

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
HONORABLE DAVID O. CARTER, JUDGE PRESIDING

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ECHOSTAR SATELLITE CORP., et)	
al.,)	
)	
Plaintiffs,)	
)	
vs.)	No. SACV 03-950 DOC
)	Day 9, Volume III
NDS GROUP PLC, et al.,)	
)	
Defendants.)	
_____)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Jury Trial

Santa Ana, California

Wednesday, April 23, 2008

Debbie Gale, CSR 9472, RPR
Federal Official Court Reporter
United States District Court
411 West 4th Street, Room 1-053
Santa Ana, California 92701
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EchoStar 2008-04-23 D9V3

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I N D E X

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WITNESSES DIRECT CROSS REDIRECT RECROSS

TARNOVSKY, Christopher

By Mr. Hagan 6

By Mr. Klein 41

EXIBITS

EXHIBIT NO. IDENTIFICATION IN EVIDENCE

2032 e-mail 6

1 SANTA ANA, CALIFORNIA, WEDNESDAY, APRIL 23, 2008

2 Day 9, Volume III

3 (1:16 p.m.)

4 (Outside the presence of the jury.)

5 THE COURT: We're on the record.

6 Instead of the documents you may or may not have
7 found over lunch, I'm not going to take that at this time.
8 I want to keep the testimony rolling along. We can take
9 this after the jury's excused, and my thought is no matter
10 what, we're not done with Tarnovsky today.

11 Mr. Tarnovsky, we'll conclude your examination if
12 you want to, but we can resolve this this evening out of the
13 presence of the jury involving 39, and then you can lay your
14 foundation this evening.

15 So the argument's not being taken or precluded
16 from you. I just want to know where this document comes
17 from and how do I authenticate it.

18 All right. Kristee's getting the jury, Counsel.

19 MR. HAGAN: Your Honor, can I hand Mr. Tarnovsky
20 the NDS documents that we located at lunch as an exhibit?

21 THE COURT: Let me see the NDS documents.

22 Does it relate to Exhibit 39?

23 MR. HAGAN: Yes, sir.

24 MR. KLEIN: Your Honor, my understanding is this
25 document was created -- I don't think there's any evidence

1 that the witness has seen this document.

2 THE COURT: If it came from NDS's database and has
3 this information, yes, you can show it to the witness. I
4 thought this was solely produced from EchoStar. That's what
5 I asked before lunch.

6 This comes from NDS's discovery?

7 MR. KLEIN: May I be heard?

8 THE COURT: You certainly may.

9 MR. KLEIN: It's my understanding the documents
10 came from ICG --

11 THE COURT: That's correct.

12 MR. KLEIN: -- and that there's nobody who can
13 testify when it was created, who created it, or anything
14 like that.

15 THE COURT: Well, we'll lay the foundation. You
16 can talk about that in front of the jury. It may not come
17 in until this evening until we have a lot more time to
18 discuss this. You can show it to him.

19 (In the presence of the jury.)

20 THE COURT: All right. The jury's present. All
21 counsel are still present. The parties are present.

22 Mr. Tarnovsky is on the witness stand.

23 Counsel, thank you for your courtesy.

24 If you would please be seated.

25 This is the continued direct examination by

1 Mr. Hagan on behalf of EchoStar and NagraStar.

2 MR. HAGAN: Thank you, Your Honor.

3 CHRISTOPHER GEORGE TARNOVSKY, PLAINTIFF'S WITNESS,

4 PREVIOUSLY SWORN, RESUMED THE STAND

5 DIRECT EXAMINATION (Resumed)

6 BY MR. HAGAN:

7 Q. Mr. Tarnovsky, before we broke for lunch, we were
8 talking about the NiPpEr2000 publication and the e-mail
9 address associated with that of ChrisVon@s4.interpass.com.

10 I want to show you what we're marking as Exhibit 2032.
11 And I'll represent to you that this was a document produced
12 by the defendants in this case --

13 MR. KLEIN: Your Honor --

14 MR. HAGAN: -- bearing Bates stamp NDS 153179
15 through NDS 153186.

16 (Exhibit No. 2032 marked for identification.)

17 MR. KLEIN: Your Honor, I object to counsel's
18 representation.

19 THE COURT: Well, ladies and gentlemen, I'm not
20 certain that one party producing this gives this exhibit
21 number 39 that we're having a serious discussion about
22 outside your presence authenticity or not, but each side had
23 disclosed information to the other.

24 The problem is, some of the information disclosed
25 may not really belong to the particular party who had it in

1 their position. It may not come from EchoStar or from NDS.
2 It may come from other unrelated or related parties. That
3 will eventually be for you to determine and the weight
4 you're to give to that.

5 Counsel, your objection is overruled.

6 MR. HAGAN: Thank you, Your Honor.

7 MR. KLEIN: Just to save time, may I have a
8 continuing objection with respect to this document?

9 THE COURT: Certainly.

10 Was this disclosed by NDS?

11 MR. KLEIN: Yes.

12 THE COURT: Okay. Thank you.

13 BY MR. HAGAN:

14 Q. Now, Mr. Tarnovsky --

15 THE COURT: Now, that doesn't mean this is NDS's
16 document, by the way. I want you to understand that.

17 Different parties have different information from
18 different sources. Each party's been disclosing information
19 to the other party.

20 Once again, let me caution you. This document,
21 just because it's produced by EchoStar or by NDS, doesn't
22 give it allegiance or nexus to that particular client. We
23 just don't know yet.

24 Counsel.

25

1 BY MR. HAGAN:

2 Q. Mr. Tarnovsky, do you have a copy of Exhibit 2032 in
3 front of you?

4 A. I do.

5 Q. And you see the title page of this document says,
6 "ChrisVon@s4.interpass.com." Do you see that?

7 A. Yes.

8 THE COURT: Just a moment. Let me caution you
9 again. This can be simply a subheading, a subtitle,
10 attached by somebody at some time. We don't know who put
11 that on this document. Just because it may be coming from
12 NDS, they may not know it may be in their possession. It
13 could come from EchoStar. We'll find out.

14 BY MR. HAGAN:

15 Q. Mr. Tarnovsky, if you'll turn to Page 3 of
16 Exhibit 2032. At the top, it has that same ChrisVon e-mail
17 address, and then under "forum summary," it identifies the
18 user name, NiPpEr2000. Do you see that?

19 A. Could you please give me the proper NDS page number?

20 Q. Certainly. It is NDS 153181.

21 A. Thank you. Could you repeat the question, Counsel.

22 Q. Do you see the portion of this page, Page 3 of
23 Exhibit 2032, under "Forum Summary," where it identifies the
24 user name NiPpEr2000?

25 A. Yes.

1 Q. Do you have any reason to believe that the user name
2 NiPpEr2000 was not associated with the e-mail address
3 ChrisVon@s4.interpass.com?

4 A. I have no knowledge of this at all.

5 Q. Did these documents, Exhibit 2032, come from your
6 files, Mr. Tarnovsky?

7 A. No.

8 Q. Did Exhibit 2032 come from your computer,
9 Mr. Tarnovsky?

10 A. No.

11 Q. Did Exhibit 2032 come from any forensic image of your
12 computer?

13 A. No.

14 MR. HAGAN: Your Honor, I would offer 2032 into
15 evidence, and I understand there's a continuing objection.

16 THE COURT: We'll take that up out of the presence
17 of the jury. Thank you, counsel.

18 BY MR. HAGAN:

19 Q. Now, Mr. Tarnovsky, we looked earlier this morning at
20 Exhibit 25, which was an IRC posting under the alias "Von."
21 And I understand that you claim that particular Von was not
22 you. But that document, under the alias Von, said, "I'm the
23 only one who can hack Nagra."

24 Have you ever stated to anyone that you could hack
25 Nagra?

1 A. I have never stated that to anyone that I can hack
2 Nagra system, period.

3 Q. Are you certain about that?

4 A. I'm absolutely positive.

5 Q. Are you as positive about that as you are the fact that
6 you are not NipperClause or NiPpEr2000?

7 A. Yes.

8 Q. Mr. Tarnovsky, let's fast-forward to December 21st of
9 2000. You understand that there was a post on Mr. Menard's
10 website or a file available on that website called
11 NiPpErClAuZ00, correct?

12 A. Yes.

13 Q. Now, you're also aware that the defendants and
14 Mr. Mordinson engaged in efforts to reverse engineer
15 EchoStar's security system in 1998, correct?

16 A. Yes.

17 Q. And you're aware that Mr. Mordinson developed a recipe
18 or a hack methodology for use on EchoStar's security system,
19 correct?

20 A. Yes.

21 Q. And you're aware that Mr. Mordinson put that
22 information, those instructions, into a written document
23 called the Headend Project Report?

24 A. I'm not actually sure that he put that -- what you're
25 saying into that report.

1 Q. Have you ever seen that Project Headend Report,
2 Mr. Tarnovsky?

3 A. I've very briefly seen this report, and only a few
4 select pages, and it was very fastly scanned over.

5 Q. Let's take a look at Exhibit 98, which has already been
6 introduced into evidence.

7 And if you would, Mr. Tarnovsky, take a moment to flip
8 through the pages of Exhibit 98 and let me know if this is
9 some of the material that you've seen before?

10 A. I've seen some of these pages, yes.

11 Q. Okay. And you saw that information at one of the
12 technical interchanges that you had with David Mordinson,
13 correct?

14 A. Yes.

15 Q. And at that time, Mr. Mordinson explained to you that
16 he had discovered a hole in EchoStar's Smart Card, correct?

17 A. I don't know that he ever said that -- like no, I don't
18 believe that's correct.

19 Q. In fact, Mr. Tarnovsky, didn't you testify at your
20 deposition that Mr. Mordinson told you that the hole he
21 discovered in EchoStar's Smart Card could not be patched?

22 A. That's different than the last question you just asked
23 me. Yes, he did say that.

24 Q. Okay. So you knew at that time that Mr. Mordinson had
25 discovered a hole in EchoStar's Smart Card, correct?

1 A. Based on the discussion that we had had that afternoon,
2 I knew that he did, yes.

3 Q. And you understood that by using that hole,
4 Mr. Mordinson and the defendants had developed a method to
5 dump the contents of EchoStar's Smart Card, correct?

6 A. That is correct.

7 Q. Now, when Mr. Mordinson showed you this report, did you
8 touch it?

9 A. I don't recall exactly how it happened. I don't
10 believe I ever touched the report, but I did see some of it.

11 Q. Well, you testified in your deposition that
12 Mr. Mordinson simply held up the report and flipped through
13 the pages of it. Do you recall that testimony?

14 A. You're helping me to remember it. As I just said, I
15 didn't believe I touched it, so it coincides with what I
16 just testified about.

17 Q. And after you and Mr. Mordinson looked through the
18 pages of that report, you went into your garage and you
19 shredded it, correct?

20 A. Yes.

21 Q. You understood at the time that you shredded it that
22 that report contained information describing a method of how
23 to dump the code from EchoStar's Smart Card, correct?

