

The Patent Search - A Dialogue

Practices

Intellectual Property Law

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Mike: Namaste, Umesh! It is good to talk with you again!

Umesh: Namaste, Mike, as always, you are full of energy! Do you mind if I ask you the secret of your energy?

Mike: Umesh, my “secret” is that I am energized by people who are passionate about what they do. And *you*, sir, are very passionate about your patent searching.

Umesh: Thank you, Mike. I am certainly that, and I am always happy to answer your questions.

Mike: Thank you, Umesh.

This past year has certainly been difficult all over the world from a public health standpoint. If you imagine the future, when the Covid-19 pandemic is over: can you envision that anything good can be said about this pandemic from your perspective as the CEO of a patent search company?

Umesh: That is a challenging question both from a predictive standpoint and an emotional standpoint because the pandemic has been hard on many people. Finding good in its consequences means overlooking its terrible consequences. But, yes, Mike, I see some good: We have seen a dramatic increase in medical devices and biotechnology-related inventions -- a trend I expect to continue for at least another couple of years and will have an equally dramatic increase in our understanding of viruses and provide effective new technologies for treating people. And, interestingly, when I talk to my grandparents and others from previous generations, they are surprised at the reaction of people today: they see people fighting back rather than being defeated by the disease as in previous pandemics.

Mike: That is a very interesting observation, Umesh. I wonder if the initiative to fight back is a response to the tremendous growth in technology in recent decades that emboldens people to believe that technology can be

harnessed to “fix” pandemics.

The growth in technology and the number of patent applications being filed must be driving growth in the number of patent searches, yes? And is the growing demand for patent search services matched by -- or exceeded by -- the growth in the number of companies that are engaged in this business?

Umesh: Mike, there is definitely an increase in the demand for services like patentability searches and the more challenging “freedom to operate” patent analyses. I also think people are more conscious and cautious now of the importance of knowing the prior art before filing patent applications and entering their markets with their new technology.

However, the growth rate in demand for patent search services, while increasing, is less than the growth rate of the number of service providers in this field of patent searching. These providers range from large search entities, boutique search firms, micro-entities, and even “ultra-micro” service providers. This trend tells me to expect both a huge demand for these services in the coming couple of years and a correspondingly greater increase in the “birth rate” of the new service providers. Demand will always have an adequate supply; but supply will exceed demand for a long time.

Mike: What a challenge then to the very small entities to establish themselves.

You noted the significant growth in technology, particularly in biotech. Do you also see improvements in your field? “patent search technology.”

Umesh: The most important change I have witnessed is not the improvements in the usability of patent databases, but in increasing awareness of the need to know the prior art that drives them to conduct preliminary searches themselves. This change results in a more refined invention description coming to us for our searches, and our “preliminary searches” will more often *confirm* that these inventions are likely to result in a patentable invention. The refinements in their inventions by our customers from their own searches challenges us to extra effort to make sure we have searched all the features – but I love this environment!

Mike: The phrase “patent search” with an emphasis on the word “search” is only one step of the process, right, Umesh? I mean, there is also *evaluating* the results of the patent search, too. Is that part becoming easier or harder? Are there new tools and techniques to help? Do you have proprietary techniques?

Umesh: The patent SEARCH itself is an unusual skill. Developing strategies for the search is the first step of the process. Many companies claim the search can be automated through artificial intelligence,-- and to some extent it can, -- but not always effectively. In my personal experience, SEARCH is about how we interpret the results presented by the databases. Artificial Intelligence can read the results, but interpreting the results has not been automated effectively as yet.

Of course, new tools and techniques have indeed made the life of the clients easier to find prior art but meanwhile, the risk of missing important prior art has increased, too. The “equivalence” and “obviousness” of two inventions are personal, subjective judgments but also based on technical arguments, which are currently impossible to attempt for even the most advanced AI search engines.

3AIP runs virtual trial graphics for the invention in a traditional paper and pen environment and we try to stay away from the use of the limiting terms in the invention disclosures or invention summaries. We use everyday language to discuss the functionality of the invention, the result, methodology, and components involved. This approach enables the searcher's mind to accept the concept of the invention in a more open way, and to then search for the concept, the functionality, and the components rather than only search the disclosed terms.

