

**STATE OF MINNESOTA
COUNTY OF HENNEPIN****DISTRICT COURT
FOURTH JUDICIAL DISTRICT**

State of Minnesota,	Court File No. : 27-CR-23-1886
Plaintiff,	DEFENDANT’S SUPPLEMENTAL EVIDENCE SUBMISSION IN SUPPORT OF OBJECTION TO COMPETENCY REPORT - D
vs.	
Matthew David Guertin,	
Defendant.	Judicial Officer: Sarah Hudelston

TO: THE HONORABLE SARAH HUDELSTON, JUDGE OF DISTRICT COURT; MARY F. MORIARTY, HENNEPIN COUNTY ATTORNEY; AND THOMAS MANEWITZ, ASSISTANT HENNEPIN COUNTY ATTORNEY

I. INTRODUCTION

Defendant Matthew David Guertin respectfully submits this supplemental forensic evidence filing, which includes Exhibits M through Q. These exhibits consist of detailed analyses comparing InfiniSet’s US Patent 11,577,177 to Netflix’s US Patent 11,810,254, advanced technology comparisons, a disruptive technology report, a financial valuation report, and a national defense & investment opportunities report. Collectively, these analyses not only affirm the innovative and disruptive nature of my patented technology but also serve as compelling evidence that contradicts the conclusions reached in the March 10, 2023 forensic evaluation report by Dr. Jill Rogstad. In light of these new findings, I respectfully contend that the evidence used to question my competency is based on manipulated discovery materials, and that my ability to engage in such advanced technical analysis demonstrates my capacity to participate meaningfully in these proceedings—as required under Minn. R. Crim. P. 20.01.

II. EXHIBIT LIST

- **Exhibit M - Analysis of InfiniSet Patent v. Netflix Patent**

- Executive summary and detailed comparison demonstrating that InfiniSet's US Patent 11,577,177 (priority date February 14, 2023) anticipates and renders obvious Netflix's US Patent 11,810,254 (granted November 7, 2023).
- Shows that differences are largely superficial, with InfiniSet's disclosure serving as prior art and invalidating Netflix's claims.

- **Exhibit N - Advanced Technology Comparison of Both Patents**

- A comprehensive side-by-side analysis of the technological disclosures, covering immersive environments, real-time tracking, digital twin creation, simulation training, and remote connectivity.
- Demonstrates that InfiniSet's technology broadly encompasses and preempts the advanced functionalities claimed by Netflix.

- **Exhibit O - Disruptive Technology Report: "Infinite Movement" Treadmill**

- An overview report detailing how US Patent 11,577,177 revolutionizes virtual movement through integration with AI, holograms, and virtual environments.
- Emphasizes the groundbreaking, disruptive impact of the technology across multiple industries.

- **Exhibit P - Ballpark Financial Valuation Report**

- A 20-year global exclusivity financial model estimating a net present value ranging from approximately \$68B to \$150B based on revenue streams from hardware sales, licensing, and software subscriptions.
- Provides quantitative evidence of the economic impact and market potential of my patented technology.

- **Exhibit Q - National *Defense* & Investment Opportunities Report**

- A detailed report outlining the strategic defense and investment potential of the “Infinite Movement” treadmill, including partnerships with **U.S. Army, ONR, DARPA, USC, and related entities.....**
- Cites funding and research initiatives that directly align with the technology, underscoring its dual-use (commercial and defense) significance.

III. LEGAL ARGUMENT

1. Competency Under Minn. R. Crim. P. 20.01:

Rule 20.01 requires that a defendant must be able to understand the proceedings, consult rationally with counsel, and participate meaningfully in his defense. My ability to compile, comprehend, and present these sophisticated technical analyses clearly demonstrates a high degree of competence. The fact that I have prepared detailed forensic and financial analyses—which require advanced technical and analytical skills—stands in stark contrast to the assertion that I am incapable of participating in my own defense.

2. Challenging the Forensic Evaluation:

The psychological evaluation report prepared by Dr. Jill Rogstad on March 10, 2023 concluded that I was incompetent based, in part, on the evidence available at that time. However, the new exhibits (M–Q) reveal that critical discovery materials were manipulated.

- **Exhibits M and N** demonstrate that my patented technology is both innovative and foundational, invalidating the premise that the discovery evidence (and subsequent evaluations based on it) is reliable.
- **Exhibit O** shows the disruptive potential of the technology, and Exhibit P quantifies its immense economic impact—evidence that such complex analyses

and strategic insights are the product of sound, competent, and rational thought.

