

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

- - - - -

ECHOSTAR SATELLITE)	
CORPORATION, et al.,)	
)	
Plaintiffs,)	
)	
vs.)	No. SACV 03-0950-DOC
)	
NDS GROUP PLC, et al.,)	
)	Day 8, Volume I
Defendants.)	
_____)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Jury Trial

Santa Ana, California

Tuesday, April 22, 2008

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Federal Official Court Reporter
United States District Court
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08-04-22 EchoStarD8V1

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I N D E X

EXAMINATION

Witness Name	Direct	Cross	Redirect	Recross
RUBIN, DOV				
By Mr. Welch	7			
By Mr. Snyder		45		

EXHIBITS

Exhibit	Identification	Evidence
Defendants' No. 391		83
Plaintiffs' No. 1065		43
Plaintiffs' No. 1270		29
Plaintiffs' No. 1540		14
Defendants' No. 1597		64
Plaintiffs' No. 2011		44
Plaintiffs' No. 2017		20
Plaintiffs' No. 2021		17

1 SANTA ANA, CALIFORNIA, TUESDAY, APRIL 22, 2008

2 DAY 8 - VOLUME I

3 (8:31 a.m.)

4 (The following proceedings is taken outside
5 the presence of the jury.)

6 THE COURT: We are on the record. We're out of
7 the presence of the jury. All counsel are present.

8 MR. SNYDER: The deposition of Mr. Ereiser --
9 (Interruption in the proceedings.)

10 THE COURT: Ereiser.

11 MR. SNYDER: They left the deposition after less
12 than an hour.

13 THE COURT: Why?

14 MR. NOLL: We -- 55 minutes, your Honor. The
15 first 30 minutes were spent asking questions that were
16 reasked in the past. They spent 15 minutes on the issue of
17 where Mr. Ereiser got the documents, and then they went
18 into DirecTV documents. Our understanding was that they
19 had 30 to 45 minutes to ask questions about the receipt of
20 the CDs. And we asked, "Do you have any more questions on
21 the CDs?"

22 "Maybe, I'm not sure," and so we adjourned the
23 deposition --

24 THE COURT: So everybody walked out?

25 MR. NOLL: Yes.

1 THE COURT: Now, we know why those are conducted
2 here in the courtroom, don't we? Because you could have
3 come down the hallway last night at 7:30 or 8:00 -- we were
4 here until 9:00 -- and told me that. So guess where we are
5 tonight? We are right back here with Mr. Ereiser. And you
6 are not going to have video equipment. I'm not going to
7 allow it to be brought in. Mr. Ereiser comes in, you can do
8 that on the record and --

9 Now, I've got to teach tonight from 6:00 to 9:30
10 at UCI, but I'll be back at 10:00. You're ordered to be
11 back here, get Mr. Ereiser in here, and they're not going to
12 ask redundant questions. I'll resolve it at 10:00 tonight.

13 MR. NOLL: You want us to put Mr. Ereiser on
14 second, still the same order that we've got --

15 THE COURT: Yes, exactly. We will reserve
16 cross-examination for you two.

17 MR. NOLL: Okay.

18 THE COURT: All right. Or Darin can start,
19 whatever you choose.

20 Okay. We are going to get the jury out.

21 One of the jurors just informed me, the gentleman
22 up in the back row, they've taken all his vacation, all his
23 sick -- sick leave time. You know, he wants to sit. He
24 made the comment, "Can we get this thing going?" So the
25 gentleman up here who is literally volunteering his time,

1 you know who he is, he's serving gratis right now. So just
2 be aware of it when you are asking redundant questions,
3 et cetera, that we're going to have a problem.

4 Okay. Would you go get the jury?

5 THE CLERK: Okay.

6 (The following proceedings is taken in the
7 presence of the jury.)

8 THE COURT: All right. We are back in session on
9 EchoStar versus NDS. The jury is present, all counsel are
10 present.

11 Counsel, call your next witness, please.

12 MR. WELCH: Your Honor, at this time -- for the
13 record, my name is Wade Welch.

14 At this time, we'd like to resume with the direct
15 examination of Mr. Dov Rubin for NDS.

16 THE COURT: Mr. Dov Rubin.

17 Thank you very much, sir. If you'd be kind enough
18 to retake the witness stand.

19 DOV RUBIN, PLAINTIFFS' WITNESS, RECALLED

20 THE COURT: Mr. Rubin, we administered an oath to
21 you last week. Do you recall that oath?

22 THE WITNESS: Yes, I do.

23 THE COURT: The same oath applies. If you'd
24 please be seated.

25 Ladies and gentlemen, when we were introduced to

1 Dov Rubin, he was on the witness stand, I believe, last
2 Thursday --

3 MR. WELCH: Yes, sir.

4 THE COURT: -- if I'm not mistaken. We were in
5 the middle of direct examination. We needed to interrupt
6 that direct examination by agreement of counsel. He's been
7 brought back as the first witness this morning.

8 Good morning, sir.

9 Counsel?

10 DIRECT EXAMINATION (Continued.)

11 BY MR. WELCH:

12 Q Good morning, Mr. Rubin.

13 A Good morning.

14 Q Just to refresh the jury's recollection, could you once
15 again tell us what your job title is with the defendants,
16 NDS?

17 A I am the vice president and general manager of NDS
18 Americas located here in Costa Mesa.

19 Q Okay. And I'm just going to recap a few things that we
20 went over in -- the last time you testified on Thursday.
21 Let me try and go through that fairly quickly, okay, just to
22 kind of get the jury back into the swing of your -- your
23 testimony, okay?

24 A Okay.

25 Q And what I've done is I've prepared Plaintiffs'

1 Demonstrative Number 14. The first thing I want to talk
2 about is basically the corporate structure, okay?

3 A Okay.

4 Q Now, we've heard of various companies. NDS Group is
5 one of the defendants in this case, correct?

6 A That's correct.

7 Q And NDS Americas is one of the defendants in this case,
8 correct?

9 A Yes.

10 Q Okay. And we've talked about a company called "NDS
11 Israel." You're familiar with that company, correct?

12 A Yes, I'm familiar.

13 Q Okay. NDS Israel is the company that Mr. Mordinson
14 worked for, correct?

15 A That's correct.

16 Q And NDS Americas is the company that you work for?

17 A Yes.

18 Q And NDS Americas is the company that Mr. Tarnovsky
19 works for, correct?

20 A Worked for.

21 Q Okay. Yes, sorry about that. But he worked for NDS
22 Americas between 1997 and when you fired him, or when he was
23 fired in approximately March of 2007, correct?

24 A That's correct.

25 Q Okay. So I'm going to draw a line right here between

1 NDS Americas and Mr. Tarnovsky, okay?

2 Now, have you ever heard of a company called
3 "HarperCollins"?

4 A Yes, I have.

5 Q Could you tell the jury what HarperCollins is?

6 A HarperCollins is a book company, also a subsidiary of
7 News Corporation.

8 Q I'm just going to put "book."

9 I don't have the world's best handwriting.

10 So HarperCollins is a subsidiary of News Corporation?

11 A Yes.

12 Q So I can draw that line there.

13 Now, News Corp -- or if we talk about the NDS Group,
14 that's a subsidiary of News Corporation as well, correct?

15 A Yes, it is.

16 Q And in fact, I believe your testimony was that News
17 Corporation appoints the majority of the board of directors
18 for NDS Group?

19 A They do.

20 Q And I think we looked in the 10-K, which was
21 Exhibit 2010, and we saw that there was a statement in there
22 that News Corporation actually controls NDS Group?

23 A That's correct.

24 Q Okay. And so indirectly, it control -- News
25 Corporation controls NDS Americas and NDS Technologies

1 Israel, correct?

2 A That's correct.

3 Q Okay. So I'm just going to draw me some lines right
4 here (indicating).

5 Now, to your knowledge, Mr. Tarnovsky doesn't work for
6 HarperCollins, right?

7 A Not at this time.

8 Q Okay. And he didn't -- has he ever worked for NDS
9 Technologies Israel, been employed --

10 A No, he has not.

11 Q Have you ever worked for HarperCollins?

12 A No, I have not.

13 Q Have you ever received any money from HarperCollins?

14 A No.

15 Q Now, your paycheck comes from NDS Americas --

16 A Yes, it does.

17 Q -- correct?

18 And you don't receive -- have you ever received money
19 for NDS -- from NDS Technologies Israel?

20 A I have.

21 Q You have.

22 And when was that?

23 A That was when I was working in Israel.

24 Q And so what time period would that be?

25 A That was from 1988 when the company started through

1 1998.

2 Q Through '98, okay.

3 And after '98, have you -- has there ever been an
4 occasion for you to receive money from NDS Israel?

5 A No.

6 Q Okay. And the only reason you were receiving money
7 from NDS Israel prior to '98 was because you were actually
8 working for them?

9 A Yes.

10 Q Okay. And we know Mr. Tarnovsky never worked for NDS
11 Israel, correct?

12 A That's correct.

13 Q And he didn't work for HarperCollins, he worked for NDS
14 Americas, correct?

15 A That's not exactly correct.

16 Q Well, does Mr. Tarnovsky write books?

17 A No.

18 Q I didn't think so.

19 Okay. So I just wanted to walk the jury through the
20 News Corporation. And actually, the chairman and CEO of
21 News Corporation, that's Mr. Murdoch, correct?

22 A Mr. Murdoch.

23 Q Okay. So I'm going to put Mr. Murdoch up here
24 (indicating).

25 THE COURT: Why don't you put his first name,

1 also. We have Charles Ergen, whose already testified on the
2 plaintiffs' side.

3 BY MR. WELCH:

4 Q Okay. We've got Rupert Murdoch. He's chairman and CEO
5 of News Corporation, correct?

6 A Correct.

7 Q Okay. Who -- who is the big chief at NDS Group?

8 A Abe Peled, P-e-l-e-d.

9 Q Who is the big chief at NDS Israel?

10 A Raffi, R-a-f-f-i, Kesten, K-e-s-t-e-n.

11 Q And who is the big chief at NDS Americas, yours truly?

12 A You are looking at him.

13 Q Okay.

14 (Laughter.)

15 BY MR. WELCH:

16 Q Now, these are all three separate corporations,
17 correct?

18 A It's four --

19 Q If we talk about HarperCollins --

20 THE COURT: Four.

21 BY MR. WELCH:

22 Q -- NDS Americas, NDS Group, NDS Israel, they are all
23 four separate corporations, correct?

24 A Yes.

25 Q And they all operate independently?

1 A Yes, they do.

2 Q But they are all controlled in some form or fashion by
3 News Corporation?

4 A Yes.

5 Q Thank you.

6 THE COURT: Now, Counsel, out of the presence of
7 the jury, if you'd like, on NDS's side, we can produce the
8 same chart so the NDS -- strike that -- the EchoStar -- we
9 can do that out of the presence of the jury and present that
10 to you, and I think that's very helpful so you start seeing
11 a tie-in. And if both counsel will stipulate, I will allow
12 one chart for each to come in so you -- you'll see the
13 tie-in of the corporate entities.

