Software patents: The battle for Free Software's soul

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Free Software Foundation Europe
http://fsfe.org

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Free Software Foundation Europe

- Founded in 2001
- independent organisation within the global FSFs network
- Work on
  - public awareness
  - policy
  - Legal issues

Why "IP" is not a useful term

- copyrights? trademarks? patents? industrial design rights? trade secrets?
- ideas != things
- knowledge is a public good

Precision is important!

What are patents?

- monopoly on an invention
  - difference to copyright: monopoly on an expression
- granted for 20 years in most countries
- intention: disclose the invention or method to the public, so others can learn. Receive a time-limited monopoly on the use of the invention in return.

History of patents:

- Middle Ages: Kings give out "litterae patentes".
  - Time-limited monopoly on the use of an invention, in return for teaching it to others.
- US constitution (1788):
  - "To promote the progress of science and useful arts, by securing **for limited times** to authors and inventors the exclusive right to their respective writings and discoveries."

Cost/benefit calculation

The basic cost/benefit calculation of patents:

- Society decides to forgo use of an innovation today
- in order to provide an incentive to innovators
- so more technologies will be available tomorrow

But does this calculation work out?

Holding back the industrial revolution: Watt's steam engine patents

- James Watt obtains patent on steam engine in 1769
- secures Act of Parliament to extend his patent until 1800
- During Watt's patents: 750 horsepower of steam engines added per year
- After Watt's patents: 4000 horsepower added per year
- Fuel efficiency:
  - constant during Watt's patents
  - x5 afterwards

Boldrin/Levine (2007)

Legal basis for patents

- European Patent Convention (1973). Requirements:
  - new
  - inventive / non-obvious
  - capable of industrial application

- TRIPS (1994): WTO agreement. Uniform requirements for WTO member countries
  - patents must be granted in all "fields of technology"
  - exceptions allowed in the public interest

Software patents: Legal situation

- in US: Software patentable almost without limitation
- in EU: ambiguous situation
  - Art. 52 of European Patent Convention says that software "as such" cannot be patented
  - but the EPO's practice is to hand out software patents at the slightest provocation

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Fundamental problem

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- $a^2 + b^2 = c^2$

What is a software patent?

- software = implemented logic
- software patents = monopolies on implemented logic
- it's not the *implementation* that is patented, but the underlying logic
  - the implementation itself is covered by copyright

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Practical problem

- almost everything we do on computers, on the Internet and on our phones is now covered by software patents.
- no useful disclosure
- patents are often of low quality
- patents prevent compatibility + interoperability

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Who suffers?

- software developers
  - have to spend time worrying about patents
  - have to work around patents
- software companies
  - patent litigation can mean bankruptcy
  - Discovery ca. EUR 100,000 / patent
  - Court case: USD 3,000,000 minimum

Who suffers? (2)

- users
  - less software available
  - at higher prices
  - less competition

- society
  - less innovation
  - need to spend more on software

Who benefits?

- Patent lawyers
- Patent bureaucracies
- A few large companies can keep competitors away for a while, at very high cost

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Bill Gates, 1991

Mutually Assured Destruction

- companies build huge patent portfolios
- software patents probably cover every single behaviour on the Internet and on mobile phones today

Patent thickets

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Jerry Baker, Senior Vice President, Oracle Corporation

Patent thickets
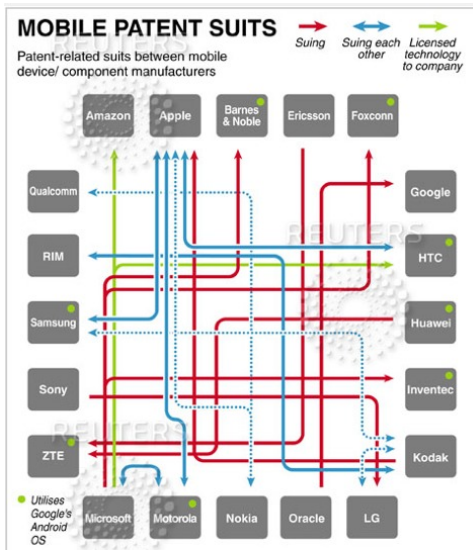
How it used to work

Sun's OpenOffice looks like Microsoft's Office

but

Microsoft's .NET looks like Sun's Java

Costs of the system

- In 1999, US public companies' profit from patents: 3 bn USD
- In 1999, patent litigation costs of US public companies: 12 bn USD

