

NDS

Michael Clinger

CEO of NDS 1990-92. Operational Security established in part to track down Clinger whom News accused of fraud

Abe Peled

CEO of NDS since July 1995

Reuven Hasak

NDS security chief, former deputy head of Israel domestic security agency Shin Bet

John Norris

Security chief of NDS US, former US Army intelligence. Orchestrated numerous stings against Canadian hackers

Ray Adams

Security chief NDS UK, former commander Metropolitan Police criminal intelligence. Ran a network of informers and hackers for whom he offered protection from prosecution

Yossi Tsuria

Chief technology officer for NDS Israel. Tsuria was part of a radical group of Jewish Israelis in the 1980s that plotted to bomb the Dome of the Rock

Avigail Gutman

NDS Operational Security, Israel and Asia. Worked on the entrapment in Thailand of Rolf Deubel, a hacker known as MadMax



Ray Adams ... the NDS UK security chief was a highly decorated but controversial former police commander.

Photo Panorama

incorrectly believed they shared the same system ROM codes.

Tarnovsky sent the Nagra code to Saggiore as an attachment to an email with the PGP encryption system. This locked the file with a date and time. It could be unlocked only by Saggiore's private key.

This was forensic evidence that linked Tarnovsky and NDS to the release of part of the underlying code for the ST Thomson chip used by Nagra.

At the 2008 trial, an NDS independent expert examined the encrypted file but made no submission to challenge its authenticity. Tarnovsky denied having sent the email to Saggiore, and said he would not have used the high level of encryption in the attachment because it was illegal in the US at the time.

Six months later Saggiore wrote a report that ended up in the hands of Gilles Kaehlin, the head of security at Canal Plus. He opened an inquiry that led to Canal Plus suing NDS for \$1 billion in damages, in March 2002.

Oliver Kömmerling became a surprise witness for Canal Plus. Adams lost his job, and in the process the hard drive of his laptop, with thousands of revealing emails, was reported stolen.

Only days before, OnDigital, the fledgling pay TV rival to BSkyB in Britain which used the widely pirated Seca card, had collapsed owing £1 billion.

In 2000, DirecTV had sued NDS for piracy-related behaviour, but the case was settled. DirecTV insisted Tarnovsky had no further contact with its smartcards.

It now sought to reopen the case in light of the Canal Plus allegations, citing actions by Kömmerling. A US Attorney in San Diego convened a grand jury to investigate NDS, and other satellite broadcasters – EchoStar in the US, Sogecable in Spain and MEASAT in Malaysia – applied to join to the Canal Plus action.

In June 2001, with the Vivendi/Canal Plus empire days away from collapse, Murdoch agreed to buy its Telepiu pay TV arm in Italy, which he merged with Stream to form Sky Italia.

A condition of the deal was that Canal Plus buried the NDS lawsuit. It became a race for time to see whether EchoStar, Sogecable and MEASAT could gain access to the Canal Plus documentation before the Telepiu deal closed in April 2003.

The window closed. MEASAT

walked away when the Canal Plus case closed. Sogecable and EchoStar had to launch new lawsuits. But the delay in trying to join Canal Plus meant most of the events that formed the basis of their cases were now beyond the statute of limitations.

DirecTV dropped its NDS lawsuit after News acquired control of the broadcaster in 2003.

The grand jury investigation was transferred to Los Angeles, where a new deputy US Attorney found NDS had no case to answer.

EchoStar soldiered on, going to trial with a drastically restricted case in 2008.

NDS applied to call the deputy US Attorney as a witness, but the judge ruled against NDS over

German hacker Oliver Kömmerling trained NDS staff to peel away the microchips used by rival companies in their smartcards.

questions of whether News had helped him get a job at the Motion Picture Association.

The jury decided in EchoStar's favour on three of the six counts, but awarded negligible damages.

The trial judge awarded split costs with \$5 million in EchoStar's favour. This was overturned by the appeals court.

"Just this week, EchoStar realised the cost of making these futile and damaging allegations against NDS when it paid approximately \$19 million to NDS," an NDS spokesman told the *Financial Review* during the week.

NDS has been sued by five of the largest satellite broadcasters in the world, each of which was seeking damages of about \$1 billion, after paying estimated legal costs of some \$80 million.

NDS has emerged unscathed and undaunted. It prefers to focus on its successful sale to Cisco, the spokesman said.

