

오픈소스 기여

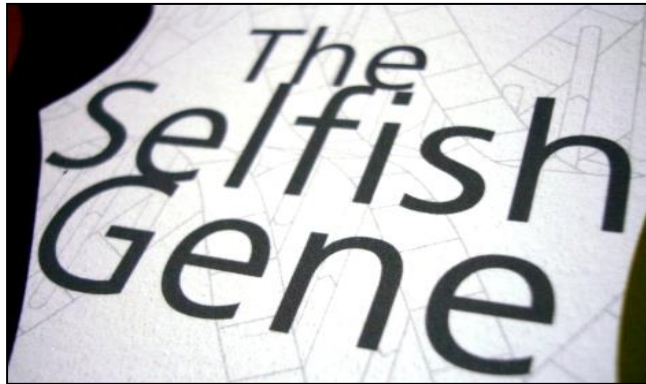
- 필요성과 법적 위험성 -

삼성전자 S/W센터 오픈소스그룹
정윤환 변호사

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2015. 10. 28.

Human : **Selfish**



Corporation : **Profit**



Open Source : **Sharing, Collaboration**



Open Source ?

■ 오픈소스의 정의

- 소스코드가 공개되어 누구나 자유롭게 다운로드 하여 사용/수정/배포할 수 있는 S/W.
- OSI (**O**pen **S**ource **I**nitiative) 정의



1. **자유롭게 배포**할 수 있어야 한다.
2. **소스코드**가 제공되어야 하며 소스코드의 재배포도 허용해야 한다.
3. 소스코드를 **수정**하여 파생저작물을 만들 수 있어야 한다.
4. 변경된 소프트웨어에는 다른 이름이나 버전을 부여함으로써 **원저작자의 코드를 보장**해야 한다.
5. 특정인이나 특정그룹에 대해서 **차별이 없어야** 한다.
6. 특정 분야에 대해서 **차별이 없어야** 한다.
7. 소스코드를 받는 **사용자가 동일한 라이선스로 사용**할 수 있어야 한다.
8. 라이선스는 **특정제품에 국한되어서는 안된다.**
9. 라이선스가 파생저작물이 아닌 **다른 소프트웨어를 제한해서는 안된다.**
10. 라이선스는 **기술에 대해서 중립적**이어야 한다.

오픈소스 기여의 필요성

유지보수 비용 절감

개발자 역량강화

외부 협력 강화

개발기간 단축

SW 품질강화

.....

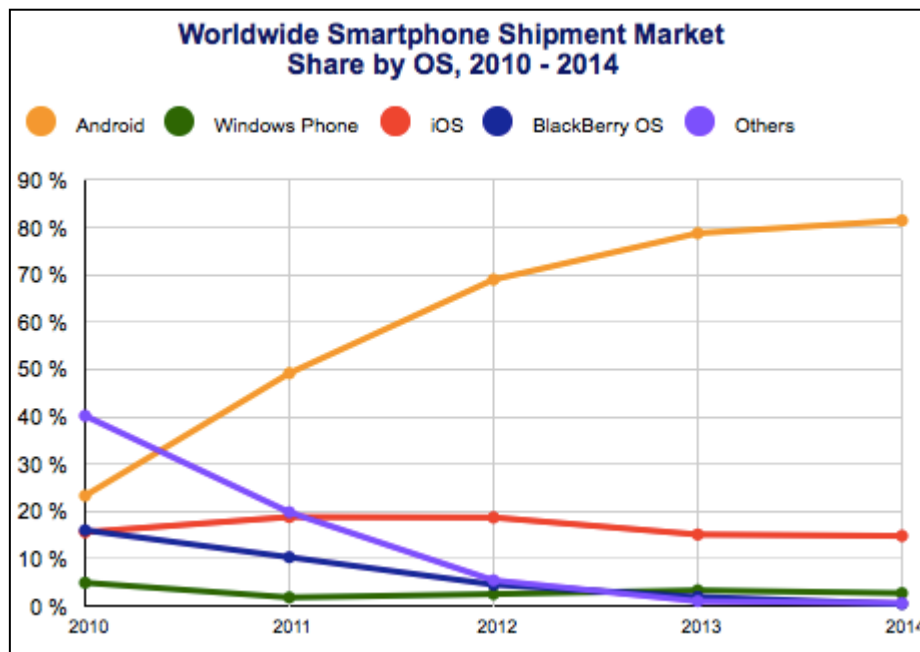
기술 확산

기술 주도권 확보

신규 비즈니스 창출

기술 주도권 확보

Contribution ➡ 공유/협력 ➡ 기술확산 ➡ 주도권 확보



(출처 : IDC)

Why Contribution ?

