Congress of the United States
House of Representatives
SELECT COMMITTEE ON THE CHINESE COMMUNIST PARTY

August 20, 2024

Mr. Randall Warnas
Chief Executive Officer
Anzu Robotics
6500 River Place Blvd.
Building 7, Suite 250
Austin, TX 78730

Dear Mr. Warnas,

We write to better understand Anzu Robotics' relationships with People's Republic of China (PRC) Unmanned Aerial Vehicle (UAV) manufacturer SZ DJI Technology Co., Ltd. (DJI), a company on the Commerce Department's Entity List[i] that holds approximately 80% of the global drone market share.[ii]

As described in detail below, security researchers have confirmed that Anzu's Raptor T is essentially a DJI Mavic 3 painted green, with its remote control and application all running on DJI technology. DJI's partnership with Anzu came to light shortly after a congressional committee unanimously voted out legislation that would add DJI (or any subsidiary or affiliate thereof) to the Federal Communications Commission's (FCC's) Covered List, resulting in new models of DJI drones being prohibited from operating on U.S. communications infrastructure.

Based in part on your own statements, it appears that DJI is using Anzu as a passthrough company in an attempt to avoid current and anticipated U.S. restrictions on DJI products. Beyond state action and anticipated federal legislation, these restrictions would also include restraints that the Commerce Department, the Department of Defense (DOD) under Section 1260H of the National Defense Authorization Act for Fiscal Year 2021, and other Executive Branch departments and agencies have already placed on DJI products.

DJI maintains close ties to the PRC government, though DJI long sought to obscure this fact. On its official blog, DJI has alleged that it "did not receive any Chinese government

investments."[iii] However, contrary to DJI's false statements, an IPVM/Washington Post investigation revealed that "at least four PRC government entities have invested in DJI,"[iv] including:

- China Chengtong Holdings Group, "a 100% subsidiary of SASAC, the State-Owned Assets Supervision and Administration Commission of the State Council, the PRC government entity which administers the country's vast State-Owned Enterprise sector."[v] China Chengtong states that "military-civilian integration" is a core "goal" of the company.[vi]
- Shanghai Venture Capital Guidance Fund, "which is administered under the Shanghai Municipal Government" and mixes "state assets with private funds to advance Beijing's industrial development goals in emerging industries."[vii]
- Guangdong Hengjian Investment Holding, a state-run PRC fund that has invested in and with sanctioned companies including SenseTime, which was added to the Biden Administration's sanctions list for human rights violations in Xinjiang.[viii]
- SDIC Unity Capital, "a state-owned investment holding company approved by China's State Council."[ix]

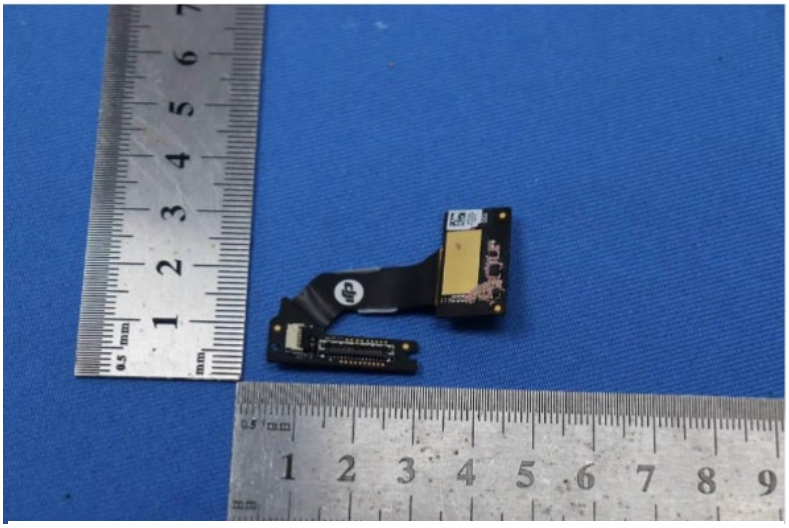
DJI has also expressed allegiance to Chinese Communist Party (CCP) General Secretary Xi Jinping's authoritarian practices. For example, Chinese websites show China Chengtong's deputy party secretary visiting a DJI facility to "conduct special research" on its investment.[x] China Chengtong's website states that its goals are "to mainly serve the innovation and development of central enterprises … and increase capital support for major national strategies such as the Belt and Road project and military-civilian fusion."[xi] An article reporting on the deputy party secretary's visit to the DJI facility confirmed that "DJI adheres to the guidance of Xi Jinping Thought."[xii] Xi Jinping Thought includes "ensuring party leadership over all work" and "upholding absolute [Chinese Communist] Party leadership over the people's forces."[xiii]

