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(Revision of a September 16, 2009 report. Contains more details about the companies, procurements, and judicial process, and more information about the Bifo company.)

The Trials of the German-Iranian Trader Mohsen Vanaki: The German Federal Intelligence Service Assesses that Iran Likely Has a Nuclear Weapons Program

By David Albright and Christina Walrond

Introduction

In November 2007, German authorities arrested German-Iranian Mohsen Vanaki under suspicions that he illegally brokered the transfer of dual-use equipment to Iran with applications in a nuclear weapons program.¹ In an apparent attempt to hide the equipment's end users, Vanaki's small German trading company arranged the sale of dual-use nuclear and military equipment from Russian, European, and American manufacturers to Iranian front companies located in the United Arab Emirates (UAE).² In a surprise move, Vanaki's defense attorneys cited U.S. intelligence findings claiming that Iran did not have a nuclear weapons program at the time of the alleged crime as evidence of their client's innocence.

Vanaki's firm maintained a commercial relationship with a Tehran-based company, Kimya Pakhsh Sharg Co. Ltd., referred to as only "K. Co. Ltd." in German court documents. Aryadaran General Trading LLC, Electroniat Shamsal Sahra Co., and Modern Technologies either served as front companies for Kimya Pakhsh Sharg or made payments to Vanaki on its behalf.

According to court documents, Kimya Pakhsh Sharg obtained nuclear and military goods for Iran by circumventing trade restrictions using front companies and phony end use declarations. Vanaki had direct contacts with the Iranian company's director and an employee, referred to in court documents as "Dr. N." and "Ka." respectively. Vanaki

¹ "Beschluss," Bundesgerichtshof. March 26, 2009 (Decision of the Federal Court of Germany).

² "Germany holds man over classified exports to Iran," Deutsche Presse Agentur. November 29, 2007.

[Banner image credit: DigitalGlobe-ISIS]

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appears to have had a long history of supplying Iranian military entities. In the 1990s, he reportedly supplied Iran's Defense Industries Organization.³

Vanaki was officially charged on June 26, 2008 with one violation of the War Weapons Control Act and two violations of the Foreign Trade and Payments Law, which are anti-proliferation laws designed to control the development, production, or trade of goods that could aid weapons of mass destruction programs in countries of proliferation concern. Though the War Weapons Control Act also applies to conventional weapons, the harshest penalties are reserved for offenses concerning the proliferation of materials for chemical, biological, or nuclear weapons programs.⁴ Under the Foreign Trade and Payments Act, the brokering of material for a nuclear weapons program is of particular concern because it threatens the foreign relations and external security of Germany.⁵

Vanaki allegedly brokered for Iran the sale of two high-speed cameras that have important applications in nuclear weapons programs.⁶ According to court documents and interviews with knowledgeable German officials, he allegedly tried to purchase through another German firm a large number of American-manufactured specialized radiation detectors modified to withstand a harsh environment, which court documents described as "nuclear detonation effects." The German company, Karl Steiger GmbH, however, cancelled the order because it could not obtain sufficient information about the equipment's end use to secure German government approval for the export.⁷ Vanaki also allegedly tried to arrange the sale of night vision goggles from a Swiss manufacturer to Kimya Pakhsh Sharg, but Swiss authorities also found the stated end-user information to be suspicious.

Surprising Use of U.S. National Intelligence Estimate

Mohsen Vanaki's trial was originally set for the summer of 2008 before the German Oberlandesgericht of Frankfurt am Main (a Hessian state court). A critical issue for this court was whether Iran had a nuclear weapons program. Convicting Vanaki under the War Weapons Control and Foreign Trade Acts depends on the court finding it sufficiently likely that the country receiving the equipment brokered by Vanaki was developing nuclear weapons at the time of the alleged crime.

In a surprising decision, the Oberlandesgericht in August 2008 dismissed all charges against Vanaki, basing its decision largely on the U.S. intelligence community's [2007 National Intelligence Estimate \(NIE\) on Iran](#). The majority of the NIE is classified, but a short, declassified summary is available. The following are several key judgments of the NIE from that summary:

³ Andreas Ulrich, "Motor im Handgepäck," *Der Spiegel*, December 3, 2007.

⁴ The War Weapons Control Act of Germany, Amended October 11, 2002.

⁵ Foreign Trade and Payments Law of Germany, Amended March 28, 2006.

⁶ "Beschluss," op. Cit., and "Motor im Handgepäck," op. cit.; and "German-Iranian accused of arranging illegal business deals with Iran," *BBC News*, June 28, 2008.

