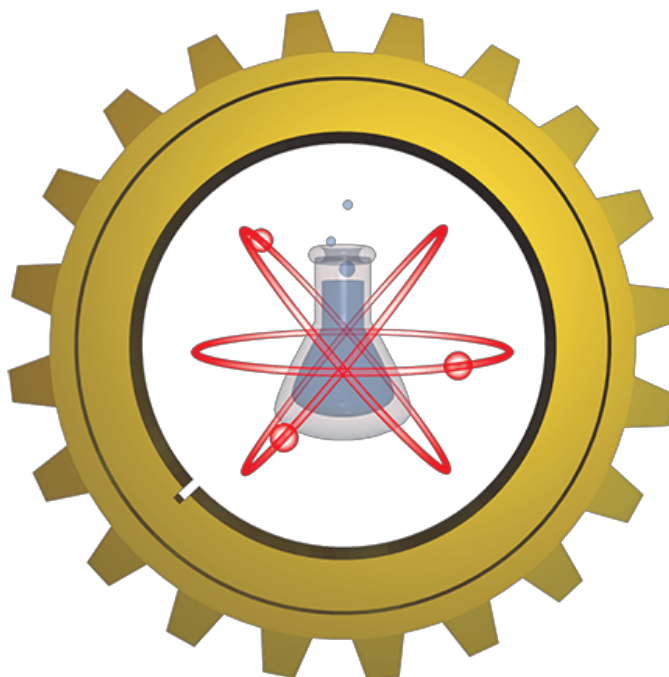


Express Search, Inc.

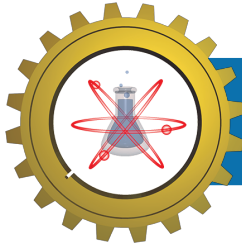
21st Century Patent Research®

Patent Research Guide

***Patent Prosecution and Litigation
Research Products***



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EXPRESS SEARCH

21st Century Patent Research

About Us

Research Expertise

Express Search offers the highest quality patent research services available, specializing in complex prosecution and litigation oriented research, customized to the client's needs.

Despite the changing landscape of patent research, our lengthy tenure in the industry attests to our success as a leader in technical research preparation.

Express Search focuses individual attention to each case, fluidly managing large volumes of research while keeping costs to clients low.

Industry Knowledge

Patent research is the foundation for solid arguments, well-written opinions, and bullet-proof applications. Express Search does not offer legal outsourcing or IP portfolio management software.

We have a true knowledge of our position in the industry allowing us to meet actual client needs through innovative patent research products.

Exceptional Research Staff

Each researcher is hand-picked and hand-trained, chosen for their specialized skill sets, research acumen and attention to detail.

Researchers maintain command of the latest technologies and innovations in their scientific specialities, in addition to the latest patent research tools and methodologies.

A listing of our esteemed research staff is located at the end of this brochure and their qualifications are published on our website or available upon request.

*Family owned and run,
proudly serving the IP
Community since 1991.*

Patent research is the foundation for solid arguments, well-written opinions, and bullet-proof applications.

Flagg Management

Family owned and run, Express Search is now in its second generation of management.

President, Cristopher Flagg, is a computer scientist and roboticist by trade. He has over eighteen years in patent research and is integral to product development and workflow initiatives.

Executive Director, Rodger Flagg, founded Express Search in 1991. He continues to lend his 30 years of industrial experience in engineering, inventing, patent research, drafting, and prosecuting.

Client Partnership

At Express Search, we consider our clients our partners. We are invested in their success and satisfaction.

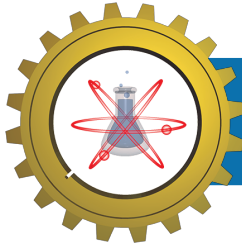
As partners, we understand that a level of decorum and professionalism is expected for successful docket management.

Timely, cost-effective, quality results, as well as direct access to management, are requisite standards for busy and conscientious counsel.

Each case is unique. The research supporting the case is likewise unique. Customization of each research project is an integral part of our successful client research partnerships.

Welcome to Express Search

Express Search invites you to contact our office to discuss all of your research requirements and concerns.



EXPRESS SEARCH

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Clearance/Freedom to Operate Research

How is Clearance Research Used?