■ Webkit vs. Blink

– Webkit

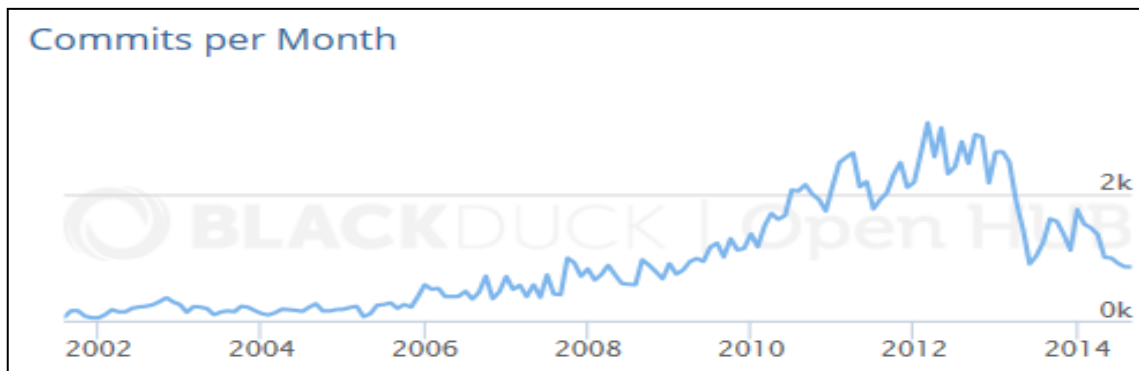
- Apple 사 개발 웹 렌더링 엔진
- 2002년 프로젝트 출범, 2005년 오픈소스 발표
- 구글 크롬 브라우저, 애플 사파리 웹브라우저, 안드로이드 웹브라우저 등에 사용
- **2009년 Google의 커밋 수 Apple 추월**
- **Apple 이 최종 소스 코드 반영 권한을 자사 직원으로 제한**

– Blink

- 2013년 4월, Google은 크롬의 렌더링 엔진으로 웹킷 대신 블링크를 사용하겠다고 선언
- 2013년 7월, 블링크가 적용된 크롬 웹 브라우저 발표



(출처 : Aurich Lawson/Thinkstock)



[Webkit Commit 증감 그래프]

(출처 : OpenHub.com)

Why Contribution ?



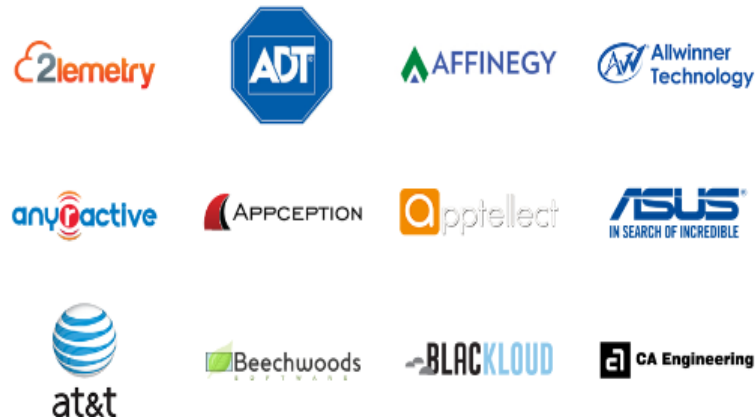
VS



PREMIER MEMBERS



COMMUNITY MEMBERS



DIAMOND:



PLATINUM:

