

EXHIBIT 7

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

ACCUSEARCH TECHNOLOGIES LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Case No. 25-cv-00514-GBW

Jury Trial Demanded

DECLARATION OF ROBERT OSANN, JR.

1. My name is Robert Osann, Jr., and I am over 18 years of age. I have personal knowledge of the facts stated below and I could, and would, testify to them.

2. I have been an independent inventor since 1973. I am currently an inventor on 74 issued United States patents and 5 British patents.

3. I am the sole inventor of the patents asserted in this case: United States Patent Nos. 10,585,959 (the “’959 patent”); 10,867,001 (the “’001 patent”); 11,100,184 (the “’184 patent”); and 11,971,937 (the “’937 patent”) (collectively, the “Asserted Patents”).

4. Over the past 50 years, I have been the founder or co-founder of, or major contributor to, more than a dozen startup efforts, spanning several different technology areas. Many of those startups were born out of the inventions claimed in my patents. Five of them were venture-capital-backed Silicon Valley startups. I served as the founding CEO of two of them.

5. One of the most notable companies was Lightspeed Semiconductor, Inc. I founded Lightspeed in 1995 based on a semiconductor chip patent on which I was the inventor.

That company started out with me leading a team of 5 employees and eventually grew to over 100 employees with over \$85M of venture funding.

6. I received two awards resulting from my work in the semiconductor industry. In 1991, I was honored as a “Pioneer of PLDs” (Programmable Logic Devices) by EE Times for my work at Assisted Technology, Inc.—a company I co-founded in 1981. In 1992, I was a recipient of the “Innovation and Innovator of the Year” award by EDN Magazine for my work at another company I co-founded: Aptix Corp. There, we developed and patented several products, including the semiconductor industry’s first 1000-pin semiconductor chip. At Aptix, I was the VP of Marketing and Applications and was a co-inventor on 4 US patents including 2 where I was the lead inventor.

7. I am currently a Partner with Nif/T, LLC (“Nif/T”) in Reno, NV. At Nif/T, I work with startups to assess their technology, business development, and potential funding avenues. I see this work as a logical extension of my background, and I try to offer the benefit of my experiences as an entrepreneur and inventor. I enjoy assisting others with startups and helping the inventors behind them develop and protect their ideas.

Problems with Prior-Art Internet Search Webpages (User Interfaces)

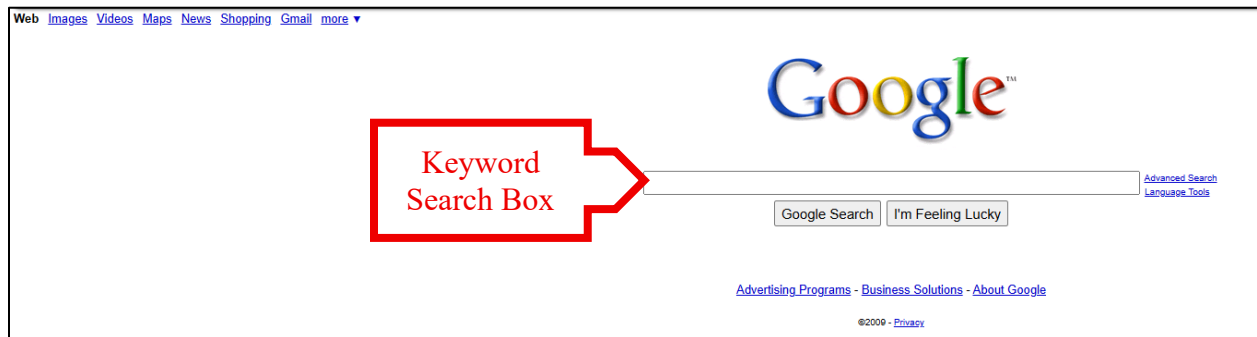
8. The Asserted Patents at issue in this case are directed to solving technical problems uniquely associated with Internet search webpages at the time (2011). The Asserted Patents relate to and improve the manner in which Internet search results are displayed on those webpages and the manner in which users can view and interact with the results, in order to prevent frustration and wasted time.