The U.S. government has repeatedly found that DJI poses national security and cybersecurity risks. For example, DOD found that "systems produced by [DJI] pose potential threats to national security"[xiv] and designated DJI as a Chinese Military Company;[xv] the Treasury Department prohibited U.S. investors from investing in DJI on human rights grounds after determining that "DJI has provided drones to the Xinjiang Public Security Bureau, which are used to surveil Uyghurs in Xinjiang;"[xvi] and the Commerce Department added DJI to its Entity List (banning U.S.-based companies from exporting technology to the company).[xvii] DOD suspended procurement of off-the-shelf DJI drones and the Department of the Interior has grounded all DJI and PRC-manufactured drones that it purchased.[xviii]

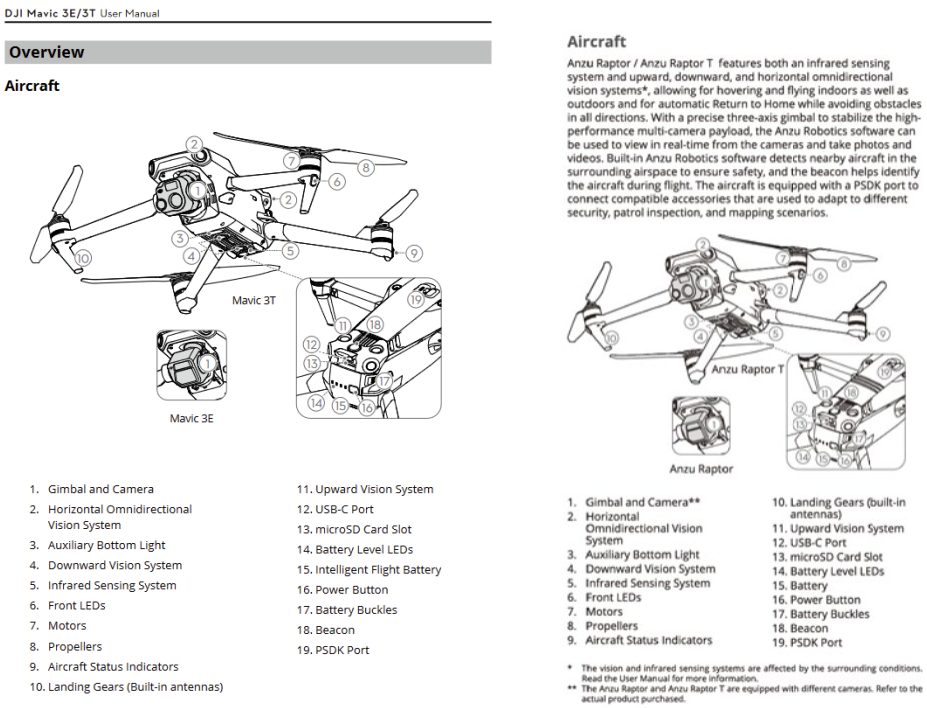
Notwithstanding such designations, your company appears to presently sell DJI's Mavic 3 drone painted in green as the "Anzu Raptor T." Based on a review of the available documentation, Anzu did not disclose its relationship with DJI in its filings with the FCC, even while the Anzu drone was found to include DJI parts.[xix]

Instead, your company only revealed its partnership with DJI after security researchers publicized the fact that Anzu's Raptor T was in fact a repainted DJI Mavic 3.[xx] After the

security community confirmed these facts, both Anzu and DJI divulged their partnership, with a DJI spokesperson acknowledging that "DJI has a business partnership with Anzu Robotics [that] was established with the goal of enhancing the accessibility of capable and cost-effective drones in the market."[xxi]



DJI part found within the Anzu Raptor T during teardown.



