

MAY' 2026

NEWSEFFECT

I N N O V A T I O N F R O N T I E R

Our Company's Growth &

SUCCESS IN 2026

Our beloved 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. He has also been named among the **Top Pioneering IP Management Experts to Watch** by **The Enterprise World**, further highlighting his exceptional contributions to the field of intellectual property management.



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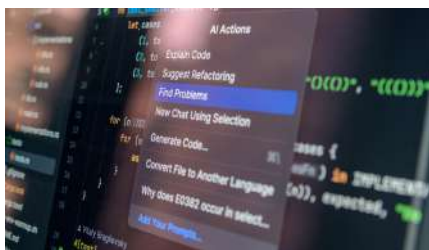
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AI ADVANCEMENTS

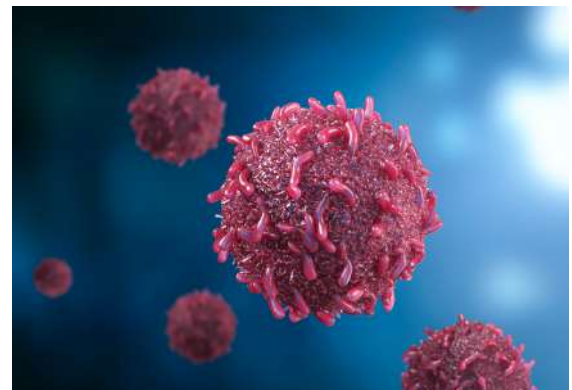


Dairy Data Warehouse – Artificial intelligence will shape the future of dairy farms

We live in a world of data and the dairy industry is no exception. From herd health to milk production, from barn sensors to feed rations, there is no lack of monitoring data to help modern dairy farmers succeed. The challenge is consistent, timely, reliable and useful access to all that information. The goal then becomes how to unlock data's full value in a way that allows a farm and the advisors supporting that farm, to effectively interpret and use it to make better decisions for the efficiency and sustainability of the operation. Enter machine learning.

AI Breast Cancer Detection Tools Are Here - This Is What It Means for Mammograms

Artificial intelligence may seem like a buzzword, but it's quickly emerging as a key player in the breast cancer prevention landscape. Specifically, AI breast cancer detection tools are helping to identify cancer earlier and more accurately - which may improve outcomes and even save lives.



CJI calls for deepening technology and AI-based judicial architecture for faster justice delivery

Chief Justice of India (CJI) Surya Kant on Saturday called for deepening technology and artificial intelligence (AI)-based judicial architecture and using technological advancements to expedite justice delivery. Stating that technology was the only effective answer to wastage of judiciary's time, he said the country's judiciary was committed to ensuring optimum utilisation of technological advancements and AI for the benefit of the common man.

AI ADVANCEMENTS

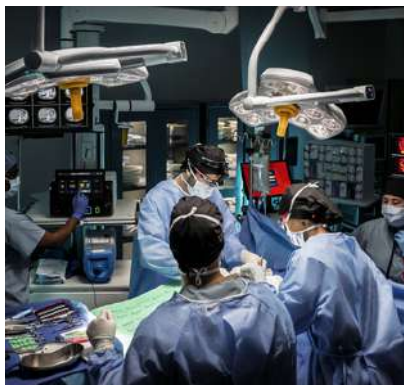


New technology, advanced models and artificial intelligence deployed to improve hurricane forecasts

- As the Atlantic hurricane season begins, NOAA is deploying uncrewed systems, testing AI-powered forecasting models and conducting Hurricane Hunter missions to improve hurricane prediction and support forecasts.
- NOAA is leveraging AI and machine learning to enhance traditional hurricane forecasting methods.
- Scientists at NOAA's Geophysical Fluid Dynamics Laboratory (GFDL) are combining the SPEAR prediction system with AI tools to improve seasonal hurricane forecasts months in advance.
- According to researcher Hiro Murakami, AI is making forecasting models smarter, faster and more effective.
- Early results indicate that AI-enhanced models can improve predictions of seasonal hurricane activity.

New artificial intelligence model maps how genes work together inside cells

- Scientists at the Icahn School of Medicine at Mount Sinai have developed a new AI model that reveals how genes work together inside human cells.
- The model helps uncover the structural and functional relationships between genes, improving understanding of biology and disease.
- It provides a reference framework for interpreting complex multi-omics data and could support the development of better diagnostics, biomarkers and therapies.



Johnson & Johnson Advances Creation of Global Intelligent OR Network in collaboration with Department of Health - Abu Dhabi

Johnson & Johnson has partnered with the Department of Health - Abu Dhabi to launch a global surgical intelligence network, making Abu Dhabi the first hub in a worldwide AI-driven infrastructure aimed at advancing innovation across the entire surgical journey. The initiative supports the future of open, laparoscopic and robotic surgery by combining surgical expertise with an open AI ecosystem.