9. Since at least 2002, I have been working independently on developing ways to improve electronic systems. My goal has been to develop technology that decreases

technological impediments and increases efficiency. In many cases, my inventions in this time period have also dealt with ways to increase public safety and save lives.

10. From 2008 until 2012, I served as a consultant and the acting Vice President of Marketing for Nevada Nanotech in Reno. Nevada Nanotech produced silicon chips for explosive and chemical detection and was funded as an anti-terrorist solution by the US government. One of my primary efforts was to actively search for other market opportunities for its chips and systems for chemical detection. As part of my responsibilities, I performed extensive Internet-based research to identify commercial opportunities for the technology.

11. At the time, the primary method of conducting searches across the Internet was through the use of Internet search webpages. Those search webpages included a search box where users input in search queries. Those queries included one or more words or characters and frequently included multiword (or “long tail”) searches of 3, 4, 5, or more search terms. Some of the most popular Internet search webpages that I used in the pre-2011 era included the following:



<https://web.archive.org/web/20100101001604/http://www.google.com/> (annotated);



<https://web.archive.org/web/20100101040705/http://www.bing.com/> (annotated);

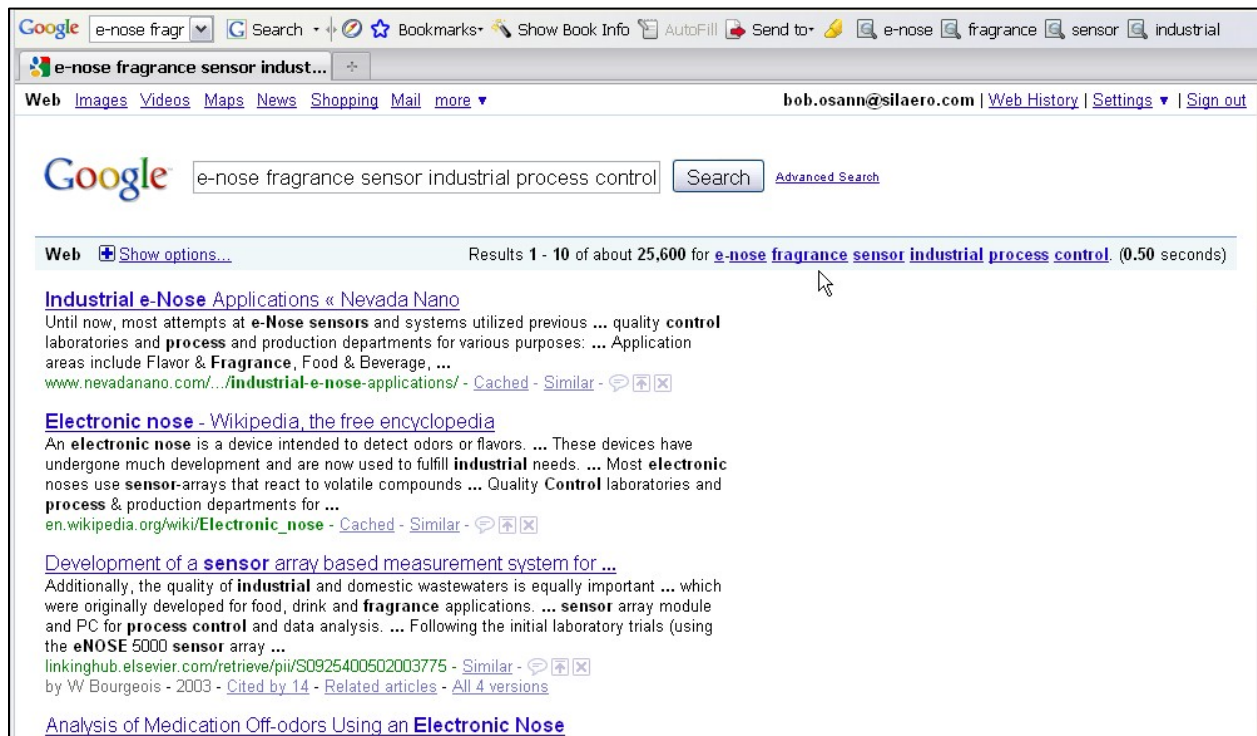


<https://web.archive.org/web/20100101003207/http://search.yahoo.com/> (annotated);



<https://web.archive.org/web/20091230202651/https://duckduckgo.com/> (annotated).

