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Swiss Smugglers Had Advanced Nuclear Weapons Designs

By David Albright

In 2004, Swiss investigators seized computer files and documents from the Swiss nationals Friedrich, Marco, and Urs Tinner. The computer files, containing over 1,000 megabytes of information, were encrypted and difficult to decipher. [Nonetheless, Swiss investigators found the designs of smaller, more sophisticated nuclear weapons than the design found in Libya.](#) Why did these smugglers associated with the notorious Pakistani nuclear engineer Abdul Qadeer Khan have these designs, unless they had sold or intended to sell them for Khan? Moreover, these computers were unlikely to be the only place where the Tinnings stored the designs.

A senior IAEA official doubted that the Tinnings were the only ones who had the designs found on their computers. “A very scary possibility,” he said. Others were bound to have received the digitized designs, he added. But who has them and what have they already done with them? How can authorities recover these designs if they are not sure who has them, this official lamented?

How will authorities learn if Iran, North Korea, or even terrorists bought these designs? What will the Tinnings do with any files they stored elsewhere?

Urs and Marco remain in jail pending their trial currently expected to start in 2009; the father Friedrich is free and awaiting trial. They have refused to cooperate with Swiss authorities about the whereabouts of the designs.

Design Found in Libya

A simpler nuclear weapon design had been found in Libya after Colonel Qaddafi had renounced his nuclear weapons effort in late 2003 and allowed U.S., British, and International Atomic Energy Agency (IAEA) investigators into his country. This design had been put under IAEA seal and moved to Washington for safekeeping.

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Qaddafi had bought a nearly complete set of blueprints and instruction manuals for a nuclear warhead for a ballistic missile from Khan. This design was for a Chinese warhead tested in 1966 that Pakistan had acquired from the Chinese in the early 1980s for its own nuclear weapons program. This design, which had no obvious Pakistani fingerprint, was ideal for Khan's smuggling ring to offer its customers as an incentive to buy the more expensive gas centrifuges able to make highly enriched uranium, a nuclear explosive material used in nuclear weapons. Khan sought to offer one-stop shopping for a nuclear arsenal.

But the designs in Switzerland included ones for smaller, more sophisticated nuclear weapons than the one found in Libya. These would have been ideal for two of Khan's other major customers, Iran and North Korea. They both faced struggles in building a nuclear warhead small enough to fit atop their ballistic missiles, and these designs were for a warhead that would fit. These designs would also simplify the task of building a nuclear weapon for anyone who obtained them.

Swiss Appeal to the IAEA

After the Libyan discoveries in 2003 and 2004, Pakistani officials categorically asserted that Khan did not sell their nuclear weapon designs. Although Pakistan's designs were developed from the Chinese-supplied design, Pakistan had gone further in designing warheads that were lighter and smaller than the Chinese design.

Upon learning of the designs, the Swiss government, which lacked nuclear weapons expertise, asked the IAEA for help in 2006. After looking at the designs, the IAEA told the Swiss that they should contact the United States or the P5, a designation for the five acknowledged nuclear weapons states. After learning of the designs from the IAEA, the U.S. government asked the Swiss for the files starting in the spring of 2006. Although public information is unclear about whether the United States received a copy of the files, one would expect that it did receive at least portions of the files in the fall of 2007 before the [Swiss government ordered the destruction of these files](#)¹.

Soon after learning of the weapon designs, a senior IAEA official told Pakistani government officials about the designs found in Switzerland. The Pakistanis were upset, since they realized that the designs had to be from their nuclear weapons arsenal. They were genuinely shocked; Khan may have transferred his own country's most secret and dangerous information to foreign smugglers so that they could sell it for a profit. And these advanced nuclear weapons designs may have long ago been sold off to some of most treacherous regimes in the world.

¹ Swiss document: <http://www.bk.admin.ch/aktuell/media/03238/index.html?lang=de&msg-id=18931&p>. Preliminary summary translation: http://www.isis-online.org/publications/expcontrol/Swiss_Doc_Summary_16June2008.pdf

Tinnors Deceived the CIA

The CIA pressured the Tinner family into working for them, most likely in 2003. They are believed to have provided information on the Khan network and turned over centrifuge components that they had not yet sent to Libya. However, the Tinnors apparently did not tell the CIA about these nuclear weapon designs.

For what has to be viewed at best as partial cooperation, the Tinnors appear to have received a large sum of money and a CIA commitment to help keep them out of jail. The CIA was unable to keep its promise on jail time. This promise itself was based on a poor understanding of the Swiss justice system. To the prosecutors, the extent of the Tinnors' work for the CIA did not make them immune from prosecution, unless the CIA showed extensive and on-going cooperation, something that it has not done. The evidence so far appears to indicate that the CIA cannot show such cooperation. Even in the case of Urs Tinner, who has been reported to have helped the CIA first in the late 1990s or early 2000s, the available evidence does not support the view that Urs provided substantial, on-going assistance at that time. Because of the flight risk posed by the highly mobile Tinner brothers, the Swiss courts have sided with the prosecutors that they should remain in jail pending their trial.

This could change. The recent Swiss government destruction of the information seized from the Tinnors could have a negative effect on the prosecution of the Tinnors. The evidence about their providing illegal assistance to Libya's nuclear weapons program appears strong, but the destruction of the information without the approval of the defendants has raised the issue of whether the Tinnors can receive a fair trial. Defense attorneys can now claim that information to prove their clients' innocence was in the destroyed documents. The Tinner brothers could soon be freed from jail or perhaps even have the charges dropped by a court concerned about the Swiss government's handling of the evidence. Given their shady past, there is no telling what the Tinnors might do in the future.

The Bush Administration often says that the Khan network was wrapped up. However, four years after the arrest of Khan and several of his associates, important questions about their activities remain outstanding. Gaining their cooperation has been difficult; prosecuting Khan's associates has been especially difficult.