24 A. That is correct.

25 Q. Now, we talked this morning about your sending battery

1 card codes to a gentleman named Jan Saggiori. Do you recall
2 that testimony, Mr. Tarnovsky?

3 A. Yes.

4 Q. Have you ever sent portions of EchoStar's code to
5 Jan Saggiori?

6 A. Not of -- no.

7 Q. Let's take a look at Exhibit 2002.

8 MR. HAGAN: Your Honor, this has already been
9 received into evidence. We would ask to publish it.

10 THE COURT: You may display it.

11 (Document displayed.)

12 MR. HAGAN: And if you could, Clint, blow up the
13 top portion that has the sender and recipient information,
14 to and from.

15 BY MR. HAGAN:

16 Q. Now, Mr. Tarnovsky, if you'll look at the first page of
17 Exhibit 2002, the sender information says
18 "Von@Metro2000.net"; is that correct, sir?

19 A. Yes, I see this.

20 Q. And that's one of the e-mail addresses that you
21 admitted to us earlier today that you created and that you
22 used, correct?

23 A. Yes.

24 Q. And if you'll look at the "to" information a little bit
25 further down, it's got Jan Saggiori, the e-mail address of

1 Jan_Saggiori@CompuServe.com. Do see that?

2 A. Yes, I do.

3 Q. And you had used that e-mail address to send
4 Mr. Saggiori information in the past, correct?

5 A. Yes. We've exchanged correspondence through this
6 e-mail.

7 Q. Now, the text of this e-mail says, "Good news from up
8 north here. Keep for you, please. Extremely top secret."

9 Now, Mr. Saggiori testified that the PGP-encrypted file
10 that you sent him contained code from EchoStar's Smart Card.
11 If you'll turn to the fourth -- or let's see -- fifth page,
12 it says Exhibit D at the bottom. And the title of that page
13 was 16cf54_full.txt? Do see that?

14 A. I see this.

15 THE COURT: Just a moment, Counsel.

16 What page again?

17 MR. HAGAN: Page 5, Your Honor. It says "Exhibit
18 D" at the bottom. It's 2002-004.

19 THE COURT: Thank you, Counsel.

20 BY MR. HAGAN:

21 Q. See the title of that page, Mr. Tarnovsky, is
22 16cf54_full.txt. Do see that?

23 A. Yes.

24 Q. And if you look back at the fourth page of
25 Exhibit 2002, the file name right above the PGP says the

1 same: 16cf54.asc. Do you see that?

2 A. Yes, I do.

3 Q. Now, you understand, Mr. Tarnovsky, that the
4 microprocessor used in EchoStar's Smart Cards, the ROM 3
5 cards, was an ST Thomson 16cf54 chip, correct?

6 A. Yes.

7 Q. This e-mail was sent March 28th, 1999. Do you see
8 that?

9 A. I see this.

10 Q. Is it your testimony here for the ladies and gentlemen
11 of this jury that you did not send portions of EchoStar's
12 code to Mr. Saggiori in March of 1999?

13 A. This is my testimony: That this is not -- this e-mail
14 is not truly sent from me, yes.

15 Q. And it is just, according to you, a coincidence that
16 the sender e-mail address is an e-mail address that you
17 created and you used?

18 A. It's not coincidence. This is a text file that you
19 printed out that your client, that's paid by you guys, your
20 client is being paid to produce this. This 16cf54.asc is a
21 piece of the encrypted mail --

22 THE COURT: Just a moment. We need to keep a
23 record of what you're saying.

24 THE WITNESS: Sorry, Your Honor.

25 THE COURT: Just start again.

1 THE WITNESS: At the time this e-mail would have
2 been sent, I was under Windows, as you can see in the
3 header, as you've showed me. It says QualComm Windows-based
4 Eudora Pro, Version 4.2. I would not be using a DOS-based
5 version of PGP2.6.3, International Version A, which is
6 illegal for use in the United States at this time frame. I
7 would have been using windows PGP, which is a plug-in for
8 Eudora, which would have encrypted the entire --

9 Yes, Your Honor, a Windows-based version of this
10 program.

11 THE COURT: Counsel, reask the question.

12 Slow down. I've got to have a record.

13 THE WITNESS: Yes, Your Honor.

14 THE COURT: Thank you.

15 BY MR. HAGAN:

16 Q. Mr. Tarnovsky, if I understand your testimony
17 correctly, you believe that you did not send this e-mail,
18 Exhibit 2002, to Jan Saggiori on March 28th, 1999, correct?

19 A. This exact e-mail as you're showing me in this exhibit
20 is not the same e-mail that I sent to Mr. Saggiori, correct.

21 Q. Are you as certain about that as you are about your
22 earlier testimony that you have never stated to anyone that
23 you have hacked Nagra?

24 A. Yes, I am.

25 Q. Mr. Tarnovsky, I asked you several times in your

1 previous deposition when Mr. Mordinson showed you portions
2 of this Headend Report. Do you recall that, sir?

3 A. Yes, I do.

4 Q. And you had some inconsistent answers. At one point,
5 you said more likely than not, it was in 1999. At several
6 other points, you said, "No, I think it was in 2001 after
7 the posting." And at one point you said it was during the
8 P3 era. Are those the three options that you gave me at
9 your deposition?

10 A. That sounds correct. The P3 era is post-2001, for the
11 record.

12 Q. It's your testimony under oath that NDS did not develop
13 and launch the P3 card until after 2001?

14 A. That's not what I'm stating. I'm stating that the P3
15 was widely hacked in 2001, and this was the reason
16 Mr. Mordinson had come over.

17 Q. Now, Mr. Tarnovsky, if Mr. Mordinson had shared the
18 Headend Report with you in 1998 after he had created it and
19 during the time when you had these technical interchanges in
20 Europe, you would agree with me, sir, that you could have
21 dumped the code from EchoStar's card and sent the code to
22 Mr. Saggiori in '99 that we have in Exhibit 2002, correct,
23 sir?

24 A. No. That's incorrect, because for several grounds, one
25 being that the code that you showed me on Page 4 is an area

1 of a Thomson chip that Mr. Saggiori nor myself could ever
2 have extracted. It's protected by a firewall, and this is
3 not able to be recovered nor does EchoStar know the true
4 contents of this area.

5 However, I know that the posting was post-2001 because
6 Mr. Mordinson showed me the report because you claimed you
7 closed the hole, and he claimed that you could not close the
8 hole.

9 Q. The NipperClause00 posting of the hack methodology for
10 the hole in EchoStar's security system was published on
11 Mr. Menard's website on December 21, 2000, correct,
12 Mr. Tarnovsky?

13 A. I don't know.

14 Q. Why don't we take a look at Exhibit 113. This is an
15 e-mail, Mr. Tarnovsky, produced by the defendants in this
16 case, and it was an e-mail sent by you to your supervisor
17 and other employees of NDS; is that correct, sir?

18 A. I believe this is true, yes.

19 Q. You don't believe that your counsel or the defendants
20 produced an e-mail that was doctored in any way, do you,
21 Mr. Tarnovsky?

22 A. I have no reason to believe so, no.

23 Q. Good. Now, you sent this e-mail on December 22nd of
24 2000, correct?

25 A. From what I read on the header, yes.

1 Q. Do you have any reason to believe that the date on the
2 e-mail produced by the defendants is inaccurate?

3 A. I can't verify that. But I have no reason not to trust
4 it.

5 Q. What is the title of this e-mail that you sent to NDS
6 employees on December 22nd, 2000?

7 A. The subject is "Cat's out of the bag."

8 Q. And in the body of this e-mail, you tell them that
9 there is a public file you saw on InterestingDevices.com as
10 well as dr7.com, and it's the syntax to dump any ROM 3
11 NagraVision card. Do you see that, sir?

12 A. I do.

13 Q. Now, Mr. Tarnovsky, were you bragging on December 22nd
14 of 2000 after posting that file on Mr. Menard's website the
15 day before?

16 A. No.

17 Q. You just happened to see that file on the Internet
18 within hours of it being published. Is that your testimony,
19 sir?

20 A. Yes, it is.

21 Q. Now, Mr. Tarnovsky, I understand that your earlier
22 testimony is that you've never hacked Nagra, you've never
23 told anyone that you could hack Nagra, but you have received
24 EchoStar's programming without an authorized subscription;
25 isn't that correct, sir?

1 A. No. I've always paid.

2 Q. Why don't we take a look at Exhibit 41 -- I'm sorry. I
3 gave you the wrong -- getting ahead of myself. Okay.

4 It's Exhibit 51, Mr. Tarnovsky. Do you have a copy of
5 that in front of you?

6 A. I do.

7 Q. Now, Exhibit 51 is an exchange of e-mails between
8 various NDS employees including yourself; is that right?

9 A. I see myself on part of the thread, yes.

10 Q. And you know the other names on those e-mails. Those
11 are other NDS employees, correct?

12 A. Yes.

13 MR. HAGAN: Clint, can we get Exhibit 51 up?
14 Thank you. And let's blow up the bottom half of it or the
15 middle third would work.

16 (Document displayed.)

17 BY MR. HAGAN:

18 Q. Mr. Tarnovsky, I want to focus you on the middle
19 portion of this e-mail exchange.

20 It was sent by John Norris. That was your supervisor
21 at the time, correct?

22 A. Yes.

23 Q. And it's dated November 13th of 2000, correct?

24 A. Yes, it is.

25 Q. Roughly a month before the Nipper post was made

1 available on Mr. Menard's website for all the world to see,
2 right?

3 A. According to you, yes.

4 Q. Now, in this e-mail, Mr. Norris says, "When I was at
5 Mike's yesterday, he took an EchoStar hack file from the
6 internet --"

7 THE COURT: Read slower, please.

8 MR. HAGAN: Sorry, Your Honor.

9 BY MR. HAGAN:

10 Q. Mr. Norris writes November 13, 2000, "When I was at
11 Mike's yesterday, he took an EchoStar hack file from the
12 Internet, put it in a P1 put the P1 into an EchoStar
13 receiver, and got all programming."

14 Now, you understand that the reference to "Mike" in
15 this e-mail is to you, Christopher Tarnovsky, correct?

16 A. Yes.

17 Q. That Mike reference was to Michael George, which was
18 your code name inside of NDS, correct?

19 A. Yes.

20 Q. In fact, you were copied on this e-mail; isn't that
21 right, Mr. Tarnovsky?

22 A. I saw myself on the e-mail, yes.

23 Q. So as of November 13th, 2000, you had demonstrated a
24 hack for EchoStar's security system to your supervisor
25 Mr. Norris, correct?

1 A. Yes.

2 Q. And you used that hack to receive all programming
3 according to Mr. Norris; is that right?

4 A. It's not, but you're gonna say it is, so I guess I have
5 to say "yes."

6 Q. Well, don't take my word for it. Let's take
7 Mr. Norris' word for it. In his e-mail on November 13 of
8 2000, he writes that you put the P1 into an EStar receiver
9 and got all programming.

