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 3, Volume II
NDS GROUP PLC, et al.,	))
Defendants.	)
_____	)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Jury Trial

Santa Ana, California

Friday, April 11, 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

(714) 558-8141

EchoStar 2008-04-11 D3V2

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1                          I N D E X

2

3    WITNESSES              DIRECT  CROSS  REDIRECT  RECROSS

4    MORDINSON, David

     By Mr. Snyder                  4              58

5

     By Mr. Hagan                          30

6

7    SEGOLI, Aharon Roni

     By Mr. Noll            67

8

9

10                          EXHIBITS

11   EXHIBIT NO.                 IDENTIFICATION   IN EVIDENCE

12   511-A    12/23/2000 xbr                          10
              posting

13

     998      Code format                            10

14

     1452     E-mail thread                          20

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1   SANTA ANA, CALIFORNIA, FRIDAY, APRIL 11, 2008

2   Day 3, Volume II

3   (10:21 a.m.)

4   (In the presence of the jury.)

5   THE COURT: Okay. Back in session and on the

6   record. Counsel are present. The jury is present. The

7   witness, Mr. Mordinson, is present.

8   DAVID MORDINSON, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

9   RESUMED THE STAND

10   THE COURT: This is the continued

11   cross-examination by Mr. Snyder on behalf of NDS.

12   MR. SNYDER: Thank you, Your Honor.

13   CROSS-EXAMINATION

14   BY MR. SNYDER:

15   Q.   Mr. Mordinson, when we took our break, you were looking

16   at Exhibit 511-A. Do you still have that in front of you?

17   A.   Yes.

18   Q.   Can you tell the jury generally, please, what that is?

19   A.   It looks like kind of a web forum or a posting board

20   usually used in the Internet.

21   Q.   And does that posting -- before this litigation

22   started, Mr. Mordinson, had you seen that posting?

23   A.   No.

24   Q.   Does that posting appear to contain code related to an

25   EchoStar Smart Card?

1   A.   Yes.

2   Q.   And who made that posting?

3   A.   That person whose nickname or alias is xbr21.

4   Q.   And what was the date of that posting?

5   A.   It's posted on 23rd of December, 2000.

6   Q.   Who is xbr21?

7   A.   I don't know.

8   Q.   Had you ever heard that name before this litigation?

9   A.   No.

10   Q.   Are you xbr21?

11   A.   No.

12   Q.   Now, there's a name in the code. It says Nipper or

13   NipperClause. Do you see that? It's about the middle of

14   the page. Right under, it says, posted December 23, 2000.

15   "You want NipperClause here." Do you see that?

16   A.   Yes.

17   Q.   And do you know who Nipper is?

18   A.   No.

19   Q.   Are you Nipper?

20   A.   No.

21   Q.   Are you NipperClause?

22   A.   No.

23   Q.   Before this litigation started, had you ever heard the

24   name "Nipper"?

25   THE COURT: Just a moment, Counsel. I don't know

1 if your tech has caught up. If you want to show this

2 visually, you may.

3   MR. SNYDER: Okay. Can we publish 511-A,

4 Your Honor?

5   THE COURT: You may.

6   MR. SNYDER: Thank you.

7   Put 511-A up, please.

8   THE COURT: I'm going to take this subject to a

9 motion to strike at later time, but I think, using my

10 discretion, it would make more sense to both sides.

11   MR. SNYDER: Thank you, Your Honor. I think it

12 will aid the jury's understanding of the exhibit.

13   Could you highlight the middle part of exhibit,

14 please, where it has the posting xbr21.

15 BY MR. SNYDER:

16 Q.   Mr. Mordinson, could you show the jury where the name

17 of the person or the alias of the person doing the posting

18 is? Where it says xbr21? Is that it?

19 A.   Yes.

20 Q.   Over on the far -- I guess for those people looking at

21 the screen, the far left-hand side of the screen; is that

22 right?

23 A.   Yes.

24 Q.   And where does it identify the time and date of the

25 posting?

1   MR. SNYDER: Could you blow that up for us,

2   please.

3   (Technician complies.)

4   THE WITNESS: Yes, this is the date of posting and

5   time.

6   BY MR. SNYDER:

7   Q.   And what does it say?

8   A.   It's December -- 23rd of December, 2000.

9   Q.   Okay. Now, immediately underneath that line, it uses

10 the word Nipper. Do you see that?

11 A.   Yes.

12 Q.   Are you Nipper, Mr. Mordinson?

13 A.   No.

14 Q.   Do you know who Nipper is?

15 A.   No.

16 Q.   Before this litigation started, had you ever seen the

17 name Nipper?

18 A.   Yes.

19 Q.   Okay. And where have you seen the name Nipper before

20 this litigation started?

21 A.   It was written in E-square of EchoStar Smart Card.

22 Q.   It was in the EchoStar Smart Card?

23 A.   Yes.

24 Q.   And is it in every EchoStar Smart Card?

25 A.   Yes.

1 Q.   So anyone who extracts the E-square from an EchoStar

2 Smart Card would find that word, correct?

3 A.   Yes.

4 Q.   Okay. Have you ever heard of anyone using the alias

5 Nipper before this litigation?

6 A.   No.

7 Q.   Now, Mr. Mordinson, on the bottom of the first page and

8 going over to the second page of this exhibit, there's some

9 code.

10   MR. SNYDER: Maybe you could blow that up for the

11 jury, please.

12   (Technician complies.)

13 BY MR. SNYDER:

14 Q.   Can you describe generally for the jury what format

15 this code is in?

16 A.   It's hexadecimal binary format.

17 Q.   What does hexadecimal binary format mean?

18 A.   That means that every number here represents a single

19 byte or item on information and occupies 8 bits. And it's

20 represented in hexadecimal count.

21 Q.   Okay. And what is hexadecimal?

22 A.   When we use our count or the count that we are

23 comfortable with, we use decimal count, which means by our

24 ten fingers. Actually, the most significant represents the

25 number of tens or hundreds or thousands. And the base for

1   this calculation is 10.

2   With hexadecimal it's more convenient for computer

3   science, the base is 16 and not 10. That means the most

4   significant represents 16 or 256 or -- et cetera. That's

5   how it's calculated.

6   Q.   So can you give the jury an example of how you count

7   from 1 to 16 in hexadecimal?

8   A.   Oh, sure. Zero, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D,

9   E, F and 10.

10 Q.   And so by the time you get to 10, one-zero, that

11 actually means 16 in base 10, which is the way we normally

12 count?

13 A.   Correct.

14 Q.   Okay. And how can you tell that this code is in

15 hexadecimal?

16 A.   In order to distinguish hexadecimal from decimal

17 format, usually hexadecimal is preceded by 0X. That's what

18 we see here.

19 Q.   And so the 0X in front of each of those indicates that

20 it's in hexadecimal format?

21 A.   Yes.

22 Q.   Now, Mr. Mordinson, did you have a chance to look at

23 this code?

24 A.   For --

25 Q.   Before today did you have a chance to look at this

1   code?

2   A.   From this exhibit, no.

3   Q.   Okay. You looked at it in a different format?

4   A.   Oh, uh, let me --

5   Q.   Let me show you Exhibit 998, please, Mr. Mordinson.

6   MR. SNYDER: May we publish Exhibit 998,

7   Your Honor?

8   THE COURT: Counsel, is there any objection to

9   both 998 and 511-A being received?

10   MR. HAGAN: No objections, Your Honor.

11   MR. SNYDER: No objections, Your Honor.

12   THE COURT: Both are received. That will make it

13   easier. We know they're eventually coming in. They're

14   received at this time by stipulation.

15   (Exhibit No. 998 received in evidence.)

16   (Exhibit No. 511-A received in evidence.)

17   BY MR. SNYDER:

18   Q.   Have you seen this Exhibit 998 before today,

19   Mr. Mordinson?

20   A.   Yes.

21   Q.   Is this the format of the code that you saw?

22   MR. SNYDER: Could we blow up the code, the first

23   half of the first page, that entire block of code, please,

24   Charlie.

25   (Technician complies.)

1   MR. SNYDER: Perfect.

2   BY MR. SNYDER:

3   Q.   Is that the same as the code that is on the xbr21

4   posting from December 23rd?

5   A.   It looks very similar, yes. Actually the same.

6   Q.   It's actually the same?

7   A.   Yes.

8   Q.   Okay. If you could go back to the first page of

9   Exhibit 998, that code that starts on the bottom of the

10   first page of Exhibit 998. Do you see that, Mr. Mordinson?

11   A.   Yes.

12   Q.   Is that the same as the code that's on the top, just

13   with the zeros and X's removed to show that it's in

14   hexadecimal format?

15   A.   Yes.

16   Q.   Now, looking at the code that's on the top of

17   Exhibit 998 and also in the xbr posting from December 23rd

18   that we've marked Exhibit 511-A --

19   MR. SNYDER: If you'll go back to the first page

20   of 511-A, please.

21   (Technician complies.)

22   BY MR. SNYDER:

23   Q.   Were you are able to look at that code, Mr. Mordinson?

24   A.   Sorry. What?

25   Q.   The code that's on Exhibit 998, were you able to look

1   at that code?

2   A.   Yes.

3   Q.   And were you able to determine that that code is

4   different from the code that you wrote for the Headend

5   Report?

6   A.   Yes.

7   Q.   And you were able to determine that merely by looking

8   at the code?

9   A.   Yes.   Looking at this code, particular this code, and

10   according to my memories for the short analysis of the code

11   in preparation to my deposition in New York.

12   Q.   Okay. Can you tell the jury one of the differences

13   that you found between the code that was posted on

14   December 23rd by xbr21 and the code that you wrote for your

15   report?

16   A.   Well, the first difference that I can point out is I

17   used a different area in RAM of the card in order to store

18   my code, which is much more convenient and much more secure,

19   protected, the area that this code utilize, because this

20   message puts the code into the stack of the Smart Card. And

21   stack usually is vital, vitally important to operation of

22   the microcomputer.

23   Q.   Okay. And in your code, where do you put -- where do

24   you store the information?

25   A.   In my code I put information into I/O buffer.

1   Q.   And the I/O buffer and the stack are different?

2   A.   Purpose, yes, certainly.

3   Q.   So in the posting on December 23rd, the information is

4   stored in the stack, and in your code it was stored in the

5   I/O buffer, correct?

6   A.   Yep.

7   Q.   And the stack and the I/O buffer are not the same

8   thing?

9   A.   Absolutely not.

10   Q.   Did you notice any other differences between the

11   posting on December 23rd, of that code, and your code?

12   A.   Well, according to my recollection, I noted that the

13   code that posted on the Internet used a library function to

14   output data from the Smart Card to the card reader. I

15   preferred to write this routine, I/O routine by myself. So

16   in my code this routine is implemented explicitly.

17   Q.   Okay. So your code uses code that you wrote for the

18   I/O routine; is that right?

19   A.   Yes.

20   Q.   What is the I/O routine?

21   A.   I/O routine is a computer code set of instructions.

22   It's a program which purpose is to perform output of data to

23   communication line to outside of the microcomputer.

24   Q.   Okay. And you said that in the code posted on

25   December 23rd by xbr21, it uses a library function?

1   A.   Yes.

2   Q.   What do you mean by a "library function"?

3   A.   Well, actually, the Smart Card includes a set of

4   functions which are stored in a ROM, or read-only memory of

5   the Smart Card. Those functions are used regularly by other

6   software or by the program of the Smart Card.

7   One of those functions is obviously for output purposes

8   of the Smart Card. That's the function that was used.

9   Q.   And so that's a function that is stored on the card all

10   the time?

11   A.   Yes.

12   Q.   And the code that was posted on December 23rd by xbr21

13   used that code that was stored on the card?

14   A.   Yes.

15   Q.   Did the code that you wrote for the Headend Report use

16   that function?

17   A.   No.

18   Q.   What code did it use?

19   A.   It used my own code that I wrote.

20   Q.   Okay. Now, did you notice any other differences,

21   Mr. Mordinson, between the code that was posted on

22   December 23rd by xbr21 and the code that you wrote?

23   A.   I've noted something that I can describe as programming

24   habits or programming style differences. It's based on my

25   15 years' experience as software engineer. It just look

1 different. I can tell it's different.

2 Q. Is there any question in your mind, Mr. Mordinson, that

3 the code that was -- that is in Exhibit 998 is different

4 from the code that you wrote for the Headend project?

5 A. Well, I had just a very fast look at -- took me about

6 15 minutes to -- to go over this code. And maybe for deeper

7 analysis I can figure out more differences. But it looks

8 different.