How much are the NDS secrets worth? The two-part sale of NDS that began in 2008 has shown that encryption is a goldmine.

The total payout was \$5.7 billion. News Datacom had an encryption system based on a

smartcard, a minor business which became hugely important when Murdoch discovered months later that he needed a way to encrypt his UK satellite venture Sky Television.

It's called a conditional access system and is used to ensure only paying customers can watch the pay TV programming.

The NDS smartcard would be inserted into the set-top box and the satellite picture would unscramble. But hackers soon worked out how to reverse engineer the NDS smartcards to produce pirate copies – which is where Operational Security came in.

Adams's new boss at NDS was Reuven Hasak, a former deputy head of Israel's domestic secret service, Shin Bet.

Hasak had been slated for the top job at Shin Bet but his career was destroyed by revelations of perjury and cover-up over the murder of two Palestinian hijackers after they were captured in April 1984.

They were killed by a Shin Bet agent, allegedly on the orders of Shin Bet chief Avraham Shalom.

But over 18 months of investigations, Hasak helped orchestrate a false story, coaching a string of Shin Bet agents to give sworn evidence that an army officer, Brigadier-General Yitzhak Mordechai, was the killer.

Shortly afterwards the Landau Commission reported that perjured evidence and the torture of suspects had been a regular part of Shin Bet procedure, and introduced reforms.

In October 1985 Hasak and two other senior Shin Bet officers went to then-prime minister Shimon Peres to reveal the cover-up and ask for Shalom to be replaced.

Peres dismissed their concerns: "Why did you just remember today? If wrongs were done, why didn't you prevent it a long time ago?"

The three Shin Bet officers were forced to resign, and formed a security firm, Shafran.

Ten years later, as three of Israel's most experienced spies, they were the logical choice when News Corp's general counsel, Arthur Siskind, needed to investigate a fraud at NDS.

Hundertmark had been succeeded at NDS by Michael Clinger, an American who ran the company for Murdoch for almost two years despite having an arrest warrant issued against him in New York for stock fraud.

Clinger was finally forced out, but in 1995 Siskind learned he was still defrauding NDS.

EUROPEAN HACKERS

Oliver Kömmerling

German master hacker hired by NDS, later Canal Plus
NDS codename Alex

Chris Tarnovsky

US serviceman in Germany turned NDS agent in US
NDS codename Mike, George or Biggun

Jan Saggiore

Swiss hacker, blows whistle on NDS
NDS codename Hannibal

Plamen Donev

Bulgarian hacker, later hired by NDS
NDS codename Pluto

Vesselin Nedeltchev

Bulgarian hacker, later hired by NDS
NDS codename Vesco

Boris Floricic

German hacker who worked with Kömmerling, dies in park
Online name Tron

Rolf Deubel

South African hacker, hacks Foxtel 1999, lured to and arrested in Bangkok in NDS sting
Online name MadMax

Lee Gibling

Founder of Thoiic.com (The House of Ill Compute), world's biggest piracy site in UK, which becomes a front for NDS to trap hackers — sets up MadMax sting

David Cottle

Sydney based satellite dish installer
Online name Bond 007.
Gutman describes him as the "master-organizer, who has managed quite an infrastructure in Oz."

It was the same file. NDS contests this, pointing out that it's possible to change a time stamp on a computer file artificially. But if someone fabricated the time stamp to frame NDS, how did they know what the time stamp needed to be, unless they had seen the NDS file?

It was a forensic fingerprint that tied the file posted on DR7 to NDS.

But how did the NDS file get to DR7? Suspicion falls on Tarnovsky.

Kömmerling says that Tarnovsky later told him he had been given the Seca ROM file and when he asked what to do with it, an NDS executive had indicated by a facial gesture that he should release it on the internet. Tarnovsky denies having posted the file.

Two days after the Seca ROM file appeared on DR7, Saggiore, phoned Tarnovsky, who was a close friend, and asked if he could help supply a part of the Seca ROM that had not been included in the file on DR7.

"[Chris] told me he was not able to have the Canal Plus ROM 2000 address because that part had been lost during extraction of the code," Saggiore testified in a US court in 2008. But Tarnovsky had the ROM code for the Nagra card, which he offered to send to Saggiore. Both cards were built on an ST Thomson microprocessor, and Tarnovsky