10 A. Yes, a DirecTV period 1 access card, which was NDS's
11 technology. At that point in time, the DirecTV period 1
12 card had been removed from the field, and they were in
13 excess with the pirates in Canada, pirates in America. We
14 were quite disturbed to see that on the Internet, someone
15 could download a file on the public WWW Internet sites that
16 would download into this DirecTV period 1 access card,
17 convert the chip to run on an EchoStar's set-top box.

18 This was very disturbing to NDS, and if we could have
19 had it our way, we would have destroyed these cards on their
20 last day of life when we finished swapping out to the
21 period 2. But we can't take that risk, so these cards are
22 out there.

23 It doesn't look good if this really does work. So this
24 was an laboratory experiment in an NDS-built lab for work
25 purposes, not for recreational television viewing as you're

1 trying to display this as.

2 Q. This was in a laboratory environment in an NDS lab?

3 A. Equipped lab.

4 Q. That's what you just testified to?

5 A. That is.

6 Q. This was at your house, wasn't it, Mr. Tarnovsky?

7 A. Yes, it is.

8 Q. Okay. So your house was an NDS-equipped lab?

9 A. It had an NDS equipped lab, yes.

10 Q. And in your house you had NDS-issued computers,
11 correct?

12 A. Yes.

13 Q. And you had other NDS-issued equipment, correct?

14 A. Yes.

15 Q. But there was no software applications on those NDS
16 computers that monitored or tracked your Internet activity,
17 was there, Mr. Tarnovsky?

18 A. I don't know. There may have been.

19 Q. Okay. To your knowledge, there was none, correct?

20 A. If there was, I was never told there was.

21 Q. In fact, you testified previously in your deposition
22 that no one at NDS ever asked you if they could put any
23 software applications on your NDS-issued computers to
24 monitor your Internet activity, correct?

25 A. This is correct.

1 Q. And those NDS-issued computers with no software
2 applications on there for monitoring, they weren't even
3 hooked into the NDS servers at their official business
4 establishment; is that right, sir?

5 A. No, that is an incorrect statement.

6 Q. In your deposition, did you testify that those
7 NDS-issued computers at your house, in your laboratory, were
8 not hooked up to the NDS servers?

9 A. No, I believe you're out of context, Counsel. I would
10 have testified something to the effect of I have NDS-issued
11 computers that are on the NDS networks through the VPN, and
12 then I would have had computers that I built up that are in
13 the lab that I built. So there's a mixture of things going
14 on here.

15 Q. Let's move forward for a minute. After you sent the
16 e-mail on December 22nd of 2000 entitled "Cat's out of the
17 bag," the EchoStar secret is out, did there come a point in
18 time where NDS asked you to quantify the number of pirate
19 cards that were out in the field?

20 A. I'm not sure. I don't -- I don't know.

21 Q. Now, backing up for just a moment, Mr. Tarnovsky, if I
22 understand your earlier testimony, pirates, satellite
23 pirates, could reprogram not just the ROM 3 EchoStar cards,
24 but also the P1 cards in order to steal EchoStar
25 programming. Was that your testimony?

1 A. Yes.

2 Q. How many were out there at that time?

3 A. I don't know.

4 Q. Of the P1 cards, you don't know.

5 Well, let's go back to the ROM 3 cards, then, for a
6 moment.

7 Did there come a time when representatives of the
8 defendants asked you if you could quantify or estimate the
9 number of pirated ROM 3 EchoStar Smart Cards in the field?

10 A. I believe that -- I believe I know what you're talking
11 about, yes.

12 Q. Why don't we take a look at Exhibit 41. Do you have
13 that in front of you, Mr. Tarnovsky?

14 A. Yes.

15 Q. This is an e-mail exchange between yourself, your
16 supervisor, Mr. Norris, and other NDS representatives.

17 Your e-mail is the second one down on the first page
18 dated February 7, 2001, 3:10 a.m. Do you see that?

19 A. I see this.

20 Q. And in this e-mail, you are estimating that there are,
21 in all capital letters, "at least a hundred thousand E3M
22 cards in the field"; is that correct?

23 A. I see I'm saying I'm guessing that there must be at
24 least. I'm not an expert on this. So I -- it could have
25 been less. I don't -- I don't know.

1 THE COURT: Well, just a moment. You were
2 guessing? I don't see that word. You want to read that to
3 us? Either you or counsel.

4 THE WITNESS: Yes, Your Honor.

5 MR. HAGAN: The paragraph says as follows,
6 Your Honor:

7 "I'm guessing they're at least a hundred
8 thousand."

9 THE COURT: Thank you. I didn't see that in the
10 bottom portion.

11 BY MR. HAGAN:

12 Q. Now, Mr. Tarnovsky, you know what an E3M card is, don't
13 you, sir?

14 A. Yes, I do, sir.

15 Q. That's an EchoStar Three-Musketeer card, right?

16 A. Yes.

17 Q. And you understood that you could load this hack recipe
18 onto an EchoStar Smart Card and create what was known as an
19 E3M card, where the individual pirate could steal EchoStar's
20 programming, correct?

21 A. Yes.

22 Q. You understood that these E3M cards were being
23 distributed through numerous websites, including some of the
24 gentlemen that you knew up in Canada, correct?

25 A. I know of the websites. I do not know of the personnel

1 that were doing this.

2 Q. Well, you know that Mr. Frost had a website where he
3 was advertising these E3M cards, didn't you, Mr. Tarnovsky?

4 A. I did not know that.

5 Q. Now, let's back up for just a minute.

6 Do you know why the defendants went to you, Chris
7 Tarnovsky, code name Michael George, when they wanted to
8 find out how many pirated EchoStar Smart Cards were in the
9 field?

10 A. Yes.

11 Q. And why is that?

12 A. Because NDS would compartmentalize individuals. So we
13 had an individual in Europe. We had myself in North
14 America, South America area. I was monitoring the websites
15 and such of pirate activity in North and South America for
16 NDS as well as. Of course, I'm seeing everything coming out
17 on Echo as well as any other system in North and South
18 America that's being talked about. So it's in their
19 interest to ask me, obviously, because I'm the only one
20 really that NDS had in North and South America scanning
21 these areas to give them a guess.

22 Avigail Gutman lives in Israel, which is in a whole
23 different world, and she has no idea what's going on in
24 Europe versus Asia versus North and South America. So it's
25 a very logical reason for her to ask myself this question.

1 Q. You were the go-to guy for NDS on estimating the number
2 of pirated EchoStar Smart Cards in the field as of
3 February 2001 --

4 MR. KLEIN: Objection. Vague and ambiguous.

5 BY MR. HAGAN:

6 Q. -- Correct?

7 THE COURT: Well, "go-to guy" -- sustain. Just
8 restate the question.

9 BY MR. HAGAN:

10 Q. You were, according to your testimony, the most
11 reliable resource for NDS to go to in February 2001 to
12 estimate the number of pirated ROM 3 Smart Cards in the
13 field, correct?

14 A. I didn't say what you just said, so I disagree.

15 Q. Now, Mr. Tarnovsky, isn't the reason that NDS asked you
16 about the number of pirated ROM 3 Smart Cards because they
17 knew you were using the Donegal software to distribute and
18 control the number of those ROM 3 Smart Cards that were
19 being distributed by Mr. Menard and others?

20 MR. KLEIN: Your Honor, I would object on the
21 question. Assumes a fact not in evidence, and so did the
22 one before that. If you want, I can elaborate.

23 MR. HAGAN: I'll rephrase the question,
24 Your Honor.

25

1 BY MR. HAGAN:

2 Q. Mr. Tarnovsky, we'll move along here, but I want to
3 make sure that we're on the same page.

4 According to your testimony, when NDS wanted to know
5 how many Smart Cards -- EchoStar E3M pirate Smart Cards --
6 were in the field in February of 2001, they went to you for
7 that number, correct?

8 MR. KLEIN: Your Honor, again I would object on
9 it. Assumes a fact not in evidence.

10 THE COURT: Overruled. You can answer that
11 question.

12 THE WITNESS: Thank you, Your Honor.

13 Per this e-mail at this particular time, they
14 asked me this question, and I gave them a guess the best I
15 could. I'm not an expert on this. I'm just monitoring the
16 Internet.

17 BY MR. HAGAN:

18 Q. Now, do you think that -- withdrawn.

19 Did you typically provide information to your superiors
20 within NDS that you did not believe to be reliable?

21 A. No. It's not a question of being reliable. It's
22 putting together a logical conclusion, trying to form a
23 conclusion based on what I'm seeing, making it as
24 reliable -- I guess, yes, I suppose so.

25 Q. Do you recall my question?

1 A. No.

2 Q. Let me reask it.

3 Did you typically provide information to your superiors
4 within NDS that you believed to be unreliable?

5 A. No.

6 Q. So at the time that you provided them with the hundred
7 thousand E3M pirated card estimate, you believed that to be
8 reliable based on your observations of the pirate websites,
9 correct?

10 A. There's no question of reliable or unreliable. It's a
11 simple trying to help someone gather an idea, the reason I
12 clearly state I am guessing.

13 Q. Let's take a look at Exhibit 1270.

14 Now, while we're getting that out there, Mr. Tarnovsky,
15 to your knowledge did NDS rely on the information that you
16 provided about a hundred thousand pirated EchoStar Smart
17 Cards in the field?

18 A. I don't know. The person that -- I don't believe so.
19 The person that asked the question was not a marketing
20 person, for example. So I don't believe so.

21 Q. Do you have Exhibit 1270 in front of you?

22 A. I do.

23 Q. This is a marketing competitive intelligence document
24 from NDS entitled "NDS and Nagra Conditional Access System:
25 A Technical and Business Analysis."

1 And Mr. Tarnovsky, if you'll look at Page 4 of
2 Exhibit 1270. It's got a Bates stamp ESC0135955. There's a
3 bullet point at the top that says "Scope." Do you see that?

4 (Document displayed.)

5 A. I see this.

6 BY MR. HAGAN:

7 Q. Now, if you look down to the bottom of that page, it
8 says, "Important note: NDS marketing competitive
9 intelligence believes this information to be accurate as of
10 the date of publication." Do you see that, sir?

11 A. I see this.

12 Q. And if you look down to the bottom, the date of
13 publication on this document is May 13, 2001, correct?

14 A. Yes.

15 Q. Now, please turn to Page 9 of Exhibit 1270.

16 A. Do you have the page, sir?

17 Q. Page 9. The page numbers are at the top. It says,
18 "Page 9 of 10."

19 A. Thank you.

20 Q. Now, in this section in bold, middle of the way down
21 the field, it says, "NDS field contacts confirmed that Nagra
22 did not start sending an ECM until after the game was over.
23 Anyone with a pirated Nagra card saw the game for free. Our
24 estimate is that this commercial loss to EchoStar probably
25 accounted for over a hundred thousand nonpaying

1 subscribers."