9 Q. Okay. And do you -- are you convinced that the code in

10 Exhibit 998 is different from your code?

11 A. Absolutely.

12 Q. And are you convinced that the code in exhibit 511-A,

13 the December 23rd posting by xbr21, is different from your

14 code?

15 A. Yes.

16 Q. Now, let me switch to another subject for a moment,

17 Mr. Mordinson. Mr. Hagan asked you some questions about a

18 posting of code from the Canal+ system. Do you recall that?

19 A. Yes.

20 Q. Okay. What code was posted that you were referring to?

21 A. According to my knowledge, what was posted is content

22 of read-only memory of EchoStar -- sorry -- of Canal+ Smart

23 Card.

24 Q. Okay. And is the read-only memory the same or

25 different in every single card?

1   A.   Read-only memory is absolutely identical for every

2   Smart Card.

3   Q.   For a single system?

4   A.   For the single system, of course, yes.

5   Q.   And you also mentioned -- Mr. Hagan asked you about the

6   date and time stamp on that file.

7   A.   Yes.

8   Q.   Is the date and time stamp on a file something that can

9   be easily manipulated?

10   A.   Absolutely. Easily, yes.

11   Q.   Is it trivial?

12   A.   Trivial.

13   Q.   Now, one more subject that I want to cover with you,

14   Mr. Mordinson, and that relates to your trip to visit

15   Mr. Tarnovsky. I'm sure everybody's very eager to hear you

16   talk about that trip.

17   When was the first time that you met Mr. Tarnovsky?

18   A.   Well, I met with Mr. Tarnovsky in -- it was autumn -- I

19   don't recall what month -- autumn 1997. I was a very fresh,

20   new employee of NDS. We went to Jerusalem, I think it was

21   with Danny Ratner, to participate in a meeting which

22   discussed pirate situation with DirecTV.

23   And I recall that Mr. Tarnovsky, Christopher Tarnovsky,

24   gave or participate in this meeting as well.

25   Q.   When you met with Mr. Tarnovsky in the fall of 1997,

1   did you discuss with him any reverse-engineering projects?

2   A.   No.

3   Q.   Did you discuss with Mr. Tarnovsky any

4   reverse-engineering projects at all before August 2001?

5   A.   No.

6   Q.   Before August of 2001, did you give Mr. Tarnovsky any

7   information related to any reverse-engineering projects?

8   A.   No.

9   Q.   When you were in the United States and when you were in

10   Canada in 1998, did you communicate in any way with

11   Mr. Tarnovsky?

12   A.   No.

13   Q.   Between the time that you came to Canada in 1998 to

14   test your hack in August of 2001, did you visit the

15   United States?

16   A.   No.

17   Q.   Between your trip to Canada in 1998 and August of 2001,

18   did you visit any part of North America?

19   A.   Sorry. Can you repeat the dates?

20   Q.   Sure. Let me speak slowly 'cause I want to make sure

21   everybody understands.

22   Between your trip to Canada in 1998 and August of 2001,

23   did you make any trips to North America?

24   A.   No.

25   Q.   Why did you come to the United States in August of

1   2001?

2   A.   Well, I came to United States in August 2001 to

3   continue the session, working session with Christopher

4   Tarnovsky that was started in May 2001 in joint effort to

5   fight DirecTV piracy. We had a similar situation at that

6   time with DirecTV piracy. And that's what we did during my

7   visit.

8   Q.   Okay. Now, you said you started a project with

9   Mr. Tarnovsky in May 2001.

10 A.   Yes.

11 Q.   Would you describe for the jury what your

12 communications were with Mr. Tarnovsky in May 2001.

13 A.   In May 2001 Christopher Tarnovsky came to Haifa for a

14 visit, and we worked jointly on fighting or developing

15 countermeasures against piracy of DirecTV period 2 and

16 period 3 cards.

17 Q.   During that meeting in Jerusalem in May 2001, did you

18 discuss with Mr. Tarnovsky any of your reverse-engineering

19 projects?

20 A.   Well, it was in Haifa, but we didn't discuss --

21 Q.   I'm sorry. The meeting in Haifa, did you discuss with

22 him any of your reverse-engineering projects?

23 A.   No.

24 Q.   During that meeting in May 2001 in Haifa with

25 Mr. Tarnovsky, did you give him any information at all

1   related to your reverse-engineering projects?

2   A.   No.

3   Q.   Now, later did you decide to come visit Mr. Tarnovsky

4   in the United States?

5   A.   Yes.

6   Q.   Can I show you a copy of what's been marked

7   Exhibit 1452, please.

8   Can you describe generally what Exhibit 1452 is?

9   A.   Well, it's a -- this exhibit represents e-mail thread

10 which includes communications between me, Christopher

11 Tarnovsky and other people in NDS. It's devoted to planning

12 of my trip to the United States in 2001.

13 Q.   And are these -- are you a party to all the

14 communications, all of the e-mails on that exhibit?

15 A.   Sorry. Say again?

16 Q.   Are you one of the participants in all of the e-mails

17 on that exhibit?

18 A.   Yes.

19 Q.   And did you exchange all of those e-mails as part of

20 your work for NDS?

21 A.   Yes.

22   MR. SNYDER: Your Honor, I move Exhibit 1452.

23   THE COURT: Any objection?

24   MR. HAGAN: No objections, Your Honor.

25   THE COURT: Received.

1   (Exhibit No. 1452 received in evidence.)

2   MR. SNYDER: May I publish it, Your Honor?

3   THE COURT: You may.

4   MR. SNYDER: Put up the top part of the first

5   page.

6   (Technician complies.)

7   MR. SNYDER: Actually, go down to the bottom, the

8   bottom message on the first page, please, from George comma

9   Michael.

10   BY MR. SNYDER:

11   Q.   Who is Mike George -- George comma Michael, or Michael

12   George?

13   A.   Well, I knew Christopher Tarnovsky as Michael George

14   during my employment at NDS.

15   Q.   Was that actually the name that you used for him all

16   the time?

17   A.   Yes.

18   Q.   Did you later learn that that was not his real name?

19   A.   Yes.

20   Q.   Why did you use a fake name for Mr. Tarnovsky when you

21   communicated with him?

22   A.   I didn't know that his name was Christopher Tarnovsky.

23   On NDS directory his name was Michael George.

24   Q.   So even within NDS he was known as Michael George?

25   A.   Yes.

1   Q.   But that wasn't his legal name?

2   A.   I learned it later.

3   Q.   Was that name, Michael George name, given to him to

4   help protect his identity?

5   A.   I don't know.

6   Q.   But you did learn later that this communication was

7   with Chris Tarnovsky, correct?

8   A.   Yes, it was Chris Tarnovsky.

9   Q.   And what was the purpose of these e-mails that you

10   traded back and forth with Mr. Tarnovsky?

11   A.   Well, it -- this e-mail thread was indicated to

12   planning my trip in to -- to Christopher Tarnovsky's house

13   in August 2001.

14   Q.   Okay. If we could look at the last e-mail, which is

15   the top of the first page, so the last one in time, what is

16   the date of that e-mail, Mr. Mordinson?

17   A.   It's 3rd of July, 2001.

18   Q.   And all of these e-mails were to plan your trip to the

19   United States?

20   A.   Yes.

21   Q.   And so, of course, they were before your trip?

22   A.   Obviously.

23   Q.   You don't plan trips after they're over, right?

24   A.   Yes.

25   Q.   And just to make sure there's no uncertainty, this was

1   the first time you had been back in the United States since

2   1998, correct?

3   A.   Yes.

4   Q.   Now, Mr. Mordinson, while you were -- where did you

5   visit Mr. Tarnovsky in the United States?

6   A.   When?

7   Q.   In 2001.

8   A.   Where?

9   Q.   Where did you visit him?

10   A.   I visited Chris Tarnovsky in his house in Carlsbad,

11   California in 2001.

12   Q.   Why did you meet him at his house?

13   A.   Because it was his office and it was the place he was

14   working.

15   Q.   And what did you discuss with Mr. Tarnovsky while you

16   were there?

17   A.   Well, as I said, our work was dedicated to developing

18   countermeasures against DirecTV P3 and P2 piracy. And

19   particularly we -- I developed several techniques to combat

20   P3 piracy, DirecTV P3 piracy, and we were evaluating them.

21   And another subject for our visit was PNP.2 emulator or

22   simulator. It was one of the threads for .2 DirecTV cards.

23   Q.   Let's make sure we help the jury understand some of

24   these terms you're using. .2 refers to what?

25   A.   .2 refers to DirecTV.2 card.

1   Q.   Okay.   So that was a type of card that was used by the

2   DirecTV system?

3   A.   Yes.

4   Q.   What are P3 cards?

5   A.   P3 cards is the next generation of the DirecTV card.

6   It was supposed to exchange the DirecTV.2 card.   And there

7   was a period of time when P2 and P3 card, they ran both in

8   DirectTV system.

9   Q.   P3 cards were another card used by the DirectTV system?

10   A.   Yes.

11   Q.   And both P2 and P3 cards for the DirecTV system were

12   supplied by NDS?

13   A.   Yes.

14   Q.   While you were meeting with Mr. Tarnovsky, did you

15   discuss countermeasures by any other companies?

16   A.   Yes.

17   Q.   Okay.   What other companies' countermeasures did you

18   discuss?

19   A.   We -- particularly we discussed the countermeasures

20   that were launched by NagraVision, developed by NagraVision,

21   launched on EchoStar system.

22   Q.   And what did -- how did that topic come up?

23   A.   I don't remember.

24   Q.   Okay.   What did Mr. Tarnovsky say to you about the

25   EchoStar countermeasure?

1   A.   Well, he said that it was published on the Internet

2   that EchoStar released a new countermeasure which supposed

3   to block all hacked cards, all hacked on the EchoStar

4   system.

5   Q.   Did you agree with him?

6   A.   No.

7   Q.   What happened after that?

8   A.   Well, he -- we started arguing with each other. Well,

9   for me it was kind of emotional or I took it personally.

10   Q.   Why did you take it personally?

11   A.   When I developed my technique to write into card, one

12   of the things that I did, I checked if it can be blocked in

13   some way. And according to my knowledge, I knew that -- I

14   was confident that my technique could not be blocked. And

15   they could -- someone tell me that someone released a

16   program or a countermeasure that would block my technique, I

17   would be upset for sure that that would happen.

18   Q.   When you say "your technique," are you referring to the

19   buffer overflow technique?

20   A.   Yes.

21   Q.   And Mr. Tarnovsky told you that on the Internet it was

22   posted that EchoStar had done something to prevent that

23   technique from being used?

24   A.   I don't remember which technique he referred to.

25   Q.   Okay.

1   A.   He said all hacked cards or something like that.

2   Q.   What happened after you and Mr. Tarnovsky started

3   arguing?

4   A.   Well, I had to check it 'cause for me it was, as I

5   said, something personal. So the first thing that I looked

6   at, it was EchoStar Smart Card code in disassembly form that

7   was stored in encrypted form on my computer.

8   So I opened it and I started looking through in order

9   to find ability to block, just to verify again if this

10   technique could be blocked. Well, it's been three years

11   since I completed the report, completed the project, and I

12   had to refresh my memories.

13   Q.   So had you looked at that report in the three years

14   since you completed the project?

15   A.   No.

16   Q.   Did it take you -- how long did it take you to refresh

17   your memory about the work that you had done on the EchoStar

18   card?

19   A.   Well, I think it was about half an hour when I was

20   looking through the code.

21   Q.   Okay. And during any part of this argument, did you

22   discuss with Mr. Tarnovsky the code that you had written?

23   A.   Not that I recall, no.

24   Q.   When you were -- after you had taken about half an hour

25   to look at the code -- I'm sorry -- to look at your report,

f7f56f08-fe66-4816-999b-c1ce00bfde4e

1 what did you do?

2 A.   Well, I didn't find a way to block my technique, the

3 buffer overflow, and therefore I was pretty sure that my

4 position in this argument is strong enough. I was trying to

5 convince him about my position in order to win the argument.

6 Q.   And how did you try and convince him that you were

7 right on your side of the argument?

8 A.   I was trying to explain why my technique could not be

9 blocked. So this is the way.

10 Q.   And how did you try to explain to Mr. Tarnovsky that

11 the technique could not be blocked?

12 A.   Well, I referred to my report. I printed two, maybe

13 three pages out of the report and pointed out something

14 like -- you see it's here or here or (indicating) -- you see

15 this or -- and if you refer to that, it's -- this is my

16 point, something like that.

17 Q.   Did you print out the entire report?

18 A.   No.

19 Q.   Why not?

20 A.   Because the purpose of printing was to show something

21 to Christopher Tarnovsky and strengthen my point in the

22 argument and not to give him or to -- other parts of the

23 report was irrelevant for the discussion.