12. One example of a set of search terms is “PGA Tour Golfer.” A user would enter that search and click the “search” button. The applicable search webpage would return a search results webpage. That webpage would typically include a list of 10 search results. Each search result would contain a link to a “referenced” webpage. As of September 16, 2009, such an interface would look as follows, which is a true and accurate depiction of a search I conducted on that date:



13. While reviewing search results, I recognized two recurring problems with the standard Internet search functionality that existed at the time.

14. First, some of the returned search results included webpages that simply provided lists of links to other webpages. '959 patent,¹ 1:45-48, 2:24-28. While I suspected that my

¹ I include citations to the '959 patent in explaining the background of my inventions, the problems I sought to solve with them, and the specific ways I implemented them. I have also included citations to the other Asserted Patents in certain places in my declaration.

keyword terms might be included in at least one of the many linked webpages (or “descendant” webpages), I found that for many my terms were not present. Those “linking pages” (containing the list) were largely irrelevant. They crowded the search interface and made it less efficient. I usually did not have the time to click through each result and into each descendent link to find the webpage that might actually contain one of my search terms. ’959 patent, 2:24-30.

15. Second, I frequently found that critical keywords from my searches were missing on some webpages referenced by the returned search results webpage. ’959 patent, 2:13-16. In those instances, there was no way for me (the user) to determine which result in the list provided on the search results webpage pointed (linked) to a webpage that actually included all the keywords (or at least some of the keywords) that I had input in my search. The search results webpages frequently included short abstracts (or descriptions) associated with each of the webpages listed on the search results webpage. But those abstracts often did not include all the search terms I had submitted. All those limitations made reviewing search results a less productive, frustrating, and time-consuming task. ’959 patent, 2:65-3:3; 11:4-15.

16. Especially during 2010 and early 2011, I frequently performed market research searches using Google in looking for opportunities that Nevada Nanotech could pursue for their system’s chemical detection capability. One such search performed in late 2010 included the search terms: <ethylene processing plastics ammonia contamination catalyst>. When I performed searches using that phrase, the search results webpage provided no indication or warning as to whether or not any search terms were missing from webpages referenced by the results. No Internet search webpage interface at the time provided that functionality.

A Solution Did Not Exist

17. The default search logic, both at the time and currently, is assumed to be “AND” logic. ’959 patent: 2:16-19. That means the keyword search should return as results only those

webpages that include *all* the search terms. *Id.* at 2:19-21, 2:30-31. In the earlier example above, an Internet search webpage using “AND” logic would *only* return webpages that contain all the words “PGA,” “Tour,” and “golfer.”

18. In 2010, I searched for and located the published search logic for the Google search engine I most frequently utilized. It claimed that by default “AND” logic was used. But my search results repeatedly demonstrated that the search logic did not require every keyword to be present, as “AND” logic would have required. ’959 patent, 2:21-24.

19. To my knowledge, Internet search results webpages in and before 2011 would determine “relevance” by using some form of “ranking” of webpages in a results list. But they did not indicate how any of the rankings were reached—and certainly not in terms of any inclusion of specific keyword search terms. That made it even more difficult for users to determine which keywords were actually included in the results.

20. In short, the user interface associated with standard Internet search results webpages in and before 2011 did not indicate which logic was used. They provided no indication of whether search results were analyzed for missing terms. Nor did they indicate any missing search term elements on referenced or descendent webpages. ’959 patent, 2:16-24, 9:12-24. Nor did they provide filters for removing one or more Internet search results referencing webpages that were missing one or more search term elements from being displayed on the search results webpage. ’959 patent, 3:6-23, Figs. 10-11.

