December' 2025

NEWSEFFECT

INNOVATION FRONTIER

CONTENTS

Our Company's Growth &

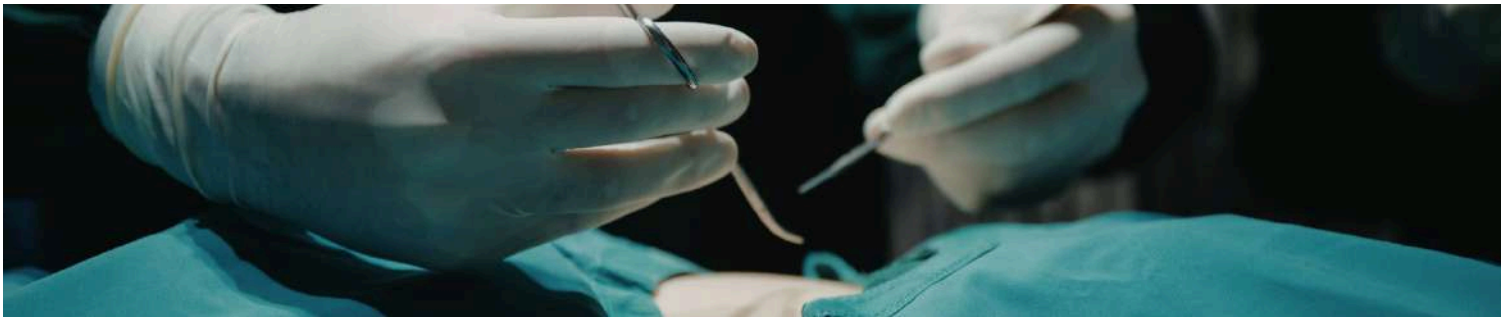
SUCCESS IN 2025

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.

AI ADVANCEMENTS

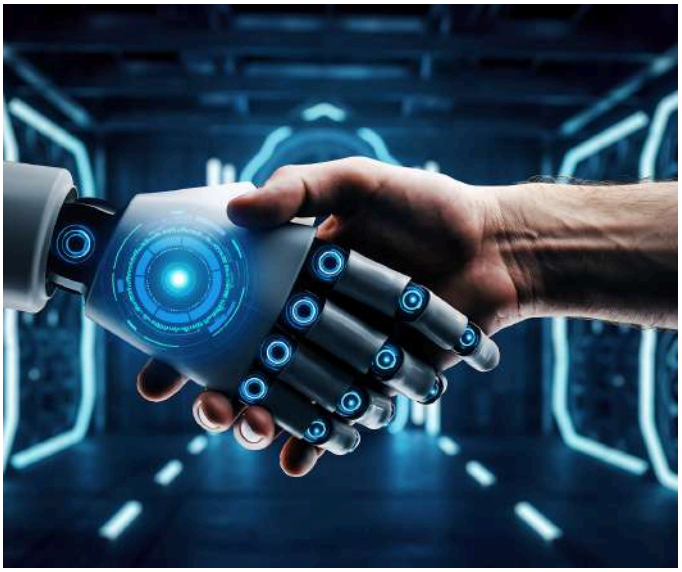
PEDIATRIC SURGEONS WEIGH AI BENEFITS AGAINST ETHICAL CHALLENGES AND PRACTICAL BARRIERS

AI holds promise in pediatric surgery, but its use remains limited and ethically challenging. Surgeons cite concerns over accountability, informed consent, data privacy, and algorithmic bias as major barriers to safe and responsible clinical integration.



JAPAN MEDICAL SAFETY BODY TO REVIEW ALL ACCIDENTAL DEATH REPORTS WITH AI.

Japan's Medical Safety Research Organization will use AI to analyze data on unexpected patient deaths, aiming to identify recurring issues and prevent similar incidents. The system will process accident reports and investigation summaries submitted by medical institutions following clinical deaths.



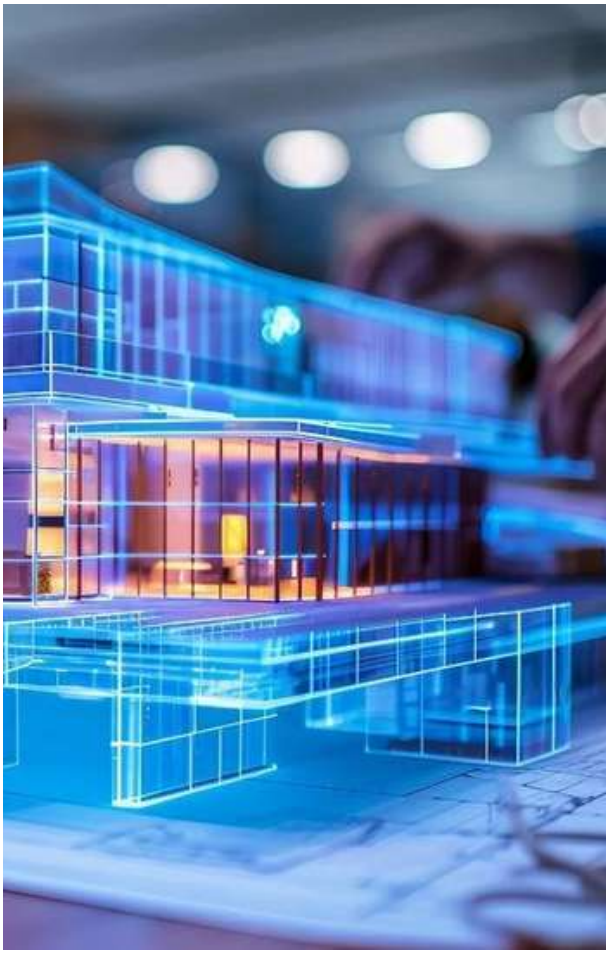
HUMAN–AI PARTNERSHIPS EMERGE AS BLUEPRINT FOR FUTURE EDUCATION SYSTEMS

AI is widely used in education to enhance efficiency, but it largely reinforces traditional models of teaching and assessment. Emerging research suggests a more disruptive shift ahead, where AI becomes an active participant in learning —reshaping how education is structured, guided, and evaluated.

