

# JUNE' 2025

## INNOVATION FRONTIER NEWSEFFECT

### Our Company's Growth & Success in 2025

Our beloved leader - **Dr. Amit Goel** has been recognized & included in the renowned **WIPR - World IP Review** Leaders 2025 Directory, which is a testament to our expertise in the field of IP.



## CONTENT

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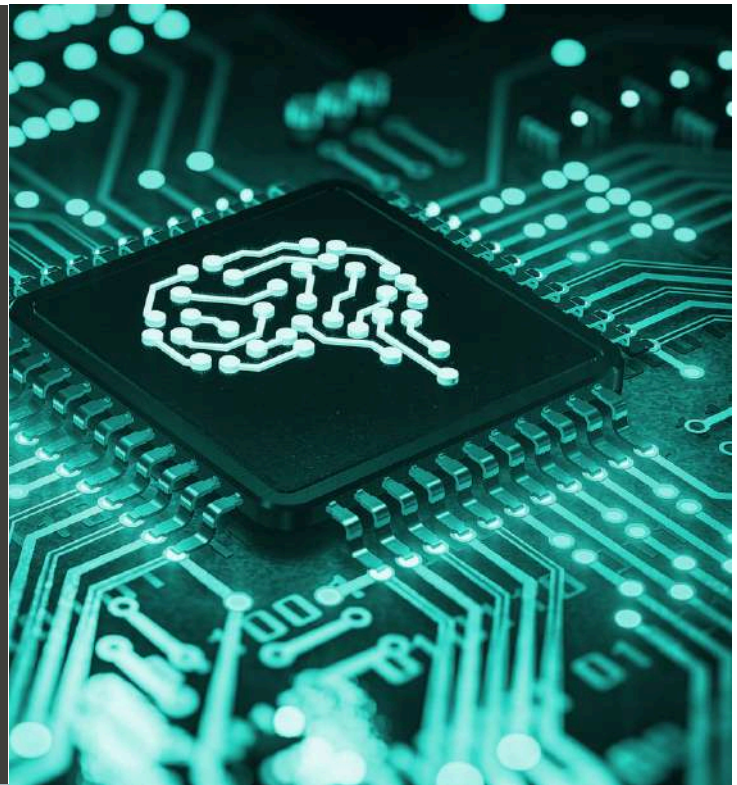
# AI ADVANCEMENTS

## Quadruped robot plays badminton with you using AI.

At ETH Zurich's Robotic Systems Lab, engineers have created ANYmal-D, a four-legged robot that can play badminton with people. This project brings together robotics, artificial intelligence and sports, showing how advanced robots can take on dynamic, fast-paced games. ANYmal-D's design and abilities are opening up new possibilities for human-robot collaboration in sports and beyond.

### Using AI to solve the power challenges caused by... AI.

- AI is central to the UK's growth and clean energy plans.
- Government aims to use AI for goals like net zero by 2030.
- AI is also proposed for public service tasks (e.g., admin, potholes).
- AI data centres drive rising energy demand.
- IEA predicts data centre energy use will double by 2030.
- AI can also help solve energy issues it contributes to.



### Generative AI Use Cases in Healthcare

This cutting-edge technology holds the promise of revolutionizing the healthcare industry by providing healthcare professionals with precise and personalized insights, automating routine administrative tasks, and boosting patient engagement. By leveraging generative AI, the healthcare sector can achieve unprecedented levels of efficiency and effectiveness, ultimately leading to better care for patients.





# AI ADVANCEMENTS

**Advanced AI models generate up to 50 times more CO<sub>2</sub> emissions than more common LLMs when answering the same questions.**

- More accurate AI models have a higher carbon footprint.
- Some prompts emit up to 50× more CO<sub>2</sub>.
- Models like Claude, o3, and R1 use more power for better accuracy.
- They still struggle with complex tasks.
- Study published June 19 in Frontiers in Communication.



## **AI classrooms: The future of education.**

The integration of artificial intelligence (AI) in education has the potential to transform the way students learn, positively impacting their academic performance. Some of the advantages offered by this technology are: personalisation of the learning experience, democratisation of private tutoring, complete availability and less pressure in the learning process..