⁷ "German-Iranian accused of arranging illegal business deals with Iran," op. cit.

- We *assess with high confidence* that until fall 2003, Iranian military entities were working under government direction to develop nuclear weapons.
- We *judge with high confidence* that the halt lasted at least several years. (Because of intelligence gaps discussed elsewhere in the Estimate, however, the DOE [Department of Energy] and the NIC [National Intelligence Council] assess with only moderate confidence that the halt to those activities represents a halt to Iran's entire nuclear weapons program.)
- We *assess with moderate confidence* Tehran had not restarted its nuclear weapons program as of mid-2007, but we do not know whether it currently intends to develop nuclear weapons. (italics added)

The court focused on the third finding, ruling that Iran was probably not developing nuclear weapons at the time of the defendant's alleged crime and dismissing the charges against Vanaki. In reaching this decision, the court characterized the assessment provided by the Bundesnachrichtendienst (BND), Germany's foreign intelligence service, as "extremely vague."

However, based on intelligence about suspicious procurements made by Iranian military entities, according to a knowledgeable German official, the BND assessed that there were strong indications that Iran had a nuclear weapons program at the time of the crime.

Overtured on Appeal

German federal prosecutors appealed the judgment to the Bundesgerichtshof, Germany's Federal Court of Justice. The federal judges decided on March 26, 2009 that the Oberlandesgericht should not have dismissed the findings of the BND. They ruled preliminarily that at the time of the crime, Iran probably had a nuclear weapons program.

The federal court rejected the lower court's characterization of the BND's statement as "extremely vague." Its decision also stated that the Oberlandesgericht failed by overstretching requirements for the admission of additional information or intelligence.

For the appeals hearing, the BND provided the federal court with a supplementary report containing additional evidence. This report discussed Iran's development of a new missile launcher and the similarities between Iran's procurement efforts and those of countries with known nuclear weapons programs, such as Pakistan and North Korea.

The federal court ordered a retrial of Vanaki under the original charges at the Landgericht, a German district court below the Oberlandesgericht, and instructed the district court to take into consideration the findings of the BND and other available evidence about the likelihood of Iran having had a nuclear weapons program at the time of the alleged crime.⁸

⁸ The federal court, at the request of the federal prosecutors during the appeal, dismissed a third charge because it has little "weight" compared to the other two alleged violations (see section on night vision goggles below).

Although the German federal judges did not seek to decide on Vanaki's guilt or innocence, in order to overturn the decision of the Oberlandesgericht, they had to find it sufficiently likely that the accused would be convicted in a retrial. Therefore, the likelihood of Vanaki's conviction depended on the judgment that Iran was probably developing a nuclear weapons program at the time of the alleged crime. The decision legally defines "developing" as all measures taken to create the technological conditions for producing nuclear weapons, including the planning and construction of nuclear weapon production facilities.

The Bundesgerichtshof, or federal appeals court, stated that the Oberlandesgericht's use of the NIE in its decision was inappropriate. It ruled that other evidence that merits consideration offsets the NIE's findings. The Oberlandesgericht had overemphasized in its judgment the finding of the NIE about the status of Iran's nuclear weapons program and improperly downplayed the BND's findings. The Oberlandesgericht correctly recognized that the BND's assessment did not contain proof of an Iranian nuclear weapons program, but it failed to recognize that the NIE's judgment about the program was also not proof. According to the NIE, "In all cases, assessments and judgments are not intended to imply that we have 'proof' that shows something to be a fact (see appendix)." In addition, the use of the term "moderate confidence" in the NIE carries with it a significant level of uncertainty about the judgment that an Iranian nuclear weapons program did not exist in 2007.

Major Equipment Allegedly Obtained or Sought by Vanaki

High-speed Cameras

In April 2007, according to the Bundesgerichtshof's decision, a front company of Kimya Pakhsh Sharg submitted a request for two sophisticated high-speed cameras to Vanaki's firm. According to the federal court's statement, Vanaki might have known that the cameras were for Iran's nuclear program. By his own admission, Vanaki knew of the possible military uses of the cameras. The federal court also asserted that he acted deliberately in breach of the embargo with Iran and contributed significantly to the complex, conspiratorial way in which the cameras were allegedly delivered to Iran.

Vanaki acquired the cameras from the Moscow-based manufacturer Bifo Company, naming the end user as a university in the Middle East. The model numbers of the two cameras were K008 streak and "uniframe" camera and K011 "nineframe" camera. He sent a price-quote to Kimya Pakhsh Sharg that stipulated his commission as 30,630 € (\$41,996.79 in 2007 USD). Vanaki allegedly visited Iran on a number of subsequent occasions to finalize the details of the transaction. The cameras allegedly traveled from Russia to Iran before November 1, 2007, without the involvement of the German authorities. The Russian government appears to have done little, if any, scrutiny of this sensitive dual-use export.