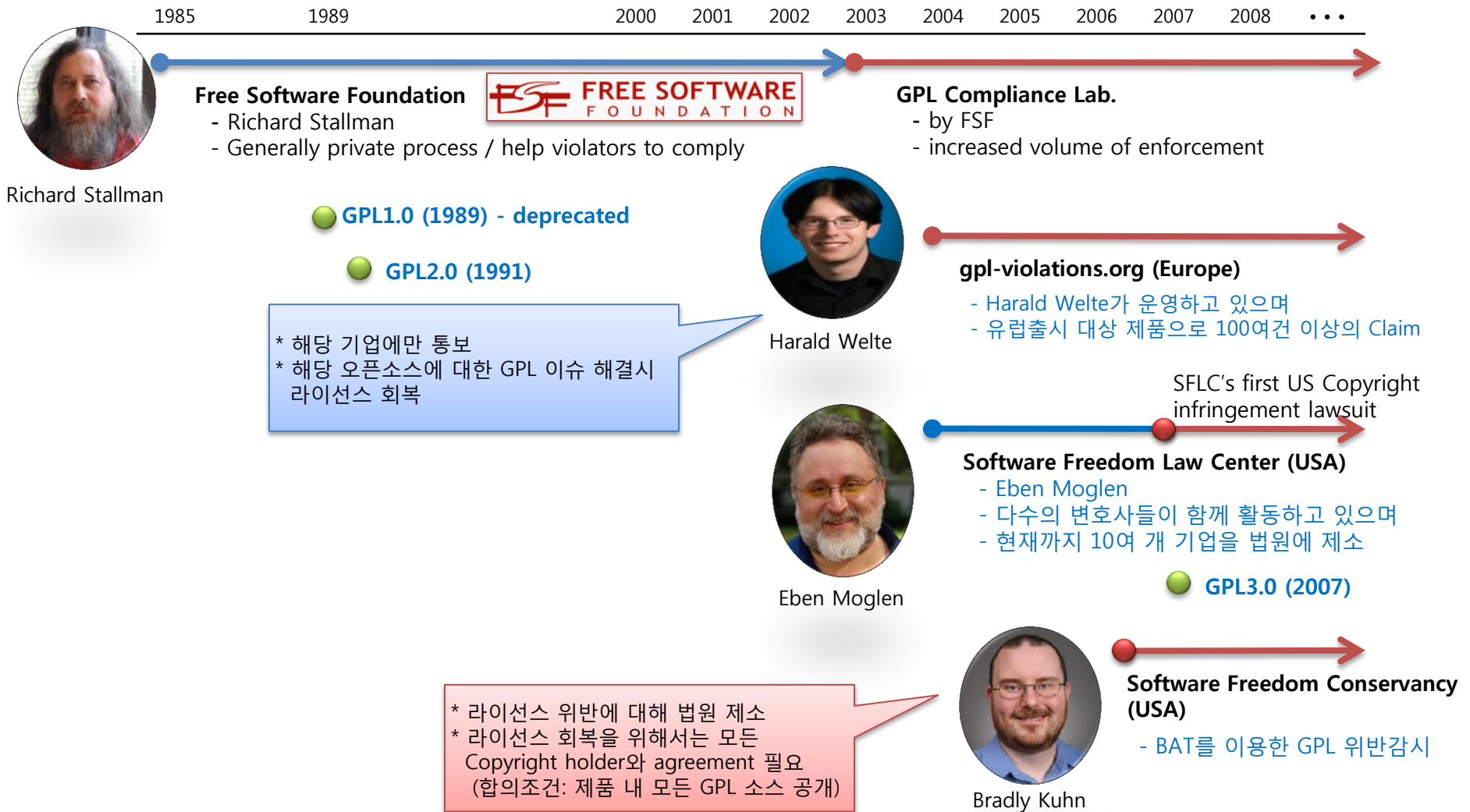


GOLD:



오픈소스 기여의 법적 위험성

License 위반 감시단체



Compliance

FOSS BAR CODE TRACKER

CDL: Software Bill of Materials (SBOM) & Cost Tracker

Training

- Crucial to the adoption of compliance.
- Ranges from a brown bag talk to a 3-day workshop.
- **STORY:** Compliance Seminar #1 - Less than 10 people attended.
- Compliance Seminar #2 (a week later) - Full house

Cost of Manual Software Code Management

Using Manual Processes Automated

Developer effort
Cost of Finding Problems
Cost of Delay

\$\$\$

Open Archival Information System (OAIS) reference model ISO 15722

Open Archival Information System (OAIS) reference model ISO 15722

Black Duck

Black Duck

Risk Management Templates

NEPA node

Package Feeds

Tools to make life easy

- **Black Duck**
- **Greenberg**

Type of Compliance Failures

- Intellectual property (IP) failures
- License failures
- Compliance process failures

AboutCode

- **How to Measure Best Practices with AboutCode**
- **AboutCode**

AboutCode

Application Development Lifecycle

ABOUT-Code

- **How to Measure Best Practices with AboutCode**
- **AboutCode**

GLPI

Governance: Policy and Compliance

Seed Your Inventory Management Tool with Pre-approved Packages

Seed Your Inventory Management Tool with Pre-approved Packages

Seed Your Inventory Management Tool with Pre-approved Packages

Seed Your Inventory Management Tool with Pre-approved Packages

Measure Everything

Establish metrics and measure yourself against them. Otherwise, how can you know what's going on and how can you improve?

Measure Everything

CODE JANITOR

CODE JANITOR

CODE JANITOR

CODE JANITOR

What should be verified about the disclosure?

- Completeness, consistency, accuracy
- Are disclosure documents available to users for open source
- Does the disclosed license match what's in the code files?
- Do the version numbers match?
- Does the license truly permit the proposed use of the software?

What should be verified about the disclosure?