Clearance research (also known as "Freedom to Operate" or "Right to Use" research), is a fundamental element in opinion drafting and a key business tool for corporate management.

Express Search offers detailed clearance research allowing our clients the flexibility to focus on drafting opinions, amendments, and briefs while having peace of mind regarding due diligence and strength within the market.

Clearance research has become a standard method of judging product value in the intangible asset marketplace.

This research is in higher demand as companies are forced to consider the increased probability of legal scrutiny.

How is a Clearance Search Conducted?

Clearance research includes an infringement search in addition to searching expired patents that may provide a "safe harbor" for a specific product, process, or service.

Our researchers address both infringement and novelty concerns with the ultimate goal of giving the client the ability to offer a solid legal opinion regarding the barriers to entry into a particular field of technology or market.

Search Results Include:

- Opinion-free comments
- Keyword searchable patents
- Current PAIR assignments
- Current INPADOC patent family and legal status
- Electronic results for easy storage and sharing
- Free shipping and free electronic patent copies
- Free research estimate

Clearance Research Fees

- Cost: \$115 per hour
- Recommended hours: 24
- Scope: 20 to 60 patents

Due to the in-depth nature of clearance research, the disclosure is measured against the claims of the cited prior art. This eliminates references that could be included in patentability results that do not specifically teach the client's invention. The end result is a highly focused body of prior art whose claims read on the disclosure provided.

The researcher covers the earliest art to the most recent inventions, including US patents, US applications and foreign art. Non-patent literature may also be included to provide an additional scholarly overview of the field of technology.

Express Search clearance research includes both the search results as well as diverse legal status information for each of the cited references.

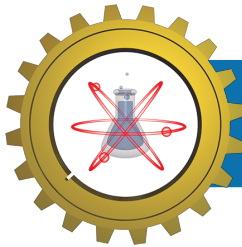
Opinion-free comments include column/line/figure and claim references which point clients directly to the most important features of the art. Coupled with keyword searchable electronic patent copies, clients can quickly and accurately prepare their clearance opinions with confidence.

Who Benefits from Clearance Research?

Key beneficiaries of this product range from small start up companies requiring information and analysis of their market options to established corporations looking to increase product lines.

Additionally, an increasing number of venture capital and grant organizations are requesting clearance opinions as a basis for funding allocation and renewal. Clearance research can aid in determining the viability of a venture under the current legal landscape.

Clearance research provides a solid foundation for the valuation of a patent or product with a specific focus on competing intellectual property.



EXPRESS SEARCH

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Validity Research

Validity Research Fees

- Cost: \$115 per hour
- Recommended hours: 24
- Scope: 20 to 60 patents
- Claims Comparison Chart included*

How is Validity Research Used?

Validity research is a useful tool in the IP practitioner's arsenal. Many clients utilize validity research for a myriad of case requirements.

While validity research is primarily used to determine the strength of a patent with regards to litigation or re-examination, it is also a valuable tool for evaluating elements of a patent portfolio.

The use of litigation as a method for maintaining patent rights is on the rise with the ever increasing backlog at the USPTO.

Economic pressure has resulted in new corporate reviews of IP portfolios. Decision-makers are debating more aggressive usage of their existing IP assets or the purchase of new, key IP assets.

Validity research adds pertinent information to the formation of corporate patent valuation strategies. The fundamental requirements of these assessments dictates the greatest attention to detail and thoroughness of research.

How is Validity Research Conducted?

Validity research is used to establish the enforceability of an issued patent in court or before the USPTO.

The claims of the subject patent are compared with prior art references published before the priority date of the subject patent.

A Claims Comparison Chart is provided with results to visually represent the relationship between cited prior art and the most important claimed elements.

Express Search validity research includes both detailed research results as well as legal status information for each of the cited references.

Opinion-free comments include column/line/figure and claim references to point clients directly to the most important features of the cited art. Coupled with keyword searchable electronic patent copies, clients can quickly and accurately prepare their validity materials. Non-patent literature may also be included to provide an additional scholarly overview of the field of technology.

Who Benefits from Validity Research?

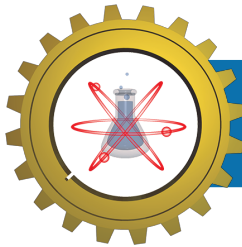
The strength of a patent has shifted from issuance to enforceability. The cost to invalidate a collection of weak patents is much higher than the cost to litigate a single strong patent. Companies are able to leverage the number of patents within a portfolio to overcome the reduced strength of individual patents.

