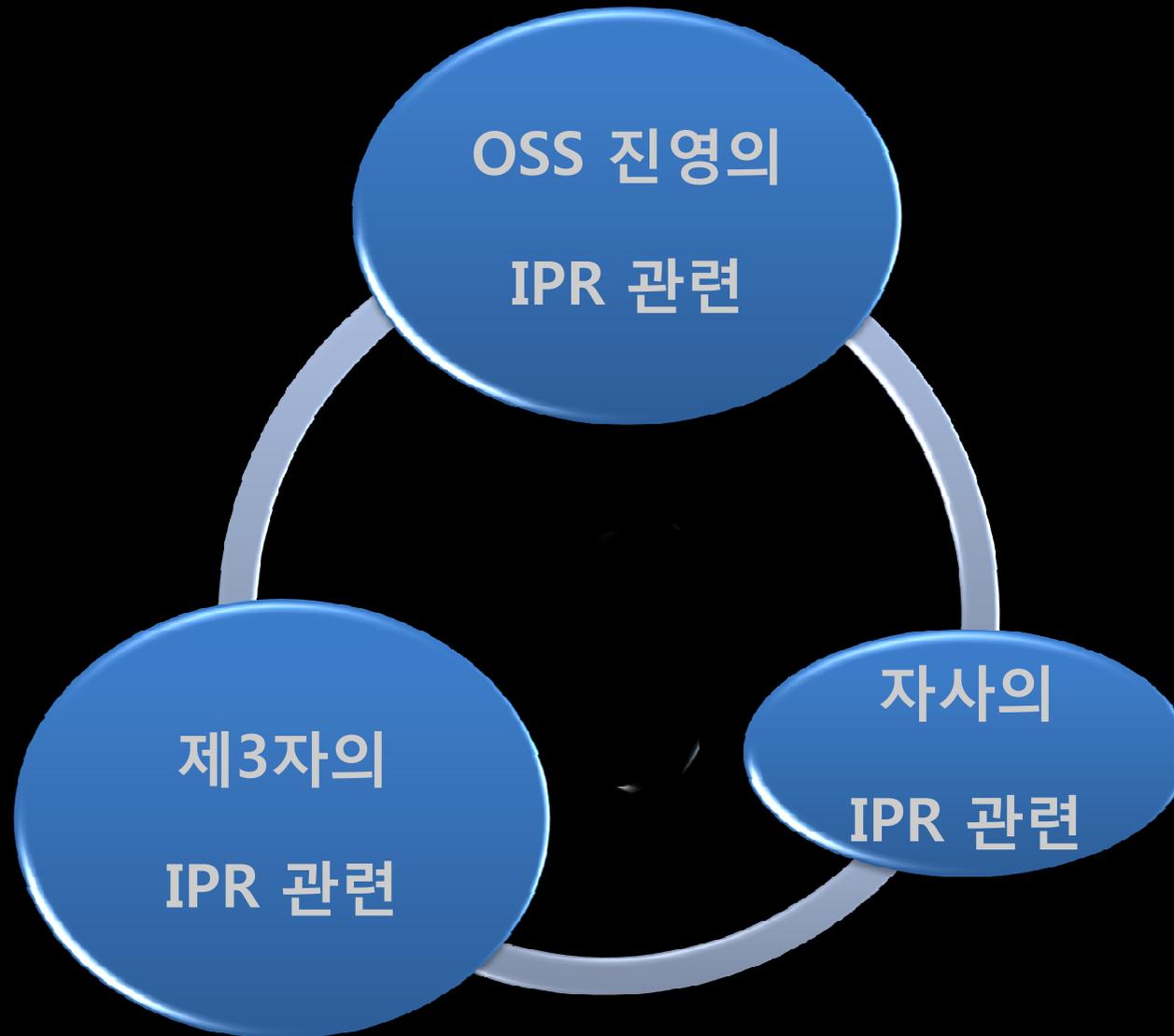


FOSS, Innovation and Patent

2012. 01. 31.
Lee Chul Nam

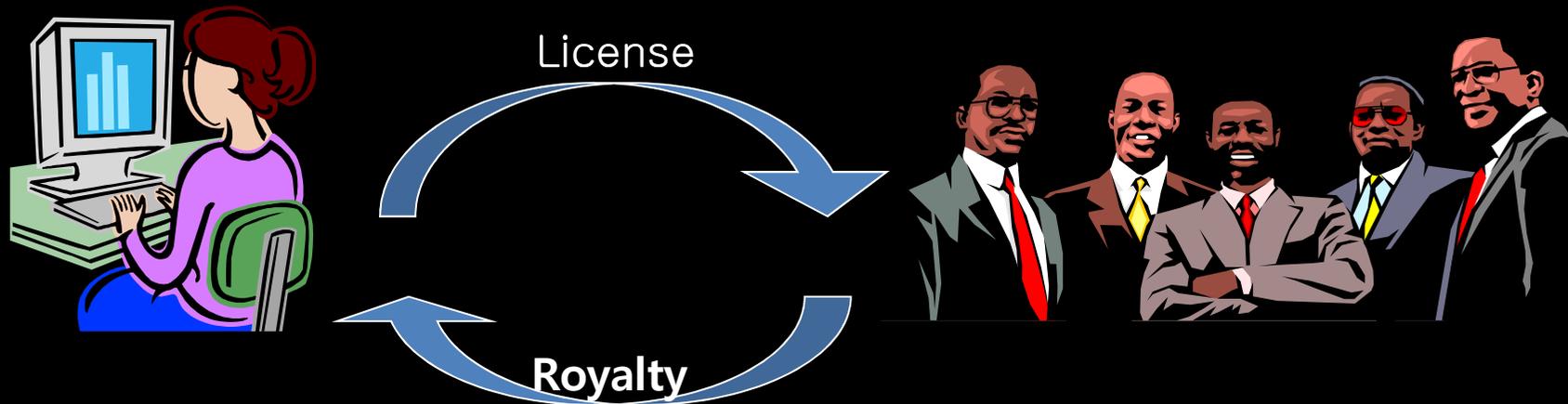
FOSS Legal Risk



AGENDA

- Proprietary SW v. FOSS
 - Monopoly v. Freedom and Cooperation
- Problems of Software Patents
- Some Solutions

Proprietary SW License and Business Model



Microsoft. "... Our business model has been based upon customers paying a fee to license software that we develop and distribute. Under this license-based software model, software developers bear the costs of converting original ideas into software products through investments in research and development, offsetting these costs with the revenue received from the distribution of their products. ..."

