

# Patents and patent information: a primer

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## To summarize

- Patents are significant information sources, *also if you don't apply for patents*
- The use of patents as information tool requires some specific background and terminology, as summarized in the following



# A patent

*A patent is a set of exclusive rights granted by a state to a patentee for a fixed period of time in exchange for the regulated public disclosure of certain details of a device, method, process or composition of matter which is new, inventive and useful or industrially applicable*



## Patent as information sources

This is one of the two key aspects in the patent law:

- the applicant can receive some *rights*,
- but he has to provide in exchange a detailed *information*, i. e. “the regulated public disclosure of certain details of a device, method, process or composition of matter”
  - This information allows everybody to legally exploit this know how when the patent rights expire
  - This information must comply to specific quality standards of uniformity, clarity and completeness

# Patent documents are:

- Significant:
  - it is reported that 90% of information available in patent documents is not available elsewhere
- Authoritative:
  - patent documents are reviewed by experts before granting
- Timely:
  - patents publications anticipate the related product
- Standard format:
  - they conform to a common standard format, which include also information about the status of the art
- Properly classified by industry topics and subtopics

# Patent information users can be companies or institutions:

- **which can not apply for patents**, as:
  - third party products resellers
  - investors in technology companies
- **which do not apply for patents**, at least significantly
  - they have their own products, but they consider that their solutions are not so innovative or they protect their ideas by using the “business secret”
- **which do apply for patents** for protecting their product and business

Also if the first two categories can not /do not to apply for patents, they are interested in patent information!

## Patent information for those *who can not apply for patents*

- **third party product resellers**, for:
  - identifying most promising potential suppliers
  - having more information for negotiating resale conditions
  - avoiding possible infringements of a third party patent with a product they distribute
- **investors, for being more informed:**
  - when investing in technology companies
  - when lending to technology companies
  - If they are active in IP financing

## Patent information for product companies, *even if they do not apply for patents*

- For **research** reasons:
  - For free reuse of third party abandoned or ceased patents
  - For producing new patentable ideas from the evaluation of the patent literature (TRIZ is a well structured methodology for this)
  - For avoiding to do research in areas well protected by other patents
- For **strategical management** reasons:
  - For identifying promising or easy to enter areas
  - For identifying strong and also weak players
  - For identifying most creative researchers and research teams
- For **risk avoidance reasons**, in the case you rely too much in the “industrial secret” for protecting your ideas
  - If another company grants a patent for a solution you protected with “the industrial secret”, you will be forced to pay royalties for it!
  - *This risk is even bigger if your secret was really well garded!*

# Patent information for patent holders

*Patent holders can be interested in patent information by the same reasons detailed in the previous slides, and besides that:*

- to **assess the patentability** of their own inventions, before filing a patent application (patentability search)
- to **oppose to a third party patent** when its claims conflict with a patent of them (validity search)
- to **identify third party product infringements** of a patent of them (infringement search)
- to **evaluate their or third party intangible** assents
- to **monitor activities of known competitors** applying for patents and **to identify new entrants too**

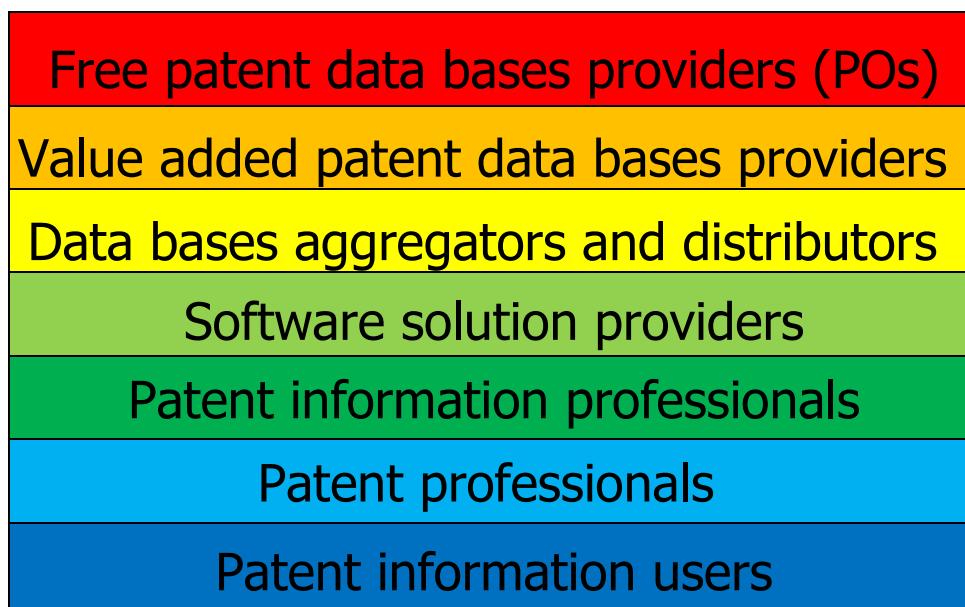
# *Business reasons to apply for a patent*

