

Perspective

Murdoch's inside job

From previous page

them that are inserted into the set-top box to decrypt the pay television signal – and they are the heart of any pay TV system. They provide the customer management base as well as the platform to offer interactive services.

But the microchips on the smartcards can be hacked and the source codes to the chips exposed.

In 1988 Murdoch turned to NDS to develop his own conditional access system for Sky.

He was so taken with NDS technology that in 2002 when General Motors was planning to launch a US satellite operation called DirecTV, he intervened to persuade them to use NDS to safeguard their broadcast.

And in 1997, when Murdoch agreed to merge his US satellite interests with the other big satellite broadcaster, EchoStar, run by Charlie Ergen, he walked away from the deal when Ergen refused to replace the Nagra smartcards EchoStar used with NDS cards.

Ergen said the NDS cards weren't safe. In his office in Denver, Colorado, he pulled out some pirate cards for DirecTV and put them into his system to show Murdoch how comprehensively the NDS cards had been broken.

That's the problem with smartcards. The microchips on the card can be hacked, and the secret codes that operate the cards exposed. Once this happens, pirate cards can be made that mimic the real cards and switch on the programming without payment, draining the broadcasters' revenue.

It's huge business. Some estimates put the number of pirate cards for DirecTV by 2000 at close to 1 million. If true, that was \$500 million of revenue DirecTV wasn't earning – and tens of millions of dollars that pirates were.

But it wasn't piracy that introduced Murdoch to the world of spies and intelligence. It was a fraud that a former chief executive of NDS, Michael Clinger, was still running on NDS years after he had been forced out.

Amazingly, Clinger had run NDS from 1990 to late 1991 despite having a US arrest warrant outstanding against him for stock fraud.

News Corp general counsel Arthur Siskind hired Reuven Hasak, a former deputy head of Israel's domestic secret service, Shin Bet, to run the investigation in 1995.

Hasak made short shrift of Clinger, and NDS chief executive Abe Peled then hired Hasak full time to set up a special unit called Operational Security to fight piracy of NDS smartcards used by BSkyB in Britain, DirecTV in the US and Foxtel in Australia.

To head Op Sec in Europe, Hasak hired Ray Adams, a highly decorated but controversial former police commander who had run the Metropolitan Police's S11 criminal intelligence unit.

In the US, Hasak hired John Norris, who had been a US Army captain in intelligence during the Vietnam War and had close links

The email trail

From Avigail Gutman to Ray Adams on Jan 6, 2000

RFC Headers:
From: Gutman, Avigail
To: Adams, Ray
Date: 6/1/2000 12:59:46 PM
Subject: RE:

Hi Ray,

Cottle is still of interest. We have him in touch with our guy in OZ - they mostly chit-chat and cottle is expected to go visit and stay with him for a couple of days.

I am not aware of cottle's contact with snoopy - as this is has not been discussed with our guy in OZ. Is snoopy more involved down there now? An extra european contact with a perspective on OZ and Asia is always a desirable thing from my perspective.

rgds
Avigail

NEWS CORP

Arthur Siskind ▶
News legal counsel, part of Office of Chairman, NDS director



Genie Gavenchak ▶
Senior News lawyer reporting to Siskind



David DeVoe ▶
News CFO, NDS director



Chase Carey ▶
Currently Chief Operating Officer, NDS director, was News executive overseeing NDS in late 1990s



James Murdoch ▶
Deputy chief operating officer; NDS director 1999-2003, 2008-present



Lachlan Murdoch ▶
NDS director, 2002-05



Australian hacker David Cottle was supplied by Avigail Gutman with blank smartcards to aid his piracy of Austar and Foxtel.

with the US Secret Service. Adams and Norris worked with the FBI, the US Secret Service, US Customs and the Royal Canadian Mounted Police as well as police forces and anti-piracy groups across Europe to target the hackers and dealers who produced the pirate cards.

They instigated hundreds of raids on suspected pirates and forged an impressive reputation as a tough enforcement arm. But piracy persisted, particularly in North America.

