

**Case Received: Utility Patent Application: TPS96570**

1 message

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Thu, Dec 25, 2025 at 7:19 PM

Reply-To: Thoughts to Paper Website &lt;support@thoughtstopaper.com&gt;

To: Darin Mirpanah &lt;dm@haiyi.company&gt;

[Contact Us](#)**Darin Mirpanah,****Your Invention Data Has Been Received!**

This email confirms that your invention data has been successfully received. Within 1 business day, we will contact you by email or phone to confirm whether we need any additional information from you before we start work.

If you have any questions in the meantime, you may reply to this email or call us at (800) 919-2493, we're here Monday-Friday 10AM-7PM Eastern Time.

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Case Number	TPS96570
Invoice Number	139292
Date Received	12/25/2025
Service	Patent Search and then Utility Patent
Invention Title	AETHER

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Thoughts to Paper  
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Germantown, MD 20874

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**2 attachments****Patent Search Engagement Form R0124.pdf**

257K

**Case Information TPS96570-20251225191849.pdf**

25K

## PATENT SEARCH ENGAGEMENT LETTER

Date: 12/25/2025

Client: Darin Mirpanah

1. **OVERVIEW:** You desire a patent search to be performed and an associated patent search report to be prepared, and now retain the services of Thoughts to Paper ("Firm", "Us", "We").
2. **FIXED FEES:** We agree to a fixed fee structure for the scope of work listed in Section 3. Any work outside of the scope of work will be billed additionally.

Amount	Fee Name	Fee Type
295	Scope of Work Detailed in Section 3	Service Fee

3. **FIXED FEE SCOPE OF WORK:** Work that is covered by the fixed fee includes:
  - a. **CONSULTATION:** Up to *20 minutes* of patent practitioner consultation with you. Additional time will be billed.
  - b. **PATENT SEARCH & REPORT:** Performing a patent search to discover similar inventions and preparing a patent search report on discovered similar inventions.

Work shall be performed by one or more of the patent practitioners listed below and further by other patent practitioners, patent engineers, and professionals within and outside of our firm, as we determine appropriate.

Name	Registration #	Name	Registration #	Name	Registration #
Anuraj Chakraborty	79592	Cianan Roden-Corrent	80518	Ming Chow	58531
Kejun Gu	L1274	Jessica Connarn	79263	Chih-Min Kam	73648
Jaeyoung Chon	L1285	Colby Macias	76516	Albert Chou	78861
Richard McCormick	81711	Christian Casabar	81956	Jing Wang	76379
Peter Hackmann	74374	Mitchell Hoard	81005	Stephen Fortson	78159

If you have someone else paying the fees for you, you need to understand that someone else who pays may have control over the success of your legal matter. For example, someone else who pays now may decide to stop paying additional fees later needed. If you have someone else paying, you understand this risk and consent to us taking payment from someone other than you.

4. **ADDITIONAL WORK BILLED BY TIME:** Any time spent on work additional to the scope of work as set in Section 3 will be billed by time, at an hourly rate of \$300 per hour, billed in increments of one tenth (1/10) of an hour. This includes answering questions by phone, email, or in person, drafting documents, research, and any time spent on matters relating to you not included in the fixed fee scope of work. Outstanding balances are due upon your receipt of our invoice. We may cease performing work until you pay any outstanding balance. Once we complete our scope of work, we will remain as attorney of record before the USPTO but will have no duty to perform any additional work.
5. **NO GUARANTEE OF FINDING ALL SIMILAR INVENTIONS OR FUTURE PATENT APPROVAL:** You understand and accept that there is absolutely no guarantee that we will find all similar inventions (prior art), or that we will find all prior art that may be used by a patent examiner to potentially reject your patent application should you decide to file a patent application in the future. Whether a prior art is considered similar enough to your invention is a subjective determination which will vary from individual to individual. Therefore, it is possible that we may find prior art that a

patent examiner will not use in a patent application rejection or conversely, a patent examiner may use a prior art in a patent application rejection that we do not find. Patent searching is not an exact science and it is common for prior art to not be found. Further, recently filed patent applications not published cannot be found in a patent search. A patent search should not be relied upon as a definitive conclusion as to whether your invention can or cannot obtain a patent. Instead, a patent search should be used as a general assessment of the patentability of your invention, as well as for use in improving your invention over existing inventions to increase your overall patentability. Any patentability opinion that is provided in the search report is a professional opinion only and comes with absolutely no guarantee of the outcome of a patent application. You agree to hold us harmless for any actions or inactions you may take while relying on the search report we provide. Should a patent application be rejected, there is no refund of any fees paid, including this patent search fee. You agree not to seek from us any losses you may incur through reliance of our patent search.