- BM-related RISK FACTORS

Certain "open source" software business models challenge our license-based software model.

Another business model ...
revenues primarily from
advertising or subscriptions.

An example of an advertising-
funded business model is Internet
search.

Free/Open Source SW License and Business Model

Free to Use, Copy, Distribute, Modify
Source Code



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- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, **to be licensed as a whole** at no charge to all third parties **under the terms of this License**. (GPL 2.0)

소스코드의 제공

You may copy and distribute the Program (or a work based on it, under Section 2) in object code ... provided that you also do one of the following:

- a) Accompany it with the **complete corresponding machine-readable source code,**

(GPL 2.0)



Mobile

- bada SDK(1)
- Mobile Phone(5)
- MP3 Player(0)
- Mobile Application(1)

Home > Mobile

Model	Country	Version	Source Code	Registered	Announcement	
bada SDK		1.0.0 b2/ 1.0.0 b3	bada SDK	2010.05.06		
N/A		2.0	Dolfin-Browser v2.0 OpenSource	2010.05.27		
SHW-M100S	KR	N/A	SHW-M100S	2010.05.31		
SPH-M570	US	N/A	SPH-M570	2010.06.01		
SPH-M350	US	N/A	SPH-M350	2010.06.01		
SPH-M350	US	N/A	SPH-M350	2010.06.05		
GT-I9000		N/A	GT-I9000	2010.06.07		



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Welcome to LG Electronics Open Source Distribution page.

LG Electronics offers the source code of open source software used in LG products. You can download the source code of LG products after selecting country and search type.

LG Electronics Open Source Distribution Site opens in August 2010. For more information on the products released before August 2010, refer to the product manuals.

Category Model Name

- select -
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- Data Storage
- Mobile Phones
- TV

