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**CENTER FOR NORTHEAST ASIAN POLICY STUDIES**

**NORTH KOREA'S THIRD ATTEMPT TO LAUNCH A  
LONG-RANGE MISSILE  
AND THE LAST OPPORTUNITY TO PREVENT IT**

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North Korea has pursued the development of nuclear weapons, and expansion of the range of its delivery vehicles in order to strengthen its military power and to gain a greater bargaining position in denuclearization talks with the United States. The Pyongyang government has used the missile test card whenever it feels talks are progressing unfavorably, or to gain new concessions from the U.S. In early August 1998, when the media and Congress showed great concern over a secret nuclear facility, North Korea fired a Taepodong-1 (Kwangmyungsung-1) missile which flew toward Japanese territory.<sup>1</sup> Later, shortly after the September 19, 2005 Joint Statement and the U.S. Treasury's freezing of North Korea's bank accounts in the Macau based Banco Delta Asia, North Korea fired another set of missiles on America's Independence Day in 2006 and staged a test of a nuclear device in October 2006. Because of these actions, North Korea was able to engage in bilateral talks with the U.S.

Now, after about two years, North Korea has again pulled out its missile test card. On March 12, North Korea notified the International Maritime Organization and the International Civil Aviation Organization that it would launch an experimental communication satellite between April 4 and 8, 2009. If it really launches this rocket, it will be North Korea's third test launch of a long-range missile. In this paper, I will first discuss briefly the background and goals of North Korea's first missile test launch in 1998 and the second in 2006, examine North Korea's missile capabilities and intentions, and explore whether the last window for diplomacy to prevent it is completely closed. Unfortunately, the prevailing opinion among experts and government officials seems to be that North Korea will undoubtedly launch this missile, and that no outside policy can persuade Pyongyang to do otherwise.

**Table 1: North Korea's Missile Development and Specifications**

1976-81	Introduction of USSR-made Scud-Bs and launchers from Egypt by reverse engineering
April 1984	First test-firing of improved Scud-B (range: 300km; warhead weight: 800kg)
May 1986	Test-firing of Scud-C (range: 500km; warhead weight: 600kg)
1988	Operational deployment of improved Scud-B/C
May 1990	First test-firing of Rodong missile (range: 1,300km; warhead weight: 500kg)
June 1991	Launching of Scud-C missile
May 1993	Test-firing of Rodong missile
January 1994	First identification of Taepodong-1
1998	Operational deployment of Rodong missile
August 1998	Test-firing of Taepodong-1 (North Korea claimed that it had launched a satellite) (range: 2,500, actual distance of flying was 1,555km; warhead weight: 500)
July 2006	Test-firing of Taepodong-2 and launching of Rodong & Scud missiles (Test-firing of Taepodong-2 failed.)
September 2008	Disclosed new long-range ballistic missile launching facilities at Dongchang-ri, Cholsan County, North Pyongan Province ( <i>Jane's Defense Weekly</i> Vol,45)

Source: 2006 Defense White Paper, The Ministry of National Defense, The Republic of Korea, p. 239.

<sup>1</sup> This SLV (rocket) was called Paektusan (now Eunha-2), the satellite was called Kwangmyungsung-1, and the missile was called Taepodong after the area it was launched.

## **1. North Korea's first two attempts to launch a long-range missile**

### **(A) The first test-firing of Taepodong-1 and the first launching of the Kwangmyungsung-1 satellite**

The first Taepodong-1 missile test launch occurred in 1998 after suspicion was raised that North Korea had violated the Geneva Agreed Framework and was constructing an underground nuclear facility in the Kumchang-ri area. When the facility was revealed in the beginning of August 1998, North Korea received much criticism from U.S. Congress and the media. In mid-August, North Korea combined a Taepodong-1 with the Scud and Rodong missiles, filled them with liquid fuel on August 30, and launched this three-stage new missile on August 31 in the absence of any prior announcement. Then on September 4, North Korea boasted that it had launched a satellite into orbit via a space launch vehicle (SLV). The test launch commemorated the 50<sup>th</sup> anniversary of the founding of the DPRK government, congratulated Kim Jong-il on his newly consolidated rule over North Korea, and showcased a product to potential customers in the Middle East. Most significantly, the launch succeeded as North Korea's attempt to engage the U.S. in talks about missile issues other than denuclearization, resulting in the visit of William J. Perry, President Clinton's Special Advisor on North Korea, who sought to convince North Korea to uphold the Agreed Framework and to stop the development of longer range missiles.<sup>2</sup>

Secretary of State Madeleine Albright, who visited Pyongyang in October 2000, also stated that an agreement stopping the development of missiles was needed in order to have a summit meeting between President Clinton and Chairman Kim Jong-il. Without a satisfactory agreement on the missiles, Albright insisted she could not recommend a meeting between Kim and Clinton. Kim told Secretary Albright that North Korea had developed a missile program to arm its own military as part of a self-reliance program and had sold missiles to Syria and Iran to obtain desperately needed foreign currency. If the U.S. guaranteed adequate compensation, Kim declared, all missile related materials, training and technology would be suspended or banned. At the mass games at Pyongyang's May Day Stadium, Secretary Albright watched an illustration, performed by individuals holding up and turning placards in precise sequence, of a Taepodong missile being launched into the sky. Kim said to the Secretary that this would be "our first missile launch—and our last"; he did not mention the Kwangmyungsung-1 satellite. Then at the end of 2000, the U.S. reached a temporary understanding with North Korea that the latter would refrain from the production, testing, deployment, and export of whole classes of missiles in return for allowing civilian North Korean satellite launches under safeguards outside of North Korea.<sup>3</sup> This agreement became known as the Missile Test Launch Moratorium.

