



USAF COUNTERPROLIFERATION CENTER
CPC OUTREACH JOURNAL
MAXWELL AFB, ALABAMA

Issue No. 925, 19 July 2011

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Welcome to the CPC Outreach Journal. As part of USAF Counterproliferation Center's mission to counter weapons of mass destruction through education and research, we're providing our government and civilian community a source for timely counterproliferation information. This information includes articles, papers and other documents addressing issues pertinent to US military response options for dealing with chemical, biological, radiological, and nuclear (CBRN) threats and countermeasures. It's our hope this information resource will help enhance your counterproliferation issue awareness.

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Press TV – Iran

Iran MP Dismisses Russia N-Issue Bid

Saturday, July 16, 2011

Iranian lawmaker Mohammad Karami-Rad has dismissed Russia's "step-by-step" approach proposed over Iran's nuclear program as a move aimed at reviving Moscow's own political weight in the region.

On Wednesday, Russia's Foreign Minister Sergei Lavrov laid out a new "step-by-step" approach that would enable Iran to take steps to address questions raised by the International Atomic Energy Agency (IAEA) regarding Tehran's nuclear program.

Karami-Rad said Iran has already responded to questions and ambiguities regarding its nuclear program based on the modality, adding that "by raising the issue of reviving negotiations, Russia wants to pave the way for the West's interests."

The Iranian lawmaker further added that the Islamic Republic is past the stage of nuclear talks and "new conditions for resuming negotiations are not acceptable."

According to Lavrov, Iran can revive negotiations to alleviate individual concerns of the IAEA about its nuclear activities and be rewarded along the way by partial removal of sanctions.

The approach would start out with the easiest questions and move onto more complicated ones that would require a longer time to respond to.

In June 2010, the United Nations Security Council imposed a fourth round of sanctions against Iran over allegations that Tehran pursues military objectives in its nuclear program.

The US-engineered sanctions were later topped by further unilateral measures by the United States and the European Union (EU).

Iran insists that as a member of the IAEA and a signatory to Nuclear Non-Proliferation Treaty (NPT), it has the right to the peaceful applications of nuclear energy for electricity generation and medical research.

<http://www.presstv.ir/detail/189331.html>

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Jerusalem Post – Israel

'Germany to Finalize Sale of Dolphin Submarine to Israel'

By JPOST.COM STAFF

July 18, 2011

'Der Spiegel': Berlin will subsidize deal of nuke-capable sub with 135m. euros; deal reached after German defense minister meets PM, Barak.

Germany will provide Israel with its sixth Dolphin-class nuclear-capable submarine and will subsidize the deal with a total of 135 million euros, German magazine *Der Spiegel* reported overnight Sunday.

According to the report, German Defense Minister Tomas de Maiziere met in Israel last week with Prime Minister Binyamin Netanyahu and Defense Minister Ehud Barak and promised to finalize the deal for the submarine.

The Dolphin submarine is capable of launching nuclear-armed ballistic missiles.

Talks on the deal for the sub stalled last year after the Germans declined to underwrite it, as they had done with previous purchases. The vessel will cost between \$500 million and \$700m. The submarines are considered Israel's most sophisticated and strategic weapon.

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Israel already has three Dolphin-class subs; another two are currently under construction in Germany with expected delivery dates of 2012 and 2013.

According to foreign reports, Israel's submarines have a second-strike capability and carry cruise missiles armed with nuclear warheads.

Germany donated Israel's first two submarines after the first Gulf War and, according to the German press, split the cost of the third with Israel. The three undersea vessels currently in the navy's possession employ a diesel-electric propulsion system, which requires frequent resurfacing to recharge their batteries.

<http://www.jpost.com/Defense/Article.aspx?id=229801>

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FARS News Agency – Iran
Tuesday, July 19, 2011

Iran to Study Russia's 'Step-by-Step' Proposal

TEHRAN (FNA) - Iranian Foreign Ministry Spokesman Ramin Mehman-Parast voiced Tehran's readiness to study a Russian proposal for the settlement of Iran-West nuclear standoff, but said that Tehran has not yet received the plan.

"This plan has not yet been delivered to us," Mehman-Parast said in his weekly press conference, and added, "But, we will study this offer once we receive it."

Meantime, the spokesman stressed Iran's inalienable right to access and use the peaceful nuclear technology, and called on the other sides to recognize and respect Tehran's rights in their proposals.

"If different states are after resolving Iran's nuclear issue they should move in a direction in which the Iranian nation's rights are recognized," Mehman-Parast said.

Russia's Foreign Minister Sergei Lavrov on July 13 laid out a new "step-by-step" approach that would enable the Islamic Republic to take steps to address the questions raised by the IAEA.

According to the proposed plan, Iran can revive negotiations to alleviate individual concerns of the IAEA about its nuclear activities and be rewarded along the way by partial removal of sanctions.

Earlier on Saturday, a senior Iranian legislator lauded Moscow for its positive attitude to the settlement of Iran-West nuclear standoff, but meantime reiterated that Russia's "step-by-step" proposal is not a proper solution since it would be a return to step one.

"Returning to the first place (over Iran's nuclear issue) cannot be a proper solution. But the fact that Western countries would once again review (Iran's) answers to the IAEA (the International Atomic Energy Agency) questions could refresh their memories on the peaceful nature of Iran's nuclear program," Head of the parliament's National Security and Foreign Policy Commission Alaeddin Boroujerdi explained.

Iran says based on the modality plan agreed between the Islamic Republic and the IAEA in 2007, the Agency should announce the Iranian nuclear case closed as Tehran has addressed all issues between Iran and the IAEA.

Tehran says it has been fully cooperative with the Agency over its nuclear program, urging the body not to be swayed by certain Western countries.

<http://english.farsnews.com/newstext.php?nn=9004280919>

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Miami Herald

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Iranian Hardliner Says US, Europe Need 'Lesson'

Associated Press (AP)

Tuesday, July 19, 2011

TEHRAN, Iran (AP) -- A prominent Iranian hardliner has called for attacks against U.S. and European airline offices over their refusal to supply fuel to Iranian aircraft.

Hossein Shariatmadari, a representative of Iran's Supreme Leader Ayatollah Ali Khamenei, says in an editorial in his Kayhan daily Tuesday that American and European airlines should be "taught an unforgettable lesson."

Iran already has banned the supply of jet fuel to European airlines in a tit-for-tat move.

Iran is at odds with the West over its nuclear program. Tehran's refusal to halt uranium enrichment has brought four sets of U.N. sanctions against Iran.

The U.S. and its allies accuse Iran of seeking to build nuclear weapons, a charge Tehran denies.

<http://www.miamiherald.com/2011/07/19/2320241/iranian-hardliner-says-us-europe.html>

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News Hosted by Google

Iran Installs 'Speedier' Nuclear Centrifuges

By Farhad Pouladi, Agence France-Presse (AFP)

Tuesday, July 19, 2011

TEHRAN — Iran said Tuesday it has begun installing new centrifuges with "better quality and speed" to enrich uranium in its nuclear facilities, defying international demands it halt its atomic activities.

"The installation of new centrifuges with better quality and speed is ongoing. We have announced it and the agency (UN atomic watchdog) has full supervision of them," Iranian foreign minister spokesman Ramin Mehmanparast told reporters at his weekly press briefing.

"They are fully aware that Iran's peaceful nuclear activity continues to progress. This is another confirmation of the Islamic republic's successful stride in its nuclear activities," he added.

He was responding to questions about progress in the installation of new-generation centrifuges, as per a June 8 announcement by Iran's nuclear chief Fereydoon Abbasi Davani.

Abbasi Davani had at the time said "the first cascade of 164 new-generation centrifuges" would soon be installed, without elaborating on the details of the new machines.

He had at the same time announced that the Islamic republic would expand its production of 20 percent enriched uranium and move the work from its main enrichment plant in Natanz in central Iran, to a smaller site at Fordo, some 150 kilometres (90 miles) south of Tehran.

Other Iranian authorities have over the past year or so said Tehran was working on new-generation centrifuges capable of enriching uranium up to five or six times faster than those currently in operation.

Washington and several European nations called Abbasi Davani's declarations as "provocation."

Despite being targeted by four sets of UN Security Council sanctions over its refusal to suspend uranium enrichment, Iran remains adamant that it will push ahead with the programme.

Iran has long been producing low or 3.5 percent enriched uranium (LEU) at Natanz, but started producing uranium at the higher level of purity of 20 percent in February 2010, ostensibly to make the fuel for a medical research reactor.

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The UN Security Council in New York has repeatedly ordered Tehran to halt all uranium enrichment until the International Atomic Energy Agency (IAEA) has verified the exclusively peaceful nature of its nuclear activities.

Uranium enrichment is the most sensitive part of the programme because it can be used to produce both the fuel for a nuclear reactor and the fissile material for an atomic warhead.

The West accuses Tehran of seeking to build a bomb under the guise of a civilian power programme, a charge which Iran strongly denies.

Iran has over 8,000 centrifuges of the first generation IR-1, with nearly 6,000 actively purifying uranium to the 3.5 percent level, according to the latest report by the IAEA, the UN nuclear watchdog, in May.

Iran through its enrichment activities has amassed four tons of LEU (around 3.5 percent) and 60 kilograms of HEU (highly enriched uranium) of 20 percent, according to the same report.

