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China's armed drones appear built from stolen data from US cyber intrusions

BY <u>BILL GERTZ</u> on <u>DECEMBER 29, 2015</u> in <u>ASIA TIMES NEWS & FEATURES</u>, <u>CHINA</u>, <u>AT TOP WRITERS</u>, <u>BILL GERTZ</u>, <u>THE CHINA CHALLENGE</u>

China's vibrant military blogosphere presented a video this month revealing a missile-firing unmanned aerial vehicle in action, dropping bombs against ground targets.

The Caihong-4, or CH-4, unmanned aerial vehicle (UAV) is a testament to the remarkable success of China's military in copying vital high-technology weapons that currently are considered among the most cutting edge arms systems used in modern combat operations for both ground strikes and intelligence-gathering.

The one-minute, 37-second online posting shows takeoffs and landings of the drone. It was uploaded to the video-sharing website Youku Dec. 17. According to the blogger who posted it, the video was produced by 11th Academy of the China Aerospace Science and Technology Corporation, a drone developer and manufacturer

The drone is shown launching two different types of bombs and the impact of their explosions on the ground. One is labeled a 50 kilogram, satellite-guided bomb and the second is an unguided CS/BBE2 50 kilogram aerial fragmentation bomb.





Photo analysis of the CH-4 shows the remote-controlled aircraft is very similar to the US military's front-line combat UAV, the MQ-9 Reaper.

Both aircraft are about the same size and wing-span and both sport identical V-tails, landing gear, imaging pods and propeller-driven rear engines.

The only major difference is the Predator's engine intake is located on top of the aircraft while the CH-4's is underneath.

There is no evidence the Chinese directly stole design information through cyber attacks against the Reaper manufacturer, General Atomics Aeronautical Systems, Inc.

But in the words of a former National Security Agency director, retired Gen. Keith Alexander, the likelihood exists Beijing acquired drone designs and technology through cyber espionage. "There are two types of companies: those that have been hacked, and know it, and those that have been hacked and don't know it," Alexander said in a recent speech.

The Pentagon's Defense Science Board warned in a 2012 report on automated defense



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systems that China was aggressively pursuing unmanned aircraft development and were "copying other successful designs" to speed up their drone programs. "The scope and speed of unmanned-aircraft development in China is a wake up call that has both industrial and military implications," the report said.

China in 2012 lagged behind US drone programs but has "clearly leverage all available information on Western unmanned systems development."

In three years since the report was published the Chinese have managed to close the gap with the United States on drone development.

Additionally, Chinese military writings also indicate Beijing is working to counter US drones by interrupting their communications links. The May 2015 issue of the technical journal "Winged Missiles," published by the PLA's Electrical Engineering Institute, discussed how its done.

"Detecting a UAV system's remote link signals is important for countering UAVs," the authors note.

On Dec. 1, another Chinese website, the social media outlet Tencent News, published a report on Chinese drones, including photos of the Gongji-1 attack drone, made by the Chengdu Aircraft Industry Group. Like the CH-4, the GJ-1 bears a striking resemblance to the Reaper. The report stated that the GJ-1 has been deployed with a PLA air force UAV unit in the Gobi desert since 2012. The report showed the remotely-piloted controls and command system used by the PLA to operate the drones.

Details of pervasive Chinese military cyber theft were revealed in classified documents made public by former NSA contractor Edward Snowden.

An undated briefing slide from around 2010 titled "Chinese Exfiltrate Sensitive Military Technology" reveals that Chinese hackers had conducted more than 30,000 cyber attacks, including more than 500 described as "significant intrusions in DoD systems."

The attacks penetrated at least 1,600 network computers and compromised at least 600,000 user accounts. The damage was assessed as costing more than \$100 million to gauge the damage and rebuild the networks.

The systems compromised included a range of commands and agencies, including the US Pacific Command, the US Transportation Command, the US Air Force, US Navy including missile navigation and tracking systems and nuclear submarine and anti-air missile designs.