## **New machine learning model brings transparency to risk prediction in medulloblastoma**

Medulloblastoma is the most common malignant pediatric brain tumor, with high metastasis risk and poor outcomes. Researchers in China developed an explainable machine learning model to identify key immune cells and cytokines linked to spread and prognosis, aiding personalized risk assessment and treatment.

## **Textile industry knits business with AI as companies adopt technology.**

- India's textile MSMEs are undergoing digital transformation.
- Tiruppur adopts AI in design, sewing, logistics, and spinning.
- AI boosts production efficiency by 10%.
- Tiruppur contributes 55% of India's knitwear exports.
- FY25 exports crossed ₹40,000 crore (US\$ 4.61 billion).
- Automation improves output, cuts waste, and eases labour shortages.

# DISRUPTIVE TECHNOLOGIES

## Generative Engine Optimization: A New Era in Marketing

As AI-driven tools replace traditional search engines, Generative Engine Optimization (GEO) is transforming marketing. Unlike SEO's focus on keywords and rankings, GEO ensures brand visibility in AI-generated content, marking a new era in digital strategy.

### Europe's 6G technology vision: Building the future of connectivity

- Europe is advancing toward 6G to meet future connectivity demands.
- Commercial 6G deployment is targeted for 2030.
- The EU is investing in research, infrastructure, and policy.
- Goal: define global 6G standards and stay ahead of global competition.
- A unified vision drives Europe's push for digital leadership and innovation.



### Vision Camera Visualizes Processes Inside Industrial Machinery

Built for Industry 4.0, the Mikrotron MotionBLITZ Quad1.1S GigE recording camera demonstrates all the qualities necessary to inspect, monitor and control manufacturing processes. The MotionBLITZ Quad1.1S can be mounted inside dense machinery, measuring only 65 x 65 x 120 mm, yet is rugged enough to withstand extreme vibrations, shocks, and temperatures from -10° to 45° C.

# DISRUPTIVE TECHNOLOGIES

## BMW pushes disruptive technology such as color-changing innovation to stand out

- BMW is innovating with E Ink color-changing car tech to boost appeal.
- Developed by engineer Stella Clarke, it uses microcapsule film to shift colors via electric fields.
- Color changes improve efficiency—dark for warmth, light for cooling.
- Initially limited to grayscale, now supports 32 colors and patterns (CES 2023).
- Still a concept, not yet in production.
- Clarke's success followed multiple failures, highlighting persistence in innovation.

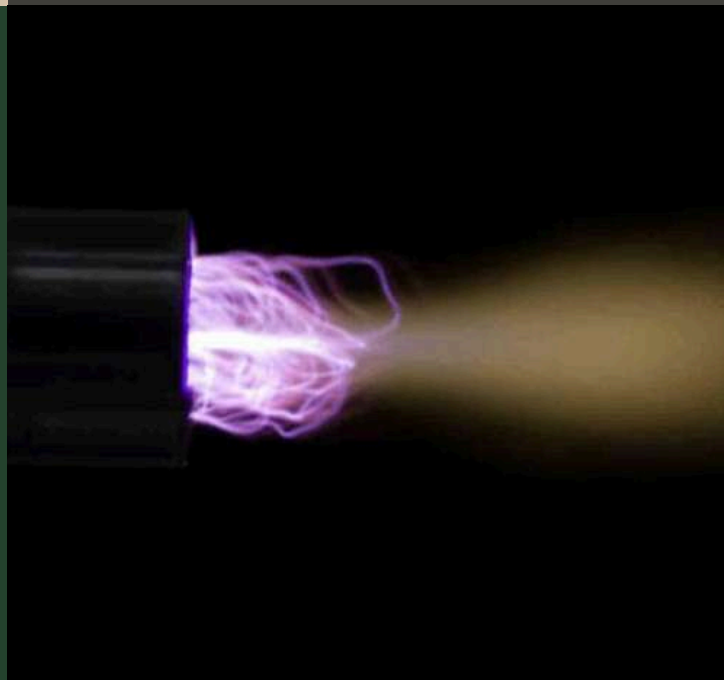


## The Robot Will See You Now & AI Will Read Your Results

Healthcare news is often conflicting—what cures today may harm tomorrow—leading to public skepticism. While this doubt is understandable, it can cause us to overlook real, proven medical breakthroughs that genuinely impact lives.

