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Autonomous Akin

Akin Gump
STRAUSS HAUER & FELD LLP

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Our newsletter reflects the focus of Akin Gump's cross-practice autonomous systems and advanced mobility team on developments in the regulatory, policy, trade, intellectual property, and cybersecurity and privacy spaces. Autonomous Akin brings you the latest news and developments so that you can keep a pulse on what is happening in government and industry that is impactful for your business. For our new readers, you can subscribe to future issues of this newsletter [here](#). Thank you!

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UNMANNED AIRCRAFT SYSTEMS (UAS)

[**Could drones be the next car accessory? Ford Patents Envision Car-Drone Future – *IOT World Today***](#)

Ford vehicles could one day come equipped with their own drones. Ford Motor Company has received at least 11 patents recently for pairing drones with vehicles in a sign that the carmaker expects unmanned aerial vehicles (UAVs) to one day become useful tools for motorists. Among the patents is one that incorporates a drone into a vehicle's moonroof and others that cover various aspects of the relationships between drones and cars, such as communications and takeoffs and landings. The company also envisions third-party drone operations, like deliveries to vehicles. A driver stuck in traffic might pay a premium to have snacks, medicine, phone chargers or even a gallon of gas delivered by drone. Drivers could order items via a phone app or a vehicle infotainment system.

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[**U.S. FCC proposes additional spectrum for drone communications – *Reuters***](#)

The U.S. Federal Communications Commission (FCC) proposed new rules to make licensed radio spectrum available for advanced aviation, including unmanned (or uncrewed) aircraft systems (UAS), or drones. Today, drones typically utilize unlicensed and low-power wireless technologies for connecting drones with their operator, other drones and manned/crewed aviation. Many UAS operations worldwide use commercial wireless systems to support UAS communication. The FCC is seeking comment on its proposed technical and service rules, and band plan, for the 5030-5091 MHz spectrum, and it is seeking comment on whether current rules for various flexible use spectrum bands are sufficient to enable airborne UAS communications. The FCC is also proposing a process for drone operators to obtain a license in the aeronautical VHF band to communicate with air traffic control and other aircraft.

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[**BT invests £5m in plan for 'drone superhighway' across southern England – *The Guardian***](#)

BT has invested £5m in a startup seeking to create a drone corridor across southern and central England to carry cargo and other supplies. The telecoms group's digital hub, Etc, is investing the money into the drone firm Altitude Angel, to support its work on Project Skyway. The scheme would involve a 165-mile drone corridor—created above Reading, Oxford, Milton Keynes, Cambridge, Coventry and Rugby—in what the two firms hope will become the United Kingdom's drone superhighway and the largest and longest network of its kind in the world.

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Hummingbird flight could provide insights for biomimicry in aerial vehicles – *Penn State University*

You don't need to be a mechanical engineering professor like Penn State's Bo Cheng to recognize that hummingbirds contrast significantly with their avian relatives. The smallest of bird species, hummingbirds flit and dart their way from food source to food source in a way no other bird can. Flying backward, forward and upside down at speeds of up to 45 miles per hour, hummingbirds are the only vertebrates capable of hovering for a period of time during flight—and that's exactly why hummingbirds have inspired modern aerial vehicles like drones. Unfortunately, these modern aerial vehicles still have a long way to go to catch up with the biological superiority of the tiny-but-mighty hummingbird. However, Cheng's recently published research provides new insights into how hummingbirds' unique wing movements could be robotically replicated, making for more agile, stable and efficient aerial vehicles.

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Drone delivery service using Starlink launched in Japan – *Japan Times*

Telecommunications company KDDI, map-maker Zenrin and others in Japan launched a drone delivery service using U.S. aerospace company SpaceX's Starlink satellite Internet access service in Chichibu, a mountainous city in Saitama Prefecture, on Thursday. By connecting a drone to the Starlink service that provides a stable communication environment even in mountain areas, the new delivery service allows residents in a district of Chichibu affected by a road closure following a mudslide in September last year to receive food and other supplies on a regular basis. According to KDDI, it is the first time that a regular drone delivery service using the Starlink service by SpaceX, officially called Space Exploration Technologies, has been launched in Japan.