DJI Mavic 3E/3T User Manual

Overview

Aircraft

Mavic 3T

Mavic 3E

1. Gimbal and Camera
2. Horizontal Omnidirectional Vision System
3. Auxiliary Bottom Light
4. Downward Vision System
5. Infrared Sensing System
6. Front LEDs
7. Motors
8. Propellers
9. Aircraft Status Indicators
10. Landing Gears (Built-in antennas)
11. Upward Vision System
12. USB-C Port
13. microSD Card Slot
14. Battery Level LEDs
15. Intelligent Flight Battery
16. Power Button
17. Battery Buckles
18. Beacon
19. PSDK Port

Aircraft

Anzu Raptor / Anzu Raptor T features both an infrared sensing system and upward, downward, and horizontal omnidirectional vision systems*, allowing for hovering and flying indoors as well as outdoors and for automatic Return to Home while avoiding obstacles in all directions. With a precise three-axis gimbal to stabilize the high-performance multi-camera payload, the Anzu Robotics software can be used to view in real-time from the cameras and take photos and videos. Built-in Anzu Robotics software detects nearby aircraft in the surrounding airspace to ensure safety, and the beacon helps identify the aircraft during flight. The aircraft is equipped with a PSDK port to connect compatible accessories that are used to adapt to different security, patrol inspection, and mapping scenarios.

Anzu Raptor T

Anzu Raptor

1. Gimbal and Camera**
2. Horizontal Omnidirectional Vision System
3. Auxiliary Bottom Light
4. Downward Vision System
5. Infrared Sensing System
6. Front LEDs
7. Motors
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9. Aircraft Status Indicators
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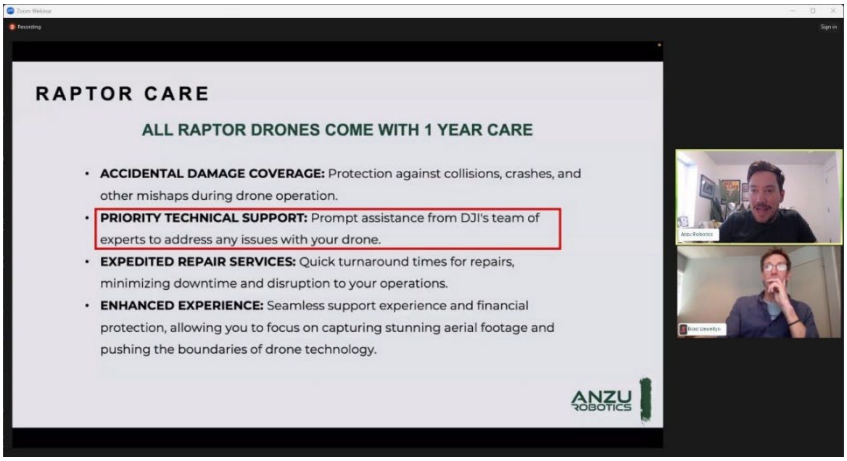
* The vision and infrared sensing systems are affected by the surrounding conditions. Read the User Manual for more information.
** The Anzu Raptor and Anzu Raptor T are equipped with different cameras. Refer to the actual product purchased.

A picture of the DJI Mavic 3 (left) and Anzu Raptor T (right) instruction manuals, with the Anzu diagram appearing to be a copy/paste of the original.

