PANTROS IP

ARTIFICIAL INTELLIGENCE. PATENT MANAGEMENT.

PATENT EVALUATION, PFI™

Understand the business, technology and legal quality of your patent prior to its involvement in a proceeding or business process

Decode the attributes of your competitor's patent

View the strength of your patent based on nearly 30 evaluation points

View the patent's position in its technological landscape

View potential licensees and generate additional revenue

Patent quality is the basis for almost all substantive decisions based on patent value, whether to assess the commercial or enforcement qualities of a single patent in a licensing negotiation, or analysing large scale patent collections to maximize portfolio asset value.

PFI™ provides a quantitative analysis of patent quality to aid in fast, high resolution identification of high / low quality patents to support management decisions – objective, transparent, repeatable.

A single score patent rating system is incapable of providing the transparency of the many components of a patent that contribute to qualitative value. Without fully understanding specific attributes of a patent, no reasonable licensing, investment, business or litigation decision could be rendered.

PFI computes and scores 20 separate data fields specific to (a) legal quality; (b) commercial quality; and (c) technology quality. It uses the peer-reviewed results and conclusions of more than 20 PROVEN empirical studies on statistical patent quality analysis by noted economists and scientists.

PATENT FACTOR INDEX

In order to shape a "real world" perspective on understanding patent quality, and hence, its potential value, our technology combines various interrelated indices and scores your US, CA, WO, PCT, EP or DE patents.

The PFI report contents a PATENT FACTOR INDEX SUMMARY, the Patent Bibliography, the Patent Legal Quality, the Patent Commercial Quality, the Patent Technology Quality, an Interpretation of the Report, as well as definitions of the single factors and corresponding references.

It will show you all Backward and Forward Citations, UN-cited Prior Art and UN-cited Concurrent Art

PATENT LEGAL QUALITY

1. ENFORCEABILITY

A US patent has three maintenance fee payment dates between issuance and expiration. Failure to pay maintenance fees, or expiration results in an unenforceable patent. If a patent is in review, the enforceability rating is reduced since there is a chance the patent will be invalidated.

2. TOTAL RELEVANCY STRENGTH

Relevancy ranking of this patent compared to the 100 most relevant patents returned from a Latent Semantic Analysis search using the full text claims of this patent.

3. NOVELTY

Based on backward patent citations. A higher number of backward citations generally indicates a reduction of invention novelty. This indicator shows the placement in number of backward citations compared to the 100 most relevant patents.

4. CLAIM SCOPE BREADTH

Patents containing a higher number of backward patent and non-patent citations have been shown to have a narrower scope of claims (more limitations) than related patents with fewer citations.

5. VALIDITY CONFIDENCE (Un-cited Earlier Filed Art)

A lower number of highly relevant but un-cited patents with earlier filing dates, disregarding earlier prior art issue dates, increases the confidence of surviving an invalidity challenge.

6. VALIDITY CONFIDENCE (Un-cited Concurrent Art)

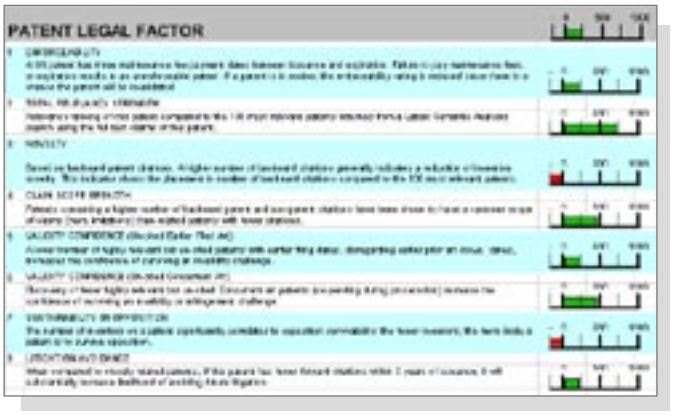
Discovery of fewer highly relevant but un-cited Concurrent art patents (co-pending during prosecution) increase the confidence of surviving an invalidity or infringement challenge.

7. SUSTAINABILITY IN OPPOSITION

The number of inventors on a patent significantly correlates to opposition survivability; the fewer inventors, the more likely a patent is to survive opposition.

8. LITIGATION AVOIDANCE

When compared to closely related patents, if this patent has fewer forward citations within 3 years of issuance, it will substantially increase likelihood of avoiding future litigation.