## Cold Plasma Tech Poised to Revolutionize Battery Cell Manufacturing: Comau & Intecells Join Forces

- Cold plasma boosts battery manufacturing efficiency and quality.
- Intecells patented its use to reduce energy and improve cell durability.
- Comau's solution cuts cycle times and energy across battery types.
- Advanced tech in development aims to halve energy, emissions, and costs.

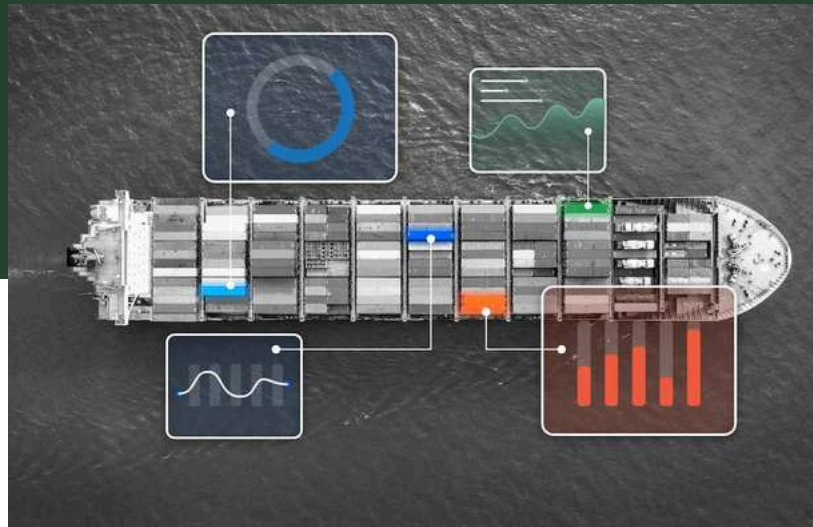




# DISRUPTIVE TECHNOLOGIES

## Smart Systems: Disruptive Innovation in Container Shipping

- Maritime ports are upgrading infrastructure to handle larger ships and boost efficiency.
- Customs administrations are adopting digital tools to secure global supply chains.
- Smart Security Devices (SSDs) provide real-time cargo monitoring and protection.
- The WCO's 2025 report highlights SSDs as the new standard, driven by IoT integration.
- Major initiatives in the past decade aim to improve situational awareness and end-to-end visibility.



## Revolutionizing Metrology for Smart Factories

For decades, manufacturing metrology has relied on traditional data collection methods. Think of meticulously recorded measurements from coordinate measuring machines (CMMs), carefully calibrated gauges, and manually documented inspection reports. This data, while crucial for quality control, often resided in silos, analyzed in isolation, and offered a snapshot of a specific point in time. However, the rise of smart manufacturing and the Internet of Things (IoT) is ushering in a new era, one defined by big data and its transformative impact on metrology.

# IP INSIGHTS

## On Virtual Reality

### What is Virtual Reality?

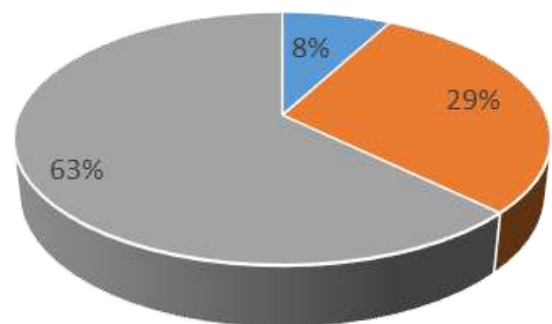
Virtual Reality (VR) is a digitally produced experience that simulates a three-dimensional environment in a real world. The technology provides viewers with an immersive experience by using VR gadgets, such as gloves, headsets or glasses, and bodysuits. Virtual Reality has revolutionized the gaming and entertainment sectors by allowing users to immerse themselves in a highly simulated environment.