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8. **TERMINATION:** Either of us may terminate this engagement at any time. If you terminate before we start work, you will receive a full refund. If you terminate after we start work, you will receive a refund only for government fees but not for our fees. If we determine at any time that we cannot or should not represent you, you will be refunded for any portion of work that has not been completed.
9. **ARBITRATION & FORUM SELECTION:** You agree that any dispute, controversy, or claim arising out of, or relating to, this engagement or the breach thereof shall be resolved by binding, final arbitration between the parties. The arbitration shall be administered by the American Arbitration Association in accordance with its Commercial Arbitration Rules and judgment on the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The seat or place of arbitration shall be Washington, DC. By agreeing to binding arbitration, you waive and thereby eliminate your right to submit the dispute for determination by a court, thus waiving your right to a jury trial. The grounds for appeal of an arbitration award are very limited as compared to a court judgment or jury verdict. Therefore, you should consult with independent counsel and carefully consider whether arbitration is acceptable to you. This Agreement is made under and shall be construed according to the laws of the State of Maryland. Unless you are required to arbitrate your claims, all disputes shall be settled in a court of competent jurisdiction in the State of Maryland.

**Client:**



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Name: Darin Mirpanah

Title: Inventor

Company:

**Provider:**

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By:

Title:

Registration #:

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Case Number : TPS96570

Case Type : Patent Search

CONTACT INFORMATION	
First Name	Darin
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Phone Number	7037721550
Best Time To Call	Early Afternoon
Address	21495 Ridgetop Circle,Suite 204 Sterling, VA 20166 United States

INVENTION INFORMATION	
Invention Title	AETHER
Collective Entity Size	Micro

INVENTION DETAILS	
List the date and location you first showed your invention to the public or made it available for sale	Never.
List any patent applications you filed but not through us, for the invention or a similar invention	U.S. Provisional Patent Application filed December 20, 2025. Applicant and inventor: Darin Mirpanah.
List any companies or individuals you are aware of who are your competitors	None known at this time.
Was the invention made by an agency of the United States Government or under a contract with an agency of the United States Government?	No

INVENTOR - 1			
First Name	Darin	Middle Name	
Last Name	Mirpanah	Email Address	dm.mcglc@gmail.com
Mailing Address	Darin Mirpanah 21495 Ridgetop Circle, Suite 204 Sterling, VA 20166 United States	Residence Address	Sterling, VA United States
Entity Size	Micro		

Has the inventor previously applied for more than 4 full patent applications in the US?	no
Did the majority of this inventor's income come from an institution of higher education?	
Did this inventor have a gross income in last year of more than \$251,190?	no

INVENTION DETAILS	
List the date and location you first showed your invention to the public or made it available for sale	Never.
List any patent applications you filed but not through us, for the invention or a similar invention	U.S. Provisional Patent Application filed December 20, 2025. Applicant and inventor: Darin Mirpanah.
List any companies or individuals you are aware of who are your competitors	None known at this time.
Was the invention made by an agency of the United States Government or under a contract with an agency of the United States Government?	NoNo

## Uploaded Files Information

FILE NAME	DATE UPLOADED	FILE SIZE	UPLOADED BY	DOWNLOAD
IRYX_AETHER_20251225190341.pdf	12/25/2025 07:03 PM	1.16 MB	You	<a href="#">Download</a>
InventionSpecification_20251225190459.html	12/25/2025 07:04 PM	1.45 KB	You	<a href="#">Download</a>



IRYX\_AETHER

IRYX\_SENTINEL observes → AETHER\_CORE decides → IRYX\_LUMEN + IRYX\_NEBULA actuate (using IRYX\_VAPOR) → AETHER\_ZONE results

any entity may embody one or more roles (LUMEN, SENTINEL, NEBULA).