24 Q.   Okay. So how much of your report did you print out?

25 A.   I believe it was two or three pages. I cannot recall

1   at the moment.

2   Q.   Did you give those two or three pages to Mr. Tarnovsky?

3   A.   No.

4   Q.   Why not?

5   A.   The purpose was to strengthen my position and to show

6   him, not to give him something. Why should I give it to

7   him?

8   Q.   Well, I think people are probably asking the question,

9   Mr. Mordinson. You printed out these two or three pages of

10   the report, and you're trying to convince Mr. Tarnovsky of

11   your side of the argument. Was there any reason why you

12   didn't just give him the pages?

13   A.   It was convenient. I hold the pages in my hand. And

14   they -- showed him the -- what I meant. I just -- I can't

15   answer the question.

16   Q.   Did you not give him the pages because they were

17   confidential NDS information?

18   A.   Among other reasons, yes.

19   Q.   Now, after you were done pointing to the pages with

20   Mr. Tarnovsky, what did you do with those pages?

21   A.   Well, I shredded them.

22   Q.   You shredded them?

23   A.   Yes.

24   Q.   Why did you shred them?

25   A.   Because they were confidential information.

1   Q.   So after you printed out those two or three pages and

2   they were shredded, were there -- other than those little

3   shreds of paper, was there any trace of what you had showed

4   to Mr. Tarnovsky?

5   A.   I'm sorry?

6   Q.   I'll withdraw the question. It was too long. I'm

7   sorry.

8   After you shredded those few pages, were there any

9   other pages or copies of your report or anything else that

10   were left with Mr. Tarnovsky?

11   A.   No.

12   Q.   Did showing Mr. Tarnovsky those pages from the report

13   settle the argument?

14   A.   No.

15   Q.   Mr. Tarnovsky still disagreed with you?

16   A.   Yes.

17   Q.   And so what did you do?

18   A.   Well, we decided to try and practice if it can be

19   blocked or it cannot.

20   Q.   And again, this -- you're referring to the buffer

21   overflow?

22   A.   Yes.

23   Q.   Okay. And so what did you do?

24   A.   The only way to test it was to obtain EchoStar system

25   and try it in practice. So we went to electronics store.

1   THE COURT: Went to where?

2   THE WITNESS: Electronics store, an electronics

3   store.

4   THE COURT: Thank you.

5   THE WITNESS: We went to electronics store. We

6   bought EchoStar system, just a set-top box and a Smart Card.

7   We went back to Chris Tarnovsky's house and connected his

8   set-top box to satellite dish and inserted the Smart Card

9   into the set-top box. Waited 10, 15 minutes maybe, just to

10 be sure that the Smart Card receives the software update, or

11 the patch, and then I tried to apply my technique to this

12 card. And --

13 BY MR. SNYDER:

14 Q.   What happened?

15 A.   Well, I was wrong. The technique -- the patch affected

16 my technique too. So my technique didn't work.

17 Q.   So the buffer overflow vulnerability had been closed by

18 the patch?

19 A.   Yes.

20 Q.   And when did you have this argument with Mr. Tarnovsky?

21 A.   It was August 2001.

22 Q.   And so did you learn in August of 2001 that the buffer

23 overflow vulnerability that you had identified had been

24 closed by a patch from EchoStar?

25 A.   Yes.

1   MR. SNYDER: No further questions.

2   THE COURT: Redirect.

3   MR. HAGAN: Thank you.

4   REDIRECT EXAMINATION

5   BY MR. HAGAN:

6   Q.   Now, Mr. Mordinson, you spent a little bit of time on

7   your examination with your attorney talking about the

8   differences between a hack and piracy, correct?

9   A.   Yes.

10   Q.   And if I understood your definition of "piracy," it was

11   when someone steals the programming without authorization or

12   without a subscription, correct?

13   A.   Yes.

14   THE COURT: I'm sorry. This is Mr. Chad Hagan on

15   behalf of EchoStar, for my record.

16   MR. HAGAN: Thank you, Your Honor. Apologize.

17   BY MR. HAGAN:

18   Q.   And you said -- you testified that you never engaged in

19   piracy of EchoStar's system of programming, correct?

20   A.   Yes.

21   Q.   But you did hack it, right?

22   A.   Right.

23   Q.   You did hack EchoStar's system, correct?

24   A.   I did hack EchoStar conditional access system.

25   Q.   Okay. And you developed a method to hack EchoStar's

1 system, correct?

2 A.   Yes.

3 Q.   And you wrote a report that described that method to

4 hack EchoStar's system, correct?

5 A.   Yes.

6 Q.   And you shared parts of that report with Christopher

7 Tarnovsky, correct?

8 A.   I shown him several pages of this report, the Headend

9 Report.

10 Q.   You would agree with me, sir, that if someone, some

11 pirate, if they used your method to hack EchoStar's system

12 and get the programming without a subscription, that would

13 be piracy?

14 A.   Actually, piracy applies for selling or making money.

15 That's illegal. It's an illegal activity around this.

16 Q.   Hold on a second, sir. You just told me and the ladies

17 and gentlemen of the jury that, in your definition, piracy

18 is stealing the programming without an authorized

19 subscription, correct?

20 A.   I told that piracy is illegal activity.

21 Q.   And the illegal activity is stealing the programming

22 without an authorized subscription, correct?

23 A.   And making money off it.

24 Q.   If someone used the hack methodology that you developed

25 and that you put in Exhibit 98 to steal EchoStar's

1   programming and make money off of that theft of EchoStar's

2   programming, in your words that would be piracy --

3   A.   Yes.

4   Q.   -- correct?

5   So is it your definition of piracy that if you steal

6   the programming yourself from EchoStar, you're not doing

7   anything illegal?

8   A.   Well, I think acquiring services or receiving services

9   that you are not authorized to is illegal. I don't know if

10 it's piracy or not. But, for example, copyright laws

11 prevent you from receiving services that they are not

12 authorized to receive.

13 Q.   Okay. So if I understand you correctly, if you steal

14 the programming from EchoStar without an authorized

15 subscription, in your belief that is theft and that is

16 illegal, correct?

17 A.   Yes.

18 Q.   Now, I want to go back to the second trip that you and

19 Zvi Shkedy made to North America. When you got to that

20 private citizen's home in Canada and you went down into the

21 basement and you set up the EchoStar receiver and the

22 satellite dish and you reprogrammed the EchoStar card using

23 the hack methodology that you developed and you put that

24 card into the EchoStar receiver, you testified yesterday

25 that you were able to open up all of EchoStar's programming,

1   correct?

2   A.   Yes.

3   Q.   And you didn't have a subscription for EchoStar at the

4   time that you did that, for that system, correct?

5   A.   Yes.

6   Q.   So under your definition, sir, you took EchoStar's

7   programming without an authorized subscription, correct?

8   A.   I would argue with that. My point is that --

9   counsel -- as I understood, counsel, receiving satellite

10   services or content from satellite without actual

11   subscription, for the purpose of viewing the services, I

12   understand it's illegal or it's wrong.

13   What we did in Canada, we tested the system. We were

14   able to do this but we didn't do that. That's make the

15   difference.

16   Q.   Let's back up for a second. Yesterday afternoon about

17   4:30 you told this jury that when you tested the hack that

18   you developed on EchoStar's system and you hooked up the

19   system, you were able to open up all of EchoStar's

20   programming as reflected in the EPG, the electronic

21   programming guide, correct?

22   A.   Yes.

23   Q.   And you did not have a subscription to EchoStar for

24   that programming with that receiver and that EchoStar Smart

25   Card, correct?

1   A.   Yes.

2   Q.   So you -- you also testified during your attorney's

3   questioning that you didn't know what the architecture was

4   for EchoStar's chip before you began the Headend Project,

5   before you tore into that chip, correct?

6   A.   Yes.

7   Q.   You knew at that time, though, that the chip was

8   manufactured by Thomson, correct?

9   A.   Yes.

10 Q.   Why not just pick up the phone and call ST Thomson and

11 ask them which architecture they use before you spend

12 hundreds of man-hours and use millions of dollars' worth of

13 equipment to tear into that chip?

14   (Interpreter interprets question.)

15   THE WITNESS: I was not in position to do this.

16 BY MR. HAGAN:

17 Q.   I'm sorry?

18 A.   I was not in position to do this.

19 Q.   You were not in position to pick up the phone and call

20 a legitimate company, ST Thomson, and ask anyone that picked

21 up the phone that's a sales rep -- there's only two

22 architectures.

23   THE COURT: Just a moment, Counsel. It's

24 ambiguous. It's unclear what "position" means. Position

25 physically or managerially? In other words, what does

1   position mean? It's a broad word, so redefine that.

2   BY MR. HAGAN:

3   Q.   Let me ask you, Mr. Mordinson, what do you mean when

4   you say you weren't in a position to pick up the phone,

5   simply call ST Thomson and ask them which architecture they

6   used for their chip?

7   A.   Well, I testified to --

8   THE COURT: Excuse me, sir. Answer the question.

9   THE WITNESS: Sorry.

10   My position was a software engineer and security

11   analyst. Security analyst or software engineer doesn't call

12   anyone to do this. Given the job and performing it, that's

13   it.

14   THE COURT: Okay.

15   THE WITNESS: It's not in my ability. It's

16   management's responsibility to provide materials or provide

17   connections to the third party, and the engineers are

18   performing the actual technical job.

19   BY MR. HAGAN:

20   Q.   So that was something that you would have expected your

21   supervisors to handle, correct?

22   A.   (No audible response.)

23   Q.   You are weren't in that managerial position. You would

24   have expected them to do something like that, correct?

25   A.   I don't know how -- how management operates. They have

1   their own reasons. I just feel it's out of my scope of my

2   job. I would -- what would I expect from my management or

3   whatever? I just don't know. That's my answer.

4   Q.   Fair enough, sir.

5   Let me ask you this, then: You testified that it took

6   about six months to do the reverse-engineering process; is

7   that correct?

8   A.   Less. But more or less six months.

9   Q.   And you focused -- I think you told me in your

10   deposition you focused almost exclusively on reverse

11   engineering during that six-month period as part of your job

12   for NDS?

13   A.   Yes. This, engineering can write in the report.

14   Q.   So your resources on behalf of the company were focused

15   specifically on this project, correct?

16   A.   Yes.

17   Q.   And NDS pays you a salary; isn't that right, sir?

18   A.   Yes.

19   Q.   NDS pays for your time, correct?

20   A.   Yes.

21   Q.   Mr. Shkedy testified that the equipment used by the

22   defendants to tear into EchoStar's card and pull out the

23   chip and dissolve the epoxy with acid -- some of that

24   technology, including the probing station and the focused

25   ion beam and the scanning electron microscope -- some of

1   that equipment cost in the range of a million dollars --

2   MR. SNYDER: Objection. Misstates the testimony

3   Your Honor.

4   THE COURT: "Leased," Counsel, is the correct

5   term. The equipment may be worth a million, but it's

6   leased, so we don't have a defined amount of money yet.

7   MR. HAGAN: I understand, Your Honor.

8   BY MR. HAGAN:

9   Q.   The leased equipment used cost in the range of up to a

10   million dollars. Do you have any reason to disagree with

11   Mr. Shkedy on that?

12   A.   I lost the question.

13   Q.   I'll ask it again.

14   If Mr. Shkedy testified yesterday that some of the

15   equipment used by the defendants to tear into EchoStar's

16   chip and to analyze that chip and to de-layer it and

17   decapsulize that chip. Some of that equipment, even though

18   some of it was leased, could cost up to a million dollars.

19   Do you have any reason to disagree with Mr. Shkedy on

20   that point?

21   A.   No, no reason.

22   Q.   Can you think of any reason why your managers or your

23   supervisors at NDS wouldn't have picked up the phone and

24   called ST Thomson and asked them, "Which of the two types of

25   architecture does your chip use?" Any reason that they

 1 wouldn't have done that before they focused you and Zvi

 2 Shkedy for six months on this project and used equipment

 3 that cost up to a million dollars? Can you think of any

 4 reason why they wouldn't have made a phone call that would

 5 have taken one minute?

 6 A.   Well, actually the platform or hardware platform which

 7 can be available from STG Thomson -- a platform is just one

 8 part of the reverse engineering. The purpose was complete

 9 understanding of the system. And the hardware is just one

10 part.

11   When we -- in order to understand the complete -- to

12 get the complete understanding of the functionality of the

13 system, you have to analyze or reverse-engineer software as

14 well. And the software was not available from STG Thomson.

15 Q.   Okay. Just so I'm clear. You can't think of a single

16 reason why your managers wouldn't have picked up the phone

17 and made that call before you had to tear into the chip to

18 find out if it was Von Neumann or Harvard architecture?