Express Search validity research benefits clients looking to manipulate intangible asset portfolios in litigation, valuation assessments and re-examination before the USPTO.

Search Results Include:

- Claims Comparison Chart
- Opinion-free comments
- Keyword searchable patents
- Current PAIR assignments
- Current INPADOC patent family and legal status
- Electronic results for easy storage and sharing
- Free shipping and free electronic patent copies
- Free research estimate

* Up to 15 claim elements are included at no cost; further claim elements may require additional authorization



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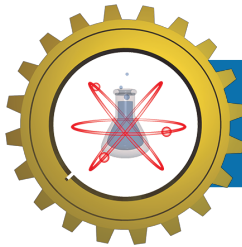
Sample Claims Comparison Chart

FEATURES							
A	Claim 1. A filter mechanism element co	<p>Claim Elements are identified from the most important claims of the subject patent (as identified by the client) to create a custom chart that visually displays the importance of the most relevant patents cited in our results.</p>					
B	a ring of filter materials surrounding the						
C	first and second end caps fixed to said f						
D	end caps having circular apertures adja end with a valve-actuating portion;						
E	the valve actuating portion including an cylindrical extension with an end cap including a base connected to the cylindrical extension pointing radially inward for pipe reception;						
F	and at least one key projection of radially inward disposition of surface cylindrical extensions axially away from the base;						
PATENT NUMBER		A	B	C	D	E	F
5,958,230		X	X	X	X	o	X
5,322,624		X	X	o	o	X	X
5,244,571		X	X	X	X	o	X
5,144,978		X	X	X	X	X	o
5,045,192						X	o
5,035,797						X	X
4,740,299						X	o
4,708,171						o	X
4,440,193						o	o
4,052,307						X	X
2,533,266						o	X
2,524,336						o	X
1,456,883		X	X	o	o	X	X
GB2078536		X	o	X	X	o	X
GB2030052		X	o	X	X	o	o
WO05061073		X	X	o	o	X	o
JP10038480		X	X	X	o	o	X
EP0532161							X
EP0442365							X

Prior Art Relevance is displayed in tabular format to provide insight into the importance of the cited prior art without rendering an opinion.

Patent 5,322,624 has claims that relate to claim elements A, B, E, and F of the subject patent.

Keyword Searchable Patents allow you to quickly locate element numbers and key features in all of the patents we cite.



EXPRESS SEARCH

21st Century Patent Research

Accelerated Examination Research

Accelerated Examination Research Fees

- Cost: \$115 per hour
- Scope: up to 20 patents

Recommended hours:

- Initial Search: 24 hours
- Update prior to filing: 6 hours
- Update based on Examiner's response to petition: *Included*
- Update in response to amended claims: 6 hours

How is Accelerated Examination Research Used?

The goal of decreased pendency and increased efficiency at the USPTO has resulted in procedural changes based on burden-sharing, particularly with regard to research.

The best example of industry impact of these changes is the Petition for Accelerated Examination, replacing the Petition to Make Special.

This new Petition will be the template for the USPTO's future efficiency initiatives.

Accelerated Examination filing has been used for both legal and business decisions, growing in benefit as its processes become more familiar to the USPTO and practitioners.

How is Accelerated Examination Research Conducted?

The initial search consists of an extended novelty search including both patent and non-patent literature, where the search strategy is reported using a *Pre-Examination Search Document*. The *Pre-Examination Search Document* requires little modification by the client prior to submission.

The search is based on both a classification search as well as a keyword search of patent and non-patent literature. The art of

Conducting this research is based on selecting the keywords from the specification and claims. It is important to have consistent and well crafted keyword search strategies across all keyword searching.

Due to the close relationship between the keyword search strategy and the application as filed, we strongly recommend an update to the initial search based on any changes made to the disclosure and/or claims. Keywords or concepts added to the application after the initial search are routinely noted by the Examiner during review of the Petition.

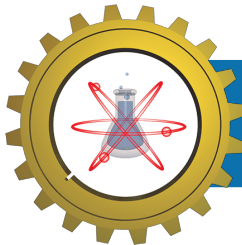
We then review the concerns expressed by the Examiner and modify the search accordingly, supplying a modified search report and new *Pre-Examination Search Document*.