2 Do you see that, Mr. Tarnovsky?

3 A. Yes, I do.

4 Q. Now, Dov -- you know who Dov Rubin is, correct?

5 A. Yes.

6 Q. If Dr. Rubin testified that NDS relied on your hundred
7 thousand pirate estimate, do you have any reason to dispute
8 that?

9 A. I do. This document's produced --

10 MR. KLEIN: Your Honor, I would object. Misstates
11 the testimony.

12 THE COURT: Overruled.

13 THE WITNESS: You have me making speculations, but
14 this document has been produced on May 13 of 2001. Piracy
15 is escalating daily on a hack system. So if I'm telling
16 them on February 7th of 2001 -- what's this, four months
17 earlier -- I think a hundred thousand, it would have been
18 possibly more by then. So I would guess that NDS would have
19 said, "Well, maybe we think Mike tends to exaggerate a
20 little bit; he's guessing, but maybe now it is a hundred
21 thousand."

22 I don't know how they've come to this. And you're
23 asking me to insinuate that this document is being supported
24 by my previous e-mail, but I don't have any correlation to
25 it, except that hundred-thousand-dollar -- or hundred

1 thousand -- number.

2 BY MR. HAGAN:

3 Q. So if I understand your testimony correctly,
4 Mr. Tarnovsky, the e-mail that you sent out estimating a
5 hundred thousand -- that was in February of '01, correct?

6 A. Yes, it was.

7 Q. And the document we looked at, 1270, was four months
8 later, in May of '01, correct?

9 A. Yes.

10 Q. And according to your testimony, you believe that
11 because piracy increases and spreads, that that number would
12 have naturally increased between February and May of 2001,
13 correct?

14 A. I believe so. In addition to this, a hundred
15 thousand -- it's clearly saying "nonpaying." It doesn't
16 mean they're using a hundred thousand hacked EchoStar
17 original access cards. They may have been using
18 after-market recycled DirecTV pirate technology such as
19 battery cards.

20 Q. Let's talk again about the December 21st posting, the
21 hack methodology under NipperClause. At your deposition,
22 you testified that that was a significant event in EchoStar
23 piracy, correct?

24 A. Yes, it was.

25 Q. Okay. And can you explain to the ladies and gentlemen

1 of the jury why that particular posting, December 2000, was
2 a significant event in EchoStar piracy?

3 A. Previous to the day that this snippet of code had been
4 posted on the Internet, people relied on dealers around
5 Canada to sell them an original access card that had been
6 enabled to receive all the programming that they offer.
7 Once this packet was placed on the Internet, it opened up
8 the possibility of anyone in their home who had a computer
9 and interface to insert -- to connect the access card to the
10 PC -- for them to make their own access card to watch
11 television for free.

12 Q. Now, when you say that based on your experience and
13 your observations of the pirate websites, the number from a
14 hundred thousand in February to whatever it is in May would
15 have increased, what number would that have increased to, do
16 you think?

17 A. I'm not an expert, so I'm speculating, Your Honor.
18 However, understand I -- you're talking about
19 legitimate cards that you're losing or something, and I'm
20 talking about people making their own hybrid technology as
21 well as using your original access cards.

22 I have no clue, but it does not calculate that you
23 would have been at, you know, 500,000 stolen original access
24 cards are now being used as pirate devices. It may be
25 100,000 original access cards and 100,000 after-market

1 devices that have been running. I don't know. I don't know
2 the answer to that.

3 Q. And you understood that the significance of that
4 NipperClause posting, that hack recipe, disclosing that to
5 all of the pirate public, that was significant because that
6 meant people could break away from the dealers, and they
7 could create their own pirate cards, correct?

8 A. What that meant was EchoStar's gonna start selling a
9 lot of receivers, yes, as well, 'cause to get the card you
10 need to buy the receiver.

11 Q. And if we look back at Exhibit 41, your e-mail that you
12 sent February 2001, a month and a half after the Nipper
13 post, you state in that e-mail, "The ROM was where their
14 hole was located of which they can never shut down. They
15 can only swap out." You were talking about a card swap,
16 correct?

17 A. Yes.

18 Q. And it was your position as of the date you wrote this
19 e-mail that as a result of this Nipper posting, disclosing
20 that hole to the pirate community, EchoStar was forced to do
21 a card swap, correct?

22 A. That was originally my -- my thoughts.

23 Q. I know your thoughts are probably different today,
24 Mr. Tarnovsky. I'm talking about February of 2001 when you
25 sent this e-mail.

1 A. On this particular day, that was what I thought, yes.

2 Q. Now, you understand the allegations central to this
3 lawsuit, correct, Mr. Tarnovsky?

4 A. (No audible response.)

5 Q. You understand what the lawsuit's about, right, sir?

6 A. To be quite honest with you, there's been so many
7 amended complaints I don't know what's stayed in the lawsuit
8 and what's been dismissed, so I honestly don't know what
9 your claims are today.

10 Q. Well, let's talk about what you knew in your
11 deposition.

12 In your deposition, you understood that the claims in
13 this lawsuit were -- was that NDS reverse-engineered and
14 hacked EchoStar's security system and that you participated
15 in distributing pirated access cards with Mr. Menard and
16 others and then posted that hack methodology on Mr. Menard's
17 website. You understood that last year, correct?

18 A. I understood that you were accusing me of making the
19 post, yes.

20 Q. And we went through a little bit earlier this morning
21 the distribution network, and I understand that you believe
22 it's a setup. But as you understood the allegations, it was
23 you and Al Menard, correct?

24 A. I -- I believe that's correct.

25 Q. And NDS knew of your relationship with Mr. Menard when

1 you started working for them; isn't that right, sir?

2 A. Yes.

3 Q. And they knew that even in 1998 Mr. Menard was using
4 Biggun Version 1, which is a pirate card that you had
5 developed, correct?

6 A. So -- I remember something briefly about -- like this.

7 Q. But Mr. Menard wasn't an employee of NDS at that time;
8 was he?

9 A. No.

10 Q. Mr. Menard was running the pirate website dr7.com up in
11 Canada, correct?

12 A. I believe that's correct.

13 Q. And then in 2002, EchoStar moved to intervene in the
14 "Canal" lawsuit, and at that time Mr. Menard was not an
15 employee of NDS, was he?

16 A. I don't know when he became an employee.

17 Q. Would it surprise you to know, Mr. Tarnovsky, that
18 Mr. Menard was not hired by NDS as a consultant until after
19 EchoStar moved to intervene in that Canal+ lawsuit?

20 A. I don't understand the question.

21 Q. Let me ask it a little different way. Allegations come
22 out from the federal government's investigation, the DirecTV
23 lawsuit, the Canal+ lawsuit, the EchoStar lawsuit, that you
24 and Mr. Menard were operating a distribution network of
25 reprogrammed cards and posting information on the Internet

1 on dr7.

2 And instead of running from Mr. Menard, your boss,
3 defendants, went out and hired him. And they paid him
4 nearly \$400,000 to surf the Internet. Now, do you believe
5 that Mr. Menard had some type of unique Internet-surfing
6 skills, or do you believe that he was hired as a result of
7 these lawsuits to make sure he was on the right team?

8 A. I believe the first statement that you said.
9 Mr. Menard's employment began well after your own client
10 approached him and tried to hire him.

11 Q. So you believe that he was paid nearly \$400,000 because
12 he had unique Internet-surfing skills?

13 A. Yes. And to elaborate, it was over a few years this
14 amount of money that you're talking about, not a year as you
15 perceive -- as you make it seem.

16 Q. Now, you -- last year, EchoStar subpoenaed you to take
17 your deposition, correct?

18 A. Yes.

19 Q. And you understood at that time that you were gonna
20 take the oath that you took today and swear to tell the
21 truth and answer all of EchoStar's questioning, correct?

22 A. Yes.

23 Q. And that deposition, the first one, was conducted on
24 April 3rd, 2007, correct?

25 A. It sounds correct.

1 Q. Three days before that, the defendants terminated your
2 employment relationship, correct?

3 A. Yes.

4 Q. On that same day, they also terminated their
5 consultancy relationship with Al Menard, correct?

6 A. I believe -- I don't have firsthand knowledge that it's
7 correct, but I believe it is correct.

8 Q. Well, let's be fair Mr. Tarnovsky. You testified in
9 your previous deposition that you called Mr. Menard on the
10 phone after you were terminated, and he told you that his
11 employment agreement or consultancy relationship was also
12 terminated; isn't that correct?

13 A. I don't recall what I stated, but it sounds correct.
14 I'm not disagreeing with you. I'm just not sure when I
15 learned things.

16 Q. So the defendants stood by you during the federal
17 investigation. They stood by you during the DirecTV
18 lawsuit. They stood by you and Mr. Menard during the Canal+
19 lawsuit, and they stayed by you and Mr. Menard during the
20 entire pendency, from 2002 until last year, in the EchoStar
21 lawsuit.

22 And 72 hours before you had to take the stand and
23 testify, they severed ties, correct?

24 A. Yes.

25 Q. And I asked you about that in your deposition, and you

1 said you couldn't really recall much about the meeting where
2 they terminated you, even though it was three days prior.

3 Do you remember that?

4 A. Yes, I do.

5 Q. And I asked you who terminated your employment
6 relationship. Do you remember what you told me?

7 A. I don't remember my exact words, but more or less.

8 Q. Let me ask you again. Who terminated your employment
9 relationship 72 hours before your deposition?

10 A. Mr. Darin Snyder and Mr. Richard Stone.

11 Q. The attorneys, the trial attorneys for the defendants?

12 A. Yes.

13 Q. Terminated you 72 hours before you took the stand?

14 A. Yes.

15 Q. And you recall the reason that they gave you for that
16 termination, correct?

17 A. I've since learned, yes.

18 Q. Now, you testified that what they told you was that
19 based on the evidence that was produced in the case, "things
20 couldn't be explained"; is that correct?

21 A. It sounds -- I won't disagree.

22 Q. And later you learned that the reason that things
23 couldn't be explained from the trial attorneys' perspective
24 is that those cash shipments intercepted in Texas were
25 linked by fingerprint analysis to an associate of

1 Mr. Menard, correct?

2 A. Yes.

3 MR. HAGAN: Pass the witness at this time,
4 Your Honor.

5 THE COURT: This would be cross-examination.

6 Mr. Klein.

7 MR. KLEIN: Thank you.

8 THE COURT: Counsel -- Mr. Klein, Mr. Hagan, and
9 Mr. Snyder, at some point do you want me to explain to the
10 jury -- strike that.