### **(B) Second missile test-firing**

In the spring of 2005 North Korea was moving forward with plutonium reprocessing and the production of nuclear weapons, while standing away from the on-going process of the Six-Party Talks. The Missile Test Launch Moratorium was still in effect, and in June 2005 Chairman Kim Jong-il told the South Korean Minister of Unification and President Roh Moo-hyun's Special Envoy that North Korea would only hold onto missiles a country is

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<sup>2</sup> Lim Dong-won, *Peacemaker*, Seoul: Jongang Books, 2008. pp. 394-396.

<sup>3</sup> Madeleine Albright, *Madam Secretary*, NY: The Easton Press, 2003, pp. 464-469.

allowed to have and would forgo its long-range and intercontinental ballistic missiles if the U.S. agreed to normalize relations. However, when the U.S. Treasury decided to freeze \$24 million of North Korean funds in the Banco Delta Asia (BDA) around the same time as the September 19, 2005 Joint Statement, North Korea regarded that the U.S. was trying to overthrow its regime. In April 2006, when unofficial talks between the members of the Six-Party Talks occurred on the margin of the Northeast Asia Cooperation Dialogue (NEACD) in Tokyo and it was apparent that the BDA problem, which was sensitive to North Korea, would not be solved, North Korea revealed that it would break the missile moratorium. The head of North Korea's delegation to the Six-Party Talks, Kim Gye-gwan, who was in Tokyo for the NEACD, tried but failed to have a meeting with American chief-of-delegation Christopher Hill. Kim told South Korean counterparts staying at the same hotel that if North Korea did not take any action, the hawks in Washington would believe they had won: "We have nuclear weapons, and should show delivery means. We would set fire to the monkey's behind to surprise it."

From May 2006, much movement was detected at a North Korean missile launching facility in Musudan-ri, Hwadae County, North Hamkyung Province. The following month, a Taepodong-2 was set up on a firing pad. On the first day of July, North Korea internally set aside a small area of the East Sea as a safe navigation zone for a few days. On July 4, as the U.S. was celebrating its Independence Day, North Korea tested the Taepodong-2 in the Musudan-ri area, and fired six Scud and Rodong missiles from Anbyun County, Kangwon Province. These test launches were North Korea's retaliation against the U.S. for the BDA affair. At this time, North Korea did not report to the International Maritime Organization that it would launch a satellite. The DPRK foreign ministry stated that the launches had been a military exercise for the purpose of strengthening its defense capability.

However, the Taepodong-2 test-firing was not successful as the missile flew for only about 40 seconds, reaching a height of 10-20 km, and then fell into East Sea, revealing that North Korea did not have the capability to reach the U.S. with a long-range missile.<sup>4</sup> Although this attempt ended in failure, North Korea did not hide the fact that it tested a new long-range missile. So in order to regain the lost initiative, in August 2006 North Korea began preparing its first-ever nuclear test. After two months of preparation, a nuclear test detonation was carried out on October 9.<sup>5</sup> Then in November 2006, while the U.S. was experiencing its midterm elections, China facilitated a meeting between the U.S. and North Korea. Then, after 13 months, the Six-Party Talks resumed in December 2006, and North Korea and the U.S. had a bilateral meeting in January 2007 in Berlin, at which the February 13 Agreement was drafted.

In the following section, I will discuss the motive behind currently threatened third test of a Taepodong missile, the technical problems and probability of success, and possibilities for delaying or canceling the test.

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<sup>4</sup> 2009.2.4 *Yonhapnews* reported a height of 10km, *Jane's Defence Weekly* cited a height of 15-20 km. Source: Joseph S Bermudez and Allison Puccioni, "Satellite imagery points to North Korean launch," *Jane's Defence Weekly*, Volume 46, Issue 8, 25 February 2009, p. 6. Considering the fact that Rodong and Scud missiles reached the planned location at the planned time shows that North Korea can carry out a similar operation against South Korea.

<sup>5</sup> The nuclear explosion was much smaller than the standard 20 megatons.

## 2. The third attempt to launch a long-range missile

In September 2008, *Jane's Defence Weekly* noted the discovery of a new missile launch facility, similar to Iran's facilities, in the Northwest part of North Korea, near the PRC-DPRK border and the Yellow Sea in an area called Dongchang-ri, North Pyongan Province.<sup>6</sup> The South Korean Defense Ministry, observing the Dongchang-ri area for the last several years, also confirmed to the National Assembly that the construction was about 80% completed, and that the facility could launch more than just a medium range missile; there has been a good deal of speculation about what sort of missiles can be launched from this new site.

According to reports, on February 3, 2009, movement was detected at a small city near Pyongyang. It was revealed that an object in the shape of a missile body was strapped to a train departing from a missile base. This train did not move toward Dongchang-ri, as some media had predicted, but rather toward the Musudan-ri facility where the 1998 and 2006 test launches took place.<sup>7</sup> In the last few weeks there have been many military threat reports and statements about when North Korea will launch what kind of missile, and speculation about whether North Korea will succeed, improving upon its attempt in 2006.

