

Is it a Star? Is it a Huge Balloon? It's a Rare Glimpse of China's Digital Silk Road

Patrice Flynn¹, PhD

Abstract

The People's Republic of China is well on its way toward building a *Digital Silk Road* that will facilitate seamless planetary e-commerce, surveillance, and telecommunications by 2030. China plans to use this universal digital system to enable social control, geolocation of its transnational infrastructure, and data reconnaissance. The West got a rare glimpse of the Digital Silk Road during the last week of January 2023 when a mysterious white balloon appeared over Canada and the United States. Instead of the West embracing the sighting as a moment of scientific discovery, the Pentagon shot down the smoking gun. This paper introduces the origins and aims of China's Digital Silk Road and provides sample applications in nations that are official partners on China's Silk Road. The balloon sighting offers valuable insights for policymakers, businesspeople, scholars, and citizens, who are curious about the new geopolitical and economic state of the world and China's ascent on the global stage.

Keywords: China's Digital Silk Road; Belt and Road Initiative; BeiDou-3 Global Navigation Satellite System; AI-powered land-, maritime-, and space-based Silk Road infrastructure

Stargazers in Montana, Canada and the Aleutian Islands saw a strange white balloon floating 60,000 feet above the Earth's surface during the last week of January 2023. After the North American Aerospace Defense Command (NORAD) took a closer look, Pentagon spokesperson Brigadier General Ryder reported that the object was a Chinese surveillance balloon, scanning the territory below (Doyle, 2023; Stewart and Ali, 2023). The sighting offered a rare glimpse into China's *Digital Silk Road*, a sophisticated telecommunications infrastructure built to facilitate seamless planetary e-commerce and surveillance. Viewers saw a remotely-maneuverable airship that travels in low-earth orbit on wind currents, conducting data reconnaissance on behalf of a host of agencies in the People's Republic of China (PRC).

It is not often that the West gets a glimpse of China's digital space-based equipment. This could have been a great opportunity to learn, a moment of discovery. But instead of the U.S. Secretary of State going to Beijing on February 5-6 to discuss the significance of the aerial orb, diplomacy yielded to military action. This article introduces the origins and aims of China's Digital Silk Road, its integration into the broader new Silk Road, and sample applications in nations that have become official partners on China's new Silk Road since its inception in 2013. The implications of the balloon sighting provide a wakeup call for businesspeople, policymakers, scholars, and citizens curious about the new geopolitical and socioeconomic state of the world and China's ascent on the global stage.

1. The Digital Silk Road

For several years, the PRC has been expanding its ambitious new Silk Road (一带一路) to include a digital route encircling the planet. The Digital Silk Road (originally called the Information Silk Road) is not just a global surveillance tool. China envisions a system that will facilitate seamless global communications connectivity, data reconnaissance via satellites, and swift transfers of data through cross-border undersea and terrestrial fiber optic cables.

¹ Bolte School of Business, Mount St. Mary's University

China is embedding AI-powered capabilities into its land-, maritime- and space-based Silk Road infrastructure projects ranging from new airports to deep seaports, high-speed rail lines, expressways, data centers, power plants, pipelines, rare earth metal mines, special economic zones, and space and satellite centers.

The infrastructure includes the BěiDǒu-3 Global Navigation Satellite System, a state-of-the art geolocation network of 35 satellites that enables highly accurate navigation, positioning, tracking, mapping, and timing services across planet Earth. The system supports a range of applications including wireless communications, e-commerce, financial payments, space travel, and more. Since 2020, dozens of governments and thousands of businesses rely on BěiDǒu-3 for digital connectivity, including handheld consumer electronics such as Apple iPhones, Qualcomm Snapdragon mobile platforms, and Samsung phones and tablets. The build-out has only just begun (see Flynn 2023).

The National Endowment for Democracy reports that China conducts AI-powered surveillance in 97 countries, of which 36 are partners on China's new Silk Road (Feldstein, 2022). These partnerships enable the PRC to test out digital capabilities as evident in the following initiatives.

- Serbia's adoption of the China UnionPay financial payment network used by ATMs, Visa, Mastercard, and commercial banks;
- mass biometric surveillance of citizens in Iran, Thailand, Vietnam, Kenya, Laos, Mongolia, Uganda, Uzbekistan, and Zimbabwe;
- information security systems and AI-powered robotics installed in India, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan;
- envisioned space stations in South Africa, Saudi Arabia, Egypt, Algeria, Morocco, Tunisia, and the United Arab Emirates;
- surveillance of 229 million citizens for Pakistan's Air Force and Inter-Services Intelligence Directorate using BěiDǒu restrictive servers; and
- Russia's adoption of China's yuan and Cross-Border Interbank Payment System (CIPS) since access to the Belgium-based SWIFT clearing system was denied on March 3, 2022.

If successful, China's digital system will further advance Beijing's hegemony as a geopolitical and economic power.

2. Latin America

While the Pentagon speculated that the balloon floating over Canada and the U.S. was launched from the Hainan Province in China by the People's Liberation Army's (PLA) Strategic Support Forces, they also reported the sighting of a Chinese surveillance balloon over Latin America (Nakashima, Harris, Hudson and Lamothe, 2023). The latter may have been launched from China's Satellite and Space Station in Argentina. This \$50 million satellite and space mission control station is situated on a 494-acre isolated desert in Argentina with a 450-ton giant metal antenna, jutting 16 stories above Quintuca, Patagonia that began transmission in March 2018.