### What are the types of Virtual Reality?

- **Non-Immersive:** Non-Immersive technology provides a computer-generated environment, but allows the user to keep control of their physical surroundings.
- **Semi-Immersive:** Semi-immersive virtual experiences provide users with a partially virtual environment. It also allows users to remain connected to their physical surroundings.
- **Fully Immersive:** Fully-immersive technology give users the most realistic simulation experience. To experience and interact with fully-immersive virtual reality, the user needs the proper VR glasses / a head mount display (HMD).

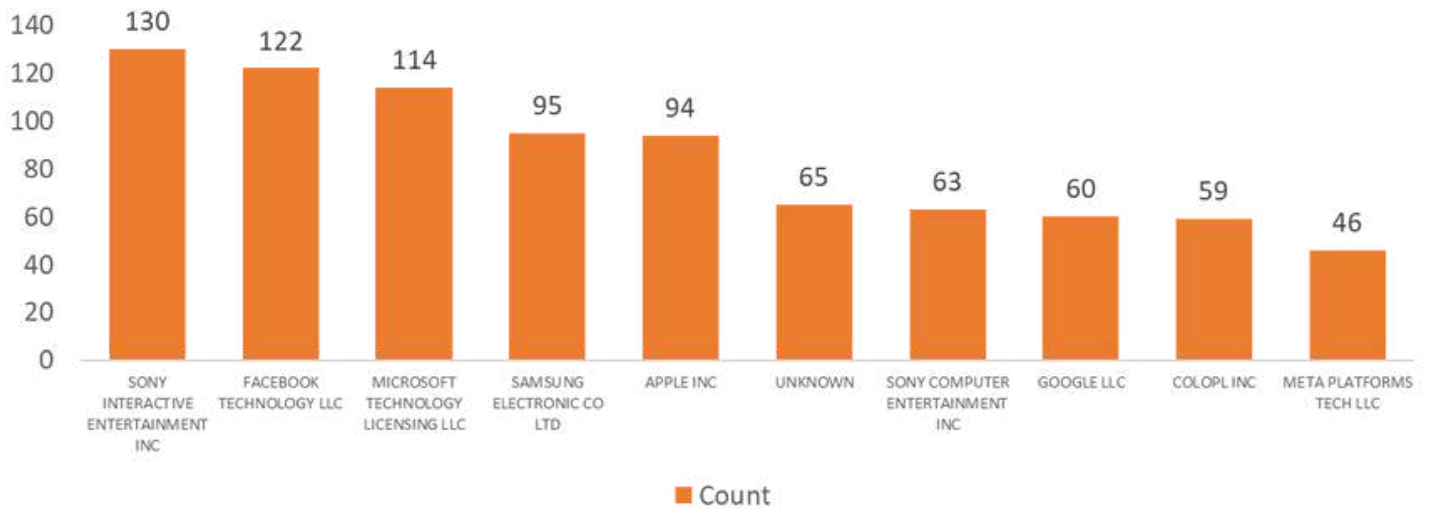
### Types of Virtual Reality



■ Non immersive ■ Semi Immersive ■ Fully Immersive

# IP INSIGHTS

## On Virtual Reality



- SONY Interactive Entertainment leads the filing count followed by Facebook, Microsoft, and Samsung.
- Major applications/patents of SONY Interactive Entertainment are related to fully immersive technologies with Gaming as their primary application area.
- Major Microsoft applications are related to fully immersive technologies with Entertainment as their primary application area.
- Major applications/patents of Google are using interaction based technology.



A drastic spike is observed in the number of patent applications filed between 2017 and 2019 with Sony and Facebook as major contributors.