11 We'll talk about that at the recess.

12 Let's move on.

13 CROSS-EXAMINATION

14 BY MR. KLEIN:

15 Q. Good afternoon, Mr. Tarnovsky.

16 A. Good afternoon, sir.

17 Q. I'd like to start and let the jury know a little about
18 yourself. How old are you?

19 A. I'm 37 years old.

20 Q. Are you married?

21 A. I am married with two children.

22 Q. How old are they?

23 A. That's a good question. Eleven -- 1996, '92 -- 11 and
24 15 and a half.

25 Q. Did you graduate from high school?

1 A. Yes.

2 Q. What year?

3 A. 1989.

4 Q. Did you ever attend college?

5 A. I attended a year of University of Maryland.

6 Q. When was that?

7 A. During 1990ish to 1996, periodically.

8 Q. So back when you graduated high school, you didn't
9 attend college then?

10 A. No, sir.

11 Q. When you graduated from high school, what did you do
12 next?

13 A. I enlisted in the military in the 11th grade.

14 Q. And then when you actually got your high school
15 diploma, did you go into the Army?

16 A. Yes.

17 Q. Why did you enlist in the Army?

18 A. I was very much into computers and electronics since
19 probably age 8, maybe even earlier than that, 1978,
20 1977, and I had been into electronics for several years
21 growing up with my father. And I have always been very
22 hyperactive and unable to focus on things that I didn't
23 like, and I wasn't a big fan of my studies unless it was
24 computer-oriented of some kind or electronics.

25 And so I had the opportunity to join the Army and be --

1 do basically computer repair. And I liked the idea, so it
2 was a good move forward, get me out from growing up with my
3 parents and getting off on my own.

4 Q. I want you to do your best to try to keep it slow
5 enough so the reporter can get what you're saying. Okay?

6 Now, during what years did you serve in the
7 United States Army?

8 A. September 5th of 1989 until July 4th of 1996.

9 Q. Now, when you first went into the Army, had you ever
10 been involved in satellite TV piracy?

11 A. No, never.

12 Q. As of the time you enlisted in the army, had you ever
13 been arrested?

14 A. No, sir.

15 Q. When you joined the Army, what was your area of
16 specialization?

17 A. Cryptographic computer repair, cryptographic links.
18 Basically cryptographic machines of some kind. Very high
19 tech Air Force-type computers that the Army would use.

20 Q. While you were in the Army, did you have a security
21 clearance?

22 A. Yes.

23 Q. And what type of clearance did you have?

24 A. I had a top secret SCI, Special Compartmented
25 Information.

1 Q. Now, when you originally enlisted in the Army, how many
2 years was that enlistment for?

3 A. For four.

4 Q. Four years?

5 A. Yes.

6 Q. And did there come a time when you re-enlisted?

7 A. Yes.

8 Q. And when was that?

9 A. I was in Fort Dietrich, Maryland, and I re-enlisted to
10 go back to Europe because my wife only spoke French, and we
11 wanted to return to Europe to make it easier for her.

12 Q. Did you get married while you were in the Army?

13 A. Yes.

14 Q. Now, when you were in the Army, did there come a time
15 when you served in Germany?

16 A. Yes.

17 Q. When was that?

18 A. After I re-enlisted, they told me I could go back to
19 Europe. And when I got back to Europe, when I return to
20 Europe to find out where I would go, they put me into the
21 Third Infantry Division out of Vilseck, Germany,
22 V-I-L-S-E-C-K.

23 Q. When was that, approximately?

24 A. That would have been in late 1993.

25 Q. Now, when you were stationed in Germany, what jobs were

1 you performing?

2 A. I got to Germany, and I didn't do anything that I had
3 done before. I was working on very, very old radios. And
4 of some -- some few cryptographic pieces of link equipment
5 that were not even related at all to what I had been trained
6 for previously.

7 Q. And did there come a time when you got assigned another
8 job?

9 A. Yes. Because they didn't need me doing this. I was
10 just a statistic on the roster. They needed my number -- my
11 job position number filled. I became the battalion
12 commander's driver.

13 Q. What was the rank of the battalion commander?

14 A. O-5.

15 Q. What was his rank?

16 A. O-5, Colonel.

17 Q. Colonel?

18 A. Colonel, yes.

19 Q. When you say you became his driver, what was your job?

20 A. I became basically his best friend. I drove him
21 everywhere he wanted to go. I learned how to evasively
22 drive. I was his driver. I would make sure the vehicle was
23 ready for him at all times. It was very nice.

24 Q. Now, did there come a time when you were in Germany
25 when you purchased a satellite system?

1 A. Yes.

2 Q. And approximately when did that occur?

3 A. Late 1994.

4 Q. How did it come about that you purchased a satellite
5 system in Germany?

6 A. My colonel was leaving -- Colonel Thornsvard was
7 leaving to go to his next assignment, and he had a system in
8 his house that he was using, and it was of no more use to
9 him, and he offered to sell it to me.

10 Q. And did you purchase the colonel's satellite system?

11 A. Yes.

12 Q. How much did you pay for it?

13 A. I'm not sure, but I think it was either \$125 or \$175.

14 Q. What is a pic card, P-I-C?

15 A. The pic card was an after-market device used to, as
16 Mr. Hagan put it, steal services from BSKyB digital out of
17 the UK, the United Kingdom, that the -- everyone would use
18 that didn't live in the UK. And it used a microchip pic
19 microprocessor to do the mathematical algorithms.

20 Q. Now, when you came in possession of the satellite
21 system, did you also come into possession of a pic card?

22 A. Yes.

23 Q. And how did that come about?

24 A. (No audible response.)

25 Q. Who gave you the pic card?

1 A. The colonel gave me a box, and in the box was, I
2 believe, two receivers and two of these cards. And he told
3 me the cards didn't work and they were garbage, but he
4 wasn't very -- he wasn't technical. So -- I don't throw
5 anything away. So I kept them.

6 Q. And did you attempt to fix the two pic cards that were
7 in the box that the colonel gave you?

8 A. Yes.

9 Q. What did you have to do to fix 'em?

10 A. I looked on the Internet. I started searching, and I
11 found articles in the Stars and Stripes that were
12 advertising codes and Smart Card -- after-market Smart Card
13 technology to get BSkyB in Europe. And I did a little more
14 fiddling and found some local Internet -- well, they weren't
15 Internet websites, but it was the Internet. It wasn't the
16 WWW Internet; it was TELNET -- FTP'ing, if anybody knows
17 what that is.

18 And so I found some files that worked on these types of
19 files that were up to date, and I made a program to program
20 the cards. And it fixed them.

21 Q. Now, before you went on the Internet and did the things
22 you just said to fix those pic cards, had you ever gone on
23 the Internet before for anything having to do with satellite
24 piracy?

25 A. No.

1 Q. What is Stars and Stripes?

2 A. It's sponsored by the U.S. military, and it's a
3 magazine that's provided to all the soldiers worldwide,
4 basically.

5 Q. And what did you find in the Stars and Stripes that
6 helped in dealing with the two pic cards that didn't work?

7 A. I Found local numbers to people around post, other
8 enlisted or officers that were selling the technology,
9 moonlighting at night. So make a phone call to them, and
10 one of them told me to hook up with a person in another town
11 near me, and I called that person, and that person gave me
12 some free information. And just a little bit of research,
13 and before I knew it, I was able to be find these Internet
14 sites.

15 Q. Now, once you repaired the pic cards, did you watch
16 satellite TV programs for free?

17 A. Yes.

18 Q. Eventually, did you move to another type of card rather
19 than the pic card?

20 A. Yes.

21 Q. What was that?

22 A. I moved to a card they called the battery card, or
23 BPSC, the battery-powered Smart Card.

24 Q. Why did you switch to the battery card?

25 A. The battery card was a more powerful type of processor.

1 It had a keypad on the back side of it, and the keypad would
2 allow me to either call local dealers around posts, and
3 their answering machines would tell me the current codes to
4 plug in. Or I could look in the Stars and Stripes, and if I
5 remember correctly, every Thursday the classified ads -- the
6 ads of the classified section would update, and the latest
7 codes for this card would be in there as well.

8 So the battery-powered Smart Card was -- it also
9 offered more channels.

10 Q. Now, at this time, did you have an understanding as to
11 whether it was legal for you to use these pic cards or these
12 battery cards in Germany that were providing you free access
13 to satellite television programs?

14 A. Yes.

15 Q. What was your understanding?

16 A. My understanding was that it was legal because the
17 signal was transmitted into England, into the UK, and it was
18 only able to be purchased in the United Kingdom. You were
19 not able to buy a subscription in Germany, for example, but
20 yet the signal would be beamed into the territory.

21 The Stars and Stripes was advertising this. The people
22 that would sell you the card were military members. And
23 their -- the only reason -- the only reason I ever heard of
24 anybody having any type of trouble was because they were
25 selling these cards without paying taxes on the sales.

1 Q. Now, were satellite-related products being advertised
2 in the Stars and Stripes?

3 A. Oh, yes. Very much.

4 Q. Were pic cards advertised?

5 A. Everything related to hacking BskyB, the analog system,
6 the period 9, period 7, into the period 10 was advertised in
7 the Stars and Stripes across Europe.

8 Q. Now, were the programs that you were receiving for free
9 via satellite when you were in Germany -- were those
10 programs being beamed to England?

11 A. They were beamed to England, but the problem with
12 satellite signals back then was the beam would kind of
13 overshoot its target, and it would spread into Germany as
14 well as Belgium, France, Spain, so pretty much all of Europe
15 could get England's signal.

16 Q. But they were intended for England?

17 A. That's correct.

18 Q. Why would you want to pick up television programs shown
19 in England?

20 A. As a service member in Europe, you have either local
21 programming in German or French or Dutch, wherever you might
22 be. The one channel they call the AFN, Armed Forces
23 Network. AFN is okay, but it's one channel, and there's not
24 a lot of variety to it.

25 So here we had the opportunity to have American shows,

1 several channels of American shows, MTV, CNN, all these
2 great channels that I missed from being back home in my home
3 in Europe. It was spectacular, to -- I don't know a better
4 word.

5 Q. And based on your observations, your conversations with
6 other American soldiers in Germany, was it uncommon for
7 American soldiers at the time you were there to be watching
8 American shows beamed to England without paying as you were
9 doing?

10 A. It was very common. In my townhouse complex of four
11 units, I remember that three of us had satellite dishes on
12 the sides of the townhouse.

13 Q. Now, we've heard the term "electronic countermeasure."
14 When you were serving in Germany and watching TV being
15 beamed to England for free, were there times when ECMs,
16 electronic countermeasures, would prevent your battery card
17 from working?

18 A. That happened a lot. I think probably once a week that
19 would happen.

20 Q. And when it would happen, where would you go to get the
21 codes to make those cards work again?

22 A. I would look on the Internet and find a new file to
23 download once I found these sites. Or I could call the
24 answering machine of the local dealers, and typically the
25 answering machine would say, "We'll have the code shortly,"

1 or they'd give you the latest code to plug into your
2 battery-powered Smart Card.

3 Q. Did the Stars and Stripes provide those cards?

4 A. Yes, but the problem is the classifieds were only
5 updated once a week. So if they hit you on Monday, you had
6 to wait until Thursday to fix your card.

7 Q. If you waited until Thursday, you could get it in the
8 classifieds in the Stars and Stripes?

9 A. Yes.

10 Q. Now, we heard testimony from you about the tv.crypt
11 mailing list. Is that a group that you joined at some
12 point?