21. My most intense Internet-based market research searching I conducted occurred between 2009 and 2011. I used what I understood to be the most prominent search engines available at the time: Google, Bing, Yahoo, and DuckDuckGo. During that time, I was never aware of any existing solution to the problems discussed above.

22. To my knowledge, no Internet search results webpages in or before 2011 indicated whether each returned search result was missing a particular search term the user had entered in a specific query.

My Solution — Improvements to Internet Search Webpage Interfaces

23. I thought of solutions to the problems discussed above. I could improve the user-facing portion of the Internet search webpage, the graphical user interface (or GUI). I could do so by adding limited, specific components to those interfaces. Those new components improved the function of the Internet search webpage interfaces by placing specific data in specific places on the display.

24. The problems I observed and set out to solve were with the user interface on the Internet search webpage and how it controls or interacts with the search engine. In that way, some iterations disclosed in the specification improve the operation of the search engine itself. That interface included the initial Internet search webpage and the results webpage that the users saw after running their search. Such interfaces are sometimes referred to as graphical user interfaces, or “GUI” for short.

25. I concluded that the most efficient way to tackle the problem would be to build upon the then-existing Internet search functionality. So, I began to consider what could be added to address the problems discussed above.

26. My first idea was to add a filter to the webpage interface. A user could use the filter to remove any result that referenced a webpage that only listed links to other (descendent) webpages or was missing one or more of the keywords from the user’s initial search request.

27. But I realized that a filter alone might not be enough. I determined that although that solution alone might have been acceptable to some users, a conventional deployment of a

filter would risk filtering out some useful results before the user had a chance to adequately evaluate them. '959 patent, 3:12-19.

28. The goal was to provide a means for the user to review all relevant returned content but to do so in a quick and efficient manner. There was no way to accomplish that result in or before 2011.

29. To create the ability for a user to specifically determine which results would be filtered and which would be kept, I decided to investigate implementing a new type of search interface (GUI) that worked in tandem with existing Internet search functionality. '959 patent, 3:22-32.

30. That interface would allow the user to determine whether each of the returned search results included or excluded one or more of the keywords from the user's initial search request. It did so by annotating each of the search results in real time. '959 patent, 5:7-36.

31. A sample Internet search webpage interface (GUI) is included in the patents as Figure 5 below. The red annotations (boxes) indicate examples of the types of information I envisioned adding to the conventional interface in connection with search result groupings.