AI ADVANCEMENTS

ABU DHABI LAUNCHES AI-POWERED SMART WATER METERS TO BOOST FARM EFFICIENCY

- Strategic milestone in Abu Dhabi's resource management efforts
- Aims to ensure fair and efficient water distribution
- Seeks to improve overall water consumption efficiency
- Provides farmers with real-time data and analytics for better productivity and decision-making
- Integrates AI-enabled smart meters with the Department of Energy's AD.WE digital platform



AI-POWERED DIGITAL TWINS DRIVE NEW ERA OF DATA-DRIVEN CONSTRUCTION

- Construction is a fast-paced industry where innovations that speed up operations attract attention.
- Efficiency gains must never compromise safety, as incidents can be catastrophic or fatal.
- Digital twins uniquely offer improvements in both efficiency and safety.
- Data plays a fundamental yet often underappreciated role in construction.
- Informed, data-driven decisions enhance cost-effectiveness, efficiency, safety, and quality

AI ADVANCEMENTS

EXCLUSIVE: HOW TCL IS REDEFINING AI WITH VERTICAL INTEGRATION AND ADVANCED MANUFACTURING.

- 2025 Global Technology Innovation Conference (TIC) showcased TCL's latest integrated technology.
- Core theme: "AI for Real", highlighting AI across TCL's ecosystem.
- AI is applied in consumer products, immersive experiences, and manufacturing processes.
- TCL emphasizes AI as a tool for tangible, vertical integration, not just a buzzword.
- CTO Daniel Sun highlighted AI integration in TVs, air conditioners, and advanced display factories, focusing on "experience-first" technology.

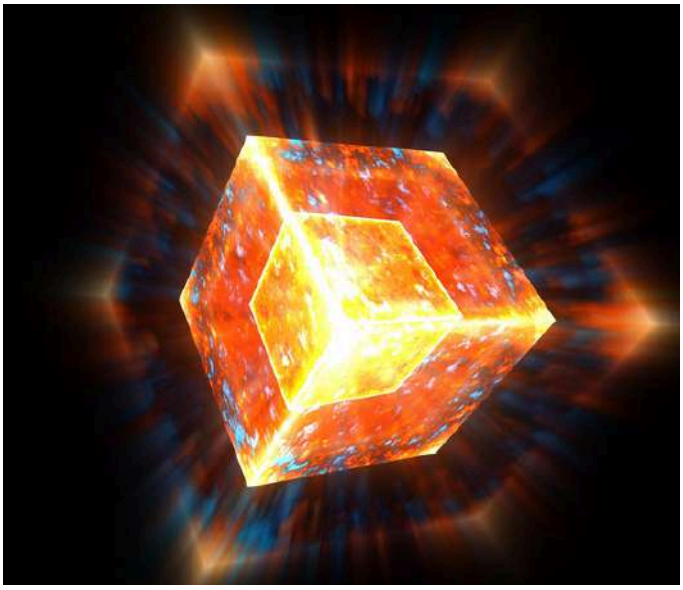
DISRUPTIVE TECHNOLOGIES

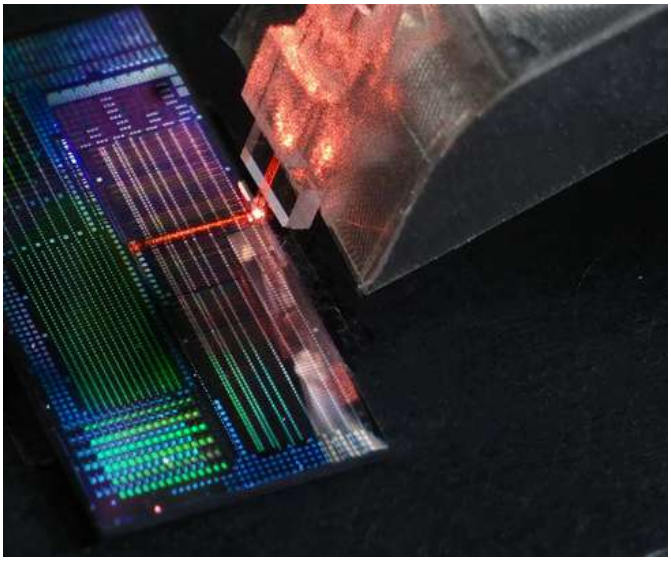
GRAPHENE SUPERCAPACITOR BREAKTHROUGH COULD BOOST ENERGY STORAGE IN FUTURE EVS AND OTHER HOUSEHOLD DEVICES

Researchers have developed multiscale reduced graphene oxide (M-rGO), boosting supercapacitor performance by enhancing surface area and ion flow. This enables faster charging, higher energy storage, and longer-lasting, compact devices for EVs, wearables, and electronics, using electrostatic rather than chemical energy storage.

A TINY POWER MODULE COULD HELP SOLVE THE WORLD'S GROWING ENERGY CRISIS

Researchers at the U.S. National Renewable Energy Laboratory developed ULIS, a compact, ultra-efficient power module using silicon carbide semiconductors. Its high power density, low resistance, and small size boost energy efficiency for data centers, power grids, and aircraft, while being lightweight, affordable, and scalable for future energy solutions.





