

Patent Webinar Series

**Open Source Software and Patents:
Reconciling the Conflict**

November 3, 2021



Meet The Speakers



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Agenda

- **Overview**

- What is Open Source Software
- Benefits and Risks of Open Source
- Open Source Business Models
- Open Source Developers and Patents
- Common Open Source Licenses
- Open Source Patent Provisions
- Risk Situations

- **Housekeeping**

- CLE
- Questions
- Materials
 - <http://www.fr.com/webinars>



+ Complimentary CLE Webinar

Post-Grant for Practitioners: Post-Grant Appeals

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	DATE Wednesday, November 10, 2021		TIME 1:30 - 2:30 PM ET/ 10:30 - 11:30 AM PT
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Post-Grant for Practitioners Webinar | Post-Grant Appeals

While *Arthrex* largely dominated post-grant headlines this year, numerous other appellate decisions have come out that have also impacted the practice. On Wednesday, November 10, please join Fish attorneys [John Dragseth](#) and [Nitika Gupta Fiorella](#) as they discuss hot-button cases touching on the substance and process of PTAB appeals at the Federal Circuit – and provide practical insights for your day-to-day practice.

Complimentary Webinar
Wednesday, November 10, 2021
1:30 - 2:30 PM ET

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What is open source/free software?

Open Source Fundamentals

What Is Free/Open Source Software?

- **“Free” has two meanings**
 - “Free” – no cost
 - “Free” – do what you want
- **Open source code is usually “free” in both senses: freely available and may be redistributed and modified**
 - But there may be conditions, such as requiring attribution or making modifications available for free as well
- **Typically permitted:** commercial use, charging (for services, warranty, or support)
- **Often (but not always) no limitations on internal “use”**
- **Open source is ubiquitous**

Open Source Fundamentals

10 Open Source Initiative Principles

1. Free Redistribution
2. Source Code
3. Derived Works
4. Integrity of The Author's Source Code
5. No Discrimination Against Persons or Groups
6. No Discrimination Against Fields of Endeavor
7. Distribution of License
8. License Must Not Be Specific to a Product
9. License Must Not Restrict Other Software
10. License Must Be Technology-Neutral



Benefits and Risks of Open Source

Open Source Fundamentals: *Benefits to Customers*

- **Free code**
- **Community Contributions**
 - Bug fixes
 - Security fixes
- **Public Relations/“Mindshare”**
 - Customers
 - Developers
 - Employees
 - Third parties
- **No Vendor Lock-in**
- **Standards Support / Adoption**

Open Source Fundamentals: *Benefits to Development Companies*

- **Open source allows companies to share in the development of commodity components and focus on value-add**
 - Lower cost, more robust, more agile
- **Open source typically benefits from a community approach**
 - User questions answered faster
 - Features added faster
 - Bugs identified and fixed
 - Code reviews can lead to better security (but not always)
- **Companies employ open source developers to ensure the company's priorities are met**
 - Making top open source developers (e.g., committers) a hot commodity
- **Some companies specialize in open source**
 - Value-added feature
 - Sell support or prioritized development
 - Red Hat is perhaps the best known

Open Source Fundamentals: Risks (i)

- **Potential loss of exclusive rights**

- Loss may be intentional – willing to give up rights to get benefits
- Loss may be unintentional – due to lack of knowledge/control, you may lose exclusive rights without knowing it
- Loss of rights may occur under multiple areas of law
 - Copyright
 - Patent
 - Trademark

- **Breach of contract/copyright claim**

- Exposure to damages or injunction
- Bad public relations

Open Source Fundamentals: Risks (ii)

- **Lack of indemnity/warranty**
 - Open source licenses always disclaim warranty
- **Security (especially with monoculture)**
 - Because certain open source tools are extremely common, they can be an attractive target for hackers
- **Reliability (varies widely)**
 - Not all open source is equally reliable
 - Reliability can also change over time based on project staffing
- **Uncertainty / code provenance**
 - You don't always know where the code is coming from

Open Source Fundamentals: Risks (iii)

- **Exposure to Patent Infringement Claims**

- It is easier for patent owners to discover how your product works internally if the source code is publicly available
- Broadly used open source components also allow patent owners to prepare “cookie cutter” complaints

- **“Abandonware”**

- Some open source projects cease to be maintained, leaving users without updates, bug fixes, or security patches

- **Settlement Complications**

- Some open source licenses limit how you can settle litigation involving the software



Open Source Business Models

Business Models

- **Just because source code is available for free doesn't mean you can't make money**
- **Many billion dollar (plus) companies are based on open source**
 - Google
 - Apple
 - Red Hat (now part of IBM)
 - Hortonworks (merged with Cloudera)
- **Nearly every software startup has some involvement with open source, as do many hardware startups**

Business Models

- Software as a Service
- Hosted Software
- Hardware + Open Source Software
- Dual Licensing

Business Models

- Open Core
- Proprietary Core / Open Extensions / Open Edge
- Freemium
- Loss Leader
- Goodwill
- Services / Support / Warranty / Indemnity
- Consulting / Customization



Open Source Developers and Patents

Engaging OS Developers

- Many companies assume OS developers are willing participate in patents
- That assumption is *sometimes* true
- Some OS developers are anti-patent
 - The “Software Patent Debate” even has its own Wikipedia [page](#).
- How can we engage all/more OS developers?