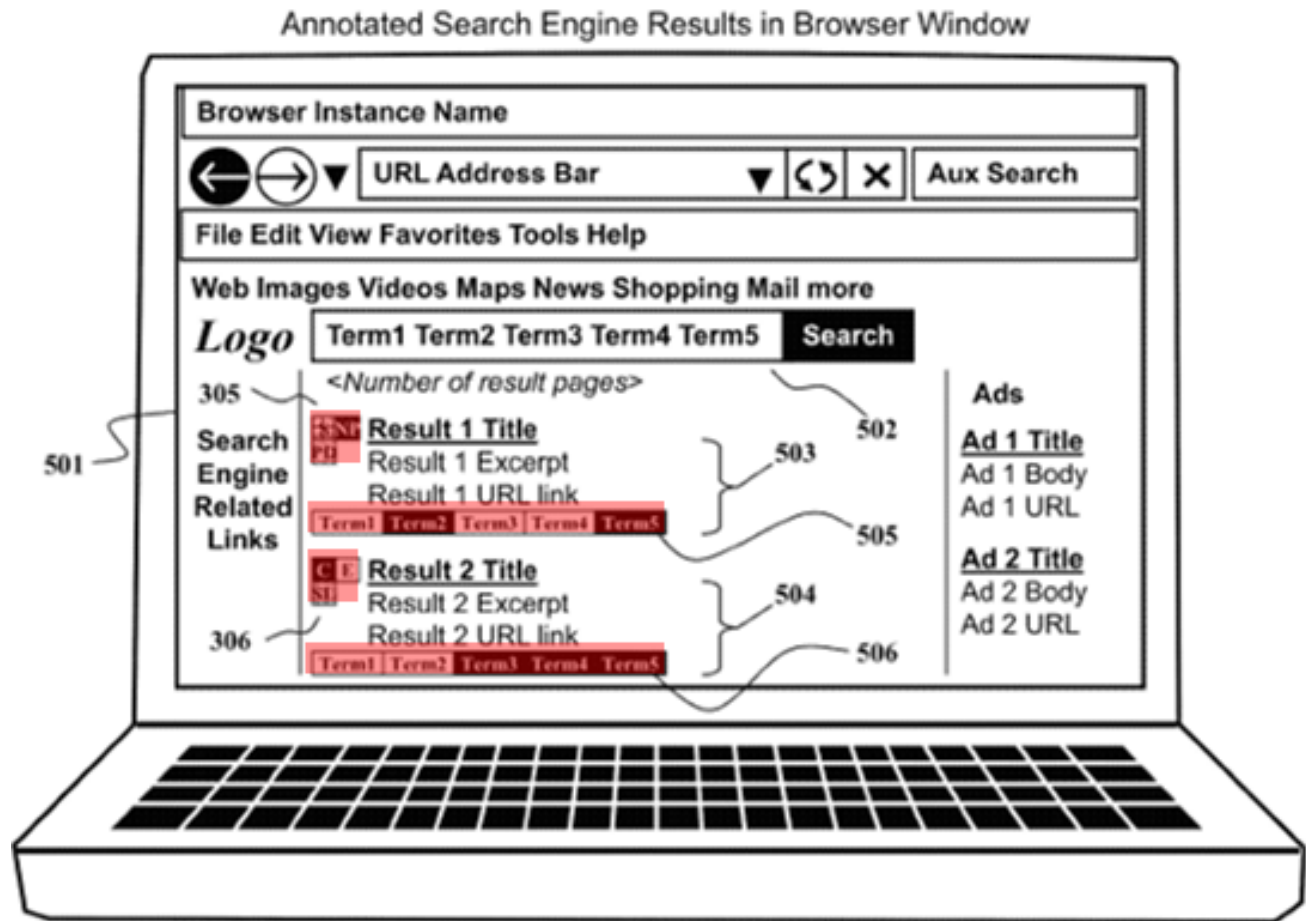


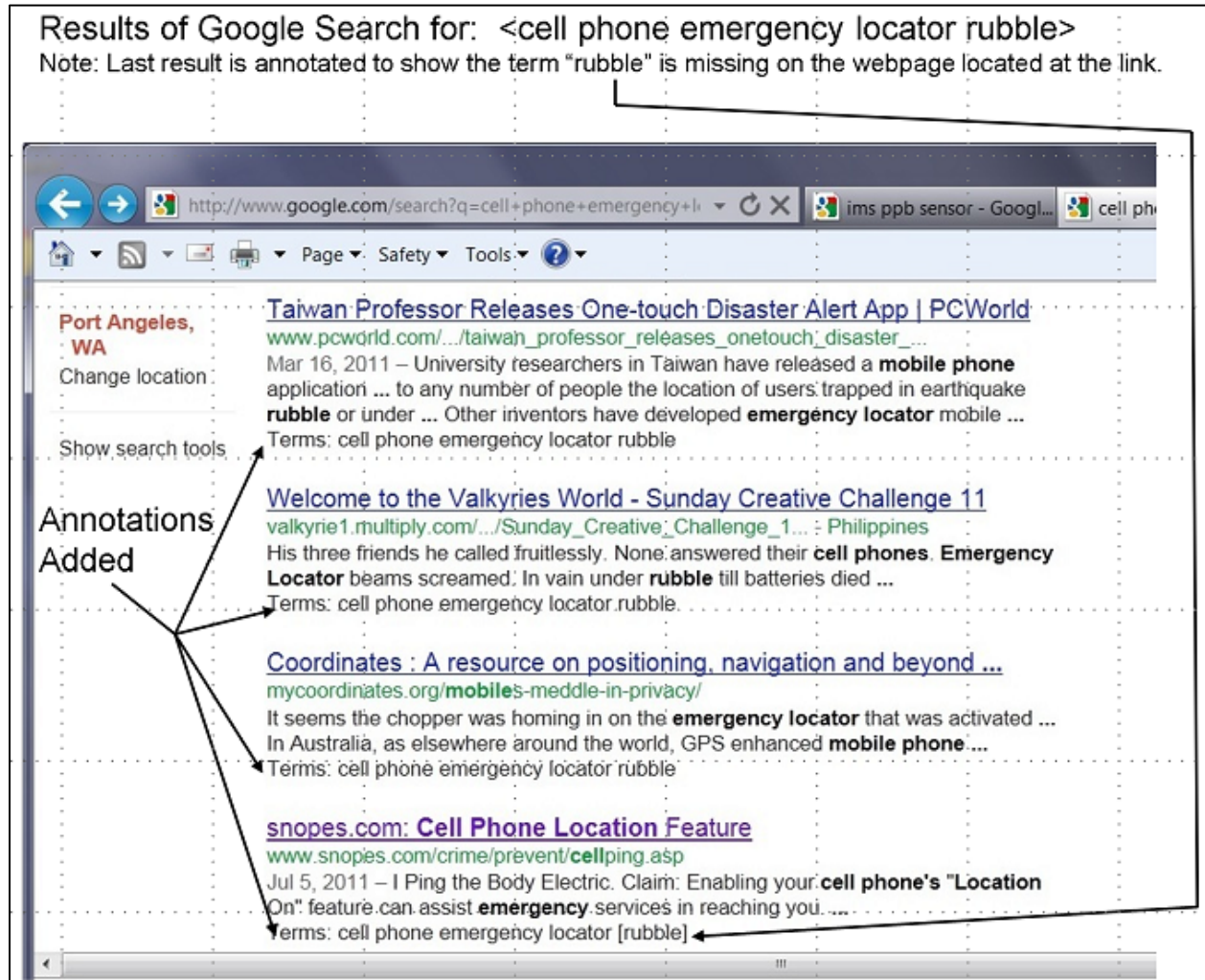
Figure 5

'959 patent, Fig. 5 (annotated).

32. I filed my initial patent application on that technology in June 2011.

33. After that, I enlisted a software consultant who, over the next several months, created a “proof-of-concept” prototype plug-in, which was a first step for one option for implementing the new Internet search results interface (GUI). A screen-shot of an annotated search results screen using the prototype is shown below, which is a true and correct depiction of

an operating version of a prototype I developed in or around November 2011:



34. The prototype demonstrated that the solutions I envisioned could be readily implemented to improve Internet search capabilities to solve technical problems that arise only within the context of internet searching technology. The plug-in was one option. I also understood that programming the improvements directly into an Internet search webpage or search engine would have been other possibilities for implementing my invention. '959 patent, 5:7-36. The improved graphical user interface and its interaction with the search engine thus fundamentally changed the operation of search engine technology.

Specific Improvements to Internet Search Functionality

35. My inventions improved the Internet search functionality that existed in 2011 to identify missing search terms and include missing term annotations ('959 patent, 9:25-10:14), the ability for the user to assess the search results in real time ('959 patent, 3:63-65; 6:6-11), the ability to filter the search results ('959 patent, 6:26-30), the ability to assess whether descendent webpages include, or are missing, one or more search terms ('959 patent, 10:25-37), and more accessible, efficient, and capable Internet search functionality for conducting Internet searches on smaller displays such as smartphones ('959 patent, 5:12-14; '184 patent, claims 4, 9, 14, 22; '937 patent, claims 6, 8, 10, 20, 22, 24, 34, 36).

36. My design goals were specificity and simplicity. I wanted to allow users to review Internet search results quickly and efficiently. Thus, I designed specific improvements to Internet search interfaces in a way that provided a limited set of data (in groupings and annotations) for the user to review.