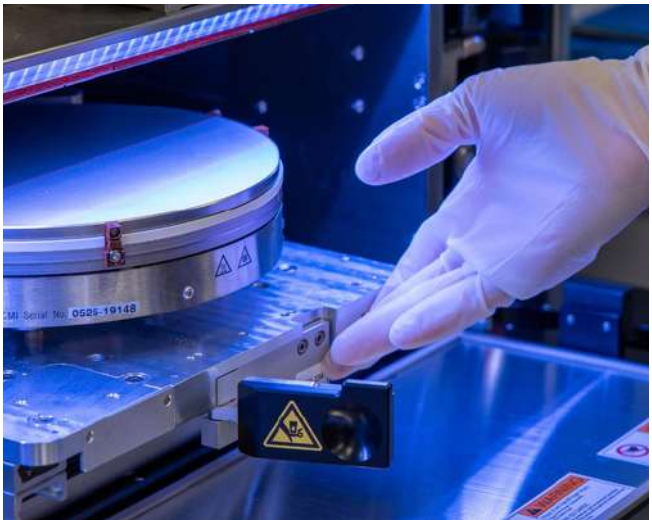
QUANTUM COMPUTING BREAKTHROUGH SHRINKS KEY DEVICE TO 100X SMALLER THAN A HUMAN HAIR

A new chip-scale optical phase modulator, nearly 100× thinner than a human hair, allows precise laser control for quantum computing. Made with standard CMOS methods, it uses microwave vibrations for stable, efficient, low-power operation, offering a compact, scalable alternative to bulky lab equipment for quantum systems.

DISRUPTIVE TECHNOLOGIES

MIT ENGINEERS CREATE 3D-PRINTABLE ALUMINUM 5 TIMES STRONGER THAN CONVENTIONAL ALLOYS

MIT developed a 3D-printable aluminum alloy using AI and simulations, producing a microstructure with tiny strengthening particles that make it 5× stronger than conventional aluminum. It remains stable at high temperatures, enabling lighter, stronger parts for jet engines, cars, and cooling systems, while accelerating alloy discovery for advanced 3D printing.



THIS NEW 3D CHIP COULD SHATTER THE "MEMORY WALL" HOLDING BACK AI

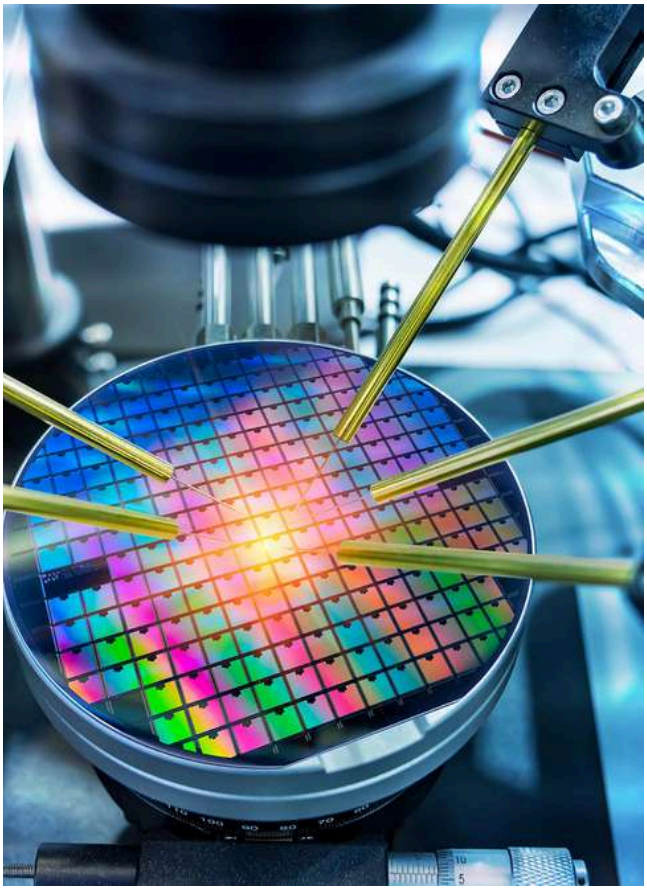
Researchers developed a monolithic 3D chip that vertically stacks memory and computing layers, overcoming the "memory wall" and greatly speeding up data movement. Tested with several-fold improvements over 2D chips and made in a commercial U.S. foundry, it promises faster, more energy-efficient AI hardware.

NEW MICROSCOPE MAKES AN INVISIBLE 2D MATERIAL VISIBLE.

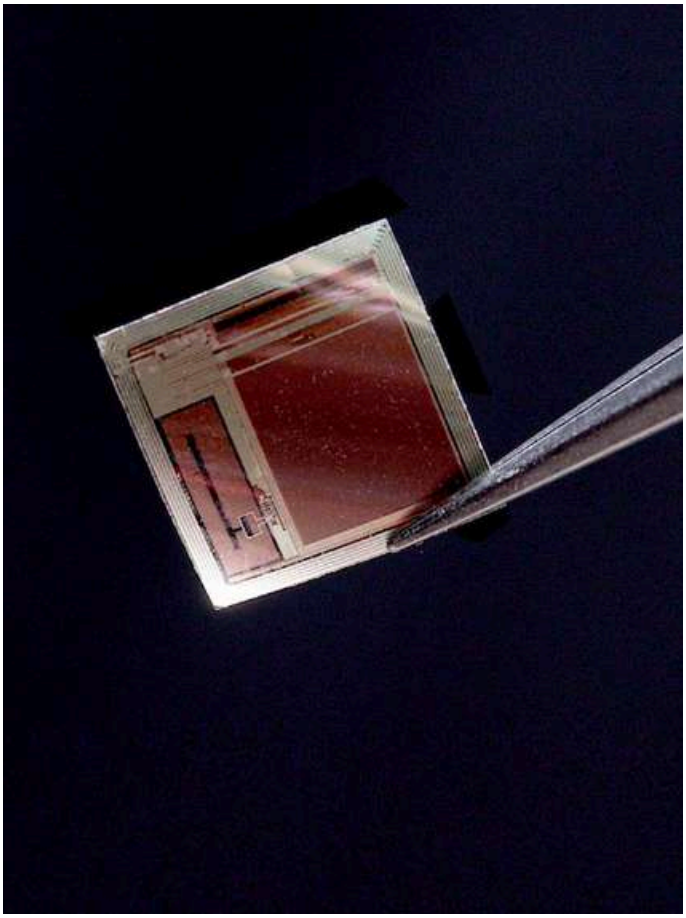
A nonlinear infrared microscope reveals atom-thin 2D materials like hBN by making them light up under infrared light, showing their structure and crystal orientation. It offers fast, high-contrast imaging beyond standard microscopes, advancing research on stacked 2D materials and nanoscale devices.