In all the Chinese obtained an estimated 50 terabytes of data, an equivalent to five times the holdings of the US Library of Congress, the American national library considered the second largest library in the world with 23.9 million catalogued books.

Separate NSA briefing slides identified 13 separate Chinese cyber intelligence-gathering operations that NSA traced to the 3rd Department of PLA General Staff Department, the electronic military spying service known as 3PLA.

Most of the hacking operations that NSA described under the code name Byzantine Hades involved the targeting of defense information, defense contractors and weapons systems.

In its cyber spying, the Chinese were able to exploit Facebook to penetrate target computers. After fooling unwitting computer users into responding to emails linked to a Facebook post, the Chinese hackers were able to implant malicious software that gave them access to user accounts and ultimately to defense secrets.

Additionally, the military hackers used "hop points" – a computer that is taken over and used as a staging area for a targeted attack. Many of the hop points were in the United States as part of efforts to disguise the Chinese origin of the cyber attacks.

Drones are not the only aircraft compromised by Chinese cyber spies. NSA identified numerous compromises other aircraft, including the B-2 bomber, the F-22 jet and frontline F-35 Joint Strike Fighter – all targeted by 3PLA since the early 2000s.

The F-35 compromises were believed to have been carried out through a non-US subcontractor involved in development of the aircraft. The subcontractor was targeted in a Chinese cyber spying operation that obtained secrets on the advanced radar and engine designs – key radar-evading stealth features.

The F-35 losses were assessed by US intelligence agencies to have been incorporated into China's new J-20 stealth fighter jet currently in development.



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For the United States, large-scale Chinese cyber spying against American high-technology arms remains a strategic vulnerability.

US Deputy Defense Secretary Robert Work announced in early December that the next defense budget will include some \$15 billion for begin funding what the Pentagon is calling its "Third Offset Strategy" – defenses designed to leverage American weapons technology advantages to offset increasingly lethal enemy military capabilities. A key element of the offset is to use autonomous weapons, like UAVs.

But if the Pentagon cannot protect its weapons know-how from the 3PLA and other foreign cyber spies its advantages are likely to quickly evaporate.

Bill Gertz is a journalist and author who has spent decades covering defense and national security affairs. He is the author of six national security books. Contact him on Twitter at @BillGertz

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There is no evidence the chinese directly store design information through cyber attacks against the Reaper manufacturer, General Atomics Aeronautical Systems, Inc.'

despite what the author says above, he clearly in his article states otherwise. by accusing china of of cyber spying (clearly all states do so, even the us), china has copied its drones hence indirectly saying china will b a competitor in this industry, something the us hates more, losing the millions of \$\$\$'s in sales around the world, if not dominate the world of drones.

9 ^ V · Reply · Share ›



O rly → known_unknowns · 2 days ago

"even the us'

i had to giggle at the inclusion of the country that basically copies and stores all digital communication in the world.

3 ^ V · Reply · Share



Gerald Mark Causey → known_unknowns • 21 hours ago

Most of China's technology was stolen from other countries. I wonder who known_unknowns thinks they are fooling?

∧ | ∨ · Reply · Share ›



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John Joel → Guest · 2 days ago

Lies and propaganda aplenty. So their world fastest computer is a copy of the US? hahaha

7 ^ V · Reply · Share ›



commiephobic → John Joel · 2 days ago

It runs on multiple Intel Xeon(s)..that's an American microprocessor..lols. It's basically just overspending for bragging rights.

4 ^ | V · Reply · Share ›



yongj29 → commiephobic · 39 minutes ago

I think you are a bit out of date my friend! The Chinese started manufacturing their own chips already beginning of this year. Hence the new supercomputer is using their own local chips. Their supercomputer is still no. 1 up to now. so there is no need for them to build another more powerful one in the near future.

∧ | ∨ · Reply · Share >



rob → commiephobic · 6 hours ago

WHEN CHINESE NATIONALS ARE WORKING IN THESE COMPANIES WHAT DO YOU EXPECT !!??



vongi29 → rob · 38 minutes ago

Once a Chinese, always a Chinese. They might buy up all the high end residences in the US but their hearts are in China.



