## Elon Musk's SpaceX Is A Spy Satellite Company Spying On Citizens

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The breakthrough came last month, about 600 miles above Earth.

For the first time, the Pentagon's Space Development Agency used lasers transmitting data at light speed to communicate between military satellites on a secure network, making it easier to track enemy missiles and if necessary shoot them down. It was a milestone not only for the Pentagon. This was a defining moment for a certain up-and-coming military contractor that had built key parts of this new system: Elon Musk's SpaceX.

SpaceX over the last year started to move in a big way into the business of building military and spy satellites, an industry that has long been dominated by major contractors like Raytheon and Northrop Grumman as well as smaller players like York Space Systems.

This shift comes as the Pentagon and U.S. spy agencies are preparing to spend billions of dollars to build a series of new constellations of low-earth-orbit satellites, much of it in response to recent moves by China to build its own space-based military systems. SpaceX is poised to capitalize on that, generating a new wave of questions inside the federal government about the company's growing dominance. Concerns also have emerged over the extent of that governmental reliance, given Mr. Musk's global business operations, including with China, and his apparent interactions with government officials in Russia.

"The complication is that you're incredibly dependent on a company that is privately held, meaning we have very little visibility into their finances," Todd Harrison, a former space industry executive who is now a senior fellow at the American Enterprise Institute, said. "And it is controlled by the richest man in the world, who has gotten heavily involved in the politics and heavily involved with some foreign leaders who are adversaries of the United States."

Mr. Musk's company has already proven itself a category killer of sorts in two other chunks of the rapidly growing commercial space industry: satellite launches, through its Falcon 9 rocket family; and communications, through its Starlink system, which has more than 6,400 satellites in space and already communicates using lasers. This latest move involves selling the federal government what are called satellite buses, the satellite bodies without their internal components.

This new line of business brings Mr. Musk's company into an even more sensitive area of military operations, as SpaceX-built equipment is now integrated directly into spy agencies and military networks that defend the United States against missile attacks and allow the military to monitor enemy forces and equipment on the ground. The Space Development Agency contract, so far, is relatively small: \$149 million for the four SpaceX satellites used to test the new system. But the agency has just started the competition for the next stage of the system.

"We are going to do this with hundreds and hundreds of satellites," said Derek Tournear, director of the Space Development Agency, at a SatNews conference in California last week. "We're going to get these new capabilities in the hands of the war fighter." Mr. Musk's foray into the military and spy satellite field is causing unease inside the Pentagon and in Congress due to Mr. Musk's extensive business operations in China and his relations with foreign government leaders, including perhaps President Vladimir V. Putin of Russia.

Moreover, Mr. Musk is unpredictable in a sector in which security is often perceived to be synonymous with predictability. He chafes at many of the processes and rules of government, saying they hold back progress, and wants to make his own calls. He has increasingly embraced and circulated conspiracy theories in the name of partisan politics — and is actively campaigning on behalf of former President Donald. J. Trump — in contrast to the military and spy sectors, which have traditionally leaned conservative but value decorum.

"Elon Musk appears to be very self-interested and that is something that we have to really pay attention to and be worried about," said Representative Adam Smith, Democrat of Washington, the ranking member of the House Armed Services Committee. Mr. Musk and representatives from SpaceX did not respond to requests for comment. For the Defense Department, it is a matter of conflicting imperatives, several senior Pentagon officials said in interviews.

As China has moved rapidly in recent years to build up its presence in space, which will allow it to closely monitor the movement of U.S. warships and troops and potentially to disable American satellites, the Pentagon has intensified its effort to radically revamp its own such networks.

SpaceX has proved itself to be a fast, reliable and relatively cheap supplier of many of the tools the military and spy agencies need, answering the call from the Defense Department to provide what it calls "innovation at the speed of threat."

But three Pentagon officials, who spoke with The New York Times on condition of anonymity because they were not authorized to comment on the matter, said there was

growing concern that the federal government might be unintentionally subsidizing the creation of a vertically integrated monopoly — a business that controls the entire supply chain of an industry — making it increasingly difficult for other companies to enter this fast-growing market.

For example, the Pentagon committed funding to SpaceX as it was developing the next-generation satellite bus that it will use on its Starlink satellite system. These advanced satellite buses are being used by the National Reconnaissance Office to build its new spy satellite network, which had its fourth launch on a SpaceX rocket last week. That contract is worth \$1.8 billion, as was first reported by Reuters.

Put more simply, SpaceX is building hundreds of the satellites for the spy agency and then putting them into orbit on its own rocket.