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PATENT COMMERCIAL QUALITY

11. FORWARD CITATION VALUE CONTRIBUTION
A larger number of forward citations when compared to the 100 most closely related patents disproportionately increases the value of this patent.

12. BACKWARD CITATION VALUE CONTRIBUTION
The larger number of backward patent citations tend to suggest a larger market size. Backward citations are a less reliable contributor to patent value than Forward Cites.

13. ENFORCEMENT LICENSING POTENTIAL
Fewer applicants dominating a particular field present a more favourable environment to pursue more costly opportunities to generate the highest revenue per licensee.

14. PARTNERING LICENSING POTENTIAL (CROSS-CLASSIFICATION)
Licensing potential into non-obvious or unrelated patent classes is based on invention activity in closely-related markets protected by different classifications.

15. CROWDEDNESS (POTENTIAL LICENSEES)
Crowdedness (more assignees practising highly related patents that are within the top 100 most relevant) suggests more activity in the market, and more licensing opportunities.

16. DIVESTITURE LICENSING PREMIUM (PATENT GROUP)
Broader market protection corresponds to the increased number of patents, and value of each patent this applicant owns (Patent Group) within the 100 most relevant.

17. PATENT GROUP COMPETITIVE POSITION
The competitive position of this applicant's Patent Group relative to the size of other applicants' Patent Groups identified within the 100 most relevant patents.

18. IN-LICENSE OPPORTUNITY
For portfolio expansion through in-licensing: this index rates the relative number of high interest, unassigned enforceable patents within the 100 most relevant.

19. KEY COMMERCIAL INDEX METRICS:
- Number of different Classes within the 100 most relevant patents
- Potential Licensees (Applicants) within the 100 most relevant patents
- Number of Unassigned Patents within top 100 (informational)
- Number of Patents owned by this applicant within top 100 (Patent Group)

PATENT FACTOR INDEX

Identifying Licensees:

Companies (applicants) named on the 100 patents most relevant to the patent under evaluation have an interest in your product or technology area. Applicants with multiple patents listed within the top 100 have invested heavily in this area, and consider this technology segment to be of high commercial interest. Prolific applicants within this technology / product area may prefer litigation to licensing, while smaller applicants may welcome the opportunity to in-license to fortify their smaller portfolio.

Field of Potential Licensees

# Patents	Applicant Name
6	ATI International SRL
1	ATI Technologies, Inc
2	Avid Technology, Inc
1	Bally Manufactoring Corporation
4	Broadcom Corporation
2	C-Cube Microsystems, Inc.
1	Cirrus Logic, Inc
1	Dica Systems Corporation
1	Dicio, Inc
1	Funai Electric Co., Ltd

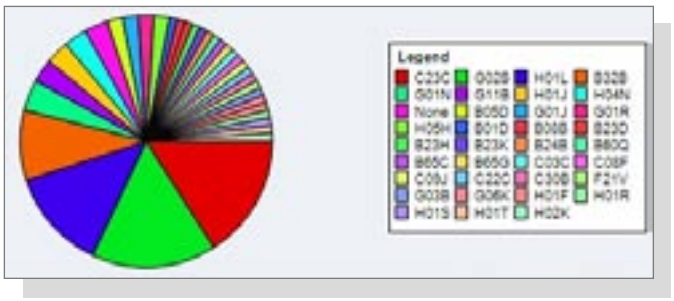
Licensing Analysis

- Semantic search results may list related patents across seemingly unrelated classifications. Patents categorized in such cross-classifications may have been misclassified, may disclose multiple inventions in different classes, or may reflect a diffusion of this technology into other technology areas.

- Your subject matter expertise is important in determining whether prolific applicants are inclined to respond negatively or positively to a “carrot” licensing offer. On the other hand, companies recently entering this technology area with products reading on just a few patents may be more amenable to licensing your technology.

Obvious Classifications:

The top 100 most relevant patents returned from the semantic search of the claims of a patent may indicate closely related patents in different classifications. These non-obvious classifications often represent licensing opportunities not previously considered.



PATENT FACTOR INDEX

PATENT TECHNOLOGY QUALITY

21. TECHNOLOGY ADVANCEMENT

This patent factor bar indicates whether this patent is a small incremental step, or a significant leap over the technology disclosed in the 100 most closely related patents.