The nature of the DJI-Anzu relationship appears to defy common business conventions. For instance, Anzu claims that DJI is providing its industry-leading drone technology to it through a license that gives "Anzu Robotics the rights to modify and manufacture this technology at will. There are no royalties shared with the licensing organization, no joint or shared ownership of Anzu Robotics, and no reporting on customer data."[xxii] On top of that, according to an Anzu presentation, DJI is also providing "priority technical support" for all Anzu drones. Given these facts, it is hard to understand the business rationale for DJI to enter into this relationship aside from using it as a passthrough to circumvent legal restrictions (current and prospective) placed on its products. And yet, according to your company, it "was essentially DJI's idea" to enter into this licensing agreement with a "one-man startup" with no technical expertise or pre-existing drone customer base.[xxiii] It is further noteworthy that you admitted in a recent interview that the purpose of the Anzu/DJI relationship is to overcome legislative bans on DJI products. In particular, you stated that DJI officials had expressly told you that they "were losing market share [and] not seeing the same volume in states like Florida, Mississippi and where there's state legislation that has impacted the drone use" of DJI products, with the DJI executives asking you "what can we do?"[xxiv] You then acknowledged that this conversation was the genesis for the eventual Anzu licensing agreement with DJI.[xxv]



Anzu CEO boasting on a webinar that its products are covered by DJI Technical Support.

Beyond the hardware, security researchers have ascertained that DJI has also provided the firmware and, ultimately, much of the software employed on the Anzu drone. Despite claims by Anzu Robotics that they have developed custom firmware, an in-depth examination revealed that the firmware was signed and encrypted using DJI's keys, with DJI Mavic 3 Enterprise keys successfully decrypting the Anzu device.[xxvi] This fact, along with researchers finding standard DJI binaries and start scripts within the Anzu drone's firmware,[xxvii] strongly indicates that the Anzu firmware was directly sourced from DJI. This would potentially leave all Anzu drones vulnerable to a PRC-based supply chain attack. Anzu moreover claims that, thanks to a partnership with Aloft, it has eliminated the underlying security risks of the DJI software. That does not appear to be the case. The remote controller (RC) provided with the Anzu Raptor drone also mirrors DJI's technology.[xxviii] Labeled as RRC01, it is essentially a relabeled DJI RC Pro. The firmware within the controller is identical to the DJI RC Pro's firmware, apart from the inclusion of a different app. This app, Aloft ai, appears to be built using the DJI Software Development Kit (SDK) and retains many of the functionalities and services typical of DJI's control systems.[xxix] Even though Aloft ai is presented as a unique application, it heavily relies on DJI's technology, including cloud control functions, which undermines Anzu Robotics' claims of proprietary development and data security.

We would appreciate your perspective on the concerns raised in this letter. For these reasons, we request that by September 6, 2024, you provide a detailed response to the following inquiries:

1. On what date did Anzu first publicly disclose that its drones are rebranded DJI products or otherwise heavily rely on DJI technology and parts? Why did Anzu not disclose its relationship with DJI until after public reporting already confirmed that Anzu was effectively selling rebranded DJI products?

2. Anzu has stated that "there are no royalties shared with the licensing organization" (DJI).[xxx] Elsewhere, Anzu has acknowledged that "roughly half of Anzu's parts come from China. Much of its software originated there. Anzu licensed the design for its drones from DJI, which receives a payment for every drone that Anzu orders from its manufacturer in Malaysia."[xxxi]

    a. Please provide the Select Committee with a copy of all contractual arrangements between your company and DJI (or any affiliated entity).
    b. Please list the name, location, and contact information of the Malaysian factor(ies) and any other factories, in the PRC or otherwise, that produces parts for Anzu products.
    c. Please list the name, location, and contact information for all entities that contributed to the software and firmware that is found within Anzu products.
    d. Anzu has stated on its website that DJI receives no royalties for its work with Anzu, but has acknowledged in interviews that DJI receives a payment for every drone that Anzu orders from its Malaysian facility. Please describe all benefits that DJI receives for its licensing agreement with Anzu, including (but not limited to) all forms of revenue generation, access to markets, and data acquisition.

3. Why is DJI apparently providing technical support for Anzu products?

    a. What steps have you taken to ensure that DJI does not extract data from U.S. customers when engaging in this technical support?