Sarbanes-Oxley IT Compliance Using Open Source Tools

OPEN SOURCE STRATEGY

OpenSamm: Governance

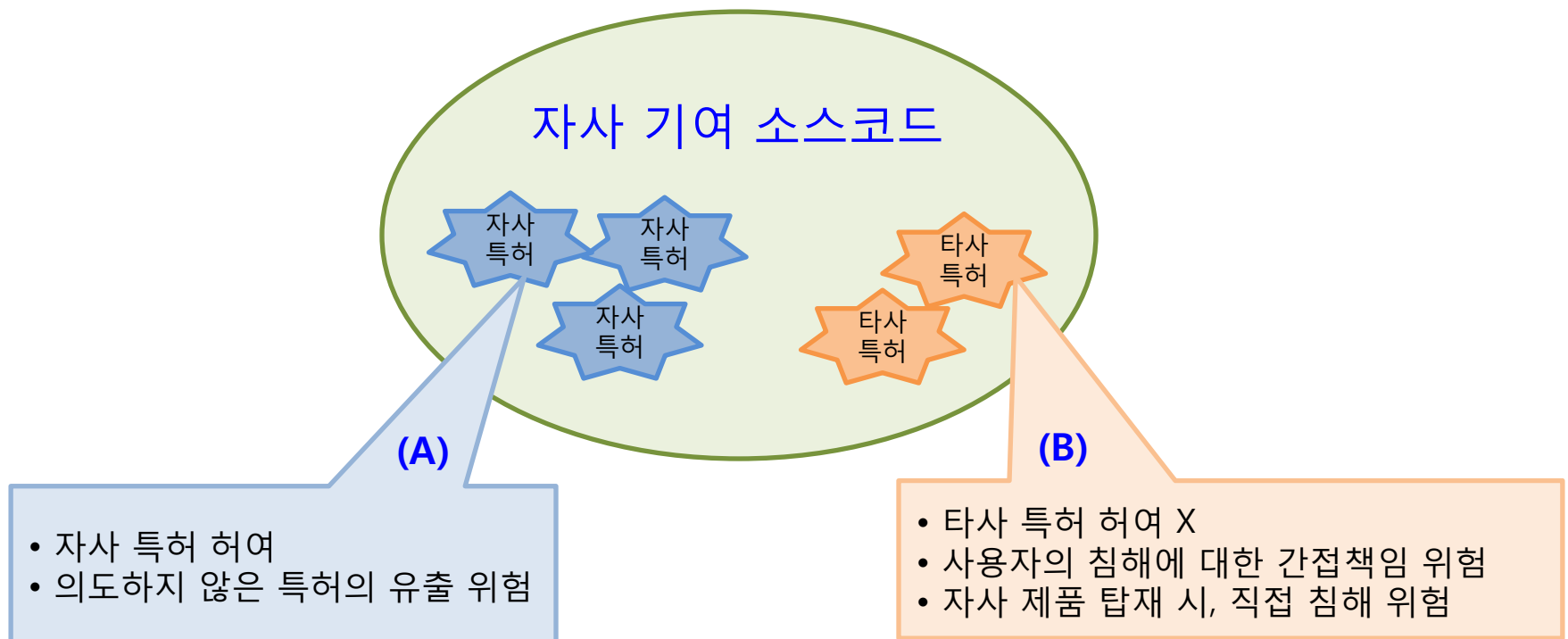
- Strategy and Metrics
- Policy and Compliance
- Education and Guidance

OpenSamm: Governance

■ 오픈소스와 특허 Risk (1/2)