DISRUPTIVE TECHNOLOGIES

PRINCETON'S BREAKTHROUGH QUBIT COULD FINALLY MAKE QUANTUM COMPUTING PRACTICAL



- Princeton developed a superconducting qubit with a tantalum-on-silicon design.
- Maintains coherence for over 1 millisecond—3× longer than previous lab records and 15× longer than typical industrial qubits.
- Dramatically reduces information loss, addressing a major quantum computing limitation.
- Could enable large, error-corrected quantum processors.



NEW PAPER-THIN BRAIN IMPLANT COULD TRANSFORM HOW HUMANS CONNECT WITH AI

- The BISC brain implant is a paper-thin, wireless brain-computer interface chip.
- It has over 65,000 electrodes enabling fast data flow for AI decoding of thoughts, intentions, and sensory signals.
- Small enough to slide between the brain and skull, making it far less invasive than traditional implants.
- Could transform neurotherapy for conditions like epilepsy, paralysis, and blindness.

IP INSIGHTS

ON INTRAVASCULAR LITHOTRIPSY (IVL) CATHETER

WHAT IS AN INTRAVASCULAR LITHOTRIPSY (IVL) CATHETER?

An Intravascular Lithotripsy (IVL) catheter is a minimally invasive, balloon-based medical device used to treat calcified vascular lesions within blood vessels.

- It is designed to modify vascular calcium by delivering controlled acoustic pressure waves (lithotripsy pulses) directly to the vessel wall.

The catheter combines:

- Conventional angioplasty balloon technology
- Lithotripsy-based calcium fracture mechanism
- IVL catheters are primarily used in:
- Coronary arteries (coronary artery disease)
- Peripheral arteries (peripheral artery disease).

KEY FUNCTIONS OF AN IVL CATHETER

- Emission of acoustic shock waves within the vessel wall.
- Selective fracture of calcified plaque (without damaging soft tissue).
- Facilitates vessel compliance for optimal balloon expansion.

Prepares lesion for:

- Drug-coated balloon (DCB)
- Stent deployment (DES/BMS).
- Operates at low inflation pressures (≈4–6 atm).

WHAT ARE THE TYPES OF IVL CATHETERS?

Based on Anatomical Application:

- Coronary IVL catheters
- Peripheral IVL catheters (iliac, femoral, popliteal arteries)

Based on Design / Configuration:

- Balloon-integrated IVL catheters with embedded lithotripsy emitters
- Over-the-wire (OTW) IVL catheters
- Rapid-exchange (RX) IVL catheters

Based on Balloon Characteristics:

- Varying balloon diameters & lengths
- Emitter count & spacing
- Pulse delivery algorithms

IP INSIGHTS

ON INTRAVASCULAR LITHOTRIPSY (IVL) CATHETER

NOVEL FORWARD IVL PLATFORM

- Introduction of a forward-facing IVL catheter with a distal, single emitter to cross extremely narrowed vascular lesions that conventional balloon IVL struggled to access.
- Delivers up to ~120 shockwave pulses from the tip, enabling closer delivery of energy to the calcified lesion than traditional balloon-based systems.
- Designed to treat complex peripheral artery disease (PAD) and chronic limb-threatening ischemia (CLTI) with improved crossability and lesion access.

BALLOONLESS IVL CATHETER DESIGNS

- Transition from classical balloon-integrated lithotripsy to balloonless platforms that avoid reliance on balloon inflation for energy transmission.
- Facilitates treatment of very tight lesions and chronic total occlusions (CTOs) that are difficult for traditional balloon catheters to navigate.

INCREASED ENERGY DELIVERY & PULSE CAPACITY

- Enhanced pulse capacity in new generation catheters (e.g., more pulses per catheter) improves the efficiency and range of calcified plaque modification.
- New devices deliver significantly more shockwave pulses compared to earlier IVL versions, enabling better therapy coverage across lesion lengths.

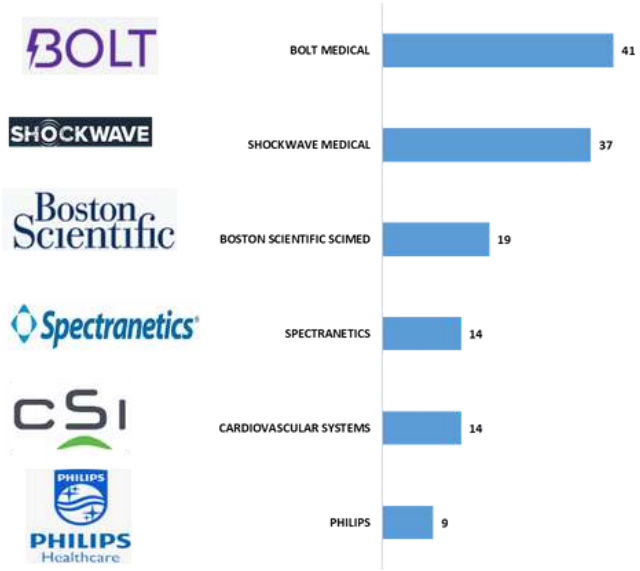
EXPANDED ANATOMICAL AND LESION COVERAGE- NEXT-GENERATION IVL CATHETERS NOW COVER:

- Extremely narrowed vessels.
- Difficult-to-cross, heavily calcified segments.
- Extended peripheral vascular territories beyond traditional coronary uses.