Iran says it needs the HEU to produce fuel for its medical research reactor in Tehran, as well as several other nuclear research reactors which it says it plans to build.

The IAEA believes, however that since 2008 there have been grey areas in Tehran's nuclear programme.

The agency reiterated at its last meeting in June its "concern about the possible existence of hidden nuclear activities," with military aim, criticising the "refusal" of Tehran to respond to repeated requests for "clarification."

Tehran vehemently denies all allegations about covert or military aimed nuclear activities and maintains its programme is a civilian one.

<http://www.google.com/hostednews/afp/article/ALeqM5hhGqmLVav8hMbmGNbzKqRgN6zKeQ?docId=CNG.7e4a598f9713cc3df378c520326d27b1.661>

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Yonhap News – South Korea

July 16, 2011

S. Korea, U.S. Agree on Further Talks on Renewing Nuclear Accord

WASHINGTON, July 15 (Yonhap) -- South Korea and the United States on Friday wrapped up a two-day meeting on revising their treaty on nuclear use and agreed to keep working on narrowing their differences, a South Korean official said.

Park Ro-byung, South Korea's envoy for the nuclear accord talks, and Robert Einhorn, the State Department's special adviser for nonproliferation and arms control, discussed how to revise the current treaty in a mutually beneficial direction, the official said.

The existing treaty, signed in 1974, expires in March 2014. Seoul is seeking to revise it to meet its enhanced status as a nuclear energy developer.

"The meeting centered on making all aspects of the nuclear accord more modern and advanced, and on revising the accord in an equal and mutually beneficial way," the official said. "We will continue to have working-level discussions on the contents and expressions of many issues to be included in the accord and to try to narrow our differences."

Under the existing pact, South Korea is prohibited from reprocessing its more than 10,000 tons of nuclear waste from some two dozen reactors.

South Korea has proposed "pyroprocessing," a new technique not yet commercialized, to recycle spent fuel. After the March meeting, the two countries formed a committee for a joint study on pyroprocessing over the next 10 years.

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Sources said Park and Einhorn also talked about how to depict the handling of used nuclear fuel in the revised accord and how to include the result of their joint research in it.

The two sides are expected to have a fourth round of talks in Seoul this fall.

<http://english.yonhapnews.co.kr/national/2011/07/16/8/0301000000AEN20110716001600315F.HTML>

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Voice of America (VOA) News

ASEAN Wants to Re-Open Talks On Nuclear-Free Zone

Monday, July 18th, 2011

The 10 members of the Association of Southeast Asian Nations will re-open talks with the five major nuclear powers aimed at ensuring the region is free of nuclear weapons.

Surin Pitsuwan, the ASEAN secretary-general, says the grouping hopes to persuade Britain, China, France, Russia and the United States to agree to a 1995 treaty that bars ASEAN states from owning or using nuclear weapons. ASEAN wants the nuclear powers to never use or threaten to use nuclear weapons in the region.

Surin made the comment Monday in an interview with VOA ahead of the ASEAN foreign ministers meeting and the ASEAN Regional Forum this week in Bali. The ASEAN states will meet with top diplomats from the grouping's neighbors and key partners, including China, Japan and the United States.

The United States, Britain, France and Russia have declined to sign the agreement because it includes the continental shelves of the region and the 200-mile exclusive economic zones of the ASEAN states. That would limit the ability for nuclear-armed ships to travel through the region.

China has indicated it is willing to sign the treaty. However, Beijing claims all of the South China Sea, overlapping with the claims of four ASEAN states.

The United States last year said it was willing to enter discussions on the treaty.

<http://blogs.voanews.com/breaking-news/2011/07/18/asean-wants-to-re-open-talks-on-nuclear-free-zone/>

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Indian Express – India

China Red Flags India Move to Join NSG

By Pranab Dhal Samanta

Sunday, July 17 2011

New Delhi : China is learnt to have questioned India's membership proposal before the Nuclear Suppliers Group (NSG) on grounds that an exception should not be made for just one country. In a clear attempt to build a case for Pakistan too, China has told the 46-member grouping that all potential candidates must be considered for membership.

According to details that have emerged from the June 23-24 meeting of the NSG at Noordwijk in the Netherlands, there was fair amount of concern expressed by many members over considering India's membership given that it is not a signatory to the Non-Proliferation Treaty. Some countries also urged the US and other countries like France and UK, which were backing India's case, to reassess the impact this may have on the non-proliferation regime.

However, it was China that took a totally different line and asked for rules of membership to be framed for all potential candidates than make an exception for India. Pakistan and Israel are the only remaining two nuclear-

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enabled countries that have not signed the NPT and clearly, sources said, the Chinese emphasis was aimed at benefiting Islamabad. In the end, such a move would end up complicating India's case.

On the other hand, sources pointed out that Beijing has in the past backed a criteria-based approach within the NSG rather than granting country-specific exemptions. To that extent, this is being seen as a somewhat consistent position.

The US had agreed to pilot India's membership to the four sensitive technologies export control regimes including the NSG which has the most stringent controls. This commitment was confirmed through the Indo-US joint statement during US President Barack Obama's visit to India.

While the US has circulated a non-paper among member countries and India too has conducted its own outreach effort, the roadblocks could be a quite a few with China making its intention uncharacteristically clear quite early in the process.

<http://www.indianexpress.com/news/china-red-flags-india-move-to-join-nsg/818578/0>

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National Journal

In Court Papers, U.S. Openly Suggests Pakistan Interested in Thermonuclear Weapon

By Global Security Newswire Staff

July 19, 2011

The United States in federal court documents offered its first open suggestion that nuclear-armed Pakistan could be seeking to build a thermonuclear weapon, the *Pittsburgh Tribune-Review* reported.

The Justice Department has charged a Chinese woman living in the United States with illegally exporting high-tech paint coatings that could aid Pakistan's nuclear-weapons development. As the ex-managing director of a Chinese branch of PPG Industries, Xun Wang is accused of shipping the material five years ago in direct disobedience of the Pittsburgh-based company and of nonproliferation guidelines issued by the Commerce Department.

Pakistan holds nuclear arms outside the Nuclear Nonproliferation Treaty and is a known past proliferator of sensitive technology and information through the black-market operation once led by scientist Abdul Qadeer Khan. As such, the United States has placed a number of restrictions on the trade of sensitive goods with the South Asian nation.

The U.S. Justice Department questions in court filings whether the paint-coating shipments could "aid Pakistan in developing thermonuclear weapons," the first instance in which Washington has formally in an open forum raised the issue of Islamabad's potential interest in a hydrogen weapon, according to Hans Kristensen, the Federation of American Scientists' nuclear information project director.

Although Pakistan has carried out nuclear tests using uranium-based weapons, it is not definitively known whether the country is recycling used atomic fuel to build a thermonuclear bomb, he said.

Wang holds permanent residency status in the United States. Before she joined PPG in 2006, the company had exported 290 gallons of the sophisticated coating to Pakistan to be used in building the nation's second atomic energy reactor at the Chashma complex, court filings state.

Chinese firms assisted Pakistan in constructing the first and second reactors at Chashma.

Two different deliveries totaling 360 gallons of epoxy coatings were also sent to Pakistan, while a fourth containing 265 gallons was stopped in Shanghai, records show.

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Pakistan needed extra epoxy to complete covering the inside of the reactor. Otherwise, it would have been forced to conduct the costly work of stripping the PPG coating that had already been applied and replacing it with a different product.

Company officials besides Wang are believed to have tried to assist China's atomic work in Pakistan, government documents state.

Atomic analysts think it is highly likely that Islamabad constructed a facility close to the second Chashma reactor that could recycle used atomic fuel into weapon-usable plutonium.

Satellite photographs taken in the last decade reveal building taking place at the site of an unfinished Chashma-area plutonium reprocessing facility that had been abandoned in the 1970s, according to a 2007 analysis by Paul Brannan and David Albright, nuclear experts at the Institute for Science and International Security. As recently as 2006, construction vehicles and materials could be viewed at the site, and pavement had been laid on roads leading up to the unfinished processing plant.

The ISIS analysts speculated that the plutonium facility was close to finished and that China possibly aided Pakistan in the project. If they are correct, the analysts asserted that used nuclear fuel rods from the first and second Chashma energy reactors "would aid Pakistan in developing thermonuclear weapons as well as increasing the size of its nuclear arsenal."

Pakistan is widely viewed as having the world's fastest-growing nuclear-weapons program.

Brannan said he was taken aback that the Justice Department used findings from his 2007 report in its case against Wang.

"When ISIS warned of this in 2007, the most we got from the U.S. government was silence," he said in an interview with the newspaper. "I don't think the U.S. has confronted Pakistan about their plutonium program. This is really controversial. We are already in the middle of a nuclear-arms race on the South Asian peninsula."

The ISIS analyst said that "the real significance of this case is, it shows how easily it is to conduct illicit nuclear trade."

<http://www.nationaljournal.com/nationalsecurity/in-court-papers-u-s-openly-suggests-pakistan-interested-in-thermonuclear-weapon-20110719>

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RIA Novosti – Russian Information Agency

Russia, NATO End Talks on Sectoral Missile Defense - Source

15 July 2011

The subject of the so-called sectoral missile defense has been taken off the agenda of Russian-NATO negotiations, a source in the Russian delegation said on Friday.