19   MR. SNYDER: Objection. Asked and answered.

20 That's the question he just asked, Your Honor.

21   THE COURT: Overruled. You can reanswer that

22 question.

23   THE WITNESS: Ask the question.

24 BY MR. HAGAN:

25 Q.   I understood that your answer had to do with other

1 components of the Headend Project. But I want to focus

2 specifically on the chip and which architecture was used for

3 that chip, because you testified for Mr. Snyder that you

4 didn't know which architecture, Von Neumann or Harvard, that

5 EchoStar chip used until you tore into it and started to

6 analyze it.

7   And I'm asking you as you sit here today under oath,

8 sir, you cannot think of a single reason why your managers

9 or supervisors at NDS wouldn't have simply picked up the

10 phone and called Thomson and asked them that question before

11 going through all of this process; is that right, sir?

12 A.   Isn't important to know that it's Von Neumann

13 architecture. I think the Von Neumann architecture or

14 particular architecture -- high-level architecture is not so

15 important. What is important is implementation of this

16 architecture in this particular chip.

17 Q.   To your knowledge as the engineer for NDS at the time

18 tasked with trying to improve their technology, were the

19 defendants considering using a microprocessor, a chip

20 manufactured by ST Thomson like the one that EchoStar used?

21 A.   I think it was considered.

22 Q.   Okay. And you wanted to analyze that chip to figure

23 out what the weaknesses or vulnerabilities were, correct?

24 That was what you did in the Headend Project, correct?

25 A.   Yes.

1   Q.   Did you ever call ST Thomson or meet with any

2   representatives of ST Thomson and ask them if they had

3   conducted this type of analysis on their chip?

4   A.   You're asking me personally?

5   Q.   Yes, sir.

6   A.   No.

7   Q.   Can you think of any reason why the defendants, your

8   supervisors and managers, wouldn't have picked up the phone

9   and set up a meeting with ST Thomson and asked them if they

10   had conducted this type of invasive attack on their chip to

11   determine whether or not there were any vulnerabilities in

12   it? Can you think of any reason why they wouldn't have done

13   that before exhausting your resources and time and

14   exhausting economic resources and leasing this

15   million-dollar equipment? Any reason at all?

16   A.   Well, I think that -- I would answer this way. Maybe

17   this conversation with STG Thomson happened and maybe NDS

18   did have meeting with STG Thomson in discussing these

19   things. I'm just not aware of them.

20   Q.   It's a different question. My question is: Can you

21   think of any reason why they wouldn't have done this before

22   going through all of this work -- the planes, trains and

23   automobiles, the setting up of the system and testing a hack

24   in a basement in Canada -- logging EchoStar's stream during

25   the first trip to the United States?

1   THE COURT: We're not going to go through a

2   summary of the evidence. Ask a question.

3   BY MR. HAGAN:

4   Q.   Okay. Any reason at all why they wouldn't have just

5   set up a meeting and ask ST Thomson if they had done this

6   type of work?

7   A.   The question assumes that this meeting should have

8   happened. But my understanding, it could have happened --

9   or I just don't know. I'm not aware of this meeting.

10   Q.   Okay. Now, you also spent quite a bit of time in your

11   examination with Mr. Snyder talking about the goals of

12   reverse-engineering EchoStar's chip and digging into that

13   chip and the technology, and you said that it was to try to

14   improve NDS's technology, try to better your company's

15   technology; is that right?

16   A.   Yes.

17   Q.   No one at NDS ever told you that that was the purpose

18   or the goal of the Headend Project, though, sir; isn't that

19   right?

20   A.   Yes.

21   Q.   So your belief that it was to make the defendant's

22   technology better is not based on anything that the company

23   told you, it's just based on your own speculation; is that

24   right?

25   A.   Well, I was not told that this project is in any way

1 different from other projects. And other projects were --

2 the purpose of other projects were -- was to improving their

3 products. So there's no way for me to think that this

4 project would be different from others.

5 Q.   That wasn't my question.

6   My question was: As you sit here today under oath, you

7 can't think of any specific person or specific instance

8 where anyone at the defendant's told you that the purpose of

9 the Headend Project, your work, was to improve NDS's

10 technology, correct, sir?

11 A.   Yes.

12 Q.   That is correct?

13 A.   Yes.

14 Q.   In fact, you don't even know what the defendant's

15 motive may have been to conduct this research and dig into

16 EchoStar's chip, because no one ever told you, correct?

17 A.   As I said, this project was not special in any way than

18 any other project. So nobody told me that take this project

19 very seriously, it's very important. Nobody told me that.

20 But a regular project, as regular as any other is.

21   So what it make me feel that I am doing a regular

22 project, and the purpose of this project is, as the purpose

23 of others, to improving this products and assist marketing.

24 Q.   And I understand, sir, from your answer that that is

25 your belief of what the purpose of this project was. But

1   you don't know and you can't tell the ladies and gentlemen

2   of the jury what the defendant's motive or purpose of this

3   project was, because they never told you, correct?

4   A.   Yes.

5   Q.   All you knew is that your part of this project, all

6   aspects of it, were to be kept secret, right?

7   A.   Yes.

8   Q.   Even secret from other NDS employees with the exception

9   of your boss, Chaim Shin-Orr, and Zvi Shkedy?

10 A.   Like any other project, yes.

11 Q.   So you can't tell the jury, 'cause you don't know,

12 whether or not the defendant's motive was for something

13 else, because that part of the project would be kept secret,

14 correct?

15 A.   Yes.

16 Q.   Now, you also mentioned Mr. Kommerling, Oliver

17 Kommerling's company, ADSR. What did that stand for?

18 A.   ADSR is Advanced -- don't remember.

19   THE COURT: It's on the document, Counsel, 809.

20   THE WITNESS: Okay.

21   THE COURT: Can each of you stipulate Advanced

22 Digital Security Research?

23   MR. HAGAN: Thank you, Your Honor.

24   THE COURT: Counsel, do you stipulate to that?

25   MR. EBERHART: Yes, Your Honor.

1   MR. SNYDER: Yes.

2   THE COURT: Thank you. It will save time.

3   BY MR. HAGAN:

4   Q.   That company, Mr. Kommerling's company, it sounded like

5   you were trying to draw a line of distinction between NDS

6   and that company. But the truth is, sir, that company,

7   ADSR, was formed between the defendants and Oliver

8   Kommerling; isn't that correct, sir?

9   A.   No, it's not correct.

10 Q.   Wasn't the purpose of ADSR to put a legitimate hack on

11 Oliver Kommerling, to make him look like he was a legitimate

12 engineer since he had previously been prosecuted -- or

13 investigated by the German police for hacking? Wasn't that

14 the purpose of forming that company?

15 A.   No.

16 Q.   You don't know what the purpose was; isn't that

17 correct, sir?

18 A.   I do.

19 Q.   What was it?

20 A.   The purpose of ADSR company -- and actually ADSR was

21 established by Oliver Kommerling in Germany. According to

22 my knowledge, in 2001 or in the early 2000 -- in late 2000,

23 early 2001, NDS decided to invest money in this company and

24 established -- make it into an establishment in the United

25 Kingdom. But this company existed before. That's my

1   knowledge.

2   Q.   Exhibit 809, which you looked at with Mr. Snyder,

3   that's the article that he talked about yesterday written by

4   Mr. Kommerling, correct?

5   A.   Yes.

6   Q.   And I believe that you testified that that article was

7   published in May of 1999. Is that right, sir?

8   A.   Yes.

9   Q.   You had already completed development of the EchoStar

10   hack by May of 1999, correct?

11   A.   Yes.

12   Q.   Now, nowhere in this article, Exhibit 809, does it talk

13   about EchoStar's security system, correct, sir?

14   A.   Yes.

15   Q.   And nowhere in this document, this article, does it

16   talk about hacking EchoStar's security system, correct?

17   A.   Yes.

18   Q.   And nowhere in this document does it contain the recipe

19   or the methodology that you developed to hack EchoStar's

20   system, correct?

21   A.   Correct.

22   Q.   In fact, this document, Exhibit 809, doesn't contain

23   any of EchoStar's secret codes that you and Zvi Shkedy

24   pulled out of the card, correct?

25   A.   Correct.

1   MR. HAGAN: May I approach, Your Honor?

2   THE COURT: You may.

3   First of all, what exhibit is it, Counsel?

4   MR. HAGAN: It's going to be a demonstrative I'm

5   going to create with the witness, Your Honor.

6   THE COURT: Counsel, if you need to see, step

7   over.

8   Did I see this last evening?

9   MR. HAGAN: It's just a blank board. I'm going to

10 use his testimony to try to --

11   THE COURT: Did I see the blank board last

12 evening?

13   MR. HAGAN: Nothing cryptic, Your Honor.

14 BY MR. HAGAN:

15 Q.   Mr. Mordinson, you also spent quite a bit of time --

16   THE COURT: Raise your voice.

17 BY MR. HAGAN:

18 Q.   -- talking with Mr. Snyder about what you believed were

19 the differences between the hack methodology that you

20 developed and the hack methodology posted under the alias

21 Nipper using xbr21, correct?

22 A.   Can you be specific, Nipper or xbr21?

23   MR. HAGAN: Christine, can you provide

24 Mr. Mordinson with a copy of exhibit --

25   THE COURT: 511-A, Counsel.

1   MR. HAGAN: And 998.

2   THE COURT: If you can't raise your voice, I'm

3   going to put you back to that lectern.

4   MR. HAGAN: Yes, sir.

5   THE COURT: That's the second warning. That will

6   be the last.

7   BY MR. HAGAN:

8   Q.   Mr. Mordinson, do you have Exhibit 998 in front of you,

9   sir?

10   A.   Yes.

11   Q.   And this is the document entitled nipperclauz.txt at

12   the top.

13   MR. HAGAN: Can we put this up, Clint.

14   (Technician complies.)

15   MR. HAGAN: Thank you.

16   BY MR. HAGAN:

17   Q.   Now, you spent some time talking with Mr. Snyder about

18   the differences between this method to hack EchoStar's

19   system and the method that you developed and put in your

20   Headend Report, correct?

21   A.   Yes.

22   Q.   You agreed with me yesterday, though, sir, that there

23   were some similarities, some fundamental similarities

24   between those two hack methodologies, correct?

25   A.   Yes.

1   Q.   I'd like to go through a couple of those so the jury

2   can see the similarities.

3   THE COURT: Counsel, I think that we can prepare a

4   chart over the lunch hour. You can compare the comparisons.

5   But we have other people from across the world waiting in

6   the hallway. We're not going to prepare that on the fly.

7   That could have been done last night.

8   MR. HAGAN: Sure, Your Honor.

9   THE COURT: I'm not going to preclude you, but

10   we're not going to take the time now. Over the lunch hour

11   prepare your two charts. We'll call the gentleman back.

12   Meanwhile, these people are going to testify today.

13   MR. HAGAN: I can finish my examination,

14   Your Honor.

15   THE COURT: All right. I'm not precluding you,

16   but we're not standing here watching the process.

17   MR. HAGAN: Thank you, Your Honor.

18   THE COURT: You can put both up. I remind you,

19   I'm not precluding you.

20   BY MR. HAGAN:

21   Q.   Mr. Mordinson, let's talk about -- you got the Haifa

22   hack that you developed; and the nipperclauz.txt, we'll call

23   that the Nipper hack.

24   You would agree with me, sir, and I believe you agreed

25   yesterday, that both of those hacks have fundamental

1 similarities in that they use the I/O buffer overflow,

2 correct?

3 A.   That's correct.

4 Q.   And they use the RAM ghost effect or address alias?

5 A.   Yes.

6 Q.   And they use the ability to execute code in the RAM

7 portion of EchoStar's card?

8 A.   Yes.

9 Q.   Now, sir, if you look at the top of Exhibit 998, there

10 as reference, about the sixth line down, it says, "Get AtR."

11 Do you see that, Mr. Mordinson?

12 A.   Yes.

13 Q.   And you know what the phrase "Get AtR" means because

14 you testified yesterday that you created a software

15 application, and you called it Get AtR, specifically for the

16 EchoStar hack; correct, sir?

17 A.   Yes.

18 Q.   And if you look down two more lines, it says

19 "ROM 3 NagraCard."

20 A.   Yes.

21 Q.   Do you see that, sir? And you testified yesterday, and

22 I believe it's in your report, that you developed the hack

23 methodology, the Haifa hack, for the ROM 3 card; correct,

24 sir?

25 A.   Yes.

1   Q.   This Exhibit 998, the post, is signed by Nipper. It's

2   titled "NipperClause"; is that right, sir?

3   A.   Yes.

4   Q.   And you discovered the term "Nipper" in EchoStar's code

5   and put that in your report; correct, sir?