### (A) What will North Korea launch?

North Korea seems to be following the path of Iran, its long-time partner in missile development. Iran successfully launched an Omid satellite on February 2 using a Safir-2 as the SLV. North Korea moved its missile-shaped item to Musudan-ri on the next day. Having seen little international criticism or threat of sanction directed against Iran's satellite launch, North Korea is emphasizing that the launch is a satellite launch for the peaceful use of space, and is taking the necessary steps in accordance with international custom – these are steps it did not take in 1998 or 2006.<sup>8</sup> On February 7, Pyongyang justified its plan by comparing it to that of Iran. The North Korean news agency, KCNA, said that the “Iranian satellite launching was a demonstration of national power, and showed the monopoly of the right does not exist. Competition in the space science and technology must be fairly proceeding, which is beneficial to all. Our country has a right to compete as a member of the international society.”<sup>9</sup> On February 24 the North Korean Committee of Space Technology released a statement that “Space is the common fortune of the humankind, and the peaceful use of the space has become a global trend. Based upon the republic government's policy of space development and peaceful use, for last ten years our country has achieved a great leap in the

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<sup>6</sup> “This new facility in Dongchang-ri consists of a movable launch pad and a 10-storey-tall umbilical tower capable of supporting North Korea's largest ballistic missiles and space launch vehicles. About 1 km south of launch pad, there is a rocket engine test stand, which is very similar to the Shaid Memmat test facility east of Tehran, Iran.” Source: Joseph S Bermudez Jr., and Tim Brown, “Ready for Launch,” *Jane's Defence Weekly*, Volume 45, Issue 38, 17 September 2008, p. 30).

<sup>7</sup> Cristian Oliver, “North Korea ‘plans missile test,’” *FT.COM*, Feb. 3 2009; Choe Sang-hun, “Seoul fears North Korea may test missile,” *International Herald Tribune*, Feb. 3 2009.

<sup>8</sup> As for the test of February 2 2009, the Iranian Space Agency reported to the 46<sup>th</sup> Meeting of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUS) on February 9 2009 in Vienna, the launch of first domestic Satellite Launch Vehicle (SLV) named “SAFIR-2” carrying first domestic telecommunication satellite called OMID was successful to inject the satellite in low Earth orbit. The agency evaluated it “definitely a great step forward toward development in space technology” (<http://www.oosa.unvienna.org/pdf/pres/stsc2009/tech-15.pdf>).

<sup>9</sup> “Rodongshinmun, “Every country has the right to use space peacefully,” (<http://www.kcna.co.jp/calandar/2009/02/02-07/2009-0207-006.html>).

area of satellite launch.”<sup>10</sup> Before the notification to the IMO and ICAO for the safe navigation of planes and ships according to relevant regulations as part of its preparations of the launching, North Korea acceded to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies and the Convention on Registration of Objects Launched into Outer Space. The accession to these agreements, North Korea explained, aims to contribute to promoting international confidence and boosting cooperation in the scientific research into space and satellite launches for peaceful purposes.<sup>11</sup>

As mentioned before, the DPRK was laying the groundwork to be portrayed as peaceful and lawful according to the related international norms to lessen the pressure and dilute criticism from the other countries. On this basis, if it launches a missile in early April, Pyongyang will reject any criticism and movements to take the case to the UN Security Council as groundless, and override the application of the existing and strengthened resolutions and sanctions against the DPRK. Pyongyang will definitely also open a diplomatic campaign to include several like-minded countries. While showcasing the increased range of its missile from 1550 km in 1998 to 3600 km, North Korea is likely to display confidence in its technological enhancement.<sup>12</sup> Considering the multiple remarks and events like the Albright-Kim Jong-il meeting, Kim’s remarks to the South Korean unification minister, the North Korean foreign ministry’s statement issued in July 2006 saying that the missile launch was a military exercise to reinforce defensive military capability, this test will be missile test using a satellite as a pretext.

### **(B) North Korea’s intention to proceed with the test-firing**

Chairman Kim Jong-il decides and directs all WMD-related policies, including nuclear weapons and missiles. Based on my own personal experience and knowledge at the Six-Party Talks and conversing with Chinese and North Korean officials, every little detail concerning the Six-Party Talks and the United States is being reported to their leader, who directs every response. In other words, Kim is directing the current missile launch plan as a combination of military, political, and diplomatic objectives, and the launch will take place only after Kim’s final approval. As Kim revealed to Secretary Albright, the 1998 missile launch plan was to strengthen North Korea’s military capability and to induce cooperation on missiles from foreign nations. More importantly, the current missile launch is being used as a lever for entering into new negotiations with the United States. As discovered in the August 8, 1998 test, Kim also is using the test to inspire political loyalty toward his political regime. Several factors are playing into his calculations.

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<sup>10</sup> “Preparation to launch Kwangmyungson-2 in full gear, The Space Technology Committee,” (<http://www.kcna.co.jp/calendar/2009/02/02/02-24/2009-0224-008.html>).

<sup>11</sup> “DPRK’s Accession to International Space Treaty and Convention” March 12 2009, (<http://www.kcna.co.jp/index-e.htm>).