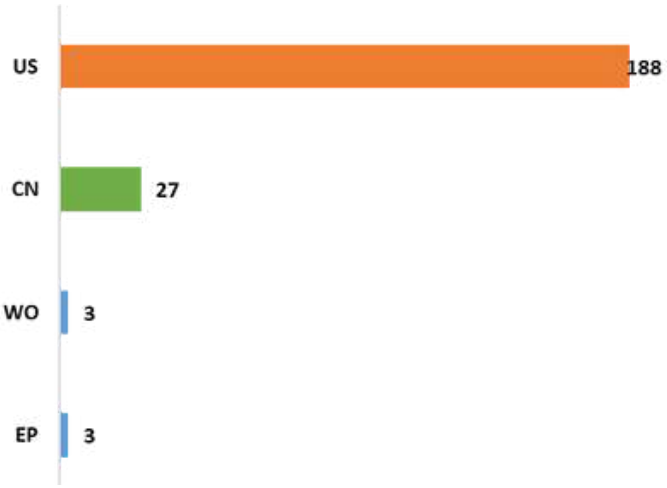
IP INSIGHTS

ON INTRAVASCULAR LITHOTRIPSY (IVL) CATHETER

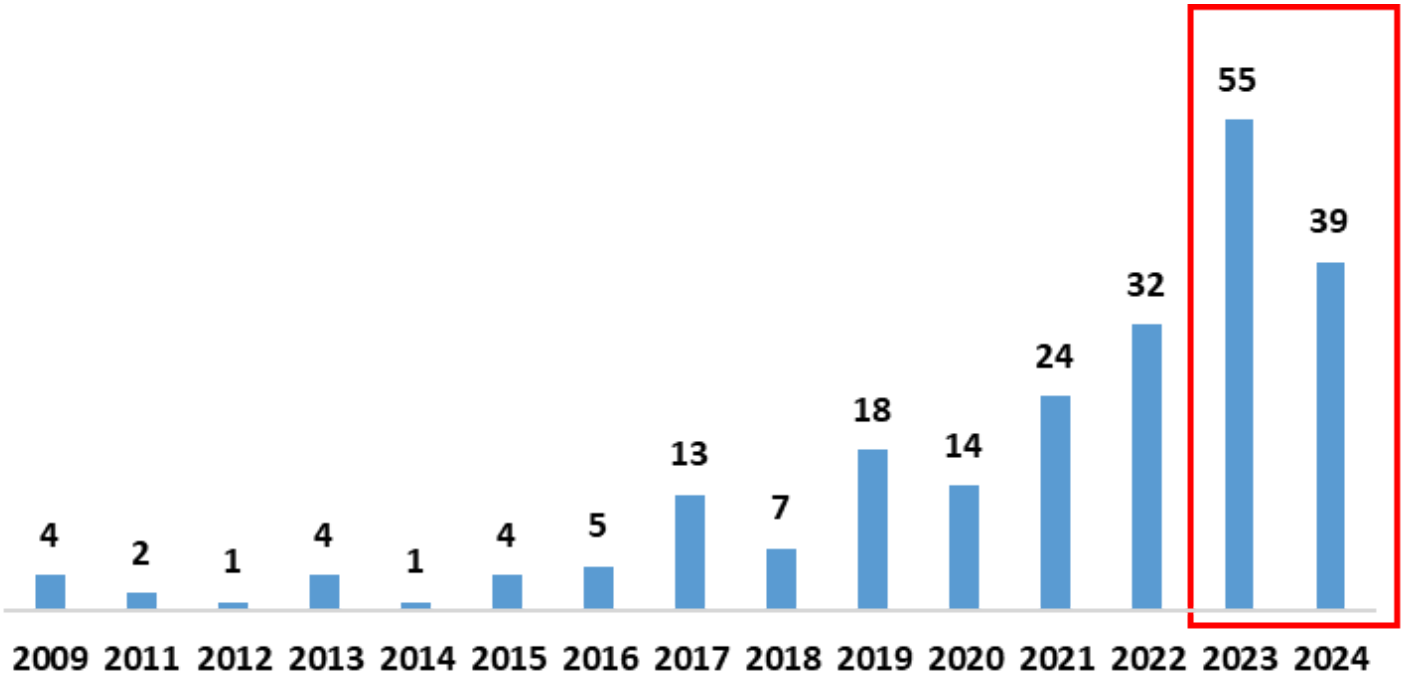
KEY PLAYERS WORKING ON IVL CATHETERS



COUNTRY TRENDS ON IVL CATHETERS



PATENT FILING YEAR TRENDS



IP NEWS

ACER, ASUS AND HISENSE WIN UK COURT RULING IN VIDEO STREAMING PATENT DISPUTE WITH NOKIA

- Acer, Asus, and China-based Hisense won a ruling from London's High Court in their global patent dispute with Nokia over video coding technology.
- The court declared that a willing licensor in Nokia's position would grant an interim license until the final "reasonable and non-discriminatory" (FRAND) terms are decided.
- The interim license requires the companies to pay Nokia $0.365 per device, between Acer/Asus's proposed $0.03 and Nokia's $0.69 per unit.
- English courts have recently allowed short-term patent licenses pending trial, as seen in disputes involving Amazon/Nokia and Lenovo/Ericsson.
- Nokia has also filed U.S. and European lawsuits against Acer, Asus, and Hisense over patents improving streaming video efficiency and quality, while settling a separate dispute with Amazon.
- FRAND licensing disputes frequently trigger global legal battles in the telecom industry.