– 자사가 기여한 오픈소스 소스코드에

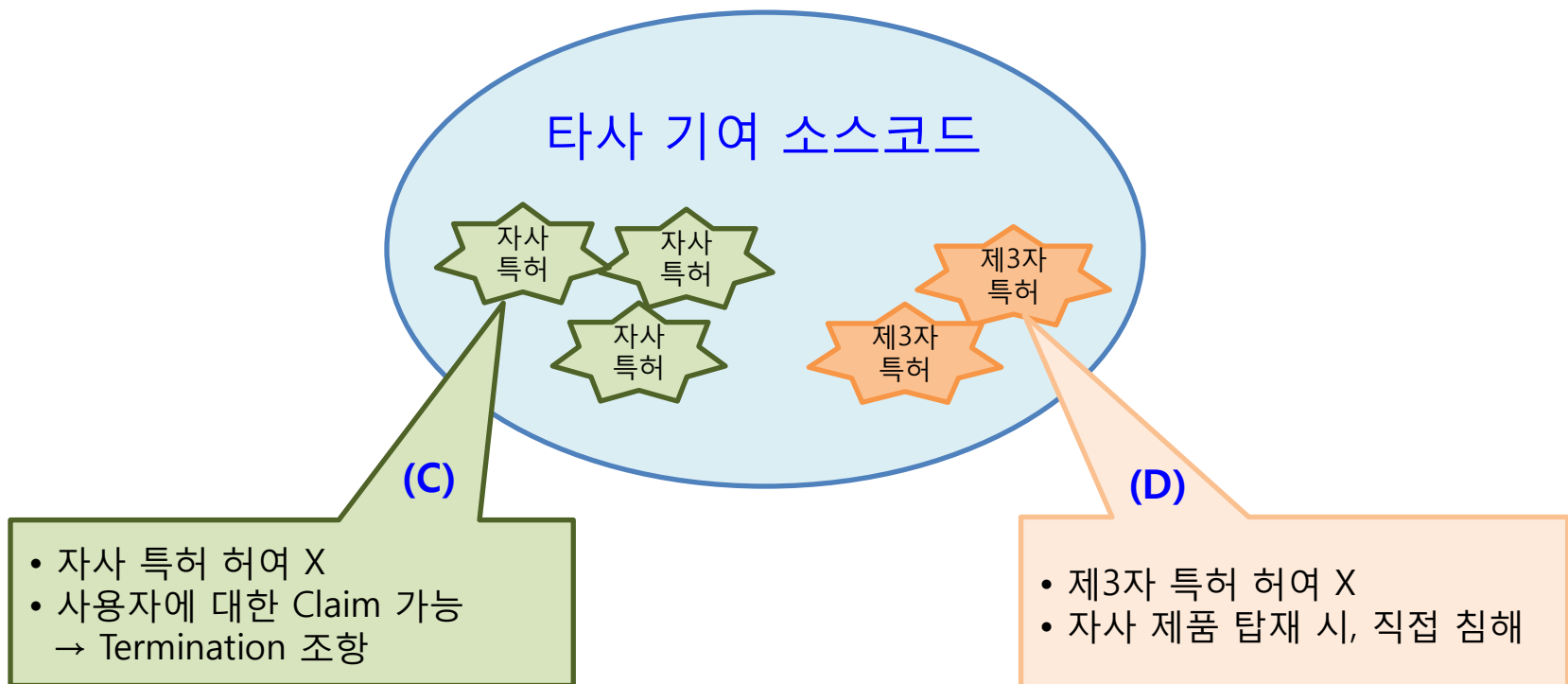
- Case (A) 자사 특허가 포함되어 있는 경우 → **자사 특허 유출 Risk**
- Case (B) 타사 특허가 포함되어 있는 경우 → **타사 특허 침해 Risk**



■ 오픈소스와 특허 Risk (2/2)

– 타사가 기여한 오픈소스 소스코드에

- Case (C) 자사 특허가 포함되어 있는 경우 → **자사 특허 유출 Risk ?**
- Case (D) 제3자 특허가 포함되어 있는 경우 → **타사 특허 침해 Risk ?**



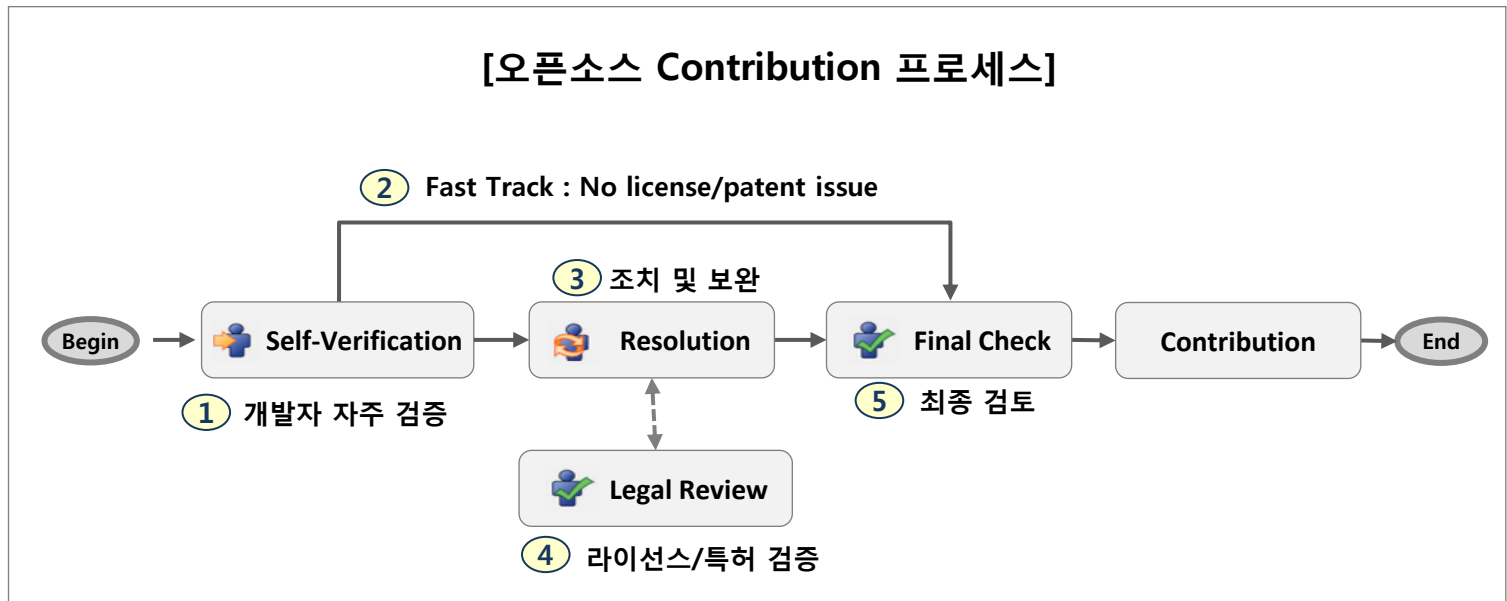
▪ 특허 Risk 대응방안 (1/2)