14 All right, Counsel.

15 MR. WELCH: Thank you.

16 BY MR. WELCH:

17 Q Now, one of the things we talked about last week was
18 the DirecTV relationship with NDS; do you recall that?

19 A Yes.

20 Q And we talked about the fact that NDS supplied
21 conditional access Smart Cards and services to DirecTV, and
22 that it was pretty much consistently compromised between the
23 period of '95 and 2004; do you recall that?

24 A I do.

25 Q Okay. What I want to do is I want you to take a look

1 at Exhibit 1540.

2 Could you tell the jury what this is?

3 A This is a -- the second conditional access license
4 agreement signed between NDS and DirectTV in August of 1999.

5 Q Okay. This is -- this is the actual agreement itself
6 that we had talked about, kind of in general, on Thursday,
7 correct?

8 A Yes.

9 MR. WELCH: Your Honor, at this time, we'd move to
10 admit Exhibit 1540.

11 THE COURT: Any objection?

12 MR. SNYDER: No.

13 THE COURT: Received.

14 (Plaintiffs' Exhibit No. 1540 is received
15 into evidence.)

16 BY MR. WELCH:

17 Q Now, do you recall in your testimony on Thursday that
18 we talked about the different types of harms that could come
19 from anybody pirating or hacking a conditional access
20 system, correct?

21 A That's correct.

22 Q And we talked about it could harm the subscription
23 television provider, it could harm the conditional access
24 provider, either through business interruption, lost
25 profits, or you know, harm to the reputation of the company.

1 A All of those are factors.

2 Q Yes.

3 And you also recall that we talked about the fact that
4 Mr. Tarnovsky was hired by NDS in 1997, and that at the time
5 Mr. Tarnovsky was hired, NDS knew he was a hacker, correct?

6 A That's correct.

7 Q And you knew that there was some risk that he could
8 continue his hacking ways?

9 A Yes.

10 Q Both of your system, as well as competitors' systems,
11 correct?

12 A Yes.

13 Q We also discussed the fact that DirectTV was concerned
14 about NDS's tactics of hiring hackers and keeping them on
15 the payroll, correct?

16 A Yes.

17 Q And that DirectTV asked NDS to take Mr. Tarnovsky and
18 Mr. Norris off the DirectTV projects; do you recall that?

19 A Yes, at some point later in this agreement.

20 Q Okay. Now, I'm going to move forward to today --

21 A Okay.

22 Q -- now that we've got everybody situated.

23 When we left off last time, we were talking about a
24 document that related to business standards of News -- at
25 News Corporation and NDS, correct?

1 A Yes.

2 Q Well, we got the actual color copies now, so I'd like
3 to launch into that using a new exhibit, which is going to
4 be Exhibit 2021.

5 Can you hand Exhibit 2021, please.

6 THE COURT: Counsel, the same admonition I gave to
7 NDS. We're not going through this paragraph by paragraph.
8 Get into the specifics of those documents, or I'll find it's
9 unduly consumptive of time.

10 MR. WELCH: Thank you, your Honor.

11 THE COURT: Very limited time in this area.

12 BY MR. WELCH:

13 Q Have you seen that document before, sir?

14 A Yes, I have.

15 Q Could you tell us what it is?

16 A This is a document of standards of business practice
17 that was originally authored by News Corporation, which NDS
18 adopted for itself for use within its companies.

19 Q So News Corp prepares that document, and it filters
20 down through all the various entities?

21 A Yes.

22 Q Okay. And this handbook or business standards or
23 business ethics, this is supposed to be given to all the
24 employees in the News Corp or the NDS chain, correct?

25 A That's correct.

1 Q And they should be given that document up front when
2 they are employed, correct?

3 A That's correct.

4 Q And they should review that document during the course
5 of their employment?

6 A Yes.

7 Q I'd like you to take a look at Exhibit 2017.

8 Your Honor, at this time, we'd like to offer
9 Exhibit 2021.

10 THE COURT: Any objection?

11 MR. SNYDER: None, your Honor.

12 THE COURT: Received.

13 (Plaintiffs' Exhibit No. 2021 is received
14 into evidence.)

15 THE COURT: Counsel?

16 BY MR. WELCH:

17 Q Could you tell us what Exhibit 2017 is, sir?

18 A 2017 is also another version of standards of business
19 conduct. There is no specific date. I'd have to look
20 through this to try to determine the date based on my
21 reconstruction over the last week as I've been requested by
22 the Court.

23 THE COURT: Well, look at the bottom of the first
24 page. Turn it over, and you'll see a date at the bottom.

25 THE WITNESS: Oh, yes, there it is. Thank you.

1 THE COURT: What's the date?

2 THE WITNESS: It's February 1996.

3 BY MR. WELCH:

4 Q Okay. So the copy the jury is going to have is
5 actually going to have the orange cover?

6 A Okay.

7 Q So this is the original News Corp policies and
8 guidelines on how employees should conduct themselves,
9 correct?

10 A That's correct.

11 Q And we didn't get a new one of these until you see
12 the -- Exhibit 2021, which came out in 2004, correct?

13 A That's correct.

14 Q And so if we want to talk about conduct that occurred
15 between '97 and the end of 2000, this is the operative
16 document, isn't it?

17 A This would have been the operative document for the
18 United States, yes.

19 Q Did this also apply -- this applied to NDS Americas?

20 A Yes, it did.

21 Q This applied to News Corporation Affiliates, such as
22 HarperCollins?

23 A I believe so.

24 Q Okay. Are you saying that it doesn't apply to NDS
25 Israel?

1 A This did not apply to Israel. This was not given out
2 in Israel in those years, no.

3 Q Was there any document like this given out to NDS
4 Israel?

5 A There was not -- we didn't have a standard business of
6 conduct document in Israel. We had a starter kit for
7 employees.

8 Q That didn't happen until 2002, though, correct?

9 A That's correct. When the direct -- actually, it was
10 2004 when the directive came from News Corp to send this
11 document to all of the divisions within News Corp. Until
12 then, there was no uniform policy.

13 Q So am I hearing you correctly that between '96 and
14 2004, there was no uniform policy to govern the employees in
15 NDS Israel?

16 A That's correct.

17 Q Okay. Now, should Mr. Tarnovsky have been provided
18 with this '96 business standards, the one with the orange
19 cover?

20 A At -- at the time that he would have joined NDS, yes,
21 he would have been provided that document.

22 Q So he should have been given this in '97, this
23 Exhibit 2017, correct?

24 A I'd like to just formally correct the -- Mr. Tarnovsky
25 formally joined NDS Americas probably -- I'm not exactly

1 sure of the date, 2000, 2001. Prior to that, as an employee
2 of HarperCollins, he would have been given this document as
3 well.

4 Q So whoever he worked for, whatever companies he moved
5 through, he should have been given this when he started,
6 correct?

7 A Yes.

8 Q And he should have been reviewing this throughout the
9 years, correct?

10 A Yes.

11 Q And would you have a problem if he wasn't given this?

12 A I would expect human resources' standard policy was
13 that they give it to all employees, and I -- there was no
14 reason to assume otherwise.

15 Q Now, Mr. Norris was his direct boss. Mr. Norris was
16 the one that hired him. Should Mr. Norris have given him
17 this?

18 A It would have come from our human resources department.

19 MR. WELCH: Your Honor, at this time, we'd like to
20 offer Exhibit 2017.

21 THE COURT: Any objection?

22 MR. SNYDER: None, your Honor.

23 THE COURT: Received.

24 (Plaintiffs' Exhibit No. 2017 is received
25 into evidence.)

1 BY MR. WELCH:

2 Q Now, in addition to the lawsuit brought by EchoStar,
3 you are aware that this is not the first time NDS has been
4 sued over its operations, correct?

5 A Are you referring by DirectTV or --

6 Q DirectTV or Canal+.

7 MR. SNYDER: Objection. Irrelevant.

8 THE COURT: Overruled.

9 THE WITNESS: Okay. Could you repeat the
10 question, please?

11 BY MR. WELCH:

12 Q In addition to the lawsuit brought by EchoStar, this is
13 not the first time that NDS has had another company complain
14 or file a lawsuit about NDS's business practices in relation
15 to providing conditional access services?

16 A That's correct.

17 Q In fact, DirectTV, NDS's client, brought some claims
18 against NDS, correct?

19 A That's correct.

20 Q And another company called Canal+ that provided
21 conditional access services in Europe, they filed a claim
22 against your company, correct?

23 A That's correct.

24 MR. SNYDER: Objection. Irrelevant.

25 THE COURT: Overruled.

1 MR. SNYDER: May I have a continuing objection to
2 this line of questioning, your Honor?

3 THE COURT: You may.

4 BY MR. WELCH:

5 Q Canal+ was a competitor of NDS, correct?

6 A That's correct.

7 Q I want to focus you on page 15 of Exhibit 2017.

8 THE COURT: Now, let me caution you concerning
9 those last two areas.

10 Whatever inference or non-inference you draw from
11 this will depend upon the evidence you hear. A simple
12 allegation is not evidence. If there is any same or similar
13 methodology or activity, that's for you to decide. There
14 may not be, there may be. And I'll further instruct you on
15 that at the end of the case, but I've allowed counsel on
16 both sides to get into some limited areas, and those were
17 apparently the last -- well, strike that.

18 Counsel?

19 MR. WELCH: Thank you, your Honor.

20 BY MR. WELCH:

21 Q Are you focused on page 15 of Exhibit 2017?

22 A Yes.

23 Q And the -- and the title of this section is
24 "Relationships with competitors and other trade practices,"
25 correct, sir?

1 A That's correct.

2 Q Now, if we look at the first paragraph. I am not going
3 to have you read, I'm just going to basically summarize it
4 for you, okay? And you just tell me if I'm right on this.

5 It talks about other competitors may have proprietary
6 rights, patents and other property rights in their
7 materials, correct?

8 A Correct.

9 Q And it states in there "Company employees and
10 consultants, especially any persons having direct contact
11 with competitors, have a clear responsibility to know and
12 obey the law," correct?

13 A That's correct.

14 Q And then the next paragraph it summarizes propriety and
15 sensitive information; do you see that?

16 A Yes.

17 Q And what it says, basically, is "The acquisition of
18 trade secrets or other proprietary information" --

19 THE COURT: Slower, slower. You can put that up
20 on the board, Counsel, so the jury can read along with you.
21 That's 2017, page 15.

22 All right. Now, read slowly.

23 MR. WELCH: Okay. I have to figure out how to
24 zoom this thing.

25 THE COURT: No, that's all right. You can slide

1 the paper.

2 BY MR. WELCH:

3 Q On relationships, proprietary and sensitive
4 information, it says "A company will not acquire another
5 company's trade secrets or other proprietary information by
6 improper means or permit the unauthorized use for third
7 parties' patents, copyrights or trademarks. The acquisition
8 of trade secrets or other proprietary information by other
9 than an open, independent" -- for example, reverse
10 engineering -- "or owner authorized means" -- for example,
11 agreements or written releases of suppliers -- "may subject
12 individuals and entities to criminal or civil liability."

13 "Additionally, means such as reverse engineering may be
14 prohibited by contractual arrangement or may violate certain
15 patent or other proprietary rights"; do you see that?