The high-speed cameras brokered by Vanaki are designed to take a rapid series of pictures and are used to photograph high-speed events that could have civil or military applications. Bifo's logo (below) contains pictures of lightning and a mushroom cloud, illustrating two important applications of its products. According to an ISIS analysis, Iran would likely use these high-tech, high-specification cameras in its sophisticated military development programs that study high-speed events, including high explosive testing. In a nuclear weapons program, these cameras would be used to film tests of high explosive lenses and high speed phenomena associated with metals driven by explosions that are key to developing implosion-type fission nuclear weapons.



Figure Bifo Logo, file name of this picture on www.bifocompany.com is boom.jpg

The Bifo company has links to Russia's nuclear weapons program. Bifo was founded by the State All-Russian Research Institute for Optical and Physical Measurements, VNIIOFI. Scientists from this company give their affiliations as both VNIIOFI and Bifo. They publish occasionally with scientists from the All Russian Research Institute of Experimental Physics, VNIIEF, which is well-known as the first nuclear weapons laboratory in the former Soviet Union, the organization that developed the first Soviet nuclear device and many generations of nuclear weapons thereafter. The topics of joint papers are directly related to nuclear weapons development or other high speed phenomena related to explosives and shock waves.

ISIS could not determine whether Iran pursued additional contacts with Bifo or specialists associated with it or VNIIEF. One has to ask if Bifo maintains an internal compliance system aimed at preventing dangerous exports of equipment or technology or whether it exercises sufficient caution in its sales.

Radiation Detectors

In May 2006, Vanaki allegedly received a request from Kimya Pakhsh Sharg for a number of components of U.S. manufacture, including an order for about 100 individual neutron, beta, and gamma detectors modified for a harsh environment and designed for the measurement of high levels of radiation, according to a knowledgeable German expert. Based on the manufacturer's specifications, the detectors could be used for military purposes.

To obtain the detectors, Vanaki contacted Karl Steiger GmbH in Mannheim, labeled “St. GmbH” in the court records, which in turn requested the items from a United States manufacturer, called “L.” The firm allegedly designated an end user in Dubai at the request of Vanaki. The German firm agreed to purchase the detectors. Vanaki then quoted the purchase price to Kimya Pakhsh Sharg as 87,245.40 € (\$109,606.40 in 2006 USD). Karl Steiger GmbH received this sum in three installments.

In May 2007, Karl Steiger GmbH submitted to the Federal Office of Economics and Export Control an export license application for the radiation detectors. This application required an end user certification and a detailed customer profile. According to the Bundesgerichtshof’s decision, Vanaki and Ka. at Kimya Pakhsh Sharg allegedly decided to falsify this information and attempted to fabricate an end user in Dubai in order to hide the fact that Kimya Pakhsh Sharg was the actual recipient. The Federal Office of Economics and Export Control asked Karl Steiger GmbH for additional information about the purpose of the export. Vanaki and Ka. allegedly conferred to determine what intended purposes would be most plausible to the licensing authorities. Vanaki preferred to offer a false end use in agriculture or medicine, but Ka. ultimately decided to use the cover story that, despite the detectors’ potential application in a nuclear plant, they would be used in the cement industry. However, the licensing authorities continued to raise questions with the German firm. In late summer, Vanaki’s contact at Karl Steiger GmbH informed him that without additional information about the end use of the equipment, his company could not provide the goods. Despite many subsequent attempts, Vanaki could not reach his contact at Karl Steiger GmbH to provide adequate information, and the German firm terminated the agreement. Vanaki was unsuccessful in returning the funds to Kimya Pakhsh Sharg.

Night Vision Goggles

In May 2007, a front company of Kimya Pakhsh Sharg requested 20 night vision goggles from Vanaki’s firm. Vanaki contacted a Swiss manufacturer about buying the goggles; however, the transaction was not completed because the Swiss regulatory export authority determined the end-user information to be insufficient.

Vanaki was charged with a violation of the Foreign Trade and Payments Law for attempting to secure the export of night vision goggles. However, at the request of the federal prosecutors, the Bundesgerichtshof, or federal court, dismissed this charge, stating this violation had relatively little weight compared to the other allegations. If convicted on this count, Vanaki would likely have received only a fine, whereas a conviction on the other charges would result in a sentence of imprisonment.