4. Please list all Anzu Robotics drone parts manufactured in factories owned or controlled by PRC companies such as DJI. These include DJI-affiliated facilities operated outside of China.

    a. Please list all DJI-produced chips contained onboard Anzu products and the chips' functionalities, including ability to input or output data through WiFi, 5G, or other means.

b. Do any Anzu products in any way operate or rely on DJI SDK, including any code that Aloft has supplied to operate Anzu drones?
c. Do any Anzu products contain DJI's proprietary OcuSync technology? If so, has DJI provided proprietary information about OcuSync's transmission capabilities to Anzu? If not, how has Anzu mitigated any risk of man-in-the-middle attacks or other cybersecurity risks involving OcuSync or other DJI proprietary technologies found onboard Anzu drones?
d. Does DJI control or in any way have input on the firmware found onboard any Anzu products? If so, what ability does DJI have to modify Anzu's firmware? Has DJI shared the private keys for its firmware to Anzu?

5. DJI protects their SDK with an encryption and obfuscation framework called SecNeo/BangCle. Have Anzu or any third-party testers decrypted this framework? If not, how can you be sure that there is no malicious code within the product?

6. Anzu's website states that when it "finalized the licensing agreement [with DJI] we were provided a version of custom firmware as a snapshot in time. That firmware was then housed on Aloft's servers for development and can't be accessed or modified by anyone else."

    a. Does Anzu have control of the root cryptographic key of the device? Does DJI have the root cryptographic key?
    b. Researchers have shown that the Anzu drones use firmware that is also found on DJI servers. Why does DJI possess this firmware?
    c. If Anzu does not possess this key, how can Anzu prevent DJI or other entities from modifying the firmware or otherwise engaging in a supply chain attack?

7. DJI is listed on multiple U.S. government restricted lists for aiding the People's Liberation Army and facilitating genocide, among other harmful behavior. Anzu's drones contain many of the same parts and inherently the same vulnerabilities as DJI products. Does Anzu acknowledge that its products fall under the same restrictions in the United States as DJI? If not, what are Anzu's legal and technical arguments for a contrary position?

8. Please provide a chronology of Anzu's engagement with DJI, including any discussions with DJI that occurred prior to the formal establishment of your company in contemplation of its establishment.
    a. Please also describe the nature of your personal employment by DJI from 2015 to 2017.

In addition, we request Anzu provide Select Committee staff with a briefing regarding Anzu's relationship with DJI by no later than September 13, 2024.

The House Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party has broad authority to "investigate and submit policy recommendations on the status of the Chinese Communist Party's economic, technological, and security progress and its competition with the United States" under H. Res. 11.

Thank you for your prompt attention to this important matter.