NATO has never given any encouragement to the Russian proposal, whereby a particular country or group of countries would be responsible for a specific missile defense sector - for instance, Russia shooting down a missile in its airspace targeting an alliance member.

"The idea of zonal missile defense? It's no longer under consideration. That's it," the official said.

Russian Foreign Minister Sergei Lavrov said as much at the Russia-NATO Council meeting in Sochi on July 4, stating that the two sides were not able to reach an agreement on a sectoral missile defense system in Europe.

With the genuinely joint approach apparently off the table, it is not clear what the two sides have left to discuss.



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In rejecting the zonal option, NATO member states cite their mutual defense obligations under the alliance's founding Washington Treaty, which may not be delegated to non-members.

Russia and NATO agreed to cooperate on the European missile shield during the NATO-Russia Council summit in Lisbon in November 2010.

NATO insists there should be two independent systems that exchange information, while Russia favors a joint system with full-scale interoperability.

Russia has retained staunch opposition to the planned deployment of U.S. missile defense systems near its borders, claiming they would be a security threat. NATO and the United States insist that the shield would defend NATO members against missiles from North Korea and Iran and would not be directed at Russia.

Russia also demands legally binding guarantees that NATO missile defense systems will not be directed against it.

MOSCOW, July 15 (RIA Novosti)

http://en.rian.ru/military_news/20110715/165215647.html

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Monsters and Critics

Newspaper: Russia is Developing New Generation ICBM

July 19, 2011

By Deutsche Presse-Agentur (DPA)

Moscow - Russia is developing a new-generation intercontinental ballistic missile (ICBM) which will become the world's most effective nuclear weapons delivery system, *Izvestia* newspaper reported on Tuesday.

The new liquid-fueled heavy missile will carry a maximum of 15 nuclear warheads and be able to reach almost any target in the Northern Hemisphere.

The missile also will be equipped with jammers and decoys to make it and its nuclear warheads, each of which may be aimed at separate targets, 'impossible' to intercept, the article said.

Russia's Ministry of Defence is in the final stages of developing blueprints for a prototype missile which will be built at a military test centre in the Ural city Chelyabinsk.

The Kremlin has spent 27.5 billion dollars in developing new technologies for the missile. Its deployment should begin in 2020.

The weapon will replace the Russia's fleet of silo-based SS-18 missiles, which currently form the main leg of Moscow's deterrent to a potential enemy nuclear strike.

The SS-18 was first fielded by the Soviet Union in the 1970s. Western analysts have said almost all of the 58 SS-18 missiles currently in service are probably aimed at ICBM silos in the US or China.

Russia and the US have been in a row since the mid-2000s over a US plan to deploy missile defence systems to Europe which, according to Washington, are needed to protect NATO states from a missile launched by a rogue nation.

Kremlin officials have repeatedly criticised the missile shield plan, saying the system would be able to intercept Russian missiles and so give NATO and the US a powerful advantage in a confrontation with Moscow.

Russian Foreign Minister Sergei Lavrov in early July warned the Kremlin would retaliate with new-technology weapons of its own if the NATO missile defence plan went forward, saying 'Russia would have to respond.'

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http://www.monstersandcritics.com/news/europe/news/article_1651916.php/Newspaper-Russia-is-developing-new-generation-ICBM

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Global Security Newswire

As Obama Prepares to Push Nuclear Test Ban, Technological Basis Still Debated

Friday, July 15, 2011

By Chris Schneidmiller, *Global Security Newswire*

First in two-article series

WASHINGTON -- It has been 12 years since the U.S. Senate last considered the Comprehensive Test Ban Treaty, which supporters say has been enough time for technology to catch up with the concerns that previously derailed the pact (see *GSN*, May 11).

Those developments, they hope, will give the treaty a fighting chance when it goes back to Capitol Hill.

Since the early days of his administration, President Obama has made it clear he intends to submit the accord for approval by the Senate as part of his administration's broader nonproliferation campaign. Top officials have discussed the general outlines of a strategy for securing ratification, but it remains to be seen when it will be put into play.

Treaty proponents argue that the United States should now feel assured it can keep its nuclear arsenal in working order without actually setting off weapons, and can be confident that no other nation could carry out a secret test blast.

They say the time is right for lawmakers here to ratify the treaty, furthering its chances to become a global regime and taking another step to stem the spread of nuclear weapons.

"It is really very difficult to develop a functional nuclear weapon without the nuclear tests. And for those countries that already have nuclear weapons it puts a cap on new and advanced nuclear weapons," said Annika Thunborg, spokeswoman for the Preparatory Commission for the Comprehensive Test Ban Treaty Organization.

"The ultimate question is ... what world do countries want to live in? And this is of course a question that many American presidents have asked," she told *Global Security Newswire*.

Critics have a different take, saying developments since 1999 have only made more obvious the dangers of accepting a binding prohibition on nuclear blast trials.

Computer modeling cannot effectively replace actual testing in terms of ensuring the upkeep of today's stockpile, nor for preparing new nuclear weapons that might one day be necessary to safeguard the United States from future threats, skeptics assert.

They question whether other governments would fall in line behind Washington in approving the agreement, and argue that some nations could still pull off atomic explosions without the outside world knowing.

"Entry into force would buy nothing," said Kathleen Bailey, former U.S. deputy assistant secretary of State. "States could still cheat without detection, and probably would."

A History of Testing

The United States set off the atomic arms race with the development and use of nuclear weapons during World War II. Over 51 years, there would be more than 2,000 underground, underwater and above-ground nuclear test

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detonations by the five recognized nuclear powers: China, France, Russia, the United Kingdom and the United States.

The technical purpose was to ensure the efficacy of nuclear weapons and to determine how they worked against buildings and living beings. Politically, they were forceful demonstrations of certain nations' military capabilities.

The impact of these events was not limited to assisting the proliferation of nuclear weapons, though the total environmental and human cost might never be known.

More than 500 atmospheric tests conducted by the nuclear powers from 1945 to 1980 spread radiation across the globe, according to one assessment. A 2003 study by the Centers for Disease Control and Prevention and the National Cancer Institute estimated that roughly 11,000 deaths might have been caused by radiation from the blasts, primarily through thyroid cancer linked to exposure to iodine 131. Other projections have been more dire.

"There have been lots of very depressing studies about the impact around Semipalatinsk," the Soviet nuclear testing site in what is now Kazakhstan, "but I wouldn't want my worst enemy to have to view some of that stuff," according to arms control specialist Jeffrey Lewis.

Pressure to curb nuclear testing began in the early years of the atomic era, according to a CTBTO history. There was some success through agreements such as the 1963 Limited Test Ban Treaty that prohibited atmospheric, underwater and space-based testing, but for decades no full-scope prohibition.

Two years of talks in Geneva, Switzerland, ended in 1996 with formalization of the Comprehensive Test Ban Treaty, which today has 182 signatory states. Each member has agreed not to conduct any nuclear trial blast no matter how small the yield, Thunborg said. That assertion, like many involving the accord, is questioned in some quarters.

The Preparatory Commission was stood up to lay the groundwork for an actual CTBT verification organization, once the agreement enters into force.

That, though, has proved sticky. The pact must be ratified by the "Annex 2" states -- 44 nations that were involved in negotiations while in possession of nuclear research or power reactors. There are still nine holdouts among that group: China, Egypt, India, Indonesia, Iran, Israel, North Korea, Pakistan and the United States.

Washington has observed a voluntary moratorium on nuclear testing since 1992. The Clinton administration submitted the treaty for Senate advice and consent, only to see it rejected in a 51-48 vote in October 1999. The tally was less close than it might seem, as two-thirds backing would be required for ratification.

Lawmakers and former top officials at the time raised a number of objections to the agreement, such as its potentially detrimental effect on the U.S. nuclear deterrent.

The U.S. Stockpile Stewardship Program had been initiated only five years earlier. The effort was intended to ensure the U.S. arsenal remained safe, secure and reliable without nuclear tests, but its capability to do that at the time remained in question, the Congressional Research Service said in a 2008 report.

"If we need nuclear weapons, we have to know they work. That is the essence of their deterrence," former Reagan administration Defense Secretary Caspar Weinberger asserted during the first debate. "The only assurance you have that they work is to test them."

Another major concern was whether the detection regime was up to the task of catching cheaters. While the five nuclear powers had by that time on their own stopped detonating nuclear devices, rivals India and Pakistan just one year earlier had conducted a series of underground test blasts.

The debate goes on regarding whether those concerns have been fully addressed in the years since the 1999 debate.

Catching Nuclear Cheaters



Twelve years ago, no detection stations or laboratories had been certified for inclusion in the planned web of technology for identifying nuclear detonations, according to Lassina Zerbo, director of the CTBTO International Data Center.

The treaty's International Monitoring System ultimately will feature 16 laboratories and 321 stations to detect seismic rumbles, radiation releases or other signs of nuclear explosions that might occur underwater, in the atmosphere or below the earth's surface.

"Ten years ago ... we had no certified facilities, today we have 265 certified facilities," Zerbo, whose operation analyzes and transmits information from the detection facilities, told *GSN* during a March interview at the organization's headquarters in Vienna, Austria.

The Preparatory Commission cites detection of North Korea's 2006 and 2009 underground nuclear blasts as evidence of its capabilities.