David James → John Joel · 2 days ago

are you kidding? This is fact, the Chinese haven't even changed the designs for god sake.

They have a long documented history of ripping off Russian and American military tech.

4 ^ | V · Reply · Share ›



Alex Wijaya → David James · a day ago

Uh yeah, their tails are different. Their outlook might look the same, but what make a drone as a drone isn't just the looks. After all, most cars are look almost the same. What really matter is the inside, and nobody knows what is inside Chinese drones except China, and their buyers. Btw, for somebody who call themselves champion of free speech, apparently censor is nothing unusual in this AT, propaganda media of the west.

3 ^ | V · Reply · Share



yongj29 → David James · 37 minutes ago

If the wheels are working well for centuries, why need to change to a square one?



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DavePh → John Joel · 2 days ago

One look at the drone, and one look at J-11B settles the verdict...China is stealing technology developed by USA, Western EU and Russia to make its own toys.

1 ^ | V · Reply · Share



Skalla · 2 days ago

The US have been stealing a long time before the Chinese: at the end of the second world war, an American colonel stole a medieval chapel on a property my family had in central France. He just ordered his troops to dismantle it and shipped it back to the US. Americans have a long tradition of stealing and murdering: it started when they pushed back the Indians to appropriate their lands and then stooped to killing them, women and children included ...

13 ^ V · Reply · Share



Tom Black → Skalla · 3 hours ago

Ironically now France is simply giving away their treasure to Arabic speaking folks.



David James → Skalla · 2 days ago

Ohh yeah so that happened while we lost well over 400,000 American lives to liberate you're country (and then help rebuild it.)

By the way if you actually are French how are those North African colonies working out?

My point is most country's have a fair amount more Dirt and blood on there hands, to call out American as some kind of criminal state and negative force in the world (while trendy.) shows your bias and lack of actual geo political knowledge.

"The US have been stealing a long time before the Chinese" <===best quote ever btw:D

3 ^ | V · Reply · Share ›



nepali hercules → David James • 2 days ago

US stole most of their tech from the nazis, and don't forget US aggression. they've never really been at peace, always engaged in regime change and creating destability.

8 ^ | V · Reply · Share ›



Alex Wijaya → David James · a day ago

the yanks keep repeating this as if they didn't go to war to protect their own interest in europe.

3 ^ V · Reply · Share ›



Shavi Tüpraş 🖈 Alex Wijaya 🔹 a day ago

In both World Wars the Americans stayed out until it became clear who was winning, and then strolled onto the battlefield to heroically bayonet the fallen; Britain had been at war with Hitler'sGermany for well over 2 years before Pearl Harbour, during which period George Bush's father was convicted of actively supporting the Nazis

More British & Commonwealth troops took part in the Liberation of France than there were ever Private Ryan's, and at the end of the War the top German rocket scientists and Japanese vivisectionists were pardoned and given sanctuary in the USA: Google the Wikipedia entry for "Unit 731" and read about the cozy deal the Yanks offered Japanese War Criminals, and why

5 ^ V · Reply · Share ›



targetdestroyed01 → Shavi Tüpraş · 4 hours ago

The US entered the war when the Axis powers were at the very height of their power in late 1942 and in to 1942. You can try rewriting history all you want but you are simply dead wrong and I am sure, deep down you know it. Maybe you just crave attention? There are a lot better ways to get it than lying.

2 ^ V · Reply · Share



James Clander → David James · a day ago

What total BS - only a fool "thinking" he's a patriot could spew such rubbish.

You must be a fool -cause you're NOT a patriot. A patriot would know & understand from ALL the published FACTS that the USA has tried hard to

set the World on fire for the past 55 years! Millions of innocents killed as collateral damage & countries bombed beyond repair by cowardly gutless neocons. The USA wins hands down for blood & destruction by 100 to1!

You should hang your head in shame for allowing the slaughter & voting for either of your major terrorist parties. FU!!!