Hasak's people were not just on good terms with law enforcement agencies. Adams's UK Operational Security team even had a special line item for police. It was Code 880110 and appears in a string of NDS departmental budgets.

On June 9, 2000, Adams's deputy Len Withall, another former policeman, asked for a £2000 cheque to be made out to Surrey Police, drawn on Code 880110, which he explained was "an amount of money set aside for payment to police/informants for assistance given to us in our work".

Adams was more explicit on October 9, 2001, when he explained Code 880110 to NDS accountant Greg Gormley, who was looking for

budget cuts: "This is a contingency sum for police informants. No claims so far. May be none this year."

That proved optimistic, as a month later, on November 13, 2001, Withall told an NDS accountant he needed £1000 cash. It should be charged against Code 880110, which he said was "used for payment to some informants not covered under our normal payment system".

Who was Withall going to pay, using the "contingency sum for police informants", and why did it have to be in cash?

These payments raise serious questions, beginning with how a major division in News Corp had a line item in its budgets which on Adams's description at least, was to be paid to police informants?

How is such a line item discussed at the annual budget planning sessions? At the least, whatever use the money was intended for – and it may well have been innocuous – including it as a line item embeds it in the corporate culture. Adams may have used his police contacts when he was able to obtain mobile telephone records for a person suspected of involvement in pay TV piracy in Canada. He also appears to have tried to obtain telephone records for an Australian hacker, David Cottle, known as Bond 007.

The Operational Security chief in Asia, Avigail Gutman, was closely monitoring Cottle, supplying him with blank smartcards to aid his piracy of Austar and Foxtel while dissuading rival Irdeto security from moving against him.

NDS vehemently denies it has ever been involved in piracy.

"The sources of accusations that NDS participated in piracy of competitor conditional-access systems have been repeatedly discredited," a spokesman told the *Financial Review*.

"The United States Department of Justice, a federal court jury, a federal trial court and a federal appellate court all rejected allegations that NDS is responsible for TV piracy."

Given the close ties Operational Security had to law enforcement, how did the piracy allegations arise?

There was a second arm to the Operational Security strategy. In addition to chasing pirates, Hasak's "Black Hat" team set out to recruit top hackers, turning them first into informants and then using their expertise to learn how to reverse engineer or deconstruct the smartcards of their rivals.

NDS RIVALS

Charlie Ergen ▶
Head of EchoStar, Dish Network



Andrew Kudelski ▶
Head of Kudelski Corporation, which produces Nagra conditional access system, used by EchoStar in US and Express BelVu in Canada



Pierre Lescure ▶
Head of Canal Plus, provider of the Seca smartcard system



Gilles Kaehlin ▶
Canal Plus security chief, former French Intelligence



Alan Guggenheim ▶
Head of Nagra US and NagraStar

Francois Carayol ▶
Head of Canal Plus Technologies

Larry Rissler ▶
Head of security for DirecTV

JJ Gee ▶
Head of security for EchoStar

German master hacker Oliver Kömmerling set up a laboratory in Haifa and trained NDS staff to use micro probes, optical microscopes, micro-laser cutters and a focused ion beam machine to peel away the microchips used by rival companies in their smartcards – the Seca card produced by Canal Plus in France, the Nagra card used by US satellite broadcaster EchoStar, the South African-Dutch Irdeto card and the Viaccess card by France Telecom.

The process on the Nagra card was completed in October 1998 – and within days, part of the same code was published on a piracy site called DR7.com run by a Canadian called Al Menard.

On March 26, 1999, the ROM source code for the Seca card by Canal Plus was also posted on DR7. Suspicion fell on Chris Tarnovsky, an American hacker employed by NDS who was a close friend of Menard.

Kömmerling in Germany saw the DR7 ROM file and realised the Seca file had the same time and date stamp – 4pm on July 6, 1998 – as the ROM file that the NDS Black Hat team had created the previous summer.

The odds against two different files being saved at the same minute in a year are 500,000 to one.