AI ADVANCEMENTS

New technology, advanced models and artificial intelligence deployed to improve hurricane forecasts

- Indian army launched two new digital platforms, 'Kautilya' and 'Q-FORCE', to improve real-time decision making, logistic management and battlefield support. The initiative shows a major push by the army towards integrating Artificial Intelligence and data driven systems into its operational framework.
- The 'Kautilya' focuses on structured data generation, AI-enabled analytics and NLP (Natural language processing) powered interface. On the other hand, 'Q-FORCE' is aimed at streamlining logistics, inventory and sustainment management across varied operational terrains. The development comes amid a wider global military transition towards AI-assisted warfare.





DISRUPTIVE TECHNOLOGIES



Engineers built a strange golden “tulip” whose petals chase the wind like a turbine while quietly pulling water from the air at the same time

A bio-inspired wind turbine has been created to harness energy and water. As global power demand continues to rise, the deployment of large-scale wind infrastructure is becoming vital. However, community resistance due to the stark physical footprint is growing worldwide. These high tensions have inspired engineers to develop innovative designs that are more socially acceptable, like this tulip.

Meet China's new humanoid robot: It can cook dinner, wash clothes and care for seniors, but one everyday problem still stops it

China's humanoid robotics push is moving beyond factory environments into everyday homes. While current systems handle structured tasks like sorting and carrying, the next challenge is mastering household activities such as tidying, storage and object retrieval. However, tasks like folding bedding, handling delicate items and navigating tight spaces still remain difficult, requiring advanced balance, precision and visual judgment.



Tech for seniors: These problem-solving devices can help them maintain independence, experts say

As Americans live longer, more seniors are choosing to age in place -living safely and independently in their homes and communities for as long as possible. According to gerontologist and caregiving advocate Dr. Lakelyn Eichenberger of Home Instead, this is about preserving routines, dignity and connection, but it requires planning, support systems and safety measures. Technology is playing a growing role, with smart devices, health-monitoring wearables and medication dispensers helping seniors maintain independence while giving families greater peace of mind.

DISRUPTIVE TECHNOLOGIES



HPO.TECH designs oystershell-inspired chambers for life-saving pressure therapy

Hyperbaric Oxygen Therapy (HBOT) is a clinical process where individuals breathe pure oxygen in a pressurized environment to accelerate the body's natural healing powers, treating everything from non-healing wounds to athletic exhaustion. Traditionally, this technology has been confined to the sterile, intimidating corridors of hospitals, housed within industrial steel tanks that often trigger anxiety and claustrophobia.

First Hydrogen finalises design and IP protection for enhanced ground drone with amphibious capabilities

- First Hydrogen's UGV is designed as a rugged, amphibious, mid-sized, lightweight platform for high-speed operation in demanding environments.
- The latest upgrade improves energy efficiency, traction and performance on steep, loose and uneven terrain.
- The company aims to address a long-recognized industry need for a mobility platform combining rugged terrain capability, payload capacity, range and operational simplicity.
- Its approach focuses on a simpler, more robust, scalable solution with AI integration.



Hafele India Delivers the World's Tallest Movable Wall at ONGC Convention & Exhibition Centre in Goa

Mumbai (Maharashtra): Hafele India, a global leader in interior solutions, has achieved a major milestone with the delivery of the world's tallest movable wall at the ONGC Convention & Exhibition Center in Goa. Standing 22 meters high and 48.1 meters wide, the installation showcases advanced engineering, acoustic performance and spatial flexibility, offering 57 dB sound insulation and smooth large-scale operability through 1500 mm panels. The project highlights high-performance architectural innovation and opens the door for future large-scale infrastructure collaborations.

Researchers warn new WiFi technology can identify you even without tracking your phone: 'Means for surveillance'

Researchers from the Karlsruhe Institute of Technology (KIT) have warned about a new kind of surveillance technology that can turn WiFi routers into invisible tracking tools capable of identifying people even if they are not carrying a smartphone or any connected device. "This technology turns every router into a potential means for surveillance," Julian Todt, one of the authors of the study, warned. "If you regularly pass by a café that operates a WiFi network, you could be identified there without noticing it and be recognized later – for example by public authorities or companies."

IP INSIGHTS

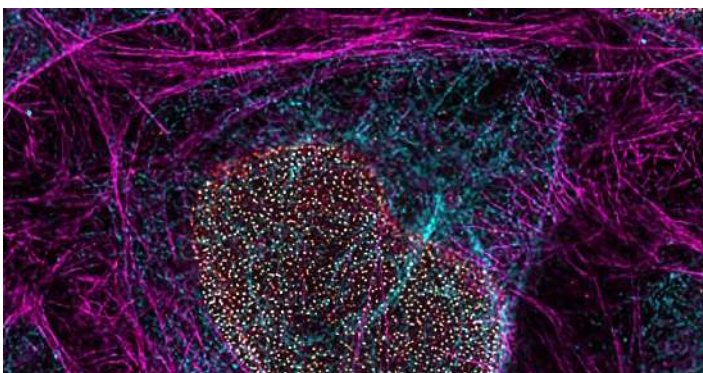
On Image Resolution via Simultaneous Microscopic Image Capture

What is Image Resolution via Simultaneous Microscopic Image Capture?

