Why Cyberattacking North Korea's Nuke Program May Be America's Best Option

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South Korea is getting closer to hosting the controversial Terminal High-Altitude Area Defense (THAAD) system, with equipment arriving on its soil recently for the aim of shooting down short-, medium- and intermediate-range missiles in their terminal phase. But the real story is that the Pentagon has been launching cyber and electronic attacks against North Korea's missile program, and that may prove to be a better alternative to America's expensive and highly unreliable Ground-based Midcourse Defense system (GMD).

What North Korea's Advanced Missile Test Means For The U.S. And Its Allies

> North Korea launched a mid-range ballistic missile this weekend, the first launch of such a missile ...

Former President Barack Obama ordered the Pentagon to cyberattack Pyongyang's missile tests to make them malfunction moments into launch, according to the *New York Times*. The results of the attacks caused the missiles to "explode, veer off course, disintegrate in midair and plunge into the sea."

The success of these cyberattacks gave military officials hope that the new approach can buffer its antimissile defenses and delay North Korea's efforts to make an ICBM capable of reaching the United States.

North Korea currently does not have the capacity to hit American targets. But the Pentagon has been amazed at the rate at which Pyongyang's nuclear weapons program has progressed towards that goal, as the story noted:

> North Korea began seeking an intercontinental ballistic missile decades ago: It was the dream of Kim Il-sung, the country's founder, who bitterly remembered the American threats to use nuclear weapons against the North during the Korean War.
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> His break came after the collapse of the Soviet Union, when out-of-work Russian rocket scientists began seeking employment in North Korea. Soon, a new generation of North Korean missiles began to appear, all knockoffs of Soviet designs. Though flight tests were sparse, American experts marveled at how the North seemed to avoid the kinds of failures that typically strike new rocket programs, including those of the United States in the late 1950s.
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> The success was so marked that Timothy McCarthy of the Middlebury Institute of International Studies at Monterey wrote in a 2001 analysis that Pyongyang's record "appears completely unique in the history of missile development and production."

Currently, America's GMD system, which has been deployed to Alaska and California since 2002, is the country's primary defense against an ICBM attack from Iran or North Korea, but it has a success rate of just 56 percent in perfect conditions. What is troubling about the GMD is that it isn't tested to defend

against multiple missile launches. Let's say North Korea had the capacity (or eventually acquires it) to launch six ICBMs at the U.S.; based on how hard it is for the GMD to hit one missile, how will stop six at once? Or even two?

The answer is simple: in all likelihood, it can't.

Obama said in 2014 that the $300 billion dollars America has invested in missile defense since the Eisenhower era has failed to fulfill its purpose of protecting the homeland. "Hitting a bullet with a bullet" is how the former President often characterized the system.

"If a target is going 15,000 miles an hour and so are you with your interceptor, and if you miss by an inch, you miss by a mile," Phillip Coyle, the former head of weapons testing at the Pentagon and former assistant secretary of defense, told Foxtrot Alpha. "It's the most difficult thing the Pentagon has tried to do."

Making the cyberattack approach even more appealing is that, according to *The Times*, North Korea's intermediate-range Musudan missile had a fail rate of 88 percent, something military officials credit the cyberattacks with helping to achieve. Obama once told top aides that he would strike North Korea's leadership and ballistic missile sites, if he believed it could work. Of course, he knew that wasn't an option because the White House doesn't have reliable intelligence on the leadership's whereabouts or where its weapons are kept; they can be moved at any time and they are likely relocated regularly.

Moreover, a failed direct missile strike would likely trigger a war and cause massive geopolitical consequences between Russia, China and South Korea that could take decades to repair. There is little public information on how expansive the Pentagon's cyberattack program is, but it appears to be a far better bet than the current GMD system.

In fact, given the failure of the system's tests, it would be a keen move to deploy more diplomatic means of convincing North Korea not to develop a nuclear weapons program in the first place. Coyle, a senior science fellow at the Center for Arms Control and Non-Proliferation, said it's happened before.

He brought up the year 1994, when the U.S. and North Korea agreed on a framework in which the North agreed to freeze operation and construction of two nuclear reactors that were believed to support a nuclear weapons program. In exchange, the U.S. was supposed to give the north two proliferation-resistant nuclear power reactors and supply it with oil while the reactors were

being constructed. The deal fell through because the GOP-led Congress at the time refused to fund it. But in 2001, after former president George Bush put North Korea on its "Axis of Evil," Pyongyang ended ministerial-level talks with South Korea intended to promote political reconciliation.

"We're going to have to start meeting with North Korea and negotiating with them (again), as we did with Iran, Coyle added, saying that it is unavoidable, if Washington wants a peaceful resolution with Pyongyang.

For those who want to take the GMD approach, good luck. The *Los Angeles Times* reported last summer that, since 2010, the last four missile tests failed and that the Pentagon tried to cover up how poorly GMD performed during the last test in January of 2016:

> Project engineers for the Jan. 28 test had planned for the interceptor to fly within a narrow "miss distance" of its target to test the new thrusters' effectiveness.
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> That is not what happened. The closest the interceptor came to the target was a distance 20 times greater than what was expected, said the Pentagon scientists, who spoke on condition they not be identified.
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> "The mission wasn't successful," one of the scientists said. "Did the thruster perform as expected? No, it did not provide the control necessary for a lethal impact of an incoming threat."
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> A second scientist said the claims of success by the Missile Defense Agency and the contractors were "hyperbole, unsupported by any test data."
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> Asked for comment by The Times, the agency acknowledged, for the first time publicly, that a problem surfaced during the Jan. 28 exercise.
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> "There was an observation unrelated to the new thruster hardware that has been investigated and successfully root-caused," the agency said in a written response to questions. "Any necessary corrective actions will be taken for the next flight test."

Prior to the *LA Times* inquiry, the Pentagon said it was "successful flight test."

There are a number of reasons why, from an engineering perspective, hitting an incoming ICBM is damn-near impossible. (*Gizmodo* broke it down a few years ago, if you want to take a look) Though, cyberattacks already seem to be a better option against a future ICBM attack from the north than an inconsistent missile defense system that doesn't work.

An even better defense would be for the current White House to call for talks with Pyongyang to convince its leadership to end its missile program. That, coupled with vicious cyber-attacking if necessary, may well be the U.S. and South Korea's best option.

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