

# The Quality of Search is Very Much Strained

**Abstract:** The quality of each internet search is subjective to the searcher's intentions. This paper examines how a quality search process might be achieved. It also discusses context points and cluster analysis, and illustrates how, starting with the results of Search Engines, one can quickly and interactively discern relevant items of interest. It introduces the concept of **Dynamic Context Search**.™

Shakespeare tells us that the quality of mercy is not strained; however, an internet search that delivers quality results certainly is. Consider your recent search engine experiences. How relevant were your results? Did the results offered exceed your ability to review them all? How many did you actually review? Were you able to isolate relevant answers quickly?

If we are being honest with ourselves, many of us have search experiences analogous to the time-honored story of the old man searching for the key.

A young man is walking down the street quite late at night, and as he nears a streetlight; he sees movement and shadows. As he gets closer his eyes see an older gentleman on his hands and knees under the streetlight.

"May I help you?" the young man offers from a distance he calculates will not frighten the older man.

"Why yes", came the reply, "I have lost my key and I am searching for it."

This young man joins the search for the lost key with enormous enthusiasm. He organizes the search from what was a hitherto random process, to a logical and efficient grid search pattern. He marks squares in the grid search and crosses off each square as it has been thoroughly searched. He has enhanced the search process with good technology.

After several minutes he breaks the silence saying quite enthusiastically, "Well sir, you were quite lucky losing the key, here under the spill of the streetlight."

"Oh I lost the key over there", the older gentlemen replies pointing several yards away, "I'm just looking here because there is so much more light".

The *streetlight* of our personal search experiences is the astonishingly fast delivery from search engines of too many results, presented in a fixed order, and arranged by somebody's idea of popularity. It is seductively easy to keep looking under that streetlight. The problem is that the key to our desired search results may very well lie outside the spill of that light.

A classic definition of *quality* is: fitness for intended use. One may view an electric drill that is safe, easy to use, and highly reliable as a quality drill – it meets our expectations for how we want to use this tool. While many of us may have the same idea of quality features in an electric drill; every search is different. Every searcher has a context in mind even if they have not fully articulated it. The quality of an individual search is judged by a personal, subjective yardstick.

A search process that has *quality* delivers three things:

- (1) it allows the searcher to express the context of the search: *interactively*,
- (2) it presents the results in an organized, pre-tabulated, grouped fashion that acknowledges the searcher's possible contexts and helps encourage searchers to explore different contexts, and
- (3) it enables the searcher to re-order, re-rank, and cross-cut through all available results and narrowed sets of results to enable discovering the most relevant results quickly and easily.

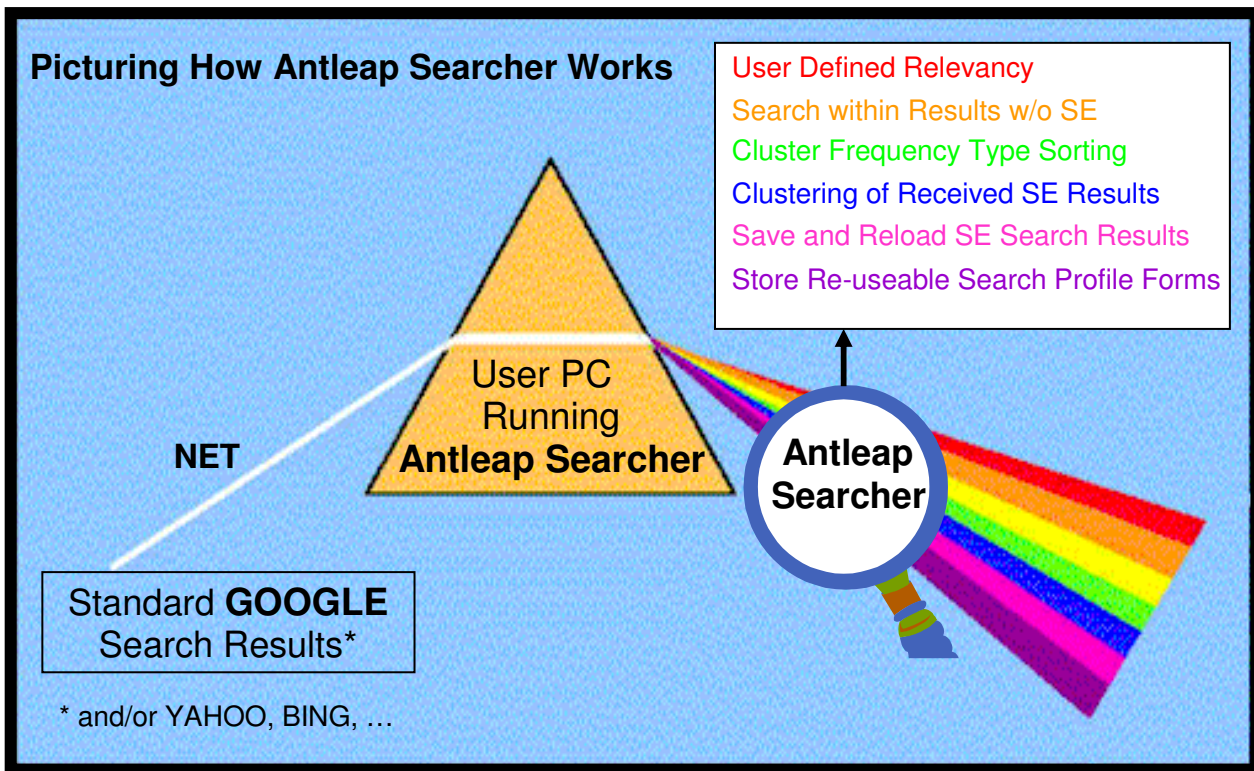
Unfortunately, Google, Yahoo, & Bing do not do this. Quite fortunately, Antleap Searcher may be used as a front-end to each of these search engines to convert each search into a *quality search*. Just like a spreadsheet allows you manage your data as you want, Antleap Searcher allows you to manage the search results from Google, Yahoo, & Bing the way you want.