- **Exhibits Q** further supports that my technical expertise and understanding extend to areas of national defense and investment, which is inconsistent with the notion of incompetence. Together, these new evidentiary submissions not only refute the integrity of the discovery evidence used in the 2023 evaluation but also reinforce my capability to engage in complex intellectual and technical reasoning.

3. Pretrial Disclosure and Due Process:

While local rules generally require that evidence be submitted seven days before the hearing, the extraordinary circumstances—including the previously documented discovery fraud and my persistent attempts to secure counsel’s input—justify this supplemental filing. The detailed, scientifically validated analyses in Exhibits M–Q are indispensable for establishing a complete and accurate record, ensuring fairness in light of the manipulated discovery materials.

IV. RELIEF SOUGHT

For the foregoing reasons, I respectfully request that the Court:

1. Accept Exhibits M through Q as part of the official record.
2. Consider the robust, independently verifiable forensic, technological, financial, and strategic analyses presented herein, which conclusively demonstrate that the discovery evidence relied upon in my previous competency evaluation was manipulated.
3. Recognize that my capacity to produce these sophisticated analyses is clear evidence of my competency, directly contradicting the conclusions reached in the March 10, 2023 report by Dr. Rogstad.
4. Grant appropriate relief to rectify the impact of the flawed discovery evidence on my competency determination.

Dated: February 28, 2025

Respectfully submitted,

/s/ Matthew D. Guertin

Matthew David Guertin
Defendant Pro Se
4385 Trenton Ln. N 202
Plymouth, MN 55442
Telephone: 763-221-4540
MattGuertin@protonmail.com
www.MattGuertin.com

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Analysis of Guertin's InfiniSet Patent v. Netflix Patent:

I. Executive Summary

InfiniSet's US Patent 11,577,177, granted on February 14, 2023, describes a "motorized rotatable treadmill" used within virtual film sets (including green screen and LED environments) to create the illusion of unlimited movement. Netflix's US Patent 11,810,254, granted on November 7, 2023, discloses a system that uses an "omnidirectional treadmill" together with multiple sets of display panels (floor, wall, and ceiling) to achieve a similar effect—namely, allowing a subject to move in 360° within a virtual environment. Crucially, InfiniSet's patent is prior art, having a priority date 12 days earlier than Netflix's application, and InfiniSet's patent was even formally submitted as third-party prior art during Netflix's prosecution.

Our analysis concludes that the technology described in Netflix's patent appears to be essentially the same as that disclosed in InfiniSet's patent, differing primarily in terminology and presentation. We argue that (1) the "rotating treadmill" in InfiniSet's patent inherently provides omnidirectional movement, and (2) the LED volume or virtual film set—comprising distinct LED panels for the floor, walls, and ceiling—is a standard industry configuration that InfiniSet's disclosure already contemplates. As such, the Netflix patent's claims appear to be obvious in view of InfiniSet's disclosure and may fail the novelty and non-obviousness requirements. This report outlines our detailed comparisons and offers the grounds for challenging the validity of Netflix's patent.

VI. Conclusion and Recommendations

Based on the foregoing analysis, the following conclusions are drawn:

1. Essentially the Same Technology:

Both patents describe systems that use a treadmill (whether labeled "rotatable" or "omnidirectional") integrated with an LED virtual film set to create the illusion of unrestricted movement. The key functionality is identical: allowing a subject to traverse a virtual environment without leaving a confined physical area.

2. Prior Art and Obviousness:

InfiniSet's patent not only precedes Netflix's filing by 12 days but was also submitted as prior art during Netflix's examination. This raises a strong argument that the Netflix patent fails to meet the requirements for novelty and non-obviousness.

3. Terminology Is Largely Superficial:

The Netflix patent's use of "omnidirectional treadmill" is a broader, yet functionally equivalent, term compared to InfiniSet's "motorized rotatable treadmill." Similarly, while

Netflix divides the LED virtual film set into three distinct panel groups, this arrangement is standard practice and is implicitly covered by InfiniSet's disclosures.