Mike: What training and techniques are needed, in your view before someone can search a given invention disclosure to effectively evaluate the relevance of the results found? Those are two different skills, right?

Umesh: Yes, Mike, the skills for searching and for evaluating search results are quite different. For example, searching the prior art is all about how skilled the searcher is with operators and database search engine execution. Evaluation of the prior art is all about having a clear understanding of every aspect of the invention -- its methodology, functionality, and the end-result of what it does -- within the searcher's mind *and* in the searcher's own words. Along with that, the researcher should be well-versed with the requirements for patentability of the various countries.

Mike: Are more companies, for example, one that is building a large patent portfolio, doing their searching in-house, or is the trend to subcontract it? What drives the patent search "outsource/insource" decision?

Umesh: Generally, big companies have multiple vendors for executing professional searches for them, and screen them carefully over the years. However, I am seeing invention disclosures that the company's R&D team has already run its own search first and then submitting its invention disclosures for an outside search -- we now see invention disclosures that include a list of known prior arts.

Mike: What about smaller companies? What patent search recommendations would you have for the CEO of a midsized "technology" company? Imagine yourself as Chief Technology Officer of a such a company. How would you structure that part of your responsibilities that looks at the technology of competitors?

Umesh: I have always wanted someone to ask me that question! I would have in-house searches conducted before spending even a single minute on any idea being considered as part of the next business strategy or as part of a new focus of the business. Following that will be the "four corners" of my strategy:

1. A detailed "freedom to operate" analysis -- always conducted by the professional searchers/ search vendors.
2. A "novelty check" on new inventive ideas -- an in-house search first for patentability and then a professional search on those ideas surviving the "patentability" test.
3. A "field" search OR a "landscape" analysis for my R&D team [Always conducted by professional search firms].
4. A "Whitespace"/ Competitor/ Portfolio Analysis to find where we stand in relation to our competitors and others active in our part of technology space -- and what options are left for us in the specific technology domain of our business interest [Always conducted by a professional firm].

Mike: Wow, Umesh! I can see the logic and the value of those four steps from the standpoints of the prudent use of time and research dollars and from developing a defensible patent portfolio.

Now, what if the company is a small, under-capitalized technology startup? What advice do you have for its founder about getting the information she needs on a tight budget?

Umesh: She needs to invest in a good service provider for immediate needs and find time to educate herself to ask the right questions about what the vendor proposes. She needs to learn to perform effective in-house searches for screening ideas she may be investing time and money in.

Mike: Umesh, Let's get philosophical for a moment: how would you characterize the nature of the mind of the perfect patent searcher? If a perfect patent searcher were a musician, would she be a jazz musician or a sitar player, for example?

Umesh: Mike, as you were phrasing your question, I was thinking my answer might be "a platoon leader in combat." But, seriously, the perfect searcher is the one who has "a flow" while playing anything in hand, sitar, guitar, Jazz, or rock. Searching is an art first and then science. I have seen great minds struggling with patent searching, but once you know how to search, even an average mind *with an eye for detail* can become a great searcher.

Mike: I resonated at your "platoon leader in combat" answer, but your other answer makes a great deal of sense to me.

On a more practical level, how do you conduct keyword searches when a word in one language may have no equivalent or several different meanings in another language?

Umesh: In my experience, this situation is a tricky one and most of the time a searcher like me gives up the "trap of words" and start looking for the function and method --, it is as if you set aside the embodiment and search for the functional of the invention. To use an expression from US Patent law, I will shift to "means plus function" type of searching whenever the words in the invention description generate mostly noise.

Mike: Umesh, this has been very enlightening for me and I appreciate your insights and your time in responding to my questions. Is there anything I should have asked, but haven't?

Umesh: Mike, what you just said is what searchers should ask themselves when they think they are done with a search: What should I have asked --and searched--that I have not already searched? Always search with a mindset that there is something already existing in a particular domain. You just have to look and eventually you will uncover the closest prior art -- you know it's there, and you also know it is not easy to find.

Mike: Thank you, Umesh.