Publications

versus

Patents

Why?

- Publishing scientific knowledge is one of the most common and rapid ways of dissemination.
- Scientific publications are subject to copyright protection, which arises automatically from the moment of their creation.
- The copyright only protects the expression of original ideas and not the research finding as such.
- The best ways to prevent others from reusing the inventions stemming from the research is patenting or keeping them as a secret

Openness vs. commercialization

- The "open science" movement has emerged, encouraging the free publication of research results in order to spark innovation.
  - open access publication will be an appropriate way of disseminating scholarship and research results for public benefit.
- Many research results require substantial further work and investment to generate useful inventions.
  - The temporary "monopoly" granted by IP protection encourages industry (e.g. the pharmaceutical industry) to partner with researchers and market their inventions by ensuring that businesses have a chance to recoup their investment.
  - Through being developed and marketed, these inventions become actual products that can be used by the public and so improve society.

Traditional distinction of point of views: research organization vs. industry

	ROs	Industry
Type of research	Basic research	Applied research
Interest	Scientific application	Commercial application
Aim	Improve science	Improve company value
Outcome	Open	Protected
Dissemination	Publishing	Patenting

COMPARISON	PATENTING	PUBLISHING
APPLICABILITY	For commercially exploitable technology	For knowledge sharing purposes
RIGHTS GRANTED	Exclusive rights	Copyright
PROCEDURE	Yes	No
COSTS	High	Low to none
USE OF THE TECHNOLOGY	Only the patent owner, unless licensed	Everyone
TECHNOLOGY PROTECTION	Yes, on the patent claims	No, only the article text
FINANCIAL GAIN	Yes	Likely, but only on the paper publication
TECHNOLOGY DISCLOSURE	After 18 months	Immediately

Rights when publishing

Assignment

- When publishing in scientific journals the author is normally required to assign all or some of the rights related to copyright (publication, translation, transmission, distribution) to the publisher .
- Therefore, once the contribution is published the author will lose most of these rights and will need to ask the publisher's permission to publish it in other journals/websites, or to make any adaptation to the original text.

License

- Licences give the author more flexibility as they retain copyright on their work and can therefore provide other publishers with the right to use the same contribution.
- Eg. Creative Commons Licensed reesources -- from literary works, to videos, photos, audio, open education, scientific research

Rights when patenting

- Patenting entails the grant exclusive right to prevent third parties from commercially exploiting - making, using, offering for sale, selling or importing the invention, which is protected by patent for a limited period of time (generally 20 years).
- In return for this monopoly, the patent owner is required to disclose the technical information on the invention in order for others to access it and continue to innovate based on it.
- Once a patent application has been published, the claimed invention forms part of the state of the art and enters into the common knowledge.

Disclosures of the key features of the invention prior to filing a patent application may prevent obtaining a patent

- disclosure at an international exhibition;
- disclosure in a journal, book, poster or other publication;
- disclosure via a website or other electronic means;
- disclosure through oral presentation;
- disclosure to someone (for example, a potential investor) who is not under an obligation to keep the information confidential

Patent as a form of knowledge dissemination

- Where organisations are not interested in acquiring a monopoly, they can use the patenting process to publish their technology – without acquiring patent – to obstruct the later patenting ambitions of competitors.
- The application will be published and appear in patent databases forever.
- By disclosing scientific information, researchers can ensure that their findings are placed in the public domain and accessible to everyone without any restriction
- This could be useful in attracting partners, customers and even investors who are using patent databases as part of a commercial intelligence search

Co-existence

- The patent documents for an invention are published aprox in 18 months after the first patent application is filed in relation to that invention (the priority date).
- It is possible to file for patent protection while also publishing research results in a peer-reviewed publication.
- In other words, patenting and publication can co-exist: having reserved the IP rights by filing a patent application, a researcher may still publish his/her research results.

Alternative dissemination routs

- Defensive publication
- Open access model
- Secrecy

ALTERNATIVE TOOLS	Pro	Cons
DEFENSIVE PUBLICATIONS	– Cheap – Locks competitors out – Free dissemination of knowledge – Freedom to operate	– Discloses inventions to competitors – No exclusivity – Less market impact
OPEN ACCESS	– Freely accessible for users – Free dissemination of knowledge – No management required	– Costs for authors – Less impact in terms of paper visibility
SECRECY	– Cheap – No invention disclosure – Damages relief	– High level management – No protection against reverse-engineering – No IP infringement

Defensive publication

- It is searched by patent examiners & ensure patent quality by reducing poor quality patent applications
- The innovation description must be as complete as possible in order to cover all the related aspects and concepts
- The drafting should reflect a patent claim as a partial description would allow competitors to patent some technology features.
- The description of the invention must be available to the public: publish the technology details in an academic or technical journal, but the best place is in a patent application – which they later abandon
- The application is in fact published after eighteen months from the filing date, although applicants can ask for an earlier publication, and it will appear in patent databases forever.
- Support:
  - Defensive Publications – a free service component
  - Research Disclosure – a cost-based specialised service

Open access model

- refers to free online access to research publications for which generally readers have permission to read, download, copy, distribute, print and search content
- does not mean that the publication process is entirely free of costs.
  - shift of costs from the reader to the author/publisher, in order to readily access and disseminate publications
- Two OA publishing models: Green OA and Gold OA

OA

Green OA

- the authors deposit (self-archive) the final peer-reviewed manuscript in a repository (open archive) to be made available in open access mode, usually after an embargo period allowing them to recoup the publishing costs (e.g. via subscriptions or pay per download)

Gold OA

- immediate open access that is provided by a publisher, costs of publishing are covered usually by the publisher so that research articles are immediately available free of charge upon publication.

Secrecy

- keep the technology secret, mainly for those inventions that do not qualify for patent protection or have a very short lifecycle
- secrecy can also be used in parallel with patent applications, in the sense that specific technical details can be kept secret while those that could be easily worked out by competitors should form part of patent claims
- an invention secret can indeed constitute a cheaper, although less reliable, alternative to patenting
- a shortcoming is that, when a product is placed on the market, it could be reverse engineered by a competitor and its secrets uncovered