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ADVANCED AIR MOBILITY

[Airbus and VDL Announce Partnership to Develop UltraAir – Avionics International](#)

While the aviation industry has maintained a consistent focus on the creation and implementation of new aircraft designs, other advancements in the industry are promising to bring great value to the aviation world. European aircraft manufacturer Airbus and high-tech Dutch producer VDL Group have just announced a partnership to design and build UltraAir, a laser communication terminal. With the support of development from Airbus and the Netherlands Organization for Applied Scientific Research (TNO), the organizations hope to have a prototype and a first flight test completed by sometime next year. UltraAir is a laser communication terminal with improved capabilities that make the more efficient transfer of data and information possible. Airbus has been developing the system since April of 2021 and has designed it to utilize laser links between a set of satellites in orbit and terminals on the ground equipped with a precise optical mechatronic system.

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[How new technologies could clean up air travel – MIT Technology Review](#)

As a climate reporter, I sometimes hesitate to admit this, but I feel it's time that I came clean on something ... I love flying. It's not even just about traveling and seeing new places: I truly enjoy the process, from sitting in an airport terminal to sliding into a window seat. I even

appreciate the elegance of a smooth trip through airport security. Unhinged, I know. My love affair with flying and my work covering climate change feel at odds because aviation makes up about three percent of the world's greenhouse-gas emissions—almost a gigaton in 2019. Airline traffic could more than double from today's levels by 2050. And we really don't know what we're going to do about it. Aviation is one of those notorious "hard-to-decarbonize" sectors, where the technical challenge of cutting emissions is especially steep. Fuels for planes need to be especially light and compact, so planes can make it into the sky and still have room for people or cargo. The industry has some ideas for technologies that could cut emissions, and some are even starting to make it to test flights.

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Aviation's best bet for cutting emissions is a new kind of fuel, but there's nowhere near enough of it – *Insider*

Of all global aircraft emissions, the U.S. accounts for 25 percent. There's a goal to reduce that to zero by 2050, but it won't be easy. Aviation is one of the most challenging industries to decarbonize. The batteries we're using to electrify cars are generally too heavy for planes, and hydrogen-powered aircraft are many years off, at least from a commercial point of view. "The aviation sector does not have many options in terms of what it can do," Puneet Dwivedi, a professor at the University of Georgia who has been studying sustainable aviation fuel production, told Insider. "There's a 2,000-pound — 20,000 pounds! — gorilla in the room, and it's fuel. You have to sort out fuel." Sustainable aviation fuel (SAF) is similar to conventional jet fuel, but it's much less carbon-intensive during its full lifecycle. From production to combustion, it releases up to 80 percent less carbon dioxide than conventional jet fuel, according to data from the International Air Transport Association.

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TECHNOLOGY, ENVIRONMENT AND LEGISLATION

Tech's climate commitment: Organizational and personal impacts are pushing tech leaders toward faster climate action – *Deloitte*

Achieving net-zero is a priority for many organizations today, and the technology industry is taking the imperative to heart. Deloitte Global predicts that in 2023, the tech industry will move faster on climate action than nontech industries. By “move faster,” we mean that more tech companies say they’re aiming for net-zero by 2030 than nontech companies. Deloitte’s 2022 CxO sustainability survey, which polled more than 2,000 C-suite executives worldwide, found that technology executives viewed net-zero as a more urgent priority: They were 13 percent more likely to target net-zero by 2030, and 24 percent less likely to push that goal past 2030 or have no plans. That tech leaders are in a hurry to mitigate climate change may not be surprising, considering the attitudes and experiences they reported in Deloitte’s survey. Tech executive respondents were more likely to be worried about climate change than those in other industries, and more likely to report personal impacts. Their direct experience with climate-driven adversity may be one reason they intend to act quickly.