4 ^ V · Reply · Share ·



Tom Black → James Clander · 3 hours ago

Liberals are amusing.



targetdestroyed01 → James Clander • 4 hours ago

Thank you for your comment Mr. Bin Laden, you can go back to rotting in the Indian Ocean now.

∧ ∨ · Reply · Share ›



Joseph · 2 days ago

So u want to tell us that Chinese are so dumb that they can only develop things by hacking US companies. So if Chinese are so dumb then how they are able to hack the US companies. Or the author wants to state that Chinese are only intelligent to get around US cyber defences. Stop this bullshitting and overcome the colonial mindset that only white man has brains and Asians are dumb?

7 ^ | V · Reply · Share ›



commiephobic → Joseph · a day ago

The US let them hack trash..so they build trash. And please, we Asians don't prefer to be represented by China in general..it's quite degrading.

2 A | V · Reply · Share ›



yongj29 → commiephobic · 32 minutes ago

But the article has painted the Chinese as super human! I don't mind to be a Chinese though. Who doesn't want to be with the race that has one of the highest IQ!



Dan Kuhn · 2 days ago

So the US is condeming military espionage? How quickly the Americans forget Stuxnet. They started this game and now are complaining because other countries are beating them at it.

5 ^ V · Reply · Share ›



vox3non · 2 days ago

Everyone spies and steals from everyone else. The sooner that people realise that this is all part of statecraft, the sooner they can focus on fixing things like the economy. And not waste time on theatrics.

6 A V · Reply · Share



Noble Intellect • 2 days ago

Typical white trash mentality. always seem to think what they design is better than everyone else, well I got news...white trash countries are have been...end of the line is near. The funny part is despite their Micky mouse war toys the white trash nations have lost every war even in backward countries like Afghanistan and Yemen, run away like greased lightening...LOL

6 ^ | V · Reply · Share >



Tom Black → Noble Intellect • 3 hours ago

Typical condescending talk from a people that live like Africans and pretty much look like them as well. One thing is certain. A billion Chinese can steal all the weapon designs they want. A handful of 'white trash' can easily dominate and enslave them any time they wish.

1 ^ V · Reply · Share



Andre · 2 days ago

Yawn. Are we talking about Predators and/or Reapers? Both are relatively old technologies (early 1990s for the Predator, late 1990s/early 2000s for the Reaper), upgrades notwithstanding. Useful for targeted killings during counter-terrorism campaigns perhaps, but not exactly on the cutting edge of weapons intended to take on near-peer or peer adversaries.

The US had complained for years about Chinese hacking until Snowden revealed the NSA's reach and scope. The US has the best SIGINT in the world and it is hard to say: (a) how much sensitive data has China hacked?; (b) how much sensitive data has the US hacked?; and (c) how much fake sensitive data has the US let slip to China?

In an open democracy like the US, where the average citizen can criticize R&D and procurement programs, and debate online using OSINT, the only way to bury the truth is to twist it and hide it in a pile of misinformation.

It doesn't take a hacker for the PLA to have an idea of where US military technology is going, and the fact that some systems look similar is immaterial. Modern nuclear submarines, hypersonic vehicles, UCAVs, 4th Generation and 5th Generation warplanes all resemble one another. All hacking?

I have to say that the US has gotten smarter about allowing Russia and China to advance in certain areas (e.g. hypersonic cruise missiles) before following suit, especially when the capability is not urgently required by the US.

4 ^ V · Reply · Share



Maria → Andre · a day ago

Andre is just playing a joke, he's NOT even serious about his own posts, he is here for his own entertainment. He is just trying to get an angry reaction out of serious readers by spitting on the truth, Andre is a troll.

Andre even said that (Pulitzer Prize winner) Seymour Hersh isn't a credible journalist (!!), and referred to Mr. Hersh as an "aging windbag", THAT was Andre's reaction when Hersh's reporting debunked the US's lie that "Assad gassed his own people"). Andre never provided a counter source to the Hersh interview. Instead, Andre's response to credible western sources (like Hersh) is to refer to his own speculation & wishful thinking. Andre is just an idiot who craves attention from serious people (he is pathetic, a child).