Image resolution via simultaneous microscopic image capture improves image resolution through the simultaneous acquisition of image data under multiple illumination strategies. Multiple illumination strategies—the different illumination strategies—such as bright-field, dark-field, oblique, fluorescence, angular illumination etc. is used to extract optical information from a sample.

What are main applications of Image Resolution via Simultaneous Microscopic Image Capture?

- **Biological microscopy:** In biological microscopy, simultaneous bright-field and dark-field illumination enables visualization of cellular morphology and tissue structure. It is also useful in pathology for detecting subtle pathological abnormalities.
- **Industrial inspection:** Simultaneous bright-field (BF) and dark-field (DF) illumination is extensively used in semiconductor industry systems for wafer inspection, defect detection, overlay analysis and detecting nanoscale irregularities



Different illumination Strategies

- **BrightField:** In bright field, front light illumination, light reflected by a flat surface is collected by the optics.
- **DarkField:** In dark field, front light illumination, reflected light is not collected by the optics. In this way, only scattered light is captured.
- **Fluorescence Illumination:** A fluorescence microscopy system is composed of three major components: an illumination source, a photo-activated fluorophore sample and a detector. Any light incident on the sample within the sample's excitation band will cause the fluorophore to emit light; typically the sample absorbs photons within its excitation band and emits photons at lower energy and longer wavelengths in its emission band.

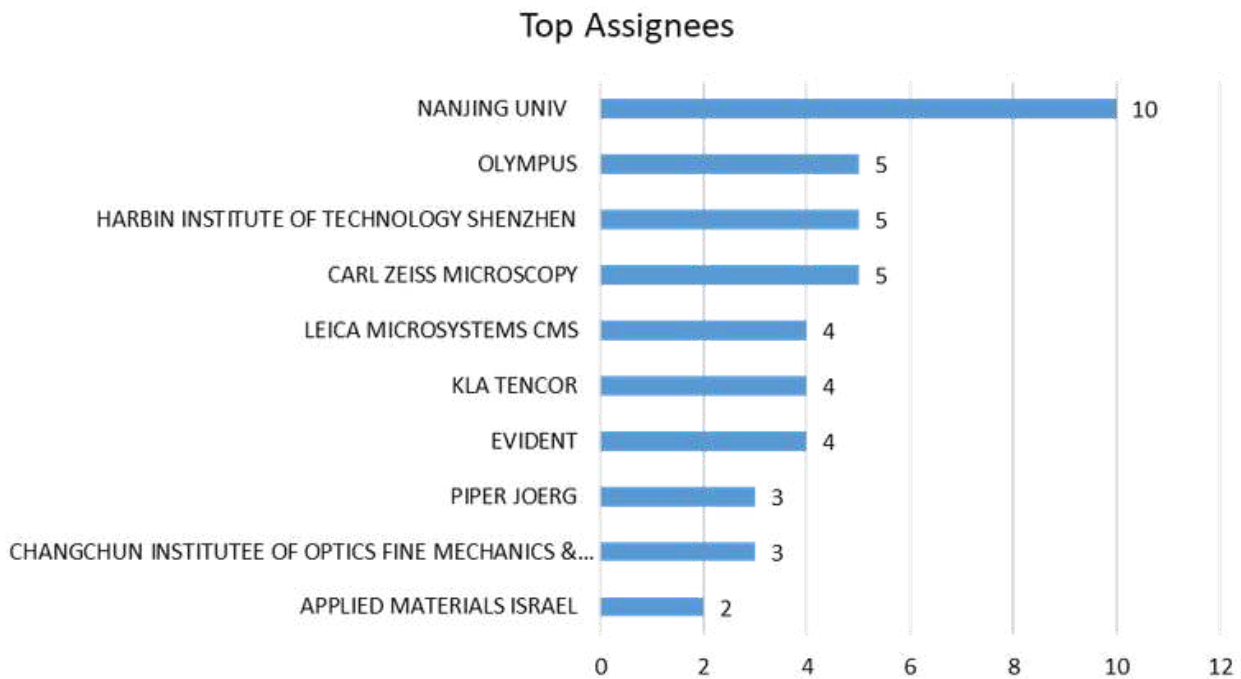
What Are the Benefits of simultaneously illumination of bright and dark field

- Brightfield microscopy suffers from low contrast and often requires staining, which can damage cells, while darkfield microscopy avoids staining but may produce degraded images due to scattering, distortion and light sensitivity issues that can affect sample integrity and accuracy.
- Combining brightfield and darkfield illumination overcomes these limitations, enabling clearer, more reliable imaging and improving detection of defects and nanoscale irregularities.

