

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 12, Volume I
Defendants.	)	
_____	)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Jury Trial

Santa Ana, California

Tuesday, April 29, 2008

Jane C.S. Rule, CSR 9316  
Federal Official Court Reporter  
United States District Court  
411 West 4th Street, Room 1-053  
Santa Ana, California 92701  
(714) 558-7755  
08-04-29 EchoStarD12V1

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

APPEARANCES OF COUNSEL:  
FOR PLAINTIFFS ECHOSTAR SATELLITE CORPORATION, et al.:  
T. WADE WELCH & ASSOCIATES  
Attorneys at Law  
BY: CHAD M. HAGAN  
T. WADE WELCH  
DAVID M. NOLL  
CHRISTINE D. WILLETTS  
Attorneys at Law  
2401 Fountainview  
Suite 700  
Houston, Texas 77057  
(713) 952-4334  
FOR DEFENDANTS NDS GROUP PLC, et al.:  
O'MELVENY & MYERS, LLP  
Attorneys at Law  
BY: DARIN W. SNYDER  
NATHANIEL L. DILGER  
DAVID R. EBERHART  
MICHAEL O'DONNELL  
Attorneys at Law  
Embarcadero Center West  
275 Battery Street  
Suite 2600  
San Francisco, California 94111-3305  
(415) 984-8700  
- AND -  
HOGAN & HARTSON, LLP  
Attorneys at Law  
BY: RICHARD L. STONE  
KENNETH D. KLEIN  
Attorneys at Law  
275 Battery Street  
Suite 2600  
San Francisco, California 94111-3305  
(415) 984-8700  
ALSO PRESENT:  
JEAN-MARIE FEY, French Interpreter

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

## I N D E X

## EXAMINATION

Witness Name	Direct	Cross	Redirect	Recross
KUDELSKI, HENRI				
By Mr. Eberhart	4		46	
By Mr. Noll		41		51

## EXHIBITS

Exhibit	Identification	Evidence
Defendants' No. 829		39
Defendants' Nos. 1596 and 1670		16
Defendants' Nos. 1671 and 1687		11
Defendants' No. 1672		27
Defendants' No. 1674		8
Defendants' No. 1676		18
Defendants' No. 1690		21
Defendants' No. 1691		23
Defendants' No. 2501		51

1 SANTA ANA, CALIFORNIA, TUESDAY, APRIL 29, 2008

2 DAY 12 - VOLUME I

3 (8:15 a.m.)

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

6 THE COURT: All right. Thank you, Counsel. We're  
7 back in session. All counsel are present.

8 And Counsel, if you'd like to proceed.

9 MR. SNYDER: We need Mr. Henri Kudelski to return  
10 to the stand.

11 HENRI KUDELSKI, DEFENDANTS' WITNESS, RESUMED

12 THE COURT: Thank you.

13 And this is Mr. Henri Kudelski's continued direct  
14 examination by Mr. Eberhart.

15 DIRECT EXAMINATION (Continued.)

16 BY MR. EBERHART:

17 Q Good morning, Mr. Kudelski.

18 A Good morning.

19 Q I gave your counsel a list of the documents that I was  
20 going to show you today. Did you take time over the last  
21 few days to review those documents?

22 THE INTERPRETER: Judge, I need the microphone.

23 THE COURT: Oh, thank you very much.

24 Kristee, if you'd give him the microphone, the  
25 interpreter.

1 THE WITNESS: Can you repeat the question?

2 BY MR. EBERHART:

3 Q I gave your counsel a list of the documents that I was  
4 going to show you today. Did you take time over the weekend  
5 to review those documents?

6 A I received them this morning. I looked at them briefly  
7 this morning.

8 Q On Friday, we were discussing the report that was  
9 issued by Nagra after the update secured the ROM 3 cards in  
10 February 2001; do you remember that?

11 A Could you please show me the report again?

12 Q Absolutely.

13 Michael, could you show the witness Exhibit 1185,  
14 please.

15 BY MR. EBERHART:

16 Q And Exhibit 1155, sir, is the report we were discussing  
17 at the end of the day on Friday. It's dated February 22nd,  
18 2001, and it talks about the update that has been made to  
19 the DNASP-003 cards, and it reflects the status of the  
20 DNASP-003 cards as secure, correct?

21 A Yes, I remember.

22 MR. EBERHART: Michael, please show the witness  
23 Exhibit 1186.

24 BY MR. EBERHART:

25 Q Mr. Kudelski, this is a report that's already in

1 evidence.

