

Will Panoramic View Analysis Save People and Add Value from the Information Flood?

Tatsuo Nakamura

VALUENEX, Inc. 525 Middlefield Road, Suite 120 in AZCA, Menlo Park, CA 94025 USA
nakamura@valuenex.com

Abstract

There are some people who want to read whole documents gathered from databases or the Internet. Unfortunately, they aren't aware or don't recognize that the size of data has accumulated at such a high rate of speed and it has already expanded beyond their ability to realistically complete the task. So, what should they do to perform their work within their deadlines and avoid unnecessary stress in the workplace?

One of the solutions for the oversized information problem is changing the method of handling data from "Reading" documents to "Viewing" documents described on the radar map with accuracy. "Reading" requires seeing sequence words, comparing words to the readers' memory, filtering them, clustering them owing to existing categories, placing the appropriate tags depending on readers' subjectively and that all tasks should be repeated indefinitely. On the other hand, "Viewing" documents described on the radar map allows the investigator just to view the picture within carefully considered search parameters. This could lead to the realization of saving time and reducing costs for gathering information from such a large amount of documents. The radar map has the potential to release people from burdensome and mundane work and increase their productivity.

How to See Huge Amounts of Documents

If you have a statistical client and have to read over 300 documents by tomorrow, what should you do?

Someone could pick out documents at random and read the abstract though there is the risk that vital detail can be missed. Other people may use bibliographic information to clarify documents based on their specific expertise or training. However, if you lack either the skills or experience, the only way accomplish your mission is by starting from visualization.

Sample Case of "Healthcare" Technology

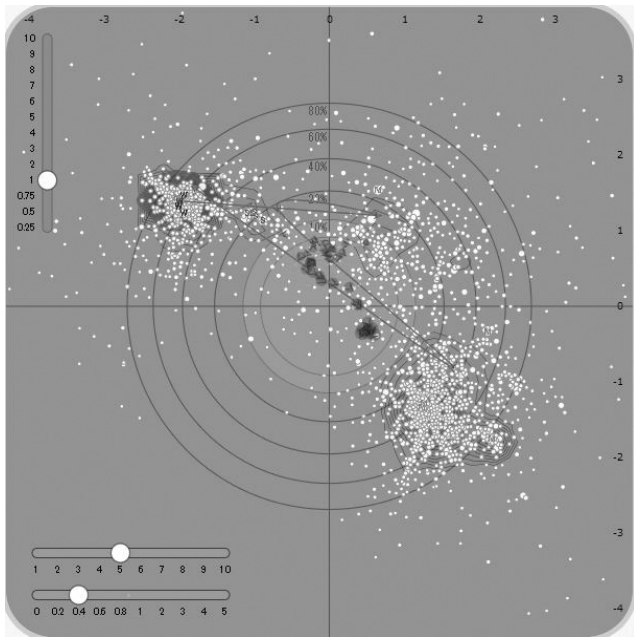
This can be shown by a simple radar map and case study using the key words of "Healthcare". There are approximately 22,763 USA application patents that include the phrase "Healthcare" in either the abstract or claim. After 2010, the number of patents in these fields is increasing rapidly. Many companies, universities and organizations are involved and interested in these areas. Competition is dramatically increasing and people who have the mission to find new competitors and creating an appropriated strategy for developing new products will face a simple but massive problem. There are simply too many documents to read.

They want and need to know and follow competitor's activities and recent developments as well as the following issues; What are their strengths/weakness for them in specific areas of technology? Where is the next stage of development? Who or Which companies can be collaborators with them to develop new business? Which area is a new frontier or an emerging technology?

Which technologies or patents are valuable?

It is impossible for people to obtain all of these solutions in a short period of time due to bottlenecks on the process, reading, processing and analyzing documents depending on expertise and ability of the people doing the actual work.

Besides, when accurate visualization is implemented, the results of above questions can be clearly identified from the radar map. (See, Figure 1.)



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Analytics Visualization Accuracy is Required.

Visualization for analytics must have the same accuracy as an expert consultant or data scientist. To what degree does it need to be accurate?

It requires over 1 million dimensions of calculation and is optimized on the cloud computing system. At my company, VALUENEX, we created an algorithmic formula and designed a visualized analysis software method called "TechRadar" which is implemented on the cloud computing system and is used by manufacturing companies and investors. We call this method "panoramic view analysis". It takes about 15 minutes to analyze 10,000 patents now but the speed is improving day by day according to development capabilities of IT systems. Imagine that you read 10,000 patents which consist of about 100,000 pages and contain many technical words that are not easily understandable. It may be impossible to accomplish all that reading and searching. Moreover, computer analytics is reproductive. Anyone can get the same results repeatedly, if the conditional expression is the same. The reproductive and panoramic features should encourage skeptics of the viability of this method.

Extending to Other Business Fields

Implementing patent documents or technical papers to the panoramic analytics method would improve activities

of decision making for R&D, aid in developing strategy, in finding collaborative companies, for predictive analytics for marketing, and for due diligence etc..

I believe that the "panoramic view analysis" of TechRadar developed by myself and my company, VALUENEX Consulting Inc. fulfills the criteria of ambient intelligence in that its system or information technology (1) is embedded into the environment; (2) can recognize the situational context of subject; (3) can be personalized to subject; (4) can change in response to the subject; and (5) can anticipate desires of the subject. I'd showed some radar map cases using patent data to illustrate how we use "panoramic view analysis" to access results from today's information flood. Moreover, we highlighted the discovery of "white space" which was uncovered in the course of our research which could be utilized by companies for collaboration as well as for visualizing the competition rate of competitors and other information by algorithmic calculation based on the radar map.

Conclusion

Accurate visualization may release people from tremendous amount of reading and analysis tasks. It also turns intangibles into tangibles. People can recognize the "white space" between existing information areas without the need for individual expertise or training. As a result, saving time and reducing cost would be realized. We are now developing the next analysis method that would combine mixing our structured analysis along with various unstructured format data sources.

It would be extremely useful for better prediction along with greater accuracy and precision.

References

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