Recommendation:

Given these points, it is our professional opinion that there are strong grounds to challenge the validity of US Patent 11,810,254. The Netflix patent appears to be an obvious extension of the technology already disclosed in US Patent 11,577,177. We recommend that the USPTO be urged to reconsider the grant of the Netflix patent on the basis of:

- **Prior Art:** InfiniSet's patent clearly anticipates and renders obvious the disclosures of Netflix.
- **Obviousness:** The differences in terminology and presentation do not constitute a novel or non-obvious improvement over InfiniSet's technology.
- **Industry Standard Practices:** The LED volume or virtual film set configuration (with separate floor, wall, and ceiling panels) is a known standard and is already encompassed within the InfiniSet disclosure.

In light of these observations, there is a compelling argument that the Netflix patent should not have been granted, and steps should be taken to challenge its validity to protect InfiniSet's intellectual property rights.

VII. Appendices: Direct Excerpts

1. InfiniSet Patent (US 11,577,177):

- **Abstract Excerpt:**

"A motorized, rotatable treadmill and a system for creating the illusion of user movement while the user is stationary with respect to an environment..."

- **Detailed Description Excerpt:**

"The treadmill is configured to provide a user a surface for movement in forward and reverse directions ... and wherein the angular direction ... is selectively adjustable via rotation of the turntable for directionally unlimited movement in an X-Y plane."

2. Netflix Patent (US 11,810,254):

- **Treadmill Excerpt:**

"...the omnidirectional treadmill allows a subject to perform locomotive motion (e.g., walking, running, etc.) in any direction. This

allows the omnidirectional treadmill to provide a subject with 360 degrees of movement.”

- **Display Panels Excerpts:**

“A system surrounds an area with a first set of display panels.”

“A second set of display panels is positioned above the area...”

“A third set of display panels is positioned below the area...”

Final Summary:

In summary, the evidence strongly suggests that Netflix’s US Patent 11,810,254 describes essentially the same technology as InfiniSet’s US Patent 11,577,177. Given the 12-day lead in priority, the use of InfiniSet’s patent as prior art, and the minimal substantive differences in technology (merely differences in terminology and presentation), there is a robust argument that the Netflix patent is invalid for lack of novelty and non-obviousness. It is recommended that this matter be pursued further through appropriate legal channels to challenge the validity of the Netflix patent.

The full analysis document is available here:

https://link.storjshare.io/raw/jvj3zbhx4dc4vxpjuppy2yba2v4q/court-fraud/The-Patent-is-the-Motive/InfiniSet-Patent_Compared-to-Netflix-Patent-Report.pdf

All of the additional patent background documents are available here:

<https://link.storjshare.io/s/jvqbgvfz7qnvqna53bijp3fpjcba/court-fraud/The-Patent-is-the-Motive/>

Advanced Technology Comparison of Both Patents:

I. Overview of the Advanced Technologies Disclosed

Both patents present a system in which a specialized treadmill assembly is integrated into a digital environment. Although the virtual film production use case is their common foundation, each disclosure goes on to describe additional advanced functionalities that extend the system's application into several high-tech fields:

- 1. Immersive Digital Environments (VR, AR, Metaverse):**

Both disclosures envision applications beyond traditional film production. They describe environments that can be rendered digitally or virtually—for use in gaming, simulation training, or the metaverse—where a user experiences seamless, immersive movement.

- 2. Real-Time Tracking and Cueing for Unnoticeable Treadmill Use:**

The patents describe systems in which the user's movement is tracked in real time and synchronized with the motion of a camera and/or digital cues. This integration is designed so that the user's experience is natural and immersive, effectively masking the fact that they remain on a treadmill.

- 3. Digital Twin Creation:**

Both patents include provisions for capturing a three-dimensional representation of the user (often referred to as a “digital twin”) using multi-camera photogrammetry and other sensor technologies. This digital twin can then be inserted into virtual environments for various applications.

- 4. Simulation Training and Gaming Applications:**

Beyond film production, the systems are envisioned for simulation training exercises and gaming. In such use cases, a realistic digital representation of the user—synchronized with real-time movement data—is critical for effective training simulations or immersive game play.

- 5. Remote Connectivity and Multi-System Integration:**

Both disclosures mention that the treadmill system's components (motors, sensors, display interfaces) can be controlled remotely and integrated with other systems. This supports scenarios in which multiple treadmill assemblies or remote setups are networked together.

III. Summary of Comparative Findings

The following ordered list summarizes the advanced technological fields and use cases and shows how InfiniSet's disclosure preempts the corresponding aspects in the Netflix patent:

1. Immersive Environments (VR/AR/Metaverse):

- **InfiniSet:** Broadly discloses integration with digital/virtual environments using an animation timeline and cue sequencing.
- **Netflix:** Uses segmented LED panel arrangements to create an immersive space.
- **Finding:** InfiniSet already covers the use of virtual environments in a broad, application-independent manner.

