the software is distributed (e.g. CD-ROM)
- Reading the Microsoft EULA is quite enlightening, before you venture on reading Open Source licenses.

# Microsoft EULA

*“...LIMITED WARRANTY FOR SOFTWARE ACQUIRED IN THE US AND CANADA. Microsoft warrants that the Software will perform **substantially** in accordance with the accompanying materials for a period of **ninety (90)** days from the date of receipt...”*

# Microsoft EULA

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# Microsoft EULA

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# Microsoft EULA

*“...Microsoft and its suppliers provide the Software and support services (if any) AS IS **AND WITH ALL FAULTS**,*

*and hereby **disclaim all other warranties** and conditions, whether express, implied or statutory, including, but not limited to, any (if any) implied warranties, duties or conditions of merchantability, of **fitness for a particular purpose**, ...*

*of **reliability** or availability, of **accuracy** or completeness of responses, of results, of workmanlike effort, **of lack of viruses**, and **of lack of negligence**,*

*all with regard to the Software, and the provision of or failure to provide support or other services, information, software, and related content through the Software or otherwise arising out of the use of the Software ...”*

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The above **copyright notice** and this **permission notice shall be included** in all copies or substantial portions of the Software.

<http://www.opensource.org/licenses/mit-license.php>

# Why not just release it to the Public Domain ?

- Under copyright law **there is NO mechanism for waiving** a copyright.
- There is **no accepted way** to dedicate a work to the public domain **before** its copyright term **expires**
- The closest approach is to have a **very open** license and to grant it to anybody

In order to appreciate **Light**  
you must first  
experience **Darkness..**

# Microsoft EULA

- The Software **may not** be used by **more than one** processor at any one time on any single Workstation Computer.
- Microsoft or its suppliers own the title, copyright, and other intellectual *property* rights in the Software. **The Software is licensed, not sold.**

<http://www.microsoft.com/windowsxp/home/eula.msp>

# Microsoft EULA

- **You may not reverse engineer, decompile, or disassemble the Software, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation.**
- **You may not rent, lease, lend or provide commercial hosting services with the Software.**

<http://www.microsoft.com/windowsxp/home/eula.mspx>

# Reverse Engineering

- **Is not an exclusive right** reserved by copyright laws
- It is usually a **contract** condition
- **Not a Copyright Condition**

# Software Licenses

Intellectual Time-Limited Monopolies in Software include:

- **Copyrights**
  - Expressions of ideas
- **Patents**
  - Implementation of methods
  - Software practices themselves (Evil)
- **Trademarks**
  - Name of packages

# Open Source Licenses

The **Open Source Initiative** defines the conditions that a software license must satisfy in order to get the label of

*“Open Source”*

<http://www.opensource.org/>

# Open Source Licenses

- **Free Redistribution**
- **The program must include source code**
- **Must allow modifications and derived works**
- **Integrity of The Author's Source Code**
- **No Discrimination Against Persons or Groups**
- **No Discrimination Against Fields of Endeavor**
- **Distribution of License**
- **License Must Not Be Specific to a Product**
- **License Must Not Restrict Other Software**
- **License Must Be Technology-Neutral**

<http://www.opensource.org/docs/osd>

# Software Licenses

What should I look for in the small print ?

- **Redistribution**

- Can I give it to my friend ?

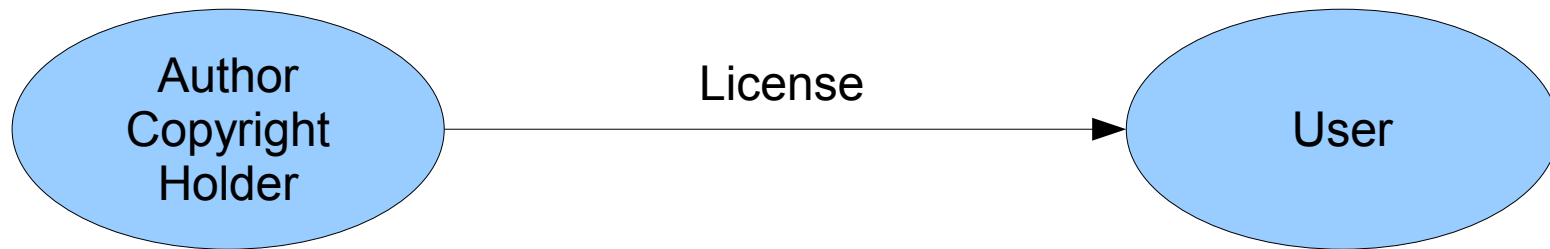
- **Derivative Work**

- Can I change it ?
- What conditions it imposes if I use it in an application ?

- **Labeling**

- Do I have to mention my use of the software ?
- Do I have to distribute the license itself ?

# What is a License ?

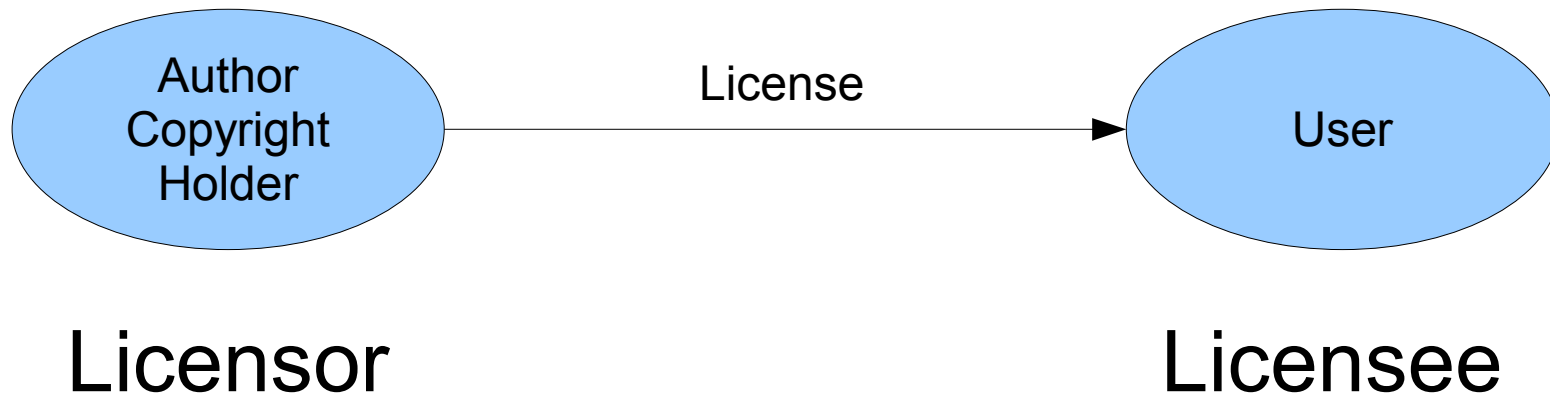


**A License is:**

**A Permission** to do something

A Copyright and Patent holder grants **permission** to others to use the materials for which they have been granted limited-time monopolies

# What is a License ?



# Duration of a License

- Perpetual license
- As long as licensee respect the license terms
- Licenses can be **revoked** by the copyright owner
  - Unless there is some **interest**
    - Royalty or fee has been paid by the licensee
    - Consideration

# Explicit vs Implied Permissions

- **Explicit**
  - Detailed in the text of the license
- **Implied**
  - By conduct of the licensor
  - Lack of exercising exclusive rights by the licensor
    - Example: patents associated with the code

# License vs Contract

- **License**

- Defines terms under which the licensee is granted **permission to exercise** some of the rights that are exclusive to the copyright (or patent) owner.
- The licensee can **only** exercise those rights **if** she obeys the license
- Exercising the rights without obeying the license terms is to incur in **copyright infringement**

# License vs Contract

- **Contract**
  - Set of **Promises**
  - For example, the **Licensor promises** not to interfere with the licensee when she is **copying, modifying distributing the code.**
- **Contract Elements**
  - Offer
  - Acceptance
  - Consideration

# License as a Contract

- **Offer**
  - Posting the software in a Web site
- **Acceptance**
  - Shrink-wrap (opening a package)
  - Click-wrap (clicking a button “I Accept”)
- **Consideration**
  - Something given in return
  - Most Open Source Licenses don't ask for anything in return