IP NEWS

GOOGLE LAWSUIT SAYS DATA SCRAPING COMPANY USES FAKE SEARCHES TO STEAL WEB CONTENT

- Google sued Texas-based SerpApi for allegedly scraping data from search results, generating hundreds of millions of fake requests to access copyrighted content.
- The lawsuit claims SerpApi bypassed Google's data protections to steal content and sell it to third parties.
- SerpApi stated the information is publicly accessible and called the lawsuit an attempt to stifle competition for AI, security, browsers, and productivity tools.
- Google said it invests heavily in protecting content and resorts to legal action when protections are bypassed.
- Google's search results include licensed copyrighted content from services like Knowledge Panels, Maps, and Shopping, making them a target for scraping.
- Google seeks monetary damages and a court order to block SerpApi's scraping.

IP NEWS

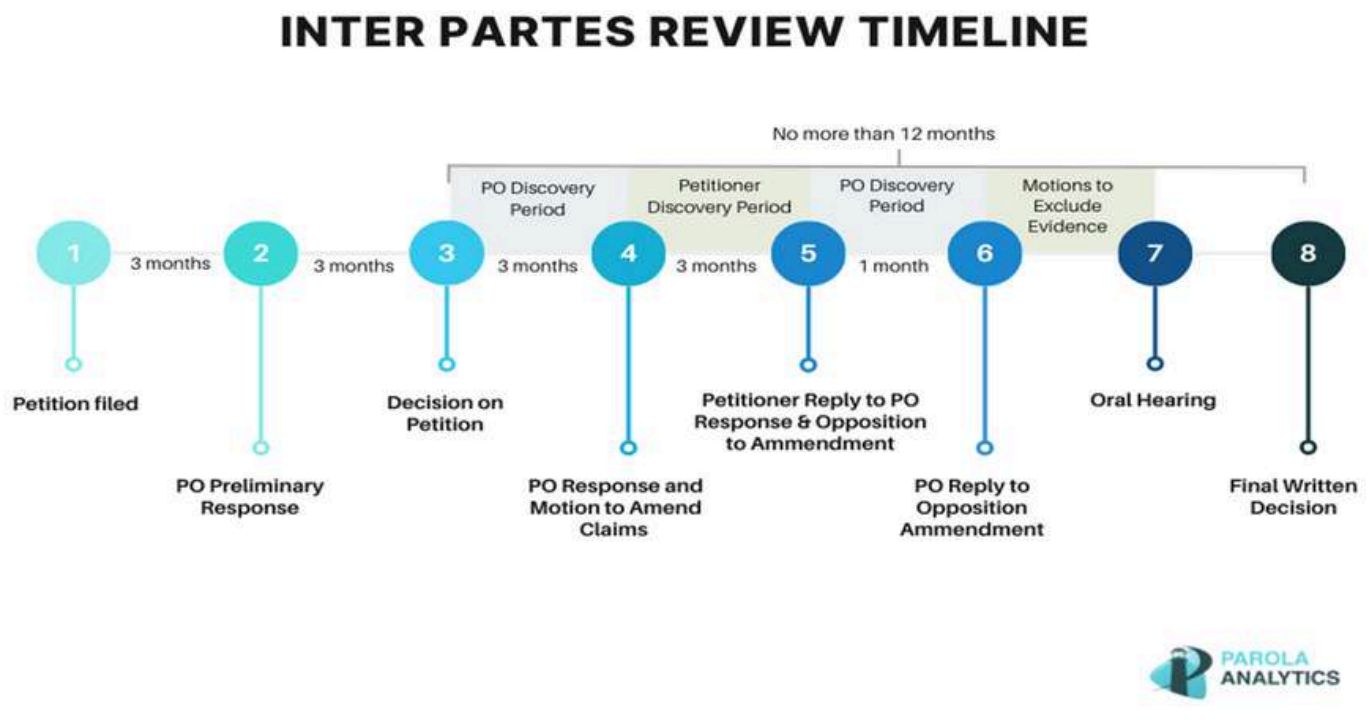
DAIICHI WINS APPEAL OF $42 MILLION US VERDICT IN ENHERTU PATENT CASE

- A U.S. appeals court overturned a $42 million jury verdict won by Pfizer's Seagen against Daiichi Sankyo over patent claims related to AstraZeneca's cancer drug Enhertu.
- The Federal Circuit ruled Seagen's patent was invalid, negating the 2022 infringement verdict in Texas.
- Pfizer expressed disappointment and is considering next steps; Daiichi and AstraZeneca have not commented.
- Enhertu generated $3.75 billion in sales last year and treats multiple forms of cancer.
- The 2022 jury had found Daiichi liable for $41.8 million, but not AstraZeneca.
- The patent was deemed invalid because it did not adequately describe the antibody invention.

IP NEWS

PATENT LAW - PROPOSED CHANGES TO USPTO'S INTER PARTES REVIEW PROCESS

- Proposed changes to 37 C.F.R. § 42.108 would impose stricter limits on when an IPR can be initiated, affecting litigation strategy in the U.S.
- The PTAB could not institute an IPR if the patent claim has already been upheld in a prior proceeding (federal court, ITC, or PTAB), creating a "one-and-done" approach.
- IPRs would be barred if a parallel district court or ITC case is likely to decide validity first, making timing a key strategic factor.
- Petitioners would have to waive the right to challenge the same claims for invalidity (§102 or §103) in any other forum.
- The rules aim to give patent owners greater certainty, reduce duplicate invalidity challenges, and potentially strengthen patent portfolio value and investment incentives.



IP NEWS

COURT IN BRAZIL'S MINAS GERAIS SLAPS DOWN NESTLE COPYRIGHT LAWSUIT

- A court in Minas Gerais, Brazil granted a preliminary injunction in favor of Coffee++, ordering Nestle to stop using the Coffee+ brand.
- Judge Claudia Helena Batista cited potential consumer confusion and harm to Coffee++.
- Nestle may face unspecified fines if it does not remove Coffee+ products from physical and online sales.
- The ruling is provisional, but Coffee++ intends to continue the dispute.
- Coffee++ CEO Leonardo Montesanto emphasized defending the company and the sovereignty of Brazilian brands.