The dismissal of a Petition is as common as a first office action rejection. Express Search includes an update to the Petition at no additional charge.

Finally the Examiner may require the *Pre-Examination Search Document* be updated prior to the patent's allowance, which Express Search will update at the direction of the client for an additional authorization.

Search Results Include:

- *Pre-Examination Search Document* (including field of search and search strategies)
- Opinion-free comments
- Keyword searchable patents
- Current PAIR assignments
- Current INPADOC patent family and legal status
- Electronic results for easy storage and sharing
- Free shipping and free electronic patent copies
- Free research estimate



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Who Benefits from Accelerated Examination Research?

A growing number of companies are pushing for Counsel to file Accelerated Examination Petitions in order to avoid the estimated six year examination backlog in some art units.

Clients who benefit most from this research typically have both legal and business motivations, wherein it is a part of a larger corporate portfolio strategy.

Critical applications may be filed normally and subsequently moved to the head of the queue through Accelerated Examination when business conditions require immediate protection.

Many clients file several smaller applications with Accelerated Examination Petitions in lieu of a larger single application with many claims. Under this strategy, a portion of the Accelerated Examination Petitions may be accepted ensuring some coverage for the technology within the first year of filing.

Novelty/Patentability Research

How is Novelty Research Used?

Novelty research provides clients with information used to form patentability opinions and a strong foundation to subsequent application drafting and submittal.

How is Novelty Research Conducted?

Novelty research is intended to provide a general overview of the art for a particular invention. The clients disclosure is compared to the prior art and the most similar patents in form and function are provided. While this search is not intended to be as exhaustive in scope as other research, it does provide the required depth to render a strong patentability opinion.

Opinion-free comments include column/line/figure and claim references to point clients directly to the most important features of the art. Coupled with keyword searchable electronic patent copies, clients can quickly and accurately prepare their patentability opinions with confidence.

Who Benefits from Novelty Research?

Novelty research is typically required in conjunction with the corporate evaluation of new and potential products during the initial stages of prosecution. A well crafted novelty

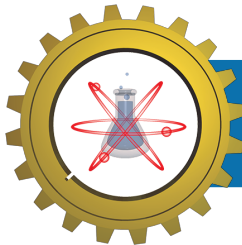
Novelty/Patentability Research Fees

- Mechanical/Design: \$695
- Electrical/Business Methods: \$795
- Chemical/Biomedical: \$895
- Hourly Novelty: \$115 per hour
- Scope: up to 20 patents

search can save time and money later in the prosecution cycle. Novelty research benefits those with new intellectual property ventures and provides a good overview of the patents relating to a potential product or design.

Search Results Include:

- Opinion-free comments
- Keyword searchable patents
- Current PAIR assignments
- Current INPADOC patent family and legal status
- Electronic results for easy storage and sharing
- Free shipping and free electronic patent copies
- Free research estimate



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21st Century Patent Research

State of the Art and Landscape Research

State of the Art Research Fees

- Cost: \$115 per hour
- Recommended hours: 14
- Scope: 20 to 120 patents

Landscape Research Fees

- Cost: \$115 per hour
- Recommended hours: 24
- Scope: 20 to 120 patents

How are State of the Art and Landscape Research Used?

State of the Art research provides an overview of a field of technology. It is an important tool in the R&D and product development process.

State of the Art research offers clients the best and most current estimation of technological innovation to focus corporate research strategy, determine areas of licensing, and gather industry information.

Patent landscape research has been a relatively recent development, due in part to an increased need for patent research as an aid in critical business decision-making.

The results identify key areas where the technology is most heavily represented, who the main assignees are, and what facets of the technology are least protected.

State of the Art research within the analytical guidelines of a Landscape framework offers clients the most customized and detailed information available to make informed decisions.

How are State of the Art and Landscape Research Conducted?

State of the Art research compiles references that show functionally equivalent means of accomplishing a similar result, providing a representative sample of cutting-edge prior art.

Express Search compiles the most pertinent information into an accessible format for client referencing and cross-referencing. Our Land-

scape format offers flexibility for both a birds-eye view of technology, as well as a focused review of specific aspects of the cited art.