16 A Yes, I do.

17 Q And that's what News Corp was trying to tell all its
18 employees, correct?

19 A That's correct.

20 Q And then if you go underneath that, you have a
21 paragraph entitled "Fair competition"; do you see that?

22 A Yes.

23 Q And it says "The company will compete fairly for
24 business, respecting the rights of other parties. This
25 includes respect for legitimate business relationships of

1 competitors with the company's perspective customers,"
2 correct?

3 A That's correct.

4 Q And one of those customers would be DirecTV?

5 A Yes.

6 Q And one of your competitors would be the client's
7 conditional access provider, correct?

8 A That's correct.

9 Q Now, going back to Mr. Tarnovsky for a second.

10 Now, it's your understanding that Mr. Tarnovsky was
11 terminated for activities or basic -- certain actions that
12 he may have taken in connection with hacking EchoStar's
13 conditional access system, correct?

14 A That wasn't my understanding.

15 Q Well, it was your understanding that he was terminated
16 for being a little less than honest, correct?

17 A With regard to the receipt of some monies inside of a
18 VCR player.

19 Q So he lied to you?

20 A We felt that he wasn't being honest.

21 Q Okay. Now, Mr. Tarnovsky reported directly to
22 Mr. Norris; we established that. Has the company done
23 anything to reprimand Mr. Norris for any of his activities?

24 A Not to my knowledge.

25 Q Now, I want to talk about Mr. Tarnovsky's friend,

1 Mr. Al Menard. Are you aware of who Mr. Al Menard is?

2 A I am not.

3 Q Okay. Are you aware that your company, NDS, hired
4 Mr. Menard after my clients brought the original lawsuit in
5 September of 2002?

6 A That would be something that I would have to defer to
7 our operations security officer, Reuven Hasak.

8 Q Okay. Are you aware that they kept him on the payroll
9 and paid him approximately \$380,000 up until March of 2007?

10 A I learned that here at the trial.

11 Q Did you have a problem with the fact that NDS hired
12 this known pirate, Al Menard, and paid him \$380,000 during
13 the pendency of the claims?

14 THE COURT: Well, Counsel, he said he didn't know
15 about this. This is unduly consumptive of time and
16 argumentative, quite frankly. Let's move along, now.

17 BY MR. WELCH:

18 Q Please take a look at Exhibit 1270 for us.

19 THE COURT: And also, I remind you, Mr. Rubin, you
20 are the corporate representative. You speak on behalf of
21 the corporation. You should know these answers. If not, I
22 will simply call you back until you do.

23 THE WITNESS: Yes, sir.

24 THE COURT: Okay. Thank you.

25

1 BY MR. WELCH:

2 Q Sir, could you tell us what Exhibit 1270 is?

3 A This is a marketing competitive intelligence document
4 comparing NDS to Nagra's conditional access system from a
5 technical and business perspective.

6 Q Okay. Did you see this document shortly after you came
7 back; it's dated May 13, 2001, correct?

8 A Yes.

9 Q Okay. And this is a sensitive internal document of
10 NDS, correct?

11 A Yes, it is. It's marked "confidential."

12 Q Okay. And why would you have reason to see this
13 document?

14 A This would provide my salesmen with information,
15 competitive intelligence information, that they may be
16 facing when they go into potential customers and maybe being
17 brought objections or claims of a competing system. So this
18 document would help them have those answers.

19 Q So was -- was this prepared by somebody at NDS, it was
20 kind of like a collection of information so that your
21 salespeople could go out and have ready answers to the
22 customers if they had any questions about NDS or
23 competitors?

24 A That's correct.

25 Q Okay. Did you ever have occasion to use any of the

1 information in Exhibit 1270 in your discussions with various
2 people?

3 A No, I did not.

4 Q Okay. But you expected your salespeople to be familiar
5 with it?

6 A I expected them to be familiar and use it only if they
7 had to.

8 Q Okay. So it was basically a handy reference guide?

9 A Informational, yes.

10 Q Now, one of the jobs that Mr. Tarnovsky had was to keep
11 his ear to the ground, so to speak, on what was going on in
12 the piracy world, correct?

13 A Correct.

14 Q Would you consider Mr. Tarnovsky to be one of your
15 field agents for gathering competitive intelligence?

16 A Yes.

17 Q Okay. And then what Mr. Tarnovsky would do is he would
18 provide that competitive intelligence?

19 THE COURT: A little slower.

20 MR. WELCH: Sorry, your Honor.

21 BY MR. WELCH:

22 Q He would provide that competitive intelligence to the
23 hierarchy in NDS, correct?

24 A Probably just to the internet competitive intelligence
25 division of operational security.

1 Q And NDS relied upon him for that, correct?

2 A He was one source, only one source.

3 Q Okay. And so Mr. Tarnovsky's information could very
4 well easily for the -- for the Americas standpoint, very
5 well easily end up in a document such as 1270, correct?

6 A Yes.

7 MR. WELCH: Your Honor, at this time, we'd like to
8 move the admission of Exhibit 1270.

9 THE COURT: Any objection?

10 MR. SNYDER: No, your Honor.

11 THE COURT: 1270 is received.

12 (Plaintiffs' Exhibit No. 1270 is received
13 into evidence.)

14 BY MR. WELCH:

15 Q Now, I want to direct your attention to the page that's
16 Bates label number ESC013-5963.

17 THE COURT: Counsel?

18 MR. WELCH: If we could go down to the last
19 paragraph of Section 5.1 and blow that up. It starts -- the
20 last paragraph, 5.1, 5.2.

21 Thank you.

22 BY MR. WELCH:

23 Q Now, this is information that NDS wanted to arm its
24 marketing staff with in connection with their sales
25 activities, correct?

1 A Yes.

2 Q Okay. And I'm just going to read for you briefly. It
3 says "As of the end of January 2001, both EchoStar, Nagra,
4 and DirectTV, NDS, in the United States were hacked. NDS
5 successfully countered a DirectTV pirate attempt in the U.S.
6 on what is being called Black Sunday by the hacker
7 community. NDS countermeasures were sent right before the
8 Super Bowl."

9 And I'll represent to you that was January 21st, 2001
10 is when the Super Bowl was that year.

11 "According to external literature, over 200,000 pirated
12 devices were disabled." That would be NDS pirate devices,
13 correct?

14 A Correct.

15 Q And then it says "NDS field contacts." Now, that could
16 be Mr. Tarnovsky, correct?

17 A Could be.

18 Q "Confirmed that Nagra did not start sending an ECM
19 until after the game was over. Anyone with a pirated
20 NagraCard saw the game for free. Our estimate is that this
21 commercial loss to EchoStar probably accounted for over
22 100,000 non-paying subscribers"; do you see that?

23 A I see that.

24 Q What we are talking about there is 100,000 pirate
25 devices in the field for EchoStar, correct?

1 A Not necessarily. That could also include what are
2 called "gray pirates" in Canada and Mexico, who bought
3 legitimate EchoStar devices and were looking at them outside
4 of the territory of the United States as well.

5 Q But -- but we know you were pretty comfortable there
6 was over 100,000 pirate devices out there?

7 A That was just Chris's estimate, and as it says at the
8 beginning of this document, the information is dynamic and
9 subject to change. And in this particular instance, we
10 weren't able to verify that from a second source. It was
11 just simply Chris's guesstimate.

12 Q If you'd go to the page that ends with the Bates label
13 55.

14 THE COURT: So are you saying, then, that these
15 field contacts are Mr. Tarnovsky?

16 THE WITNESS: In this particular instance, it
17 should have been "field contact" if they were being precise.
18 We did not verify -- we had not verified this information
19 from a second source.

20 THE COURT: I just heard you say "Chris,"
21 referring to Tarnovsky. Is this Tarnovsky?

22 THE WITNESS: Yes, yes.

23 THE COURT: Okay. Thank you.

24 BY MR. WELCH:

25 Q Sir, could you go to the page that ends in the Bates

1 label 955 of Exhibit 1217 -- or 1270, sorry.

2 A Yes.

3 Q If you could go down to the last paragraph. It's
4 entitled "Important note."

5 A Yes.

6 Q I'm going to read to you the second sentence.

7 "NDS marketing competitive intelligence believes this
8 information" -- the information is contained in 1270,
9 correct?

10 A Yes.

11 Q -- "to be accurate as of the date of publication."

12 A Yes.

13 Q Do you agree with that statement?

14 A Yes, and as it -- as it says in the next sentence as
15 well.

16 Q Okay. And what we know is as of the date of this
17 publication, this is May 13th, 2001, correct?

18 A Yes.

19 Q And the reason you wanted -- that when you put
20 information in here, the reason you want it to be accurate
21 is you know you're sending your sales force out into
22 America, and you want to make sure they're giving you
23 accurate information, correct?

24 A That's correct. However, everything on the incident --

25 Q Thank you, sir.

1 A -- is not necessarily accurate.

2 Q Okay. Now, I want you to go back to section 5.1, which
3 is Bates labeled ending 5963.

4 A Yes.

5 Q Do you see the first paragraph of 5.1?

6 A Nagra is not --

7 Q I'm going to read it for you. It says "Nagra is not
8 capable of successfully launching electronic countermeasures
9 to fight a hack." That would be an ECM, correct?

10 A That's correct.

11 Q That was your view?

12 A That was my view in 1997 as well.

13 Q And it says "In the United States, pirates have found
14 Nagra's electronic countermeasures easy to overcome"; do you
15 see that?

16 A Yes, I do.

17 Q So if the system was hacked, they could try to have
18 countermeasures, but it may ultimately end up would have to
19 switch out the system, correct, because ECMs may not be
20 effective?

21 A There are ways to circumvent that, as I discussed in
22 1997 in my testimony and my presentation to EchoStar
23 engineers and personnel.

24 Q And then if the ECMs aren't effective, maybe they --
25 sometimes ECMs can be effective up front, correct?

1 A They could, initially.

2 Q And then as pirates and hackers begin to understand the
3 system better and better, it can overrun the ECMs, correct?

4 A That's only one instance.

5 Q But my -- I'm talking about generally, hackers can
6 eventually overrun an ECM, correct, or ECMs?

7 A It -- it depends on the ECM.

8 Q Okay. And if your ECMs are not effective after a
9 period of time, that can lead a conditional access provider
10 or a satellite provider to have to swap out their
11 conditional access stream, correct?

12 A If the ECMs are not effective or they're not designed
13 properly, yes.

14 Q Now, we talked about the agreement, 1540, which is the
15 1999 agreement. That agreement ran from August '99 to
16 August 2003, correct?

17 A That -- that's correct.

18 Q And you are aware that EchoStar was in the midst of
19 swapping out its cards or having a soft swap, so to speak,
20 in 2003, correct?

21 A I only heard that from the testimony during the trial.

22 Q Okay. Did there come a time in 2002 when DirecTV filed
23 a lawsuit against NDS?

24 A Yes.

25 Q Okay. And one of the things that DirecTV was looking

1 to do was potentially get out of the contract with NDS,
2 correct?