Open Source Developer Motivations

- **What motivates (some/many/typical) open source developers?**
 - Their project (even though they were hired by a particular company)
 - Their component in the project
 - Open source
 - Other open source developers
- **Many are passionate**
 - Will leave a company that violates their principles
 - And will get a new job before their desks get cold
- **Patents: generally considered bad**
 - Common belief that patents are antithetical to open
 - [Software Patents Considered Harmful](#)
 - [WHY SOFTWARE PATENTS ARE BAD, PERIOD.](#)
- **Goal: transition from “bad” to ... anything other than bad**

What typically does not work (from someone who has tried)

- “You can exclude others from competing”
- “You can get a competitive advantage”
- “You can drive up competitors’ costs”
- “It helps your company”
- “Your company can monetize the portfolio”
- “There are awards”

These are all true, but typically miss the mark, often badly. None address core motivations.

- “Helps pay for your development”
 - Explain that IP Income is recorded as a negative expense, literally paying for development
 - Risky and typically misses, but can be used with some audiences

	Three Months Ended December 31,		Year Ended December 31,	
	2020	2019	2020	2019
EXPENSE AND OTHER INCOME				
S,G&A	7,232	5,433	23,082	20,604
R,D&E	1,611	1,596	6,333	5,989
Intellectual property and custom development income	(173)	(159)	(626)	(648)
Other (income) and expense	247	(117)	861	(968)
Interest expense	317	354	1,288	1,344
TOTAL EXPENSE AND OTHER INCOME	9,234	7,107	30,937	26,322

IBM 2020 annual report

What to try: PATENTS CAN PROTECT OPEN DEVELOPMENT

- Yes, **PATENTS CAN PROTECT OPEN DEVELOPMENT**
- Restaurant story (often a good place to start)
 - Two friends attend culinary school
 - They scrimp to save money while working entry-level jobs
 - They open their own restaurant
 - Initially, rave reviews for food and server
 - But then ...
- The punchline is that they failed to secure parking, a key property right, and competitors were able to make their offering uncompetitive

PATENTS DO PROTECT OPEN DEVELOPMENT

Open Invention Network

Our Mission: To Enable Open Source

OIN safeguards Open Source and helps our community reduce patent risks in core Linux and adjacent Open Source technologies.

We were created and exist to ensure a level playing field for Linux and Open Source Software (OSS), safeguarding developers, distributors and users from organizations that could leverage Intellectual Property (IP) to hinder their growth and innovation.

We accomplish this goal by acquiring, developing, and sharing **Intellectual Property** to promote a collaborative Linux ecosystem.

3 OIN-Owned Patent Portfolio

In select cases, OIN may sell OIN community members' patents from its own portfolio to help bolster a licensee's defensive position and permit them to file effective counterclaims.

4 OIN Patent Acquisitions & Threat Clearing

In certain circumstances, OIN may acquire patents from patent antagonists asserting patents in situations where the acquisition provides a broad-based clearing of patent threats to OIN community members.

A client's policies can help

- **Policies that can help**

- [Twitter's innovators agreement](#)
- [Red Hat patent promise](#)
- [Tesla: our patents belong to you](#)

- **Add societal good**

- [Open Covid Pledge](#), founded by Facebook, Amazon, Intel, IBM, Microsoft, HPE, Sandia Labs, Unified Patents, apheris AI, Fabricatorz Foundation; numerous additional pledgers

- **Know you client's policies ahead of time**

Remove Impediments by addressing Common Misconceptions

- **Can't patent open source**
 - Patenting the method, not a particular implementation
 - And this protects your freedom to innovate in open source
- **Open source is free, so why bother?**
 - Virtually all OSS has a proprietary analog, and the proprietary company can use patents to hinder OSS
- **It's too hard**
 - **Show a simple example and/or metaphor**
 - [URL shortening](#), cookie recipe (method of making cookies)

2 ¾ cups all-purpose flour
1 teaspoon baking soda
½ teaspoon baking powder
1 cup butter, softened
1 ½ cups white sugar
1 egg
1 teaspoon vanilla extract

Step 1

Preheat oven to 375 degrees F (190 degrees C). In a small bowl, stir together flour, baking soda, and baking powder. Set aside.

Step 2

In a large bowl, cream together the butter and sugar until smooth. Beat in egg and vanilla. Gradually blend in the dry ingredients. Roll rounded teaspoonfuls of dough into balls, and place onto ungreased cookie sheets.

Step 3

Bake 8 to 10 minutes in the preheated oven, or until golden. Let stand on cookie sheet two minutes before removing to cool on wire racks.