6   A.   Yes.

7   Q.   The two lines down after it says "ROM 3," it says --

8   you had the entire EEPROM -- it's -- the message of this

9   post is, this is how you dump the EEPROM from EchoStar's

10   card, correct?

11   A.   Yes.

12   Q.   And in your report, Exhibit 998, you developed a method

13   to dump EchoStar's EEPROM code, correct?

14   A.   Yes.

15   Q.   Now, Mr. Mordinson, just a couple more questions for

16   you.

17   You testified at your deposition that you believed the

18   NDS engineers were the best engineers in the world; correct,

19   sir?

20   A.   Well, it's the same as I would say my daughter is the

21   best in the world, and I strongly believe that my daughter

22   is the best child in the world. I am proud of my company,

23   and I'm proud of the people that I work with. In my eyes,

24   they are the best in the world. But does it mean that I

25   compare them to every particular one in the world? No.

1   Just my impressions. May be -- may sound arrogant, maybe,

2   but it's the same.

3   Q.   And your impression is that the NDS engineers are the

4   best in the world, right?

5   A.   Well, that's the proven fact: that NDS products proved

6   to be the most secure in the world in recent years because

7   hackers haven't been capable to break into NDS security

8   systems. So obviously it's the best system in the world.

9   But about the best engineers in the world is the same as I'd

10   say my daughter is the best in the world.

11   Q.   And if Reuven Hasak -- you know who Reuven Hasak is,

12   correct?

13   A.   Yes.

14   Q.   Can you tell the ladies and gentlemen of the jury who

15   Mr. Hasak is?

16   A.   Mr. Hasak is chief security officer at NDS, according

17   to my knowledge of his position.

18   Q.   You understand that Mr. Hasak is the top of the food

19   chain, the highest ranking official as far as security for

20   NDS's system or antipiracy activities, correct?

21   A.   For -- yes.

22   Q.   And you understand that his title is something like

23   president or vice president or chief of global Internet

24   security or global NDS security?

25   A.   Yes.

1 Q. And if Mr. Hasak testified that Chris Tarnovsky and

2 Oliver Kommerling, at the time that NDS hired them, they

3 were the two best hackers in the world, you don't have any

4 reason to dispute Mr. Hasak's testimony; is that correct?

5 A. Correct.

6 Q. And you showed portions -- withdrawn.

7   NDS reverse-engineered EchoStar's system, correct?

8 A. Yes.

9 Q. And developed a hack for it, correct?

10 A. Yes.

11 Q. And at some point in time you shared that information

12 with Chris Tarnovsky, correct?

13 A. I showed him a couple of pages.

14 Q. And yesterday Mr. Shkedy testified -- and I think you

15 testified that you believe he showed the Canal+ information

16 to Oliver Kommerling, correct?

17 A. That's my belief.

18 Q. And you testified earlier that the information, the

19 code for Canal+'s system, got posted on the Internet,

20 correct?

21 A. Wrong.

22 Q. The code for Canal+, the ROM code, got posted on the

23 Internet?

24 A. Yes.

25 Q. Got posted on Allen Menard's dr7 website.

1   A.   I don't know that it posted there.

2   Q.   You also testified that the EchoStar hack methodology

3   got posted on the Internet, correct?

4   A.   Sorry. Lost you.

5   Q.   Exhibit 998.

6   A.   Okay.

7   Q.   You testified that that got posted on the Internet,

8   correct?

9   A.   That's what my lawyer told me.

10   Q.   On Allen Menard's website, dr7.com?

11   THE COURT: I didn't hear an answer.

12   THE WITNESS: Sorry.

13   BY MR. HAGAN:

14   Q.   That hack methodology --

15   THE COURT: Counsel --

16   BY MR. HAGAN:

17   Q.   -- got posted on Al Menard's website --

18   THE COURT: Counsel, you asked a question. He

19   hasn't answered it yet.

20   THE WITNESS: I need you to repeat the question,

21   please.

22   BY MR. HAGAN:

23   Q.   The hack methodology, the Nipper hack, Exhibit -- I

24   don't remember the number. You had it in front of you --

25   that got posted on Allen Menard's dr7 pirate website; is

1   that correct?

2   A.   Yes.

3   THE COURT: Is that 998?   Be specific.

4   MR. HAGAN: 998, Your Honor.

5   BY MR. HAGAN:

6   Q.   Look at Exhibit 511-A that Mr. Snyder gave you.

7   A.   Okay.

8   Q.   You agree this is a printout of that hack methodology

9   from Al Menard's dr7 pirate website?

10   It's right there at the top.   Do you see that?

11   A.   I'm sorry, Counsel, to disappoint you.   I'm not

12   familiar with dr7 website.

13   Q.   Can you think of any reason -- withdrawn.

14   Were you aware that NDS went out and hired Al Menard

15   after this lawsuit was filed, after the allegations that

16   Menard and Tarnovsky engaged in this conduct -- were you

17   aware that your employer went out and hired Allen Menard as

18   a consultant?

19   A.   I'm not aware of that.

20   Q.   Were you aware that they paid him almost $400,000 as a

21   consultant?

22   THE COURT: Excuse me.   Did you say you were not

23   aware?

24   THE WITNESS: I was not aware of that.

25   THE COURT: Then these subsequent questions are

1   irrelevant.

2   MR. HAGAN: Certainly, Your Honor.

3   THE COURT: This is argument later, Counsel, where

4   you lay a foundation and bring witnesses.

5   BY MR. HAGAN:

6   Q.   Mr. Mordinson, you agreed in your deposition that if

7   someone had a pirate or a hacker with sufficient technical

8   knowledge, if they had a copy of your report, Exhibit 998,

9   then they could develop the hack methodology, the Nipper

10   hack, posted on the Internet; correct, sir?

11   A.   No.

12   Q.   Is it your testimony that someone with sophisticated

13   software knowledge, that had a copy of your Headend Report,

14   could not develop and post the hack methodology on the

15   Internet?

16   A.   This information is not sufficient to deliver this

17   hack. One has to have, first of all, EchoStar code and know

18   the ghost effect and know about the buffer overflow

19   technique and implement it. So this is essential

20   information.

21   Q.   Let me maybe ask it a different way. I apologize. I'm

22   not as familiar with the technical terms as you.

23   You would agree, Mr. Mordinson, that if someone

24   understood the 6805 core processor, the EchoStar processor,

25   and your Headend Report, that person could develop the

1 technique posted on the Internet in December of 2000?

2 A.   You're missing a very important component here.

3 EchoStar code. Or I missed the question. I'm sorry.

4 Q.   Okay. You would agree, sir, that if someone understood

5 the 6805 core processor --

6 A.   Okay.

7 Q.   -- from EchoStar's system, as well as EchoStar's code,

8 and your Headend Report, Exhibit 998 -- excuse me --

9 Exhibit 98, that person could develop the technique for

10 hacking EchoStar's system that was posted on the Internet?

11 A.   Yes, it's possible.

12 Q.   Now, you testified that English is your third language,

13 right?

14 A.   Yes.

15 Q.   And I don't speak any other languages, but you are

16 doing great. But it's your third language. There's --

17 Russian is your first language, correct?

18 A.   Yes.

19 Q.   Then Hebrew?

20 A.   Yes.

21 Q.   Then English. Chaim Chin-Orr, your boss, he speaks

22 Hebrew, correct?

23 A.   Yes.

24 Q.   And Svi Shkedy -- he had a translator here yesterday --

25 he speaks and understands Hebrew, correct?

1   A.   Yes.

2   Q.   And those are the only people that you discussed --

3   other than Chris Tarnovsky -- the Headend Project with,

4   correct?

5   A.   Sorry.

6   (Interpreter translates.)

7   THE WITNESS: Can you ask me separately about

8   everyone in your question?

9   BY MR. HAGAN:

10   Q.   The people that you discussed the Headend Project with,

11   hacking of EchoStar's system, during the time that you were

12   doing it, that was only two individuals, right?

13   Chaim Shin-Orr and Svi Shkedy?

14   A.   That's correct.

15   Q.   Your supervisor and the other engineer that helped you,

16   correct?

17   A.   We helped each other, yes.

18   Q.   Helped each other. And both of those individuals

19   understand Hebrew?

20   A.   Yes.

21   Q.   Correct? But you didn't write your report that

22   describes how to hack EchoStar's system in Hebrew, did you,

23   Mr. Mordinson?

24   A.   No. It's written in English.

25   Q.   It's written in very good English. And as far as you

1   know, Chris Tarnovsky does not speak Hebrew, does he, sir?

2   A.   No.   He's not -- he doesn't.

3   MR. HAGAN: Pass the witness, Your Honor.

4   THE COURT: Recross.

5   RECROSS-EXAMINATION

6   BY MR. SNYDER:

7   Q.   Just a few questions, Mr. Mordinson.

8   Do you write all of your reports at NDS in English?

9   A.   Yes.   It's the official language of NDS.

10 Q.   When you say that it's the "official language" of NDS,

11 what do you mean?

12 A.   Well, NDS is -- employs many people that came to Israel

13 from many countries like United States, South Africa,

14 Russia, Bella Russia, Ukraine, France, Germany, many

15 countries.   So we had to have the common language in order

16 to allow all these employees to communicate with each other.

17 Therefore, the official language that was used -- that was

18 selected to allow communication between NDS employees with

19 English.   So every e-mail and every report was written in

20 English only.

21   And I don't recall any e-mail that I exchanged with

22 people, even if English is not the native -- their -- is not

23 their native language, exchanging other language than

24 Hebrew -- than English, sorry.

25 Q.   Is it against NDS policy to write reports in anything

1 other than English?

2 A.   Yes.

3 Q.   So all the reports that you write are in English?

4 A.   Yes.

5 Q.   And all the reports that you receive are in English?

6 A.   Yes.

7 Q.   And all of the e-mails that you send to NDS employees

8 are in English?

9 A.   Yes.

10 Q.   And all of the e-mails you that receive from NDS

11 employees are in English also?

12 A.   Yes.

13 Q.   So there wasn't anything sinister about writing the

14 Headend Report in English, was there?

15 A.   No.

16 Q.   That was just part of your normal practice?

17 A.   Absolutely.

18 Q.   Now, Mr. Hagan asked you some questions about calling

19 *SGS Thomson.

20   Let's take a step back. Can you remind the jury --

21 what is the purpose of the Haifa Research Center?

22 A.   Purpose of Haifa Research Center is to perform security

23 relation of NDS products and in this way improve NDS

24 products and assist marketing in some ways.

25 Q.   Now, would it serve the purposes of the Haifa Research

1   Center in reverse-engineering products to improve NDS's

2   products if you just called someone up and asked them about

3   their product?

4   A.   No.

5   Q.   Now, Mr. Hagan also asked you about identifying the

6   kind of architecture that the SGS Thomson chip used,

7   particularly the ST16 and the -- if you knew that that chip

8   had a Von Neumann architecture, would it have made your

9   reverse engineering project unnecessary?

10   A.   Well, it would make the results of a security relation

11   probably like if I -- if we -- I mean, Haifa Research Center

12   would get access to a cookbook and read it so our expertise

13   would be influenced. Therefore, the same is for a knowing

14   the architecture or hardware of the chip that we are working

15   on.

16   Q.   Is one of the purposes of the way the Haifa Research

17   Center is set up to avoid it from getting external

18   information that way?

19   A.   No.

20   Q.   Now, you also mentioned -- or Mr. Hagan asked you --

21   whether anyone had told you that the specific EchoStar chip

22   project was to improve NDS chips. Do you remember those

23   questions?

24   A.   Yes.

25   Q.   Okay. Did anyone ever tell you what the specific

1 purpose of any project was?

2 A.   When I started working for NDS, when Chaim Chin-Orr

3 interviewed me before I started, he explained shortly what

4 is the purpose of Haifa Research Center, and this is what I

5 believe that -- what I told you, that Haifa Research Center

6 is -- the purpose of Haifa Research Center is to improve NDS

7 products. So he didn't tell me what the purpose of every

8 particular project that we carried out, and said this

9 particular project of reverse-engineering EchoStar product

10 was no way different from others. So...

11 Q.   And for any particular project, has somebody come and

12 told you what the purpose of that particular project was?

13 A.   No.

14 Q.   So was the EchoStar project different from all the

15 others in this respect?

16 A.   No.

17 Q.   Now, Mr. Hagan also showed you the Exhibit 998, which

18 is the NipperClause.txt file?

19 A.   Yes.

20 Q.   Okay. And he asked you about several of the words that

21 are in there?

22   MR. SNYDER: Could you bring up for us, Charlie,

23 Exhibit 998.

24   (Technician complies.)