<sup>12</sup> On March 20 2009, Choson Shinbo, the official propaganda newspaper of the pro-North Korean General Association of Korean resident in Japan contributed an editorial. “The Notification of Satellite Launching Plan is the opportunity of self-reflection provided by Chosun saying that the grids of space launching vehicle suggested the two parts of the vehicle will reach 650km and 3,600km. (<http://www.korea-np.co.jp/news/ViewArticle.aspx?ArticleID=35922>).

(i) Military purpose

Due to the lack of economic means, North Korea now has a greater need than before to drastically advance its asymmetric, and not conventional, military capability. To strengthen the national defense, North Korea feels the need to publicly showcase that it actually possesses a militarily credible delivery means for nuclear weapons so as to cement its status as a nuclear weapon state. The failure of the of Taepodong-2 on July 4, 2006 means that North Korea has no effective and deployable nuclear deterrence against the U.S., and Pyongyang's reasoning that it is developing nuclear weapons to defend itself from the U.S.'s hostile North Korea policy will lose its practical force. Therefore, North Korea seeks to secure the status of a bona fide nuclear state by succeeding in its test launch test. In addition, this test launch will counter the South Korea's strengthening of its own defenses with an improved asymmetric capability. This test, therefore, is in significant part the result of North Korean military strategy.

(ii) The domestic political factor

From the political perspective, North Korea has seen considerably extensive organizational and personnel changes in its party, military, and administration since last fall, when Kim suffered from sickness. Unable to further delay post-Kim succession plans indefinitely, North Korea requires measures to strengthen its reciprocal regulation and internal control. The decreased work hours for Kim due to his declining health increases the use of documentary reports rather than face-to-face meetings or larger meetings led by Kim. This circumstance pushes North Korean bureaucrats to become more conservative and inflexible, and to lean more on old doctrine. The current aggressive tactics by North Korea in using a missile launch attempt against the U.S. and in rapidly escalating various military threats against South Korea are closely linked to the internal political climate of North Korea.

(iii) Diplomatic chip against the Obama administration

Another important intention is to secure an advantageous position for negotiations with the Obama administration. North Korea wants to gain political and diplomatic leverage in the nuclear negotiations by intensifying tensions with the U.S. North Korea has developed a complex position: while arbitrarily interpreting some remarks from the U.S. State Department and intelligence agencies – and fabricating others – to argue that the U.S. has begun acknowledging that North Korea is a nuclear state, Pyongyang claims that the goal of the Six-Party Talks is not to bring about an abandonment of its nuclear program, but to normalize relations between the U.S. and North Korea (the U.S. will never recognize North Korea as a nuclear weapons state for the purposes of the non-proliferation treaty). Furthermore, Pyongyang argues, the Six-Party Talks should be considered talks on nuclear arms reduction between nuclear powers. Li Gun, Director-General of the DPRK Foreign Ministry, said to American experts last November in New York and February in Pyongyang that the North will not abandon its nuclear capability before the end of the visible nuclear threat directed at North Korea – meaning the nuclear umbrella that the United States provides to its allies in Northeast Asia – and they want to continue to hold onto their nuclear weapon for long time, even if the Six-Party Talks continue.

The first argument could be a simple repetition of the old doctrine, the second remarks would reveal the true pulse of Pyongyang. In the meantime, North Korea is trying to divert U.S. attention from nuclear weapons themselves, toward the delivery vehicle.

After completing the U.S.-Chinese foreign ministerial talks on March 11, a day before North Korea's notice to the IMO, Secretary of State Clinton said that Stephen Bosworth, the administration's new special representative for North Korea policy, was "prepared to go on a moment's notice to begin discussions with the North Koreans," but was not invited. Secretary Clinton also said, "We need to have a conversation about missiles," a topic which was not included in the Six-Party Talks. "We would like to see it be part of the discussion with North Korea."<sup>13</sup> It is likely that the State Department, even before the start of Ambassador Bosworth's Northeast Asia tour in early March, had probably already informed, via its New York channel, North Korea of the ambassador's intention to visit North Korea and willingness to discuss the issues of nuclear weapons, normalization of relations, and the current missile test issue. Otherwise, North Korea would not have known of Bosworth's desire to visit and the lack of an invitation would not have been notable.

In the same interview noted above, Secretary Clinton said, "there are a range of options available to take action against the North Koreans in the wake of the missile launch, if they pursue that." However, based on the July and October, 2006 experiences, there are few measures available to actually pressure North Korea. Knowing well that the U.S. will always welcome any North Korean invitation to resume the discussion, North Korea has little disincentive not to go ahead with a test launch. Moreover, with the strong belief that a successful missile launch will result in considerable advantages to North Korea when resuming the negotiation afterwards, North Korea would have decided that it was in its interest to launch either missile or satellite.

#### (iv) Potential missile buyers in the Middle East

At this time, too, North Koreans will aim at advertising their capability to the potential buyers and real cooperation partners in the Middle East, but the overall value is diminished. North Korea will accord less importance to a successful test as a means to entice potential Middle Eastern missile clients this time. The North Korean and Iranian governments have been collaborating on ballistic missile programs since the early 1980s.<sup>14</sup> In 1993 Iran entered into an agreement with North Korea to purchase Rodong missiles.<sup>15</sup> For last several years, North Korean engineers have traveled to Iran to assist in the advancement of the capabilities of the Safir rocket, and in July 2006, Iranian scientists and engineers watched as the North Koreans conducted a Taepodong-2 test firing.<sup>16</sup> Iran's successful satellite launch on February 2 proved a big jump in missile capability; "the Iranians, long students of North Korean missile technology, have now surpassed their tutors."<sup>17</sup> The fact that the new Dongang-ri launch site

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<sup>13</sup> U.S. Department of State, "Clinton's Remarks After Meeting Chinese Foreign Minister Yang," March 11, 2009; <http://www.america.gov/st/texttrans-english/2009/March/20090312133245xjsnommis0.2299921.html>.