IP INSIGHTS

On Image Resolution via Simultaneous Microscopic Image Capture

Top Assignees by patents/publications



- Nanjing UNIV emerges as the leading assignee in the Image resolution via simultaneous microscopic image capture domain followed by Olympus, Harbin institute, Carl Zeiss microscopy.
- Nanjing has the highest number of patents in the biological field.
- Nanjing's maximum number of patents were filed in 2015.
- A significant share of Nanjing's patents also disclose Fluorescence illumination.



- The highest number of patent filings was observed in 2023, with China emerging as the leading contributor.



USPTO creates new reexamination pre-order procedure for patent owners

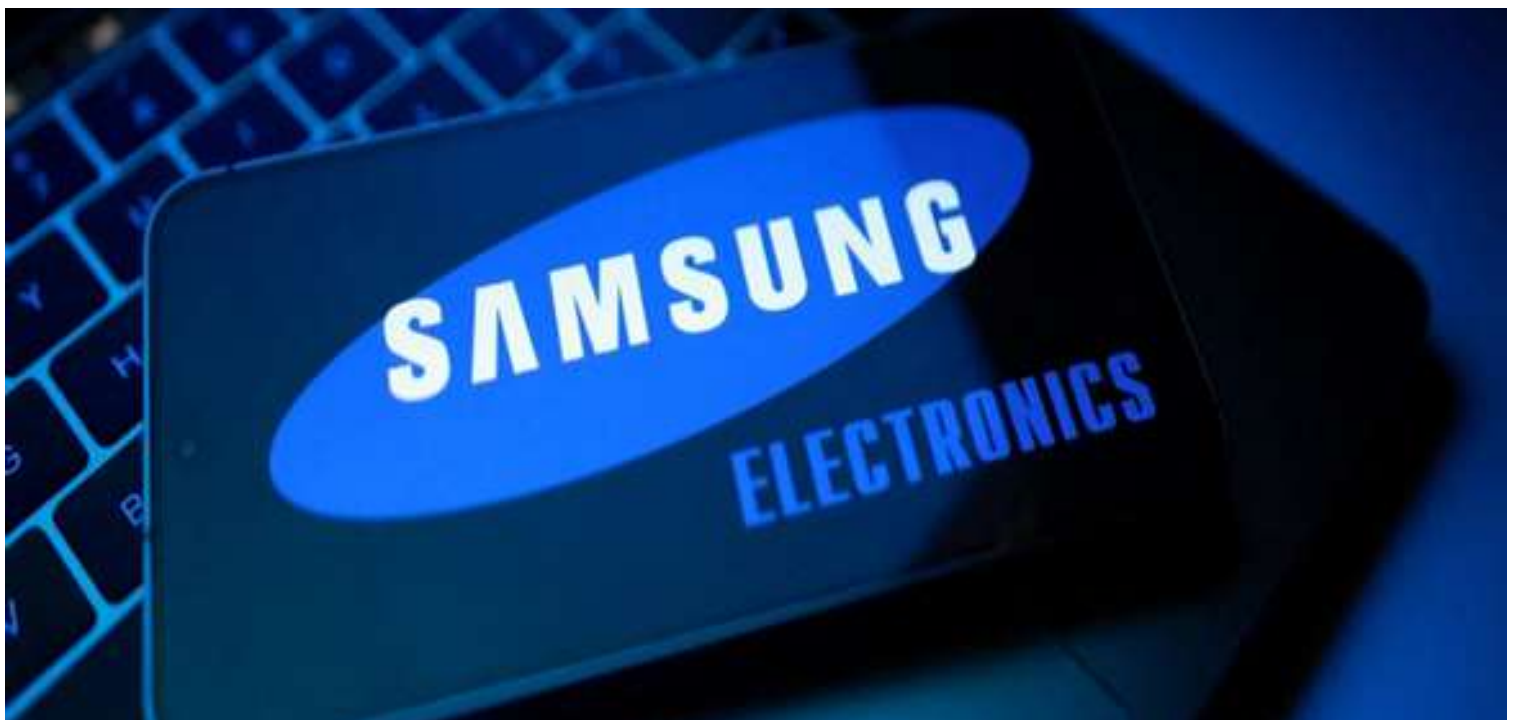
- Patent litigants are increasingly using ex parte reexamination (EPR) to challenge patent validity, shifting away from inter partes review (IPR) due to expanded USPTO discretion to deny IPR petitions under recent policy changes.
- EPR filings through May 15, 2026, have exceeded IPR petitions for the first time since IPR proceedings were introduced.
- Patent owners can now file a free, up to 30-page pre-order paper (including expert declaration) explaining why no substantial new question of patentability exists.
- This submission allows patent owners to argue for maintaining prior patentability decisions after considering alleged new teachings.
- The procedure applies to EPR requests filed after April 5, 2026, with a 30-day response window for patent owners and a possible 15-day reply window for requesters in limited cases.