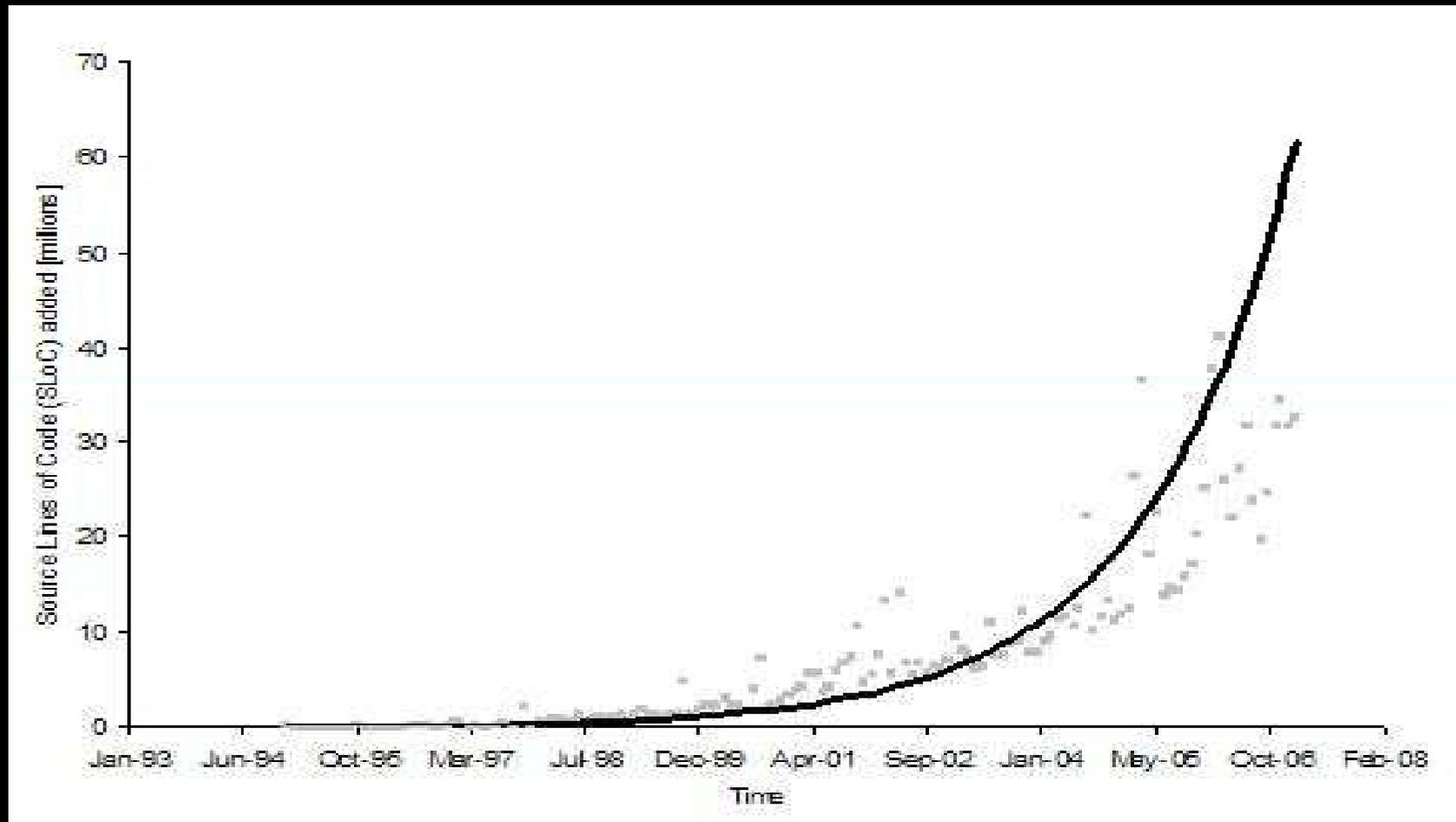


Global ; English

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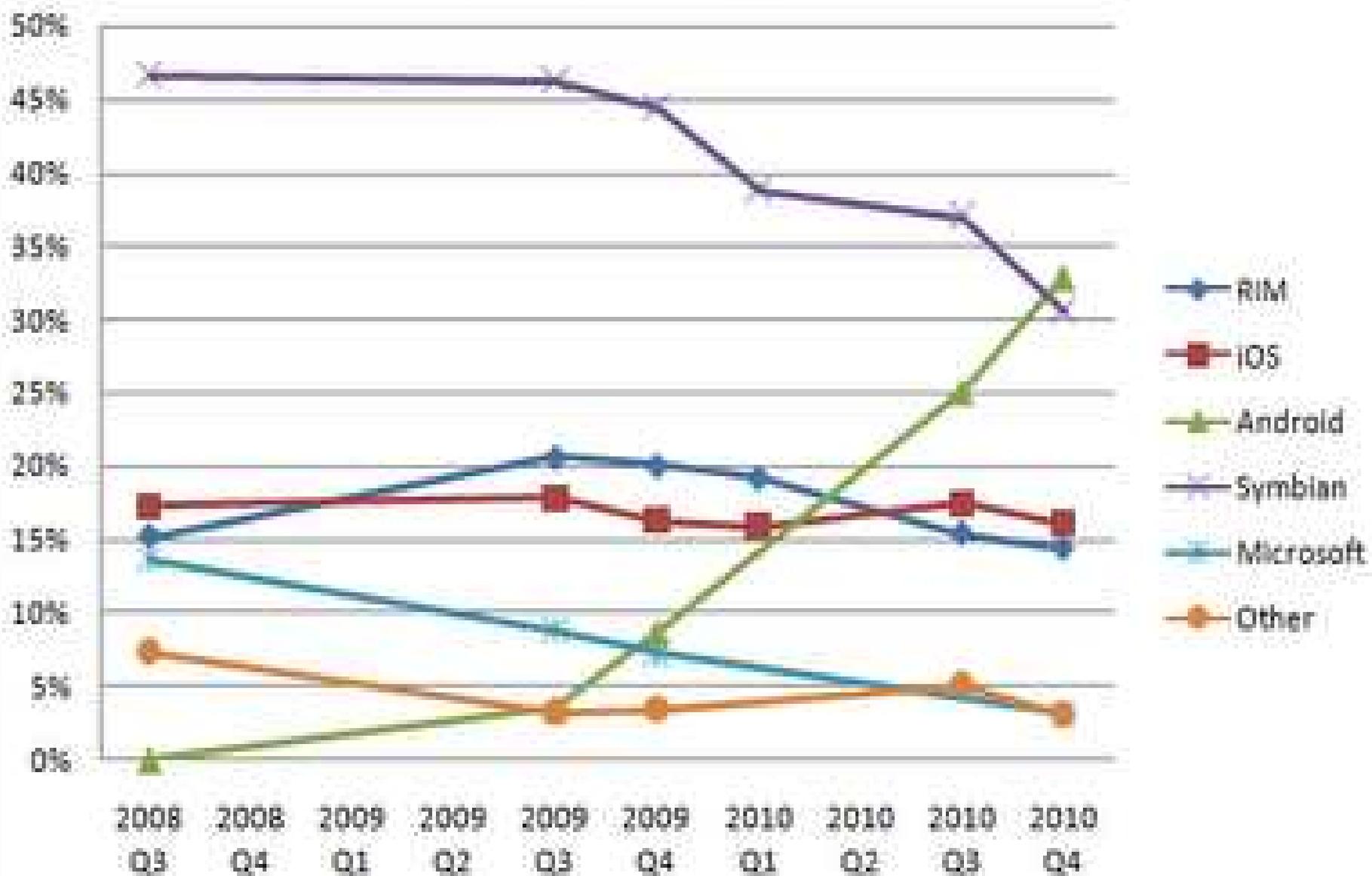
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The Growth of Open Source



5122 active and popular open source projects
(Source : Amit Deshpande and Dirk Riehle
SAP Research, SAP Labs LLC)

World-wide Smartphone Sales



APPLICATIONS

Home

Contacts

Phone

Browser

...