22. TECHNICAL SOPHISTICATION

A higher number of forward citations to this patent, when compared to the 100 most relevant patents, indicates a higher level of technical sophistication.

23. COMBINATORIAL ACCESSION

The higher the number of primary classifications within the top 100 most relevant that differ from the present invention, the more diffused the core technology is.

24. TECHNOLOGY COGENCY

More inventors listed on the present patent, when compared to the 100 most relevant patents, argue in favour of a stronger, more substantial and persistent technology (cogency).

25. KEY TECHNOLOGY FACTOR METRICS

- Number of Different Classes of Forward Cited Patents

- Number of Inventors Listed in This Patent

Combinatorial Accession

- A high rate of adoption of the core technology protected by a patent by unrelated industry segments reinforces the importance of the technology.

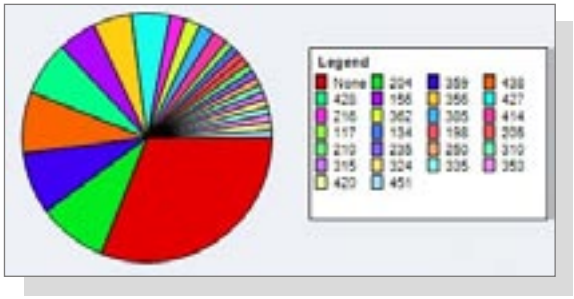
- The 100 most relevant patents are analysed, and un-obvious patent classifications linked to the core technology are identified.

Each classification is assumed to represent a different "industry segment".

- If the present patent enjoys an earlier filing date, the spill-over represented by other classifications is the Combinatorial Accession of this patent. If other closely related patents were earlier filed, the present patent may reflect the adoption of the underlying technology from another industry segment.

Diffusion of Classifications:

The 100 most relevant patents are categorized in the following primary classifications. Classifications that differ from the present patent indicate a diffusion of this patent's technology into other technology areas.



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Technology Adoption / Diffusion (S-Curve)

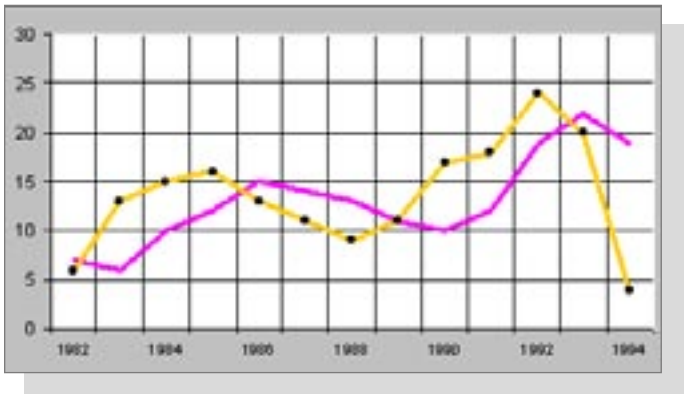
S-curves represent the generational improvements in technology within this area over time, and at what point a particular technology enters the curve. The curves are used to visualize

(a) the probable useful life of a patent (based on the number of generations of improvement since the issuance of this patent), and

(b) the adoption of this technology by other industry areas, or the diffusion of technology to spawn related innovation.

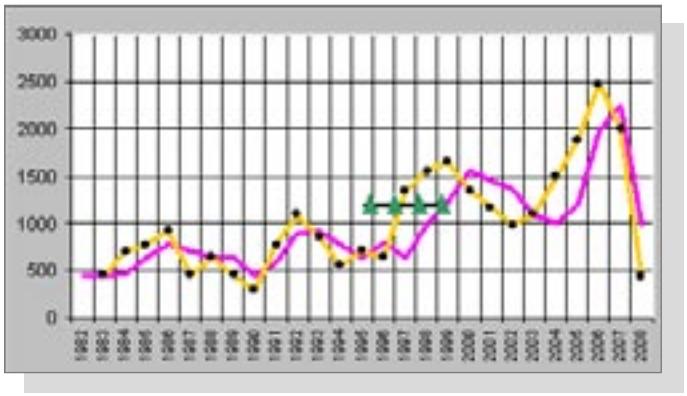
100 Patents Most Relevant to the Patent in valuation

This S-Curve plots the 100 patents most closely related to the patent based on the Semantic search of the claims of this patent, regardless of the patent class. The most relevant patents may have been issued in patent classifications different from the classification of this patent, indicating the possible diffusion of this technology across various product or industry sectors. The date range (X axis) is from the earliest to latest issue date of the 100 most relevant patents. Any year not shown means that none of the 100 most relevant patents were issued during that year.