IP NEWS

UK court orders Samsung to pay China's ZTE a \$392 million lump sum after patent trial

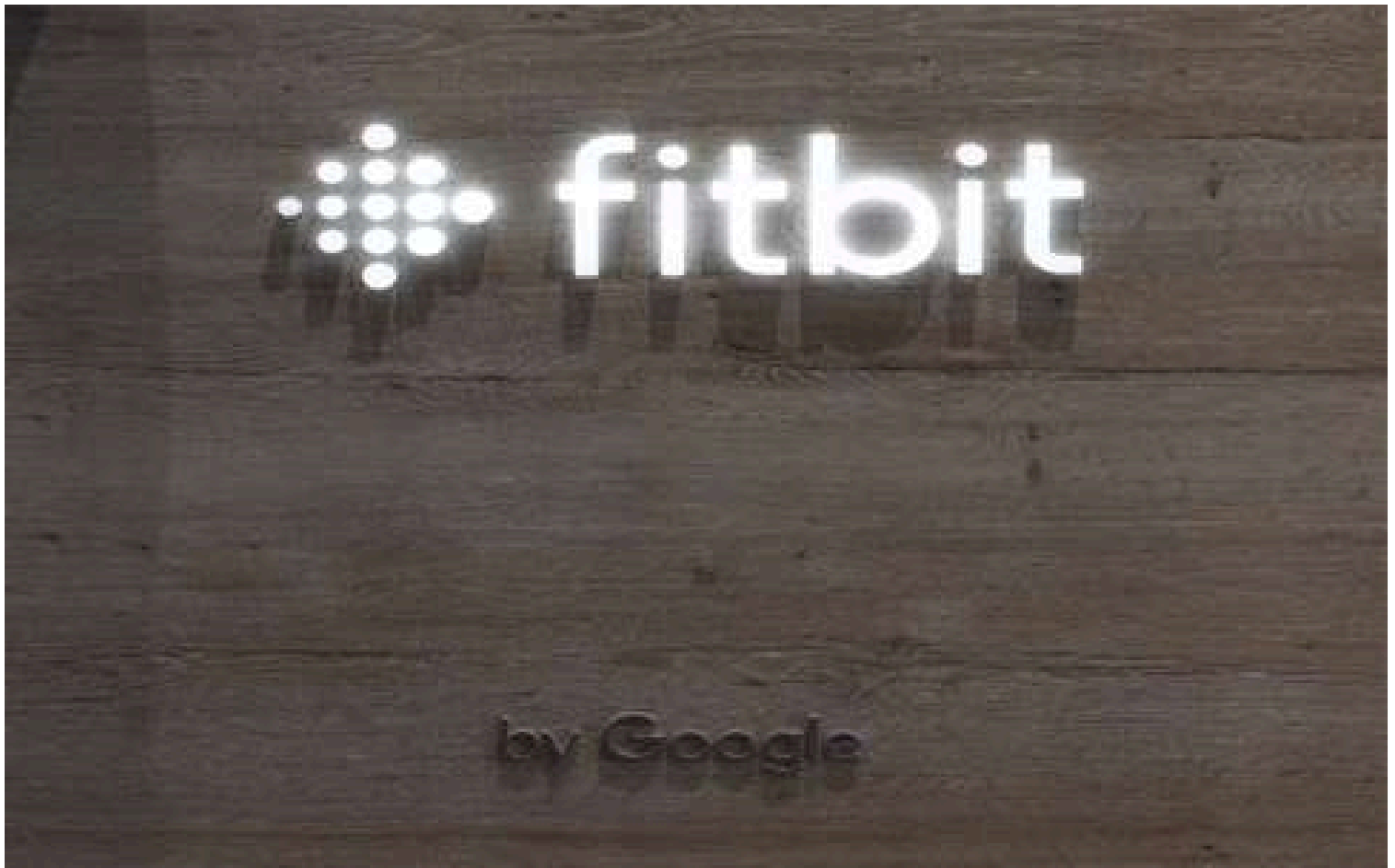
- Samsung Electronics must pay a \$392 million lump sum for a license to use ZTE's patents for mobile phones, London's High Court ruled on Friday in the English leg of the companies' global licensing dispute.
- ZTE has brought parallel lawsuits against Samsung in China, Germany and Brazil as the two companies battle over the terms on which Samsung can use ZTE's patents and most importantly the cost.
- Samsung sued ZTE in London in December 2024 seeking a determination of the fair, reasonable and non-discriminatory - or FRAND - terms of a patent license. Such licenses have repeatedly been the subject of global legal battles in the telecom industry.
- Judge Richard Meade ruled that Samsung pay a lump sum of \$392 million after the two companies were unable to agree on the renewal of a previous 2021 deal.
- The lump sum is more than the maximum \$200 million Samsung had argued for, but less than the \$731 million ZTE had sought.
- Samsung and ZTE did not immediately respond to a request for comment. They both have the right to appeal.
- England is a popular jurisdiction for patent litigation as it can set global FRAND terms, following a landmark 2020 UK Supreme Court ruling. The same is true for courts in China, where ZTE is separately seeking a ruling on FRAND terms.