– Case (A),(B) : 자사 기여 소스코드 검증

• [오픈소스 Contribution 프로세스]

. 관련 자사 특허 검토 (필수) → 오픈 여부 결정

. 관련 타사 특허 검토 (필요시)



▪ 특허 Risk 대응방안 (2/2)

- Case (C) : 타사 기여 소스코드에 포함된 자사 특허 유출 방지
 - 사전 Review 및 Opt-out 조항 [ex. OIC]
- Case (D) : 타사 기여 소스코드에 포함된 제3자 특허 침해 방지
 - Community 자체 검증 [ex. 아파치/이클립스 IP clearance]
 - 기여자 계약 (CLA/DCO)

분류	CLA (Contributor License Agreement)	DCO (Developer Certificate of Origin)
주요 내용	기여물에 대한 기여자의 배포 권한 확인 오픈소스 프로젝트/커뮤니티에 배포 권한 부여	
제출 방식	최초 기여 이전에 서명 후 제출 (우편, 이메일, 웹페이지 등)	소스코드 기여 시 자동 포함 (Sign-off)
사례	Apache Foundation, FSF, Eclipse, Google, Ubuntu, OpenStack 등	Linux Kernel, Open Web OS, Android, QT, Docker, LibreOffice 등

▪ 이슈 : Permissive 라이선스의 특허 허여 여부

AllSeen Alliance IP Policy

Outbound Distributions

The Alliance will release project code under the [ISC License](#) and provide no other rights for such code other than those expressly granted in that license. For the text of the ISC License, please visit <http://opensource.org/licenses/ISC>. [Except as otherwise expressly stated in the ISC license, the Alliance does not grant any licenses or other rights to any copyrights, patents or other intellectual property for project code.](#)

- BSD 계열의 Permissive 라이선스 : 특허에 대한 규정 없음
 - 묵시적 허여 여부
 - 명시적으로 특허권을 허여하지 않는다고 규정한 경우?

오픈소스 기여의 필요성

- Developer -

Why Open Source? - 개발자

- Webkit Reviewer List
(<http://www.webkit.org/team.html>)



The screenshot shows the 'The WebKit Open Source Project' website. The main heading is 'The WebKit Open Source Project'. Below it, there's a section for the 'WebKit Team' with a list of team members and their affiliations. To the left, there's a sidebar with links to various resources like 'Home', 'Surfin' Safari Blog', 'Planet WebKit', 'Project Goals', 'Keeping in Touch', 'Trac', 'Contributors Meeting', 'Working with the Code', 'Installing Developer Tools', 'Getting the Code', 'Building WebKit', 'Running WebKit', 'Debugging WebKit', 'Contributing Code', 'Commit and Review Policy', 'Adding Features', 'Security Policy', 'Documentation', 'Wiki', 'Projects', 'Code Style Guidelines', 'Technical Articles', 'Web Inspector', 'Web Developer Resources', 'Demos', 'Testing', 'Regression Testing', 'Leak Hunting', 'Writing New Tests', 'Getting a Crash Log', 'Bugs', 'Reporting Bugs', 'Bug Report Guidelines', 'Bug Prioritization', 'Test Case Reduction', 'Bug Life Cycle'. At the bottom, there's a disclaimer about the open source nature of the project and its licensing.