25

1 BY MR. SNYDER:

2 Q.   Okay. At the very top it has the term "AtR"?

3 A.   Yes.

4 Q.   Can you tell the jury what AtR is?

5 A.   AtR is a standard message that, according to ISO 7816

6 standard, every Smart Card should deliver to the center box,

7 or the receiving device, in response to receipt.

8 Q.   So is "get AtR" a term that you invented?

9 A.   No. From reading this paragraph, I can appreciate

10 that -- this is kind of procedure described. And "get AtR"

11 is just -- get AtR -- it's two separate words. It doesn't

12 apply to anything else.

13 Q.   And AtR stands for what?

14 A.   Answer to reset.

15 Q.   And you mentioned that answer to reset, or AtR, is part

16 of the ISO standard?

17 A.   Yes.

18 Q.   Could you explain to the jury what you mean by the

19 ISO standard?

20 A.   Actually, Smart Card as an electronic appliance or

21 electronic device should comply with international standard

22 designated as ISO, I-S-O, 7816 which has several parts. But

23 every particular Smart Card in the world has to be compliant

24 with this standard.

25 Q.   So for a product to be a Smart Card, it has to comply

1   with this standard, ISO 7816?

2   A.   Exactly.

3   Q.   And if it complies with 7816, it has an AtR in it,

4   correct?

5   A.   Yes.

6   Q.   So every Smart Card in the world has AtR?

7   A.   Yes.   Standard everywhere in the world.

8   Q.   Now, Mr. Hagan also asked you about the term "ROM 3."

9   Do you recall that?

10   A.   Yes.

11   Q.   What is the ROM 3?

12   A.   During Headend Project, we came across with two

13   versions of Nagra Smart Cards used by EchoStar.   They were

14   based on the same hardware platform, ST16CF54, if I am not

15   mistaken.   But they use different programming written in ROM

16   part of the memory, read-only memory.   This ROM 3 or,

17   actually, the designation of the version, is represented in

18   AtR.   So therefore you can distinguish between the cards.

19   Beside different program or different instructions

20   written in the ROM and slightly different data written in

21   EEPROM -- or E-square PROM -- no other differences between

22   those two cards.

23   Q.   So did you create the distinction or the name ROM 3?

24   A.   No, its written in ROM, I believe.

25   Q.   It's written in ROM in the Smart Card?

1   A.   Yes.

2   Q.   And so every Smart Card of that type would also say

3   that it was ROM 3?

4   A.   Yes.

5   Q.   Now, Mr. Hagan also pointed to the word "Nipper." Do

6   you recall that?

7   A.   Yes.

8   Q.   You didn't make up that word as part of your work, did

9   you?

10 A.   No.

11 Q.   That came directly from the Smart Card?

12 A.   Yes, it's in the Smart Card.

13 Q.   And that word would be found in every single Smart Card

14 of that type?

15 A.   Yes.

16 Q.   AtR, ROM 3m and Nipper -- they don't indicate that this

17 code, Exhibit 998, came from you, do they?

18 A.   No. Not in any way.

19 Q.   Now, Mr. Mordinson, Mr. Hagan has spent quite a bit of

20 time emphasizing that you created a methodology to hack the

21 EchoStar card. Did you learn at some point that that hack

22 no longer worked?

23 A.   Yes.

24 Q.   And when did you learn that the hack that you created

25 that uses the buffer overflow vulnerability no longer

1   worked?

2   A.   Well, I figured it out during my visit in August 2001

3   at Chris Tarnovsky's house.

4   MR. SNYDER: Thank you. No more questions.

5   MR. HAGAN: Your Honor, I would like the

6   opportunity to create my chart over lunch.

7   THE COURT: Counsel, I'm way ahead of you -- both

8   of you. Okay? Believe it or not.

9   Let me explain what's happened. Both sides have

10 experts who are going to testify later on. But by virtue of

11 Mr. Mordinson's testimony, it's obvious that the

12 similarities and dissimilarities in comparison are going to

13 creep through this testimony.

14   NDS asked the first questions in that barrage

15 followed again by EchoStar and then another opportunity for

16 NDS.

17   If we're going to turn him into an expert, I'll

18 give both sides a chance, an opportunity.

19   But you're not going home. You're with me now.

20   THE WITNESS: (Nods head.)

21   THE COURT: And so therefore, if they think that

22 they can accomplish that and get their charts together over

23 the lunch hour, so be it. But we have other witnesses who

24 have come across the world, and we're going to call them

25 this afternoon so they can be on the plane. If we have time

1   at the end of the day we'll try to complete the gentleman,

2   but if not, he'll be back with us on Tuesday.

3   In no way, counsel, am I precluding either one of

4   you. It's just now strayed over into an area that was

5   inevitable. So it's not fault-finding; it's my compliment

6   to both sides. I'll give them a couple more rounds, if they

7   would like, in this area. Okay? That's what's really

8   happening behind the scenes.

9   So, sir, you're ordered back to the Court at

10   1:00 o'clock, and we'll see you, if we can, at that time. I

11   doubt it. But you'll remain out there in the hallway.

12   Thank you very much. You may step down.

13   (Witness steps down subject to recall.)

14   THE WITNESS: Thank you.

15   THE COURT: Counsel, your next witness, please.

16   MR. HAGAN: Thank you, Your Honor.

17   Plaintiffs would like to call Mr. Eric Lebson,

18   30 minutes of video clips, before lunch.

19   THE COURT: No, Counsel. You represented to me

20   it's Mr. Segoly. That's who he is.

21   MR. HAGAN: Certainly Judge, we'll call

22   Roni Segoly.

23   THE COURT: Just as we talked about last evening.

24   Thank you very much, sir.

25   Would you be kind enough to raise your right hand.

1   Kristee will administer an oath to you, sir.

2   AHARON RONI SEGOLY, PLAINTIFF'S WITNESS, SWORN

3   THE WITNESS: (In English) I swear.

4   THE COURT: Thank you, sir. If you would please

5   be seated here in the witness box, and the interpreter will

6   help you.

7   THE COURT: Would you state your full name for the

8   jury, please.

9   THE WITNESS: My name is Aharon Segoly.

10   THE COURT: Would you spell your first and last

11   names, slowly, for me, please.

12   THE WITNESS: My first name is Aharon,

13   A-H-A-R-O-N; and next name is Roni, R-O-N-I; my third name

14   is Segoly, S-E-G-O-L-Y.

15   THE COURT: Thank you very much, sir.

16   This is direct examination by --

17   MR. NOLL: David Noll for the plaintiffs, EchoStar

18   and NagraStar.

19   THE COURT: Thank you.

20   DIRECT EXAMINATION

21   BY MR. NOLL:

22   Q.   Good morning, Mr. Segoly.

23   A.   Good morning.

24   Q.   I don't know if you remember me from your deposition,

25   but I recall you gave your deposition in Canada. Do you

1 recall that, sir?

2 A.   I do recall.

3 Q.   Okay. You're currently employed by NDS; is that

4 correct, sir?

5 A.   Yes, I am.

6 Q.   And NDS is in the business of providing protection of

7 pay television services; is that correct?

8 A.   Yes, it is correct.

9 Q.   And NDS provides a conditional access system, right?

10 A.   Yes, it is.

11 Q.   And DirecTV is the largest client of NDS in the

12 United States, correct?

13 A.   I think it's globally the biggest customer, yes.

14 Q.   Okay. And NDS is owned in principle by a company named

15 News Corporation; is that right?

16 A.   Yes, it does.

17 Q.   And News Corporation -- the majority of News

18 Corporation is owned by an individual by the name of Rupert

19 Murdoch; is that correct?

20 A.   I'm not sure about this, so I assume, yes.

21 Q.   You've heard of Rupert Murdoch, correct?

22 A.   Yes, I did.

23 Q.   And have you spoken to Mr. Murdoch at all about this

24 case?

25 A.   No, I've not.

1   Q.   Stepping back to your work at NDS, you went to work for

2   NDS about 13 years ago; is that right?

3   A.   Yes. It was in November '94.

4   Q.   And you started in the Jerusalem office with NDS?

5   A.   Yes, I did.

6   Q.   And you were in charge of physical and data security;

7   is that right?

8   A.   At the beginning, yes.

9   Q.   And your duties as a security officer later included

10   making connections with hackers; is that true?

11   A.   My duties later required me to do what we call

12   antipiracy activity, which includes relations with what you

13   call hackers.

14   Q.   And you also made connections with confidential

15   informants, right?

16   A.   Yes, I did.

17   Q.   And your duties also included employing certain hackers

18   and confidential informants for NDS, correct?

19   A.   Yes, it did.

20   Q.   And you understand what is meant by the term "satellite

21   piracy," sir?

22   A.   I believe I do.

23   Q.   In your words, what's satellite piracy?

24   A.   Satellite piracy will be -- the way I understand it, we

25   understand it, the company -- it will be a commercial

1   operation, someone financing activity to hack conditional

2   access system, and then to create pirate card or emulator

3   and distribute it. That would be satellite piracy.

4   Q.   Your -- so your testimony is also that satellite piracy

5   can involve reverse-engineering a Smart Card; isn't that

6   right?

7   A.   I assume that if you want to hack a system that is

8   protected by Smart Card, you have to understand the security

9   in the Smart Card. It might involve also

10   reverse-engineering the Smart Card.

11   Q.   And according to you, piracy is changing the signal in

12   order to bypass the Smart Card, right?

13   A.   I think you need to clarify what do you mean by

14   "signal."

15   Q.   Well, you understand generally how satellite systems

16   work?

17   A.   Yes, I do.

18   Q.   Okay. And you understand there's a signal that's

19   beamed down to the customer so they can receive television,

20   correct?

21   A.   Yes, I do.

22   Q.   Okay. So we're clear on what the signal is, right?

23   A.   But the pirates cannot change a signal, because it's

24   being beamed from the satellite.

25   Q.   Okay. You understand that piracy involves changing the

1   Smart Card, modifying the Smart Card, in order to receive

2   the signal?

3   A.   Piracy usually -- or hacking -- usually involve

4   creating an emulator, a device that hacks instead of Smart

5   Card. And you would put a different device into your --

6   decoder into your set-top box.

7   Q.   And stepping back to your efforts to hire hackers, your

8   position is you -- NDS hired hackers to try to understand

9   what they were doing to hack NDS's security system, right?

10   A.   NDS was hiring hackers mainly for two reasons. One was

11   to support our developers in order to understand how Smart

12   Card is hacked so we can protect our system better. And the

13   other reason was to deter them from their activity.

14   Q.   And in your words, Mr. Segoly, a hacker is a person who

15   takes hardware or software to make the technology behave

16   differently?

17   A.   Yes. A hacker will be someone who can bypass security

18   system and make the system behave in a different way than it

19   was supposed to be.

20   Q.   Do you know a gentleman named Svi Shkedy?

21   A.   Yes, I know Svi Shkedy.

22   Q.   Do you know another gentleman named David Mordinson?

23   A.   Yes, I know David.

24   Q.   If Mr. Shkedy testified that he, along with David

25   Mordinson, changed EchoStar's signals in order to bypass

1 EchoStar's security system, would you consider that to be an

2 act of piracy, sir?

3 A.   I'm not sure exactly what they testified, and I'm not

4 sure exactly the details. But like I mentioned before, a

5 hacker will be someone who takes a secure system or secure

6 software and will modify it in such way that you can make it

7 behave differently than it was planned to do.

8 Q.   Do you know a gentleman named John Norris?

9 A.   Yes, I do.

10 Q.   Who's John Norris?

11 A.   John Norris is currently the head of NDS security group

12 in the UK -- I'm sorry, in the States.

13 Q.   And you, in fact, recruited John Norris back in 1995 to

14 come work for NDS; is that right?

15 A.   I think it was '95, but I did recruit him.

16 Q.   And when John Norris joined NDS, you and Mr. Norris

17 were both involved in recruiting hackers, correct?

18 A.   Yes, we did.

19 Q.   And one of the hackers that you recruited was a man by

20 the name of Christopher Tarnovsky, correct?

21 A.   Yes, correct.

22 Q.   And at the time you recruited Mr. Tarnovsky, you knew

23 he was engaging in satellite piracy, right?

24 A.   At the time that we recruited Mr. Tarnovsky, I think it

25 was during '96, we -- he told us that he'd been involved in

1   such activity before he joined us. We made clear to

2   Mr. Tarnovsky like we made clear to any --

3   THE COURT: I'm sorry. Sir, please answer the

4   question.

5   The question was, did you know that he was engaged

6   in satellite piracy when you hired him?

7   THE WITNESS: I don't remember exactly the

8   details. I remember that he told us he was engaged in such

9   activity before.