IP NEWS

Philips, Google's Fitbit settle fitness-tracker patent dispute

- Philips and Google's Fitbit have settled Philips' lawsuit accusing Fitbit of misusing its fitness-tracker technology.
- The companies' court filing, said that they had resolved their long-running patent dispute over Fitbit's wearables and asked to dismiss the case with prejudice, which means it cannot be refiled.
- Philips sued Fitbit in 2019, arguing Fitbit's fitness trackers infringed patents related to its wearable health-monitoring devices. All of the patents at issue were eventually invalidated by the court and the U.S. Patent and Trademark Office.
- Fitbit, along with Garmin, defeated a related Philips patent case at the U.S. International Trade Commission in 2021.
- Google acquired Fitbit for \$2.1 billion in January 2021.
- The case is Philips North America LLC v. Fitbit LLC, U.S. District Court for the District of Massachusetts, No. 1:19-cv-11586.



IP NEWS

USPTO Open Data Portal to require registration for access beginning June 18, 2026

- The U.S. Patent and Trademark Office (USPTO) will require registration for access to the Open Data Portal (ODP) starting on June 18, 2026. The registration requirement is part of the Office's agency-wide initiative to further enhance protections of publicly available federal data.
- Available to the public since February 2025, ODP is USPTO's unified data platform, home to a wide range of products including publicly accessible patent and trademark datasets. Starting on June 18, 2026, users will need to have a USPTO.gov account to register and access the ODP site.
- This measure will improve site security while limiting costly, unregistered bot traffic—keeping ODP safe, fast and reliable. This registration will allow the agency to improve the customer profile and future offerings.
- Users that have a USPTO.gov account are already registered. Existing users can log in by clicking on the 'Sign in' link on the top right corner of the site. Please note that we expect to send a request for more profile information late this summer to improve existing customer profiles, aiding with the further improvement of products and future offerings.



IP NEWS

AI to turbocharge patent creation at India tech hubs, say executives

- Global companies expect AI to accelerate the creation of new products and intellectual property at their Indian technology hubs, underlining the country's growing role as an innovation base even as the futuristic technology reshapes work.
- Executives from Publicis Groupe's Epsilon, Kimberly-Clark and Daimler Truck told Reuters automation is helping staff at their global capability centres move beyond routine tasks, focusing instead on more complex work and building proprietary technology.
- "The number of IPs, the patents and the trade secrets created by (GCCs in India) is already increasing," Radhakrishnan Kodakkal, head of Daimler Truck Innovation Center India, said at a Reuters summit. "AI would accelerate it."
- India's tech hubs have long outgrown their low-cost back-office origins to become innovation centres for global firms, but AI tools that can increasingly handle tasks such as coding have cast doubt on what role these centres will play next.
- So far, India's large AI-skilled workforce and cost advantages have continued to draw investment into these centres despite global uncertainty.



IP NEWS

Brazil approves first generic semaglutide pen after Ozempic patent expiry

- SAO PAULO- Brazil's health regulator Anvisa said on Tuesday it had approved EMS's Ozivy, the country's first semaglutide-based injector pen, as the drugmaker looks to expand into a higher-end segment of the global pharmaceutical industry.
- The drug uses the same active ingredient as Novo Nordisk's diabetes and weight-loss drug Ozempic, whose patent expired in Brazil in March.
- Drug to be produced at EMS plant in Sao Paulo state with capacity for up to 40 million pens per year.
- CEO of Grupo NC, which controls EMS, told Reuters in March the firm expected to launch semaglutide pens this year.
- Following the registration, the drug will be marketed once Brazil's medicine pricing chamber approves a price cap.
- For inclusion in Brazil's public healthcare system SUS, Ozivy must be approved by the Health Ministry.
- Five other synthetic semaglutide applications and one biological version are under review by Anvisa.
- EMS rival Hypera had previously said it also planned to launch its generic version of semaglutide this year.



IP NEWS

Federal Judge Allows Copyright Lawsuit Against Capitol Riot Defense Lawyers Over Jury Report Use

- A federal judge in Washington, D.C. has allowed a copyright infringement lawsuit to proceed against attorneys who defended January 6 Capitol riot defendants, over alleged unauthorized use of a jury-attitude report.
- The court rejected early arguments based on fair use and public access to court records, finding them insufficient to dismiss the case.
- The dispute centers on a legal consultant's claim that her jury-attitude analysis was used without permission in defense strategy.
- Attorneys argued the material was permissible for legal and public-interest use, but the court held that copyright issues require further examination.
- The ruling highlights ongoing tensions between fair use doctrines and proprietary rights over litigation consulting materials, with potential broader implications for legal practice.