Even with less than two-thirds of the detection system installed five years ago, more than 20 facilities identified the seismic impact of the North's first test. Data and a preliminary analysis pointed to an underground nuclear detonation; information including the magnitude, depth and time of the event was issued to CTBT member states within hours, and a full report confirmed the assessment two days after the incident.

A radionuclide station in Canada reported elevated levels of xenon gas that the organization was able to track back to North Korea, further cementing the conclusion that the Stalinist state had, as promised, detonated a nuclear device.

The organization's detection infrastructure was nearly 80 percent ready when the North conducted its second nuclear blast in 2009. Even as television news reports noted an earthquake in the region, the CTBT office in Vienna had again gathered detailed information suggesting that the event appeared instead to be an explosion.

Treaty states within 48 hours received tangible, detailed evidence indicating the North had set off another nuclear device, according to CTBT officials.

Critics have noted that the detection complex in 2009 did not pick up any noble gases that would be expected to be emitted by a nuclear explosion.

"It is the quality, not the quantity, of measurements or devices that could theoretically detect a nuclear explosion that really matters," Senator Jon Kyl (R-Ariz.), a longtime opponent of the CTBT regime, said in March during the Carnegie International Nuclear Policy Conference. "I would note that even if you add the sophisticated United States capabilities beyond the international capabilities, we were not even able to verify the test that was announced in advance by the North Koreans in 2009."

Zerbo said there are "different schools of thought" on why that occurred, but declined to elaborate.

"No one picked up on the noble gas ... not the United States, not Russia, not China, not South Korea, not Japan," he said.

Nonetheless, it is "unlikely for several reasons" that any nation could get away with a nuclear test unnoticed, Zerbo asserted. The organization's seismic monitoring system has been found able to detect blasts with yields much lower than 1 kiloton, Thunborg said.

The 2006 North Korean blast has been assessed at about a half-kiloton. By comparison, the U.S. Trinity nuclear test in 1945 had a 19-kiloton yield.

Skeptics remain unconvinced that the door has closed on the possibility of secret, undetected nuclear explosions.

There are a number of options for nations to get away with nuclear testing, such as conducting a "decoupled" blast within a specialized container or underground space, the National Institute for Public Policy said in an analysis issued this year. "This can reduce the seismic signal below the threshold of detectability."



Nuclear blasts of a kiloton or higher could be masked against detection while still offering value in creation of new weapons and in maintaining existing systems, the report asserts.

"Most experts with relevant technical expertise agree that the [CTBT International Monitoring System], even supplemented with national technical means, cannot detect decoupled nuclear explosions of one to two kilotons, and perhaps of several kilotons," Bailey, who co-authored the NIPP report, stated by e-mail.

Treaty evaders could pull off a series of successive activities that might allow them to quietly build up reserves of information and know-how, according to some observers. They could glean information on nuclear physics and testing, among other related matters, through detonations of minimal yield.

Undersecretary of State for Arms Control and International Security Ellen Tauscher played down that threat in May.

"Could we imagine a far-fetched scenario where a country might conduct a test so low that it would not be detected? Perhaps. But could a country be certain that it would not be caught? That is unclear," she said during the Arms Control Association's annual meeting in Washington. "Would a country be willing to risk being caught cheating? Doubtful, because there would be a significant cost to pay for those countries that test."

Tauscher did not elaborate on the costs.

Analysts emphasize the value added by national capabilities to the treaty organization's complex of detection equipment. The pact authorizes states to use their own means for determining whether a nuclear test explosion has occurred, including satellites, intelligence and any of the 16,000 seismic stations installed across the globe, said Jenifer Mackby, a former CTBTO official who is now an adjunct fellow at the Center for Strategic and International Studies in Washington.

The International Monitoring System provides data that no country could access on its own, Mackby said. Alongside that infrastructure "you have enhanced national capabilities. Almost all countries in the world have seismic stations," she told *GSN*. "So I think that's a large development as well. ... You have more capability in some respects than any country could gather on its own."

Mackby also noted that bringing the treaty into force would allow treaty states to request that the CTBTO Executive Council authorize short-notice, on-site inspections of states suspected of conducting a nuclear test. She acknowledged others' doubts on whether an executive body of member nations with varying allegiances would sign off on such a visit. However, Mackby said representation by the five nuclear powers makes it "quite feasible" that the council could gather the votes in support of an inspection.

"If countries send qualified experts to the council, most of the members will vote on the technical and credible merits of the case rather than making it strictly a political exercise," Mackby stated.

The converse fear is that the treaty's contribution to nuclear nonproliferation could be undermined if a nation simply forgoes testing in developing a weapon, possibly by using an existing design acquired from another country.

"Today, I'm not so sure that you need" a test detonation to verify a nuclear weapon works as planned, former International Atomic Energy Agency chief inspector Olli Heinonen said during a panel discussion this week in Washington. "I don't think there's an easy answer, but I would not start to wait for a nuclear test" (see *GSN*, July 14).

Stockpile Stewardship

Speaking on May 10, Tauscher highlighted U.S. capabilities both to support the international regime against nuclear testing and to keep its own nuclear weapons in working order.



Directors of the nation's national laboratories say the Stockpile Stewardship Program, carried out by the Energy Department's semiautonomous National Nuclear Security Administration, "has provided a deeper understanding of our arsenal than they ever had when testing was commonplace," she said.

The effort involves a number of activities carried out at the nuclear laboratories and associated facilities, including surveillance of weapons parts as they age and production of replacement components. The United States through last fall had also conducted 24 "subcritical" tests to study the behavior of plutonium under explosive conditions without actually setting off a nuclear detonation.

Stockpile Stewardship, which in recent budgets has received more than \$6 billion in annual funding, has formed the basis for yearly findings that the arsenal is both safe and reliable, the 2008 CRS report states.

A key 2002 study from the National Academy of Sciences also determined that with sufficient resources and focus, the nation could carry out the technical operations to ensure the viability of the stockpile under the CTBT regime.

The ability of supercomputers to model the behavior of a nuclear-weapon detonation is paramount to this program, and was central to the treaty's defeat in 1999, according to Lewis.

"Computing power was a crucial benchmark that was established in the 1990s and concerns about computer power were front and center in the objections of many senators, most of [whom] did not object to the treaty directly but only to what they claimed was an early consideration of it," the expert, who heads the East Asia Nonproliferation Program at the James Martin Center for Nonproliferation Studies, told *GSN*.

During the 1999 debate, heads of some of the nation's nuclear-weapon laboratories said it would be years -- possibly up to a decade -- before supercomputers would have the capacity to perform their stockpile mission.

Bruce Goodwin, a veteran nuclear-weapon scientist with the Los Alamos and Lawrence Livermore national laboratories, at the time said he could imagine by 2004 to 2005 a computer with 100 teraflops of computing power -- meaning it could conduct 100 trillion floating-point operations per second.

In 2008, the Energy Department said its new "Roadrunner" computer could conduct more than one thousand trillion calculations per second. An even more powerful computer was set to be assembled at the Lawrence Livermore National Laboratory this year.

The massive leaps in supercomputing power should resolve questions about nuclear blast modeling, surmounting another obstacle to U.S. approval of the treaty, Lewis said.

Questions persist on whether life-extension activities including replacement of parts would over time change warheads to the degree that testing would be necessary to ensure they still function as expected. Updating today's weapons "beyond the design envelope validated by nuclear testing ... could result in defects in life-extended warheads that could cause them to fail," the Congressional Research Service said in its 2008 assessment.

The JASONs, a group of high-level scientific advisers to the government, said in 2009 that there is "no evidence that accumulation of changes incurred from aging and [life-extension programs] have increased risk to certification of today's deployed nuclear warheads."

Speaking at the Carnegie conference, Kyl said that Stockpile Stewardship has offered "both good news and bad news" about the state of the U.S. nuclear arsenal. He expressed doubt that stockpile upkeep and life-extension efforts could ultimately keep the weapons working, and said the time is not yet right to forever swear off nuclear testing.

The lawmaker's office did not respond to requests for further comment about the stockpile issues cited in his speech.

There is also the question of whether today's arsenal will hold up for the challenges posed by future threats, particularly if the personnel and facilities central to sustaining the complex are allowed to stagnate, critics say.



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New weapons might be required to counter new dangers, and testing might be necessary for the design and manufacturing of new deterrence systems, according to the NIPP report.

The United States could determine it requires a nuclear warhead capable of eliminating hardened, underground facilities that pose a threat to national security, only to be prohibited by the test ban treaty, said Baker Spring, a research fellow on national security policy at the conservative Heritage Foundation.

The Bush administration pursued research on a nuclear "bunker buster," but ultimately dropped the effort in the face of congressional opposition (see *GSN*, Oct. 26, 2005).

"A strict adherence to the CTBT as drafted would prevent the creation of new nuclear weapons to meet new nuclear missions. To me that's the fundamental flaw with the treaty," Spring said.

All of these issues -- and more -- could be raised when the treaty goes back to the Senate. How much sway the technological developments of the last decade will have in determining the accord's chances for approval will be determined only then.

"Everything in D.C. these days is extremely polarized," Mackby said. "No matter what the virtues are, in the end this treaty and many other things are likely to be based on political decisions, more than technical."