# IP NEWS

## Western Digital convinces US judge to throw out \$552.7 million patent award



- Western Digital had a \$552.7M patent infringement award against it reduced to \$1.
- U.S. District Judge James Selna ruled the original damages wrongly included non-infringing product aspects.
- The ruling overturned a \$315.7M jury verdict and \$237M in interest previously awarded to SPEX.
- SPEX, based in San Jose, sued in 2016 over encryption tech from Spyrus, targeting WD products like Ultrastar, My Book, and My Passport.
- WD denied infringement; a jury initially ruled in favor of SPEX in October 2023.
- Judge Selna stated only "nominal" damages were justified.

## EPO - New mobile app connects startups, investors and research universities



- EPO's Deep Tech Finder (DTF) is now available as a mobile app for iOS and Android.
- Enables easy access to Europe's top patent-active, investment-ready startups.
- Over 50,000 searches since launch for startups, investors, and universities.
- Startups with patents are up to 10× more likely to attract investment.
- DTF offers insights by combining patent, legal, and financial data.
  - Key features:
  - Search 10,000+ startups and 1,000+ universities
  - Filter by name, location, funding, and sector
  - View patent docs via Espacenet and legal status via EPO Register
  - Part of EPO's push to make patent knowledge more accessible and actionable.

# IP NEWS

## USPTO Study into Applications with Large Patent Families Raises Questions



- USPTO studied allowed applications with large patent families (2021–2025).
- Focused on cases with claims under 35 USC 120.
- Most large families were in electrical, not pharma, fields.
- OPQA found ~22% had missed double patenting rejections.
- ~60% resulted in terminal disclaimers; ~30% in amendments.
- Study raises concerns about post-allowance examination practices.

## Samsung wins interim licence in UK patent fight with ZTE



- Samsung won a ruling in London's High Court for an interim licence to use ZTE's mobile phone patents.
- Interim licences have been allowed in recent UK cases (e.g., Amazon vs. Nokia, Lenovo vs. Ericsson).
- Samsung sued ZTE in Dec 2024 in London for FRAND terms; ZTE filed parallel cases in China, Germany, and Brazil.
- Samsung argued a willing licensor would agree to interim terms pending a final FRAND decision.
- ZTE's offer tied FRAND terms to Chinese court rulings.
- Ruling strengthens the UK's role in setting global FRAND terms.

# IP NEWS

## **Anthropic wins key US ruling on AI training in authors' copyright lawsuit**



- Judge ruled Anthropic's AI training on books is fair use.
- Storing 7M+ pirated books infringes copyrights; trial set for damages.
- Willful infringement could mean \$150K per work in fines.
- Anthropic calls ruling supportive of creativity.
- Class action alleges unauthorized use of pirated books.
- Similar suits target other AI firms.
- First US fair use ruling on generative AI.

## **ITC general exclusion orders: a consideration for patent owners amid tariff uncertainty**



- Trump's tariff policies create market volatility for foreign manufacturers selling in the U.S.
- Fluctuating tariffs prompt supply chain shifts to avoid costs, complicating IP enforcement.
- These changes make it harder to track origins of counterfeit or infringing goods.
- The International Trade Commission (ITC) remains a strong forum to address foreign IP infringement.
- ITC helps U.S. patent holders protect rights despite tariff-driven supply chain reorganizations.



# TECHNOLOGY THEMES

## Breakthrough: Microbes Turn Plastic Waste into Paracetamol

- University of Edinburgh engineered E. coli to convert PET plastic waste into paracetamol precursor.
- Enzymatic process breaks down PET to terephthalic acid (TPA), then transforms TPA into 4-aminophenol.
- Produces pharmaceutical-grade paracetamol under mild, eco-friendly conditions.
- Reduces plastic pollution and cuts carbon footprint in drug manufacturing.
- Enables decentralized, sustainable paracetamol production, especially for resource-limited areas.
- Showcases circular bioeconomy by turning waste into valuable drugs.



## Innovative Reaction Converts Plastic Waste Into Valuable Compounds

- NUS developed a mild Lossen rearrangement inside E. coli cells.
- Enables microbes to perform complex synthetic chemistry on plastic waste.
- Converts PET plastic intermediates into valuable pharmaceutical and polymer building blocks.
- Combines biological and chemical catalysis for efficient, sustainable production.
- Reduces waste, energy use, and toxicity.
- Creates potential for programmable living factories to upcycle plastic into specialty chemicals.