APPLICATION FRAMEWORK

Activity Manager

Window Manager

Content Providers

View System

Notification Manager

Package Manager

Telephony Manager

Resource Manager

Location Manager

XMPP Service

LIBRARIES

Surface Manager

Media Framework

SQLite

OpenGL|ES

FreeType

WebKit

SGL

SSL

libc

ANDROID RUNTIME

Core Libraries

Dalvik Virtual Machine

LINUX KERNEL

Display Driver

Camera Driver

Bluetooth Driver

Flash Memory Driver

Binder (IPC) Driver

USB Driver

Keypad Driver

WiFi Driver

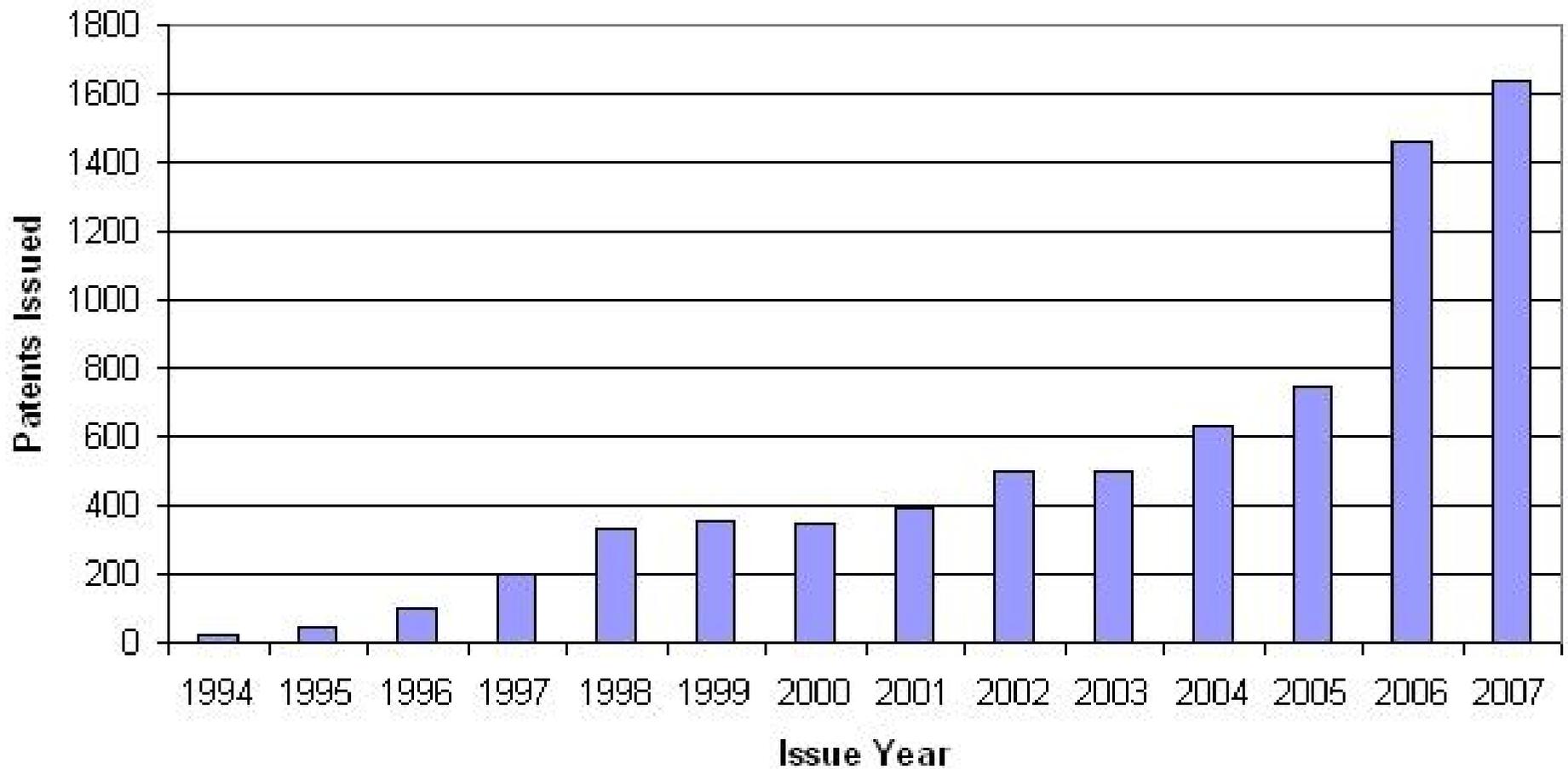
Audio Drivers

Power Management

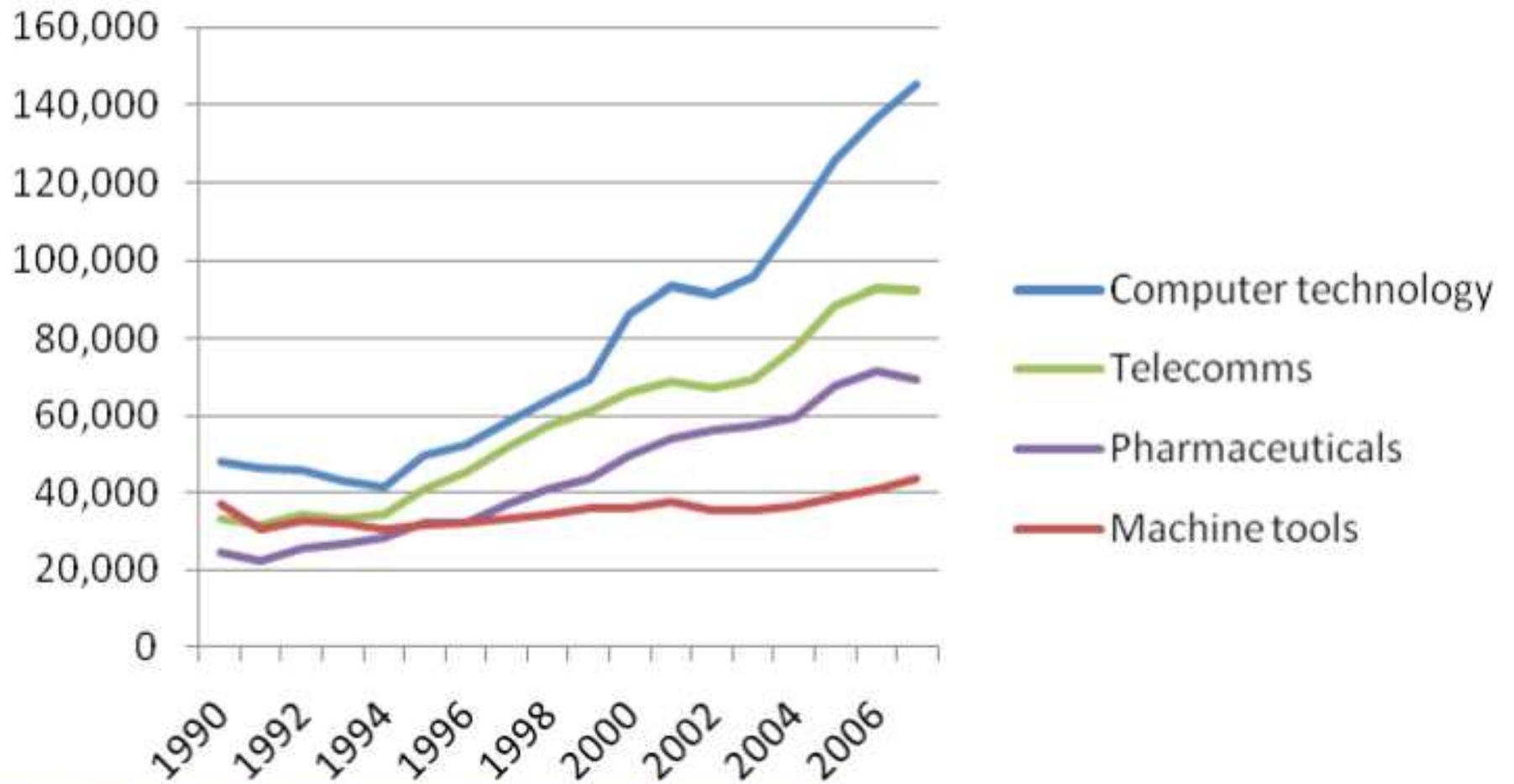
Company Name	# of Changes	% of Total
None	11,594	13.9%
Unknown	10,803	12.9%
Red Hat	9,351	11.2%
Novell	7,385	8.9%
IBM	6,952	8.3%
Intel	3,388	4.1%
Linux Foundation	2,160	2.6%
Consultant	2,055	2.5%
SGI	1,649	2.0%
MIPS Technologies	1,341	1.6%
Oracle	1,122	1.3%
MontaVista	1,010	1.2%
Google	965	1.1%
Linutronix	817	1.0%
HP	765	0.9%