Other Equipment

Vanaki provided a range of other items to Iran. He is reported to have sold Iran vacuum pumps.⁹ Police investigators also found records of an additional dozen procurements on

⁹ “Motor im Handgepäck,” op. cit.

Vanaki's laptop, which authorities seized during their investigation. It was unclear from these records, however, whether the items were successfully sent to Iran. None of the items mentioned on the laptop were prominent nuclear dual-use equipment.

Retrial in September 2009

The retrial of Mohsen Vanaki began on September 11, 2009 in the district court of Frankfurt (Landgericht). An expert from the University of Munich testified that the high-speed cameras transferred to Iran had no practical application outside of the development of nuclear weapons. On September 24, the district court ruled against Vanaki. Based on this testimony, the district court found that Vanaki should have been aware that the items he sought to procure for Iran could be used in a nuclear weapons program. Vanaki was sentenced to a 22-month suspended sentence and ordered to pay the court 5,000 Euros (\$7,300). The federal prosecutor appealed this decision of the district court, seeking a prison sentence of three years and four months for Vanaki.

Conclusion

The Vanaki case poses difficult challenges for those trying to prevent the transfer of nuclear weapons capabilities to Iran and other proliferant states. A determined smuggler can often evade detection for years. If caught, prosecution is difficult. In this case, a state court required an unrealistically high burden of proof in order to charge an individual with violating German anti-proliferation laws. The court misinterpreted the 2007 NIE as evidence that Iran did not have a nuclear weapons program after 2003, when a more strict interpretation of this document indicates that the U.S. intelligence community could not make a definitive assessment of the status of Iran's nuclear weapons program after 2003.

This case also provides rare, illuminating insight into a disagreement among intelligence agencies about the complex judgments concerning Iran's nuclear program. The BND assessment offers a different view from the NIE on the critical question of whether Iran had a nuclear weapons program in 2007.

The task before the German court regarding the Vanaki case is in many ways a microcosm of the larger debate taking place throughout the international community regarding Iran's nuclear program. Just as the federal appeals court found it inappropriate for the state court to rely only on the 2007 U.S. NIE to determine the merit of the charges against Vanaki, it would also be inappropriate to conclude that Iran has not restarted its nuclear weapons program based only on the NIE's findings without further assessment.

Excerpt from 2007 Iran National Intelligence Estimate

What We Mean When We Say: An Explanation of Estimative Language

We use phrases such as *we judge*, *we assess*, and *we estimate*—and probabilistic terms such as *probably* and *likely*—to convey analytical assessments and judgments. Such statements are not facts, proof, or knowledge. These assessments and judgments generally are based on collected information, which often is incomplete or fragmentary. Some assessments are built on previous judgments. In all cases, assessments and judgments are not intended to imply that we have “proof” that shows something to be a fact or that definitively links two items or issues.

In addition to conveying judgments rather than certainty, our estimative language also often conveys 1) our assessed likelihood or probability of an event; and 2) the level of confidence we ascribe to the judgment.

Estimates of Likelihood. Because analytical judgments are not certain, we use probabilistic language to reflect the Community’s estimates of the likelihood of developments or events. Terms such as *probably*, *likely*, *very likely*, or *almost certainly* indicate a greater than even chance. The terms *unlikely* and *remote* indicate a less than even chance that an event will occur; they do not imply that an event will not occur. Terms such as *might* or *may* reflect situations in which we are unable to assess the likelihood, generally because relevant information is unavailable, sketchy, or fragmented. Terms such as *we cannot dismiss*, *we cannot rule out*, or *we cannot discount* reflect an unlikely, improbable, or remote event whose consequences are such that it warrants mentioning. The chart provides a rough idea of the relationship of some of these terms to each other.

Remote	Very unlikely	Unlikely	Even chance	Probably/Likely	Very likely	Almost certainly

Confidence in Assessments. Our assessments and estimates are supported by information that varies in scope, quality and sourcing. Consequently, we ascribe *high*, *moderate*, or *low* levels of confidence to our assessments, as follows:

- *High confidence* generally indicates that our judgments are based on high-quality information, and/or that the nature of the issue makes it possible to render a solid judgment. A “high confidence” judgment is not a fact or a certainty, however, and such judgments still carry a risk of being wrong.
- *Moderate confidence* generally means that the information is credibly sourced and plausible but not of sufficient quality or corroborated sufficiently to warrant a higher level of confidence.
- *Low confidence* generally means that the information’s credibility and/or plausibility is questionable, or that the information is too fragmented or poorly corroborated to make solid analytic inferences, or that we have significant concerns or problems with the sources.