On Monday, Global Security Newswire will look at the Comprehensive Test Ban Treaty's ratification prospects in the U.S. Senate, and how the outcome might affect the calculus of other nations needed to bring it into force.

http://www.globalsecuritynewswire.org/gsn/nw_20110713_3038.php

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Global Security Newswire

Senate Decision Key to Future of Test Ban Treaty

Monday, July 18, 2011

By Chris Schneidmiller, *Global Security Newswire*

Second in two-article series

WASHINGTON -- The Obama administration is preparing for a lobbying campaign that could determine the future of the Comprehensive Test Ban Treaty (see *GSN*, July 15).

Administration officials have declared in recent months that they intend to follow through on their long-stated pledge to seek the U.S. Senate's advice and consent on the accord. Still to be determined are when that will occur and whether the White House can overcome entrenched divisions on Capitol Hill to secure necessary Republican support for ratification.

The stakes are significant: U.S. approval could draw other holdout nations into the treaty regime, bringing it that much closer to becoming international law, proponents say. Failure would provide those states with continued reason to dismiss the pact -- though critics say they might do that anyway.

Before seeking a vote, the administration intends to carry out a program to educate lawmakers and the public on the value of the treaty, Undersecretary of State for Arms Control and International Security Ellen Tauscher has said on multiple occasions this year (see *GSN*, May 11).

The effort would address issues likely to be debated in the Senate -- the viability of the U.S. nuclear arsenal without testing, whether all CTBT member states have accepted an absolute ban on any trial blasts, and the ability to catch any state that attempts to cheat.



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"We continue a long, methodical process to lay the groundwork for Senate consideration of the CTBT," the State Department said last month in a statement to *Global Security Newswire*. "Currently, we are in the process of engaging with members of the Senate and their staff on the importance of the CTBT."

It added: "We are not moving for a Senate vote, don't expect one anytime soon, and will not push for one until we have done the engagement work needed to secure approval."

Several analysts agreed that the White House would not begin the fight until it felt secure the result would be an improvement on the last time a Democratic president tried to persuade the Senate to approve the treaty.

The United States signed the pact in 1996, but three years later the Clinton administration ratification effort ran into a brick wall of skeptical lawmakers. The Senate voted 51-48 against approval. A two-thirds affirmative vote would be required for the United States to become a full participant in the accord.

Washington is among 44 capitals that must ratify the test ban before it can enter into force. Thirty-five nations have taken that step, leaving only China, Egypt, India, Indonesia, Iran, Israel, North Korea, Pakistan and the United States.

President Obama might wait to make his push until after publication of a new National Academy of Sciences report on the treaty, said arms control specialist Jeffrey Lewis. The follow-up to a 2002 academy study is expected to assess the effect that ratification would have on the U.S. capability to keep its nuclear weapons in working order without testing and on the capacity to identify atomic detonations in other nations.

The new report is undergoing classification review, which could take weeks or years, according to Lewis.

A classified National Intelligence Estimate on the matter was sent to Capitol Hill last August, but has not been seen by most lawmakers, said Daryl Kimball, executive director of the Arms Control Association. The document is said to offer an updated, thorough assessment of the ability to detect secret nuclear tests, according to Kimball.

Senator Robert Casey (D-Pa.) suggested at the Arms Control Association's annual meeting in May that the Senate might not take up the treaty until after the 2012 election.

"In my judgment, we should act before the 2012 elections. I don't have a high degree of confidence that we will," the lawmaker said, echoing time line estimates from other observers.

"I don't think [the Obama administration is], at least in the near term, serious about putting this to a vote," said Lewis, director of the East Asia Nonproliferation Program at the James Martin Center for Nonproliferation Studies. "I don't think there's a desire to have a vote if they think they're going to lose, and I don't think the votes are there yet."

Only 41 lawmakers who considered the treaty in 1999 remain in the Senate, Kimball said in a recent issue brief. Newer senators must be briefed on the matter, while the chamber as a whole must be informed of technical developments since 1999 that would promote entry into force.

Politics plays a role in congressional policy debates and nuclear security will be a topic of discussion during the 2012 presidential election campaign, Kimball said. The White House is already taking heat over what Republicans say are inadequate attempts to rein in suspected proliferation activities in nations such as Iran and Syria (see *GSN*, March 30).

Still, the Senate's ratification last year of the U.S.-Russian New START nuclear arms control pact is cause for optimism about the test ban's chances on Capitol Hill, Kimball said. Thirteen GOP senators voted in favor of the bilateral agreement.

The two years it took Moscow and Washington to negotiate and approve New START "was relatively fast for a treaty," according to Kimball. He said the administration should take whatever time is needed to see the test ban passed.



"I would hope that the issue of the test ban treaty does not become a partisan political football because there is strong Republican support for the test ban treaty out there," Kimball said. "If the treaty is not seriously considered by the Senate until after 2012, that will be because it took that much time to sort through the issues and to develop enough support to go ahead with the final stages of the ratification effort."

That plan, though, would hinge on Obama's re-election. Should he be defeated next year, the pact would almost certainly remain frozen in place in Washington.

In arguing for ratification, the administration will be able to point to advancements since 1999, including the near-completion of the International Monitoring System for detecting nuclear blasts and supercomputing power used in modeling the workings of the weapons. Obama has also pledged \$85 billion over the next decade for modernizing the nuclear complex.

"It's not enough for the Obama administration to point to a really fast computer, there has to be a strategy" for persuading the Senate to endorse the treaty, Lewis said. "They did very well on New START, but I think this is going to be a little bit tougher."

Rumblings so far from the GOP side have not favored ratification.

Senate Minority Whip Jon Kyl (R-Ariz.) led Senate opposition to the treaty 12 years ago and has remained an outspoken opponent of CTBT ratification (see *GSN*, March 29). The lawmaker, however, does not intend to run for re-election in 2012.

Senate Minority Leader Mitch McConnell (R-Ky.) in recent years has also continued to stress that preserving the possibility of a return to testing would be necessary for ensuring the reliability and safety of the nation's decades-old nuclear weapons.

Calls to both GOP lawmakers' offices were not returned.

Baker Spring, a national security policy research fellow at the conservative Heritage Foundation, played down the potential for a significant number of Republican senators to buck the party line in favor of the treaty. The test ban is rightfully seen by the party as more central than New START to the full U.S. strategic posture, he said.

Prospects for ratification are "unclear," according to Spring.

"I think that a lot of it will depend on exactly how the administration balances the desires and fervent hopes of the arms control advocacy groups with members of the Senate on ... the question of military viability" of the nuclear arsenal, he said.

Another longtime opponent of the accord expressed greater skepticism about its chances in the U.S. Senate.

"I believe the likelihood of ratification to be very low, given that the same deficiencies of the treaty persist" that existed in 1999, said former Deputy Assistant Secretary of State Kathleen Bailey, who co-authored a report this year on the potential for cheating and other issues with the CTBT regime. "Also, the risks associated with ratification are serious."

Beyond Washington

For supporters, it is the danger of failing to bring the treaty into force that is cause for concern. If the regime worked as anticipated, any member state not already possessing nuclear weapons could be constrained in its capacity to produce such arms by forswearing the capacity to test those warheads. Nuclear-armed states could be similarly restricted from developing new weapons.

This restriction becomes increasingly important as more nations pursue atomic energy programs that could lead them to acquire the capacity to produce nuclear weapon-usable fuel, said Annika Thunborg, spokeswoman for the Preparatory Commission for the Comprehensive Test Ban Treaty Organization. The compact would erect a clear barrier between that capability and actual weapons development, which would be a crucial measure as long as the



international community faces a continued impasse in enacting a treaty specifically aimed at outlawing production of fissile material for weapons, she added.

"As long as we don't have a fissile material cutoff treaty, which needs to clearly come into place ... we have a treaty, the CTBT, that is the only multilateral treaty that puts a very, very clear limit on further weapons development," according to Thunborg.

The United States and the other formal nuclear powers have voluntarily suspended nuclear test detonations for the better part of two decades, leaving such trials to a few other states -- India and Pakistan in 1998, and North Korea twice in the last six years.

"There is a de facto moratorium in place," Thunborg acknowledged. "What is important is to take the final step and make sure this de facto international norm is put legally in place, firmly and legally in place. As long as you don't have that norm ... there is a chance it will break apart."

Indonesia today is the only nation among the nine key nonratifying states to assert conclusively that it will sign off on the pact.

Treaty officials said they could not address the likelihood of success in the United States. However, they emphasized the importance of garnering Washington's approval in driving the treaty toward implementation.

Lassina Zerbo, who heads the CTBT International Data Center, said he believes China would follow the United States in ratifying the pact, which could affect the thinking of neighboring governments in Islamabad and New Delhi.

"If the United States does ratify it will probably build more confidence in terms of the others to see one of the major players in terms of the world's security embarking on the CTBT," he said.

The CTBT officials and other treaty supporters acknowledge that frictions between antagonists in Asia and the Middle East would complicate the process of bringing the pact into force.

Membership by Egypt, Israel and Iran would be tied up by varying concerns about proliferation in the region. It is widely accepted that Jerusalem holds nuclear weapons, though the government does not publicly acknowledge the arsenal's existence. Israel, the United States and other nations also suspect that Iran is pursuing a nuclear-weapon capability.

India and Pakistan have not conducted nuclear explosions for more than a decade, but they continue to develop their respective deterrent forces. Islamabad, in particular, appears to be moving briskly to enhance its stock of fissile material and weaponry (see *GSN*, July 1).

"Nations will do what is in their interests. They are not driven by wanting to follow 'an example' set by the U.S.," Bailey told *GSN* by e-mail.