A Landscape document is prepared independently to provide a visual representation of the state of the art and technology. It groups the most important features of the disclosure and relates them to art cited.

Who Benefits from State of the Art and Landscape Research?

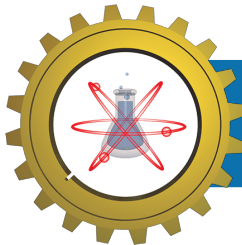
Counsel for start up companies or corporations with large R&D initiatives and new product lines are well served by both State of the Art research or a State of the Art / Landscape combination.

Additionally, technology transfer offices, universities, and federally-granted research foundations have found a review of their research and its position in the market useful to the grant process.

Clients generally benefit from this research during business plan development, annual R&D reviews, budget planning, and pre-product line release analysis.

Search Results Include:

- Prior art charted by feature, assignee, and issue date (Landscape research only)
- Opinion-free comments
- Keyword searchable patents
- Current PAIR assignments
- Current INPADOC patent family and legal status
- Electronic results for easy storage and sharing
- Free shipping and free electronic patent copies
- Free research estimate



EXPRESS SEARCH

21st Century Patent Research

Non-Patent Literature Research

How is Non-Patent Literature Research Used?

Non-patent literature provides similar benefits to patent prior art during prosecution, litigation, and re-examination proceedings.

Scholarly articles and documents within the public domain are an ever-increasing presence in the realm of intellectual property, as well as a growing requirement by the USPTO.

Relevant articles can be efficiently located to provide support for intellectual property endeavors, from validity to clearance research.

These articles point out key elements that were known to those skilled in the art prior to a patent's publication and provide insight into the development of cutting edge technologies.

How is Non-Patent Literature Research Conducted?

The viability of non-patent literature as an aid to patent research has greatly increased over the past decade with the maturation of online data collections.

It was recognized that when conducting non-patent literature research the major limitation was not on the time spent doing the research, but rather the cost of accessing the standard databases.

Database developments, particularly with regard to federated databases, provide a relatively newfound access to scholarly publications. In most cases, it is possible to locate highly relevant non-patent literature without incurring substantial database costs.

The advent of federated databases, coupled with an experienced background in non-patent literature research and its diversified search strategy formation, offers an alternative to standard subscription database research and its associated cost.

Express Search utilizes both subscription and free databases, depending upon the field of technology and individual case requirements. Our researchers are skilled at identifying the right non-patent literature in the most cost effective manner possible.

Non-Patent Literature Research Fees

- Cost: \$115 per hour
- Recommended hours: 6-12 hours

We have successfully provided Accelerated Examination *Pre-Examination Support Documents* based entirely on free databases. These databases highlight a widely available pool of free information. Additionally, these databases balance the increased USPTO requirements with a cost-effective research alternative.

Who Benefits from Non-Patent Literature Research?

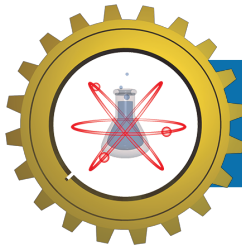
All patent research may benefit from the inclusion of non-patent literature with standard patent prior art. It provides a window into the field of art that can strengthen claims of novelty and enforceability.

USPTO initiatives to reduce examiner workload, along with the increased availability of non-patent literature resources, will dictate an increased role for non-patent literature in the intellectual property arena.

Complex filings already require non-patent literature components. Express Search has refined the process from both a research and cost-benefit perspective, offering a thorough, detailed, and professionally viable addition to traditional patent research results.

Search Results Include:

- Opinion-free comments
- Electronic results for easy storage and sharing
- Free shipping
- Copyright cleared non-patent literature articles available through copyright holders at additional cost
- Free research estimate



EXPRESS SEARCH

21st Century Patent Research

Executive Research Staff

■ **Cristopher Flagg, President**

BS, Computer Science, George Mason University, 2004; Computer Visions Specialist, Space Systems Development Group, Naval Research Laboratories, 2004-2005; patent research since 1990.

■ **Rodger Flagg, Executive Director**

BGS, Indiana University, 1979; Young & Associates, 1978-1984; CTS Corp., 1984-1988; 8 years aerospace, 6 years industrial engineering; past president, Crystal City/Pentagon Rotary; Inventor - 14 patents; patent research since 1988.