# License vs Contract

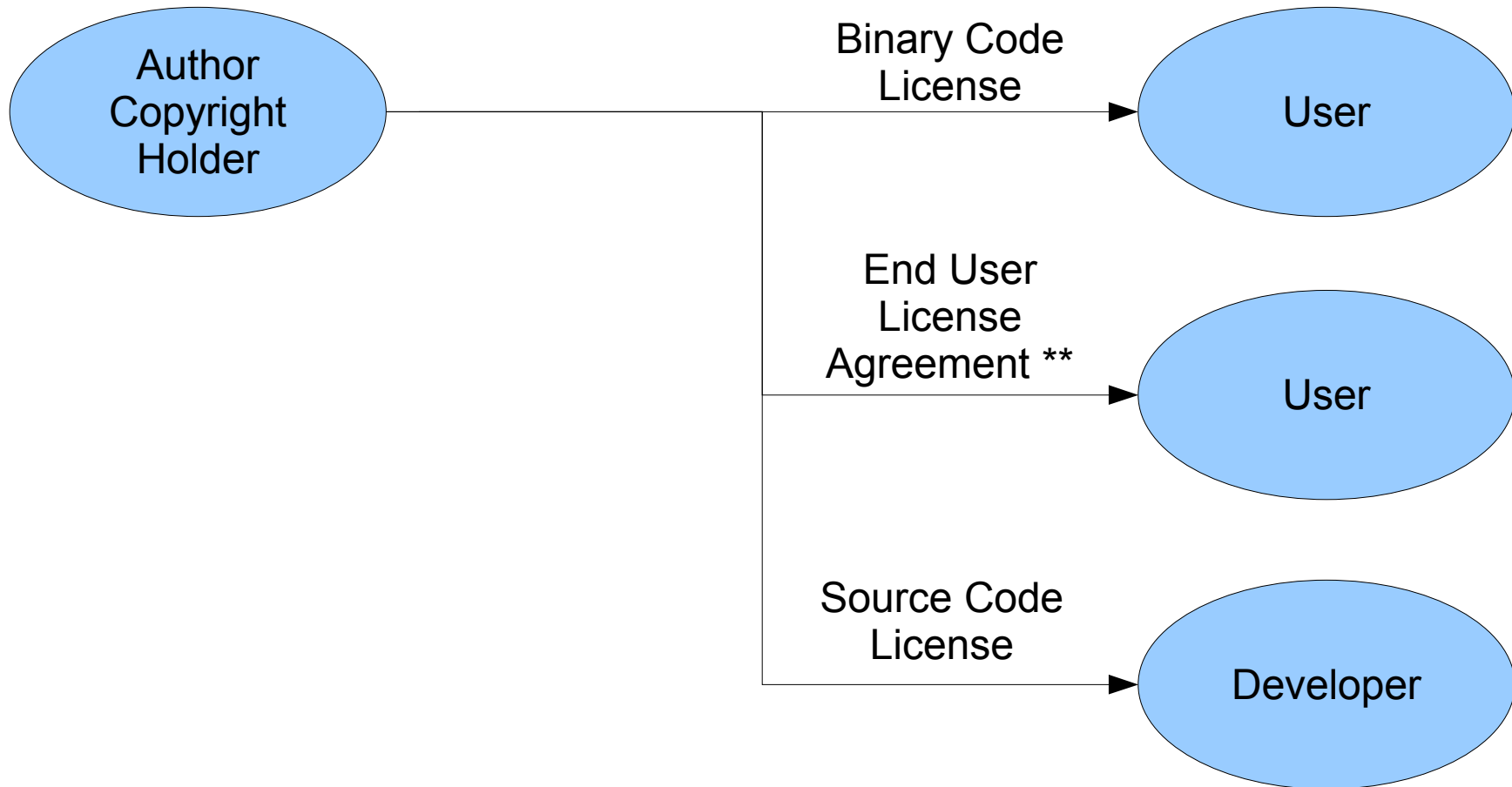
- **Contract**

- Licensors can enforce a contract even if he is not the copyright owner of the work
- *The contract is the law*
- Contract litigation is well developed
- Courts will fill-in any terms missing from the original contract

# Reusing the Code

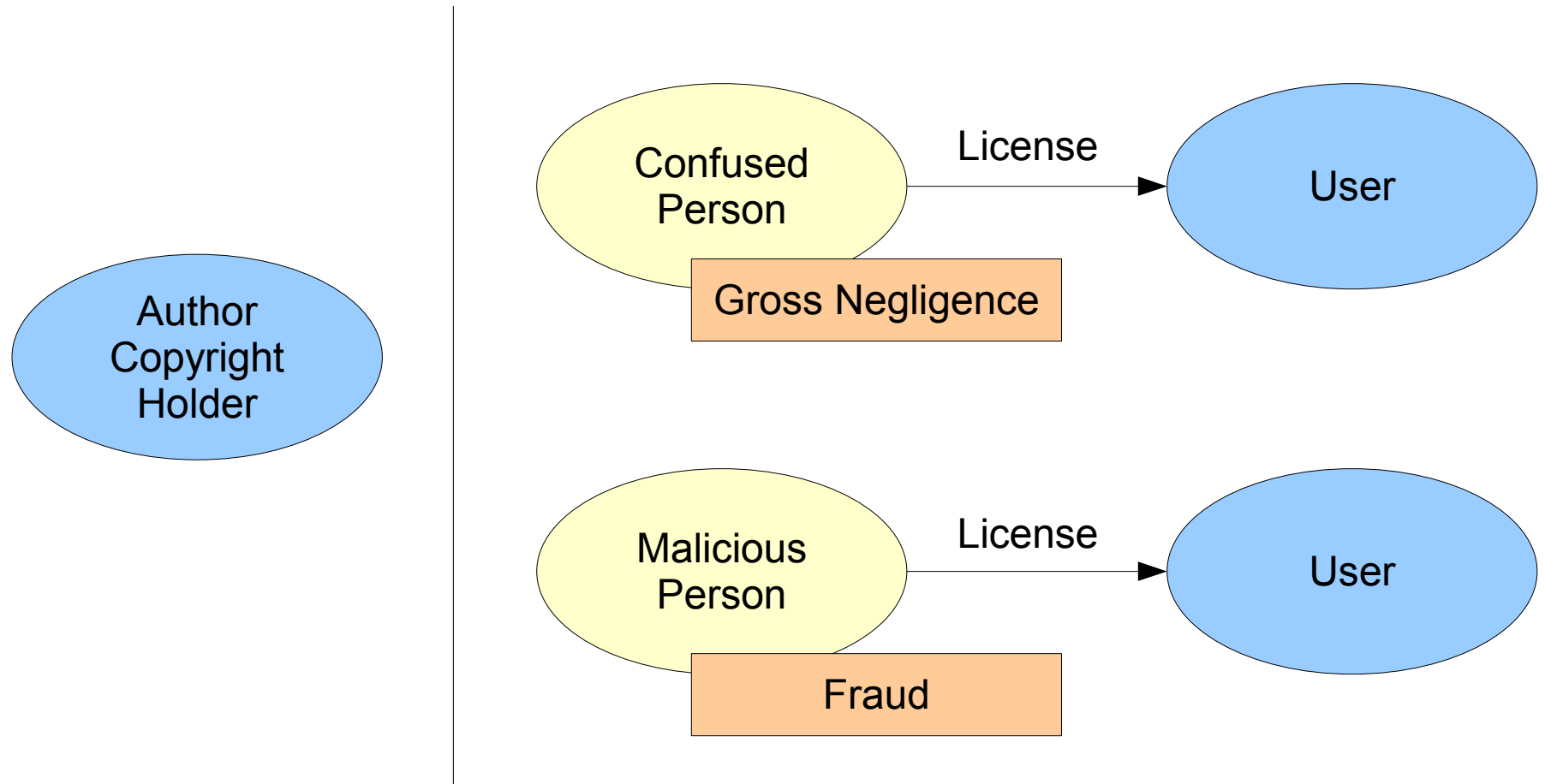
- Sub-licensing
- Re-licensing
- Removing copyright notices
- Dual-licensing