3 A They were looking to exercise a clause, an exit clause
4 in the contract, but for a specific purpose.

5 Q Okay. Now, a new contract was entered into in 2004,
6 correct?

7 A That's correct.

8 Q And were you involved in the negotiations surrounding
9 that new contract?

10 A No, I was not.

11 Q Okay. But you have general knowledge about it, because
12 you're -- you're the chief at NDS Americas, correct?

13 A I have general knowledge.

14 Q Okay. And we'll just short-circuit things. That
15 agreement was entered into in March 2004, correct?

16 A That's correct.

17 Q And it was for six years?

18 A Yes.

19 Q Okay. And March 2004, does that refresh your
20 recollection that that's the time when News Corporation was
21 able to consummate its transaction for purchasing the
22 controlling shares of DirecTV?

23 A Yes.

24 Q So at the same time, we've got News Corporation
25 purchasing DirecTV or the controlling interest in DirecTV,

1 and we have a new contract for conditional access for
2 DirecTV, correct?

3 A That's correct.

4 Q And right after that DirecTV became secure, correct?

5 A They took decisions that we had been pushing the old
6 management to take for a long time, so yes, they did become
7 secure.

8 Q Now, we talked about the claims that DirecTV's made, we
9 talked about claims of Canal+, generally, we talked about
10 the claims that plaintiffs have made. Those are some pretty
11 serious allegations, aren't they?

12 A That's a matter of opinion.

13 Q You don't think they are serious?

14 A Any -- any litigation is serious.

15 Q Your largest customer sues you, one of your largest
16 competitors we established in -- in the case --

17 THE COURT: Counsel, you are not asking questions
18 now.

19 MR. WELCH: Okay.

20 BY MR. WELCH:

21 Q The allegations that were leveled by DirecTV and Canal+
22 and EchoStar span a number of years, don't they?

23 A Yes.

24 Q And they are serious allegations with potential
25 ramifications in the hundreds of millions of dollars,

1 correct?

2 A On the surface, they are serious allegations.

3 Obviously each one is a case unto itself.

4 Q Now, have you ever had the opportunity to have
5 conversations with Mr. Murdoch about the operation of NDS
6 Americas?

7 A I've had many conversations with Mr. Murdoch, but he's
8 never talked to me about the operations of NDS Americas or
9 NDS at all.

10 Q Have you had conversations with Mr. Murdoch about these
11 allegations of piracy?

12 A No, I have not.

13 Q You never told him about it?

14 A No.

15 Q He never asked you?

16 A Nope, never came up in a conversation.

17 Q Now, if Mr. Murdoch gave you or Mr. Peled or Mr. Norris
18 direction, you all would follow that, correct?

19 A Repeat the question, please.

20 Q If Mr. Murdoch gave you --

21 A Is that -- did you say "if"?

22 Q Yes, sir.

23 A Okay.

24 Q If Mr. Murdoch gave you, Mr. Norris and Mr. Peled
25 direction, you would follow that?

1 A Hypothetically, yes, but it never happened.

2 Q Now, you are aware that we've requested Mr. Murdoch's
3 presence in this trial, correct?

4 MR. SNYDER: Objection, your Honor.

5 THE COURT: Overruled.

6 You can answer the question.

7 THE WITNESS: I've heard requested by the Court.

8 BY MR. WELCH:

9 Q Do you know if Mr. Murdoch is going to be here?
10 Because I'd like to have a conversation with him in front of
11 the jury --

12 MR. SNYDER: Objection, your Honor.

13 MR. WELCH: -- about these allegations.

14 THE COURT: Yeah. I haven't formed an opinion yet
15 as a judge whether Mr. Murdoch or Mr. Peled --

16 MR. WELCH: Peled, yes, your Honor.

17 MR. SNYDER: Peled.

18 THE COURT: -- are appropriate witnesses, and I'm
19 not requiring them to come from the NDS side, nor have I
20 formed an opinion whether Andre Kudelski or Charles Ergen on
21 the EchoStar, plaintiffs' side, were appropriate witnesses,
22 nor have I ordered them to come to court. But I've
23 counseled both counsel outside of your presence, and now I
24 counsel you, you may find it relevant that all or none of
25 those people appear. There may be no liability; there may

1 be liability. If you find liability, there may or may not
2 be punitive damages. And how decisions are made or by whom,
3 whether they are at lower levels at EchoStar or NDS or
4 middle management or the top levels will be for you to
5 determine. So let me just say all four persons are invited.

6 (Laughter.)

7 THE COURT: If they don't come, that's their
8 choice. I'm going to give both counsel for each side the
9 ability to argue that corporate decisions may be made at the
10 highest level; they may not be. This gentleman is the
11 corporate representative. There will be corporate
12 representatives for EchoStar, but you'll decide if these
13 people should be appearing or not, and if so, what inference
14 of their non-appearance or appearance you attach to it. But
15 I'm not going to preclude either counsel from either side
16 arguing that on behalf of EchoStar's part, these decisions
17 may have been made at the highest level regarding
18 allegations of satellite piracy.

19 And on the other side, NDS's counterclaim, some of
20 their vital documents were -- were stolen from them, and
21 those corporate decisions might have been made at the
22 highest levels on plaintiffs' side as far as Charles Ergen.
23 I don't know if Andre Kudelski will appear. I don't know if
24 Rupert Murdoch will appear. I don't know if Mr. Peled will
25 appear. They're invited.

1 Counsel?

2 BY MR. WELCH:

3 Q Now, Mr. Rubin, you've been sitting here for all the
4 testimony with the exception of Thursday afternoon and
5 Friday, correct?

6 A Correct.

7 Q And you know there's two plaintiffs in this lawsuit,
8 correct; there's EchoStar, and then there's NagraStar,
9 correct?

10 A Correct.

11 THE COURT: And by the way, at least I've talked
12 with counsel, also, that it may or may not be beneficial if
13 these persons appear and look you in the eye and tell you
14 what's occurred, because you have a multitude of
15 corporations, some with different ownership interests. And
16 how you find corporate responsibility or who is in charge of
17 decision making may not lie with lower level members of
18 management or even, you know, corporate representatives.
19 And you may attach no significance to their non-appearance,
20 you may attach significance, but counsel has been on
21 forewarning for a significant period of time on both sides
22 that they can have these people appear or not. And then you
23 can judge credibility if they decide to or not, because
24 these are serious allegations on both sides.

25 Counsel?

1 MR. WELCH: Thank you, your Honor.

2 BY MR. WELCH:

3 Q Now, Mr. Rubin, EchoStar brought its top of the line,
4 Mr. Ergen, didn't it, gave your -- your counsel the
5 opportunity to cross-examine Mr. Ergen on the stand; he was
6 the first witness?

7 A He did.

8 Q And we brought Mr. Lenoir, the CEO of NagraStar, the
9 other plaintiff, put him on the stand second and let the NDS
10 attorneys cross-examine him, correct?

11 MR. SNYDER: Objection, your Honor. This is an
12 issue that --

13 THE COURT: Sustained.

14 Is Mr. Andre Kudelski going to be appearing,
15 Counsel?

16 MR. WELCH: Henri Kudelski is going to be here.

17 THE COURT: Andre Kudelski will be here?

18 MR. WELCH: Henri, Henri.

19 THE COURT: Well, that's Henri. Is Andre
20 Kudelski, the primary owner of the Kudelski Group,
21 et cetera, going to be here?

22 No, no, Counsel, I'm asking you.

23 MR. WELCH: As of this time, they have not put him
24 on the witness list, and we haven't put him on --

25 THE COURT: No, no. I'm sorry, Counsel. I've

1 invited him.

2 MR. WELCH: Okay.

3 THE COURT: I've invited corporate America and
4 international to appear. So let me be very clear, I've
5 extended a warm invitation.

6 (Laughter.)

7 THE COURT: You can judge their appearance or
8 non-appearance, whether they're international figures or
9 national figures, the Court has limited jurisdiction. I am
10 not going to order somebody in from Israel or -- or
11 Switzerland. And both sides can choose to put on the stand
12 who they choose, but as a jury, I've counseled outside your
13 presence and now counsel in your presence that with these
14 kinds of allegations, satellite piracy on one side and
15 stealing of vital documents on the other side, that if these
16 did occur, you are going to have to decide if these are
17 lower level people for either party making these decisions,
18 middle management or the very top of the structure. You
19 have the right to have people appear and look you in the eye
20 and tell you, you know, that they did or didn't or have
21 knowledge or not, and so they're warmly invited.

22 BY MR. WELCH:

23 Q Could you please take a look at Exhibit 1065 for us.

24 It's just housekeeping, your Honor.

25 Can you tell us what this is, sir.

1 A It says "Form 20-F, filed by NDS Group PLC."

2 Q And that's one of the defendants in the lawsuit,
3 correct?

4 A That's correct.

5 Q And this is the securities filing that's filed with the
6 government --

7 THE COURT: Slower, slower. You are slurring your
8 words.

9 BY MR. WELCH:

10 Q And this is a securities filing that's filed with the
11 government?

12 A That's correct.

13 MR. WELCH: Your Honor, at this time, we move to
14 admit 1065.

15 THE COURT: Any objection, Counsel?

16 MR. SNYDER: No objection.

17 THE COURT: Received.

18 (Plaintiffs' Exhibit No. 1065 is received
19 into evidence.)

20 BY MR. WELCH:

21 Q Now, I'd like to take a look at Exhibit 2011.

22 Could you please tell us what Exhibit 2011 is.

23 A This is Form 10-Q that every public company needs to
24 file on a quarterly basis, and this one is for NDS Group
25 PLC.

1 MR. WELCH: Your Honor, at this time, we'd like to
2 move the admission of Exhibit 2011.

3 THE COURT: Any objection, Counsel?

4 MR. SNYDER: No objection.

5 THE COURT: 2011 is received.

6 (Plaintiffs' Exhibit No. 2011 is received
7 into evidence.)

8 MR. WELCH: Now, if there's any need for the jury
9 to assess the revenues or the net worth of the Defendant
10 NDS, these are two documents, 20 -- 2010 and 2011.

11 MR. SNYDER: Objection, your Honor. It's
12 argument. There is no question.

13 THE COURT: Sustained.

14 BY MR. WELCH:

15 Q Those two documents, 2010 and 2011, they reference
16 revenues and net worth of the defendant, correct?

17 A That's correct.

18 MR. WELCH: Your Honor, at this time we have no
19 further questions for Mr. Rubin.

20 THE COURT: Thank you.

21 This is cross-examination by Mr. Snyder on behalf
22 of NDS.

23 MR. SNYDER: Thank you, your Honor. Darin Snyder
24 for the defendants.

25

CROSS-EXAMINATION

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BY MR. SNYDER:

Q Good morning, Dr. Rubin.

A Good morning.

Q You've been on the stand a couple of times now, but the jury hasn't really had a chance to hear very much about you. Could you tell the jury a little bit about your family?

A Okay. I've been married 32 years. We have six children, five boys and one girl.

Q Do you have any grandchildren, Dr. Rubin?

A I have. I have 11 grandchildren.

Q I'm sure people noticed that you had to leave on Thursday. Could -- could you tell the jury where you went?

A Yes. I raced out of the courtroom here and made my flight to Tel Aviv, the last flight into Tel Aviv 20 minutes before flight time. I spent the two days with my -- Passover with my family and had a chance to finally see two granddaughters who were born a week apart.

Q Dr. Rubin, could you briefly describe for the jury your educational background?