37. Annotations of terms missing from webpages referenced by the search results are implemented using a specific type of annotation. The specification and claims specifically state how the results are organized (e.g., grouped), what is included in the groups (e.g., title, link, excerpt, and/or URL), what is included in the annotations (e.g., missing search terms), and where they are located (e.g., in or near search result groupings).

38. For example, Figures 3-7 of the specification show annotated search results. Figures 3 and 4 show examples of abbreviations indicating categories that characterize each of the referenced webpages. '959 patent, 8:23-9:9; Figs. 3-4. Figures 5-7 show further examples that indicates which search terms are missing from the referenced webpage (or descendant pages of the referenced webpages) and which are present. '959 patent, 9:61-11:44; Figs. 5-7. In each of these examples, the annotations are placed in or around a search result grouping (the title, link,

excerpt, and/or URL) and indicate whether one or more search term elements are missing from that specific webpage. '959 patent, claim 1.

39. As of 2011, the inclusion of search result annotations to allow the user to more efficiently review search results solved what was a serious deficiency with then-conventional Internet search webpage functionality.

40. The inventions of the Asserted Patents also provide Internet search webpage interfaces with the capability to present, and to allow a user to assess, the search results in real time—instead of requiring the user to open each webpage result to determine whether its content was relevant or useful. Conventional search engines in or before 2011 routinely included irrelevant results that, at times, omitted one or more keywords from the user's search query. '959 patent, 2:21-24, 9:23-24.

41. The inventions also provide the Internet search webpage interfaces with the capability to include filters that users can use to quickly filter search results by using predetermined criteria. And when the filter is used, the filtered results would be removed from the search results webpage or alternately the search engine would perform an additional search and provide an updated search results webpage. '959 patent, 13:6-9. For example, the interfaces allow users to filter out a specific type of webpage or webpages that do not include one or more of the input search terms. '959 patent, 6:16-8:22; 12:48-62. Conventional Internet search functionality in or before 2011 did not provide functionality or capability to do any of those things.

42. The inventions improved conventional Internet search functionality by also providing an analysis of descendent webpages in real time. The same search term analysis is implemented on the descendant webpages and is displayed in the webpage grouping (e.g., the

title, link, excerpt, and/or URL), showing the one or more search term elements missing from both the Level 1 (webpage search result) and the Level 2 webpages (the descendant webpages).

'959 patent, 10:25-11:44; Figs. 6-7.

43. The improvements to conventional Internet search functionality are even more apparent when the searches are being run on smaller devices (such as smartphones) with limited screen area. Those devices are limited by smaller displays and limited user input devices. Thus, it is more important that users are able to filter out irrelevant search results with minimal user input necessary. And it is beneficial to prevent having to dedicate precious screen space to excessive irrelevant search results where those irrelevant search results obscured desired and relevant results. In short, efficient searching is paramount and specific asserted claims provide additional benefit in the context of such smaller-screened devices. '184 patent, claims 4, 9, 14, 22; '937 patent, claims 6, 8, 10, 20, 22, 24, 34, 36.