# Using the Code

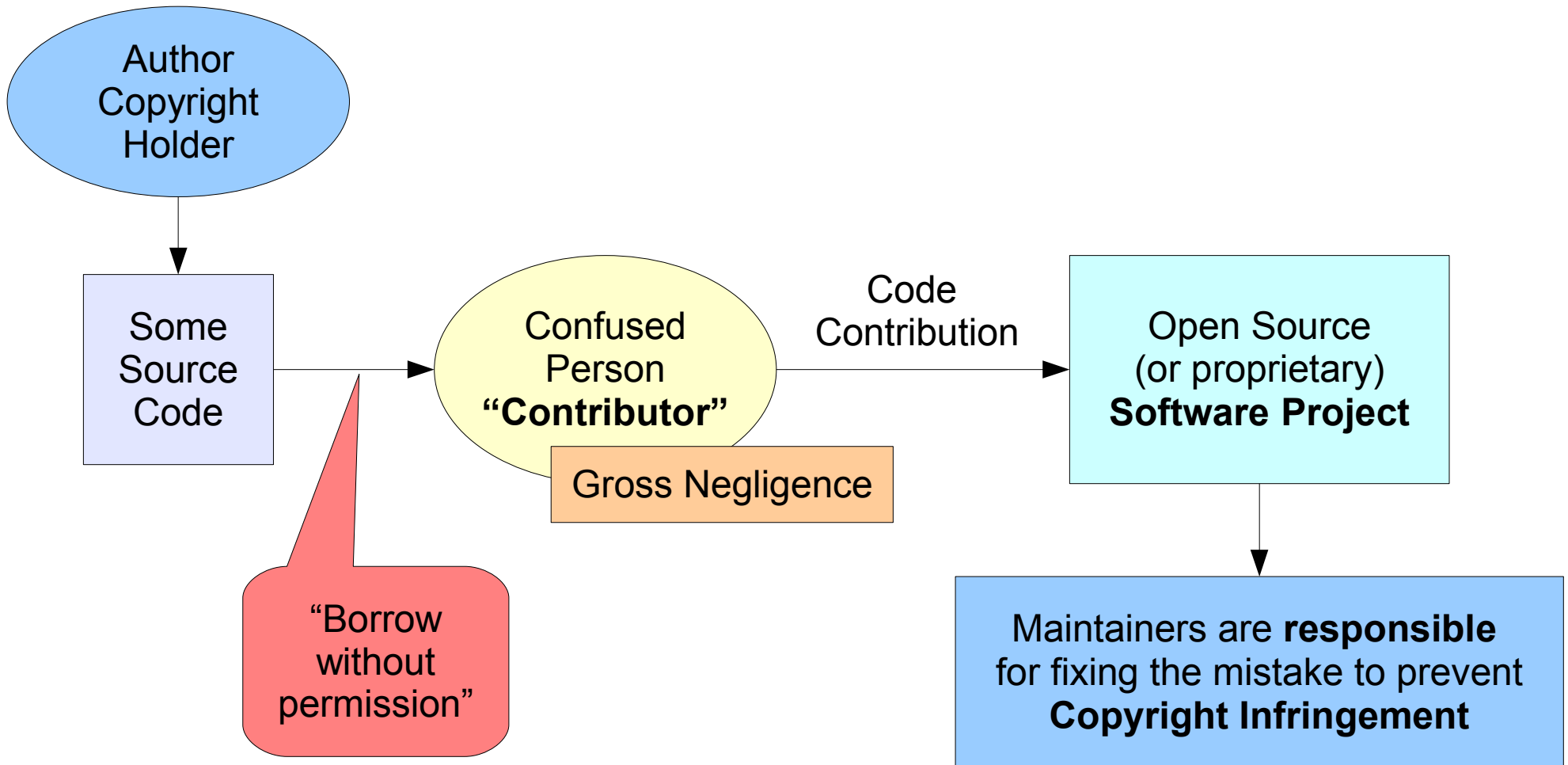


**\*\* EULA:** is a **Contract**, it goes **beyond** Copyright Law.

# Only the Copyright Holder can license the work.



# Only the Copyright Holder can license the work.

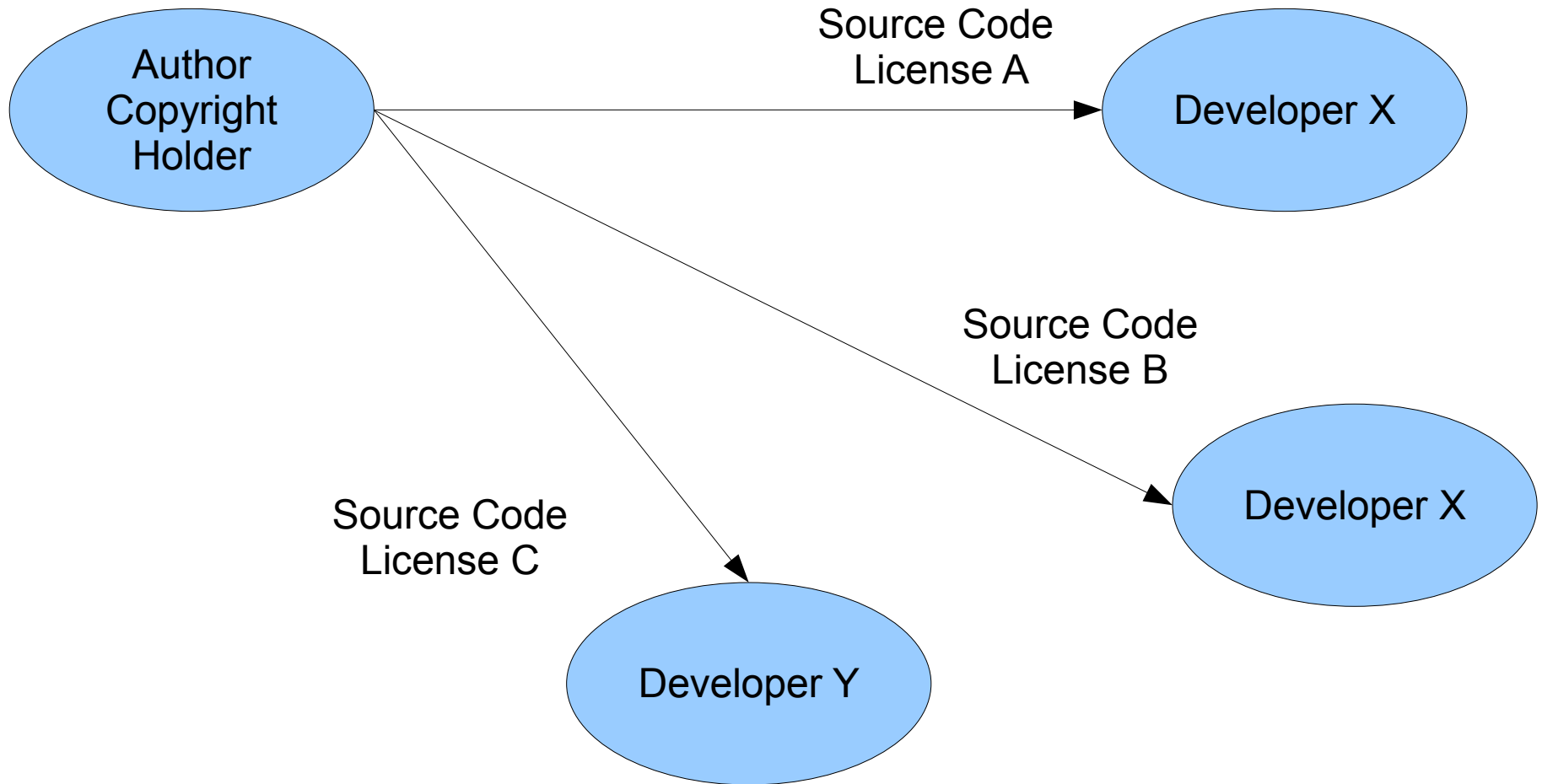


# Copyright Notices

- Copyright rights do not rely on the Notice being attached to the work
- Copyright Notices are there only to help users know who is the owner of the work

Work C	Copyright by Person Z
Work B	Copyright by Person Y
Work A	Copyright by Person X

# Dual / Multiple Licenses



# Derivative Work

Building innovation upon  
the innovation that has come before...

- Just as a biological entity...software **Evolves**.
- **ALL** software products are built on top of preexisting elements.
- Despite the fact that most software products do not acknowledge it.

