

Ensuring EU Legislation doesn't inhibit Computer Security

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Talk Overview

- Background
 - What is Network Security?
- Current Laws, EU and Abroad
 - Rights of Software Authors
 - How these protections affect Network Security
- Future Hurdles
 - IPRED2
 - Others?

Background

- Network Security Testing relies heavily on Free Software
- Computer crackers will use all means available to them to break into networks
- Currently, Network Security Professionals can match these criminals step-for-step
- Software Patents and other “IP” laws threaten to inhibit our ability to keep up

What is Network Security?

- The Internet can be a dangerous place!
 - Spam, Viruses, Spyware, Malware, etc.
- Systems protected by:
 - Ensuring Operating System is secure
 - Ensuring Applications are secure
- Much of this testing uses automated tools
 - Most tools are Free Software
 - Same/similar tools used by the computer crackers

Rights of Software Authors

- Software Authors may protect their software in a variety of ways:
 - Copyrights
 - Trade Secrets
 - Licences (Contract Law)
 - Trademarks (Not relevant to network security)
 - Patents (USA)

Copyrights

- Automatic right
- Persists for lifetime of author, plus 70 years
- Computer programs written in 1950s *may* fall into public domain in 20 years
 - Source?
 - Computers will have changed a **lot** in that time!
- Computing works become out-of-date very quickly
 - Consider changes in the last 10 years alone...

Trade Secrets

- Programmers write software in a number of programming languages
 - Computers don't execute this code directly
 - Code translated into Machine Code
 - Original code is no longer human-readable
- Without source code, very difficult to recreate original code

Licences

- Proprietary Software Licences further restrict users' rights to use software
- To use software, users must accept licence or not use the software

Patents

- Software is not patentable in the EU
- Software *is* patentable in the US
- Companies doing business in USA affected by patents
 - Many US companies have massive software patent portfolios
- Software Patents are very difficult to read
 - Makes it much harder for small companies to compete

Patents (II)

- Copyright Infringement is obvious
 - Honest people don't do it!
- Patent Infringement is a minefield
 - People don't turn to patents for inspiration...
 - Without following all software patents it's impossible to be sure you're not infringing
 - Tens of thousands of software patents filed in USA every year
 - Microsoft *alone* expects to file 3,000 patents in 2005
 - No way for small companies to keep up

Patents (III)

"The idea that I can be presented with a problem, set out to logically solve it with the tools at hand, and wind up with a program that could not be legally used because someone else followed the same logical steps some years ago and filed for a patent on it is horrifying."

-- John Carmack, id software

Recap

- Software authors can use a combination of measures already to protect their works
- More protection given to software authors than most other industries

What does this mean for Network Security?

- EU:
 - We can develop and use software to help protect computer networks
 - Act honestly (use Free Software or don't copy others' code without permission) and we're fine
- US:
 - Possibly infringing on any number of patents
 - These patents impede legitimate use of logical formulæ
 - Crackers won't be stopped by these patents
 - Who's losing out from this?

Threats on the Horizon

- Software Patents
 - Not currently happening in the EU
- IPRED2
 - Potential to criminalise “IP” Infringement

IPRED2

- “Counterfeiting and piracy[...] are a serious threat to national economies and governments.”
 - Absolutely!
- “Counterfeiting and pirating have become lucrative activities in the same way as other large-scale criminal activities such as drug trafficking.”
 - Again, can't argue that!

IPRED2 (II)

- However:
 - “Intellectual Property” is many different things
 - Copyrights
 - Trade Secrets
 - Patents
 - Lumping them together distorts the discussion

IPRED2 (III)

- Copyright Infringement
 - Obvious to the person doing it
- Trade Secret Disclosure
 - Obvious to the person doing it
- Patent Infringement
 - No idea until Cease & Desist letter arrives (at least in software)

IPRED2 (IV)

- Criminalising these activities raises the bar significantly for software developers
 - No longer able to get indemnification insurance
 - Not a huge problem for large corporations
 - Huge problem for SMEs
 - Companies able to use the claim of infringement as a weapon
 - Safer to pay up than risk jail...?
 - Risk becomes significantly greater if Software Patents ever arrive in the EU too...

IPRED2 (V)

- Looking Outside EU
 - Copyright Infringement, Trademark Infringement, Patent Infringement and Trade Secret Disclosure are all civil matters in most of the world
 - By criminalising, this places EU companies at a disadvantage in the world market

How will IPRED2 affect Network Security?

- Criminalising Infringements:
 - If a problem is found with a tool we use, Proprietary or Free Software, we would be breaking *criminal law* by continuing to use it
- If Software Patents ever become legal in EU:
 - Impossible for SMEs to know if they're infringing on Patents
 - SMEs could be breaking *criminal law* without knowing it

IPRED2 – Intent vs Implementation

- Aimed at stopping Organised Crime, Counterfeiting, Piracy and so on
 - Very Laudable
- Actually far more wide-reaching
 - will probably help fighting organised crime...
 - but will affect SMEs – larger companies can use potential infringement as a stick to hit us with.
 - Most SMEs don't have the resources to fight in court
 - Will roll over/pay up to stop a court case, even when charge is frivolous

Future Potential Hurdles

- US – IPPA (Intellectual Property Protection Act)
- Software Patents likely to come back

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Any Questions?