More Common Misconceptions

- **Don't have to have implemented it**
 - Often that's too late
- **Doesn't have to be completely new**
 - Most patents are improvements on existing art
 - More function, faster, more scalable, more secure, easier to use, easier to manage, etc.
- **Inventing isn't only for geniuses**
 - Inventing is more common than most guess
 - The difference between inventor and non-inventor is typically recognition, not innovation
- **Inventing isn't only for programmers**
 - Good inventions come from good problems
 - Sales, marketing, test, etc. often see problems before programmers

Additional Benefits

- **Opportunity to collaborate**
 - What do you get when a material scientist, a physicist and a photochemist have free time and leftover Thanksgiving turkey?
- **Creative outlet for innovators – and can be fun**
- **Opportunity to address Diversity & Inclusion**
 - Statistically, most patents come from white/Asian males
 - That experience creates eminence, enhances career opportunities, which can exacerbate D&I imbalances
 - And diversity of thought and experience often leads to stronger innovations



Common Open Source Licenses

Open Source Fundamentals

Common Licenses – Permissive

- Apache
- MIT
- BSD
- “Unlicense”

- One-off/eccentric licenses
 - *WTFPL*
 - *JSON*
 - *VIM*

- Creative Commons Licenses

Open Source Fundamentals

Common Licenses – Copyleft / “Viral”

- GNU General Public License (GPL)
- Affero - AGPL
- “Lesser” - LGPL

“Weak” Copyleft

- Mozilla Public License
- Common Development and Distribution License
- Eclipse Public License

Open Source Fundamentals

New generation of cloud-oriented licenses

- **Server Side Public License**
 - Expands AGPL-like terms to code that functions as part of a “service” (e.g. MongoDB)
- **Elastic License 2.0**
 - Bars providing software as a hosted or managed service (e.g. Elasticsearch)
- **Commons clause**
 - Prohibits “selling” the software
- **Typically used in a dual-licensing model**
- Often not considered to fall within accepted definitions of “open source”



Open Source Patent Provisions

Open Source Patent Provisions

Patent clauses in open-source licenses generally fall into one of three categories:

- **Patent Licenses (or covenants not to sue);**
 - Who grants the license?
 - generally, only contributors (including in some cases modifying distributors) - however read the provisions of the OS license, e.g., the copyleft license, at issue
 - Which patents does the license include?
 - a) the contribution alone or b) the combination of the Contribution with the Work (see e.g., Apache 2.0)
 - Which activities does the license allow?
- **Defensive Termination**
 - e.g., Apache 2.0
- **Other Patent Provisions**
 - e.g., GPL v3 provision regarding entering into restrictive patent licenses



Risk Situations

Open Source Risk Situations

- **Merger & Acquisition**
- **Venture Investment**
- **Business Deals**
- **Product Releases**
- **Litigation Case Studies**
 - Surprise claims
 - License enforcement

Patent Litigation Involving Open Source Issues

- ***Twin Peaks v. Red Hat (2012 NDCal)***
 - GPL counterclaim in mirror file system case
- ***IBM v. Asus (2008-9 ITC)***
 - Successful GPL license defense involving routers
- ***Ximpleware v. Versata (2013-5 NDCal)***
 - Patent and copyright claims on XML parser arising out of separate commercial litigation in Texas

Open Source Enforcement Examples

- ***MySQL v. NuSphere* (D. Mass. 2002)**
 - Copyright and trademark claims on GPL database software
- ***BusyBox v. Monsoon Multimedia* (S.D.N.Y. 2009-10)**
 - Embedded GPL Unix utilities in consumer electronics
- ***Jacobsen v. Katzer* (Fed. Cir. 2008)**
 - Model railroad software – DJ patent claim and copyright claim
- ***Continuent v. Tekelec* (S.D. Cal. 2013)**
 - Database replication / telephony
- **Patrick McHardy – monetized GPL enforcement (Germany)**
 - Netfilter / NAT – money damages
- ***Christoph Hellwig v. VMWare* (Germany 2015-present)**
 - Kernel code, currently on appeal
- ***B.V. v. University* (Germany 2015)**
 - “S Client” WiFi Login – Injunction and Damages
- ***Artifex v. Hancorn* (2016-7 NDCal)**
 - Copyright and contract enforcement of dual-licensing model for PDF generator

OSS Hygiene

- **Perform regular source code audits** to determine OSS in current use, and confirm compliance with the applicable license provisions
- **Implement routine inbound and outbound tracking systems** to limit need for expensive/cumbersome audits once baseline level of compliance is established
- **Maintain a whitelist** of acceptable OSS licenses, a blacklist of rejected OSS licenses, and a validation process to approve OSS licenses not on either list
- Prior to making major software purchases, **require vendors to provide OSS audits**
- **Implement a policy** for identifying areas where OSS licenses may interact with patents to insure alignment



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Thank You!

Please send your NY CLE forms to mcleteam@fr.com

Any questions about the webinar, contact Makayla Mainini at mainini@fr.com

A replay of the webinar will be available for viewing at <http://www.fr.com/webinars>

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