10   THE COURT: Did he tell you he was engaged in such

11   activity?

12   THE WITNESS: It was '96. I don't remember the

13   details. I assume he told me.

14   THE COURT: We'll start the answer again. We ask

15   the questions.

16   THE WITNESS: Sorry.

17   BY MR. NOLL:

18   Q.   Okay. At the time you recruited Mr. Tarnovsky, you

19   knew that Mr. Tarnovsky was engaging in satellite piracy,

20   right?

21   A.   As far as I remember, he told us that he was active in

22   such activity. I don't remember the details of what he told

23   us.

24   Q.   Okay. And piracy is illegal; isn't that correct, sir?

25   A.   I want to be clear about it. I'm not sure exactly in

1   which country and which laws. Some places it's legal; some

2   places it's not legal. I'm not sure about the legality of

3   it. Hacking a system and selling pirated Smart Card, as far

4   as I know, is illegal distributing.

5   Q.   Okay. Is it your testimony, sir, that in certain

6   countries you can steal satellite signals, and that's legal?

7   A.   My testimony is in according to my experience. When we

8   started to be active, it wasn't clear in some countries what

9   laws can be applied to such piracy.

10   Q.   And the truth is, Mr. Segoly, you knew that

11   Mr. Tarnovsky was one of the main sources behind the hack of

12   NDS's security system at the time you hired him.

13   A.   No, sir.

14   Q.   You didn't know that?

15   A.   No. He told us about the activity that he had. I'm

16   not sure the activity was related to NDS. I don't remember

17   the details, but I am not sure that he was involved in

18   hacking NDS system.

19   Q.   How did you come to know of Mr. Tarnovsky? You didn't

20   think he was involved in hacking NDS's system, and you were

21   a security officer trying to protect NDS. How did you come

22   to know of him?

23   A.   He approached us. He sent us e-mail -- I think it was

24   '96 or '97. He said that he is in the U.S. Army. I'm not

25   sure he was soldier or hired by the Army. He was posted in

1   Germany. He said he's going back to the States, and he

2   asked if he could work in NDS as a developer.

3   Q.   How did you know Mr. Tarnovsky had any skills to offer

4   NDS when he approached you?

5   A.   Mr. Tarnovsky -- I don't remember the exact details,

6   but Mr. Tarnovsky was known on the Internet as someone who

7   deals with piracy. But I don't want to say specific facts

8   because I don't remember exactly.

9   Q.   Okay. So you do have some recollection that

10   Mr. Tarnovsky was a pirate on the Internet before NDS hired

11   him, correct?

12   A.   As far as I remember, the name didn't come out of the

13   blue, yes.

14   Q.   And you hired Mr. Tarnovsky, even though he was a

15   satellite pirate, right?

16   A.   We did hire Mr. Tarnovsky, yes.

17   Q.   And when you hired him, you discussed a short-term plan

18   with Mr. Tarnovsky that included him continuing to pretend

19   to be a hacker.

20   A.   Yeah. The nature of the proposal that we gave him that

21   on short time plan he would continue to be as informer, and

22   on the longer time it would be NDS full member of team as a

23   developer.

24   Q.   And after Mr. Tarnovsky joined NDS, you instructed him

25   to continue to be active on piracy websites, right?

1   A.   Yes, we did.

2   Q.   And you didn't give Mr. Tarnovsky any training, did

3   you?

4   A.   At the time that he joined, or at the -- regard -- I

5   mean, in the scope of my involvement, we didn't give him any

6   training, just instructions what he can do and what he

7   cannot do.

8   Q.   You just told him, "Don't do anything illegal," right?

9   A.   We told him, "Don't do anything illegal, and don't do

10   anything that we are not aware of."

11   Q.   You didn't monitor Mr. Tarnovsky's activities, did you,

12   sir?

13   A.   We monitored him very closely.

14   Q.   And at the time you brought him in, Mr. Tarnovsky

15   didn't provide NDS with any technical information, right?

16   A.   At the time that we brought him in and I think until I

17   left security -- and I think it was like the end of '97 or

18   '98 -- his main activity was in the scope of antipiracy or

19   giving information. So I'm not sure he was given technical

20   training at the time. But not by me.

21   Q.   Now, you didn't give Mr. Tarnovsky any technical

22   information from inside of NDS, correct?

23   A.   What I'm saying is that at one point he was given

24   training because he started to be involved in development,

25   but I'm not sure about the date, and it wasn't by me,

1   because I'm not technical person.

2   Q.   And the truth is, Mr. Segoly, you didn't give Tarnovsky

3   any technical --

4   THE COURT: Counsel, that's argumentative.

5   BY MR. NOLL:

6   Q.   You didn't give Tarnovsky any technical information

7   because you just didn't trust him?

8   A.   No. Definitely it's not the truth, no.

9   Q.   You trusted Mr. Tarnovsky?

10   A.   At the time, yes, and we employed him.

11   Q.   When Mr. Tarnovsky was recruited by NDS, you can recall

12   John Norris not wanting to be in charge of supervising

13   Mr. Tarnovsky, right?

14   A.   I do recall.

15   Q.   And, in fact, Mr. Norris openly expressed his opinion

16   that if Mr. Tarnovsky had done anything illegal, he should

17   be put in jail; is that correct?

18   A.   Mr. Norris expressed his opinion openly when we met

19   Mr. Tarnovsky in London, saying that if Mr. Tarnovsky is

20   going to continue being active in illegal stuff that he's

21   not telling us, then we will hand him over to the FBI.

22   Q.   And you knew NDS was taking a risk when they hired

23   Mr. Tarnovsky, right?

24   A.   In a way, because we are working in a company that has

25   sensitive information. Sharing sensitive information is a

1   risk. Sharing sensitive information with me is a risk for

2   such company.

3   Q.   Are you a former satellite pirate or hacker, sir?

4   A.   No. But when you share information, you know how to

5   handle it and how to manage your employees. I'm not a

6   former hacker.

7   Q.   You said it might be a risk to provide you information.

8   Why would you say that?

9   A.   Because when you have sensitive information and don't

10   want information to be circulated, then you have to avoid

11   sharing with others unless you have to. And sharing with me

12   is also kind of risk for such company.

13   Q.   And the risk specifically relating to Mr. Tarnovsky is

14   that he may take the knowledge that he learned from NDS and

15   do whatever he wanted with it?

16   A.   In theory, yes, it is possible.

17   Q.   I mean, but this is the risk -- this is your risk

18   assessment, correct?

19   A.   This is a risk that I assessed when we employed him.

20   And as result, we enforced or implemented some supervising

21   methods which are relevant to this case.

22   Q.   And the risk was also that Mr. Tarnovsky may take

23   information that NDS provided him and do illegal or unlawful

24   things with that information, correct?

25   A.   In theory, yes. The same risks that I would take

1   information that were given to me and sell it to someone,

2   yes.

3   Q.   So what, if anything, did NDS do to try to lesson or

4   reduce that risk as it relates to Mr. Tarnovsky?

5   A.   When we employed Mr. Tarnovsky and through all the

6   period I was in charge, we supervised his activity. We gave

7   him clear instructions what he can do and what he cannot do.

8   We gave clear instructions to everyone that dealt with him

9   what he can do and cannot do, and we also cross-referenced

10   all the information that we got from him to information we

11   got from other informants or from the Internet.

12   Q.   Did you do anything else other than giving

13   Mr. Tarnovsky instructions as to what he could or couldn't

14   do with NDS information?

15   A.   Everything that I mentioned is beyond: Giving him

16   instructions, giving instructions to people that work with

17   him, monitor his activity on the Internet if we can see,

18   cross-reference information that we get from him to

19   information that we get from others.

20   Q.   Can you think of any reason as you sit here today under

21   oath why Mr. Mordinson would share information with

22   Mr. Tarnovsky about hacking EchoStar's security system?

23   A.   I have no knowledge, and I wasn't involved in such

24   activity, so, no.

25   Q.   So these instructions that were given to Mr. Tarnovsky,

1 these are oral instructions, or are they written down

2 somewhere?

3 A.   I am not sure if it was written down. It was

4 definitely orally, but I'm not sure if it was written down.

5 Q.   And you, sir, never wrote any instructions down and

6 gave them to Mr. Tarnovsky as to how he was supposed to act

7 once he came on board with NDS, right?

8 A.   I would assume that many of my e-mails will bear such

9 instructions, but I don't remember specifically.

10 Q.   What would you say the most important thing was that

11 NDS did in order to lessen the risk that Mr. Tarnovsky may

12 continue to engage in illegal conduct?

13 A.   I think the most effective or -- most effective method,

14 which was relaxing for me, was cross-referencing information

15 that we get from him to information that we get from others

16 and information that we gather from the Internet regarding

17 Chris Tarnovsky.

18 Q.   Okay. And with the apparent risk that Mr. Tarnovsky

19 presented, NDS still instructed Mr. Tarnovsky to stay active

20 in the pirate community on the Internet, right?

21 A.   We instructed him to pretend to be active on the

22 Internet, to show himself as being still active pirate. We

23 instructed him not to do anything illegal. We instructed

24 him not to say -- not to do anything that we are not aware

25 of.

1   Q.   And you're aware that Mr. Tarnovsky used the alias

2   "biggun"?

3   A.   Yes, I remember the alias.

4   Q.   And you knew that he used the alias "shrimp."

5   A.   No, I was not aware of such alias.

6   Q.   Do you know he used the alias "Mike George"?

7   A.   "Mike" was alias that we used in the company when we

8   referred to Chris in our reports. I'm not sure he used it

9   on the Internet.

10   Q.   Do you have an alias at NDS?

11   A.   No.

12   Q.   Why not?

13   A.   Because I'm not informant, and I'm not working, and I'm

14   not pretending to be someone else than I am. In his case,

15   we had to use aliases in our reports so we don't expose his

16   name.

17   Q.   Why did Mr. Tarnovsky need an internal alias within

18   NDS?

19   A.   Because even employing Mr. Tarnovsky or explaining the

20   nature of his work is sensitive from our point of view. We

21   don't want to share it with everyone in the company, and we

22   done want to endanger him.

23   Q.   You didn't want others at the company to know that you

24   had hired a former satellite hacker and pirate in

25   Mr. Tarnovsky, correct?

1   A.   We did not want people in the company to know his

2   identity and to know the nature of our activity, not in

3   details.

4   Q.   You're aware of Mr. Tarnovsky using an alias called

5   "Arthur Von Neumann"?

6   A.   No, I'm not aware.

7   Q.   You know that NagraStar competes with NDS in the

8   conditional access market, sir, right?

9   A.   Yes, I do.

10   Q.   And you understand that NagraStar provides EchoStar's

11   conditional access system?

12   A.   At the time I was not so -- or even now I'm not so

13   aware of the companies here in the United States. I know

14   that EchoStar is a customer of Nagra, but not the rest of

15   the details.

16   Q.   And you were interested, sir, in knowing whether or not

17   NagraStar's conditional access system had been hacked; is

18   that correct?

19   A.   You have to distinguish -- if I can clarify two cases.

20   One is what we call publicly known information, information

21   that we use in sales and marketing. In such case, yes, we

22   are interested to know who from our competitors is hacked.

23   Technical details were beyond -- the focus of my work was

24   not in our competitors.

25   Q.   And it was important to you to know whether or not the

1   EchoStar system was hacked so that you could use that in

2   your marketing efforts to try to get new business; isn't

3   that right?

4   A.   When we go to meet new customer, potential customer, we

5   sell security. So what they ask us, "Why is your system

6   stronger than your competitors?" If competitor is hacked or

7   compromised, yes, it is important for marketing and sales.

8   Q.   Yeah. It gives you more leverage to try to get new

9   business when you can say the only other conditional access

10   provider in the market is hacked as well; isn't that right?

11   A.   It gives me leverage in the case in the sense that I

12   can talk to customer, and what we talk to customer is only

13   publicly available information because we have to show them.

14   Q.   And let's focus back. In 1998, DirecTV was hacked in

15   the United States, correct?

16   A.   I don't remember exactly the details. When I started

17   working in security, DirecTV system was compromised, yes.

18   Q.   And NDS provides its system, its conditional access

19   system to DirectTV, right?

20   A.   Yes, it does.

21   Q.   In 1998 BSkyB was hacked in Europe, right?

22   A.   No, it was not. I joined security in '94. I think '95

23   or '96 BSkyB changed to digital system, and they were never

24   hacked since.

25   Q.   Has it ever been hacked after that point in time?

1   A.   No.

2   Q.   Okay. If DirecTV was hacked and NagraStar -- or

3   EchoStar was not hacked, would that be something that would

4   lessen your ability to convince new customers to come on

5   board with NDS?