But ... Software Patent

Microsoft's Patent Count



Patent applications by field of technology



Source: WIPO Statistics Database, September 2010

SW Patent and FOSS

- SW특허권의 증가와 FOSS
 - FSF 등 대부분의 커뮤니티는 소프트웨어 특허를 반대
 - GPL Preamble :
“...any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all”
 - 283 U.S. Patents to Linux Kernel, OSRM
 - Microsoft
 - “Linux violates 235 MS’s Patents”
 - Cross-licensed with Amazon (Novell, Samsung, LG)

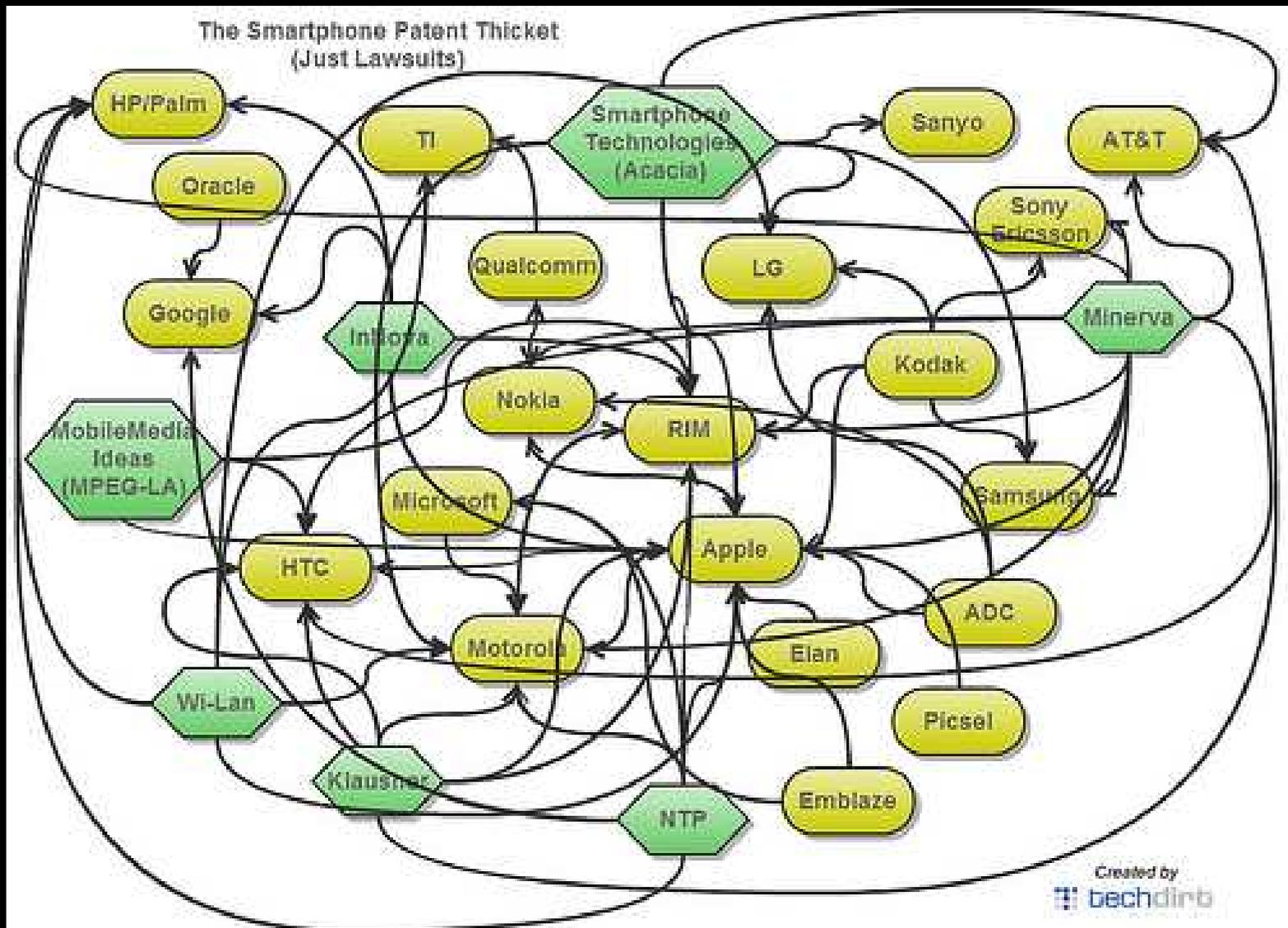
Case : JBoss

- JBoss 특허권 분쟁 (Firestar v. Red Hat Inc.)
 - Red Hat이 JBoss를 인수한 직후인 2006년 6월 28일 Firestar가 Red Hat을 상대로 특허침해소송 제기
 - 미국 특허 6,101,502 "a method of interfacing an object oriented software application with a relational database"
 - JBoss Hibernate 3.0이 침해했다고 주장
 - 2008년 6월, 당사자 합의를 통해 분쟁해결

Case : JBoss

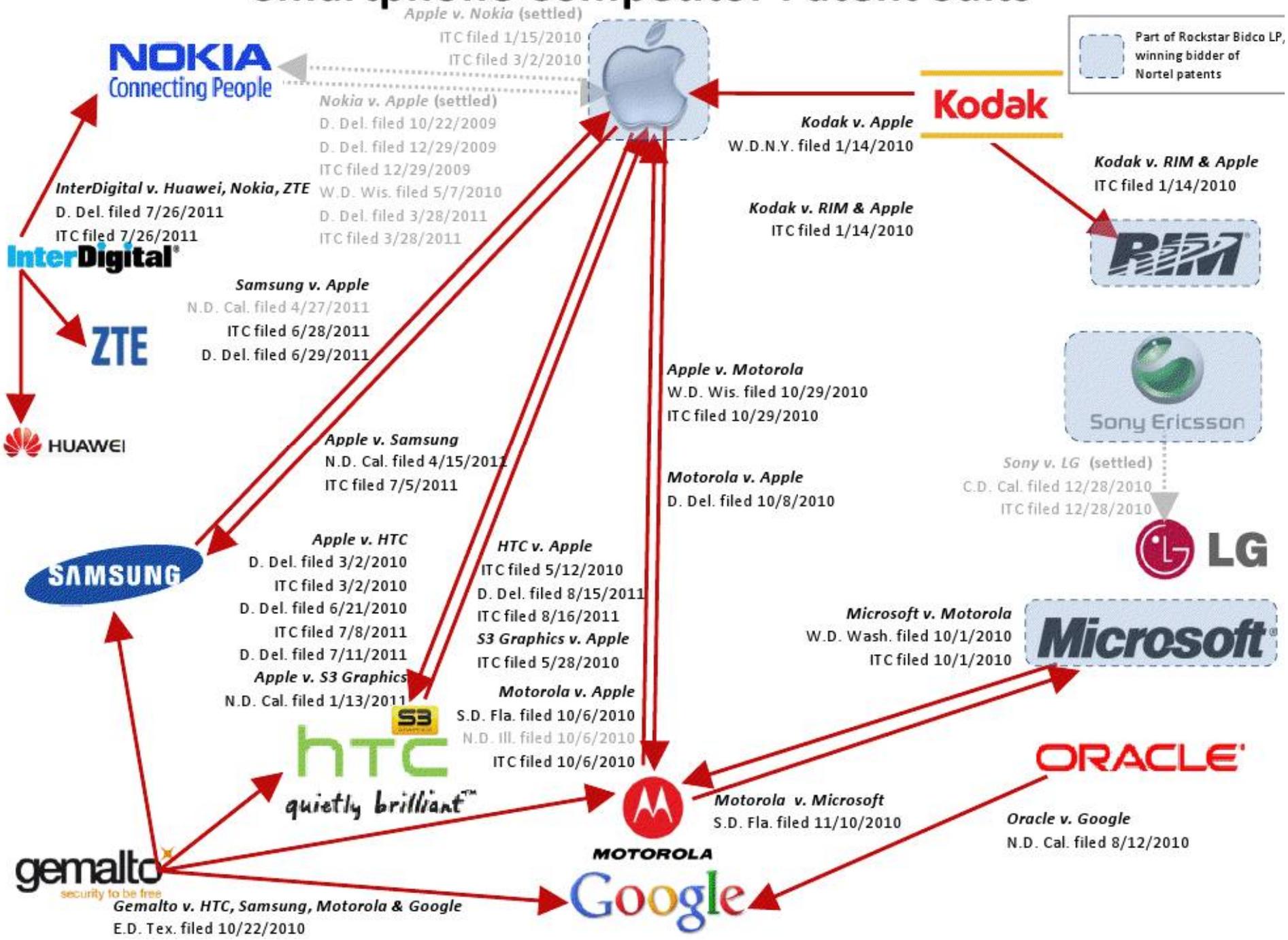
- 합의의 내용과 주요 쟁점
 - Covers all software licensed under the Red Hat brand
 - Permits third parties to create derivative works and combinations with other products.
 - Cover the upstream members of its ecosystem (community members)

Smartphone patent suits



Smartphone Competitor Patent Suits

Part of Rockstar Bidco LP, winning bidder of Nortel patents



Apple v. HTC

- [Patent #7,362,331](#): Time-Based, Non-Constant Translation Of User Interface Objects Between States
- [Patent #7,479,949](#): Touch Screen Device, Method, And Graphical User Interface For Determining Commands By Applying Heuristics
- [Patent #7,657,849](#): Unlocking A Device By Performing Gestures On An Unlock Image
- [Patent #7,469,381](#): List Scrolling And Document Translation, Scaling, And Rotation On A Touch-Screen Display