25 Year Trend, Year issued

Seminal patents within a patent classification typically occur at the steepest transition between the "long flat tail" and the rapid rise in the curve. If the patent is closer to the Front of an S-Curve, it is considered to be a more important technology upon which rapid improvement or subsequent diffusion is based. A sequence of individual S-Curves indicates a succession of noticeable improvements in this technology area - know as "technology generations". The technological importance and economic value of this patent may diminish with each subsequent generation since it issued, regardless of where it resides on the S-Curve within its own generation.



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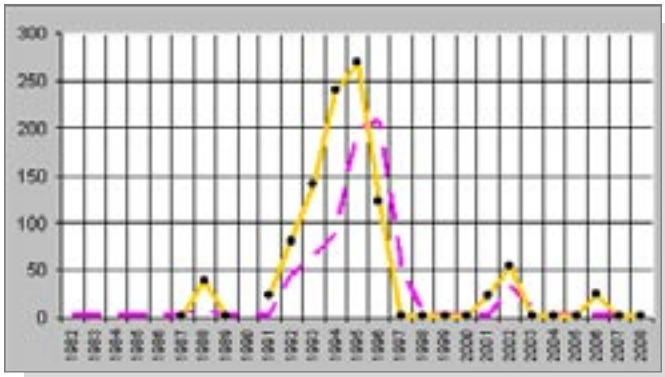
25 Year Trend, Year Filed

Beginning in 2001, patent applications (dotted line) are published 18 months after initial filing whether they have issued or not. They serve as an "early predictor" of the issued patent S-Curve above. A rapid rise in the patent application activity may be an early indicator that a vigorous period of technology diffusion or adoption may be imminent. Do not simply assume that a rapid decline in the most recent 1-1/2 years means a tapering off of activity within this classification. Because of the 18 month publication rule, many pending patents may not be reflected on this chart. Verify new patent application activity every few months.



Latent Semantic Search Results List

Latent Semantic Search Results List

27. Following is the list of the 100 most relevant patents used in generating this PF/i Report.
Current Patent in red.

Rank	Document	Applicant	Filing/Issue Dates	Patent Title
100%	US 5275709	Leybold Aktiengesellschaft	04/06/1992 - 01/04/1994	Apparatus for coating substrates, preferably flat, more or less plate-like substrates
99%	US 7244086	OC Oerlikon Balzers AG	11/14/2003 - 07/17/2007	Apparatus for vacuum treating two dimensionally extended substrates and method for manufacturing suc
98%	US 20040115032	Not Assigned	11/14/2003 - 06/17/2004	Apparatus for vacuum treating two dimensionally extended substrates and method for manufacturing suc
97%	US 20080038095	OC OERLIKON BALZERS AG	05/30/2007 - 02/14/2008	APPARATUS FOR VACUUM TREATING TWO DIMENSIONALLY EXTENDED SUBSTRATES AND METHOD FOR MANUFACTURING SUC
94%	US 20020017377	Anelva Corporation	07/17/2001 - 02/14/2002	Heating and cooling apparatus, and vacuum processing apparatus equipped with this apparatus
94%	US 20070089852	Canon Anelva Corporation	12/13/2006 - 04/26/2007	Heating and cooling apparatus, and vacuum processing apparatus equipped with this apparatus
94%	US 5340454	Leybold Aktiengesellschaft	07/28/1993 - 08/23/1994	Method and apparatus for the coating of substrates
94%	US 6030459	C V Research Corporation	11/27/1996 - 02/29/2000	Low-pressure processing device
93%	US 5658114	Leybold Aktiengesellschaft	02/15/1995 - 08/19/1997	Modular vacuum system for the treatment of disk-shaped workpieces
93%	US 6902647	Asm International N V	08/29/2002 - 06/07/2005	Method of processing substrates with integrated weighing steps
93%	US 20050281950	CHI MEI OPTOELECTRONICS CORP	06/16/2005 - 12/22/2005	Deposition apparatus and method

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References

PFI Reports incorporate the conclusions drawn from a number of statistical studies performed on large patent data collections. These references are provided for those interested in further study.

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