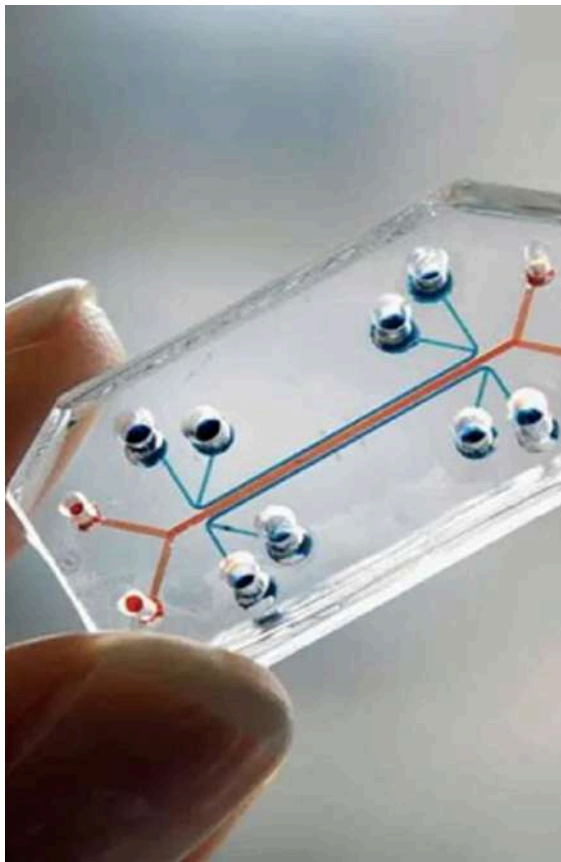
IP NEWS

Europe's top court annuls EU patent body's decision on Obelix name for weapons

- Europe's top court has overturned the EUIPO's refusal to block a Polish company from registering "Obelix" as a trademark for weapons.
- The EUIPO had earlier allowed the "Obelix" mark for firearms, ammunition and explosives in 2022.
- Les Éditions Albert René challenged the registration, arguing it infringed its existing OBELIX trademark and harmed its reputation.
- The EUIPO initially rejected the challenge, citing insufficient proof of reputation.
- The Court of Justice of the European Union ruled that the EUIPO's assessment was flawed and based on an incomplete analysis of evidence.
- The OBELIX character from the 1959 Asterix remains widely recognized, with strong cultural presence including attractions like Parc Astérix.



TECHNOLOGY THEMES



Inflammatory Technology

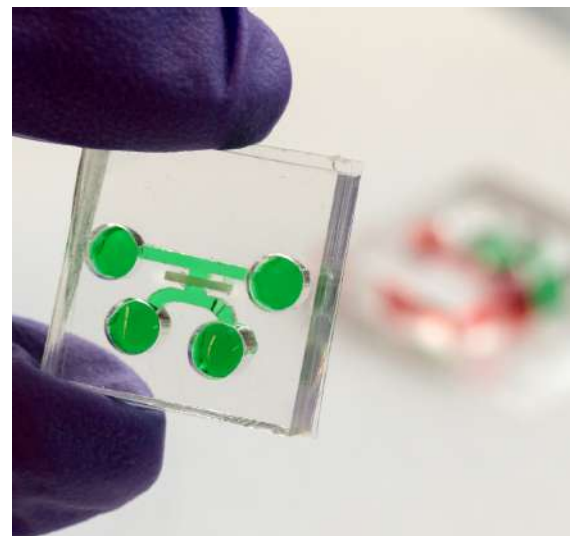
Bowel

Disease-on-a-Chip

- A study published in Nature Biomedical Engineering reports a breakthrough “IBD-on-a-chip” platform that models the human colon using patient-derived cells, including fibroblasts, epithelial cells and immune cells.
- The system shows that fibroblasts play an active role in inflammatory bowel disease, driving inflammation, fibrosis and disease progression by influencing immune and epithelial responses. Mechanical stretching that mimics intestinal movement further intensifies these effects.
- Researchers also recreated female hormonal conditions, observing changes in inflammation that may help explain symptom variation during pregnancy and other hormonal shifts in women with IBD.
- Importantly, the model can track early signs of colon cancer development in real time, making it one of the first organ-on-a-chip systems to replicate early cancer progression.