13 A. I was invited by Dr. Marcus Kuhn from Cambridge
14 University.

15 Q. And what was the tv.crypt mailing list?

16 A. As I previously testified, the tv.crypt mailing list
17 was basically a mass e-mail that would come out from a bunch
18 of people that were all PhDs, scholars going for their
19 masters or their doctorates or they were just in college.
20 Jan Saggiori was just a college student at the time. And if
21 you showed some type of intellectual interest in Smart Card
22 technology, you would be possibly invited or accepted to
23 join the list.

24 Q. Were you invited to join?

25 A. Yes.

1 Q. Now, when you were in Europe, did you begin
2 communicating through the Internet, the tv.crypt list, with
3 others who were interested in decrypting satellite signals?

4 A. Yes.

5 Q. What else did you do, if anything, while you were in
6 Germany to further your knowledge with respect to obtaining
7 satellite programs for free?

8 Did you read articles?

9 A. Yes. I read a lot of articles.

10 Q. Did there come a time -- I -- you said you left the
11 Army. Was that in 1996?

12 A. Yes. July 4th.

13 Q. Why did you leave?

14 A. The new colonel came into post, and he was more of a
15 technical guy than Colonel Thornsward had been. And when
16 you drive your colonel or any officer, you become
17 basically -- you and him or the person becomes very close,
18 very tight. I would always make a joke that I was highest
19 ranking enlisted member in the battalion because no one
20 would touch me because of the colonel.

21 And the new colonel would always make comments that I
22 was too smart and shouldn't be in the military and take
23 President Clinton's advice and get out early on what they
24 call an "early out" or a "window" and consider civilian
25 life.

1 And I took him up on that offer, you know, as time went
2 by, so...

3 Q. Did you receive an honorable discharge?

4 A. Yes.

5 Q. And when you were discharged, what was your rank?

6 A. E-5.

7 Q. And E-5 is a sergeant?

8 A. Yes, it is.

9 Q. Now, how long was it after you left the Army in 1996
10 before you obtained employment?

11 A. I was employed the day I left. I basically interviewed
12 over the telephone with a company out of Boston,
13 Massachusetts while I was still enlisted and kind of
14 transitioned out of the military right into Boston,
15 Massachusetts.

16 Q. What was the name of that company?

17 A. Ulvac Technologies, U-L-V-A-C.

18 Q. What was their business?

19 A. They believed that they were to the ultimate in vacuum.
20 Thus the name. And they made basically anything to do with
21 making a semiconductor. So they would make ion implanters,
22 sputters -- they sputter metals and things onto the wafers
23 when they're building a chip, mini chips. And I was an
24 entry-level software engineer for them.

25 Q. Very briefly, what's a semiconductor?

1 A. Semiconductor is a circuit made out of either
2 complimentary MOS or P-type MOS or N-type MOS, depending on
3 the era. Today most of the semiconductors are made out of
4 CMOS technology, and they can do any number of functions,
5 whatever you'd like.

6 Q. TV cell phones, microwaves, and cards -- do they all
7 have semiconductors?

8 A. Yes.

9 Q. And now, when you returned to the United States and you
10 worked for this company as a software engineer, did you stop
11 trying to obtain satellite TV programs for free?

12 A. No, that -- no, I didn't.

13 Q. Why not?

14 A. As I was leaving, there was a lot of talk on the
15 tv.crypt list about DirecTV in North America having the same
16 access card as Sky.9 had. There were several articles
17 written up about it. I had heard about the raid with
18 Mr. Ereiser's group where the RCMP raided them. A lot of
19 this was being publicized in Europe. So my interest spread,
20 carried over with me from Europe.

21 Q. Okay. When you returned to the United States, what --
22 to the extent that you were still trying to obtain satellite
23 TV for free, was this from DirecTV?

24 A. Yes, it was.

25 Q. Were you successful in hacking DirecTV when you

1 returned to the United States?

2 A. Yes.

3 Q. Were you the first one to hack DirecTV when you
4 returned to the United States?

5 A. No.

6 Q. It was already being hacked?

7 A. It was. In fact, when I was coming over, Jan Saggiori
8 was the one that sent me the first actual images of the
9 DirecTV period 1 EEPROM. So I actually was already armed
10 with some information on DirecTV's chips from Mr. Saggiori
11 before even arriving in the United States.

12 Q. Now, did there come a time after you left the Army --
13 by the way, what state were you working in at that time?

14 A. I was working in Massachusetts.

15 Q. Okay. So did there come a time when you left the Army,
16 you took this job as a software engineer -- did there come a
17 time you received a communication from Mr. Ron Ereiser?

18 A. Yes.

19 Q. When was that?

20 A. I believe August -- August of 1996. I believe that's
21 correct.

22 Q. Okay. And how did that come about? How did it come
23 about that you were now communicating with Mr. Ron Ereiser?

24 A. There was a person named Carl Gamble on the tv.crypt
25 list who contacted me from the list and asked me -- he

1 basically mentioned something about some Canadians, some
2 person from Canada e-mailed him somehow -- I'm not sure --
3 somehow Carl Gamble put me in contact with Ron Ereiser and
4 asked if Ron could call me.

5 Q. And did you know who Ron Ereiser was before this phone
6 call?

7 A. I had never heard of him except the article on the
8 raids, but I didn't -- I don't recall seeing his name on the
9 raids, but he would explain to me that he, you know, he
10 would boast himself to me explaining who he was exactly when
11 I would meet him.

12 Q. So at some point you received a phone call from Ron
13 Ereiser?

14 A. Yes.

15 Q. Now, did there come a time after you received that
16 phone call where Mr. Ereiser offered you money to do
17 something for him?

18 A. Yes.

19 Q. What did he want you to do?

20 A. Mr. Ereiser was throwing the world at me, asking me to
21 please fix the battery cards for DirecTV North America
22 because they had been taken out with an electronic
23 countermeasure, an ECM, as well as being simultaneously
24 raided. And he explained that their current -- their
25 previous engineer that had cracked the DirecTV conditional

1 access system, Norman Dick, had called it quits because of
2 the lawsuit, the litigation filed by NDS and DirectTV,
3 something to this effect.

4 Q. Okay. Try to keep this slow. Don't get too fast. We
5 don't want to wear the reporter out.

6 What did Mr. Ereiser offer you to do this job?

7 A. The first time we spoke on the phone, he asked me if I
8 could do it, and I said yes, I can. Then he said, what do I
9 need.

10 And I told him that really I could use a receiver and a
11 dual output LNB, which is the head that goes on the
12 satellite dish.

13 Mr. Ereiser Saturday delivered to me via FedEx an LNB
14 head for my satellite dish.

15 Q. Did he offer to pay you any money?

16 A. Later. He would then offer me \$20,000 to fix the
17 system.

18 Q. And by "the system," to fix the battery cards?

19 A. Yes.

20 Q. And were you able to fix the battery cards?

21 A. Yes.

22 Q. And in addition to fixing the battery cards, did you do
23 any additional work at that time to hack the DirectTV system
24 after you figured out how to fix the battery cards?

25 A. Well, when I figured out how to fix the card, when I

1 understood what they did, I then tried to improvise and make
2 it more -- not so prone to falling down or to being attacked
3 by this electronic countermeasure. And so I would study the
4 system to learn it better than the engineers that designed
5 it knew it.

6 Q. Now, when you say you studied it to know it better than
7 the engineers that had created it, worked on it, at this
8 time you still had a high school degree?

9 A. Yes.

10 Q. Do you have any understanding or explanation as to how
11 somebody with a high school degree could accomplish what you
12 were able to accomplish and discuss this with -- and be able
13 to compete with engineers who went to college and graduate
14 school?

15 A. Well, one of them is motivation. And the other, I
16 believe, is having ADHD. That helps. So I'm very
17 persistent and, of course, I know I'm self-taught on.

18 Q. Now, during the time that you were doing this work for
19 Mr. Ereiser, fixing the battery cards, working on the ECMs,
20 were you still employed?

21 A. Yes, I was.

22 Q. Now, when you left the Army, was there ever a time when
23 your sole source of income was just from pirate-related
24 activity?

25 A. No. I've always had a main -- a main job.

1 Q. What period of time did you actually do this work for
2 Mr. Ereiser that you've been talking about?

3 A. I would -- rounding the months, I would say from
4 September, the 1st of September until the day the card --
5 card's life ended, I believe July 1st of 1997.

6 Q. So we're talking about September, 1996, through about
7 July of 1997. Is that about it?

8 A. To the best of my knowledge, that would be correct. I
9 don't know the exact date that the card was swapped out for
10 the second generation access card.

11 Q. And did there come a time when you were offered a job
12 by NDS?

13 A. Yes.

14 Q. When was that?

15 A. Sometime after February of that year.

16 THE COURT: Was that 1997?

17 THE WITNESS: Yes, Your Honor. At some point in
18 time I would meet -- I would meet a gentleman in NDS,
19 Roni Segoly, and --

20 BY MR. KLEIN:

21 Q. How did you meet him?

22 A. I'm sorry. I met Mr. Segoly through -- previously on
23 the tv.crypt list. I met Mr. Perry Smith, who was not the
24 C.T.O. or the chief technical officer of NDS in Israel, but
25 he was pretty much the one that went under that person for

1 developing the Smart Card chips. He had been a very
2 long-time employee of NDS, and he also happened to be on the
3 tv.crypt list. And the list knew he was from NDS, or NDC at
4 the time.

5 When I had gotten the image of the EEPROM, or
6 "E-square" we call it sometimes, I -- from Mr. Saggiori I
7 actually e-mailed Perry Smith a copy of this.

8 Q. And this is a DirectTV NDS chip we're talking about?

9 A. Yes, so I'm mixing up my facts. So that means that
10 when I was in Boston, Massachusetts in a hotel, at a
11 Residence Inn, waiting to move into my house, I sent
12 Mr. Smith a dump of their technology, and he then introduced
13 me via e-mail to Roni Segoly.

14 Q. Okay. Let's slow down.

15 You sent Mr. Smith, and Mr. Smith worked for NDS?

16 A. Yes.

17 Q. And you sent him, you said, a dump of their technology.
18 Are you saying it was a dump of the NDS technology?

19 A. It was, yes, it was exactly what Jan Saggiori had
20 e-mailed me. I then basically sent a new e-mail to
21 Mr. Smith and said maybe this helps you guys for combating
22 your piracy in the United States.

23 Q. Why did you do that?

24 A. I don't know really. I always kind of hoped maybe to
25 work with NDS, but it seemed like something that would never

1 happen. I remember seeing on the television one time the
2 head of security for Canal+ in France on some news show, and
3 they showed his laboratory of Smart Card pirate devices all
4 over the table, and I just thought that would be very, very
5 cool to be that guy some day.

6 Q. Now, at the time that you were communicating with NDS,
7 did Mr. Ereiser make you some kind of an offer with respect
8 to working for him?