IP NEWS

DISNEY, JAMES CAMERON SUED FOR COPYRIGHT INFRINGEMENT OVER 'AVATAR'

- Disney and director James Cameron are being sued by 3-D animator Eric Ryder in California federal court over "Avatar: The Way of Water".
- Ryder claims he collaborated with Cameron's Lightstorm Entertainment in the late 1990s on a sci-fi story "KRZ", which he alleges was copied for the Avatar series.
- Ryder seeks at least $500 million in damages and a court order to block the release of the upcoming third film, "Avatar: Fire and Ash".
- He previously filed a similar lawsuit over the first Avatar film in 2011, which was dismissed after the court found Cameron created Avatar before Ryder's submission.
- The new lawsuit asserts it addresses new acts of copying specific to Avatar 2.
- Disney and Lightstorm have not yet commented.

IP NEWS

SCULPTOR SUING JEFF KOONS FACES SKEPTICAL APPEALS COURT IN COPYRIGHT CASE

- A U.S. appeals court expressed skepticism over sculptor Michael Hayden's attempt to revive his lawsuit against Jeff Koons for allegedly using Hayden's stone set piece in 1989 artworks.
- Hayden argues he only learned of the alleged infringement in 2019 and seeks to overturn a Manhattan judge's dismissal for being filed too late.
- Hayden created sets and props for Italian politician/performer Cicciolina (Ilona Staller) in the 1980s, including a serpent-on-rock sculpture in 1988.
- Koons photographed with Staller in 1989 for his "Made in Heaven" series, featuring Hayden's platform in a billboard, wood sculpture, and oil paintings.
- Koons and Staller married in 1991 and divorced in 1994.
- Hayden filed the lawsuit in 2021; U.S. District Judge Timothy Reif dismissed it in February, ruling Hayden should have known of the alleged infringement earlier.

IP NEWS

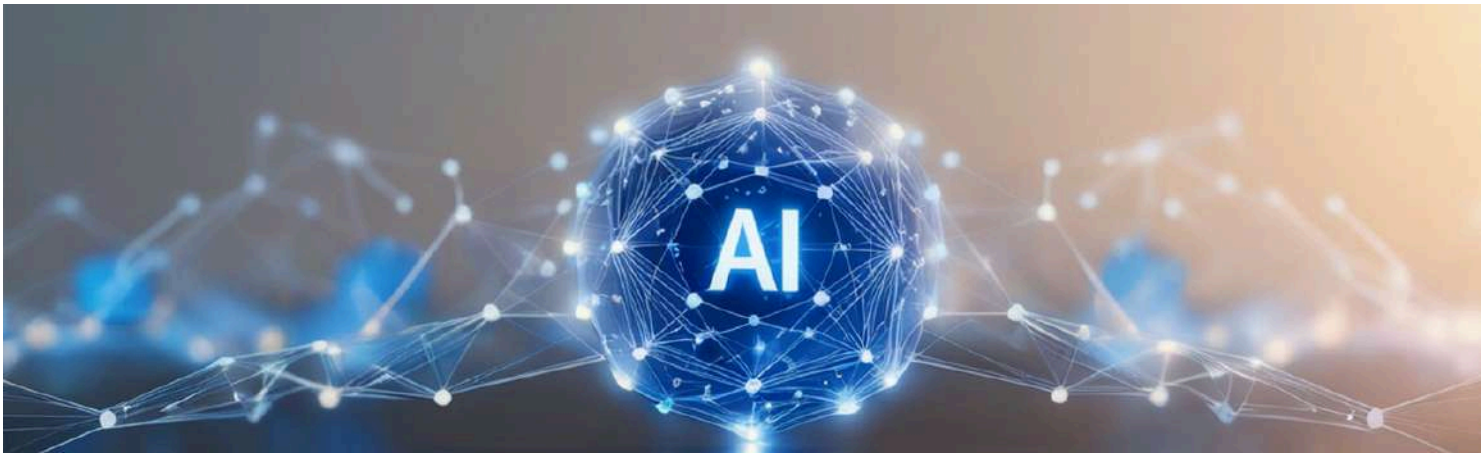
OPENAI LOSES FIGHT TO KEEP CHATGPT LOGS SECRET IN COPYRIGHT CASE

- A federal judge in Manhattan ruled that OpenAI must produce millions of anonymized ChatGPT user logs in its copyright dispute with the New York Times and other news outlets.
- U.S. Magistrate Judge Ona Wang said 20 million logs are relevant and can be shared without violating user privacy.
- Wang rejected OpenAI's privacy objections, noting multiple protections are in place due to the sensitive nature of the data.
- OpenAI argued the request disregards privacy protections and common-sense security practices, citing a statement from its CISO Dane Stuckey.
- OpenAI has appealed Wang's order to U.S. District Judge Sidney Stein.

TECHNOLOGY THEMES

TECH IN 2025: RISE OF AGENTIC AL, HARDWARE SHIFTS AND BREAKTHROUGHS THAT REDEFINED THE YEAR

In 2025, technology accelerated beyond gadgets to the rise of agentic AI—systems that act autonomously rather than just respond to prompts. These AI could manage tasks, make decisions, and operate across business workflows, processing data, handling customer queries, monitoring systems, and resolving problems in real time. For the first time, AI moved from assisting humans to working alongside them.



ENTERING A NEW SEASON OF INTELLIGENCE WITH AGENTIC AI, TECHNOLOGY AND COLLABORATION

- Agentic AI proactively makes decisions, coordinates actions, and identifies risks early on construction sites.
- Tablets are replacing clipboards, giving teams real-time access to blueprints and project data.
- AI helps keep plans updated, reduces delays, and allows teams to focus more on building.
- Both large and small construction companies are adopting these technologies, sharing knowledge and training.