The only nation that seems likely in the near term to try another atomic blast, North Korea, might also be the least likely to join the treaty.

Pyongyang and Tehran "view the U.S. commitment to nuclear disarmament as a sign of weakness to be exploited," Baker said in May in an issue memo posted on the Heritage website.

Skepticism that isolated and intransigent North Korea would join the treaty is so high that there have been suggestions of a test ban that simply ignores the nation (see *GSN*, June 4, 2009).

It is possible that member states could enact the pact provisionally when they reach the point at which there are only one or two holdouts, Kimball said.

Thunborg said, though, that the only acceptable regime is one that is ultimately all-inclusive.

"It is important that everyone is included, that not one country is left out of this," she said.



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http://www.globalsecuritynewswire.org/gsn/nw_20110714_9351.php

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U.S. Army
Press Release

Army Develops New Ways to Test, Identify Biological Agents

July 18, 2011

By Edgewood Chemical Biological Center (ECBC)

ABERDEEN PROVING GROUND, Md., July 19, 2011 -- The Army is advancing science in new ways. Scientists at the U.S. Army Edgewood Chemical Biological Center developed a ground-breaking method for identification of biological agents.

"Remember today, July 14, 2011. You are experiencing the beginning of a revolution," said David Chiang, chief executive officer of Sage-N Research, Inc.

Chiang forecasts a bright future for the Agents of Biological Origins Identification, or ABOID, system that researchers developed at Edgewood Chemical Biological Center, or ECBC.

Sage-N Research, Inc., a computational pyrometrics company, entered into an exclusive license agreement with ECBC May 27, 2011, with the agreement signed July 14, 2011.

This license allows the integration of ECBC's ABOID system into Sage-N Research's existing SORCERER -- proteomics platform, enabling rapid and cost-effective detection and identification of microorganisms.

Researchers designed the ABOID system to test and identify biological agents in circumstances where commanders are unfamiliar with the possible threats that await their Soldiers.

Ali Pervez, vice president of marketing at Sage-N Research, Inc. noted the technology will ultimately have the ability to save thousands of lives by allowing for faster response and corrective measures to be taken against emerging and unknown biological threats.

Currently, the system has a database of 4,500 unique genomes of bacteria, viruses and fungi.

"This cutting-edge technology enables identification of microorganisms down to strain level in minutes, rather than hours," said Charles Wick, former ECBC Senior Scientist who led the ABOID team. "This proves very successful for infectious disease identification and a range of other potential application in military, medical, pharmaceutical, food and public safety areas."

http://www.army.mil/article/61823/Army_develops_new_ways_to_test_identify_biological_agents/

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The Australian – Australia

New CIA Director will Take Fight to Terrorists

By The Australian
July 20, 2011

THE CIA is poised to take over the military's starring role in the battle against al-Qa'ida as General David Petraeus becomes its new director.

General Petraeus, who hands over command of US forces in Afghanistan this week, will be the first CIA director to come to the job directly from a war.

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But the move puts him in charge of the US's expanding covert wars in places such as Yemen and Pakistan, marking a historic shift in the balance of power between the Pentagon and the CIA, and from counter-insurgency to counter-terrorism.

Mr Petraeus, as he will be called when he takes up his new job, will remain an active battlefield commander, in charge of a robotic air force of attack drones and a paramilitary army.

The main focus of his efforts will be in Pakistan. The deterioration in military and intelligence co-operation between Washington and Islamabad may force the US to expand unilateral covert action against al-Qa'ida militants.

General Petraeus made implicit reference to Pakistan in his farewell speech in Kabul where he handed over to General John Allen. There was nothing easy about the counter-insurgency struggle, he said, "especially when the enemy can exploit sanctuaries outside the country".

Last week, General Petraeus flew to Islamabad to meet Pakistani generals aggrieved at Washington's decision to withhold \$US800 million (\$753m) in military aid in protest at Pakistani obstructiveness in the wake of the death of Osama bin Laden.

But a worse threat to US-Pakistan military co-operation lurks in the Leahy amendment that forbids the payment of federal funds to the security forces of a country if there is credible evidence of human rights abuses.

Pakistan has been implicated in the killing of a journalist who exposed links between its intelligence and al-Qa'ida militants.

The Times

<http://www.theaustralian.com.au/news/world/new-cia-director-will-take-fight-to-terrorists/story-e6fmg6so-1226097835323>

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S. Rajaratnam School of International Studies (RSIS) – Singapore

OPINION/Commentary

15 July 2011

Osama's Demise And Zawahiri's Rise: Weakening Of Al Qaeda

By Muhammad Saiful Adli Ayob and Muhammad Haniff Hassan

Synopsis

Ayman Al Zawahiri's rise as leader of Al Qaeda could increase internal disunity and weaken the terrorist organisation. Outside the Afghan-Pakistan theatre its threat will be limited to instigating associates in the Arabian peninsula and self-radicalised individuals elsewhere.

Commentary

FOLLOWING THE death of Osama bin Laden, the rise of Ayman Al Zawahiri as the new leader of Al Qaeda is likely to reopen old divisions within the organisation. There were two major factions in Al Qaeda when it was formed. One comprised Osama bin Laden's followers from the Arabian peninsula and other countries, as well as volunteers with no previous affiliation to militant organisations, fighting the Soviet army in Afghanistan. The other was the Egyptian Islamic Jihad (EIJ) faction led by Ayman Al Zawahiri. The faction of Osama and others were discontented with the over-representation of EIJ members at the leadership and operational levels.

The Egyptians numbered more than half the group that formed the initial Qaeda al-Jihad and held most of the major appointments. Thus Zawahiri was the second-in-command to Osama while Abu Ubaidah al Banshiri was Qaeda's military chief, later replaced by Mohamed Atef a.k.a abu Hafs Al Misri. He in turn was replaced after his

death in the September 11 attacks by Saif al Adel, a former Egyptian army colonel, and Mustafa Abu Yazid, who oversees Al Qaeda in Afghanistan.

Saudi-Egyptian rift

The Saudis and Yemenis felt they should have a fair share of key positions because they formed a major contingent of foreign volunteers in Afghanistan, gave more financial support and came from the land of Prophet Muhammad and the two holiest cities in Islam.

Osama was able to keep the divisions in check by his willingness to accept the Egyptians' over-representation in key positions so as to tap their jihadi experience and military expertise which the Saudis were lacking. The EIJ has more than a decade of experience in militant jihad, with ideological depth and organisational ability as their members included former Egyptian military and police officers. Osama was able to pacify them by virtue of his charisma, financial backing and his authority as emir whom the members were required to obey without question. The Saudis were appeased by the fact that their leader, Osama, was the emir of Al Qaeda.

EIJ monopoly

After Osama's death Zawahiri's appointment as the new emir completes the EIJ's monopoly of Al Qaeda. Without the rallying factor of Osama, Al Qaeda Central faces the real risk of a mass exodus of the Osama faction members who have long been discontented. It is doubtful that Zawahiri will be able to strategically address and heal this rupture. Osama's faction would either leave for other groups or become inactive.

Indeed, there is every likelihood that Al Qaeda Central will revert to being the old EIJ with a new name — a failed organisation before its merger with Al Qaeda. In fact, the current EIJ is weaker than before the merger because of the revisionist view of the group's former ideological leader, Dr Fadl. Currently imprisoned in Egypt, Dr Fadl now regards as illegitimate armed jihad for regime change in Muslim countries and against Western states as currently practised by al-Qaeda. Fearing it is causing greater harm than good, he has also denounced al-Qaeda's tactic of indiscriminate attacks.

Limited threat

Al Qaeda Central will have little operational impact outside the Afghan-Pakistan theatre. Its activities outside the theatre will be limited to propaganda work to instigate self-radicalised individuals and members of Al Qaeda franchises in the Arabian Peninsula, Iraq, North Africa and its associates elsewhere such as Jemaah Islamiyah in Indonesia.

The possible fragmentation of Al Qaeda Central following the anointing of Zawahiri as the new emir will, however, not mean the demise of the organisation. However, it will strengthen counter-terrorism initiatives the world over, besides inviting an intensified US harassment on Qaeda elements in the Afghan-Pakistan border region. Coupled with the internal problems of Al Qaeda Central, the counter-terrorism offensive will significantly weaken and limit its effectiveness.

The threat of terrorism will then come primarily from self-radicalised individuals out to attack US targets such as the Times Square bombing attempt (May 2010); and attempts by Al Qaeda in the Arabian Peninsula (AQAP) to blow up US airliners by means of an underwear bomb device in 2009 and a loaded printer cartridge that was couriered in 2010.

More effort and resources will have to be deployed to address these two sources of threat — self-radicalised individuals and AQAP. A speedy resolution of the insurgency problem in Afghanistan, which will allow the withdrawal of US and NATO military forces, will contribute directly to this effort; more resources and focus can then be directed to these threats. More importantly, it will deny Al Qaeda Central the potent source of propaganda that has been radicalising many individuals — its last source of strength.