<sup>14</sup> Joseph S Bermudez Jr., and Tim Brown, "Ready for Launch," *Jane's Defence Weekly*, Volume 45, Issue 38, September 17, 2008. p. 30.

<sup>15</sup> Alon Ben-David, "Iran could still extend an 'unclenched fist,'" *Jane's Defence Weekly*, 11 February, 2009, p. 40.

<sup>16</sup> Interview by the author with experts on North Korean missiles, March 2009.

<sup>17</sup> Alon Ben-David, "Iran could still extend an 'unclenched fist,'" *Jane's Defence Weekly*, 11 February, 2009, p. 40.



is an imitation of an Iranian launch site, and Iran's successful satellite launch show that Iran's technology is advancing much faster than North Korea's. Iran's oil revenues are a significant in drastically shortening the time required for developing and applying new technologies. Seemingly North Korea now needs to learn from Iranian technology, and technological cooperation and information-sharing between two states will also benefit Iran. Each nation perceives a benefit to cooperation in facing the U.S. and deflecting pressures from the outside.

Amid North Korea's preparations for its missile test in May 2006, one American official noted that Iranian President Mahmoud Ahmadinejad's uncooperative attitude almost made Kim Jong-il look a little rational. A high-ranking North Korean official who served as a representative to the Six-Party Talks remarked that even if North Korea normalized relations with the U.S., it would not sever ties with countries like Iran and Syria, because relations with the Middle East are very important.

As discussed above, North Korea has insisted on carrying out a third test of a long-range missile because it feels it has nothing to lose. But, of course this holds true only if the test succeeds. It does not seem like North Korea has not thought about what will happen if the test fails. There is need to examine the meaning behind North Korea's March 12, 2009 announcement of its intention to test a communication satellite around April 4-8, 2009.

**(C) The failed July 2006 test launch: the reason why the window of opportunity has not completely closed**

The March 12 announcement does not signal that North Korea has finished preparations for the test launch. Rather, from a diplomatic standpoint it was an act of protest against the ROK-U.S. joint military drill called Key Resolve. North Korea's decision to launch two weeks after the end of the Key Resolve drill on March 20 can be interpreted as its willingness to observe the U.S.'s actions before making a final decision to test. From a technical standpoint, North Korea's announcement to launch three weeks later can be seen as evidence that they are not so confident to launch any time they want, meaning their technology is not militarily deployable. The fact that Iran succeeded in using the Safir-2 to launch its Omid satellite into orbit on February 2 does not guarantee North Korea will succeed as well. But, the fact that North Korea is emphasizing the satellite launch shows that North Korea learned much from Iran about the Omid technology.

**Table 2: OMID Satellite Specifications**

<b>Characterization:</b> Store and Forward Telecommunication Satellite
<b>Dimensions:</b> 40cm * 40cm * 40cm / <b>Weight:</b> 27 kg
<b>Thermal Control:</b> Passive/ <b>Frequency Band:</b> UHF
<b>Nodal Period:</b> 90.7minutes/ <b>Inclination:</b> 55.71degrees
<b>Apogee:</b> 381.2km / <b>Perigee:</b> 245.5km

Source: Iranian Space Agency, <http://www.oosa.unvienna.org/pdf/pres/stsc2009/tech-15.pdf>.

If North Korea puts a satellite similar to Omid into orbit and can show that the telemetry between the ground station and the satellite is working, North Korea will be able to boast of its technological capabilities. After NASA and similar organizations verify the success of the SLV launch, North Korea will declare that it succeeded in its 1998 test and will declare that it can become an economically strong nation by 2012. Due to success in importing satellite parts with the lifespan of several months from Iran, North Korea can speak confidently about its satellite

**Table 3: Specifications of Iranian Safir-2 and North Korean Baekdusan (Taepodong)-2 as Space Launching Vehicle**

Safir- 2	Taepodong-2
<ul style="list-style-type: none"> <li>· This SLV is 22 meters long with a diameter of 1.25 meters and weight of more than 26 tons.</li> <li>· The mission of SAFIR-2 SLV was to place OMID satellite in the orbit of 250km.</li> <li>· Two-stage launcher</li> <li>· 1st Stage Engine: Max. Altitude: 68 km</li> <li>· 2nd Stage Engine: Max. Payload Weight: 27 kg, Angle correction for final payload injection</li> <li>· Liquid Fuel/solid fuel</li> </ul>	<ul style="list-style-type: none"> <li>· This SLV is 35.8 meters long with a diameter of 2.2 meters (1<sup>st</sup> vehicle), 1.3-1.5 meters (2<sup>nd</sup> vehicle), and 1m(3<sup>rd</sup> vehicle), weights unknown.</li> <li>· The mission of Paektusan(Taepodong) 2 is to place Kwangmyungsung-2 satellite in the LOE</li> <li>· Three-stage launcher</li> <li>· Liquid fuel(1<sup>st</sup> stage engine) /solid fuel(2<sup>nd</sup>, 3<sup>rd</sup> stage engine)</li> </ul>

Sources: Iranian Space Agency, OMID Satellite Launch Report, 46th Meeting of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS), 9th - 20th February 2009, Vienna (<http://www.oosa.unvienna.org/pdf/pres/stsc2009/tech-15.pdf>).