A Okay. I have a bachelor of science degree from the Jerusalem College of Technology. It's in electro-optical engineering and applied physics.

Q Do you have any other degrees?

A Yes, I have a master of science degree in system

1 engineering from Case Western Reserve University in
2 Cleveland, Ohio, and I have a Ph.D in biomedical
3 engineering. That's actually a dual degree in medicine and
4 engineering right here from southern California, USC.

5 Q Are you typically addressed as "Dr. Rubin"?

6 A It depends where. Certainly not by my wife.

7 (Laughter.)

8 BY MR. SNYDER:

9 Q Well, I don't know how many lawsuits have had two
10 Dr. Rubins as witnesses, but -- but I'll go ahead and
11 address you as Dr. Rubin, since we -- we try to be a little
12 bit formal here for obvious reasons.

13 A Dov would work, too, but as you please.

14 Q Okay. Dr. Rubin, before getting involved with NDS, did
15 you do work in the biomedical field in which you've been
16 educated?

17 A Yes. I know at this point, my father was a physician.
18 He wanted me to go into medicine, but yes.

19 Q Could you describe your work in the biomedical field
20 for the jury, please?

21 A Yes, when I was at Case Western Reserve, I co-developed
22 a very neat life-saving device. It's called -- it was
23 called a transcutaneous oxygen sensor. It sounds like a
24 mouthful, but it actually is very vital for the survival of
25 premature infants. If you want to know the oxygen tension

1 in any premature infant, you have to actually sample the
2 blood, which then puts them in a life-threatening situation.

3 THE COURT: Just a little slower. I can see that
4 that's breaking out a little bit.

5 Say that again slower.

6 THE WITNESS: With premature infants, you need to
7 monitor their oxygen tension as frequently as possible, and
8 the typical method is to sample blood and then measure the
9 oxygen. The act of sampling the blood actually affects the
10 infants' health, and so we came up -- I came up with a
11 method that allowed to monitor it continuously by putting a
12 sensor right on the premature infants' skin. That became a
13 model for something that's used today all over the world.
14 You probably see this not only in premature infants, just
15 every hospital around the world, they put a little sensor on
16 your finger, and they monitor your oxygen, the carbon
17 dioxide without having to take blood. It's noninvasive, and
18 that's a very nice life-saving device used millions of times
19 around the world.

20 BY MR. SNYDER:

21 Q Can you give the jury any other example of the work
22 that you did in the biomedical field before joining NDS?

23 A I worked for the City of Hope up in Duarte where I
24 invented a computer system for early detection of lung
25 disease. We are talking several years to be able to detect

1 the onset of lung disease, long before traditional methods
2 can actually spot it. The results are published and still
3 used clinically today up in the City of Hope.

4 Q Dr. Rubin, it seems like quite a jump from testing the
5 blood and saving the lives of premature babies to working on
6 conditional access systems. Can you tell the jury how you
7 went from the biomedical field to conditional access.

8 A Something that I -- I and my wife feel is important is
9 making a difference in different ways and maybe some
10 examples where we felt we are contributing in the medical
11 field, but around 1983, we felt we wanted to make a
12 difference by moving our family. We were a little smaller
13 then, we only had three children, but moving to Israel to
14 try to make a difference there maybe in a different way.

15 It was certainly my vision, our vision, that I'd like
16 to be involved -- I'd like to start a company in which we
17 have a spectrum of people, all races, all nationalities,
18 sort of be a model, a beacon in the Middle East for what --
19 how people can work harmoniously together. And I'm pretty
20 proud of the fact that -- that after a few years there, I
21 was able to have the opportunity of -- of starting NDS and
22 fulfill that dream.

23 Q Were you involved in the founding of NDS?

24 A Yes, I was. At the time, I had a -- a company -- I had
25 started a company of my own that was working in computer

1 communications. I wish there were other biomedical
2 companies in the field in Israel at the time, but there
3 weren't. But along that period of time, I did come across
4 a -- a technology called encryption technology or
5 cryptography developed by Professor Shamir, Professor Adi
6 Shamir, from the Weizmann Institute of Science.

7 Q I need you to slow down, Dr. Rubin.

8 A I'm sorry.

9 THE COURT: Adi Shamir?

10 THE WITNESS: S-h-a-m-i-r.

11 THE COURT: For my own protection for the record,
12 this Court's going to state that the conversation's too
13 quick. I am not going to interrupt you, Doctor, but if
14 there was a review in court in this matter, that court
15 should be put on notice that it's impossible for the court
16 reporter to take accurate notes. And unless counsel can
17 control that by taking a pause or you can control that, the
18 Court can only make that statement that it's trying to get a
19 record.

20 THE WITNESS: Okay, your Honor.

21 BY MR. SNYDER:

22 Q So you discovered the -- or you learned about the
23 cryptographic algorithms of Dr. Shamir?

24 A Yes.

25 Q And then can you finish describing how NDS was founded,

1 again, speaking slowly, Dr. Rubin.

2 A I recognized that the future of technology, the way the
3 world was going to be moving in 1988 was electronically.
4 There would be electronic funds transfers, documents that
5 needed to be proved to be unforgeable, and this
6 cryptographic technology had perfect applications. And
7 after some meetings with -- with Professor Shamir, we felt
8 that we had some very good ideas in which to start a -- a
9 joint venture. The only thing that we lacked was money, and
10 somehow we were actually able to make a connection with News
11 Corporation, who invested the first \$5 million in our
12 venture.

13 Q And when was NDS founded?

14 A February of 1988.

15 Q And has NDS helped you achieve this idea of creating a
16 company in the Middle East with various races and
17 nationalities?

18 A Yes, they have. The company today supports over a
19 thousand families in Jerusalem. We are the largest
20 high-tech employer in Jerusalem, and we've been visited and
21 commended for our work by prime ministers and dignitaries.
22 I certainly feel -- my wife and I certainly feel that we've
23 fulfilled that goal.

24 Q And what is your current role with NDS?

25 A My current role has been here in California since 1998.

1 I am the vice president and general manager of NDS Americas
2 right down the road in Costa Mesa.

3 Q What other roles have you had at NDS since it's
4 founded?

5 A Well, I officially started out as technical manager,
6 general manager, vice president of sales, but you know, with
7 startups, you sort of have to do everything. You even have
8 to do windows. And so titles doesn't necessarily say
9 everything, but yes, I've had a number of titles.

10 THE COURT: I'm sorry, Counsel. I'm unclear about
11 something.

12 You said you're vice president of NDS Americas?

13 THE WITNESS: Vice president and general manager
14 of NDS Americas.

15 THE COURT: Who is the president of NDS Americas?

16 THE WITNESS: There is none.

17 THE COURT: Okay.

18 BY MR. SNYDER:

19 Q Is the vice president and general manager of NDS
20 Americas essentially what you're responsible for, Dr. Rubin?

21 A I'm responsible for supporting existing customers,
22 responsible for seeking out new sales, responsible for
23 making sure that our Smart Card manufacturing plant, also
24 located here, operates and delivers functionally, and any
25 other divisions of NDS, any other functional divisions of

1 NDS that reside -- that need to work in the United States
2 receive the proper administrative functions.

3 Q And who do you report to?

4 A I report to the CEO and chairman, Dr. Abe Peled.

5 Q Now, last Thursday you referred to a matrix
6 organizational structure, but you weren't given an
7 opportunity to explain that. Does -- does NDS have a matrix
8 organizational structure?

9 A Yes, we do.

10 THE COURT: Does NDS Americas?

11 BY MR. SNYDER:

12 Q Does NDS Americas have an organizational structure?

13 A Yes, we do, as does the rest of NDS worldwide.

14 Q And could you describe briefly for the jury what you
15 mean by a matrix organizational structure?

16 A Most engineers, most personnel actually have two
17 managers. On one hand, they need a functional manager who
18 has areas of expertise who can assign their proper tasks
19 that they need to do -- need to perform from an engineering
20 standpoint. On the other hand, every region or every
21 employee has a regional manager in which their
22 administrative matters are met, salary, bonuses, benefits,
23 just day-to-day type of needs, make sure that they are
24 adhered to, supported.

25 Q And are you the lead local manager for all of the

1 employees of NDS Americas?

2 A Yes, I am.

3 Q Are you the functional manager for all of the employees
4 at NDS Americas?

5 A No, I'm not.

6 Q Let's take a couple of examples. What is your role in
7 operational security?

8 A My role in operational security is we have an
9 operational security division located in the Americas, and
10 the person reporting to me is John Norris. And under him
11 are a number of other operatives who also reside in the
12 United States.

13 Q Excuse me.

14 And does John Norris have a functional manager?

15 A Yes, John Norris's functional manager is Reuven Hasak,
16 H-a-s-a-k.

17 Q And who is Mr. Hasak?

18 A Mr. Hasak is the senior vice president of worldwide
19 operational security.

20 Q Now, last week you -- in response to one of Mr. Welch's
21 questions, you said that you would not have expected to hear
22 from Mr. Norris when money was sent to Chris Tarnovsky and
23 found inside of some packages, and I think that might have
24 struck some people as strange. Why did you say you would
25 not have expected to be told about that?

1 A I would -- the person I would have expected to be told
2 immediately would have been his functional manager,
3 Mr. Hasak.

4 Q And why did you think you would not be told about that?

5 A I wouldn't be told about that immediately. That would
6 come up more during our management forum or during
7 conversations I would have with our CEO, but for myself, I
8 really have none -- very little or if -- no actual
9 understanding of the true meaning of operational security,
10 and so it's not my area of expertise.

11 Q What role did you have in research and development?

12 A Here in the United States, I have a large number of
13 research and development engineers whose functional manager
14 resides in Israel, and he gives them their functional
15 direction.

16 Q Now, let's take a -- take a step back for just a moment
17 to the founding of the company. When -- when NDS was
18 originally founded, what was the technology used for?

19 A The original use was what we call secure funds
20 transfer. That was how you transfer money electronically
21 between banks, between an individual and the banks, between
22 foreign currency traders maybe on two sides of the world who
23 don't know or have never seen each other, and how do they
24 trust each other, and these were the cryptographic
25 techniques that we developed.

1 Q And how did that technology evolve into NDS's current
2 business of supplying conditional access systems for
3 television operators?

4 A About a year into the company, there was a system in
5 England called Sky Television that was looking to broadcast,
6 and they were told by all of the studios that they needed to
7 scramble or encrypt their movie content before they would
8 have the right to broadcast it. And we were known in many
9 places around the world as being experts in the area of
10 cryptography.

11 Q Does NDS's technology have any current uses beyond paid
12 television?

13 A Yes. We haven't really exploited all. It has military
14 application. It has applications -- new applications that
15 are coming out in the future like electronic paper,
16 electronically erasable paper that you actually hold and
17 treat like paper, but change the images on it.

18 Q Now, you mentioned earlier this morning, Dr. Rubin,
19 that NDS is a publicly traded company?

20 A Yes.

21 Q What does that mean?

22 A Well, that means that we are regulated by all sorts of
23 government offices, regulations and the notorious
24 Sarbanes-Oxley rules called "SOX," which is a headache every
25 year that we have to face from an accounting perspective.