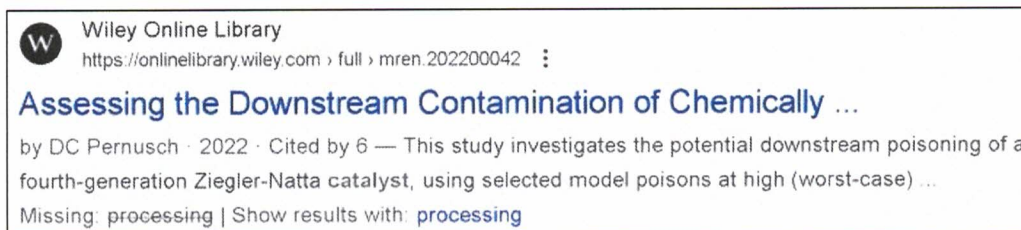
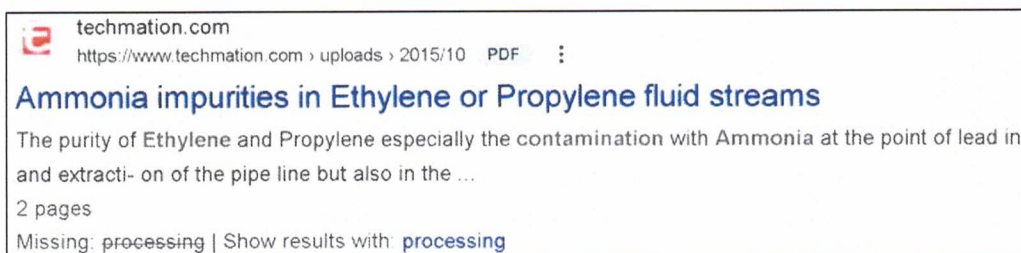
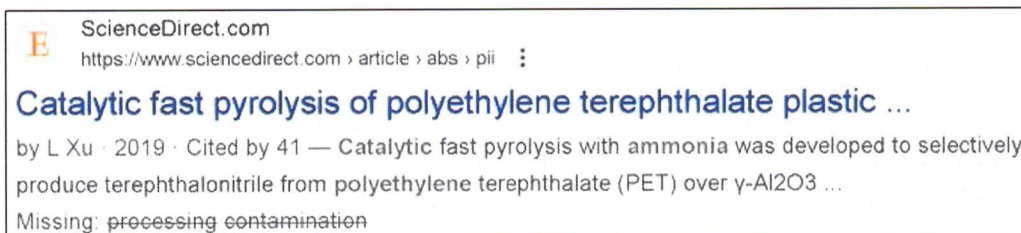
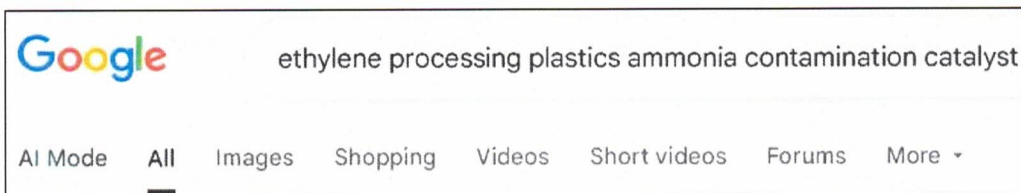
44. The Asserted Patents also created a new, unconventional connection between the annotations and filtering function. For example, missing-term annotations in conjunction with a filter provide a specific way to filter the search results at the same time the user reviews those results for missing terms. '959 patent, 6:26-30. It permits the user to perform personalized iterative searches by choosing to review only the results that include specific terms or performing additional searches using slightly different keywords. *See, e.g.*, '959 patent, claim 3.

45. The use of annotations in connection with search result groupings allows the user to review search results and assess the listed webpages without having to click on those webpages (i.e., navigate away from the search results webpage) only to find in some cases that the information they seek is absent due to one or more missing search terms.

46. Using my patented approach, a user can save time by choosing not to review any search result that does not include one or more of the specific keywords submitted in their search query. The user can also filter the results in different ways by choosing to filter them based on which keywords are either included or are missing. '959 patent, 3:7-12.

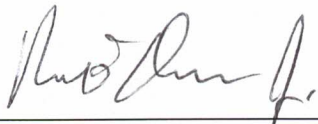
47. That dynamic filtering, integrated into the GUI itself, fundamentally altered how users navigated search results. It eliminated—or at least reduced—needless clicks, load times, bandwidth, and computer processing resources.

48. My inventions have been implemented today. I ran that same search mentioned above (for <ethylene processing plastics ammonia contamination catalyst>) on July 4, 2025 on Google. Excerpts of the results are shown below. They show that of the 10 search results shown on the first results page, 4 of the results are now annotated with missing terms. In 2010, I would have had to visit each of those 4 referenced webpages and spend time reading through them. Only then could I have concluded that the information I sought was not there. All that time would have been wasted prior to my inventions.



I declare under penalty of perjury under the laws on the United States of America that the foregoing is true and correct.

Date: July 11, 2025

by: 
Robert Osann, Jr.