Although North Korea insists its goal at this time is to successfully launch a satellite, true success will be determined by the power capacity of the rocket. Judging from the fact that North Korea chose the Musudan-ri launch site over the Dongchang-ri site shows that the current materials in the horizontal processing building are not direct imports of Iran's Safir-2 technology. Because the Safir-2 is much smaller than the Taepodong-2, it cannot be launched at the Musudan-ri platform. That North Korea is preparing a test at Musudan-ri shows that a three-stage engine will be used. In other words, in order to make up for the failure in 2006, North Korea is pursuing a test independent of outside help. Since the July 2006 Taepodong-2 failure, North Korea has not tried to test-fire anything longer than intermediate range missiles. *Jane's Defence Weekly* writes that in order to avoid the same mistake it made in 2006, North Korea must get three parts right: the engine test stand, the horizontal processing building, and the umbilical tower. North Korean engineers have conducted intensive engine tests at the Musudan-ri facility, and at present, it seems that they are conducting final technical examinations according to the check list at the horizontal processing building; still it is

questionable how advanced this building is.<sup>18</sup> North Korea also increased the height of its umbilical tower from 30 meters for the Taepodong-1 to around 35-38 meters for the Taepodong-2. This tower has been improved, maintained, and should provide enhanced boosting power for the new SLV. On the other hand, the extension of the pad may actually introduce a new critical design failure. But the most vulnerable part of the Taepodong-2 lies in the engine part using liquid propellants. Toxic propellants will quickly corrode the inside of the fuel tank and also cause damage to the fuel injection nozzle and other sensitive equipment. If the last failed test-firing was caused by this problem, it was assumed that it would take about two years of development to overcome it.

Without test-firing no one can say if the launch will be successful. However, even many advanced countries have suffered failed launches, and there are many precedents for postponing a launch because of technical questions. There was no information that anyone in North Korea took responsibility for the July 2006 failure and was purged by the top leadership. Rather, other nuclear and military technicians rushed into preparations for the nuclear test detonation beginning the next month. In case of another failure, though, the damage would be completely different, especially if there is no plan B such as a second nuclear explosion. The Obama administration has given enough signals that it is open to high level political dialogue, including a summit meeting, but the North Korean regime decided to show its deterrence capability by demonstrating the means of delivery for nuclear weapons. Therefore, especially North Korea's boasting that it is a nuclear power, an internal fiasco will be inevitable if the launch fails.

North Korea is unrecognized but arguably *de facto* nuclear state already, and it will get limited gains from a successful test-firing of a longer range missile. Failure, however, will have grave consequences including a perception that North Korea is not actually a nuclear power as it lacks means of delivery. Considering Kim Jong-il's health problem, the U.S. and other countries will maximize their influence and pressure, and new or increased sanctions on the DPRK will be likely. In short, the cost of failure is too big, compared with the small benefits of success. North Korea has already overwhelmingly achieved its goal of garnering attention and has already expressed enough dissatisfaction with the South Korean government. If a satellite launch is its true motive, North Korea can address the issue as Pyongyang and Washington discussed in the last days of the Clinton administration in 2000. No country will be opposed if the U.S. and North Korea begin to discuss missile issues on the verge of the Six-Party Talks. But North Korea will not unclench its fist.<sup>19</sup> North Korea always believes the talks will be resumed any time they offer to have dialogue. This time, however, will be and should be different, and North Korea needs to have second thoughts to the recent turn of events in the wake of the end of the Key Resolve drill on March 20.

Actually, on the same day, *The People's North Korea News (Choson Shinbo)*, a pro-North Korean propaganda newspaper run by the Chosun General Association of Korean Residents in Japan, cited an interesting article titled "Notification of Satellite Launching Plan is the Opportunity of Self-reflection provided by DPRK." First all, as propaganda, the article

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<sup>18</sup> Joseph S Bermudez and Alliason Puccioni, "Satellite imagery points to North Korean launch," *Jane's Defence Weekly*, Feb 25, 2009., p. 6.

<sup>19</sup> Sun-won Park, "Succeeding to draw attention, now put your fist down," *Pressian*, Feb. 17 2009, [http://www.pressian.com/article/article.asp?article\\_num=40090217145026](http://www.pressian.com/article/article.asp?article_num=40090217145026).