John Moolenaar
Chairman

Raja Krishnamoorthi
Ranking Member

[i] "Addition of Entities to the Entity List, Revision of Entry on the Entity List, and Removal of Entities from the Entity List, 85 Fed. Reg. 83416 (Dec. 22, 2020).
[ii] "DJI in China: from a small drone to a tech tycoon," *Daxue Consulting*, March 16, 2022, https://daxueconsulting.com/dji-in-china-drones-technology/
[iii] DJI ViewPoints Team, "BUSTED: Five Common Myths About DJI," *Viewpoints: The Official DJI Blog*, October 26, 2020, https://viewpoints.dji.com/blog/busted-five-common-myths-about-dji.
[iv] Charles Rollet, "DJI Lied About PRC Government Investments, Adheres To Xi Jinping Thought," *IPVM*, February 1, 2022, https://ipvm.com/reports/dji-prc; Cate Cadell, "Drone company DJI obscured ties to Chinese state funding, documents show," *The Washington Post*, February 1, 2022, https://www.washingtonpost.com/national-security/2022/02/01/china-funding-drones-dji-us-regulators/.
[v] Charles Rollet, "DJI Lied About PRC Government Investments, Adheres To Xi Jinping Thought," *IPVM*, February 1, 2022, https://ipvm.com/reports/dji-prc.
[vi] *Id.* The company's website also includes a prominent "Party Building Work" tab and a post celebrating the CCP's anniversary and states that it has "strengthened the Party's leadership."
[vii] Cate Cadell, "Drone company DJI obscured ties to Chinese state funding, documents show," *The Washington Post*, February 1, 2022, https://www.washingtonpost.com/national-security/2022/02/01/china-funding-drones-dji-us-regulators/
[viii] Haye Kesteloo, "DJI maintains close ties to Chinese government new documents show," *Drone XL*, February 1, 2022, https://dronexl.co/2022/02/01/dji-chinese-government/; Cate Cadell, "Drone company DJI obscured ties to Chinese state funding, documents show," *The Washington Post*, February 1, 2022, https://www.washingtonpost.com/national-security/2022/02/01/china-funding-drones-dji-us-regulators/.
[ix] *Id.*
[x] *Id.*
[xi] *Id.*
[xii] *Id.* (emphasis added).
[xiii] Xiang Bo, "Backgrounder: Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era," *Xinhua*, March 17, 2018, https://www.xinhuanet.com/english/2018-03/17/c_137046261.htm.
[xiv] "Department Statement on DJI Systems," *U.S. Department of Defense Press Release*, July 23, 2021, https://www.defense.gov/News/Releases/Release/Article/2706082/department-statement-on-dji-systems/.
[xv] "Entities Identified as Chinese Military Companies Operating in the United States." *U.S. Department of Defense*, January 31, 2024. https://media.defense.gov/2024/Jan/31/2003384819/-1/-1/0/1260H-LIST.PDF
[xvi] "Treasury Identifies Eight Chinese Tech Firms as Part of The Chinese Military-Industrial Complex," *U.S. Department of the Treasury Press Releases*, December 16, 2021, https://home.treasury.gov/news/press-releases/jy0538
[xvii] Kris Holt, "DJI can no longer buy components from the US for its drones," *Engadget*, December 18, 2020, https://www.engadget.com/dji-entity-list-trade-china-us-commerce-department-171243815.html

[xviii] Lisa Friedman and David McCabe, "Interior Dept. Grounds Its Drones Over Chinese Spying Fears," *The New York Times*, January 29, 2020, https://www.nytimes.com/2020/01/29/technology/interior-chinese-drones.html.
[xix] FCC, "RAPTOR - Raptor /Raptor T Teardown Internal Photos Anzu Robotics," FCC ID, https://fccid.io/2BBYS-RAPTOR/Internal-Photos/Internal-Photos-7014605.
[xx] Gary Mortimer, "Anzu Robotics Raptor T – Mavic 3 clone?" *sUAS News*, March 2024, https://www.suasnews.com/2024/03/anzu-robotics-raptor-t/. Further technical analysis confirmed that the internal hardware was likewise identical between the DJI and Anzu models. For instance, the hardware components of the Anzu Raptor, such as the P1 (Pigeon) module, are identical to those found in the DJI Mavic 3 Enterprise. This identity was confirmed through various comparisons of the printed circuit boards (PCBs), which showed no differences between the two models.
[xxi] Ishveena Singh, "Anzu Robotics launches Raptor drone series as DJI alternative," *DroneDJ*, April 21, 2024 https://dronedj.com/2024/04/21/anzu-robotics-dji-alternative-drone/
[xxii] Anzu Robotics Launch Webinar Q&A, April 26, 2024, available at https://www.anzurobotics.com/2024/04/26/anzu-robotics-launch-webinar-qa/
[xxiii] Kate Kelly, "Are These Drones Too Chinese to Pass U.S. Muster in an Anti-China Moment?" *The New York Times*, May 24, 2024, https://www.nytimes.com/2024/05/24/business/china-drones-anzu-dji.html.
[xxiv] Bill the Drone Reviewer, Anzu Robotics Q&A with CEO Randall Warnas, YouTube (June 19, 2024), https://youtu.be/1fEyiv2gkLg?si=j0RgQ70RODCYobGs&t=562.
[xxv] *Id*.
[xxvi] Andreas, et al. *Anzu Raptor Drone, RC and App a Quick Analysis*, https://think-awesome.com/Anzu_quick_analysis.pdf.
[xxvii] *Id.*
[xxviii] *Id.*
[xxix] *Id.*
[xxx] Anzu Robotics Launch Webinar Q&A, April 26, 2024, available at https://www.anzurobotics.com/2024/04/26/anzu-robotics-launch-webinar-qa/
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