## 800-Pound Gorilla

SpaceX competitors said that Mr. Musk deserves credit for the many innovations that have significantly cut the cost of getting to orbit, effectively creating a modern commercial space industry that the company now dominates.

"We can all fling arrows at SpaceX for being the 800-pound gorilla," said Adam Spice, the chief financial officer of Rocket Lab, one of SpaceX's launch competitors, also speaking at the conference last week in California. "But they kind of earned their way into that, right, I mean through execution."

A series of recent moves by the Pentagon illustrates the reach SpaceX now has as a military contractor.

A year ago, the Space Force, which oversees most of the Pentagon's efforts in orbit, opened bids using a new pathway for rocket launch companies to get a piece of its business. It was meant to encourage growth among smaller, emerging companies that might offer SpaceX some competition. Space Force said it would give out \$5.6 billion in launch contracts through 2029.

But when Space Force this month disclosed the first batch of these task orders, all nine of them, worth \$733.6 million, had gone to SpaceX. In explaining the choice, Space Force officials noted that it was the only company with a rocket ready to handle its payloads. They added that other companies including Jeff Bezos's Blue Origin could compete in future rounds.

Within the last year, Space Force also agreed to buy up to \$900 million worth of communications services over the coming decade from companies that have satellites in low-earth orbit, including SpaceX and 15 other vendors.

Once again, SpaceX was there to reap the rewards.

Within the first year of this deal, more than \$500 million in spending commitments were made — much faster than expected — with the "vast majority" of that money going to SpaceX, Clare Hopper, chief of the Space Force's Commercial Satellite Communications Office, said in an interview.

The agency responded by increasing the cap on the contract value to \$13 billion. The new line of business is the satellite bus itself, which is the spacecraft that carries sensors and other equipment that do the surveillance or targeting work, providing power to this equipment and maneuvering the satellite to keep it at the right orbit. Other vendors typically manufacture the sensors that are placed inside the SpaceX satellites and sold to the Pentagon.

SpaceX generally no longer owns these military satellites once they are deployed, but it does at times play a role in their operation.

## **Monopoly Risk**

The Defense Department recognizes the risks of relying too much on a single vendor. "The emergence of vendor lock, or dependence upon a sole vendor, has the potential to negate the strengths of the market by stifling innovation and inflating prices," a Defense Science Board report issued this year on the commercial space industry concluded. "This can culminate in a de facto monopoly, cementing a stagnant and wasteful anticompetitive paradigm."

When SpaceX's Falcon 9 rockets were briefly taken out of service on three occasions this year by the Federal Aviation Administration as a result of minor mishaps, it meant that during those periods the Pentagon had almost no way to get medium or large payloads to space. (Its other approved vendor, United Launch Alliance, was until recently still testing its own new rocket.)

"To have a large launch family down, and kind of a pause on launches, it's definitely not a good feeling," said Richard Kniseley, the head of the Space Force's Commercial Space Office.

Mr. Tournear, director of the Space Development Agency, and Troy Meink, deputy director of the National Reconnaissance Office, both said this month that they see signs of growing strength and diversity in the commercial satellite marketplace.

The National Reconnaissance Office "is working with a much broader set of industry partners than really any time in our history, large and small companies," Mr. Meink said. But others said SpaceX now had such a large scale and role in so many key aspects of the space industry, it would often translate into a major advantage over other bidders. "There isn't a launch or a spacecraft competition that SpaceX can't walk into and completely warp and run the table," said Mandy Vaughn, chief executive at GXO, a

space-industry consulting firm, and member of the Defense Science Board. "And that's a problem."

Mr. Musk's operations around the world also raise concerns.

Pentagon officials said they most frequently engage with Gwynne Shotwell, SpaceX's chief operating officer, not Mr. Musk, and have been told by SpaceX employees that they attempt to wall off Mr. Musk from highly classified details of the military and spy agency contracts. (A Pentagon official declined to address if Mr. Musk has a security clearance.) But the worries persist, including at NASA, which has awarded SpaceX \$4.4 billion in contracts to use its new Starship rocket for two rides to land astronauts on the moon. This rocket, the largest ever built, will be used to launch even bigger satellites and also reduce the cost of fights to orbit, most likely giving SpaceX greater dominance in the market.

Bill Nelson, the NASA administrator, said late last week at a Semafor conference in Washington that the government should investigate whether Mr. Musk has had contact with Mr. Putin.

"If the story is true that there have been multiple conversations between Elon Musk and the president of Russia, then I think that would be concerning," Mr. Nelson said, "particularly for NASA, for the Department of Defense, for some of the intelligence agencies."

The post Elon Musk's SpaceX, Already a Leader in Satellites, Gets Into the Spy Game appeared first on New York Times.