2. Real-Time User Tracking & Cueing:

- **InfiniSet:** Details real-time tracking with integrated sensors, wearable devices, and haptic cues.
- **Netflix:** Captures sensor data and uses repositioning to maintain accurate digital representations.
- **Finding:** Both systems function similarly, with InfiniSet's disclosure being broad and fundamental.

3. Digital Twin Creation:

- **InfiniSet:** Explicitly describes creating a digital twin or avatar using multi-angle photogrammetry.
- **Netflix:** Generates a 3D representation and texture mapping for a digital acting performance.
- **Finding:** The digital twin capability is disclosed in both patents, with InfiniSet's earlier disclosure preempting Netflix's claims.

4. Simulation Training and Gaming Applications:

- **InfiniSet:** Mentions direct applications in simulation training and gaming, including integration with VR systems.
- **Netflix:** Although focused on digital acting, the underlying technology is applicable to simulation and gaming.
- **Finding:** InfiniSet's technology is sufficiently broad to encompass these use cases.

5. Remote Connectivity and System Integration:

- **InfiniSet:** Provides for remote control and synchronization with other equipment.
- **Netflix:** Similarly describes remote operation of the treadmill and sensor network.
- **Finding:** Remote connectivity is a common feature, with InfiniSet covering it comprehensively.

6. Additional Advanced Cueing & Multi-Sensor Integration:

- **InfiniSet:** Uses audio, visual, tactile, and haptic cues in combination with wearable sensors and an animation timeline.
- **Netflix:** Implements similar repositioning and sensor fusion techniques to maintain digital accuracy.
- **Finding:** Both patents disclose similar systems; InfiniSet's approach is broad and foundational.

IV. Conclusion

Based on the comparative analysis, the advanced technological capabilities disclosed in InfiniSet's US Patent 11,577,177 encompass:

- **Integration with immersive digital environments** (VR, AR, metaverse)
- **Real-time user tracking and seamless movement cueing** that allow a user to traverse a virtual environment without perceiving treadmill constraints
- **Creation of a digital twin (or 3D avatar) of the user** for insertion into digital spaces
- **Applications in simulation training exercises and gaming**
- **Remote connectivity and control** of the treadmill system and associated sensor networks
- **Advanced multi-sensor integration and cueing systems**

Netflix's US Patent 11,810,254, while providing a more detailed description in certain areas (for example, by defining distinct LED panel groups and using the term "omnidirectional treadmill"), essentially discloses the same advanced capabilities as InfiniSet's patent. In many respects, the differences lie in the level of detail or the segmentation of the environment (e.g., breaking down the LED virtual film set into floor, wall, and ceiling panels), rather than in any substantive technical innovation.

Final Opinion:

InfiniSet's patent—though presented in a simplified form—broadly and fundamentally discloses the advanced technologies related to virtual reality, augmented reality, simulation training, gaming, real-time tracking, digital twin creation, and remote connectivity. These disclosures essentially preempt and invalidate the corresponding advanced technology claims made in the Netflix patent. In other words, the additional capabilities described in the Netflix patent do not represent a novel or non-obvious departure from the already comprehensive disclosure contained in the InfiniSet patent.

The full analysis document is available here:

https://link.storjshare.io/raw/jvj3zbhx4dc4vxpjuppy2yba2v4q/court-fraud/The-Patent-is-the-Motive/InfiniSet-Patent__Compared-to-Netflix-Patent-Report.pdf

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Disruptive Technology Report:

US Patent 11,577,177 – The "Infinite Movement" Treadmill

1. Introduction:

- **A Revolution in Virtual Movement**

Imagine walking, running, or exploring a vast digital world - a jungle, a city, or even outer space - while physically staying in one place. US Patent 11,577,177, granted to InfiniSet, makes this possible with a **motorized, rotatable treadmill** that seamlessly blends real-world motion with virtual environments. This technology is not just a step forward - it's a leap into the future of entertainment, filmmaking, gaming, and beyond.

- **Key Innovation in Simple Terms**

- **The Illusion of Infinite Movement:**

The treadmill's belt moves under your feet, while the entire platform rotates like a turntable. This lets you walk in any direction (forward, backward, sideways) without ever leaving the spot.