Anyone can check out that Seymour Hersh report/interview (title): "Sy Hersh Reveals Potential Turkish Role in Syria Chemical Strike That Almost Sparked U.S. Bombing", interview with Democracy Now.

2 ^ | V · Reply · Share



criticalobserver · 20 hours ago

I suggest the US should stop designing any new weapon systems so there is nothing there for the Chinese to hack. In the interim the US should use funds from their bloated defence budget to build up their dilapidated infrastructure. This would benefit the US and the world!!

1 ^ V · Reply · Share ›



James Clander · a day ago

If so TOP marks to China - - the US War Machine is hopefully being checkmated in many different ways & about time.

1 ^ V · Reply · Share



XBBUSA · 2 days ago

blah blah, eventually everyone will blow up everyone else and it wont matter anymore. Why do we worry about things like this instead of worrying how we are going to all live together in peace as there is no reason we need to do this at all. The real issue is not who stole from who, but rather who respects who and makes it work in the sense of being partners and friends. Nobody wins from this stuff and all this does is piss someone off that we even bothered to say it knowing that we already know what they did so why bother putting it in their face. This is stuff we already known about. Just another story to get it stored up to get them upset.

Why not just play a game of Ping pong on an old Tube TV with the old joysticks and the winner takes all... LOL:)

1 ^ V · Reply · Share ›



passerby · 2 days ago

One sees that for Bill Gertz, the bio reads "Journalist"... Western media standards are as unimpeachable as ever.

1 ^ V · Reply · Share



David James • 2 days ago

This is the massive price the American people have to pay for our government failing to take cyber security seriously.

We just gave away DECADES of research that cost the US tax payers billions of dollars and was meant to give us a broad military advantage, we have ceded both; the money, the security and also the time, it would take more decades of massive spending to build this kind of tech advantage again.

The implications are so huge we haven't begun to see them all yet.

1 ^ V · Reply · Share



Tom Black → David James • 3 hours ago



...but we got hope and change.

∧ V · Reply · Share ›



Qiaobao · 2 days ago

Gertz just cannot admit an arms race has started between China and US, and is expanding fast

1 ^ V · Reply · Share ›



Vajra Bodhi ∘ a day ago

The white invaders stole America from the native Indians after their brutal genocide.

Reply · Share



alan 🖈 Vajra Bodhi 🔹 a day ago

that's not stealing, that's robbing, pillage and plunder in broad day light many years ago!

1 ^ V · Reply · Share



Kenneth Ng Kwan Chung • a day ago

It does not mean that if the drone looks similar that it is a copy.

Very likely the Chinese had experimented with various designs eg the joined winged drone but they probably found the aerodynamics of the reaper drone best therefore they followed it. I am sure all the materials and intervals are all different.

The best analogy is the car. They may look similar but a BMW is different from Mercedes and is further different from Hyundai or KIA. They borrow styling cues from each other.

1 ^ V · Reply · Share



Ralph Menneth Ng Kwan Chung • 14 hours ago

Very god point here Kenneth.



Tom Black → Ralph · 3 hours ago

Perhaps if you work in the Chinese propaganda department they are good points. To anyone else with an IQ > 65 they sound rather silly.



Tom Black → Kenneth Ng Kwan Chung • 3 hours ago

It is most certainly a direct copy and would be considered an act of war by any of the 43 previous American presidents.



Kamath · 2 days ago

Pakistan from where Predator drones were once took off and landed , was one of the key players in passing on the info to Chineese.

1 A V · Reply · Share



yongj29 · an hour ago

I know the Chinese are very intelligent and capable people. They also want to get things done in very much less time than others. But this article really makes the Chinese look like super human!

∧ | ∨ · Reply · Share ›



Jon Steward · an hour ago

China designs its planes to look like the U.S. ones on purposes...

^ | ∨ · Reply · Share



timmyfoxx · 2 hours ago

They weren't taken, they were given by this administration.

∧ | ∨ · Reply · Share ·



elchucko · 2 hours ago

alth in the man did the state of the state o

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