Tooth-on-a-chip

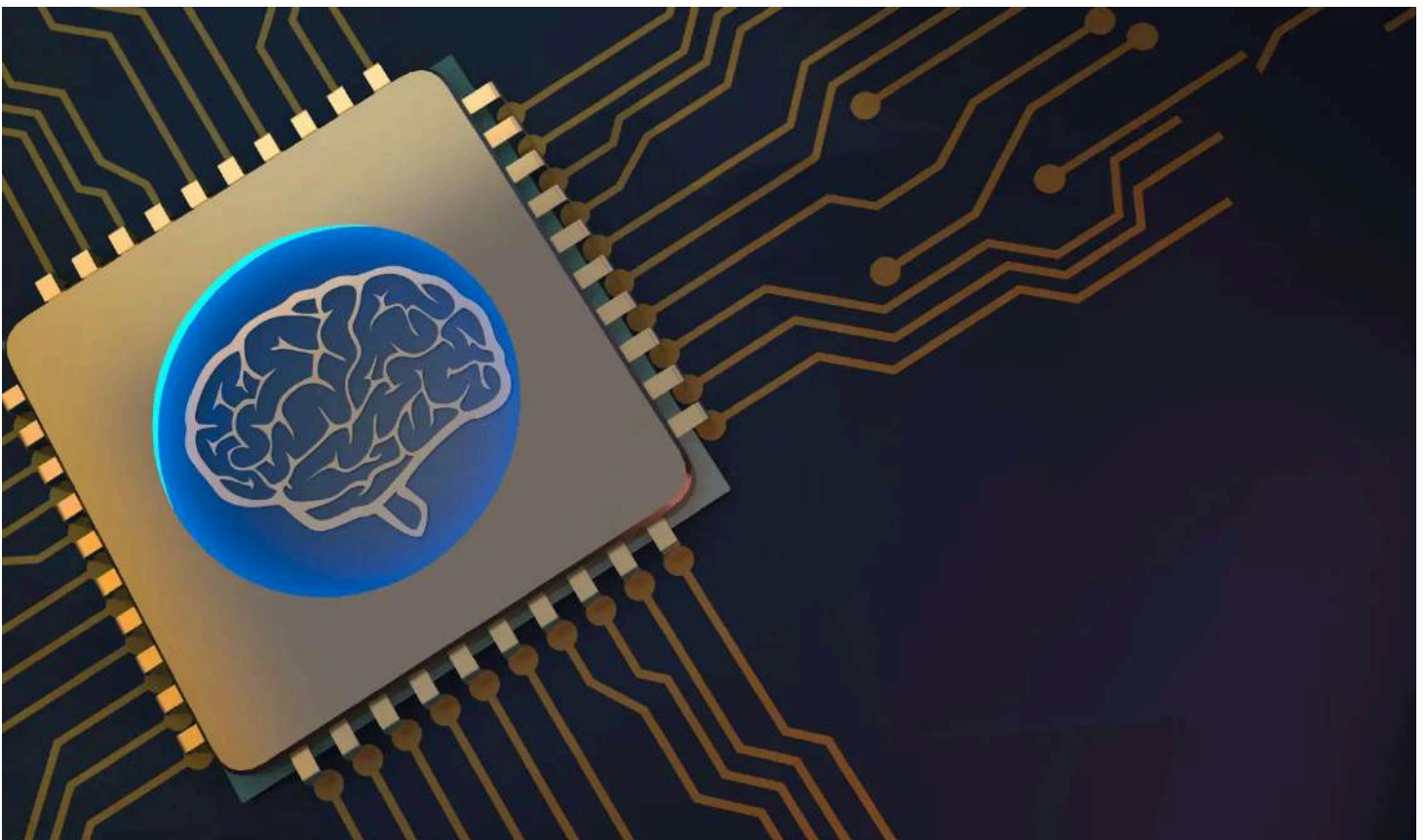
- The tooth-on-a-chip (ToC) system is a lab-based platform that mimics the dentin-pulp junction of human teeth using dental cells, scaffolds, and controlled fluid flow to recreate a living tooth-like environment.
- Unlike traditional 2D cell cultures or animal models, it allows better control of biochemical signals, fluid dynamics, and mechanical forces while enabling real-time observation of cellular activity.
- It is mainly used to study dental material interactions, tooth inflammation, and tissue repair and regeneration.



TECHNOLOGY THEMES

Melding Artificial Intelligence with Organ-on-Chip Technology

- Scientists are developing 3D tumor spheroids and organ-on-a-chip systems to better mimic real human tissue behavior, including cell interactions, nutrient flow, and drug diffusion—something traditional cell cultures and animal models cannot fully replicate.
- Because these systems generate large and complex datasets from imaging and biological measurements, AI and machine learning are increasingly used to analyze the data. These tools help identify patterns, measure system responses, and evaluate drug behavior, ultimately making drug testing more accurate, efficient, and data-driven.



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Top Pioneering
IP Management Experts To Watch
in 2026 ★★★★★

Dr. AMIT GOEL
(Director & Co-Founder)

 **Effectual Services**
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A Proud Moment for Effectual Services

We are delighted to share that our esteemed leader, **Dr. Amit Goel**, has been featured by The Enterprise World in its prestigious issue “**Top Pioneering IP Management Experts to Watch in 2026.**”

This distinguished recognition highlights Dr. Amit Goel’s exceptional leadership, forward-thinking vision and unwavering commitment to excellence in the field of Intellectual Property Management.



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DR. AMIT GOEL

in Issue of

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SUSANNE J.
Editor

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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