



Licensing and Legal Challenges for Sustainable Digitalisation

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Sustainability and Patents

- Some misconceptions
- Patents and patent licensing
- Patents and open source
- Patents and standards
- Patents and SaaS

Misconceptions and clarifications

- Duration of patents
- National effect of patents
- Patents and software: “as such”
- Patents as a monopoly
- Secondary infringement
- Patents let you stop others, don’t grant positive rights
- The effectiveness of patent searches

Patents and Patent Licensing

- You need a licence if you want to exploit an invention patented by someone else (unless you own that specific patent yourself).
- A patent does not grant you the right to exploit the patented invention: it may also be subject to patents owned by others.

Patents and Open Source

- Hidden copyrights vs. hidden patents
- Licences are from someone in the distribution chain
- Patent clauses in open source
 - MIT
 - Apache
 - GPLv2
 - GPLv3
- Retaliation clauses
- “Liberty or death” in GPL

GPL and Patents

- GPL licences are “copyleft” licences
 - Intended to preserve freedom
 - Work in a cascade
- GPLv2 has no explicit patent licence
- GPLv3 grants a patent licence

Why patents and GPL don't play nicely

- “Liberty or death”
- You must be able to pass on the rights that you have.
- Most patent licences will be personal to you.
- You will not be able to pass on patent rights to a third party receiving the software

AGPL

- AGPL is like GPL, but is designed to close the “ASP loophole”
- A service provider using GPL code to provide a service over SaaS is not required to license the software (and the source code) to the user.
- With AGPL, if the service provider modifies the AGPL code and allows SaaS customers to access the functionality, the SaaS customers are entitled to the software and code under AGPL

RAND and RAND-Z Licences

- “Reasonable and non-discriminatory”. May bear a royalty.
- Royalty-bearing licences explicitly forbidden under GPL.
- RAND-Z means RAND-Zero: zero royalty.
- This is still a problem under GPL, as recipients will almost certainly not be able to exercise the right to modify outside of the specification.

Patents and Standards

- Many standards are implemented in software, such as software to read and write file formats for text, images, sound and videos.
- The standards may rely on 'standard-essential patents' which are necessarily infringed by any implementation

Obtaining Licences

- If licences are available for formal standards they are typically offered on
 - RAND terms or
 - RAND-Z terms.
- Both of these are likely to be incompatible with the GPL licensing regime

Patents and SaaS

- If the functionality of software is provided on a SaaS, and implements standards, the customer may also need a patent licence:
 - Because even though the service provider is exercising the rights under the patent, the customer is making use of the invention.
 - Because even where software is provided on a SaaS basis, some of the software may still run on the customer's computer (e.g. in the browser).
- It's even more complicated where the customer (e.g. a municipality) isn't the same as the user (e.g. a student).

Example

- Microsoft online services terms:
“Customer must obtain its own patent licence(s) from any third party H.265/HEVC patent pools or rights holders before using Azure Media Services to encode or decode H.265/HEVC media”
(1st June 2019 p.36)
- But who *is* the customer?

Are these issues real?

- GIF (Graphics Interchange Format) was introduced in 1987.
- Widely used on CompuServe, and later the internet.
- Uses LZW compression – covered by patents
- In 1999 Unisys, the patent owners, announced some users, even non-commercial and private users, would be charged \$5,000 to \$7,500.

Are these issues real?

- Alcatel-Lucent claimed patents in the MP3 format.
- In 2007, a San Diego district judge awarded Alcatel-Lucent \$1,500,000,000 in damages (would have been \$4,500,000,000 but the jury couldn't confirm wilful conduct).
- Overturned on appeal, and was eventually settled.

How to avoid liability?

- Determine which patent licences you need.
- Negotiate a patent licence.
- Simple!

How to determine which patents you need?

- Determine which standard you are using.
- Determine which is the standards setting organisation (e.g. ISO, ITU-T, W3C...)
- Look at the patents database (if there is one) for that standard to see who has declared patents against the standard.
- Contact each of the declarants to seek a patent licence.

Issues:

- You don't necessarily know which standards you are using. The GIF patent infringement case involved patents on the hidden LZW compression element.
- A standard referenced by a standard is a 'normative reference'. You will have to research all normatively referenced standards, at multiple level. Possibly 100s.
- Not all standards are from SSOs which have a standards database.

ISO Standards Database

- Is not always up to date.
- Rarely contains details of the patents themselves
- Often has declarants who are relying on patents which have expired
- Declarants may not even respond
- If they do respond negotiating terms is very difficult

ISO Standards Database

- There may be patent holders who have not declared on the database
- Analysing a specific patent to see if it is an SEP may cost \$7,500 per patent, in bulk.
- You may need to analyse 1,000s of patents.
- In multiple jurisdictions.
- Even the standards specification itself may cost many thousands of Euros, taking into account normatively referenced standards
- ...if those standards are actually available.

Patent Pools

- A patent pool is a consortium of organisations who have agreed to act jointly in licensing their patents, both to each other and to third parties.
- A patent pool may not contain all of the patents which are necessarily to license a particular standard or technology.
- The patent pool terms are likely to be rigid: it is unlikely you will be able to negotiate a licence compatible with a chosen open source licence, for example.



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