1 Q When did NDS become a publicly traded company?

2 A November of 1999.

3 Q And was there -- why did NDS go public in November of
4 1999?

5 A Well, it was a process that we had discussed and
6 actually begun a long time before 1999 for a very simple
7 reason, or two reasons. One is always to provide share
8 incentives to employees to keep their motivation and keep
9 them staying on in the company, as was the practice in the
10 high-tech industry in those years.

11 But more importantly for me, and more important for the
12 company, we found ourselves in many situations where we were
13 going in for -- to bid on a system that was competing to
14 ourselves, competing maybe to a News Corporation entity that
15 we applied in technology for, and we wanted to show the
16 customers that you can't have these shenanigans. We really
17 have to -- we really have to perform. We have public
18 accountability, and we wanted to give them the comfort
19 that -- that they were getting the best deal possible.

20 Q Now, Dr. Rubin, you were asked last week about the
21 timing of NDS's public offering, selling its shares to the
22 public, and the timing of renewing your contract with --
23 with DirectTV; do you recall that testimony?

24 A Yes, I do.

25 Q Did the timing of the contract or renewal of the

1 contract with DirecTV have anything to do with the timing of
2 NDS for the first time selling shares to the public?

3 A Well, as I said before, the -- the process of going
4 public is a lot of documentation, and it takes a lot of
5 time. It's like a slow-moving ship. You can't really
6 predict when and how fast you can turn. So the timing did
7 not have anything to do directly with the DirecTV contract,
8 closing of the DirecTV contract, but I can sure say it
9 didn't hurt us.

10 Q Now, Dr. Rubin, how many -- does -- does NDS have
11 customers beyond DirecTV now?

12 A Yes.

13 Q Who is DirecTV's largest customer? I'm sorry, who was
14 NDS's largest customer? I misspoke, excuse me.

15 A NDS's largest customer is DirecTV.

16 (Laughter.)

17 BY MR. SNYDER:

18 Q Now, when did -- when did NDS begin its relationship
19 with DirecTV?

20 A I actually began the relationship with DirecTV in the
21 sales -- in the sales period back in February of 1991, and
22 proceeded negotiating that deal through I think it was
23 January of 1992.

24 Q Was NDS DirecTV's original conditional access provider?

25 A Yes, we were.

1 Q How long did that contract last?

2 A Well, the original contract was called to last for six
3 years, but we had an extension in the middle.

4 Q Okay. Was that extension in 1998?

5 A Yes. We began negotiations I believe it was the summer
6 of 1998, and they were taking a long time, and the original
7 contract was -- was due to expire, so both sides agreed we
8 should issue an extension, it would be both our benefits.

9 Q What was the -- the primary issue in the discussions
10 between NDS and DirecTV when that contract was being
11 renegotiated?

12 A The major point was that DirecTV wanted more insight or
13 control over our technology.

14 Q Was -- did you know at that time that DirecTV was
15 talking to other competitors?

16 A We were told at the first session, the opening session
17 of negotiations, that this would be treated like an open
18 contract like any other contract with any other vendor, and
19 yes, there would be other bidders for the contract.

20 Q Did DirecTV ever tell you the names of any of the other
21 bidders for DirecTV's business?

22 A Absolutely not. They were very discrete, and they were
23 fastidious and meticulous about not telling that to us.

24 Q Now, last week you were asked whether you knew whether
25 or not Nagra was one of the competitors for DirecTV's

1 business; do you recall that testimony?

2 A I do.

3 Q And I believe you said you assumed they were, but you
4 didn't know that they were?

5 A That's correct. I was, first of all, referring to my
6 deposition when I was asked a question about assuming, and I
7 said, yes, I assumed that Nagra would be one of the possible
8 conditional access suppliers. The question that came to me
9 last week was "Did you know," and clearly, I did not know.

10 Q Okay. Why do you say -- why did you assume that Nagra
11 would be one of the competitors?

12 A Well, there's only a handful of large conditional
13 access providers. There were smaller ones that DirecTV
14 could have chosen, but there's Motorola, Scientific Atlanta,
15 Nagra, Detto, even Microsoft, who could have bid -- been the
16 potential bidders for that contract, who we did have no way
17 of knowing.

18 Q Did DirecTV at any time during those negotiations
19 mention Nagra or any other possible competitors for the
20 DirecTV business?

21 A Never.

22 Q Were you aware at the time of those negotiations that
23 DirecTV had had some discussions with Nagra?

24 A I wasn't aware of it.

25 Q When was the first time you became aware that DirecTV

1 in the '98, 1999 time frame had had discussions with Nagra
2 about becoming DirecTV's conditional access provider?

3 A It may have been during my deposition when the question
4 was put to me.

5 Q At the time that you were renegotiating the contract in
6 1988 and 1999 with DirecTV, was the NDS system supplied to
7 DirecTV hacked?

8 A Yes, it was.

9 Q What was NDS doing to respond to the piracy of the
10 DirecTV system?

11 A Well, first of all, we were developing countermeasures.
12 We were putting out our operational security personnel in
13 the field trying to locate pirate devices, to shut down
14 pirate websites and other sources such as that.

15 Q Has NDS ever changed the cards that are used by the
16 DirecTV system?

17 A Yes, we have.

18 Q When was the first of those card changes?

19 A The first of the card changes, late 1995, beginning of
20 '96, but it wasn't exactly a card change. We introduced a
21 new card to the field, and DirecTV chose to leave the older
22 card still in the field.

23 Q And what was that new card called?

24 A That new card was called P2, period two.

25 Q And at some point, did NDS supply DirecTV with a card

1 called the P3 card?

2 A Yes, we did.

3 Q And when was that, approximately?

4 A That was probably July -- June, July of 1999. We
5 worked on that with DirecTV for quite a while.

6 Q And was that card -- was that -- the introduction of
7 that card a card swap?

8 A No, that wasn't a card swap. That was just introducing
9 a -- yet another card into the system.

10 Q And was there another card after the P3 card?

11 A Yes, there was. In the Spring of 2002, we developed
12 P4, period four card.

13 Q And was -- was the introduction of the P4 card a card
14 swap?

15 A No, that wasn't either.

16 Q Did DirecTV -- before News Corp purchased an interest
17 in DirecTV, were you ever engaged in a card swap?

18 A No, they weren't.

19 Q Has NDS encouraged DirecTV to engage in a card swap?

20 A We definitely did. That was a source of discussion
21 probably from the period two card. When we introduced that
22 card in 1996, it was always a point of discussion, but
23 DirecTV, for their reasons, chose not to do that swap.

24 Q Why did NDS want DirecTV to engage in a card swap after
25 the P4 card was introduced?

1 A We felt adamant that the P4 card was as close as you
2 could call an ultimate card in terms of its security, its
3 ability to perform. And we felt that it -- it had met and
4 solved all of the previous problems that we'd encountered
5 in -- in previous hacks.

6 Q Has the P4 card ever been pirated?

7 A Not since -- not since its introduction in 2002.

8 Q At some point, did DirecTV engage in a card swap?

9 A Yes, they did.

10 Q And when was that?

11 A Well, that was when new management came in, and we once
12 again presented to them the pros and cons of remaining with
13 the status quo versus the benefits of going forward and
14 cutting -- making a clean cut.

15 Q And was that new management that was put in place after
16 News Corp purchased an interest in DirecTV?

17 A Yes, it was.

18 Q So can you explain to the jury why -- what relationship
19 there was between News Corp purchasing an interest in
20 DirecTV and DirecTV ending its piracy problems?

21 A I can only quote a coincidental. It's something that
22 we had lobbied, and it's something that made sense just
23 about -- to just about everybody. And we're just fortunate
24 that this new management understood the benefits of doing
25 that, and I think they reaped the benefits in the years

1 going forward.

2 Q And in the years before that card swap, had the P4 card
3 already been introduced?

4 A It had been in the field for two years with no problems
5 whatsoever. We did, however, have to operate the system at
6 what we call the lowest common denominator, meaning the
7 lowest level of security that would satisfy all the cards,
8 including the hacked cards that were in the field.

9 Q Let's make sure that everybody understands that. When
10 you say "the lowest common denominator," you mean that a
11 signal that would be broadcast had to be encrypted by the
12 P2, P3 and P4 card?

13 A That's correct.

14 Q And after the card swap was completed to go to the P4
15 card, what was NDS and DirecTV able to do?

16 A We disabled any old cards, any P1, P2 or P3 cards that
17 were in the field. They became inoperative, and today P4 is
18 the only card that's out there, or the variance thereof.

19 Q Now, you mentioned earlier, Dr. Rubin, that DirecTV
20 is -- is an important customer. And I believe that last
21 week you showed -- the jury was shown some revenue figures
22 from DirecTV; do you recall that?

23 A Yes.

24 MR. SNYDER: Mike, could you show the witness
25 Exhibit 1597.

1 BY MR. SNYDER:

2 Q Dr. Rubin, can you explain, briefly, to the jury what
3 is Exhibit 1597.

4 A This is an analysis of revenue and profit that NDS
5 received from DirectTV.

6 Q And is this a summary that was being prepared based on
7 NDS's regular books and records?

8 A Yes, this was something that was prepared at the
9 request of counsel late last week and -- yes.

10 Q And does this reflect the amount of operating profit
11 associated with DirectTV for the years 1999 through 2005?

12 A Yes, it is.

13 MR. SNYDER: I move Exhibit 1597.

14 MR. WELCH: Your Honor, we object to the
15 introduction of 1597. We were not provided with the
16 underlying data, although we requested it during discovery.

17 THE COURT: Overruled. It's received.

18 (Defendants' Exhibit No. 1597 is received
19 into evidence.)

20 THE COURT: You can look at that underlying data
21 tonight, tomorrow night, Friday night, Saturday and Sunday.

22 (Laughter.)

23 BY MR. SNYDER:

24 Q Dr. Rubin, in response to --

25 THE COURT: And they've been with me all day

1 Saturday and Sunday, so we are working outside of your
2 presence -- or half a day Sunday.

3 BY MR. SNYDER:

4 Q Dr. Rubin, in response to one of plaintiffs' counsel's
5 questions, you were asked whether that spreadsheet of
6 revenue numbers was the amount that -- that NDS made from
7 DirecTV; do you recall that testimony?

8 A Yes, that was both in my deposition and in my
9 testimony.

10 Q And when you said that that was the amount that NDS
11 made, could you explain what you mean?

12 A That would be the total revenue that DirecTV paid us
13 without accounting for any expenses, so expenses like card
14 costs, how much it costs us to manufacture a card, things
15 like royalties that we had to pay third parties for the
16 technology that we use. And our operating expenses, meaning
17 the manpower, the research and development, not only here in
18 the Americas, but in -- in all of our R and D centers around
19 the world, those are all expenses for us.

20 Q Okay. And did you include all of those expenses in
21 Exhibit 1597, the calculation of profit from the DirecTV
22 account?