# Derivative Work

Definition:

- The legal definition is **VERY GRAY**
- The license can provide **its own definition**  
(for example GPL)

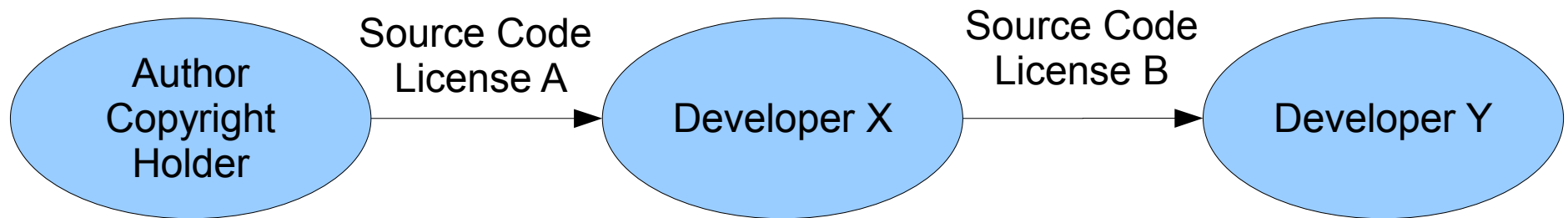
# Derivative Work

In the US "**derivative work**" is defined in 17 U.S.C. § 101:

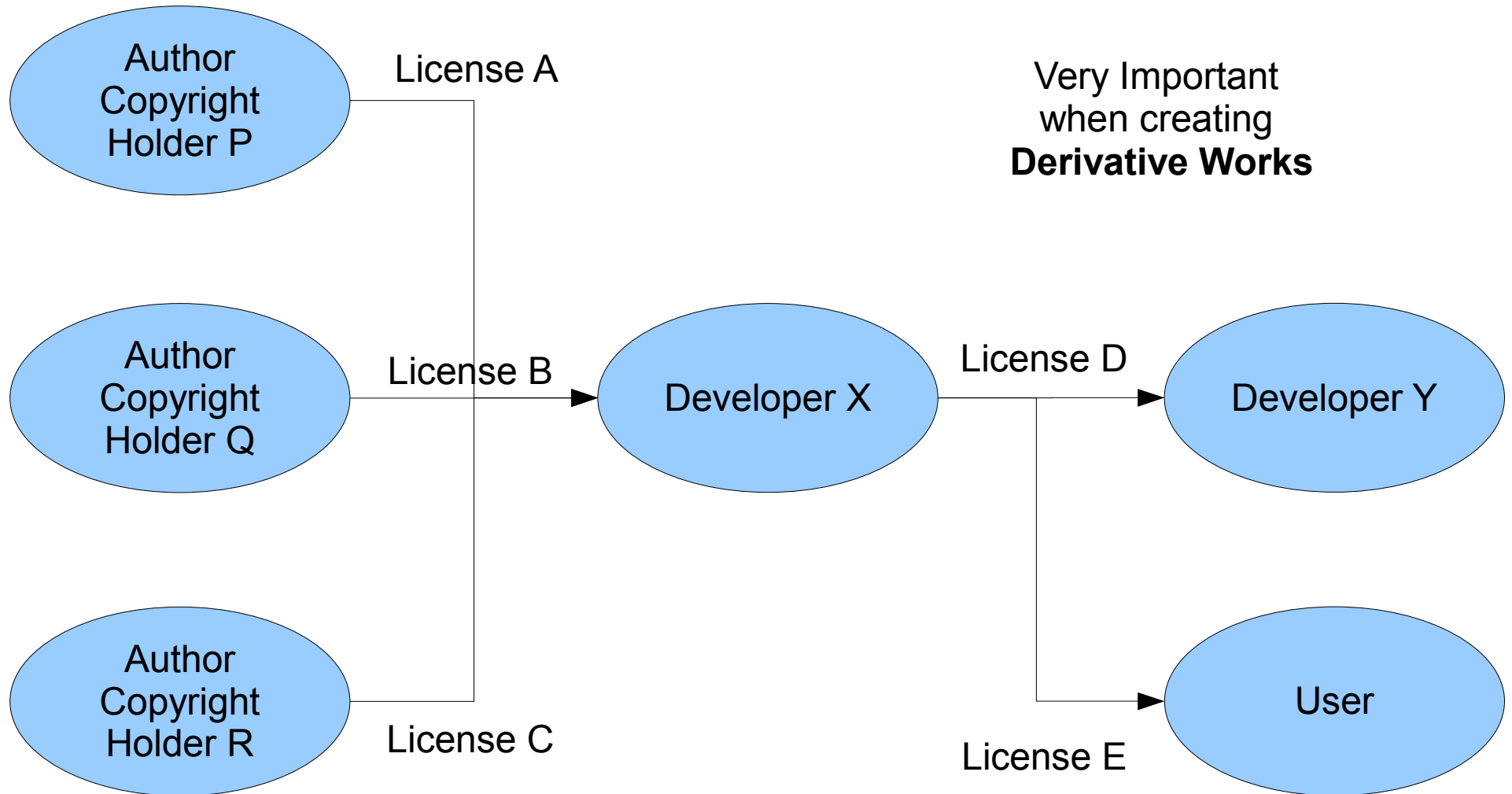
A "**derivative work**" is a work based upon one or more preexisting works, such as a **translation**, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, **abridgment**, **condensation**, or **any other form** in which a work may be **recast**, **transformed**, or **adapted**.

A work consisting of **editorial revisions**, **annotations**, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a "derivative work".