Sun-won Park  
*North Korea's Third Attempt to Launch a Long-Range Missile*  
Brookings CNAPS

confirmed that there is no need to make a change of plans, and the tests would be carried out according to the announced schedule. However, the article notably states that:

“North Korea announced it would test around April 4-8, which means that North Korea is granting time to U.S. leaders....It is too early to gauge the Obama administration’s reaction as it is still “reviewing” policy toward the DPRK. One thing that is for certain is that if the U.S. decides to stop or pressure North Korea, the Six-Party Talks will be threatened. As noted above, after North Korea announced its plans to launch a satellite, U.S. Secretary of State Hillary Clinton, after meeting with China’s Minister of Foreign Affairs, Yang Jiechi, expressed the will to negotiate with the DPRK on missile-related issues. However, if the Obama administration interprets North Korea’s missiles as nuclear warheads attached to intercontinental missiles, there will be many problems.”<sup>20</sup>

Two different interpretations of this statement are possible. A negative interpretation is that North Korea is stating that UN Security Council sanctions should not be prepared before the test, and if sanctions are implemented, the Six-Party Talks will experience a long-term deadlock. North Korea is asking the other nations to turn a blind eye to the satellite test. If a positive interpretation is made, the U.S. should acknowledge that North Korea has peaceful intentions, and also engage in bilateral talks on the matter as they did in 1990s. If the U.S. makes certain proposals to North Korea, it will reconsider its planned launch. However one interprets the *Choson Shinbo* article, one cannot create policy based on an article written in a paper with no political authority. At this time, taking a minimalist approach, the article at least shows that North Korea has not completely closed the window of opportunity.

### 3. Recommendations

#### **(A) The Obama administration should send well-balanced messages to Pyongyang again**

North Korea insists that its intentions for the third launch of a long-range missile are peaceful, and are only to launch a satellite. Using the phrase “for the peaceful purposes of the satellite” intends to give dual messages. First, Pyongyang wants to avoid international sanctions based on UN Security Council Resolutions 1695 (from July 2006) and 1718 (from October 2006). The former recommended the member countries apply their own measures to the DPRK mainly because it failed to provide a prior announcement and notification of the missile launch. Resolution 1718 was stronger, obliging UN member states to implement sanctions after nuclear test explosion. This time Pyongyang has made the proper notifications and therefore international society will not take unified actions swiftly to reinforce the existing sanctions against North Korea. Second, the Pyongyang government still maintains that the launch is separate from the Key Resolve drill, although it did not completely deny the tacit political nexus between their plan and the U.S.-ROK exercise. In other words, North Korea stresses that the launch is not the country’s military response to the U.S. military exercise. However, there is no absolute reason for testing the launch of a non-militarily intended satellite between April 4 and 8, two weeks after the completion of the Key Resolve.

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<sup>20</sup> Kim Ji-young, “Notification of Satellite Launching Plan is the Opportunity of Self-reflection provided by DPRK,” *Choson Shinbo*, March 20 2009. (<http://www.korea-np.co.jp/news/ViewArticles.asp?ArticleID=35922>). See also Kim Ji-young, “Secretary Clinton, “Indirect Appeal to Pyongyang,” (<http://www.korea-np.co.jp/news/ArticlePrint.asp?ArticleID=35597>)

Therefore, continued positive dialogue with North Korea is needed to see if North Korea offers an indirect hint that it wishes for the situation to change during the time after the exercise and before the launch. The U.S. needs to contact and persist on relaying the intentions for arranging high-level meetings and a visit to Pyongyang by Ambassador Bosworth in order to learn more about the current North Korean stance and in particular how North Korea perceives Secretary Clinton's willingness to facilitate bilateral missile talks. An invitation from Ambassador Bosworth for a visit by Deputy Ministers like Kang Suk-joo and Kim Gye-gwan can also serve as a realistic option. The U.S. should require North Korea to officially announce the peaceful and non-military, intended only to put a satellite into orbit. If the peaceful intention of a satellite is officially reaffirmed by North Korea, the U.S. can offer to rekindle the past discussions between North Korea and the Clinton administration to effect a proxy satellite launch of the North Korean satellite by another nation, as Chairman Kim told Albright.

The U.S. also needs to indirectly inform North Korea of the possible U.S. responses if North Korea goes ahead with the planned launch. For instance, bringing the testing to the attention of the UN Security Council will be inevitable. There will be tougher sanctions against North Korea while the discontinuation of food and fertilizer support from South Korea will be extended. Other kinds of unexpected reactions, such as a U.S. congressional denunciation (or even indictment) of the North Korea leadership or the regular reporting of North Korea's U.S. dollar transactions to the Congress, can follow, and the U.S. should let North Korea know that the U.S. strongly wishes for such undesirable outcomes not to come true.

Unnecessarily inciting North Korea should be avoided since the best course is to resolve the issue through dialogue. Nevertheless, the U.S. should stress to North Korea the importance of having a positive start with the new North Korea policy team led by Secretary Clinton, arguably the most politically influential secretary of state in U.S. history, who has shown the willingness to have a summit meeting with Chairman Kim Jong-il. Publicly expressing this U.S. stance so as to have Kim directly hear this U.S. voice would be more effective than passing the word through intermediaries or leaking rumors to this effect. The U.S. should also emphasize that North Korea's decision not to launch a satellite will positively influence the U.S.'s North Korean policy currently under review and that the White House, the Departments of State, and the Department of Defense are all trying to react to the current issue carefully, despite North Korea's extremely aggressive choice of words.