IRYX\_LUMEN  
Local Emission Node

Executes AETHER\_CORE outputs by generating structured emission using one of multiple compatible emitter embodiments.

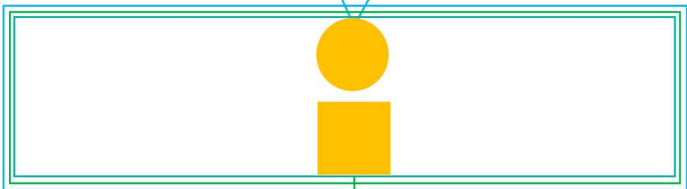
*lamp with stand for prototype*



IRYX\_SENTINEL  
Autonomous System Node

Captures environmental state using one or more sensing modalities and may execute local inference. Produces structured observations.

*rear view camera for concept illustration*



AETHER\_ZONE  
Visible Scattering Region

The resultant visible scattering / interaction region formed by the interaction of IRYX\_LUMEN emission and IRYX\_VAPOR in the presence of IRYX\_NEBULA delivery, under AETHER\_CORE coordination and optional IRYX\_SENTINEL feedback.

*the region may be directly influenced by physical interaction (e.g., human presence, motion, objects) and/or indirectly via software control.*

AETHER\_CORE  
Spatial Coordination Layer

Receives structured observations from IRYX\_SENTINEL and computes control outputs for IRYX\_LUMEN and IRYX\_NEBULA, including timing, geometry, intensity, pattern selection, and medium configuration.

*control inputs may originate from software interfaces and/or physical interaction within the AETHER\_ZONE.*

IRYX\_VAPOR  
Volumetric Medium

Defines the active volumetric medium used to create the visible scattering region. Medium compositions may vary by application and are treated as interchangeable consumables or deployable compounds.

