Space Technology Industry Is Here. Are You Ready for Takeoff?

Intellectual Property

Technology, Privacy, and eCommerce

With everyone’s space-age dreams becoming more of a reality, it’s easy to become overwhelmed with all of the opportunities. Space technology is on the brink of exploding (think of the dot-com boom in the early 2000s), and in-house counsel interested in shaping this up-and-coming industry are well positioned to make a real impact. According to Dr. Sean Casey, co-founder and managing director at Silicon Valley Space Center; Sunil Nagaraj, vice president at Bessemer Venture Partners; Maryanna Saenko, partner at Airbus Ventures; and Ronald Goedendorp, vice president of Space Opportunities at NanoRacks; the opportunities, like space itself, are limitless.

Lower barriers to enter space technology

New opportunities for all professionals, including in-house counsel, now exist in space technology that didn’t exist 10 years ago. According to Nagaraj, this is because mainstream technology is embracing advancements in space. As an example, in 2014 Google bought Skybox, a satellite imaging company.

According to Goedendorp, our ability to utilize space commercially has increased, while expenses associated with innovating space technology have decreased, and other fields, such as analytics and machine learning, have developed. These developments translate to much lower barriers for those seeking to enter the space industry, leaving the door open for innovators to explore less traditional space technology, including many interesting commercial applications.

“For example, molecules behave very differently in space. It will be interesting to see what we can do with this future research,” Goedendorp notes. “Space has also increased connectivity, which means we will have more and better data,” says Saenko. Saenko observes that exploring more debris in space and propulsion problems are interesting challenges that present many opportunities.

Ultimately, says Casey, “space is now accessible to fund, and interesting technology can now fly off the small platform.” He suggests that these lower barriers to entry mean that both entrepreneurs and educators can now participate more freely. Additionally, these low barriers to entry are paired with great opportunities for funding. Serious venture capital firms and companies, even those not traditionally interested in space, are angling themselves to be included in space technology.

Novel intellectual property issues

It should come as no surprise that, like all innovations and developing fields, intellectual property issues are a key component of legal topics with relation to space technology. Saenko shares, “We recently funded a company that is Series A. We most definitely reviewed for and were interested in their interesting and meaningful IP.”

Innovation in space technology, according to Saenko is occurring more rapidly, allowing more people access and build on research. She also expects the space technology boom to create a wave of secondary market innovations and applications in fields such as robotics and biology.

Nagaraj underscores that there will also be interesting intellectual property issues for components used within space technology. As the rate and amount of space innovation increases dramatically, standard off-the-shelf components are becoming increasingly available. This makes space innovation and research and development a quicker and more affordable process.

He observes that space technology innovators no longer have to reinvent the wheel for each component. This widespread availability of components speeds up innovation, but will also present interesting intellectual property issues. Inevitably, the legal field will see a rise in intellectual property-related work in this new and exciting specialty.

Space regulations are abundant and will evolve

No conversation about the space industry is complete without mentioning the International Traffic in Arms Regulations (ITAR), a set of US federal government regulations on the export and import of defense-related articles and services.

“ITAR just sounds threatening and most definitely requires an engagement of a competent legal professional,” Goedendorp jokes. “It is a boring read and if you are building anything in space you most definitely want to discuss the implications of ITAR with someone who understands it intimately,” he says.

There will be a high demand for lawyers who understand and can advise companies on these important regulations. Saenko has observed that ITAR has implications for multinational companies. “If the folks in your company regularly interact with non-US citizens, even those that are fellow employees of the company, you need to be aware of ITAR because going through explaining inadvertent disclosure with the US government is not enjoyable,” she cautions.

Saenko also notes that ITAR is much more manageable if a company is using standardized parts. She advises that space industry companies should rely on standard components and parts, especially in proving viability. “It just makes life much easier!” she says.

Space-savvy workforce issues

Undoubtedly, “the space is taking off!” as Goedendorp says. However, the question is whether we have enough talent to support such quick progress and development. It is not a secret that “good aerospace engineers are not as common as other engineers, who are already a scarce resource,” Goedendorp adds.

Casey advises space innovators to look broadly in universities and other educational facilities for recruiting. Space innovators should also consider seeking talent outside of their usual recruiting pool.

“We also tend to be US- and Silicon Valley-centric when we look for talent,” Saenko observes. “When it comes to recruiting aerospace engineers, we need to take a much more global perspective. If we don’t look in China, India, and Russia we will definitely miss amazing aerospace engineers and space technology talent.”

For attorneys, this approach presents a whole slew of interesting employment and immigration law issues. Given the upcoming shift in the US political landscape, attorneys will have to watch development carefully to make sure their companies can continue recruiting from the global workforce pool as Saenko suggests.

The allure of space attracts professionals and amateurs alike. Decades of Cold War, Chinese space challenges, and popular media franchises like *Star Wars* have inspired bright thinkers for generations. Now that the space industry is booming, how should you choose which of the many opportunities to pursue? One way is to emulate how investors choose where to allocate their funds. “I spend 90 percent of my time on the question ‘Does anyone want this product?’” Nagaraj notes. “I want to see customer logs, emails, letters of intent, and other signs of interest.” Casey, Saenko, and Goedendorp agree that customers, market size, and market traction are important in assessing the size of any space tech opportunity. This is where most legal professionals looking to invest or take employment risks should focus when they evaluate space technology opportunities.

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