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<http://www.rsis.edu.sg/publications/Perspective/RSIS1052011.pdf>

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HPCWire

OPINION

July 15, 2011

Nuclear Deterrence: In Supercomputing We Trust

Michael Feldman

The use of supercomputing to help maintain the US nuclear weapons arsenal is one of the more specialized applications of high performance computing. Simulating the behavior of these devices inside a computer has allowed the US to adhere to the Comprehensive Test Ban Treaty (CTBT), while maintaining some confidence that the country's nuclear deterrence capabilities remain intact. The responsibility to support our nuclear arsenal virtually has fallen on the NNSA's Stockpile Stewardship Program, under the Department of Energy.

But the ability of these supercomputing models to be able to replace actual nuclear testing is still somewhat controversial. A report by Chris Schneidmiller at Global Security Newswire weighs some of pros and cons of physical versus simulated nuclear testing and the ramifications of our CTBT obligations. In particular, Schneidmiller begins by pointing out that skeptics believe that "computer modeling cannot effectively replace actual testing in terms of ensuring the upkeep of today's stockpile, nor for preparing new nuclear weapons that might one day be necessary to safeguard the United States from future threats."

In addition new types of weapons might need to be developed to counter new types of threats. The Bush administration's proposal for the so-called "bunker busting" nuke is one such example. Having to develop an entirely new bomb without ever being able to detonate it is problematic at best.

The problem is that without some sort of physical testing, there is no assurance that the real-world behavior of the weapons is being reflected in computer model. As former Defense Secretary Caspar Weinberger pointed out, the confidence that the weapons will work is the whole basis of our nuclear deterrence strategy. And the only way to demonstrate that is to test the devices.

Of course, the whole idea behind the Stockpile Stewardship Program is to demonstrate that confidence without the testing. According to Undersecretary of State for Arms Control and International Security Ellen Tauscher, the directors of national labs maintain that the program has "provided a deeper understanding of our arsenal than they ever had when testing was commonplace."

A 2002 study from the National Academy of Sciences concluded that the US nuclear stockpile could indeed be maintained, given enough computing power and other technical resources. Particularly in the 1990s, whether supercomputers were capable of accurately simulating these weapon systems was an open question. Today, with petascale machines available, there is less concern about capability.

In March at the Carnegie International Nuclear Policy Conference, CTBT opponent Senator Jon Kyl said that Stockpile Stewardship Program offered "both good news and bad news" regarding our nuclear arsenal, but expressed reservations that the program was the ultimate answer to maintaining our nuclear deterrence.

http://www.hpcwire.com/hpcwire/2011-07-15/nuclear_deterrence:_in_supercomputing_we_trust.html

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Al Arabiya – U.A.E.

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OPINION

Letting Terrorists Walk Free and Then Shedding Tears

Saturday, 16 July 2011

By Bibhu Prasad Routray

On July 14, Malik Ishaq, chief of the banned Sunni outfit Lashkar-e-Jhangvi (LeJ), that had kidnapped and murdered US journalist Daniel Pearl in 2002 walked free from after being granted bail by the Pakistan Supreme Court.

Ishaq had been arrested in 1997 for involvement in sectarian murders -- almost all of his victims were members of the minority Shia community in Pakistan. He was charged with murder of 70 people in 44 different cases, but escaped conviction in each case due to lack of evidence.

As he walked out to freedom, Malik Ishaq was garlanded and showered with rose petals by his supporters. Photographs published in all major newspapers in Pakistan showed a beaming Malik Ishaq inside a car, who went on to declare that he does not believe in terrorism and would work for the country.

LeJ, like the Taliban, is part of the broader Deoband movement. It was formed in 1996 with an objective of transforming Pakistan into a Sunni state, primarily through violent means. The entire LeJ leadership consists of Jihadis who fought against Soviet forces in Afghanistan. A majority of its cadres are drawn from the numerous Sunni madrassas in Pakistan.

LeJ was banned in Pakistan in 2001 by President Pervez Musharraf's regime. Two years later, LeJ was added to the list of terrorist organizations by the US. The then Secretary of State Colin Powell had accused LeJ of close links with the Al Qaeda, Taliban and of carrying out "numerous bus and church bombings."

The outfit shares ideological as well as operational proximity with the Taliban. During the Taliban regime in Kabul, several of LeJ's leaders and cadres found refuge in Afghanistan. The Taliban government, in spite of its close relationship with Pakistan, refused to hand them over to Pakistan.

Apart from the countless attacks on the Shia Muslims in Pakistan, LeJ was also involved in the 2009 attack on the Sri Lankan cricket team playing in Pakistan. The outfit had planned to take the players hostage and bargain for the release of some of its detained members. Malik Ishaq was instrumental in finetuning the attack from his prison cell.

Bail given to Malik Ishaq was rather surprising. In an October 1997, Malik Ishaq in a media interview had boasted, "I have been instrumental in the killing of 102 human beings." New revelations now suggest that Malik Ishaq even received a monthly stipend from the Punjab government during his imprisonment, at least since 2008. A minister from the Punjab province, which is home to Malik Ishaq and where the LeJ is most active, has confirmed the payment. The minister said that the payment was given to Ishaq's family and not to him.

While the meager stipend amount might not have been delivered to the prisoner, Malik Ishaq did wield enormous clout, normally reserved for the high and the mighty in the South Asian context, inside the prison. In recognition of his proximity with the Taliban, on 10 October 2009 Pakistan army flew him to Rawalpindi in a chartered flight to negotiate with the Tehrik-e-Taliban Pakistan (TTP or Pakistani Taliban) suicide attackers who had stormed its headquarters.

Bail granted to Malik Ishaq adds him to the list of a growing number of terrorist leaders belonging to organizations banned by the Pakistani government, who have dodged the judicial process and secured freedom for themselves. The list includes leaders like chief of Lashkar-e-Toiba (LeT) Hafiz Saeed, chief of Harkat-ul-Mujahideen (HuM) Maulana Fazlur Rehman Khalil and Maulana Mohammad Ahmed Ludhianvi, the chief of Sipah-e-Sahaba Pakistan (SSP).

While the Pakistani authorities can argue that their freedom is sourced from judiciary decisions, such judgments invariably are results of poor investigation processes bordering on state complicity. These are results of a well-



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known state policy that sets apart terrorist formations on the basis of their utility to military and the intelligence. The same policy hunts down the Pakistani Taliban, while tactically exonerating the Afghan Taliban and its affiliates from the purview of the military operations.

The net result is that there are too many terrorist leaders roaming free on Pakistan's streets. This makes the country's claim of being sincere in fighting terrorism sound utterly decrepit.

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<http://english.alarabiya.net/views/2011/07/16/157946.html>

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People's Daily – China

OPINION

Military Ties Move Forward

July 17, 2011

By Tao Wenzhao (China Daily)

Bilateral exchanges important for US and Chinese military to increase understanding and reach further consensus

The recent visit to China by US Chairman of the Joint Chiefs of Staff, Mike Mullen, will further improve bilateral military-to-military ties that have warmed considerably since President Hu Jintao's state visit to the United States in January.

During his four-day visit, which ended on Wednesday, Mullen gave a speech at the prestigious Renmin University of China and met with Vice-President Xi Jinping, who is also vice-chairman of the Central Military Commission. He also visited military bases in the Ji'nan Military Command and Nanjing Military Command and talked with Su-27 pilots about the capabilities of the aircraft. Mullen was also given access to China's Second Artillery Force of the People's Liberation Army (PLA), the first visit by a senior US military official to the military unit that is responsible for China's missile and nuclear stockpiles.

Mullen's unprecedented access was reciprocal treatment to Washington following the visit to the US in May by Chen Bingde, chief of the General Staff of the People's Liberation Army, who was given inspection tours of some US military bases and facilities.

Mullen's visit to the Second Artillery Force will to some extent satisfy the Pentagon's curiosity over China's strategic nuclear arsenal, long believed to be the most secret and elusive part of China's military development. In previous years, US military delegations always complained that their Chinese hosts only arranged visits to such scenic spots as the Forbidden Palace and the Great Wall, which was in sharp contrast to the access given Chinese military delegations to US military bases and facilities, they said.

The visits by senior military officials to each other's key military facilities reflect both sides' sincerity in their efforts to boosting bilateral military ties.

"China and the US should sincerely look upon each other as cooperative partners rather than adversaries", Defense Minister Liang Guanglie said during a meeting with former US defense secretary Robert Gates in Singapore.

Mullen's visit came amid lingering tensions in the South China Sea and the US' frequent military exercises with the Philippines, Japan and Australia. An upcoming military drill is also due to be held between the US and Vietnam. All these have caused and will cause China serious concern and were a key topic of discussion between Mullen and his Chinese hosts.

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Despite the improved relations, Mullen's visit failed to erase wide divergences between China and the US on the South China Sea issue. During his meeting with Mullen, Chen criticized the US' joint military drills with Vietnam and the Philippines as being inappropriate and said the dispute can be resolved without US intervention. Chen also denounced US' surveillance activities in China's offshore waters as unnecessary. In response, Mullen stressed that the US is and will be an Asia-Pacific power and it will not keep away from the region, as its presence is important to its Asian allies.

In fact, the US' increased military presence in the Asia-Pacific region is a very important part of its "return to Asia" strategy, as indicated by Washington's strengthened military presence in Northeast Asia in 2010 following the rise in tensions on the Korean Peninsular and in Southeast Asia this year. Maintaining military superiority in Asia-Pacific, in Washington's eyes, is an important way of sustaining and prolonging its predominant status in the region.

