

by Kari L. Barnes kbarnes@buchalter.com

VIEWPOINT

free money

Federal grants can be the lifeblood for small aerospace companies. But complex paperwork can trip unwary applicants and jeopardize their full rights to their innovations. Intellectual-property attorney Kari L. Barnes highlights the pitfalls, and how to avoid them.

overnment money permeates the aerospace industry. The proposed 2017 federal budget would allocate \$152.3 billion for research and development by government agencies and outside contractors. The budget would set aside \$827 million for R&D on space technology, \$324 million for advanced exploration systems and \$100 million for low-carbon-emission aircraft, among other projects.

Federal law mandates that 3.2 percent of any external R&D investment must go to small businesses with fewer than 500 employees. So if the Pentagon were to give Boeing \$97 million to develop a fighter jet, another \$3 million must be reserved for small contractors on the jet program or directed to firms through separate channels, such as the federal Small Business Innovation Research program.

SBIR grants are a major source of federal funds for small innovators, including those in the aerospace sector. Each year, the government sets aside about \$2 billion for SBIR, and several thousand firms receive awards that currently average \$150,000 for promising technologies and \$1 million for more developed concepts.

This free money, however, can be a loaded gift for the unwary.

In exchange for taxpayer-funded grants to help recipients bring their ideas to market, the government always gets to retain a royalty-free right to use anything invented or delivered under the SBIR program. The government can also extend that right to other parties. Furthermore, subcontractors retained by the small business using SBIR money will get ownership of any part of the subcontractor's work generated under the contract.

Unless they're vigilant, small businesses risk jeopardizing the full benefit of their research, and undermining possession of their intellectual property. As a patent attorney, I work frequently with clients who learn too late that their inventions and innovations resulting from SBIR grants belong partly to subcontractors or that their trade secrets can be subject to disclosure under the Freedom of Information Act.

The good news is that businesses can protect themselves by using the federal bureaucracy to their advantage.

The key is meticulous paperwork. Paperwork to document which data, code, prototype or report remains under the company's ownership. Paperwork to designate what information is confidential. Paperwork to keep track of separate budgets to avoid comingling non-SBIR activities.

Imagine the most complicated tax return you've ever endured: the calculations, rules, exceptions and exceptions to exceptions. That's a cakewalk compared to navigating the byzantine world that is SBIR funding. But the potential payoff can be worth a lot of money, or even make a difference in your company's survival.

Let's say a fictional company we'll call Zirfram invents a long-range optical communication system in response to an SBIR solicitation for a device to relay information from upper-atmosphere stations to ground stations. With the grant, Zirfram gets to retain ownership of its invention and the right to sell it to other parties. NASA or the Pentagon or other government agencies would pay to use Zirfram's communication system in any or all government upper-atmosphere stations. The government can also permit other companies, including Zirfram's competitors, to make Zirfram's communication system for the government's use on government stations without paying any royalties.

Ownership rights also extend to any subcontractors Zirfram hires to work on the SBIR project. So if Zirfram contracts out development of an actuated mount for

Money for small innovators

The U.S. has consistently allocated about \$2 billion a year to encourage small businesses with fewer than 500 employees to pursue technological innovations. Small Business Innovation Research grants are awarded to several thousand firms annually and range from \$150,000 for early-phase projects to \$1 million for more developed concepts.



tracking the ground station from the upper-atmosphere station, the subcontractor will own the actuated mount outright. If Zirfram were to commercialize its communication system, it would have to negotiate separate ownership or use rights with the subcontractor.

In essence, an SBIR grant buys the government "billable time" for all work products performed for that specific project. So it's imperative that Zirfram strategically and proactively accounts for every step of its work that does or does not fall under the SBIR grant.

Zirfram could choose to spend its own money to employ a subcontractor. Or it would use SBIR funds for that, but then purchase the rights to the actuated mount with the company's money, even for a nominal sum. Another option is for Zirfram to agree at the outset that the subcontractor will give Zirfram exclusive royalty-free license [but not ownership] for the actuated mount.

Another valuable tactic is for Zirfram to protect its rights to any technical data, software and other intellectual property generated under the SBIR grant. There are different levels of data rights, but they all restrict the government's use of the data and, more importantly, restrict disclosing the data to others. Used properly, data rights could help Zirfram land additional government contracts while shutting out potential competitors.

An SBIR award can be a game changer for small businesses, enabling them to prove their concepts or build prototypes when funding from banks or venture capitalists is unavailable. But I have too often seen small businesses lose out because they didn't know — or know how — to assert control over their intellectual assets from the start.

The path to protecting those rights is treacherous. Be aware. Be aggressive. Be successful.

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Kari Barnes is an attorney with BuchalterNemer's intellectual property practice group in Irvine, California. She advises aerospace firms seeking to patent their technology created in

part with federal grants.