Apple v. HTC

- [Patent #5,920,726](#): System And Method For Managing Power Conditions Within A Digital Camera Device
- [Patent #7,633,076](#): Automated Response To And Sensing Of User Activity In Portable Devices
- [Patent #5,848,105](#): GMSK Signal Processors For Improved Communications Capacity And Quality
- [Patent #7,383,453](#): Conserving Power By Reducing Voltage Supplied To An Instruction-Processing Portion Of A Processor
- [Patent #5,455,599](#): Object-Oriented Graphic System
- [Patent #6,424,354](#): Object-Oriented Event Notification System With Listener Registration Of Both Interests And Methods

Oracle v. Google

- [#6,125,447](#): Protection domains to provide security in a computer system; Li Gong
- [#6,192,476](#): Controlling access to a resource; Li Gong
- [#5,966,702](#): Method and apparatus for pre-processing and packaging class files; Nedim Fresko, Richard Tuck
- [#7,426,720](#): System and method for dynamic preloading of classes through memory space cloning of a master runtime system process; Nedim Fresko
- [#RE38,104](#): Method and apparatus for resolving data references in generated code; James Gosling
- [#6,910,205](#): Interpreting functions utilizing a hybrid of virtual and native machine instructions; Lars Bak, Robert Griesemer
- [#6,061,520](#): Method and system for performing static initialization; Frank Yellin, Richard Tuck

IP Innovation v. Red Hat

- 2007년 10월 9일, IP Innovation 등은 Red Hat과 Novell을 상대로 미국 텍사스동부연방법원에 특허권 침해소송을 제기
- 미국 특허 5,072,412 "a User Interface with Multiple Workspaces for Sharing Display System Objects" 및 이와 관련된 2개의 특허권
- 침해주장제품은 Red Hat 리눅스 시스템과, Novell Suse Linux Enterprise Desktop 및 Novell Suse Linux Enterprise Server
- IP Innovation은 Acacia의 자회사인데, Acacia는 흔히 얘기하는 'Patent Troll'로 알려져 있음
- 2010. 5. 1. A jury in Marshall, Texas, sided with Red Hat and Novell's defense that the patents were invalid

How to deal with SW Patent?

- IP Innovation v. Red Hat and Novell
 - “Total victory for open source software in a patent lawsuit”
 - “I hope that Red Hat now sees the dangers of software patenting and will give up the practice, lest it one day morph into a troll.”
 - “If RedHat does not get patents, then it will ALWAYS be subject to potential litigation from bullish companies”
 - “Ultimately, what Linux distributions want isn't Free Software, Freedom, an end to Software Patents or anything else... It's to make a profit”
 - “when Red Hat's portfolio is eventually purchased, the promise is off and your defensive patents become offensive”

(source : opensource.com)

Why abolish software patents?

- All businesses are targets
- Antitrust doesn't work
- Blocking innovation and research
- Blocking useful freedoms
- Blocks competing software, reducing choice
- Breaks software distribution methods
- Controlling entire markets
- Costs are astronomically disproportionate for SMEs and individuals
- Costs of the patent system to governments
- Examples of use for sabotage
- Freedom of expression
- Harm to standards
- Harms to education
- Hindering competition, obstructing the free market
- Incompatible timespans
- Infringement is unavoidable

(source : en.swpat.org)

Why abolish software patents?

- Insurance against patent litigation doesn't work
- Invalid patents remain unchallenged
- Jobs and skills
- Just a Use of the Patented General Purpose Computer
- Low risk
- Patent ambush
- Patent trolls
- Publishing information is made dangerous
- Software is math
- Software is too abstract, patent quality is bad
- Software patents harm SMEs
- Software progress happens without patents
- Speculation
- The disclosure is useless
- The failing solutions are expensive
- Inequality between small and large patent holders

(source : en.swpat.org)

Some Remedies

- Defensive patent pools
- Prior art database including "defensive publication"
- Patent clauses in software licenses
- Community patent review
- Invalidate the most harmful
- Raising examination standards
- Defensive patenting
- Changing company patent policy

(source : opensource.com)



- Open Invention Network

- 2005년 IBM, NEC, 노벨, 필립스, 레드햇, 소니가 공동으로 만든 리눅스 특허 풀
- (출원중 특허 포함) 현재 150여개 특허 관리
- 기업들은 자사의 특허를 OIN 및 회원기업에게 라이선스하는 것을 대가로 OIN과 회원기업들의 특허를 무료로 사용
- 구글이 처음으로 OIN과 라이선스계약을 체결한 이후 현재 110개가 넘는 기업 참여
- 2010년 4월 NHN이 국내기업 처음으로 가입

- OIN License Agreement
 - OIN® grants patent license to licensee
 - All OIN patents and applications for all products
 - Licensee grants patent license to OIN®
 - All licensee patents and applications for the Linux System
 - Licensee grants license to other current and future licensees
 - All licensee patents and applications for the Linux System

COMMUNITY PATENT REVIEW

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- 1 [System and method for streamlined registration ...](#)
- 2 [Vm inter-process communications](#)

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IPAustralia, in cooperation with Queensland University of Technology, launched Peer-to-Patent Australia on December 9, 2009. Visit www.peertopatent.org.au to learn more and participate in continuing the Peer-to-Patent project.

U.S. PEER-TO-PATENT IN EVALUATION

The U.S. Patent and Trademark Office and New York Law School are presently preparing an evaluation of the two-year Peer-to-Patent U.S. pilot. Results of that evaluation should be complete by the end of the year.

JAPAN PATENT OFFICE PILOT

[Read a portion of the report discussing the successful pilot run by the Japan Patent Office.](#)

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Post-Issue Peer to Patent, or simply **Post-Issue**, seeks to improve the quality of patents by providing a framework for ferreting out weak, non-meritorious patent claims in patents that have issued. Harnessing the power of a community of peer reviewers created through Peer to Patent (www.peertopatent.org), **Post-Issue** elicits previously unidentified prior art that may invalidate or narrow the claims of issued patents. In so doing **Post-Issue** provides greater freedom to innovate, removes uncertainty from the patent system, and provides greater certainty as to the value of issued patents. Whether for-profit or non-profit, whether for responding to demand letters or litigation or for improving a party's own patents, all parties are invited to request posting of patents to Post-Issue for review.