TECHNOLOGY THEMES

IT SECTOR 2026 OUTLOOK: AGENTIC, AI AND INTELLIGENT OPERATIONS TO TAKE CENTRE STAGE IN THE COMING YEAR

Recently during Microsoft's AI Tour in India, Satya Nadella Chairman and CEO announced the licensing of two lakh Co-pilot licenses between four IT services and consulting companies, namely Cognizant, Infosys, TCS, and Wipro where AI is being adopted from business operations to employee experiences to integration in daily workflow. In fact, most firms now have seen Agentic AI deployment in functions like HR, finance, and also within their software development teams.

AGENTIC AI, DIGITAL TWINS, AND INTELLIGENT WEARABLES RESHAPE SECURITY OPERATIONS IN 2026

As 2026 approaches, Agentic AI, digital twins, and intelligent wearables are moving into everyday security operations. Agentic AI now autonomously analyzes video feeds and sensor data to investigate incidents and propose mitigation steps for human approval. Adoption is accelerating globally, especially in Singapore, where business leaders see it as essential for competitiveness. Digital twins have matured, mirroring complex environments like ports and airports to simulate emergencies, plan resources, and optimize systems in real time.

TECHNOLOGY THEMES

AGENTIC AI TO ACCELERATE DIGITAL WORKPLACE EVOLUTION IN 2026

- In 2025, AI became central to digital workplaces, driving key trends.
- Agentic AI adoption increased, enhancing autonomous decision-making and task management.
- Platform interoperability improved, enabling smoother integration across tools and systems.
- Contact centers expanded and became more AI-enabled.
- Sales teams received better AI-driven support for workflows and customer interactions.
- Mobile solutions grew in popularity, supporting remote and on-site work.
- Team collaboration platforms remained the foundation of digital workplaces, now increasingly integrated with generative and agentic AI.
- These developments set the stage for significant advancements in 2026.

GLANCE @EFFECTUAL

IAM 300 GLOBAL LEADERS 2026

A Proud Moment for Effectual Services

We are delighted to share that our esteemed leader, **Dr. Amit Goel, has been recognized in the IAM 300 – 2026 listing**, a prestigious global acknowledgment reserved for the world's leading IP strategists. This accomplishment reflects not only Dr. Goel's exceptional vision and dedication but also underscores the depth of expertise and innovation that defines our organization in the field of Intellectual Property.

Dr. Amit Goel's recognition is a testament to his unwavering commitment to excellence, his strategic leadership and the transformative impact he continues to create within the IP landscape. His guidance has played a pivotal role in strengthening our capabilities, elevating our global presence and consistently driving high-value outcomes for our clients and partners.

Congratulations, Dr. Amit Goel, on this well-deserved achievement. We extend our heartfelt appreciation for the brilliant work you do and for inspiring all of us to pursue the highest standards of professional excellence. Your recognition brings pride to the entire team at Effectual and reinforces our collective pursuit of leadership in the IP domain

GLANCE @EFFECTUAL

GLOBAL
LEGAL ASSOCIATION

8TH GLA ANNUAL ARBITRATION & LITIGATION SUMMIT

MALAYSIA 2026

22nd - 23rd Jan' 2026 **AIAC**

We are very happy to announce our upcoming flagship event, the **8th GLA Annual Arbitration & Litigation Summit 2026 Malaysia Edition**, scheduled for **22nd - 23rd Jan, 2026**. This conference is expected to bring together 275+ IP professionals, including:

- Head of IP
- IP Counsels
- Head of Litigation
- General Counsels
- Litigation Managers
- Arbitration Heads
- ADR Professionals
- Chief Dispute Resolution Officers
- Risk & Compliance Professionals
- Data Privacy Managers
- Legal Attorneys
- Directors/Partners of Law Firms and
- other key service providers.

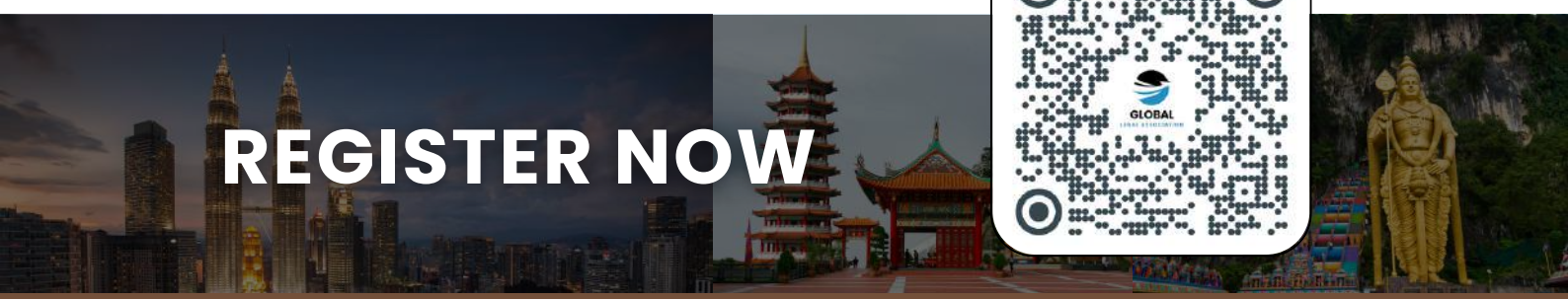
275+ ATTENDEES

70+ SPEAKERS

15+ EXHIBITORS

15+ MEDIA PARTNERS

15+ SESSIONS



GET IN TOUCH

The sum of human ingenuity and expertise that powers us.

Human interactions that drive innovation.

EffectUal Services

Intelligence That Matters

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