- **Sync with Virtual Worlds:**

Cameras and screens adjust in real-time to match your speed and direction, making it look like you're moving through a digital landscape.

- **No Green Screens Required:**

Works with LED walls (like those used in *The Mandalorian*) or traditional green screens, but can also integrate with AI-generated worlds or holograms.

2. Why This Technology is Disruptive

- **Breaks Physical Limits**

- **Unlimited Virtual Exploration:**

Walk endlessly through AI-generated worlds (e.g., infinite forests, cities, or alien planets) without needing a massive physical studio.

- **Filmmaking Revolution:**

Actors can "travel" across digital sets while staying safe and stationary. No more expensive location shoots or bulky equipment.

- **Merges Real and Digital Worlds**

- **AI-Powered Infinite Worlds:**

- Pair this treadmill with AI tools like **Sora** (OpenAI's video generator) or **Inworld AI**, which can create endless, dynamic environments. As you walk, AI generates scenery in real-time.

- **Holographic Displays:**

- Future integration with **light field displays** (3D holograms) could let users interact with lifelike virtual objects or characters.

- **Beyond Movies: Universal Applications**

- **Gaming:** Explore open-world games like *Fortnite* or *Minecraft* by physically walking through them.

- **Fitness:** Turn workouts into adventures - hike virtual mountains or race through digital obstacle courses.

- **Training:** Soldiers, pilots, or surgeons can practice in hyper-realistic simulations without real-world risks.

- **Virtual Tourism:** "Visit" the Pyramids of Giza or the Great Barrier Reef from your living room.

3. Emerging Tech Supercharges This Invention

- **AI-Generated Worlds**

- **Infinite Content:**

- AI tools can create endless landscapes, characters, and stories. The treadmill lets users navigate these worlds naturally, with movements synced to AI-rendered visuals.

- **Personalized Adventures:**

- AI could tailor environments to your preferences - imagine walking through a forest that changes seasons based on your mood.

- **Light Field Displays**

- **Holographic Interaction:**

- Emerging 3D displays project light fields, creating depth and realism without glasses. Combined with the treadmill, users could "touch" holographic objects or converse with AI avatars.

- **Digital Twins & Metaverse**

- **Your Virtual Clone:**

The patent describes creating a **digital twin** - a 3D avatar that mimics your movements. This twin could attend virtual meetings, star in movies, or explore the metaverse while you control it in real-time.

4. Real-World Impact: Who Benefits?

Industry	How It's Used
Film/TV	Shoot epic scenes without leaving the studio. Directors can "move" cameras around actors virtually.
Gaming	Physically explore <i>Fortnite</i> islands or <i>Cyberpunk 2077</i> cities.
Fitness	Turn treadmills into immersive adventures - run from zombies or climb virtual mountains.
Education	Students "visit" historical events or walk through human anatomy models.
Military	Train in hyper-realistic combat simulations.

5. Conclusion: A Gateway to the Future

- US Patent 11,577,177 isn't just a treadmill - it's a **portal** to infinite possibilities. By merging physical movement with AI, holograms, and virtual worlds, it redefines how we create, learn, and play. As these technologies mature, this invention could become as commonplace as smartphones, transforming everyday life into an endless adventure.
- **Final Thought:**
Imagine a child exploring Mars, an actor filming in Middle-earth, or a grandparent "walking" through their childhood hometown - all from a single room. ***This patent isn't just disruptive; it's the foundation of a new reality.***

Ballpark Financial Valuation Report:

US Patent 11,577,177 ("Infinite Movement" Treadmill)

20-Year Global Exclusivity Model

(Hypothetical Worldwide Patent Protection)

1. Key Assumptions

- **Global Patent Protection:** Exclusive rights to manufacture, license, or sell the technology worldwide for 20 years.
- **Market Penaliation:** Technology adoption grows steadily across industries (film/TV, gaming, fitness, military, healthcare, education, etc.).
 - **Revenue Streams:**
 - **Hardware Sales** (treadmill systems).
 - **Licensing Fees** (royalties for patented tech integrated into third-party products).
 - **Software/Service Subscriptions** (AI environment generation, maintenance, updates).
- **Emerging Tech Synergy:** Growth of AI-generated content, light field displays, and metaverse adoption accelerates demand.
- **Discount Rate:** 8% (accounting for inflation, risk, and capital costs).