**(B) The North Korean leadership should make a brave decision to engage positively in dialogue with the U.S.**

North Korea has become weaker as its outside has decreased considerably. Both internal and external challenges are raising questions about regime survival, and Chairman Kim Jong-il faces considerable stress in navigating manifold and often countervailing policy options. In light of recent reports, his health is of paramount concern among the leadership. This is especially important in light of continued uncertainty about succession in North Korea. Some recent and largely unsubstantiated reports speculate about the emergence of one of his three sons as a successor, but succession planning seems to have been largely delayed after the passing away in 2004 of Mrs. Ko Young-hee, Kim's second wife and mother of his second and third sons, Kim Jong-chol and Kim Jong-un. Economically, the country is caught in a poverty trap, exacerbated by the legacy of BDA sanctions that have curtailed government

revenues from illicit activities. All foreign currency transactions are monitored. The allegations of North Korea-Syrian nuclear cooperation have focused attention on North Korea's exporting of missiles, components, or technologies to Middle Eastern governments, and therefore reduced the likelihood of future sales, in combination with the Obama administration's active engagement plan with Middle East countries. North Korea faces a severely constricted space for carrying out illicit international activities. Moreover, careful international attention on North Korea's uranium enrichment program also dissuades Pyongyang from importing goods considered as dual-use. North Korea has also not realized any material benefits from the lifting of the Trading with the Enemy Act or its delisting from the U.S. list of state sponsors of terrorism.

These challenges render the status quo untenable and present an attractive opportunity for serious and meaningful U.S. engagement with Pyongyang. At 67 and in poor health, this could be Kim's last chance for a real negotiation to terminate the state of war that has existed for North Korea since 1953. Of course, systemic vulnerability also raises the opposite prospect of a renewed hardened stance, a retrenchment back toward conventional sources of legitimacy and tactics – anti-Americanism, provocation, and brinksmanship. In the absence of a credible test of engagement from the North Korean side, it is difficult to predict which course is the prevailing policy choice in Pyongyang.

Dialogue – instead of confrontation – with neighboring states is more advantageous if the leadership sees the present as an important time for the betterment of North Korean society. A confrontational stance can have some short-term effects. However, as China seeks regional stability for its long-term economic prosperity, and if North Korea truly desires its own economic revitalization by 2012, North Korea must extensively expand its cooperation with the neighboring nations. To show its willingness to develop cooperative relations, North Korea should expand its contact channel with the U.S., and refrain from positioning the launch vehicle at the launch pad. The international community will cheerfully welcome the news if North Korea communicates to the IMO and ICAO of its decision to reschedule the launch time. North Korea should naturally reconsider its refusal of U.S. food support once the dialogue between two nations begins. North Korea should also consider elevating the status of its current New York channel to discuss the missile issue, and should suggest contact between U.S. Ambassador and North Korea's UN representative. Internally securing extensive materials for discussion will also help improve mutual understanding of the current problem. In order to first initiate the dialogue, both the U.S. and North Korea should consider request a neutral third party, such as UN Secretary General Ban Ki-moon, to mediate the talks. North Korea must realize that its attempt to recharacterize the Six-Party Talks as arms reduction talks will only be perceived as North Korea's willingness to enter into a nuclear competition with the U.S. Many nations in the world are abandoning the past hostile relations and instead strengthening the friendly alliances to achieve mutual profit. North Korea needs to more concretely realize the prospect of a whole new international environment for the nation once North Korea succeeds on normalizing the relation with the U.S.

### **(C) Close cooperation between the U.S. and China is imperative**

North Korea established this year as “China-DPRK Friendship Year,” marking the 60<sup>th</sup> anniversary of China-North Korea diplomatic relations. Premier Kim Young-il and a delegation of over 100 members visited China last week for five days, and completed important diplomatic meetings with his Chinese counterpart Premier Wen Jiabao, and

President Hu Jintao. China has already invited Kim Jong-il to visit China, and North Korea has tentatively accepted. Kim's visit to China should have a positive impact not only on Sino-North Korea relations, but also on peace and security in Northeast Asia. New room for diplomatic endeavors is open for China, and action would refute suspicions of its behind-the-scenes acquiescence in favor of North Korea's aggressive stance. (Such suspicions are relatively strong in Seoul, in the wake of Wang Jiarui's positive comments on his meeting with Kim Jong-il and the Chinese foreign ministry's remarks that if it is proven that North Korea does launch a satellite, UN sanctions may not be considered.) China should spend more time and energy than others for peace and stability in the region, which would benefit many Northeast Asian states. Closer cooperation between China and the U.S. is essential, and both South Korea and Japan should exercise more patience for now. If Chairman Kim visits Beijing to commemorate his old relationship with China, the world will take a break from raising questions about his political leadership and succession.<sup>21</sup> The U.S. may also have a better picture for possible summit talks between President Obama and Chairman Kim. To that end, North Korea should decide to notify the IMO and ICAO that it is postponing the satellite launching plan, and announce its willingness to have preliminary contacts with the U.S. for missile negotiations.

## **5. Concluding Remarks**

Efforts for peace and stability must continue, even though it is more likely that North Korea will launch its satellite than that it will change its stance and "reschedule." The sensitive period of the Key Resolve exercise has passed. Now is the time to fundamentally reassess the situation. Only those who believe that an opportunity is possible can create one. I think there is less than a 30% chance that North Korea will reschedule its current plan to launch, but undertaking the steps described above may increase the chances to 50%. The odds are not high, but it is the duty of governments and the work of nations to undertake diplomacy to resolve unthinkably difficult issues.

North Korea and the U.S. must begin dialogue to improve their relationship and to establish peace in Northeast Asia. All hope lies therein.

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<sup>21</sup> *Yonhap News Agency*, "North Korean Premier had courtesy call to Hu Jintao, consulted Kim Jong-il visit to China," (<http://app.yonhapnews.co.kr>), March 19 2009.