*ultrasonic mist for prototype*



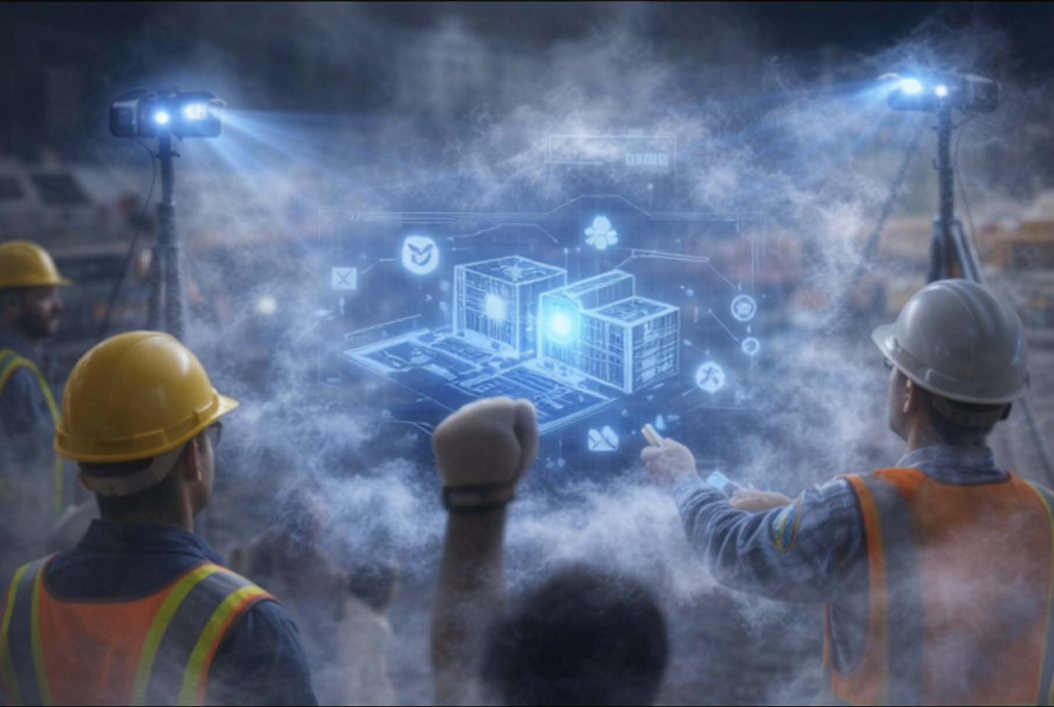
IRYX\_NEBULA  
Volumetric Medium Node

Executes AETHER\_CORE outputs by modulating volumetric medium delivery (rate, direction, duty cycle, spatial placement), using one of multiple compatible medium-injector embodiments.

*ultrasonic cool-mist humidifier for prototype*

*illustrative concepts and prototypes; implementations may vary*

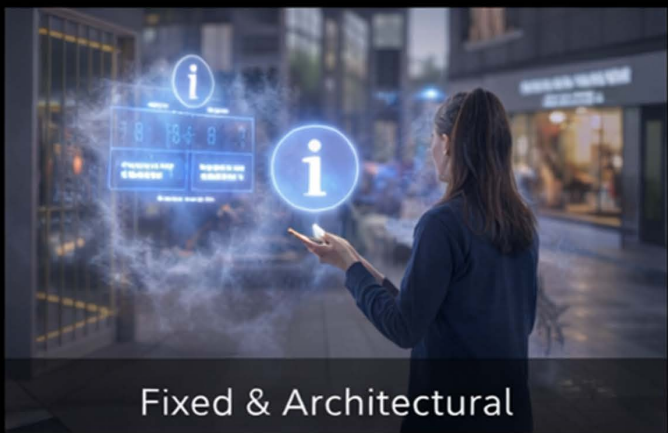
*all examples represent deployment configurations of the same AETHER system*



Wearable & Personal



Mobile & Vehicle



Fixed & Architectural



Large-Scale & Distributed



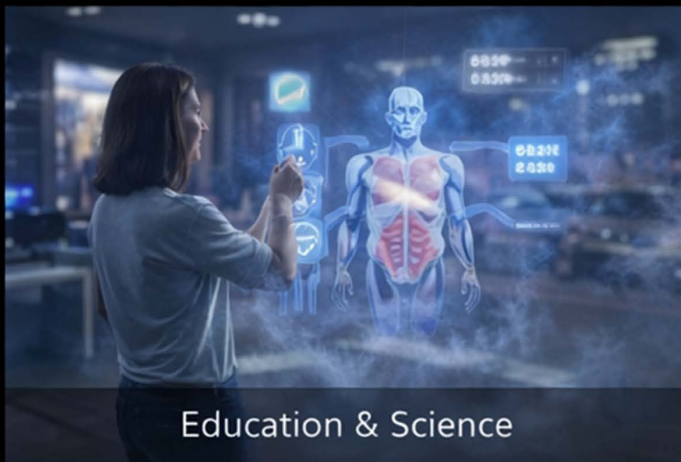
Public Safety & Emergency



Industrial & Field Ops



Patilic-Safety & Emergency



Education & Science



Aerial (Drones)



## Invention Summary

The invention relates to a system and methods for generating and interacting with spatial interaction regions in open space using coordinated sensing, control, emission, and volumetric media.

One or more sensing subsystems observe an environment and user interaction. A control system receives observations and determines control outputs. One or more emission subsystems generate structured emission, and one or more medium delivery subsystems introduce or modulate a volumetric medium in open space. Interaction of the structured emission with the volumetric medium forms a spatial interaction region that is visible and physically interactive in air.

The system operates in open space without requiring screens, fixed display surfaces, or head-mounted displays. Interaction may occur through physical disturbance of the region, proximity, gesture, object motion, environmental change, and/or software-driven configuration.

The system is role-based and embodiment-agnostic. Any entity—wearable, handheld, vehicular, architectural, robotic, or aerial—may embody one or more roles, and multiple entities may coordinate recursively to form distributed or scalable interaction regions.

Interaction fidelity increases with node density and spatial locality, enabling scalable configurations ranging from personal wearable use to large distributed environments.