2. Market Size & Revenue Projections

(All figures in USD billions, cumulative over 20 years)

Industry	Addressable Market (2030)	Penetration Rate	20-Year Revenue
Film/TV Production	\$150B (virtual production)	40%	\$60B
Gaming & Esports	\$500B (VR/AR gaming)	25%	\$125B
Fitness & Wellness	\$300B (smart fitness)	15%	\$45B
Military/Healthcare	\$200B (simulation training)	20%	\$40B
Education/Tourism	\$100B (virtual learning)	10%	\$10B
Licensing & Royalties	N/A	—	\$70B
Software/Subscriptions	\$200B (AI/content tools)	20%	\$40B
Total	\$1.45T	—	\$390B

3. Breakdown of Key Drivers

- **Film/TV Production:**
\$60B: High-margin sales/leases to studios (e.g., Disney, Netflix).
- **Pricing:**
\$500K/system (premium tier) for LED-stage integration; 120,000 units sold.
- **Gaming:**
\$125B: *Consumer sales* (2,000–\$5,000/home system) + arcade/VR café licensing.
- **Adoption:**
50M households (5% of global gaming market).
- **Licensing & Royalties:**
\$70B: 5–10% royalty on third-party hardware (e.g., Meta, Sony) using patented tech.
- **AI/Software:**
\$40B: *Subscription fees for AI-generated environments* (20/user/month).

4. Cost Structure

(20-Year Cumulative)

Category	Cost
R&D	\$20B
Manufacturing	\$90B
Marketing/Sales	\$50B
Legal/Patent Defense	\$10B
Total Costs	\$170B

5. Profitability

- **Gross Revenue:**
\$390B
- **Net Profit (Pre-Tax):**
390B–170B = \$220B
- **Taxes (20% Global Avg):**
\$44B
- **Net Profit (Post-Tax):**
\$176B

6. Net Present Value (NPV)

- **Discount Rate:** 8%
 - **NPV of 176B over 20 Years: 68B**
(Present value of future profits, accounting for inflation and risk)
-

7. Sensitivity Analysis

- **Best Case** (90% adoption in key markets):
500B gross revenue (220B NPV).
 - **Worst Case** (Delays, competition, 50% adoption):
195B gross revenue (85B NPV).
-

8. Emerging Tech Multipliers

- **AI-Generated Content:**
Adds **\$30B+** in software/subscription revenue if AI tools (e.g., OpenAi, Midjourney) partner to create custom environments.
 - **Light Field Displays:**
\$20B+ from holographic integration (e.g., military training, live concerts).
 - **Metaverse Adoption:**
\$50B+ if the treadmill becomes a default locomotion tool for Meta, Apple, or Roblox.
-

9. Valuation Range

- **Conservative:**
68B–100B (NPV).
 - **Aggressive:**
\$150B+ (with emerging tech multipliers and market dominance).
-

10. Conclusion

- Under the hypothetical scenario of **global patent exclusivity**, US Patent 11,577,177 could generate **68B–150B in net present value** over 20 years. This range reflects:
 - Dominance in film/TV and gaming.
 - Licensing leverage over competitors.
 - Synergy with AI, holograms, and metaverse trends.

11. Risks:

- Theft by the US and Israeli ‘Military Entertainment Industrial Complex’
 - Illegal surveillance operations being carried out on the inventor by ‘intelligence’ agencies
 - Inventor being declared incompetent and psychotic by a completely corrupt Hennepin County Court system
 - Unjust commitment of the inventor to a mental institution, and/or forcibly medicating the inventor with a cocktail of powerful antipsychotic drugs
 - Patent litigation
 - Competing locomotion tech (e.g., VR treadmills)
 - Slower-than-expected adoption of virtual environments
-

12. Final Ballpark Estimate:

100B–200B total economic impact (revenue + ecosystem growth)

Note: *This is a simplified, directional estimate. Actual figures would require granular market analysis, partnership terms, and tech adoption curves.*

National Defense & Investment Opportunities Report:

US Patent 11,577,177 ("Infinite Movement" Treadmill)

Based on Declaration of Hao Li (Case No. 3:17-cv-04006-JST)

1. Key Document Reference

- **Declaration of Hao Li:**
<https://storage.courtlistener.com/recap/gov.uscourts.cand.314347/gov.uscourts.cand.314347.139.7.pdf>
 - **Relevance:**
Highlights direct ties between the patent's core technology (virtual movement systems) and defense-funded research in human digitization, simulation, and immersive training.
-