6   A.   Could you please explain the question again?

7   Q.   Yeah. We just talked a minute ago about the fact that

8   EchoStar and NagraStar's system was hacked is something you

9   would like to tell a prospective customer, right?

10   A.   Correct.

11   Q.   Because that would give you some bargaining advantage.

12   In other words, you could say that, "Hey, the competition is

13   hacked. You should come with us because we have a better

14   system. Right?

15   A.   Correct.

16   Q.   And so, according to you, sir, you wanted that

17   information, the information that EchoStar and NagraStar was

18   hacked, so you could give it to your salespeople so you

19   could then tell your -- the prospective customers the

20   weaknesses in your competition's system.

21   A.   As I mentioned before, the information that you can

22   give customer, potential customer, is only publicly

23   available compromise of another system. Publicly available

24   meaning it is hacked, the pirate device is out there, and

25   yes, this is information that you might use.

1   Q.   It would be good for you to know that the EchoStar

2   system was hacked, right?

3   A.   If it's hacked, and if it's available on the Internet,

4   and if there are devices out there, then yes, it is

5   important.

6   Q.   You understand the claims that EchoStar has made in

7   this case; is that right?

8   A.   In general. Because I was not involved since '97. So

9   in general.

10 Q.   And generally, you understand that EchoStar claims that

11 NDS hacked its conditional access system and posted its

12 secret instructions and codes on the Internet. You

13 understand that, right?

14 A.   I understand it was publicized on the Internet at the

15 time, yes.

16 Q.   And you're also familiar with a company called Canal+?

17 A.   Yes, I'm familiar.

18 Q.   And Canal+ was a supplier of conditional access

19 technology that competed with NDS?

20 A.   Yes, they are not active today, but they supplied

21 conditional access system.

22 Q.   And Canal+, to your knowledge, also sued NDS, correct?

23 A.   As far as I remember, yes.

24 Q.   And you recall that Canal+ also claimed that NDS hacked

25 Canal+'s systems and posted their codes on the Internet,

1   correct?

2   A.   In general, yes. I'm not even sure what the difference

3   is between the two cases, but, yes.

4   Q.   And you said Canal+ is no longer -- what did you say?

5   I didn't hear your testimony. They're no longer doing

6   business?

7   A.   Not any longer doing business, such businesses.

8   Q.   And you're aware that NDS purchased a large part of

9   Canal+?

10   A.   Yes, I'm aware.

11   Q.   Sir, you know that NDS has a lab in Haifa, Israel,

12   right?

13   A.   Yes, I do.

14   Q.   And it's your testimony that that lab was set up by NDS

15   to analyze the security of its own conditional access

16   system, correct?

17   A.   Correct.

18   Q.   And that was the aim of the Haifa lab, right?

19   A.   That was the aim of the Haifa lab when I was involved,

20   when I helped installing the physical security facilities in

21   the lab, and that is what I understood at the time, yes.

22   Q.   I mean, the aim, as you understand it, was for NDS to

23   try to take a different approach or different look at its

24   own conditional access system, right?

25   A.   It's very known practice within companies like NDS

1 where we develop security -- secure system -- to employ

2 people with what we call hacking skills in order to attack

3 its own system so we can identify holes and improve the

4 system. I think that was the aim of Haifa team.

5 Q.   Yeah. The aim, according to you, was not to hack any

6 competitors' conditional access systems, correct?

7 A.   I never heard about such goal or such activity.

8 Q.   NDS employees were limited to working on NDS hardware

9 and software in the Haifa lab, right?

10 A.   I wasn't involved in the activity in Haifa lab, so I'm

11 not sure exactly what was being done over there.

12 Q.   It's your position, sir, that hacking a competitor's

13 conditional access system is not moral, correct?

14 A.   It's probably also or might be -- yes, it's not moral.

15 Q.   And you also don't believe its legal; is that right,

16 sir?

17 A.   Depends on the aim of the activity. As I said before,

18 or as I know from the market, when you take a system, you

19 reverse-engineer a system, you analyze a system, there is a

20 big difference between such activity and between creating

21 pirate device and distributing. Piracy is the second part.

22 Taking the pirate device and distributing it, that is what I

23 meant by immoral activity.

24 Q.   And to use your words, sir, if NDS hacked a

25 competitor's conditional access system, that would be

1   something that could get NDS into trouble; isn't that right?

2   A.   I --

3   Q.   You said that at your deposition, didn't you, sir?

4   A.   I said that reverse engineering is not illegal

5   activity. Understanding how other system work is not

6   illegal. Creating hack device and distributing is illegal.

7   Q.   And if NDS did that, created and distributed hacking

8   devices, that's something that could get NDS into trouble?

9   A.   I assume so, yes.

10   MR. NOLL: Pass the witness.

11   THE COURT: Do you want to go to lunch?

12   All right. We'll start the cross-examination at

13   1:00 o'clock.

14   You're admonished not to discuss this matter

15   amongst yourselves or form or express any opinion. That

16   being the case, have a nice lunch, and we'll see you at

17   1:00 o'clock promptly.

18   We need to stay on the record for a moment.

19   (Outside the presence of the jury.)

20   THE COURT: All right. Counsel, if you would be

21   seated.

22   First, I want to deal with the issue concerning

23   Mr. Mordinson, because I know that each counsel wants to

24   conclude his examination.

25   What happened was inevitable, and that is, through

1 Mr. Mordinson, each of you has decided, in a sense, to jump

2 the gun, and that's acceptable to the Court. He has

3 valuable technical knowledge of creation of code, and he

4 could be, in fact, a very critical expert for both sides

5 although he hasn't, quote/unquote, been designated an

6 expert. So that slippage is normal. And I also understand

7 as a practical matter that NDS really doesn't want

8 Mr. Mordinson flying over and back, so I'm going to use my

9 complete discretion so he doesn't have to come back,

10 potentially in your case, to accomplish the same things

11 you're trying to show, and that is dissimilarity.

12   So NDS really opened that door, in a sense, in

13 terms of the comparison, and you had one go-around, but then

14 NDS came back and expanded that door a little bit, so

15 obviously you're going to have another round of questions.

16   And I don't think that those questions should be

17 pushed. In other words, to prepare by 1:00 o'clock, unless

18 they're finite questions, I'm not requiring you to do that.

19 And Mr. Mordinson may be best brought back at the end of the

20 day and if you're prepared to really enter into this kind of

21 back and forth between the parties. Otherwise, I can simply

22 exclude him, but I can require him to fly back. And so I'll

23 have you two informally discuss that.

24   But the next witness after this gentleman is

25 Mr. Cumberland. We will finish the same order that we

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1   discussed last evening: Mr. Segoly and then

2   Mr. Cumberland -- I'm sorry, Investigator Cumberland -- and

3   then the playing of the tape. And only then will we come

4   back to Mr. Mordinson if we even do today.

5   No, I'm speaking, and you're listening.

6   Now, the second thing is, I want to generally talk

7   to you about a position that I think you're finding yourself

8   in. And it's called --

9   (Cell phone rings in the courtroom.)

10   THE COURT: It's probably somebody who's very

11   important calling. Can I have it and answer? I'm just

12   kidding. Don't worry about it. You're having a heart

13   attack.

14   Mr. Ergen couldn't wait to get up on the stand and

15   testify, and you might find, although NDS might disagree,

16   that he was a very credible witness. I make no value

17   judgment. But Mr. Ergen has had a chance to make a good or

18   bad presentation on behalf of EchoStar.

19   Now, Mr. Kudelski was a little bit more reticent,

20   but Mr. Kudelski will be here, and the jury will have a

21   chance to listen to Mr. Kudelski.

22   You attempted to have Rupert Murdoch brought to

23   court in an informal discussion, and I quashed that, but let

24   me talk to NDS for a moment and explain a precarious

25   position both sides may find themselves in.

1   This case involves zero to -- I don't know, maybe

2   a billion dollars. I don't know what the range is yet -- or

3   more.

4   And it's an interesting position because you may

5   have a credible or noncredible person in the form of an

6   engineer like Mr. Mordinson or Mr. Shkedy. But they might

7   be perceived to be computer geeks or engineers or people who

8   don't have managerial responsibility. And from the

9   beginning of this case I've had the impression that each

10   entity -- EchoStar and NDS, NagraStar and -- well, let me

11   leave it at that for a moment -- may have been layering. By

12   that, I mean you've chosen to present the witnesses that you

13   think best proves or disproves your case. But we have these

14   rather innocuous people up there, and we don't have

15   managerial people.

16   So what's happened is, I've allowed you to expand

17   your examination and cross-examination, and you've asked,

18   quite frankly, speculative questions: What happened in

19   Jerusalem? What's your opinion? And NDS has done the same

20   thing. It's been coequal.

21   What that means is, at some point you've got a

22   jury, if you listen carefully, that's very hard working and

23   very ethical. They start at 8:00, and they end at 5:00, and

24   they only want one hour for lunch. You've got one juror who

25   teaches ethics; you've got another who's the president of a

1   corporation and reads leadership books.

2   I will not force Rupert Murdoch to come to court.

3   I will only suggest to you Mr. Pilon or Mr. Murdoch -- you

4   may be leaving the jury in the position of Mr. Kudelski

5   being an excellent witness, Mr. Ergen being an excellent

6   witness, I don't know. And they've had the chance at the

7   top of the ladder to look the jury in the eye and say, "You

8   know, we didn't know about the 26,000 pages of documents

9   that were stolen from NDS that were exchanged at this

10   secretive airport up in Ontario." The jury may discount

11   that, or they may believe them. Because if this ever

12   reaches the top ladder -- perhaps if Mr. Ergen was found to

13   be noncredible, et cetera, I would think that even if you

14   got liability, it would go up 'cause he's noncredible.

15   You may tactically end up placing yourself in a

16   position where there's a certain assumption amongst

17   jurors -- and you can't read their mind -- that leadership

18   starts at the top, and it's hard to believe with billions

19   and billions of dollars and this industry in flux that the

20   top of the ladder didn't know that.

21   Just as Mr. Ergen, you would argue, should have

22   known as a leader -- and his conniving that you've alleged

23   in terms of revenge motive -- all starts with Mr. Ergen.

24   And now he's been presented, and the jury can judge that

25   credibility. That side thinks it's good; your side thinks

1   it's not so good.

2   Without Mr. Murdoch here or Mr. Palone here, you

3   leave yourself in the position of an argument that Rupert

4   Murdoch on behalf of DirecTV or Mr. Palone on behalf of NDS

5   not only knew about the thefts that took place, these 26,000

6   pages of documents, but the unsaid supposition is that

7   leadership starts at the top. And this isn't a couple

8   hundred there that got stolen. This is a whole industry

9   with two primary competitors. And some jurors may find it

10   hard to believe that minimally, if it doesn't come from

11   Mr. Ergen or Mr. Murdoch, it certainly comes from the

12   highest levels of management.

13   Now, I understand that we're using these

14   engineers, et cetera, to speculate about where the

15   management decisions came. Why didn't you call Thomson

16   chip?

17   We can go right up the ladder to Shmoe or whatever

18   his name is, but we'll never find as a practical matter if

19   that order was given. You'll never find it in a major

20   corporation with thousands of employees.

21   So it's fair warning, because if, in fact, the

22   argument ensues, I don't know that I'm going to limit that

23   argument.

24   So do you have to produce Rupert Murdoch?

25   Absolutely not. Mr. Palone? Absolutely not. Do they ever

1   have to produce Mr. Kudelski? Absolutely not. But if they

2   don't, the adverse inference is so strong that your case

3   would be over. So Mr. Kudelski is going to be here.

4   So you have to use your sound judgment. I only

5   give you this record so that if you decide to convey this

6   message about how far reaching the arguments could be, that

7   you're not caught by surprise three weeks from now saying to

8   the Court, "Oh, Judge, limit the arguments." That's a

9   personal decision and professional decision.

10   All right. Now, I'm going to want to see your

11   chart. You're not going to lunch.

12   And you can draw your chart, and Mr. Stone or

13   Mr. Snyder was -- you two will remain in court. You'll draw

14   the chart. I'll see that in about 20 minutes. We'll see

15   how far reaching that is.

16   In addition, you'll have a private discussion.

17   And if we conclude Mr. Mordinson today, so be it. But we're

18   not breaking the order. We're not doing that again.

19   Thank you very much.

20   We'll see you in 20 minutes.

21   MR. HAGAN: Thank you, Your Honor.

22   (Lunch recess held at 12:12 p.m.)

23   (Further proceedings reported by Sharon

24   Seffens in Volume III.)

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3   CERTIFICATE

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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 12, 2008

13

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15   _____

                           DEBBIE GALE, U.S. COURT REPORTER

16   CSR NO. 9472, RPR

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