23 A Yes, I did.

24 Q In preparing Exhibit 1597, did you notice any errors in
25 the listing of the revenue that was on Exhibit 650?

1 A Yes, there was a -- a single error.

2 Q And what was that?

3 A In 2005, the revenue received was \$161.2 million.

4 Q And what accounts for that discrepancy with
5 Exhibit 650?

6 A When we calculated -- the year 2005 was the year that
7 NDS switched its general accounting principles, GAP, as it's
8 called, from general accounting principles UK to general
9 accounting principles U.S. And so, in addition, up until
10 that point, all of our accounts were held in British pounds,
11 in the currency British pounds, and in 2005, we switched to
12 U.S. dollars.

13 So those two factors caused a bit of confusion in
14 calculating the underlying revenue or just to calculate that
15 revenue, so this is the correct number that -- that appears.

16 Q And when you say "this is the correct number," are you
17 referring to the number that's printed on Exhibit 1597?

18 A Yes, 1597, page 7.

19 Q Thank you, Dr. Rubin.

20 Now, there was some testimony on Thursday and this
21 morning about News Corporation's relationship to NDS; do you
22 recall that?

23 A Yes.

24 Q What is -- what control does News Corporation exercise
25 over NDS?

1 A From a management perspective, News Corporation appoint
2 four board members. They also have the right to appoint
3 three outside board members and the chairman.

4 Q Now, does -- does Mr. Rupert Murdoch occupy a seat on
5 the board of NDS?

6 A No.

7 Q Does Mr. Murdoch have any role in the operations or
8 business of NDS?

9 A I can talk personally to this one, because since day
10 one, 20 years ago, he has never given instruction to me or
11 anyone within NDS about the operation of the company or to
12 favor one customer over another customer.

13 Q Is NDS permitted to sell its products to competitors of
14 News Corp or News Corp companies?

15 A Absolutely, yes.

16 Q And does anyone at News Corp ever provide any
17 instruction on what kind of business arrangements NDS should
18 have with competitors of News Corp companies?

19 A Nothing.

20 Q Has anyone at News Corp ever provided you with any
21 instructions or directions on how NDS should behave towards
22 its competitors?

23 A Also not other than the standards of business conduct.

24 Q Now, who are NDS's direct competitors?

25 A Well, that depends on the region. Maybe you could help

1 me.

2 Q Okay. Well, you were asked last week whether Nagra or
3 NagraStar was NDS's biggest competitor; do you recall that?

4 A I do.

5 Q Is NagraStar NDS's biggest competitor?

6 A No, they are not.

7 Q Okay. Is there any region in which NagraStar is NDS's
8 biggest competitor?

9 A Maybe in Europe.

10 Q Who are NDS's biggest competitors in the United States?

11 A The largest competitors, just so that you understand,
12 we consider conditional access competition not only related
13 to satellite --

14 Q Slow down, Dr. Rubin, please.

15 A -- not only relating to satellite, but conditional
16 access works and cable and telephony over the internet. So
17 our biggest competitors here in the United States consist of
18 either Motorola or Scientific Atlanta simply by virtue of
19 the fact that there are 65 million cable homes in the United
20 States. Assume a 50/50 split, and that gives you 32 million
21 for each of them, so they are our largest competitor here.

22 Q And for how many homes in the United States does NDS
23 supply conditional access?

24 A I can probably answer that in terms of active cards. I
25 don't know exactly how many homes. Some homes have multiple

1 cards.

2 Q I wasn't trying to ask a trick question, Dr. Rubin;
3 you're right. What's the number of active cards, actually
4 cards NDS has in the United States?

5 A We have probably maybe 35 or 40 million active cards
6 here.

7 Q And what is the number of active cards worldwide for
8 NDS?

9 A About 82 million.

10 Q Now, did Canal+ used to be one of NDS's competitors in
11 the Smart Card market?

12 A Yes, they were.

13 Q Does -- is Canal+ still in the Smart Card business?

14 A No, they are not.

15 Q Who purchased the Canal+ Smart Card business?

16 A The Nagra company, the Nagra Kudelski company.

17 THE COURT: And when you say "Kudelski," that
18 would be Andre Kudelski, not his brother Henri?

19 THE WITNESS: Andre.

20 THE COURT: Andre, thank you.

21 BY MR. SNYDER:

22 Q Dr. Rubin, I know you've been sitting here for --

23 THE COURT: And just so the jury knows, he's in
24 Switzerland; is that correct?

25 THE WITNESS: That's my understanding, yes.

1 THE COURT: Mr. Rupert Murdoch is in Australia?

2 THE WITNESS: No, he usually resides, besides on
3 the airplane, in New York, New York and Los Angeles.

4 THE COURT: And Mr. Peled is in the UK?

5 THE WITNESS: He is in the UK, yes.

6 THE COURT: They are all invited.

7 BY MR. SNYDER:

8 Q Dr. Rubin, you've -- during the testimony in this case,
9 you've heard reference to the Black Hat Team and the Haifa
10 research center?

11 A Yes, I have.

12 Q What, if any, is your role with the Haifa research
13 center?

14 A I have no direct role with the -- with the research
15 center.

16 Q Were you aware of the creation of the Haifa research
17 center at the time?

18 A Yes, I was.

19 Q And how -- in what capacity were you aware of the Haifa
20 research center?

21 A I'm a member of the management forum, which are the
22 senior executives in the company who meet with Dr. Peled,
23 and this was discussed, that we needed to have an additional
24 engineering facility, something beyond our regular
25 engineering abilities.

1 Q And what was -- why was it considered important to have
2 another research facility beyond the traditional NDS
3 research facilities in Jerusalem?

4 A We wanted to have a set of engineers that looked at a
5 product, whether it was our own or any other product, in an
6 unbiased way without the benefit of getting information,
7 looking at it sort of as a black box, where the Black Hat
8 name comes from, where they don't have the benefit of -- of
9 documents or winks and nods or hearing hallway conversations
10 about any given product.

11 Q Are you familiar with the term "Black Hat team"?

12 A Yes, I am.

13 Q And what does Black Hat Team refer to?

14 A It's a term that I heard referred to within IBM where
15 they established a team of engineers whose job it was to
16 break into, hack into, reverse engineer, understand IBM's
17 own systems, and hence, they got the term "Black Hat team."

18 Q Now, if you -- since the creation of the Haifa research
19 center, have you been told what kind of projects they
20 undertook?

21 A No.

22 Q Have you ever been given the reports of any of those
23 projects?

24 A No, I have not.

25 Q I'm sure you've heard, as you've sat here through the

1 trial, a lot of reference to this document called the
2 Headend Report?

3 A Correct.

4 Q Before this litigation, had you ever seen a copy of the
5 Headend Report?

6 A No.

7 Q Have you been sent the reports on any of the reverse
8 engineering projects at the Haifa research center?

9 A None.

10 Q You were asked on Thursday whether you were aware of
11 any direct benefits to NDS from reverse engineering; do you
12 recall that testimony?

13 A Yes.

14 Q And -- and I believe you said that you were not aware
15 of any of those benefits?

16 A That's correct.

17 Q Why is it you're not aware of any direct benefits to
18 NDS from these reverse engineering projects?

19 A The way the process was to work was that the Haifa
20 research center makes their conclusions, makes their
21 recommendations about maybe mistakes that should be avoided,
22 maybe makes suggestions of things to do, but all those
23 suggestions really get incorporated by the chip design team
24 located in Jerusalem. So that's just input for them about
25 what to do, what not to do, pitfalls to avoid, so I

1 certainly -- I don't think it's a one-to-one relationship.
2 It certainly isn't a one-to-one relationship of saying,
3 "Well, we've discovered this, therefore, that."

4 What -- about the only thing that -- that I learned in
5 talking to some of the people in Jerusalem was that their
6 one conclusion was not to use the ST chip.

7 Q Now, Dr. Rubin, is developing better chips one of the
8 ways that NDS tries to fight piracy?

9 A Absolutely.

10 Q Is one of the ways that NDS fights piracy through its
11 operational security group?

12 A Yes.

13 Q And is one of the ways that NDS fights piracy in the
14 operational security group by hiring former pirates?

15 A Yes.

16 Q Why does NDS hire former satellite pirates?

17 A It's -- the reason is we learned the hard way. We
18 learned from experience in the early years of the company.
19 Those first six or eight years were quite demanding, and I
20 would say educational for us in the sense that I came to the
21 conclusion, and we came to the conclusion, that our
22 straightforward thinking engineers, who think straight, who
23 think in grids, are definitely not representative of the
24 other forces and the other smart brains that are out there.
25 And there are people that attack the system in ways we just

1 couldn't even imagine.

2 Q And was hiring former satellite pirates one way of
3 gaining that knowledge?

4 A Yes, it was.

5 Q Now, Mr. Welch asked you some questions about DirecTV
6 and the use of former satellite pirates, and I believe you
7 mentioned that DirecTV at one point objected to, in
8 particular, Mr. Tarnovsky working on DirecTV projects; do
9 you recall that?

10 A Yes.

11 Q Was that -- did DirecTV object to Mr. Tarnovsky's
12 involvement when NDS hired Mr. Tarnovsky?

13 A No. In fact, we had discussed with DirecTV that we
14 would be using pirates, and they were fine with that through
15 those early years, '95, '96, and certainly gave no objection
16 for us hiring Mr. Tarnovsky.

17 Q When did DirecTV object to Mr. Tarnovsky's role in
18 DirecTV projects?

19 A After the incident where it was written up in the press
20 that -- that he -- Mr. Tarnovsky had received money in a DVR
21 or DVD at a post office box and all those other details,
22 DirecTV said that they really couldn't afford to have the
23 bad publicity. I think I mentioned last week in my
24 testimony this negative publicity, the old "where there's
25 smoke, there's fire" is bad for everybody in this business.

1 And DirecTV felt that they did not want to be associated
2 with it, guilt or no guilt, but we just couldn't pay the
3 price of having association with him, and they asked me to
4 remove him from the account.

5 Q And what did you do?

6 A I did just that. I removed -- I told Chris -- I told
7 John to please instruct Chris that he was off of the
8 account.

9 Q When you say "John," you're referring to John Norris?

10 A That's correct.

11 Q And the Chris you're referring to is Chris Tarnovsky?

12 A That's correct.

13 Q And was that in the year 2001?

14 A Yes, it was.

15 Q At that point, had Mr. Tarnovsky been assisting NDS and
16 DirecTV in fighting piracy for several years?

17 A Yes.

18 Q And before that time, had DirecTV ever objected to
19 Mr. Tarnovsky's involvement with NDS in fighting piracy?

20 A No. In fact, they certainly benefited from the fruits
21 of his labor in their own prosecutions of -- of criminals.

22 Q Now, you are aware, aren't you, Dr. Rubin, that the
23 EchoStar system has also been pirated for several years;
24 isn't that right?

25 A Yes.

1 Q And is it hopeful to NDS if its competitors' systems
2 are pirated?

3 A No, it's not.

4 Q Why not? That -- that seems a little bit strange to
5 me. Why isn't it good for NDS if its competitor is pirated?

6 A If -- if you are a viewer -- and I know Mr. Ergen said
7 that most Americans are honest, but if you're a viewer and
8 can find a system that's available for free, chances are
9 you're going to go buy that free system. And that means not
10 only loss of revenue for the system that's hacked, that also
11 means a lost potential subscriber for the competitor.

12 Q When you are selling to potential customers, is whether
13 or not a system is pirated the most important consideration?