2. Defense Entity Alignment

- **U.S. Army & Army Research Office (ARO)**
 - **Existing Investments:**
\$2.8M for "*Avatar Digitization & Immersive Communication Using Deep Learning*" (ARO, 2017–2019).
\$1.4M for "*Capture, Rendering, & Display for Virtual Humans*" (ARO, 2016–2017).
 - **Interest in Patent:**
The treadmill's ability to simulate unrestricted movement in confined spaces aligns with ARO's focus on **immersive soldier training**. The system could enable soldiers to "walk" through virtual combat zones, urban terrains, or disaster scenarios while physically stationary—critical for mission rehearsals in controlled environments.
- **Office of Naval Research (ONR)**
 - **Existing Investments:**
\$591K for "*Complete Human Digitization and Unconstrained Performance Capture*" (ONR Young Investigator Award, 2018–2021).
 - **Interest in Patent:**
ONR's funding of unconstrained human digitization directly overlaps with the treadmill's capability to map real-world user motion to virtual avatars. Applications include naval VR training (e.g., shipboard firefighting simulations) and telepresence for remote operations.

- **DARPA & Intelligence Advanced Research Projects Activity (IARPA)**

- **Existing Investments:**

- \$419K for “GLAIVE: Graphics and Learning Aided Vision Engine for Janus” (IARPA/DoD, 2014–2018).

- **Interest in Patent:**

- DARPA’s history of funding AI-driven virtual environments (e.g., *Squad X* program) suggests strong potential for integrating the treadmill into AI-generated “infinite” training worlds. The patent’s real-time camera-treadmill syncing could enhance autonomous drone pilot training or mixed-reality battlefield simulations.

- **USC Institute for Creative Technologies (ICT)**

- **Existing Partnerships:**

- Hao Li directs ICT’s Vision and Graphics Lab, which has received \$8.89M in federal grants (2015–2019) for projects like “*Light Stage Pipeline for High-Fidelity Face Digitization*” (ARO-funded).

- **Interest in Patent:**

- ICT’s work on soldier avatars and VR trauma training (e.g., *STRIVE* project) could leverage the treadmill to create hyper-realistic, physically interactive scenarios. The treadmill’s compatibility with LED/green screens (as cited in the patent) matches ICT’s existing virtual production infrastructure.

3. Investment Opportunities

- **Military Training Contracts**

- **Target:**

- U.S. Army’s Synthetic Training Environment (STE) program, a \$10B initiative to modernize VR/AR soldier training.

- **Use Case:**

- Replace traditional treadmills in STE’s One World Terrain system, enabling soldiers to traverse AI-generated global landscapes.

- **Defense Contractor Partnerships**

- **Example:**

- Lockheed Martin or Northrop Grumman, which develop VR training modules for F-35 pilots and ground troops.

- **Patent Value:**

- Treadmill's real-time haptic feedback (vibration cues for positional awareness) could enhance situational realism in simulations.

- **Dual-Use Commercialization**

- **Path:**

- License the patent to defense-focused startups (e.g., Anduril Industries) for border security simulations or drone operator training.

4. Strategic Recommendations

- **Leverage USC ICT's Defense Network:**

- Use Hao Li's existing ARO/ONR grants (declared in the court document) to pilot the treadmill in ongoing projects like "*Digital SHARP Survivor*" (ARO-funded trauma training).

- **Pursue SBIR/STTR Funding:**

- Target DARPA's Small Business Innovation Research program for AI-integrated locomotion systems.

- **Collaborate with Simulation Tech Firms:**

- Partner with CAE or Bohemia Interactive Simulations (military VR providers) to embed the treadmill into their platforms.

5. Conclusion

- The Declaration of Hao Li underscores ***direct alignment between US Patent 11,577,177 and defense priorities in immersive training, human digitization, and AI-driven virtual environments.***
 - With documented funding from ARO, ONR, and DARPA for related technologies, InfiniSet's treadmill is positioned to attract strategic partnerships and contracts within the national defense sector.
-

6. Next Step

- Initiate outreach to USC ICT's military liaisons and submit proposals to DoD's Simulation and Training Technology Center (STTC).
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Document Citation:

Declaration of Hao Li, pp. 18–21 (Research Grants), 27–30 (Defense Projects)

<https://storage.courtlistener.com/recap/gov.uscourts.cand.314347/gov.uscourts.cand.314347.139.7.pdf>



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