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## GLOBAL LEGAL ASSOCIATION

The Global Legal Association successfully concluded its 6th Arbitration and Litigation Conference in Malaysia on May 26th and 27th.

The event brought together over 250 distinguished professionals, including Heads of Litigation, General Counsels, Litigation Managers, Arbitration Experts, ADR Specialists, Chief Dispute Resolution Officers, Risk and Compliance Professionals, Data Privacy Managers, Legal Attorneys, Directors and Partners from leading law firms, and other key service providers from across the legal and corporate landscape.

This year's conference served as a dynamic platform for discussing pressing operational challenges faced in the fields of litigation and arbitration. It also facilitated in-depth dialogue and collaborative exploration of innovative solutions to strengthen legal strategy, dispute resolution mechanisms, and regulatory compliance in an evolving global environment.



**For more details on  
the event and future  
initiatives**

**SCAN THE CODE**





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GLOBAL LEGAL ASSOCIATION

## 7<sup>TH</sup> GLA CONCORDIUM DUBAI 2025

 22<sup>nd</sup> - 23<sup>rd</sup> Sep' 2025

 Knight Castle Hotel

We are delighted to announce our upcoming flagship event — **7th GLA CONCORDIUM DUBAI 2025 – AI, LEGALTECH & IP CONFERENCE – WHERE LAW, TECHNOLOGY & IP CONVERGE**. Set against the dynamic backdrop of Dubai—a global nexus for innovation, trade, and transformative ideas—GLA Concordium 2025 is a premier international forum bringing together thought leaders, legal pioneers, tech innovators, policymakers, academics, and industry professionals. The conference delves into the evolving intersections of Artificial Intelligence, Legal Technology, and Intellectual Property, offering a unique space where critical insights, future-forward discussions, and collaborative solutions take shape. As AI and automation redefine legal practice and the protection of innovation becomes more complex, GLA Concordium 2025 addresses the urgent need for forward-looking dialogue and regulatory frameworks. From ethical AI in legal practice to the future of IP in the digital age, this event unpacks challenges and opportunities that will shape the legal and technological landscapes for decades to come.



REGISTER NOW





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## A Proud Moment for Effectual Services

Our beloved leader - Dr. Amit Goel has been recognized & included in the renowned WIPR - World IP Review Leaders 2025 Directory, which is a testament to our expertise in the field of IP. Congratulations to you for getting listed and thank you for the brilliant work you do, very well deserved.

Every year, World IP Review painstakingly compiles the opinions of over 12,000 IP professionals. Following a thorough examination procedure, outstanding people who have become leaders in their fields are shortlisted. The WIPR research team carefully assesses the shortlisted candidate's background, industry expertise, work accomplished, and other contributions. Their selection demonstrates their capacity to sculpt and sway IP's destiny.

This acknowledgment strengthens our commitment to offering our clients the greatest research and consulting services possible because it gives us further assurance that our best practices are the standard in the sectors and industries in which we operate. We dedicate this recognition to our wonderful employees without whom this wouldn't have been possible and to our beloved global clients, who help us in constantly challenging ourselves, while setting new benchmarks. Once again, our heartfelt appreciation to our clients and colleagues for their continued support & trust.

# GET IN TOUCH

The sum of human ingenuity and expertise that powers us.

Human interactions that drive innovation.



**EffectUal**  
**Services**  
Intelligence That Matters

For more information connect with us



✉ [info@effectualservices.com](mailto:info@effectualservices.com)



## OUR OFFICES



**USA**

📍 SUITE-427,425  
BROADHOLLOW ROAD,  
MELVILLE | NY-11747

☎ +1-972-256-8133



**INDIA**

📍 SDF A-05, NSEZ,  
NOIDA-DADRI ROAD,  
NOIDA PHASE II -201305

☎ +91-120-452-2210



**SINGAPORE**

📍 531A, UPPER CROSS  
STREET, SINGAPORE-  
051531

☎ +91-120-452-2211