14 A It's not; it really isn't.

15 Q Why is that?

16 A Customers -- the first and foremost importance for the
17 company -- for the customer is does the system function
18 operationally well. Customers know that piracy is not
19 necessarily their biggest problem. It's not their biggest
20 loss, their biggest financial problem. They want to know,
21 can they deliver instant response time.

22 If any of you have satellite, you know on DirecTV you
23 can get a response in three seconds. If you have a problem,
24 call up the operator. If you want to order a channel, order
25 a movie, you can have that within three seconds.

1 The -- our customer, in this case, DirecTV, wants to
2 know that the system is supporting legitimate subscribers,
3 the 15 to 20 million subscribers that are paying for
4 legitimate television. They want to know that the service
5 is uninterrupted, or as they say, the show must go on. And
6 those are the most important criteria.

7 Q Let me take a step back for a moment to DirecTV's
8 request about Mr. Tarnovsky, Mr. Norris. I believe you
9 mentioned that DirecTV also asked that Mr. Norris be removed
10 from DirecTV projects?

11 A Yes.

12 Q Did -- did DirecTV later rescind or remove that
13 request?

14 A They didn't formally rescind. I got a request maybe
15 probably less than a month later for assistance that their
16 operational security team needed, and I continued to get
17 such similar requests for Mr. Norris's assistance in the
18 months ahead as well.

19 Q So Mr. Norris continued to assist DirecTV with its
20 piracy problems?

21 A Yes.

22 Q Does NDS ever assist its competitors with their piracy
23 problems?

24 A Yes, we do.

25 Q Has NDS ever offered to assist EchoStar with its piracy

1 problems?

2 A Yes, we have.

3 Q Have you ever been involved in any of those offers of
4 assistance?

5 A I certainly have.

6 Q When?

7 A Well, in -- I can recall a couple of instances. First
8 of all, in March of 2000, I had requested a meeting with
9 Mr. Ergen, and there were some other engineers. I believe
10 Mike Dugan, D-u-g-a-n, is present, Dave Kummer, K-u-m-e-r
11 (sic), and of course, Mr. Ergen.

12 Q What was discussed in that meeting as it relates to
13 EchoStar piracy?

14 A Well, if I may, the meeting -- I actually called the
15 meeting to -- to discuss other products that I thought
16 EchoStar would be interested in, things relating to
17 interactive applications, gains, middleware.

18 (Interruption in the proceedings.)

19 THE WITNESS: Middleware, yes.

20 However, the meeting began by Mr. Ergen telling
21 me, "Dov, I have a piracy problem here; what can we do?"

22 And I said to him -- I said I would be more than
23 happy to have our operational security people meet with his
24 to meet that problem, and I did reiterate the same slogan,
25 that piracy for one hurts us all.

1 BY MR. SNYDER:

2 Q And this meeting was when, Dr. Rubin?

3 A March of 2000.

4 Q At any point during that meeting, did Mr. Ergen suggest
5 in any way that NDS might be involved in some way in
6 EchoStar's piracy problem?

7 A No, no, to the contrary.

8 Q At that meeting, did anyone from EchoStar who attended
9 the meeting suggest in any way whatsoever that NDS might be
10 involved in some way with EchoStar's piracy problems?

11 A No.

12 Q There was no mention of that at all?

13 A Not at all. It was a friendly meeting and a friendly
14 discussion.

15 Q Now, let me change topics for just a few minutes,
16 Dr. Rubin, and ask you about Chris Tarnovsky. When did you
17 first meet Chris Tarnovsky?

18 A I had a hard time pinpointing the date. It must have
19 been sometime in 1998.

20 Q What interaction have you had with Chris Tarnovsky over
21 the years?

22 A I treat Chris -- or treated Chris while he was an
23 employee -- I treated Chris no different than any other
24 employee in my company. I make it a point to sit with every
25 individual at least twice a year, ask them how they are

1 doing, talk about their work, make sure that they are
2 comfortable and make sure our employment benefits and just
3 their whole surroundings are to their liking.

4 In Chris's case, I usually would meet him outside the
5 company. We would have lunch right outside our offices, and
6 so I would meet with Chris twice a year for lunch.

7 Q When you met with Chris during these -- these meetings,
8 did you talk about any of his undercover work?

9 A We -- we did. We talked -- typically, from my
10 perspective, what I would try to stress to Chris was that,
11 as I said the analogy before, "where there's smoke there's
12 fire," we as a company, our only reason for existence and
13 ability to sell to companies is if we are perceived as an
14 honest company. And I always have tried from the beginning
15 of this company until today to maintain that image, because
16 it's more than an image. It -- it's a reality from how we
17 operate. And I tried to convey that to Chris, that I know
18 he's working on -- on the dark edge, but that -- that
19 anything that he would do or get misconstrued that he was
20 doing something wrong would be devastating for us, and yeah.

21 Q Did Chris Tarnovsky ever mention to you that he had a
22 mailbox in San Marcos, Texas?

23 A No, he did not.

24 Q When was the first time that you, as the vice president
25 and general manager of NDS Americas, learned that

1 Mr. Tarnovsky had received some packages with money inside
2 them at a mailbox in San Marcos, Texas?

3 A I learned that from the newspaper. I think it was the
4 Los Angeles Times.

5 Q Are you aware that there was an investigation conducted
6 as a result of those packages that were found?

7 A Yes, yes.

8 Q Was NDS ever charged with any crimes?

9 A No.

10 Q Was NDS ever indicted?

11 A No.

12 Q Were any search warrants ever executed against NDS?

13 A No.

14 Q Was Chris Tarnovsky ever charged with any crime?

15 A No, he was not.

16 Q Was Mr. Tarnovsky indicted?

17 A No.

18 Q Were any search warrants ever executed against
19 Mr. Tarnovsky?

20 A No.

21 Q Now, I assume that as a security company, Dr. Rubin,
22 NDS also secures its own facilities?

23 A Yes.

24 Q Could you describe, generally, what kind of security
25 NDS uses?

1 A Well, first of all, we have physical security of the
2 premises, video cameras, access control systems with only
3 badged employees. We maintain 24 by 7 security guards who
4 patrol the facility, and then we have the actual internal
5 security of our data.

6 Q And is the internal security of your data also
7 protected?

8 A Yes, it's protected in multiple ways. First of all, we
9 only communicate on our internal network. That means our
10 internal wide area network that connects the NDS offices
11 around the world, and that communication is encrypted.

12 In addition, we also make sure that every personal
13 computer that is used has a resident encryption system so
14 that the contents of the disk, if the disk ever gets stolen,
15 are encrypted and unintelligible.

16 And then, thirdly, as an added precaution, in case
17 there is highly sensitive material, we also use, as had
18 been mentioned before in the trial, PGP, which is the Pretty
19 Good Privacy or pretty good protection. I am not sure, I
20 heard them both here. I don't know what it stands for.

21 Q Could you please take a look at Exhibit 391.

22 Do you recognize this exhibit, Dr. Rubin, Exhibit 391?

23 A Yes, I do.

24 Q Could you tell the jury briefly what this document is?

25 A This document represents a written summary of meetings,

1 a series of meetings that were held between senior DirecTV
2 engineers and senior NDS engineers to discuss card history,
3 Smart Card history and various technical discussions around
4 Smart Cards.

5 Q Is this a document that was prepared by NDS and DirecTV
6 in the regular course of their business?

7 A Yes, it was.

8 MR. SNYDER: Your Honor, I move Exhibit 391.

9 MR. WELCH: No objection, your Honor.

10 THE COURT: Received.

11 (Defendants' Exhibit No. 391 is received into
12 evidence.)

13 MR. SNYDER: Could you just blow up the title and
14 the authors, please.

15 BY MR. SNYDER:

16 Q Dr. Rubin, who are the authors of this document?

17 A The authors are one DirecTV person, Ron Cocchi, and one
18 NDS person, Perry Smith.

19 Q And who is or was Ron Cocchi at DirecTV?

20 A Ron Cocchi was -- I don't know if his precise title was
21 the lead engineer or -- or chief engineer for DirecTV at the
22 time.

23 Q And who was Perry Smith?

24 A Perry Smith is the vice president of security at NDS.

25 Q Is this document marked to indicate that it's

1 confidential?

2 A Yes, it says "DirectTV Proprietary II."

3 Q And does that -- does that designation appear on every
4 page?

5 A Yes, it does.

6 Q What is the purpose of marking a document like this as
7 proprietary?

8 A And proprietary II in this case, this -- this is
9 actually DirectTV's methodology, but that means extremely and
10 highly confidential.

11 Q What -- what was the purpose of this document?

12 A This document represented probably the most honest and
13 open discussion that we had ever had to date with a customer
14 to explain all of the hacks that were known previously to
15 the customer, and as I mentioned before, as part of the
16 working towards the second agreement in the spirit of
17 openness where we shared with DirectTV previous failures so
18 that DirectTV could learn from them.

19 THE COURT: Counsel, tell me when a good time for
20 a recess would be.

21 MR. SNYDER: If I could have three more minutes,
22 it would be a very good time, your Honor.

23 THE COURT: Any logical breaking point.

24 MR. SNYDER: Thank you.

25

1 BY MR. SNYDER:

2 Q Does this document contain confidential NDS
3 information?

4 A Very much so.

5 Q Can you give the jury an example of the kind of
6 confidential NDS information that this document contains?

7 A Can we turn to page 091.

8 Q So you are referring to the Bates number.

9 A The ESC number.

10 Q Page 6 of the exhibit.

11 A Oh, sorry, 391-006. I'm sorry.

12 (Interruption in the proceedings.)

13 THE WITNESS: 391-006.

14 BY MR. SNYDER:

15 Q If you could pull out just the top couple of boxes,
16 please.

17 And can you describe for the jury what about this is
18 confidential NDS information, Dr. Rubin?

19 A I'd say everything, but I'll be specific.

20 It contains every -- the name, the manufacturer of
21 every chip that we had ever produced for Sky or for DirecTV,
22 its exact architectural structure, and more importantly, how
23 it was hacked or how others attempt to hack that card, or
24 the mistakes or the flaws in each one of those cards.

25 Q If the information in this document, Exhibit 391, were

1 in the hands of NDS's competitors, would that harm NDS?

2 A I'd say a little stronger. If -- if this document were
3 here, I -- I won't say which one of our customers would be
4 irreparably harmed today.

5 Q Would it also irreparably harm NDS?

6 A Yes.

7 MR. SNYDER: This would be a good time for a
8 break, your Honor.

9 THE COURT: You are admonished not to discuss this
10 matter amongst yourselves, nor to form nor express any
11 opinion concerning this case.

12 Why don't we come and get you in 20 minutes.

13 (Recess.)

14 -oOo-

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1 -oOo-

2 CERTIFICATE

3
4 I hereby certify that pursuant to Section 753,
5 Title 28, United States Code, the foregoing is a true and
6 correct transcript of the stenographically reported
7 proceedings held in the above-entitled matter and that the
8 transcript page format is in conformance with the
9 regulations of the Judicial Conference of the United States.

10
11 Date: April 23, 2008

12
13
14 _____
15 JANE C.S. RULE, U.S. COURT REPORTER

16 CSR NO. 9316
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