Research Staff

■ **Kenneth Bower**

Patent Examiner, USPTO, 1995-1998; BS/ME, Mechanical Design and Control Systems, Valparaiso University, 1963; EXXON, Director of R&D, 1978-1984; Gould Electronics Laboratories, Associate Director of Research, 1975-1978; Inventor - 6 patents; patent research since 1984.

■ **R. Marie Burton**

MS, Medical Science, George Washington University, 1996; BA, Liberal Arts, University of Maryland; Physicians Assistant, Neurosurgery, 1994-2000; patent research since 2000.

■ **Brigitte P. Davis**

BS, Computer Science, Old Dominion University, 1987; Certificate of Translation (English/French), Georgetown University, 1990; MA, Humanities, Marymount University, 1992; patent research since 2003.

■ **Kathryn Googins**

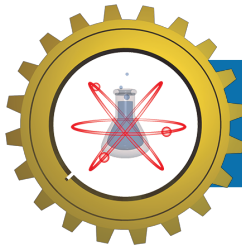
MA, Counseling, University of Texas; BA, Psychology, Schreiner University, 2000; Parochial school teacher, 2001-2006; US Navy Cryptologic Technician, 1984-1989; patent research since 2007.

■ **Steve Gottlieb**

Electrical Controls, Industrial Supply Distributors, 1976-1979; Electrical Engineering Design, Shefferman & Bigelson, 1980-1982; Electrical Engineering Design, Lee-Thorp Engineers, 1982-1983; Electrical Controls, Cirbee Reco, 1984-1989; patents research since 1989.

■ **Tim Matthewson**

PhD/BA, History, University of California, 1976; Technical Writer/Research Coordinator, Lamar University, 1976-1997; patent research since 1993.



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■ Henry Mayo

BS, Mechanical Engineering, George Washington University, 1960; Engineer/Field Testing, Naval Research Labs, 1961-1980; Inventor - 8 patents; patent research since 1989.

■ Dan Nolan

Patent Examiner, USPTO, 1999 - 2004; BS, Industrial Business Management, 1966; MS/BS, Computer Sciences, 1968; Software development, IBM; Director, Data Processing, Computer Sciences Corp.; Inventor – 4 patents; 100+ software copyrights; patent research since 1999.

■ John Richardson

Patent Examiner, USPTO, 1999 – 2005; BS, Mechanical Engineering, Salford University, 1965; MS, Nuclear Physics, Aston University, 1968; Patent Agent #56,831; Engineer, EBASCO Services Inc., 1970-1981; Engineer, Raytheon, 1981-1999; patent research since 1999.

■ Elizabeth Shaw

Patent Examiner, USPTO, 1995-2006; BS, Biology, York College of Pennsylvania, 1992; Lab Technician/Research Assistant, Medlantic Research Institute, 1993 – 1995; patent research since 1995.

■ Mark Spector

Patent Examiner, USPTO, 1989-1990; JD, New England School of Law, 1987; MS, Chemical Engineering, Columbia University, 1979; DC Bar, 1990; patent research since 1989.

■ Andrea Walsh

PhD, Biological Chemistry, University of California; JD, John Marshall Law School; BA, Chemistry and Biology, Albertus Magnus College; Senior Patent Editor, CAS, 1984-1988; Patent Attorney, Abbott Laboratories, 1988-1994; Senior Patent Attorney, Novartis, 1994-1996; Senior Patent Attorney, 1996-2006; Director, IPat Solutions, 2006-2007; patent research since 1988.

■ Ryan Ward

BS, Electrical Engineering, Brigham Young University, 2004; Registered Patent Agent #63,647; Engineer Technician, RF Monolithics, 1995-2000; Project Manager, Abbot Laboratories, 2001-2002; Systems and Field Engineer, L3 Communications, 2004-2008; patent research since 2008.

■ Lila York

PhD, Oceanography, New Mexico State University, 1986; BS, Equine Science and Microbiology, New Mexico State University, 1984; CIO, Future Image, 1990-1995; Project Manager, Baptist Health Systems, 1995-1997; Project Director, Koch Industries, 1997-1999; Director of Special Projects, Southwest Stars Corp, 1998-2006; COO, PowerMaster Recyclone, 2006-present; Patent research since 2009.



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