The WebKit Open Source Project

WebKit Team
Here is the key for each item:

- Name (IRC nickname) Affiliation
- Areas of knowledge

Reviewers

- Abhishek Arya** (inferno-sec) *Chromium*
 - Security, Layout and Rendering
- Ada Chan** (chanada) *Apple*
 - WebKit on Windows
- Adam Barth** (abarth)
 - Security, HTML parser, webkit-patch, FrameLoader (sadly), V8 Bindings, The Chromium Port
- Adam Roben** (aroben) *Apple*
 - Plug-ins and Java (Win, General), WebKit API (Win), Windows build system, General Windows port issues, Developer Tools (Web Inspector), Tools
- Adam Treat** (manyoso) *KDE*
 - The QtWebKit Port, The HTML Parser/Tokenizer, The platform layer, Image loading and painting, ScrollView and friends
- Adele Peterson** (adele) *Apple*
 - HTML Forms, Security, Layout and Rendering, Web Compatibility (General)
- Adrienne Walker** (enne) *Google / Chromium*
- Alejandro G. Castro** (alexg___) *Igalia*
 - WebKitGTK+, Cairo graphics backend, ShadowBlur rendering, Epiphany/WebKit Contributor
- Alex Christensen** (alexchristensen) *Apple*
 - Win64, WebGL
- Alexander Pavlov** (apavlov) *Chromium*
 - Developer Tools, Web Inspector, CSS OM
- Alexandru Chiculita** (achicu) *Adobe*
 - CSS Regions, CSS Exclusions, CSS Filters, CSS Custom Filters
- Alexey Proskuryakov** (ap) *Apple*
- Alexis Menard** (darktears) *INdT / Nokia / KDE*
 - The QtWebKit Port, CSS, CSS shorthands, HTML5 Media Elements
- Alice Liu** (aliu) *Apple*
 - HTML Editing, Memory Use / Leaks, Core DOM, Web Compatibility (Web Apps), Web Compatibility (General), Bug Mastery, Web Accessibility
- Allan Sandfeld Jensen** (carewolf) *Nokia / Digia / KDE*
 - QtWebKit, CSS Selectors, Touch Adjustment, Hit Testing

WebKit is open source software with portions licensed under the LGPL and BSD licenses. Complete license and copyright information can be found within the code.

WebKit and the WebKit logo are trademarks of

- EFL Committer List
(<https://www.enlightenment.org/p.php?p=contact&l=en>)

Name	Managing / Contributing
 Bertrand Jacquin	e2, e3, e4, e5
 Boris Faure	Terminology, Tiling, klok, eenvader.fractal, mpdude, e, efl, ... various bits here and there
 Carsten Hatzler	eet, evas, embryo, ecore, edje, e, emotion, rage, imlib2, imlib2_loaders, entice, edb, epeg, expedite, exquisite, elementary, efreet, e_dbus, www, entrance, eina
 Cedric BAIL	eina, eet, evas, edje, ecore, eio, emotion, expedite, e, ephoto, eyelight, efreet
 Chidamber Zinnourey	e
 Christopher Michael	General E patch monkey, imprint, emodules, ilume2, evas, ecore, elementary, E17, EFL Wayland
 ChunEon Park	evas, elementary, envtor, eina, ecore, edje, expedite
 Daniel Hirt	efl, elementary
 Daniel Juyung Seo	elementary, elm theme viewer, efl, enlightenment, BINDINGS and some others
 Daniel Kolesa	eolian, elua, enity, efl, elementary, enlightenment, emodules, czech i10n
 Daniel Wilmann	elev8, efl
 Daniel Zagoui	eebj, evas, edje, ecore, elementary
 David Walter Seikel	e, ecore_exe, edje
 Davide Andreoli	Python bindings, EpyMC, Espionage, Places, Penguins, DevsMap, edje_editor, e, edje, emotion, elementary
 Deon Thomas	E17
 Eduardo Lima (Etrunko)	General Fixes, Python-EFL, E, Ecore and Evas (Wayland)
 Eric Schuele	E17, ecore, efreet, e_modules
 Felipe Magno de Almeida	Eolian, Eina-Cxx, Eet-Cxx, Ekibus-Cxx
 Flavio Vinicius Alvares Ceolin	Edje, Elementary
 Gustavo Lima Chaves	Evas, Edje, Elementary

Why Open Source? - 개발자

- To be a friend with Leaders



OPERATING SYSTEMS open source, linux

Open source needs more tech-savvy lawyers, Linux Foundation says

To avoid legal difficulties when managing intellectual property for open-source projects, more tech savvy lawyers are needed, according to the Linux Foundation.