If there is the lack of mutual trust between China and the US, then it remains particularly obvious between their militaries. The Pentagon always overestimates China's military strength despite the fact that its weapons and military equipment are still two decades behind those of the US, as indicated by the Pentagon's annual report on China's military strength. However, it is Mullen's belief that China is developing military capabilities targeting the US and China's military buildup is regarded as a big challenge to the US' long-established predominance in Asia-Pacific. The Pentagon even believes that the established balance of power in East Asia has been affected by China's rise as the result of the US' over-emphasis on anti-terror operations and its involvement in the wars in Iraq and Afghanistan.

To eradicate misunderstandings and enhance mutual trust, the Chinese and the US militaries should increase exchanges. Encouragingly, a variety of consensuses were reached on bilateral military exchanges in the months ahead during Mullen's visit to China.

The establishment of a long-term and reliable military relationship between China and the US is in the interests of both countries, as Mullen has claimed. It is hoped that the US will do more concrete work in a bid to clear away obstacles and push bilateral military ties to develop in a stable and sustainable fashion.

The author is a senior research scholar with the Center for US-China Relations at Tsinghua University.

http://www.chinadaily.com.cn/opinion/2011-07/18/content_12920345.htm

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The Australian – Australia
OPINION/National Affairs Commentary

Knocking on Nobody's Door

By Paul Dibb, *The Australian*
July 18, 2011

THE debate in Australia about the rise of China's military power continues to rage. It is as if China is already knocking on our door and about to pose a direct threat to us.

But the reality is quite different. While it is true that China is beginning to develop some significant elements of military power it will be a long time before it is a peer competitor of the US.

It is quite premature to advise that Australia should encourage the US to accommodate to the realities of Chinese power, as my colleague Hugh White insists. And it is downright dangerous to suggest that Australia must develop the military capability to tear an arm off China, and even provoke revolt inside China, as Ross Babbage argues. It is also incorrect, as Greg Sheridan would have us believe, that historically no country has ever developed a navy the size of China's without going to war.

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Let's look at how long it has taken China to develop what are, in fact, rather modest military capabilities. Since its first nuclear explosion in 1964, Beijing has struggled to develop a minimum nuclear deterrent force. Unlike the US and Russia, it has no credible nuclear war-fighting capability.

China's land-based intercontinental ballistic missile force was until quite recently vulnerable to a disarming first strike. It has about 66 ICBMs, some of which are solid fuelled and road-mobile and therefore more difficult to target. Only about 24 of these ICBMs are truly intercontinental in range. And China's only ballistic missile-firing submarine has had no experience of long-range, covert patrols.

By comparison, the US has the world's most advanced nuclear war-fighting capabilities. Compared with China's 200 nuclear warheads, the US has 2150 operational strategic nuclear warheads together with 2850 warheads in reserve that are relatively quickly deployable.

It is true, however, that China is modernising its force and we should expect it in the next few years to deploy more ICBMs capable of targeting the US. It has one new JIN-class nuclear submarine that has entered service. However, its associated JL-2 ballistic missile has encountered difficulty, failing several final test flights.

According to the Pentagon, the PLA has only a limited capacity to communicate with submarines at sea, and the Chinese navy has no experience in managing a ballistic missile submarine fleet that performs long-range patrols with live nuclear warheads mated to missiles. China's land-based mobile missiles may also face similar command and control challenges in wartime.

What about China's much vaunted navy and its ability to project serious military power in our part of the world?

There is no doubt that Beijing is developing the capacity to make life very difficult for US naval forces operating in the approaches to China, including defending Taiwan. And it is developing a ballistic missile capable of targeting US aircraft carriers. However, China's real-time tracking radars and intelligence satellites are highly vulnerable. And the US has the capability with prompt global conventional strikes to seriously damage China's command and control.

As to China's navy, it is weak in both anti-submarine warfare and anti-air warfare. Chinese anti-submarine warfare capabilities, while slowly improving, are not able to provide a reasonable degree of security in open waters. Chinese attack submarines possess little ASW capability, which is the primary mission of the US attack submarine force.

The Chinese navy remains untested in modern combat and has no experience of operating in a joint battle environment. According to the Pentagon, China's ability to sustain military power at a distance remains limited. And it is unlikely China will be able to project and sustain large forces in high-intensity combat operations far from China until well into the 2020s.

As to the claim that historically no country has developed a navy the size of China's without using it in armed conflict, the Soviet Union had an infinitely larger and more capable navy than that of China- and it never once fired a shot in anger.

China has 68 tactical submarines (28 of which are obsolete) whereas the USSR had 280 at the height of its military power. And China has 78 principal surface combatants in its navy and that compares with 264 for the former Soviet Union. The Pentagon classifies only 25 per cent of China's naval surface combatants (and fighter aircraft) as modern.

Many of China's most advanced weapons are still based heavily on foreign designs (mostly Russian) copied through reverse engineering. This highlights a persistent weakness in China's capability for innovation and a reliance on foreign suppliers for some propulsion units, fire control systems, cruise missiles, torpedoes, sensors and advanced electronics.



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By all means we need to keep a close eye on the development of China's military forces. China is undoubtedly an ambitious power seeking to claim its historical place in the sun.

But let's not succumb to the fatal assumption that China's rise and rise will be a simple straight-line extrapolation.

China is a power with very substantial weaknesses. It has been described as a fragile superpower. Some experts argue the most potent threats to the communist leadership lie within China and that political survival is as important as national survival abroad.

As Jonathan Lee from the Centre for Independent Studies argues, relatively little attention in Australian foreign and security policy circles is given to the consequences of a Chinese economy with deep structural problems and a society suffering profound governance and social deficiencies.

So, let's not frighten ourselves to death by drumming up the next military threat to Australia and basing our defence policy on the likelihood that we are going to be attacked by China.

Paul Dibb is emeritus professor of strategic studies at the Australian National University.

<http://www.theaustralian.com.au/national-affairs/commentary/knocking-on-nobodys-door/story-e6frgd0x-1226096366875>

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Institute for Defence Studies & Analyses (IDSA) - India
OPINION/Analysis

Detecting Surgically Implanted Bombs

By Shashank Singhal

July 18, 2011

Aviation has been a favourite target for terrorist groups over the last three decades. Apart from the use of bombs as in September 2008 when 270 people were killed by a blast in the luggage bay of a flight in Scotland, terrorists have also resorted to other means. These include the use of a shoe bomb in December 2001, lethal liquids in August 2006; an underwear implant bomb in December 2009; packed printer cartridges in October 2010; and the insulated lining of beverage containers in December 2010. Some of the above were foiled by flight attendants while others were prevented by passengers or intelligence services. This commentary is focused on one particular method in which the aviation sector could be targeted in future; namely, suicide bombers carrying surgically implanted bombs in their body and blowing up airliners in mid-air. US intelligence has reported that the al Qaeda in the Arabian Peninsula may be considering the use of this method.¹

Many advances have been made in detection devices such as full body scans that complement metal detectors. However, new technologies are being developed not only by scientists but also by terrorists. One of the new terrorist innovations could be surgically implanted bombs in the body of a terrorist travelling by air. This is not really new given that smugglers of contraband have been known to adopt this method. Nevertheless, the fact remains that such a bomb cannot be detected even by advanced detectors. The implant of a bomb in the body of a terrorist would be similar to a breast implant; only, instead of silicon, explosives like PETN would be filled in the abdomen, buttocks or even near the heart where pacemakers are placed. The detonator can be electronically managed like a pacemaker, or injected into place, or even mechanically compressed by pressing the breast downwards if planted there. Implants are so common that they are not noticed by security personnel.² Depending upon the amount of explosive used, a plane can even be destroyed.

Governments will now have to consider ways of detecting the carriers of surgically implanted bombs. One way is to use lasers, which have been used to trigger PETN explosions. A pulse with a duration of 25 nanoseconds and 0.5-4.2 joules of energy Q-switched ruby laser can initiate the detonation of a PETN surface coated with a 100nm thick aluminium foil in less than half a microsecond.³ But if the laser were to be passed through the human body

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instead of aluminium foil at the same speed and energy it will not explode. Instead, it will heat up the body and this can be measured in an infrared radiation chamber. Thus, the provision of an infrared chamber is essential before and after the administration of the laser. Administering such a laser pulse to the human body is thus likely to help in detecting implanted explosives. Experiments need to be undertaken in this regard to identify the particular duration and energy that would be required to illuminate different parts of the body given the differing thicknesses of each part.

What of the infrastructure necessary for detecting surgically implanted bombs in the human body? A passenger will have to pass through first an infrared chamber, then a chamber where the laser will be administered and finally another infrared chamber. Laser and infrared chambers will be administered electronically through computers. During this process, a body containing explosives will heat up. Images from the two infrared chambers before and after the laser was administered will show observable changes if the body in question contains explosives.

This particular method is also useful to detect persons carrying explosives outside their bodies. In such a case, the bomb will be clearly visible in the infrared chamber.

At worst, using this technology may result in a bomb explosion. However, this can be eliminated by controlling the on-off time of the laser. The whole set-up can check a person in less than five seconds. As of now, there are no known side-effects from the use of lasers. But research must be carried out to clearly establish this.

1. Keith Johnson and Siobhan Gorman, "Bomb Implants Emerge as Airline Terror Threat," *The Wall Street Journal*, July 7, 2011.
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http://www.idsa.in/idsacomments/DetectingSurgicallyImplantedBombs_ssinghal_180711

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