- To prevent competitors for copying your solutions
- To increase the technical credibility of your patented solution for your customers and resellers
- To sustain the position of our company within the “coopetion”
  - *Since a product can include many patents, which could also became to different companies, this implies cross license agreements*
- To negotiate licensing and other IP based contractual agreements
  - obtaining additional revenues from third party solutions which include your patented idea

## Financial reasons to apply for a patent

- To support a appropriate valuation of your intangibles in your balance sheet
- To acquire venture capital:
  - Your patents can be a good indicator of your technical excellence
- To enhance access to finance, by using
  - IP loan: the IP is used to grant a loan
  - IP securitization: for future royalty payments of franchising, licensing or merchandising contracts
  - IP lease back: the IP asset is sold to a leasing company in exchange of a leasing agreement

## The patent users value chain



# The patent users value chain

Comments to the previous slide:

- the slide provides a overview of roles, not necessary of players
  - some players could combine many roles: as an example a consulting company can include patent information professionals, for searching for patent information, and patent professionals, e.g. for preparing patent applications
- the same role can be covered by different players
  - as an example, patent information professionals can work for a industrial company or for a consultant
- some levels can be also skipped, e.g. not always value added data bases are necessary or used in specific kind of searches
  - Hence a more precise representation will be the “value network”, not the “value chain”

## Patent data bases *basic content*

A patent data base includes:

- Metadata: identifiers, patent dates, inventors, applicants, invention classification
- Texts including abstract, description and claims

Different patent data bases can differ in quality, i.e. by:

- the geographical and temporal data base extension
- the patent text searchability, with two dimensions:
  - target: full text search, abstract only search, no search
  - functions available: string search support, vicinity function support and so

*patent text searchability implies that the data base includes off line precomputed text indexes*

- the eventual normalisation of metadata disuniformities or even typos, e.g. in the name of the applicant company

## Patent data bases *integrative content*

- Patent family grouping, *with different conventions used, e.g.:*
  - patents with the exactly the same priority in Esp@cenet
  - patents with a priority in common in INPADOC***And both data bases are built by the same entity (EPO)!***
- Citations: for building a authority network beteen patents. But:
  - To be distinguished between PO examiner citations, more reliable, from inventors ones, which could be less reliable
  - *citations tell more for the past than for the future*: a newly applied patent is not yet citet, even if relevant!
- Annotations:
  - Manual, i.e. added by topic experts, can add circumstances npt included in the original documents
    - Derwent Patent Index requires 350 experts only for that
  - Automatic: can paraphrase what is already in the text, but can not add facts not already mentioned in the patent

## Complementary data bases

closely related data bases

- legal patent databases, with the legal history of a patent family including extensions to other countries, oppositions faced, status patent changes e.g. "ceased"
  - INPADOC, managed by EPO, is a convenient resource

other data bases also useful in some kind of searches

- research paper databases: to access the reference research papers cited by a patent document
- company databases, which can infer from a company name, in the applicant field, the company group
- business and marketing databases, which an also be useful in some kind of searches, in particular for evaluating the market potential of a new inventions

# Complementary internet resources

general internet resources, as:

- business portals, for obtaining general information and reports on a specific field, e.g. nanotechnology
- news, to identify the business impact of specific patent
- patent specific forums and blogs: some of them in fact include discussions on general patent topics and even on specific patents

*General internet resources, besides data bases, are claimed to be of increasing utility, as presented in some recent EPO tutorials.*

Some search environments provide a close integration of some of these data bases with the patent data bases. In other cases the user has to integrate manually the results of different data bases

*Today Web 2.0 architectures represent a opportunity for the time and cost effective integration of different data bases and of internet resources*

# Usecases, a classification

- Patent searching, with different subcases,
  - more focused and standardized in methods
  - “precision oriented” in the Information Retrieval jargon
  - typically performed for the legal and IP department
- Patent analysis, with different subcases
  - broader in scope and less standard in methods
  - generally more involved, but the 20/80 rule can apply too
  - “recall oriented” in the Information Retrieval jargon
  - different subcases of interest for R&D, M&S, finance, strategy
- Patent monitoring ->regularly and automatically updates information
  - for well known competitors or well known technical areas
  - for unsuspected competitors or new emerging technical areas

# Other information

Other IntelliSemantic patent related presentations are:

- “Patents: a primer”, which expands the first section of this presentation
- “Patent informatics: a primer”, which expands the second section of this presentation
- “IntelliPatent 4.3: ”An Overview”

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See also the company site <http://www.intellisemantic.com>  
and the patent search site <http://www.intellipatent.eu>