

Gaining competitive edge using Big Data and Artificial Intelligence for Patents

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These days patent wars seem to be a new battleground for companies. Various ongoing litigation cases among companies will put companies patent portfolios under extensive scrutinization and data validation acid testing.

*Traditionally most companies only manage their **IPR** information thru in-house docketing systems and/or using some leverage of outside counsels to propagate/ manage information from various country level **patent offices** towards in-house data docketing platform.*

As it is evident on this business model, the magnitude of the portfolio size will require huge amount of human intelligence power in means of handling the significant amount of data coming from internal and external sources (outside counsels).

The common misinterpretation about patents is that they are just a “piece of paper”, which once granted then it's covered on various legal aspects of its lifetime.

Well this is far away from the truth, since patents are products as such and should be treated in similar manner ie. patent has a lifecycle from its creation until they expire or are sold (when patent lifecycle management responsibility will transfer over to other party).

*Some information elements of patents are:
publication date, granted date, claims,
inventors, patent references/referencing,
maintenance fees etc*

Now all such information elements have their own characteristics by which those do affect the lifetime, quality, valuation and other aspects of the whole patent portfolio as such.

The most important part of any patent is its claims and within there even wordings play crucial part of the valuation and possible defendable aspects against any litigation cases.

Large companies tend to have over ~100-200K patents worldwide. It is impossible to keep up to date with all information as such by conventional means of handling the patents ie. relying on in-house attorneys, quality people, patent docketers, outside counsels etc.

For example, by at looking US originated patent cases ([USPTO](#)), which some of the [biggest companies](#) are submitting yearly. Company could have over >5000 active cases just in USA only which needs to be monitored on daily basis. Also various documentation information which is 'flying around' between company and USPTO end can easily exceed over 5000 PDF documents daily.

If you consider that for example average legal PDF document would be 5-10 pages long then it would mean over 25-50K pages of information on daily basis, There is no company which can handle such volume of information in means of someone 'eye-balling' those thru and certifying that all details would be correct and then possible taking various actions related on their information as such.

This kind on volume, velocity and variety of information needs to be addressed in other means than traditional ways how most companies handle it at the moment.

The key to successfully manage such information complexity is to define a new business approach and start thinking patents as products. Yes, products, and each and every one of them. This is how great companies differentiate themselves by building up a patent platform.

Patent platform is in essence a search platform which does all needed automated patent searches and document downloads from several [country patent offices](#). This platform is not used by humans but instead of by machine learning and business rules. Companies should implement various business rules based on IPR portfolio case valuation, case importance, legal events, fee payments etc. Those business rules will then govern the IPR data searches thru patent platform entity.

By introducing this kind of patent platform, companies can re-structure their business in a way where people don't do anymore data searches/validations but instead their focus can be shifted from searching/updating to information analytics. This is competitive business change towards to business intelligence.

Also, by automating all various aspects of IPR portfolio data management, companies can take out human errors out of equation. Human produced errors like typos, wrong dates, wrong record edits/inputs etc are the most common data quality factor.

Also, patent platform companies should consider about implementing [Solr](#) search indexing (facets search model). This search engine concept can lead a way to management acceptance of this new business model towards patents.

With intelligent automation you can raise the bar on data integrity issues and also direct business level focus towards making decisions based on the most up to date data available. Without good quality data any business intelligence platforms or management dashboards are useless or even dangerous for the successful business guidance as such.