9 A. Mr. Ereiser made a lot of offers that he never
10 fulfilled on, but one of them, yes, he did make a
11 substantial offer to me.

12 Q. And what was the offer Mr. Ereiser made to you?

13 A. He threw out something -- the DirecTV period 2 chip was
14 being mailed out to subscribing customers. Mr. Ereiser -- I
15 had already met with him on two occasions, met with his
16 other colleagues on an occasion. We all got along good.

17 Q. What time period are we talking about here?

18 A. April of 1997, I believe.

19 Q. Okay. Please continue.

20 A. Okay. So basically the card swap's coming, and they're
21 basically saying, "Hey, why don't you move down to
22 Grand Cayman? We'll give you a million dollars, you hack
23 the DirecTV period 2 chip, you support it from within the
24 Grand Caymans. Everything will be great. You can live on
25 an island. Blah, blah, blah. Does that answer your

1 question?

2 Q. Yes. Now, so you've got the living in the
3 Grand Caymans, the million dollars on one side -- how much
4 did NDS offer you -- withdrawn.

5 Did NDS at some point offer you some money?

6 A. Yes, they did.

7 Q. How much did they offer you to work for them?

8 A. They basically offered me \$65,000 a year, \$14,000
9 moving expenses, and a \$10,000 loan that could be forgiven
10 over two years.

11 Q. And they wanted you -- the moving expenses were for you
12 to move from where you were to California?

13 A. Yes.

14 Q. So you had the Cayman Islands and a million-dollar
15 offer on one hand. You had the NDS offer of 65,000, moving
16 expenses, a loan that would be forgiven on the other hand.
17 You picked NDS?

18 A. Yes.

19 Q. Why?

20 A. Well, I've always been worried, concerned about
21 providing for my family and my kids. Even getting out, it
22 was very scary. That's why I -- simultaneously I lined up
23 to kind of exit through the transition right in to work,
24 never losing a paycheck, so to speak.

25 So family is always a concern. The Cayman Islands is

1 great for vacation. It smells a little bit. But it's very
2 expensive. And I think it would have been -- I didn't see a
3 long future. I saw room for growth with NDS, though, and
4 California had palm trees. It's very elegant, and it was
5 very nice. It was very nice. I don't know how else to
6 explain it.

7 So basically with Mr. Ereiser, I had asked him, oh, I
8 need an oscilloscope one time. Oh, you got to buy that with
9 your own money. Wait a second. You're telling me you're
10 going to pay me all this money, but yet you won't front me a
11 \$2,000-dollar oscilloscope?

12 There were too many broken promises. Family issues,
13 worry that NDS would track down -- even though it's not
14 illegal in the Grand Caymans for me to do it, I'm still a
15 U.S. citizen. And there's still the worry of maybe
16 Mr. Norris or whoever -- 'cause I had heard about him by
17 then, of course -- would have customs bugging me every time
18 I come through the border to come up to see my family.

19 So I wanted to -- I just wanted to have stable life,
20 make, you know, decent -- you know, provide for my family.
21 I knew there was room for growth, and it was very exciting
22 what was being offered from NDS -- much more than Grand
23 Cayman would have been.

24 Q. And at the time you thought working in the Grand
25 Caymans -- you weren't breaking the law to do that?

1 A. I didn't think it would be breaking the law, but today
2 I believe that as a U.S. citizen I might have been able to
3 have been -- you know, it might have been breaking the law
4 because I'm a citizen doing it, even though it's out of the
5 country. I don't know. It was just seemed too sketchy. It
6 didn't seem like there was security for myself and my
7 family.

8 Q. Now, when you began working for NDS, was that
9 approximately July of 1997?

10 A. July 1st.

11 Q. Did any of your acquaintances in the hacker community
12 know you were now working for NDS?

13 A. No one was to know. And I was polygraphed on this
14 question.

15 Q. How many years did you work for NDS?

16 A. Just shy of 10 years.

17 Q. And what were your job duties when you went to work for
18 NDS?

19 A. My original job duties, to the best of my knowledge as
20 I remember, is to mingle in these chat rooms in the
21 beginning and surf the Internet websites and returning
22 information that seems relevant and pertinent as well as
23 analyzing the DirecTV period 2 access card software to find
24 bugs or holes in the technology before the hackers found
25 them. And to sum that up, I found more holes in that card

1 than I think they ever expected, and my role would shift
2 very quickly to become more technical than spy.

3 Q. You did also have this undercover role?

4 A. That was part of the spy role.

5 Q. And what was that role?

6 A. I don't understand the question.

7 Q. What did you do in that undercover role? What in
8 general were you supposed to do as an undercover agent?

9 A. I kept the fictitious mailbox -- I'm sorry -- the
10 fictitious aliases. Of course, you never mingled
11 Chris Tarnovsky or biggun or Von, or any sense of Chris and
12 Von were never put together in anything at all, and Von was
13 never used for anything outside of piracy. But my Von
14 e-mail was actually used, so I shouldn't -- it's not really
15 accurate. But Chris and Von were never together.

16 And I needed to basically not let the pirates have any
17 idea that I was living in California. The pirates knew who
18 I was. They knew I lived in New Hampshire.

19 And so my father lived in Virginia, and so thus the
20 setup of the mailbox in Virginia, the local telephone number
21 that would be forwarded to California, as well as a cell
22 phone number in Virginia.

23 Q. Let's slow down a little bit.

24 Why -- what was your understanding as to why the
25 outside world couldn't know that you had actually moved to

1 California? Why was that?

2 A. Because the only reason why I would move to California
3 would be because I was working for NDS. The -- from a
4 pirate's mind -- a pirate's mind is very small as to where
5 people are located in places. So if I tell them, "Oh, I'm
6 going to move from New Hampshire to California," the first
7 thing they're going to ask is, "Who are you going to work
8 for?" I don't have a good answer. The easiest thing for me
9 to say and makes more sense is I'm moving to Virginia, my
10 dad's down there, there's a semiconductor fab company down
11 there. Leaving Ulvac, going to go to work for
12 Dominion Semiconductor, for example.

13 And that kind of sets the story, where California would
14 have been in a much bigger and larger-scale problem to
15 control.

16 I think the only way California could have ever
17 worked would have been if I really did go to work for, say,
18 the Wonder Wear Corporation out of Irvine and actually
19 called one of the pirates --

20 Q. You're speeding up again. Slow down.

21 A. Okay. I'm a little nervous.

22 So, I mean, if I worked for a real company and I
23 called them on an unblocked -- non-caller-blocked line in
24 Irvine, that probably could have worked out. Then they'd
25 see Wonder Wear Corporation. But didn't know how I was

1 going to do that. So just seemed most sensible, your dad is
2 in Virginia. Set yourself up to be in Virginia.

3 Q. Okay. So if I understand it, when you began working
4 for NDS, you have physically moved yourself and your family
5 to California. Right so far?

6 A. Yes.

7 Q. But your pirate persona, as far as the pirate world
8 knew, you were living in Virginia?

9 A. Yes.

10 Q. And you had -- and in order to accomplish that, you had
11 a mailbox in Virginia?

12 A. Yes.

13 Q. Okay. And when mail came to the box in Virginia, what
14 would happen to it?

15 A. The mail owner was instructed to overnight the --
16 whatever comes in to me in California at my home address.

17 Q. Okay. And this arrangement where you lived in
18 California and had a mailbox in Virginia and the mail was
19 forwarded to California, was that arrangement all known to
20 NDS?

21 A. It was -- it was -- I don't know to the extent it was
22 known to NDS.

23 Q. Was it known to John Norris?

24 A. John understood that I had a mailbox and phone number
25 in Virginia, yes.

1 Q. And John Norris didn't have a problem with that?

2 A. No.

3 Q. Now, it was mentioned during your direct examination by
4 counsel that at some point you were on the payroll of a
5 company called Harper Collins?

6 A. Yes.

7 Q. Do you have an understanding as to why you were on the
8 Harper Collins payroll if you were working for NDS?

9 A. Yes.

10 Q. What's your understanding?

11 A. From day one of my employment with NDS, I was always
12 payrolled through another corporation. It began with Kesme
13 Corporation, K-E-S-M-E, out of Virginia. Then something
14 happened. I don't know what happened. We switched to
15 Paychex. And then at some point in time it went to
16 Harper Collins.

17 Q. And why was that done?

18 A. In case a company such as this ICG pulled a credit
19 report on me through an illicit means, obviously, they
20 couldn't see that my employment was coming from NDS.

21 Q. And why didn't NDS and you want somebody to be able to
22 track down the fact that you were working for NDS?

23 A. 'Cause Canadian -- the Canadians might kill me, who
24 knows. My family, you never know. This is a big, big
25 business in Canada.

1 Q. Sorry. Are you saying that the reason you were paid
2 through other companies was for your own safety?

3 A. Yes.

4 Q. And did you have -- during the years that you worked
5 for NDS in this undercover capacity, did you have concerns
6 for your own safety and the safety of your family?

7 A. On one occasion, one or two occasions, yes.

8 Q. We'll get into that more a little later.

9 Now, while you were working for NDS, was it ever your
10 job to analyze EchoStar's conditional access system?

11 A. No. I've never been tasked with that job duty.

12 Q. Now, was it your job to monitor the Internet with
13 respect to satellite piracy?

14 A. My job was to monitor -- was -- my primary focus was
15 DirecTV's piracy. Anything related to an NDS product.
16 However, I would read anything related to any type of
17 technology of a Smart Card or of some type of system,
18 Canal+, EchoStar. I would follow threads on the Internet
19 and such. But this is not something that I would
20 necessarily -- I wouldn't report it to NDS unless it was
21 something that I felt was kind of significant, such as the
22 posting in the cat's out of the bag thing.

23 Q. You said you would report something that was
24 significant or insignificant?

25 A. Significance of a competitor.

1 Q. But your actual job was to monitor postings relating to
2 what?

3 A. To NDS technology.

4 Q. Now, while you were monitoring the Web and working for
5 NDS, was information from time to time on the Web with
6 respect to EchoStar's conditional access system?

7 A. I don't understand the question.

8 Q. Okay. While you were monitoring the Web as an employee
9 of NDS, you were looking for information relating to DirecTV
10 and NDS, correct?

11 A. Yes.

12 Q. And did there come times when you saw information
13 relating to EchoStar system?

14 A. Yes. It's commingled on these websites, so you have a
15 mixture of everything in one -- in one basket.

16 Q. Now, when you were on NDS's payroll, did there come --
17 were there times when you'd be on the Web in -- on what
18 we've called pirate websites' bulletin boards?

19 A. Yes.

20 Q. And from time to time, would you, in your pirate
21 persona, communicate with satellite pirates?

22 A. I needed to, or else I'd become a person that no longer
23 received not-so-public information from individuals, so,
24 yes.

25 Q. Okay. So when you communicated with satellite pirates

1 on these pirate bulletin boards, it was your task to try to
2 appear to talk like a pirate?

3 A. At times, yes. Whatever it took basically to fit in
4 with them to make them trust me. Everybody trusted me until
5 2001 when my cover was blown.