### Select-A-Context Subject — Splitting Search Beams into More Manageable Wavelengths

Every search happens in the context of what is in the searcher’s mind – but the search engine is not aware of it. Suppose we search for *hot chocolate*: Are we looking for recipes? Or maybe for a source for cocoa? Or a rock band named Hot Chocolate? Or a movie? Or the Hot Chocolate 5K run? Or perhaps we are investigating stolen candy?

- | <u>Context Points</u> |
|-----------------------|
| • Health              |
| • Travel              |
| • Service             |
| • Product             |
| • Finance             |
| • Website             |
| • Company             |
| • Education           |
| • Government          |
| • Entertainment       |

Antleap Searcher, allows searchers to select different context point subjects and permits searchers to examine and re-examine, *dynamically*, the total search engine received results until the searcher is satisfied that relevant results have been isolated. For example: at any time a user may dynamically select a context point subject, shown in the box to the right, and Antleap Searcher will do two things: (1) first it will take the current search term and add 10 terms associated with that context point subject and initiate 10 different and new searches with the selected search engine. Second (2) it will gather those results together with the original results and present them according to highest scoring. This means that the act of simply declaring or selecting a context



subject will bring in new results as if you had selected 10 additional attributed terms and did 10 additional searches. Each time a different context point subject is selected, Antleap Searcher uses the

results already in memory and again selects context related words for that newly selected context point and issues new search requests to add to the current results. The scoring is automatically adjusted to sift the chosen context related results to the top of the list. In this way, searchers can dynamically and interactively examine their results; all their results.

### Cluster Analysis – The X-ray Vision of Search

The first cousins of Context Analysis are the various forms of Cluster Analysis - ways of spotting patterns-of-interest in search results. These patterns-of-interest may take four different forms:

- (1) Results which contain **certain file types** – like PowerPoint files (.ppt) or Excel files (.xls) or Word files (.doc), adobe (.pdf), for example.
- (2) Results sourced from **certain website extensions** – like educational institutions (.edu), government sites (.gov), commercial sites (.com), national sites (.jp, .uk, etc), for example.
- (3) Results which **contain patterns in content** as related words (example in the box at the right)
- (4) **Combinations** (For example: select all .uk website results which contain a .pdf file type; select .edu files and the content patterns change

Search Engine	Google
Search Engine Front End	<b>Antleap Searcher</b>
Search Term	"quality of mercy"
Total Results Returned	786
<b>Patterns in Content</b> (related words)	
Strained	119
Heaven	95
Shakespeare	79
Venice	51
<b>Patterns in File Type</b>	
.pdf	13
.doc	4
<b>Patterns in Website Extension</b>	
.com	432
.org	132
.edu	55
.net	54
.uk	44
.au	11
.ca	10
<b>Note 1:</b> The Google results page explains that there is a total of 282,000 results. Yet if one pages down far enough the last result Google allows you to have is 795. There are 9 duplicates within that 795 so the total available results are 786.	

Searchers benefit by simultaneously and dynamically looking across different sets of search results – all from the same original search term. Choosing a different file type or website type cluster will immediately display the corresponding content cluster pattern for that set. These capabilities are called **Dynamic Context Search™**. These recurring patterns provide a catalyst to understand search topics; this is a kind of wisdom about the results not evident until the hundreds of results were grouped together and *then* examined simultaneously. These

kinds of capabilities are not delivered by search engines but are available from Antleap Searcher – the front-end for search engines. Antleap Searcher thus provides a **Self Managed Search™** capability.

### Conclusion

The subject context points and clustering analysis capabilities of Antleap Searcher are automatic capabilities which may be selected at will by the searcher. These tools are applied interactively and dynamically by the searcher and operate on the current set of Search Engine results. This enables searchers to isolate and identify relevant results rapidly.

Using Antleap Searcher transforms the myriad of search results into quality searches – easily identifying relevant results. Searchers obtain relevant results much more quickly than the strain of serially reviewing hundreds of results by eye. Antleap Searcher helps searchers get the best out of Search Engines such as Google, Yahoo, and Bing. Antleap doesn't do the good things Google and others do; Antleap does the good things that they don't do. Searchers benefit.