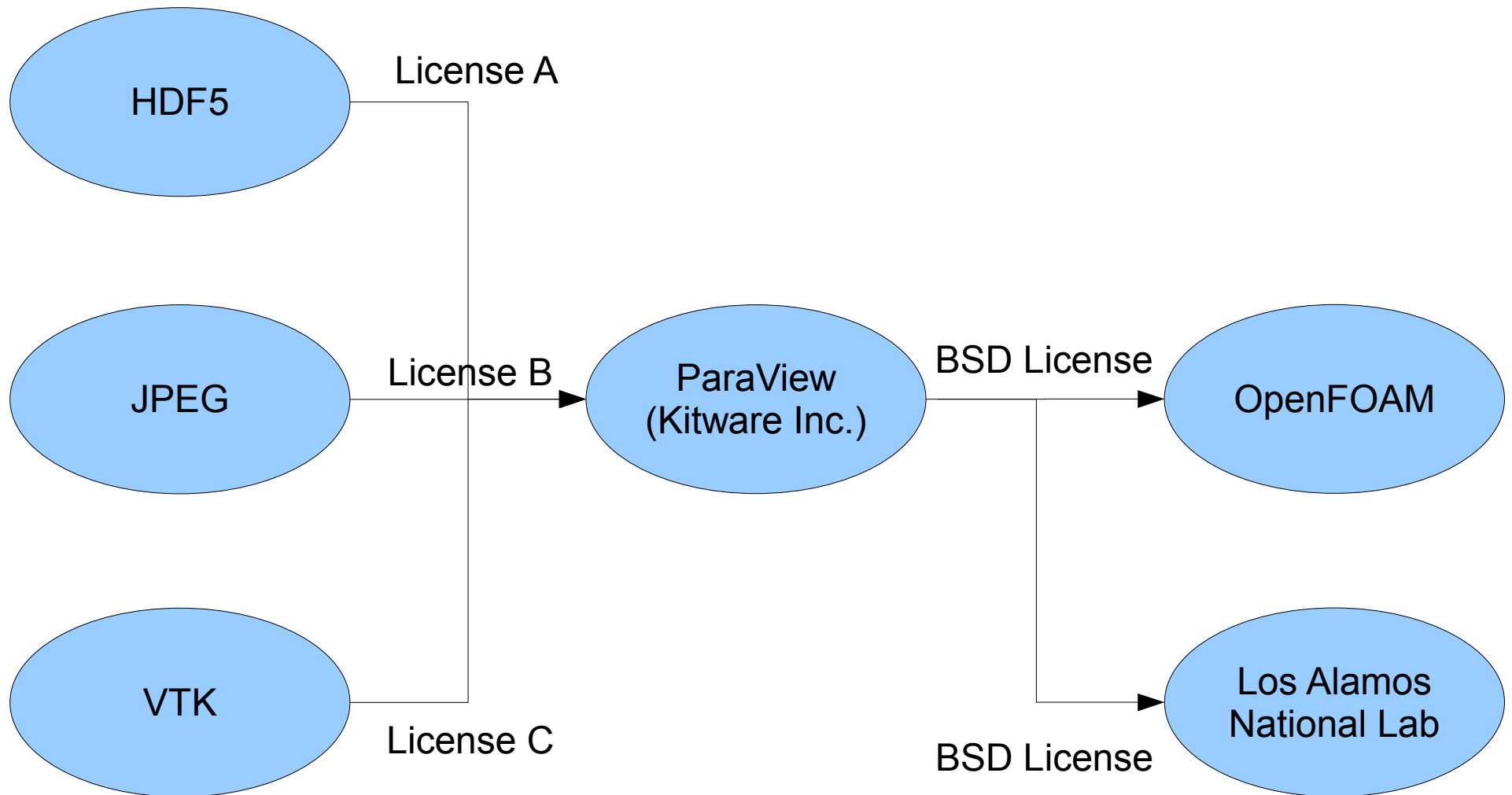
# Sub-Licensing



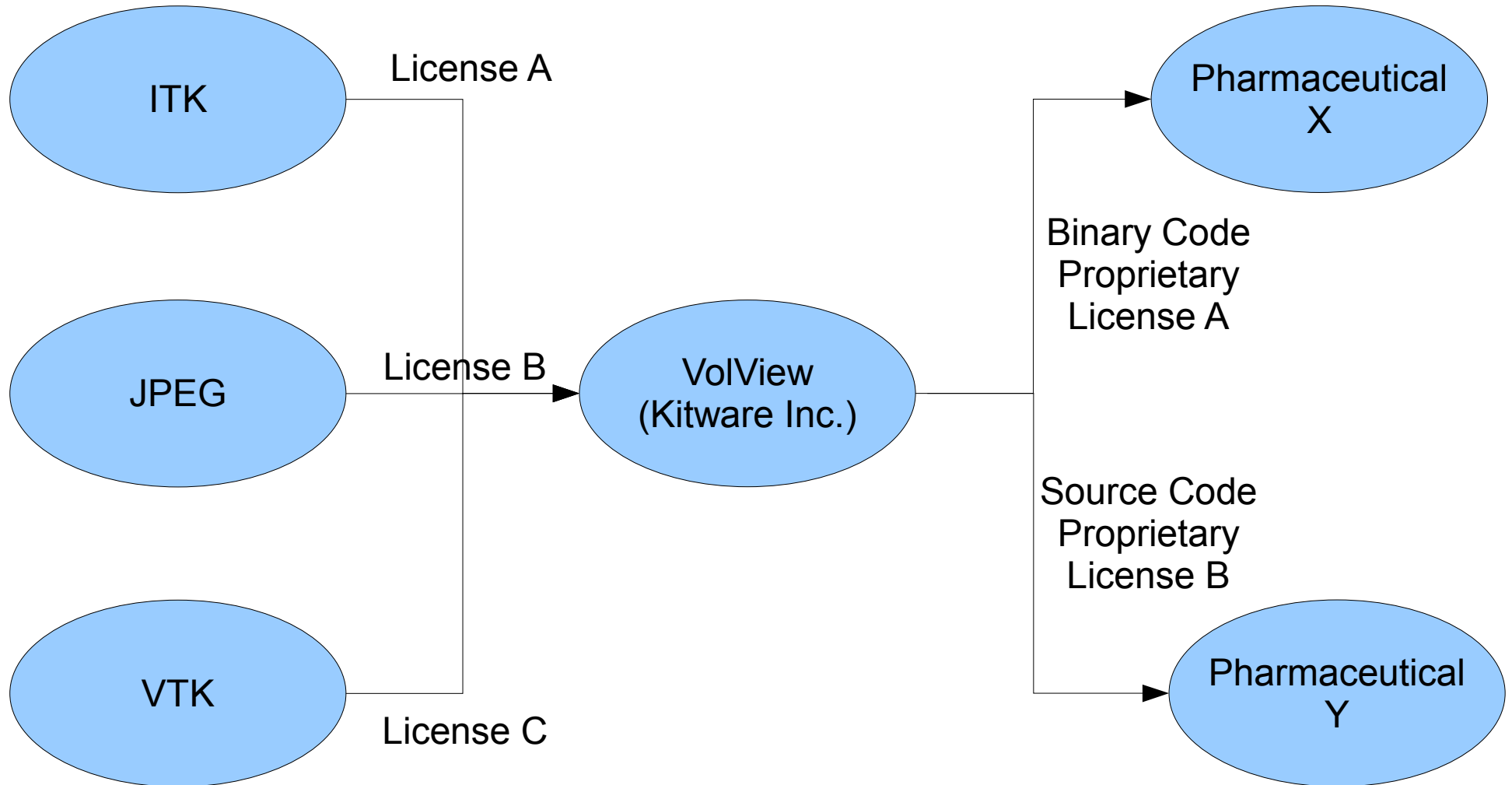
# Sub-Licensing



# Sub-Licensing



# Sub-Licensing



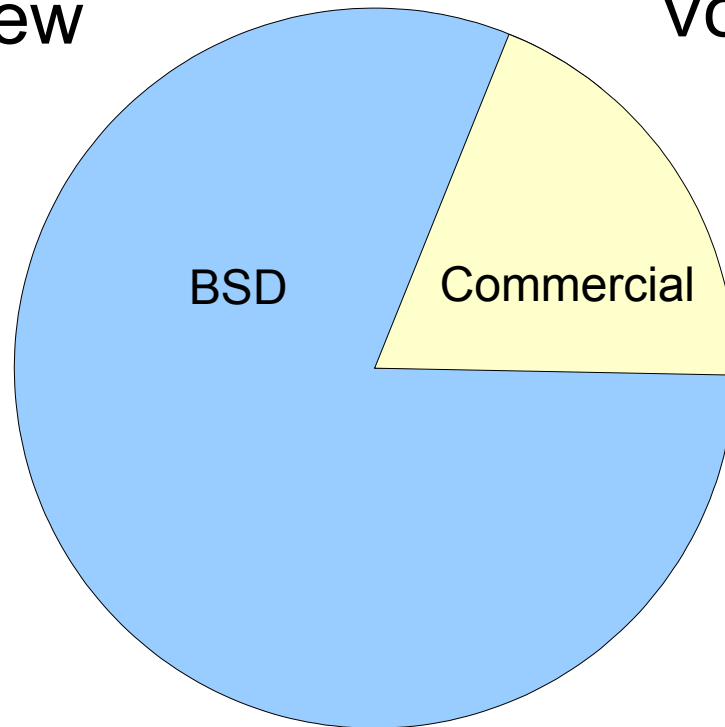
# Dual / Multiple Licenses

- MPL
- Qt (GPL and Commercial)
- MySql (GPL and Commercial)
- Ghostscript (scheduled: ~one-year)
  - Aladdin Free Public License (for non-commercial)
  - Artifex Commercial License

