

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

UNIFIED PATENTS INC.  
Petitioner

v.

VILOX TECHNOLOGIES LLC.  
Patent Owner

---

Case IPR2018-00044  
Patent No. 7,302,423

---

**DECLARATION OF DR. JOSEPH L. DE BELLIS**

## I. INTRODUCTION

1. I make this Declaration in support of Patent Owner's Response in the matter of Petition IPR2018-00044 (Petition).
2. I am not being compensated for this Declaration.
3. I am the sole inventor of U.S. Patent 7,302,423 ('423 Patent). In addition, I am the sole inventor, or one of two inventors, of six additional U.S. Patents and two pending patent applications, all of which relate in some manner to the '423 Patent. I am the owner of Vilox Technologies LLC, to which all patents and patent applications are assigned.
4. In preparing this Declaration, I reviewed the Petition; Exhibit 1011 thereto, Declaration of Ingrid Hsieh-Yee, Ph.D.; Exhibit 1005 thereto, Declaration of Philip Greenspun, Ph.D.; and Exhibit 1009 thereto, Excel 2000 Bible (*Excel*).
5. In addition to being an inventor or co-inventor of seven U.S. Patents, I am the founder and owner of Vilox LLC, of Louisville, Kentucky. Vilox LLC manufactured commercial embodiments of the patented technology claimed in the seven U.S. Patents, and sold products to private entities and government organizations.
6. I have attended several in-person interviews at the U.S. Patent Office during examination of my U.S. Patents and patent applications.
7. I have been informed of and understand the relevant statutory basis for determining the priority date for a U.S. Patent. I am familiar with the terms "conception," "diligence," and "reduction to practice." I am familiar with the basis for establishing a prior art date for a reference, and application of prior art

references generally in determining the validity of a U.S. Patent. I also have been informed of and understand the concept of “swearing behind a reference.” Finally, I understand the notions of novelty and nonobviousness when determining the validity of a U.S. Patent.

## **II. CONCEPTION OF MY INVENTIONS**

8. After reviewing the Petition and the Declaration of Dr. Hseih-Yee (Ex 1011), I understand the Petitioner asserts the Excel 2000 Bible reference (Ex 1009) has a “prior art date” of “between July 27, 1999 and October 26, 1999,” although the actual copy of the reference considered by Dr. Hseih-Yee may not have been shelved until late December 1999 (60 days after October 26, 1999). See Ex 1011, paragraphs 17, 20. I understand from the Declaration of Dr. Greenspun (Ex 1005) that the Petitioner states the priority date of my ‘423 Patent is “as early as February 25, 2000.” See Ex 1005, paragraph 24. I also understand from the Petition that the Petitioner alleges the Excel 2000 Bible reference is “approximately 5 months prior art.” See Petition at 48. The date on which the Excel 2000 Bible was actually accessible is not clear based on Petitioner’s positions, but all the dates are after I conceived of the inventions disclosed and claimed in the ‘423 Patent.
9. I conceived of the inventions disclosed in my U.S. Patents, including the ‘423 Patent, at least as early as January 1999. It was in January 1999 that I described to my Office Manager at that time, Missy De Bellis, my vision for a database management product that would be intuitive and flexible, which I came to call my

“search-on-the-fly” system. My intention was to design such a system for use in my medical practice.

10. The system I described to Ms. De Bellis was one whereby a user could search large amounts of data across various databases organized in various ways such that the system would not only return all available results, but also would display all of the results on one page. To allow the user to view all the available results, I envisioned using truncation to reduce, as necessary, results to representations that would trigger and take advantage of the user’s power of recognition. I further described a system that would allow users to search beginning with criteria of their choice but with options to filter using other criteria so that the search process would be more intuitive for the user. To do this, I envisioned a database as a three-dimensional body having a number of faces or panes; each face representing a view into the database. I further envisioned increasing the number of panes, changing, for example, a cubic form database to something like a geodesic dome; the greater the number of “panes” (parses), the more granular the search capability. I explained that using these concepts, we could “drill down” on data across multiple databases in what I referred to as a “hyper-specific” parsing of the available data. The truncation of the alpha-numeric spectrum would then allow results to be reduced to a single-page view so that the extremes of the spectrum could be appreciated by the user.
11. I explained to Ms. De Bellis that by using the system and methods described above, we would have much better visibility into the data for a given patient. In

essence, she, as Office Manager, would be able to roll and tumble the data across our multiple databases, or search on the fly. Our software then would truncate search results, as necessary, so that she could view all search results on one page of the terminal, which would allow her to recognize the results.

12. After unsuccessful attempts to modify off-the-shelf software products to implement my search-on-the-fly concepts, I began efforts to design such a software tool in May 1999. I initially focused development on icon manipulation, faceted search, truncation, and related database tools.
13. I continued working on developing a system that embodied my search-on-the-fly concepts throughout the summer of 1999. Late May through September was the busiest time of the year for my medical practice due to the large influx of people into the Hamptons in the summer months. I nevertheless continued to work on developing the search-on-the-fly system when I was not in surgery or seeing patients. I found the progress to be slow and frustrating, in part because I had no training or background as a software programmer or engineer.
14. In August 1999, I first discussed my inventive concepts with Adriano Freire, whom I had originally employed for other purposes, but who was a computer programmer in his native country of Brazil. Mr. Freire subsequently became a co-inventor on my U.S. Patent 7,188,100.
15. My initial efforts with Mr. Freire were directed to writing software programs that would bring my inventive concepts to life. Those efforts included Mr. Freire writing computer code that would accomplish my intentions. To that end, I purchased

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.