Educating lawyers, however, is not the only solution, argued other open-source insiders at the LinuxCon Europe conference in Edinburgh this week.

Open-source software adoption is outstripping the legal knowledge of parties involved in open-source projects who have difficulty dealing with copyright, patent, licensing and compliance issues, said Linux Foundation Executive Director Jim Zemlin. During the conference's opening speech on Monday, Zemlin said the open-source community needs more lawyers who have an understanding of the technology and how open-source collaboration works.

Having lawyers with a better understanding of the technology involved in open-source projects would indeed be a way to overcome legal difficulties, said Deb Nicholson, community outreach director of the Open Innovation Network (OIN).

"I would agree that having more tech savvy lawyers that understand open-source legal issues would be good," Nicholson said. "Smaller companies are desperate to find someone who can advise them," she said, adding that even if they can pay them, finding an attorney who understands the issues can be difficult. [2013.10.22, PCWorld]

Why Open Source? - Lawyer

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 **what:** **where:**

one search. all jobs. job title, keywords or company city, state, or zip

open source jobs Tip: Enter your zip code in the "where" box to show results in your area.

Sort by: **relevance** - date [Upload your resume](#) - Let employers find you Jobs 1 to 10 of 41,437

Salary Estimate
\$25,000+ (34761)
\$50,000+ (27972)
\$70,000+ (20959)
\$85,000+ (15188)
\$105,000+ (8102)

Company

Location

Job Type

Show: all jobs - 32,812 new jobs

Customer Data Operations Associate - new
Wiley - ★★★★★ 66 reviews - Hoboken, NJ
Run customer reports out of Business Intelligence system, analyze the data, identify issues, take corrective action or open a ticket in the technical issue...
1 day ago - save job - email - more...

Intelligence Analyst - new
T-Rex Corporation - ★★★★★ 5 reviews - Arlington, VA
As an Administrative (Intelligence) Analyst, you will be responsible for conducting exhaustive database searches to include, but not limited to Student and...
20 hours ago - save job - email - more...

Open Source Analyst - new
Intrepid Solutions - United States
Open Source Analyst. Minimum five (5) years of experience as an Open Source Analyst. Collaborates closely with experts in cyber disciplines/specialties to...
3 days ago - save job - email - more...

Open Source Analyst - new
Novetta - ★★★★★ 5 reviews - Fort Bragg, NC
The candidate must analyze open source material and understand the intelligence process to compile, collate, analyze, produce, and evaluate all-source material....
12 hours ago - save job - email - more...

Mandarin Linguist and All Source/Counterintelligence Analyst... - new
CACI International Inc - ★★★★★ 658 reviews - Linthicum, MD +1 location
Expertise in assessing sources using the PAMSSA method. Network communication using TCP/IP protocols, basic system administration, basic understanding of...
CACI International - 7 hours ago - save job - email - more...

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 **what:** **where:**

one search. all jobs. job title, keywords or company city, state, or zip

open source lawyer jobs Jobs 1 to 10 of 56

[Upload your resume](#) - Let employers find you

Sort by: **relevance** - date **Show:** all jobs - 42 new jobs

Salary Estimate
\$45,000+ (52)
\$65,000+ (42)
\$80,000+ (29)
\$100,000+ (21)
\$110,000+ (13)

Company

Location

Job Type

Senior Counsel, Commercial Contracts - new
Wyndham Worldwide Corporate - ★★★★★ 2 reviews - Parsippany, NJ
Provide internal clients, assigned business units, and lawyers with advice and counsel regarding all facets of information technology and information systems...
Wyndham - 2 days ago - save job - email - more...

Research Analyst, Dispute Resolution - new
IFC - Washington, DC
Routinely gather and monitor information from inside (corporate relations) and outside sources (media, NGOs....
6 days ago - save job - email - more...

Legal Counsel - new
Automatic Inc. - United States
Structuring and negotiating commercial and strategic transactions, licensing (especially open source licenses), tax, intellectual property, mergers/acquisitions...
29 days ago - save job - email - more...

Policy Counsel - new
New America - Washington, DC 20036 (Downtown area)
Dedication to open technology, open networks, and open source, and dedication to maximizing the benefits of technology for poor, rural, and other underserved...
13 days ago - save job - email - more...

Legal Counsel, Product Law Group - new
Apple - ★★★★★ 1,859 reviews - Santa Clara Valley, CA
Familiarity with open source or legal and regulatory compliance in areas such as product liability and data privacy a plus....
28 days ago - save job - email - more...

**“IF THEY ARE
USING OPEN
SOURCE,
WHY
AREN'T
WE?”**