Meurer/Bessen, 2008

How it still works

"An awkward silence ensued. The blue suits did not even confer among themselves. They just sat there, stonelike. Finally, the chief suit responded. "OK," he said, "maybe you don't infringe these seven patents. But we have 10,000 U.S. patents. Do you really want us to go back to Armonk [IBM headquarters in New York] and find seven patents you do infringe? Or do you want to make this easy and just pay us $20 million?"

Gary L. Reback, Forbes, June 24, 2002.

Novell: The patent time-bomb

- In the second half of 2010, Novell was being sold to Attachmate. Novell's patent portfolio was meant to be acquired for USD 450m by a consortium of Microsoft, Apple, Oracle and EMC.
- Novell has long worked on Unix and GNU/Linux systems. Acquired Suse in 2004.
- so we can assume that Novell holds numerous patents that read on Unix and related technologies, such as GNU/Linux.
- These patents in the hand of Microsoft, Apple and Oracle could do substantial damage. All three companies are using patents aggressively against competition from Free Software.

FSFE's work on the Novell case

- submission to German authorities in December 2010: "We're concerned"
- conversation with and briefing for German authorities to inform them about Free Software and our concerns
- exchanging information with others in the Free Software community
- responding to German authorities' questionnaire to market participants

Results

- Microsoft prevented from acquiring Novell patents
- Attachmate will retain patents
- Novell's patents will be licensed to on terms that are compatible with Free Software, including GPL and other copyleft licenses
- interesting side note: German authorities recognise that patent-based FUD campaigns can be anticompetitive

Things we learned

- competition authorities don't have much experience in dealing with patents (though that's about to change)
- competition authorities don't have a good understanding of Free Software
- but they're willing to learn!
- a little work goes a long way

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Current example: Nortel

- the largest patent auction in history – June 2011
- consortium of Microsoft, Apple, RIM, EMC, Sony, Ericsson ("Rockstar") spends USD 4.5bn on 6000 patents
- patent portfolio probably contains patents on basic things like networking
- likely first target: Android

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Nortel (2)

- Google's reaction: buys Motorola Mobility for USD 12.5 bn.
- neither the 4.5 bn USD paid for Nortel's patents nor a large part of the 12.5 bn USD which Google paid for Motorola Mobility will be invested productively. They go purely towards building up a stock of weapons intended to keep others from attacking.

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What to do?

¿How can we persuade the competition authorities that Microsoft and Apple should not be allowed to buy Nortel's patents?

Example 1: Microsoft vs Linux kernel

- Microsoft has been going around for about a decade, claiming that it holds 225 patents that read on the Linux kernel.
- doesn't disclose *which* patents
- no lawsuits, where patents would have to be disclosed, and where they might be exposed to attempts to invalidate them
- numerous "licensing agreements" with various companies that use the Linux kernel in their products. Terms never disclosed, though every agreement is announced wiht a press release.
    - e.g. Linspire, Novell, HTC, Amazon
- Intended result: Create the impression that you need a license to use and distribute the Linux kernel

Example 2: Microsoft's campaign against Android

- similar to example 1, Microsoft claims to hold patents that read on Android (which is basically Linux kernel & forked Java ["Dalvik"]
  - e.g. Barnes & Noble, Motorola, Wistron,
  - Acer, ViewSonic (yesterday)

Taking it one step further: Intellectual Ventures

- Intellectual Ventures takes the system to its logical consequence
- set up by Nathan Myrvohld, former Microsoft CTO
- patent pool that companies can buy into

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How does it work?