# Combining Licenses

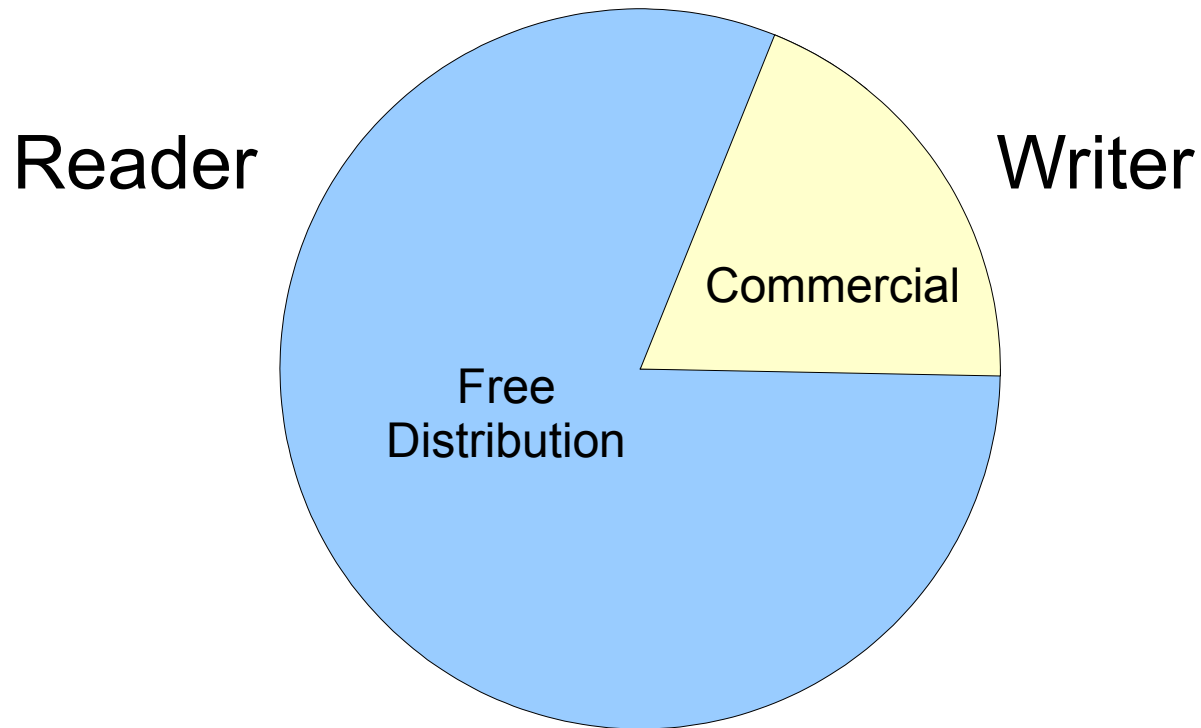
ParaView

VolView

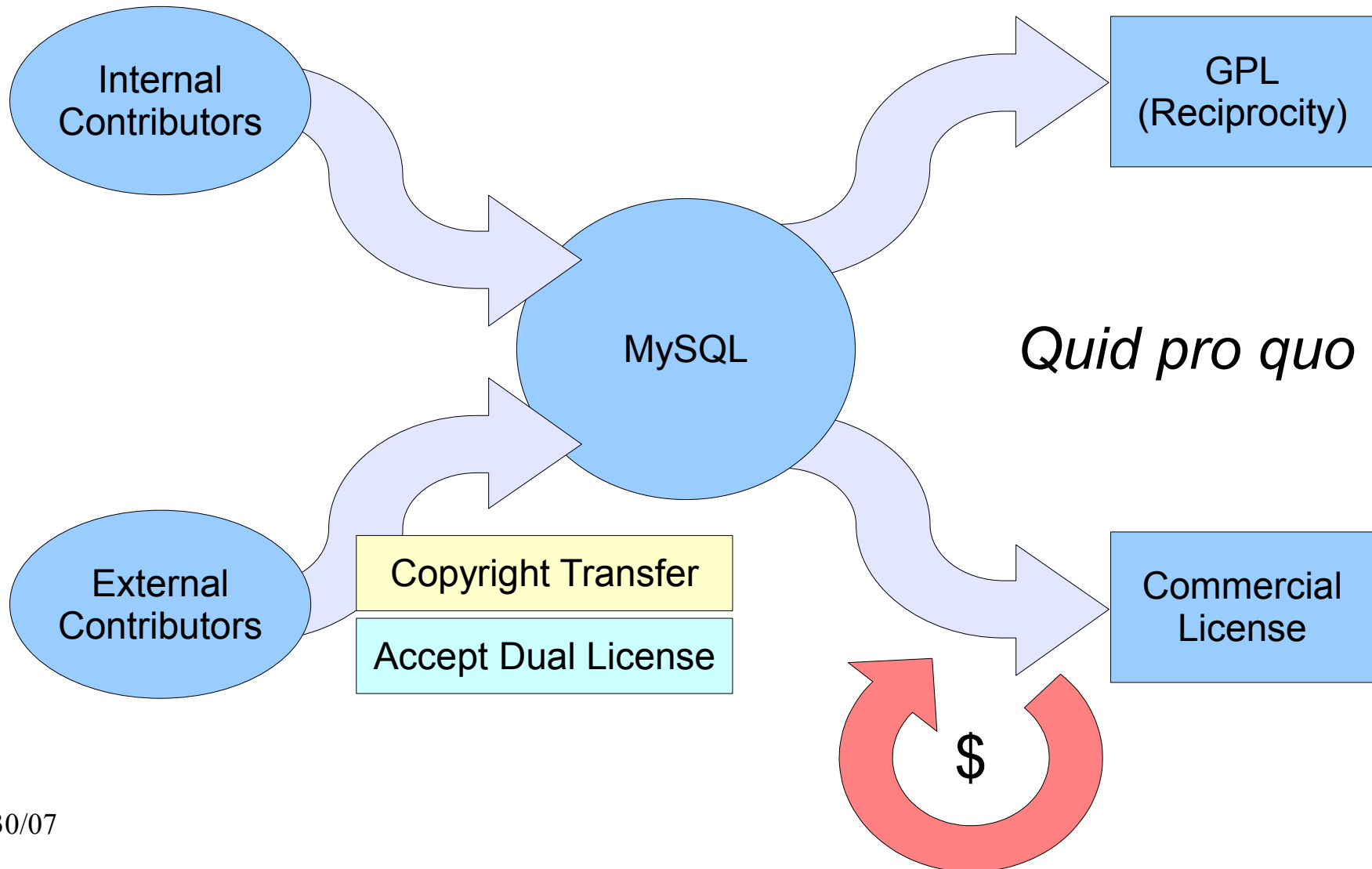


# Combining Licenses

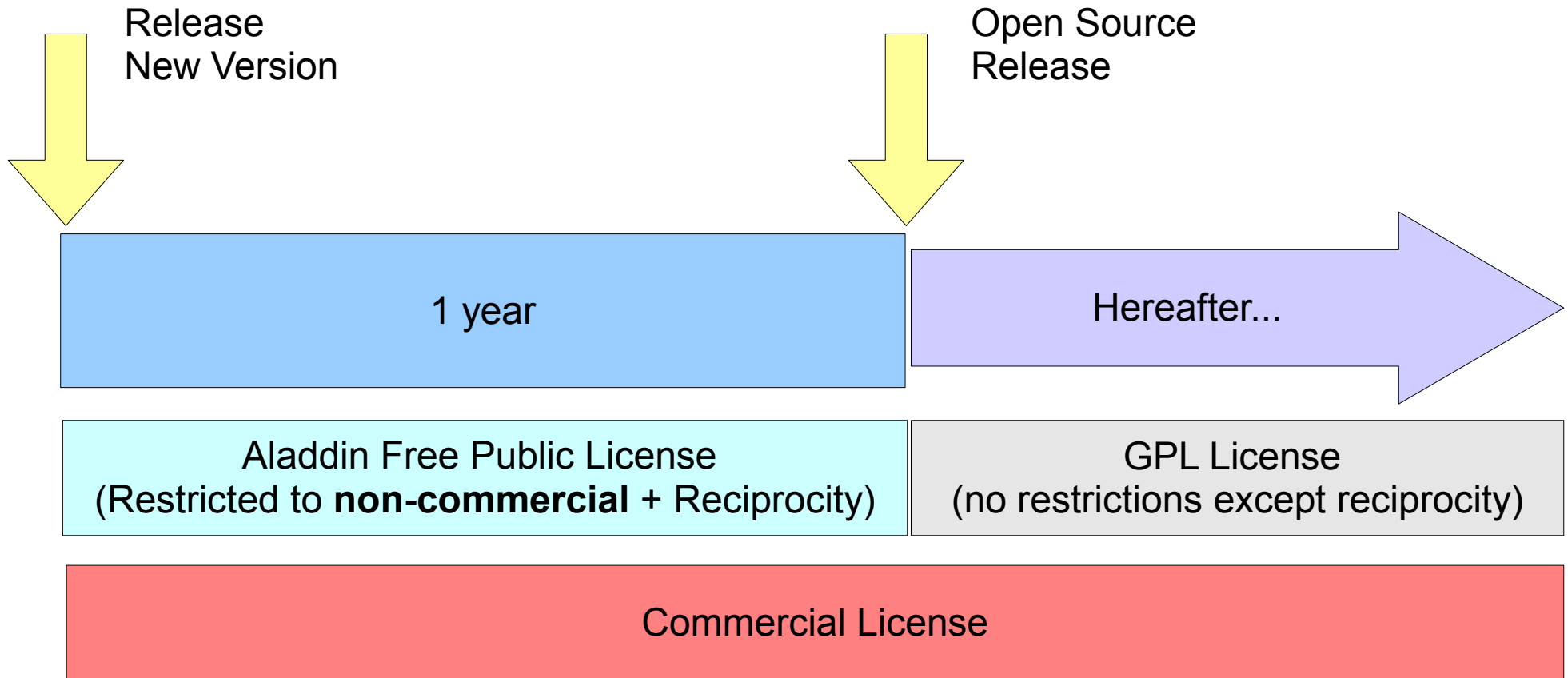
## Adobe Acrobat Binaries



# Dual Licensing - MySQL



# Scheduled License - Ghostscript

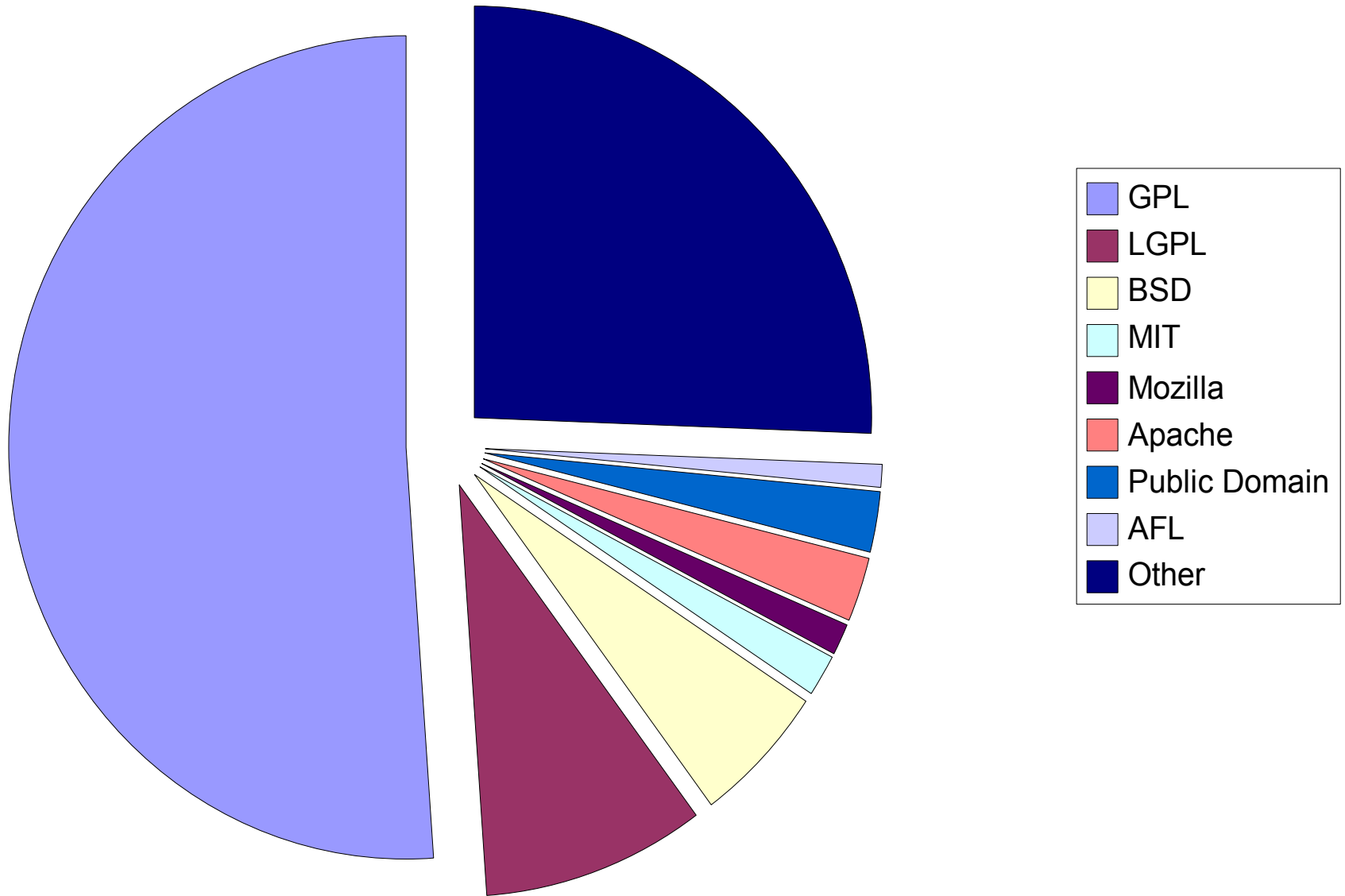


# Popular Licenses

GPL	62,980	51.06%
LGPL	11,190	9.07%
BSD	6,971	5.65%
MIT	2,066	1.67%
Mozilla	1,559	1.26%
Apache	3,096	2.51%
Public Domain	2,889	2.34%
AFL	1,084	0.88%
Other	31,511	25.55%
	<b>123,346</b>	<b>100.00%</b>

<http://sourceforge.net/search/index.php>

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<http://www.opensource.org/licenses/bsd-license.php>