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As new technologies have entered the patent system over the past 25 years patent offices have faced greater challenges in identifying all relevant prior art (documentary evidence that an invention has previously been made) during the patent examination process. In part this is due to the lack of a history of issued patents in these new subject matter areas...

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[Patents Currently Available for Review](#)

[Archive of Reviewed Patents](#)

- 5,412,717 Computer system security method and apparatus having program authorization information data structures



WHAT IS A DEFENSIVE PUBLICATION?

Defensive publications, which are endorsed by the USPTO as an IP rights management tool, are documents that provide descriptions and artwork of a product, device or method so that it enters the public domain and becomes prior art. This powerful preemptive disclosure prevents other parties from obtaining a patent on the product, device or method. It enables the original inventor to ensure that they have access to their invention by preventing others from later making patent claims on it. It also means that they do not have to shoulder the cost of patent applications.

The Defensive Publications program, a component of Linux Defenders, enables non-attorneys to use a set of Web-based forms to generate defensive publications. It relies on substantial participation from the open source community as it relates to disclosures. Defensive publication drafts will be reviewed and edited as needed and at no charge by OIN's attorneys. The completed defensive publication will be added by OIN to the IP.com Prior Art Database, which is in turn used by IP attorneys and the patent and trademark office to search for prior art when examining patent applications.

SUBMIT DEFENSIVE PUBLICATIONS

In the event you have an invention that you would like to have prepared as a defensive publication, please submit your invention here. Upon registration, you will be provided support in structuring your invention so it can be effective as prior art and placed in the public domain. If during the process you wish to have your invention prepared as a patent instead of a defensive publication, we will work with you to facilitate the preparation of a patent disclosure which will be prosecuted and licensed as part of Open Invention Network's patent estate to the broader community on a royalty free and fully paid up basis. The choice is yours. Our interest is in ensuring that the Linux community has an outlet to invent that limits poor quality patents and ensures freedom of action/freedom to operate across the entire ecosystem.

Learn more about defensive publications with our examples and frequently asked questions.

To submit a defensive publication, please [register](#) and/or login to the system.

E-mail:

Password:

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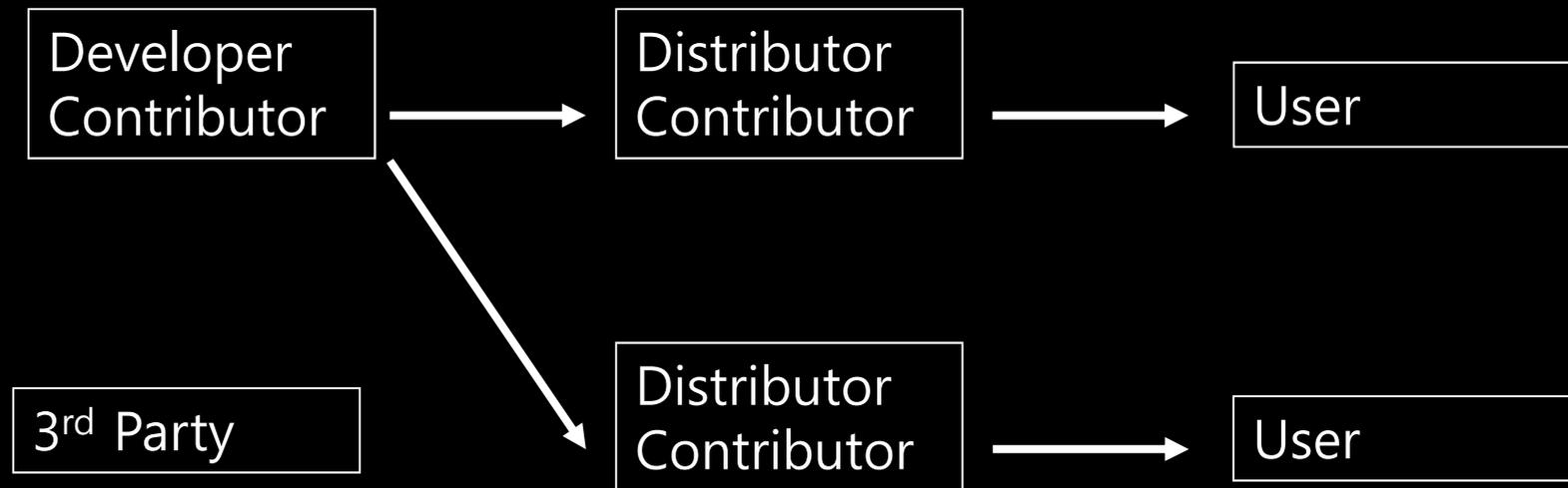
WHAT WE ARE TRYING TO DO

We are attempting to mobilize the creativity and innovative capacities of the Linux and broader open source community to codify the universe of preexisting inventions in defensive publications that upon publication in the IP.com Prior Art Database will immediately serve as effective prior art that prevents anyone from having a patent issued that claims inventions that have already been documented in a defensive publication. In addition to creating a vehicle to utilize this highly effective form of IP rights management for known inventions, it is hoped that the community will use defensive publications as a means of codifying future inventions should the inventors prefer not to make their invention the subject of a patent disclosure and application.

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 - 제3자가 소유한 특허의 취급에 관한 조항

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- Licensee's Patent
- 3rd Party's Patent

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- Redhat Insurance Program

- MPL

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- Patent (11.)

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A: You might have a problem here. There have been cases where companies have used FFmpeg in their products. These companies found out that once you start trying to make money from patented technologies, **the owners of the patents will come after their licensing fees.** Notably, MPEG LA is vigilant and diligent about collecting for MPEG-related technologies.