- IV has "backend arrangements" with shell companies. They sell patents to trolls, then take a cut of the money the troll generates.
- Yet IV's founder Nathan Myrvold presents himself as the solution to the patent troll problem: Companies can buy into IV's patent pool. IV itself claims that it doesn't bring lawsuits – but the threat can't be realised without lawsuits.
- so basically, IV is "a Mafia-style shakedown". "A protection scheme isn't credible if a butcher shop isn't burned down now and then."

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Summary

- software patents add huge costs for those participating in the game
- software patents add deadly risks for those that can't afford to participate in the game. Do you have 12.5 bn USD lying around?
- Today, software patents are the weapon of choice that proprietary software makers use to fend off competition from Free Software
- our only way forward is to get rid of software patents. It will take long, and it will be hard. We need your help.
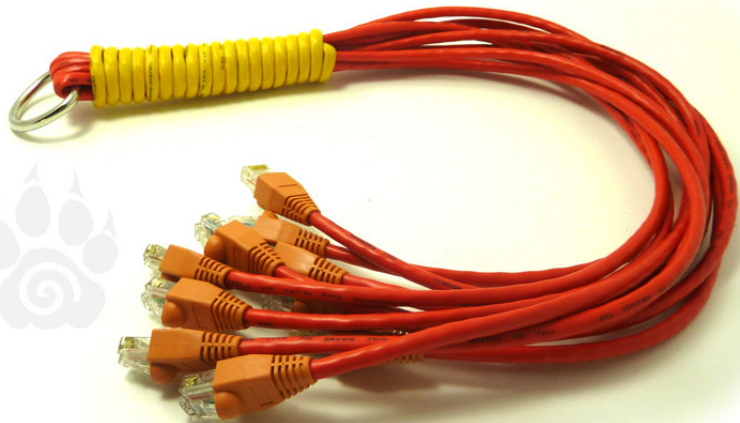
Temporary measures

- defensive publication
- document prior art

long-term measures

- create awareness
    - learn more about the problem
    - convince others

- get rid of software patents!
    - build national coalitions
    - change EU law
    - push for better international rules

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Support FSFE and raise the pressure

- http://fsfe.org/
- Meurer, Michael J. and Bessen, James E. [1]: Do Patents Perform Like Property?. Boston Univ. School of Law Working Paper No. 08-08, p.29. Available at SSRN: http://ssrn.com/abstract=1103143]
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- Reback, Gary L. (2002): Patently Absurd. Too many patents are just as bad for society as too few. http://www.forbes.com/asap/2002/0624/044.html
- Reuters: Graphic of the day, 2011-08-17. http://blog.thomsonreuters.com/index.php/mobile-patent-suits-graphic-of-the-day/

Presentation based on materials assembled by Diego Naranjo – thanks!

Talk about Free Software

- DO: Talk about Free Software freely and frequently with your friends
- DON'T: Criticise others if there's something they don't know

Be constructive

- DO: Give real examples of problems that non-free software causes
- DON'T: Criticise just one company

Stick to the facts

- DO: Stick to the facts, and tell people where you got them from
- DON'T: Pretend you know something you don't

Tailor your argument to your audience

- DO: Talk about things you understand, and make sure your audience is interested
- DON'T: Be overly technical or philosophical unless it's necessary

Be patient, calm and reasonable

- DO: Be patient with the people you're talking to
- DON'T: Be hurried, angry or personal

Show them how it works

- DO: Show people the programs you're using
- DON'T: Pretend that a program can do more than it really can

Stick around

- seeds take time to grow

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Work with others

- You can accomplish much more through collaboration than alone
- and it's more fun!

Juntate al trabajo de FSFE

- utiliza los materiales de FSFE para promover el software libre
- listas de correo: debate, traducciones, diseño...
- Únete al Fellowship

http://fsfe.org/contribute/contribute.es.html