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AI in chip design: Semiconductor companies are using AI to design better chips faster, cheaper, and more efficiently – *Deloitte*

Artificial intelligence (AI) is fast becoming a powerful aid to human chip engineers in the extremely complex task of semiconductor design. Deloitte Global predicts that the world's leading semiconductor companies will spend \$300 million on internal and third-party AI tools for designing chips in 2023, and that number will grow by 20 percent annually for the next four years to surpass \$500 million in 2026. That's not a lot of money in the context of 2023's anticipated \$660 billion global semiconductor market, but it's significant for the outsized return on investment. AI design tools are enabling chipmakers to push the boundaries of Moore's law, save time and money, alleviate the talent shortage and even drag older chip designs into the modern era. At the same time, these tools can increase supply chain security and help mitigate the next chip shortage. Put another way, although a single-seat license for the AI software tools required to design a chip may cost mere tens of thousands of dollars, the chips designed by such tools could be worth billions.

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[Four questions to ask about climate investment in 2013 – Bloomberg](#)

The start of the year is a boon for the data-minded in the climate and energy world: We get the full wrap on the prior year's investment flows and indicators, and a raft of outlooks on the year ahead. Earlier this week, Bloomberg Green's Eric Roston neatly summarized the climate numbers to watch in 2023. I have my own things to watch for, indicators that will reveal what 2023 means for the scale and speed of the energy transition. Here are the questions I'm asking, which will hopefully resolve as the year develops: 1. Will climate tech make good in 2023 on its bumper funding year of 2022?

Climate tech in 2022 saw an 89 percent increase in year-on-year venture capital, according to HolonIQ, with more than \$70 billion invested from January to December. That's all the

more striking because 2022 was a fairly dismal year for venture capital funding in general—dollars invested were down 42 percent in the first 11 months of the year compared to 2021.

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AUTONOMY & ELECTRIC VEHICLES

[An Expert's Look at the Current EV Landscape and Potential Disputes in 2023 – WIT Legal](#)

2022 was a transformative year for many American markets, especially those being shifted by rapid technological advancement, increased government oversight and evolving consumer values. And when it comes to the automotive industry, the electric vehicle (EV) landscape is going through a complete metamorphosis, especially as we move further toward Biden's 2030 electrification goals. More and more companies are entering into the EV race, opening the door for patent battles, theft of trade secrets disputes and conflicts over systems security, especially as these vehicles' wireless capabilities grow. Let's take a quick look at 2022's EV litigation landscape to learn more about what types of cases have been hitting the courts and who has been involved in the disputes.

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[FMCSA seeks more feedback on regs related to autonomous trucks – CCJ](#)

The Federal Motor Carrier Safety Administration is requesting public comment about factors the agency should consider in amending federal regulations to establish regulatory framework for autonomous trucks. The agency previously published an advance notice of

proposed rulemaking (ANPRM) in May 2019 seeking comments on Federal Motor Carrier Safety Regulations (FMCSRs) that may need to be amended, revised or eliminated to facilitate the safe introduction of trucks equipped with automated driving systems (ADS) to the nation's highways. A supplemental advance notice of proposed rulemaking (SANPRM) that will be published Wednesday, February 1, seeks additional information on the topic. The original ANPRM sought answers to questions related to CDL requirements; hours of service; medical qualifications for drivers; inspection, repair and maintenance; and more as they related to autonomous trucks.

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Chancery Won't Toss Out Auto Supplier's Nokia Patent Suit – *Law360*

Delaware's Court of Chancery refused on Tuesday to dismiss most claims filed by German auto components supplier Continental Automotive Systems in a suit seeking licenses under Nokia's standard-setting cellular patents on fair terms. In decisions focused largely on disputes over the Chancery Court's reach, Vice Chancellor Nathan A. Cook ruled that the court has jurisdiction to consider most Continental Automotive Systems Inc.'s claims to a right to service essential patents under Nokia Corp.'s Subscriber Equipment and Infrastructure Equipment License Agreement, or SULA, with Qualcomm. Continental's suit also argues that patent standard-setting organization policies oblige Nokia to make essential patents available to some Qualcomm customers, including Continental, under fair, reasonable and non-discriminatory, or FRAND, prices, the vice chancellor said. "Much of the dispute in this case concerns whether Continental can enforce certain third-party beneficiary rights" under the SULA, he added.