Space power is critical for the PRC as articulated by the China State Council Information Office's white paper: "To explore the vast cosmos, develop the space industry and build China into a space power is a dream we pursue unremittingly" (PRC, 2016:1).

Toward this aim, the PLA's China Satellite Launch and Tracking Control General selected Argentina's Neuquén province for the satellite hub to monitor satellite and space missions round the clock. The station serves China well and led to Argentina becoming an official partner on China's One Belt One Road in 2022 with promises of new infrastructure projects and an expansion of the Argentine-based space station.

3. Implications

Given all our knowledge about China's digital capabilities, did anyone really think the January sighting was of a lost, off-course Chinese surveillance balloon? Space engineers could readily identify the contents of this kind of balloon most likely outfitted with radio signals, electrooptical sensors, digital cameras, and solar-powered satellite transmission capabilities. Such balloons are a minor piece of the bigger Digital Silk Road.

Of more interest is why citizens in the West were given a glimpse of the balloon. Dean Cheng, senior advisor to the China program at the U.S. Institute of Peace, suggested, “This is a way to test how the other side respond[s], not in a military sense. But politically, what do you do about it? Do you keep it quiet?” (Holland, Martina and Brunnstrom, 2023).

The balloon launch may have been China’s way of testing the West to see how it will act in this new age of sophisticated surveillance in which we are living. The White House could have gathered a group of scientists from the U.S. Air Force, NASA, and SpaceX to carefully bring this curious piece of hovering scientific equipment down to Earth to examine fully. Rather than embracing a moment of discovery, the U.S. military shot the orb with a \$440,000 Sidewinder missile. Was that really necessary? I’m not purporting to know what this viewing was all about, but I would have hoped that diplomacy could have prevailed. Instead, the U.S. returned to old fashioned demonstrations of military might at the expense of scientific inquiry.

Imagine if U.S. Secretary Blinken had brought a piece of the floating balloon with him on his diplomatic trip to Beijing scheduled for February 5-6. He could have used diplomatic channels to spur a discussion about China’s Digital Silk Road and its attendant surveillance apparatus in low-Earth and geostationary orbits. Instead, the Secretary canceled his trip, and the Pentagon destroyed the smoking gun. The spectacle highlighted, once again, how Washington views U.S. military supremacy as an article of faith, defended by the foreign policy establishment. Former Colonel Andrew Bacevich augurs: “As the world continues to “shrink” thanks to globalization and technological progress (and also to expand into space and cyberspace), the reach of the U.S. military forces grows accordingly, a process that stirs little controversy” (2023:12).

It was a missed opportunity because the land, maritime and space system the PRC is building under the aegis of China’s Silk Road national rejuvenation initiative is transforming the very structure of power across the globe. In time, the commercial, scientific, governance, and intelligence applications of China’s new Silk Road, its space exploration, and universal digital infrastructure may define the future of global capitalism. President Xi Jinping is leading an immense scientific and space undertaking of which residents in Canada and the United States got a rare glimpse while gazing upwards at a huge white balloon floating in space in early 2023. Sadly, it was a missed opportunity to learn more about China’s vision for the future and its scientific capabilities.

References

- Bacevich, Andrew J. March/April 2023. “The Reckoning That Wasn’t: Why America Remains Trapped by False Dreams of Hegemony.” *Foreign Affairs*. pp. 6-21.
- Cooper, Helene and Edward Wong. February 5, 2023. “U.S. Shoots Down a Balloon China Sent to Surveil.” *The New York Times*, p.1, 20.
- Doyle, Gerry. February 2, 2023. “Factbox: High-altitude Spy Balloons: Old Concept, New Applications. *Reuters*. <https://www.reuters.com/world/high-altitude-spy-balloons-old-concept-new-applications-2023-02-03/>.
- Feldstein, Steven. June 2022. “The Global Struggle Over AI Surveillance.” Washington, DC: National Endowment for Democracy. <https://www.ned.org/wp-content/uploads/2022/06/Global-Struggle-Over-AI-Surveillance-Emerging-Trends-Democratic-Responses.pdf>.
- Flynn, Patrice. March 2023. “The Making of China’s Digital Silk Road: A Universal Surveillance, Financial and Telecommunications Infrastructure.” *The Working Paper Series in International Studies*. Mount St. Mary’s University. No. 2023-02.
- Holland, Steve, Michael Martina and David Brunnstrom. February 3, 2023. “China’s balloon over the U.S. seen as bold but clumsy espionage tactic.” *Reuters*. <https://www.reuters.com/world/us/chinas-balloon-over-us-seen-bold-clumsy-espionage-tactic-2023-02-04/>.
- Nakashima, Ellen, Shane Harris, John Hudson and Dan Lamothe. February 7, 2023. “Chinese balloon part of vast aerial surveillance program, U.S. says.” *The Washington Post*. <https://www.washingtonpost.com/national-security/2023/02/07/china-spy-balloon-intelligence/>.
- PRC State Council. December 28, 2016. White Paper on Space Power. http://english.www.gov.cn/archive/white_paper/2016/12/28/content_281475527159496.htm.

Stewart, Phil and Idress Ali. February 3, 2023. "Chinese spy balloon changes course, floating over central United States-Pentagon." *Reuters*. <https://www.reuters.com/world/us/chinese-spy-balloon-changes-course-floating-over-central-united-states-pentagon-2023-02-03/>.