# MIT vs BSD

BSD = MIT  
+  
Non-Endorsement

# BSD-Like ( ITK, VTK, Cmake) < 2008

- Redistributions of source code must retain the copyright notice.
- Redistributions of binaries must display the copyright notice.
- The name of the developers should not be used to endorse the derivative work.
- **Modified** source versions **must be** plainly **marked** as such, and must not be misrepresented as being the original software

# BSD vs BSD-Like (VTK, ITK)

{ VTK, ITK, CMake } < 2008

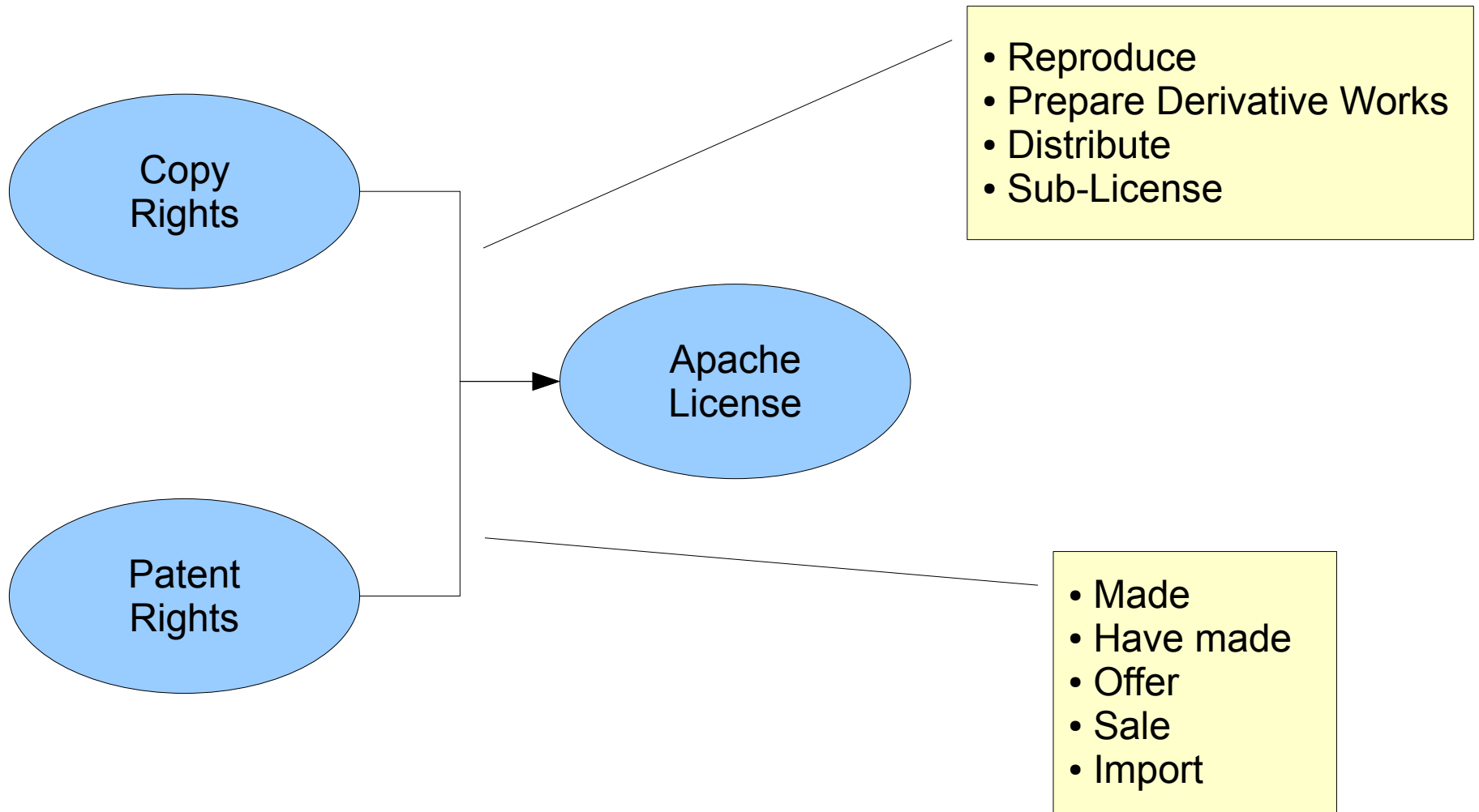
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BSD