6 Q. And how was your cover blown?

7 A. Nagra leaked the lawsuit, as far as I understand, to
8 pirates up in Canada that was sealed.

9 Q. Did there come a time when you worked for NDS that you
10 had an assignment -- and I think actually you spoke about
11 this a little bit before -- where you went to Canada to meet
12 with Mr. Ereiser and some people from his organization?

13 A. Yes.

14 Q. And when you went to meet with Mr. Ereiser, briefly,
15 what was the purpose of that?

16 A. Mr. Ereiser's group had successfully extracted the
17 contents of the DirecTV period 2 access card, which was the
18 second generation of the key -- like a lock, of the lock to
19 secure the doors. They had successfully compromised this
20 card, so they said. They were arranging a meeting, and they
21 asked me to come up.

22 Q. And this was -- again, we're talking about NDS card,
23 DirecTV?

24 A. DirecTV period 2, October, I believe, of 1997.

25 Q. Now, I think you've already testified that as a result

1 of that meeting, approximately \$20,000 was paid to you?

2 A. Yes.

3 Q. During the course of that meeting, did anything happen
4 that caused you to fear for your life?

5 A. One of Mr. Ereiser's associates, David Truthwait
6 (phonetic), aka "D," who is a Hell's Angels affiliate, owns
7 a biker bar somewhere in mid-Canada, he questioned me alone
8 on why -- it might have been with Mr. Ereiser in the room --
9 on why I flew through Dallas, Texas, to get up to Calgary
10 where they were.

11 Q. Did you, in fact, fly through Dallas, Texas?

12 A. I did, yes.

13 Q. Okay. And was the reason you flew through Dallas
14 because you lived in Southern California?

15 A. Yes.

16 Q. And then the stop-off was Dallas, and then it went to
17 Canada?

18 A. Yes.

19 Q. And was he suspicious as to why, if you lived in
20 Virginia, you would be going through Dallas?

21 A. Very.

22 Q. And were you a bit concerned at that time?

23 A. He threatened to break my legs or my knees or
24 something, some part of my lower body, if he ever found out
25 that I was a narc.

1 Q. You said a narc?

2 A. An informant.

3 Q. And did you manage to get out of that situation without
4 your knees being broken?

5 A. Yes.

6 Q. Did you think he was capable of making good on those
7 promises?

8 A. Absolutely. Other individuals in Canada that dealt in
9 this piracy issue, the dealers, had their legs broken and
10 beaten up. There's been some bad stuff going on up there.

11 Q. Did you accomplish your mission despite the threat?

12 A. I did.

13 Q. What was your mission?

14 A. My mission was to go up there, find out what they knew
15 exactly, what type of a threat are they to NDS.

16 Q. What did you find out?

17 A. I found out that they did, in fact, crack the chip,
18 they did extract the contents of the device, and I returned
19 with a copy of the memory locations of the device.

20 Q. Now, there was also some testimony about you at some
21 point in time providing a device or some software to
22 Mr. Ereiser and the use of what was called a dongle. Do you
23 remember that?

24 A. Yes, I do.

25 Q. What's a dongle?

1 A. To clarify Mr. Hagan's putting them together earlier, a
2 dongle is a security token that you stick on the back of a
3 computer such as a laptop or PC. And what this token does
4 is, it's a security layer that my software that ran on the
5 PC couldn't be copied and just resold to other dealers,
6 which is Mr. Ereiser's prior history: to take a piece of
7 software and sell it again and again and again to get his
8 money back. So the dongle basically limited -- kept NDS in
9 control of how many access cards could he reproduce to
10 appear legitimate as well as making sure that he couldn't
11 just copy the software. So it was a protective device.

12 Q. So you gave the software to Mr. Ereiser that he
13 requested, correct?

14 A. Yes.

15 Q. And this was part of an NDS operation?

16 A. With DirectTV's approval, yes.

17 Q. And if I understand, by using the dongle, you could
18 avoid Mr. Ereiser taking that software and reproducing it
19 and giving it to other pirates?

20 A. That is correct.

21 Q. Was there also any kind of provision made with respect
22 to an ECM with -- concerning that software you gave
23 Mr. Ereiser?

24 A. When I designed the software to go into the access card
25 technology, I also designed the countermeasure that would

1 take out the software. All of this was gone over on one of
2 these technology meetings in Jerusalem with the engineers
3 that would have designed the chip -- this card's software.
4 And then it was given the blessing from DirecTV, the
5 go-ahead. The kill was tested, and at any given time we
6 could knock out all of Mr. Ereiser's access cards, yet
7 satisfy his trust in me that I produced.

8 Q. As far as you know, was the operation successful?

9 A. I don't know as to the extent of it, but I would say it
10 was a success, yes.

11 Q. Now, we've heard testimony about something called
12 Operation Smart Card. Have you ever heard of that?

13 A. I've heard of it, but I'm not sure which that might be,
14 which operation.

15 Q. Let me ask a question: Was there ever a time when you
16 worked directly with any -- either customs agents or federal
17 agents on any kind of an NDS operation, undercover
18 operation?

19 A. Yes.

20 Q. What was that?

21 A. I worked with U.S. Customs out of Blaine, Washington,
22 on an operation where they were selling counterfeit DirecTV
23 access cards using a -- 99 percent the same image of Ron's
24 technology.

25 Q. "Ron" meaning Ron Ereiser?

1 A. Correct, so the same ECM that I already designed would
2 knock both Ron out and the customs operation out when this
3 was finished, when it was determined to pull the plug on the
4 operation. So I worked with two agents. Burton --

5 Q. You don't have to give their names. You worked for two
6 customs agents?

7 A. Yes.

8 Q. And that was part of the operation?

9 A. Yes.

10 Q. Now, when you worked for NDS, did you have frequent
11 contacts with Mr. Norris?

12 A. We would -- yeah. I don't know how, the extent of it.
13 It would vary. It would depend on my technical workload,
14 and it would also depend on if anything significant was
15 around to talk about.

16 Q. Let's be clear. When you say it would depend on your
17 technical workload, with respect to the technical work, did
18 you report to Mr. Norris or somebody else?

19 A. I always reported to Mr. Norris. But Mr. Norris is not
20 technical at all. So I would also kind of directly report
21 to Mr. Smith in Israel directly.

22 Q. Okay. Now, with respect to what we'll call the
23 nontechnical or the monitoring of the Internet to the extent
24 it was nontechnical, the undercover operations, with respect
25 to that, did you report to Mr. Norris?

1 A. Yes.

2 Q. And what was -- how did you communicate with
3 Mr. Norris? How frequently and what kind of communications?

4 A. Again, I don't know the frequency. It would depend
5 almost on if there was any -- if there was nothing
6 significant going on, I may not speak to Mr. Norris all week
7 long. Or maybe a week and a half could go by before I would
8 speak to him sometimes.

9 But I would think typically maybe once a week at least
10 we would speak, but I'm not certain.

11 Q. Did you have phone communications with him?

12 A. Phone or e-mails.

13 Q. Did you have to write a report, a weekly report?

14 A. At some point in time, I needed to produce a weekly
15 report on Friday afternoons.

16 Q. And that was for Mr. Norris?

17 A. Mr. Norris and the upper echelon of NDS, yes.

18 Q. Now, you talked about this Headend Report. On any of
19 those trips to Israel, did you ever see the Headend Report?

20 A. No. I've never seen the Headend Report until
21 Mr. Mordinson visited my residence sometime in 2001.

22 Q. And on any of those trips to Israel, did you ever
23 discuss the Headend Report?

24 A. I never knew this report existed until Mr. Mordinson
25 showed me the brief -- the brief pages of it.

1 Q. And when did that happen?

2 A. It was in my office in -- sometime in late 2001. We
3 had taken a break from trying to combat -- how to combat
4 emulation of the DirecTV .3 access card. We had been
5 battling heads about this all morning, and then somehow the
6 topic came up of, "Oh, by the way, EchoStar closed the hole
7 in their chip." And then David said, "No way. They can't
8 do that."

9 And -- and something to this effect happened, and then
10 he noticed that I was the "BigGun" back in 1996 from a
11 plaque on my wall, and I think a combination of all of that
12 provoked him to -- to aim his infrared at my printer and
13 print some of the report out.

14 THE COURT: You said "David." David who?

15 THE WITNESS: Mordinson, Your Honor.

16 THE COURT: Okay.

17 BY MR. KLEIN:

18 Q. Did that take place before or after the December 2000
19 Internet posting?

20 A. It had to have taken place after because we were
21 discussing the fact that EchoStar had closed a hole that
22 both of us agreed couldn't be closed because of where the
23 hole was in the card's memory.

24 Q. Let's talk about closing that hole.

25 Counsel showed you an e-mail where you said they

1 wouldn't be able to close the hole; they'll have to do a
2 swap-out. Do you recall that?

3 A. I do.

4 Q. When you wrote that, was that statement based on some
5 analysis you had done?

6 A. Not really. I had -- as I stated earlier, I policed
7 the Internet on these websites, so when that's -- this
8 information is disseminated into the public domain, I
9 downloaded it, and I looked at it, and I looked -- does it
10 look authentic or not, the public disassemblies that persons
11 were put on the Internet such as StuntGuy and some other
12 individuals. And there was a whole group of individuals
13 putting -- working on their system.

14 Under -- seeing how the hole was being used just gave
15 me this -- looking at where it was in the power-up of the
16 chip, it didn't seem like they could close it.

17 Q. Was it your job for NDS to determine if they could
18 close it or not?

19 A. No. This was purely my own technical -- again, always
20 trying to learn. My own technical nature.

21 Q. By the way, when you first found out about that
22 December 2000 posting, where were you physically?

23 A. I was either in Belgium or I was en route to go to
24 Israel.

25 Q. And why were you in Belgium in December of 2000?

1 A. 'Cause my wife is from the French part of Belgium, and
2 so we will go to Belgium pretty much every year in December
3 or in summer sometimes. And we were in Belgium at her
4 parents' house, but I would always be bored, so we would
5 make a technical review meeting in Jerusalem like for a few
6 days across this two or three weeks that she would drag me
7 to Belgium.

8 THE COURT: Counsel, why don't you get to a place
9 for a recess.

10 MR. KLEIN: This is an excellent place.

11 THE COURT: All right.

12 Please don't discuss this matter amongst
13 yourselves nor form or express any opinion.

14 Have a nice recess.

15 (Recess held at 3:06 p.m.)

16 (Further proceedings reported by Sharon
17 Seffens in Volume IV.)

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3 CERTIFICATE

4
5 I hereby certify that pursuant to Section 753,
6 Title 28, United States Code, the foregoing is a true and
7 correct transcript of the stenographically reported
8 proceedings held in the above-entitled matter and that the
9 transcript page format is in conformance with the
10 regulations of the Judicial Conference of the United States.

11
12 Date: April 24, 2008

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15 _____
16 DEBBIE GALE, U.S. COURT REPORTER

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