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[You May Be Able to Buy a Self-Driving Car After All – *Wall Street Journal*](#)

A year ago, investors were wildly optimistic about the potential of automotive technologies such as automated driving. They now risk swinging to the opposite extreme. Anyone looking for an idea of the cars that might be on sale in five years' time likely found the news from this year's CES in Las Vegas more muted than usual. Stellantis showed off new concept EVs on Thursday, including a highly anticipated Ram pickup truck, but in reality it is playing catch-up with peers such as Ford and General Motors. Sony unveiled a brand for its new automotive joint venture with Honda, Afeela, but didn't give many details of the much-hyped EV they expect to start selling in North America in 2026.

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[PTAB Nixes Claims in Pilot Car Charger Patents – *Law360*](#)

The Patent Trial and Appeal Board has found that nearly every challenged claim in a pair of Pilot Inc. car charger patents is invalid as either anticipated or obvious. In a pair of Monday decisions, a three-judge panel invalidated 19 claims in a patent challenged by the NOCO Company Inc., and 18 claims in another patent challenged by Shenzhen Chic Electrics Co. Ltd. Most of the claims in the patent challenged by NOCO, which was U.S. Patent No. 10,328,806 B2, were found invalid as obvious over pieces of prior art, like a patent application referred to as Richardson. There, one claim was also found anticipated by Richardson, according to the PTAB records.

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[Car financing newcomers are ready to seize Biden's EV boom – *Bloomberg*](#)

Buying certain electric cars in the U.S. just got cheaper, thanks to new tax credits meant to phase out gasoline-guzzlers, and a wave of companies that let wary drivers lease or subscribe their way to an electric vehicle are making the most out of the government carrots. “They’ve got to be convinced,” says Andrew Krulewitz, founder of Zevvy, an EV financing startup. “Buying cars is a big deal.” Zevvy, based in Hayward, California, offers six-month EV leases targeted at Uber drivers and others who spend considerable hours behind the wheel, giving them a different path into a Tesla, Chevy Bolt or other electric model. The startup scraps the usual mileage caps in favor of a pay-per-mile price, which is designed to be cheaper than gasoline. After six months, customers can return the car, extend the lease or buy the car outright. “Where there aren’t any savings for the driver, we’ll make that obvious,” says Krulewitz.

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[Even higher battery prices can’t chill the hot energy storage sector – Bloomberg](#)

Lithium-ion battery storage has expanded by orders of magnitude since the 1990s, with new devices creating ever-larger demand. Camcorders came first, followed by personal computers and then smartphones and other personal electronics. In the 2010s, the newest and far biggest demand center emerged: electric vehicles. EVs now drive the bulk of global lithium-ion battery manufacturing, as well as substantial R&D. As the industry scaled, costs fell. A kilowatt-hour of lithium-ion battery storage declined in cost by 80 percent from 2013 to 2021. That trend reversed last year. As commodity price increases and inflation hit the battery sector (along with everything else), prices rose for the first time in at least 12 years, by seven percent. They are expected to remain elevated this year and not drop until 2024. The price increase has an obvious impact on the cost of electric vehicles, but it matters elsewhere in energy, too.

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EVENTS

[7th Unmanned and Autonomous Systems for Utilities and Energy Conference](#)

March 15, 2023

Atlanta, GA

[IAM Live: Auto IP USA](#)

May 4, 2023

Detroit, MI

[Law-Tech Connect AUVSI Workshop](#)

May 8, 2023

Denver, CO

Akin Gump partner Jennifer Richter will be speaking on a panel titled “Show Me the Money! Tapping Into Opportunities to Work with the Government.”

[AUVSI XPONENTIAL 2023](#)

May 8-11, 2023

Denver, CO

Akin Gump partner Ruben Munoz will be speaking on a panel around patent licensing and litigation issues.

[Law-Tech Connect Energy Drone + Robotics Workshop](#)

June 12, 2023

Houston, TX

Akin Gump partner Jennifer Richter will be speaking on a panel titled “A Holistic Approach to Securing Energy Infrastructure” and Akin Gump counsel Christopher Treanor will be speaking on a panel titled “Clearing the Air - How Advanced Tech Contributes to Methane Compliance.”

If you would like further information, please contact:

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