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Marking modified versions

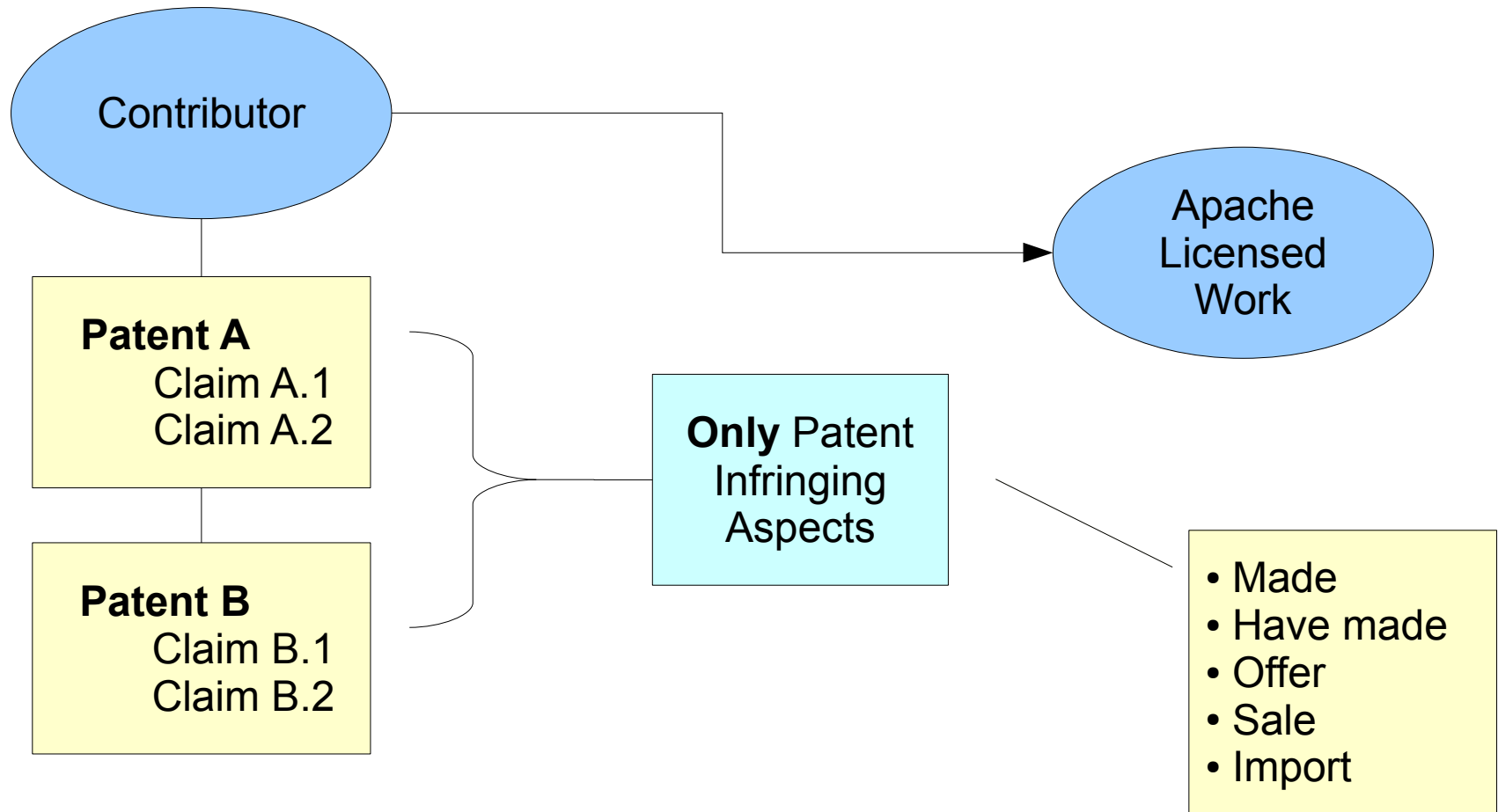
# Apache License



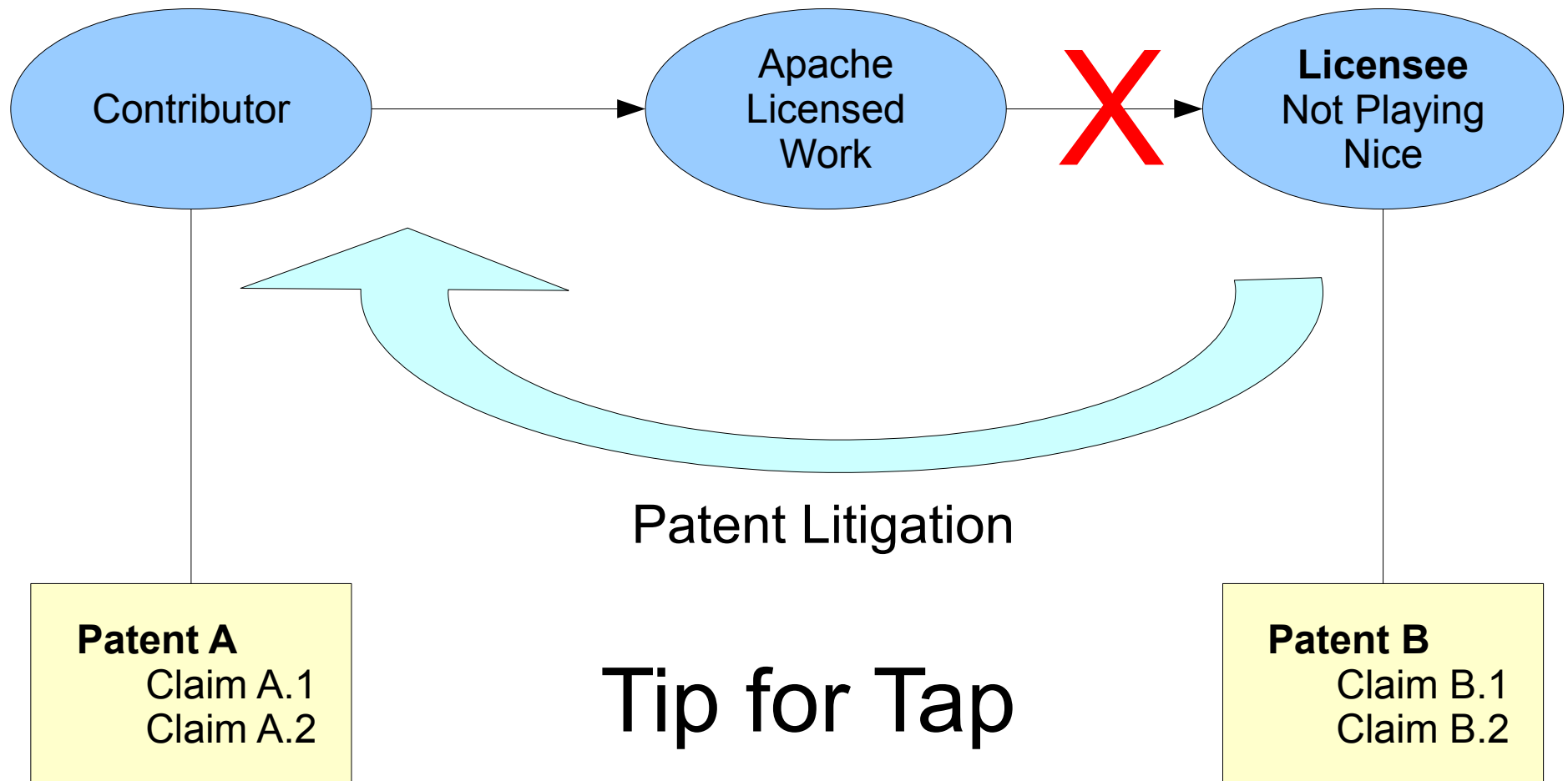
# Apache License

- **Perpetual**
- Worldwide
- Non-Exclusive
- No-Charge
- Royalty Free
- **Irrevocable**

# Apache License



# Apache License



# GPL – GNU Public License

- The software is provided in source code form
- The software may be used for any purpose whatsoever
- The software may be modified freely and combined with other software to create derivative works
- The licensed software may be redistributed
- Derivative works, **if distributed**, must be distributed under a GPL license. **[RECIPROCITY]**

# LGPL – Lesser GPL

- Intended for Software Libraries, to facilitate their adoption as de-facto standards
- Work that “*uses the library*” is not subject to this license. (e.g. Object files that links to a **Shared** library).
- Executables that statically link to the library are “Derivative Work” and become covered by this license.

# Qt Licensing Model

- **Commercial License**
  - For construction of commercial proprietary software
- **Open Source Edition License**
  - Equivalent to GPL
- **Educational License**
  - Free of charge for classroom education
- **Academic Licensing**
  - Discount value for academic institutions

<http://www.trolltech.com/products/qt/licenses/licensing>

# Qt Commercial License

## **Allow you to:**

- Build commercial software and software whose source code you wish to keep private.
- Freely choose licensing for the software you are writing (Proprietary, Open Source or both).
- Get commercial support from Trolltech
- Be able to gain access to Qt Solutions and commercial-only Qt components

**<http://www.trolltech.com/products/qt/licenses/licensing>**

End