2 So, Charlie, you can put it on the screen.

3 BY MR. EBERHART:

4 Q This is dated March 2nd, 2001, and this is a further  
5 update from Joel Conus about the status of piracy of the  
6 EchoStar system, correct?

7 A Yes.

8 Q And in this report, Mr. Conus gives what he describes  
9 as his point of view, or POV, about the current situation;  
10 do you see that about halfway down the page?

11 A Yes, I can see it.

12 Q And so Mr. Conus, whom you were supervising, was  
13 providing his views on the current piracy situation, not  
14 just repeating what the pirates were saying on websites,  
15 correct?

16 A I have not -- if you say so. I haven't read it.

17 Q Well, that's what Mr. Conus says here, correct, that  
18 he's -- "He would like to give my POV about the current  
19 situation"; that's what he says, correct?

20 A Just a second, please.

21 Yes, he says that. He says it is his POV.

22 Q And Mr. Conus goes on to provide the following  
23 information that -- that constitutes his point of view on  
24 the current situation, and I am going to ask you if I'm  
25 reading the following correctly:

1           "Not much is happening on the forums now. The hacking  
2 is stalling, it seems. The number of hackers who still have  
3 non-updated cards is very limited, and therefore, the  
4 blocker code that has been published cannot be widely used."

5           Did I read that correctly?

6           A     Yes, that is what is written.

7           Q     So as of March 2nd, 2001, it was Mr. Conus's view that  
8 the blocker code that had been published could not be widely  
9 used, correct?

10          A     Yes, he said that at that date.

11          Q     And looking down the page on Exhibit 1186, Mr. Conus  
12 also writes that "The DNASP-003 cards are secured. VIP  
13 rights on some cards. Cards and blockers not affected by  
14 the update," correct?

15          A     Yes, he said some cards are secure, some other cards  
16 have a VIP, and some other cards have a blocker.

17          Q     But he also says that the blocker code that had been  
18 published could not be widely used, correct?

19          A     Yes, that was in his POV.

20          Q     Why don't you hold on to that exhibit for a minute, and  
21 let's --

22                 Michael, please give the witness Exhibit 1674.

23                 BY MR. EBERHART:

24                 Q     Exhibit 1674 is another update from Mr. Conus dated  
25 December 11th, 2001, and it was sent to you, correct?

1 A Yes.

2 Q And you received this in the normal course of your work  
3 for NagraVision, NagraCard; is that correct?

4 A Yes, as a team leader of security of the  
5 countermeasures.

6 MR. EBERHART: Your Honor, defendants offer  
7 Exhibit 1674.

8 THE COURT: Any objection?

9 MR. NOLL: No objection, your Honor.

10 THE COURT: Received.

11 (Defendants' Exhibit No. 1674 is received  
12 into evidence.)

13 BY MR. EBERHART:

14 Q Now, Mr. Kudelski, looking about two-thirds of the way  
15 down the first page of Exhibit 1674, it shows the status of  
16 the DNASP-003 cards as, "Hole closed. Some cards have  
17 blocker software," correct?

18 A Yes, that's what is written.

19 Q Okay. So as of December 11th, 2001, Nagra believed  
20 that the hole in the DNASP-003 card has been closed,  
21 correct?

22 A No, no. It says the hole is closed for certain cards,  
23 and for other cards, there are soft blockers.

24 Q And this update also omits the reference to VIP rights  
25 that you saw in Exhibit 1186, correct, and that's the prior



1 report we just looked at?

2 A No, it doesn't mention that, and I don't see why it  
3 should --

4 Q So as of December --

5 THE INTERPRETER: Please, please --

6 MR. EBERHART: I'm sorry.

7 THE INTERPRETER: The witness is not finished.

8 THE WITNESS: I don't see any reason why they  
9 shouldn't say that they are not, because normally there  
10 should be some.

11 BY MR. EBERHART:

12 Q But the report does not reflect any VIP rights in the  
13 DNASP-003 cards as of December 11th, 2001, correct?

14 A No. That is what is written, but as far as I'm  
15 concerned, I think there should be some, also.

16 Q So you disagree with Mr. Conus's reports?

17 A No. I'm -- I'm just saying it's not complete.

18 Q So you believe Mr. Conus prepared incomplete reports  
19 that he submitted on the status of Nagra piracy?

20 A No, no. That is just my opinion. I think there were  
21 some more. It's just my opinion.

22 Q Your opinion is that Mr. Conus submitted incomplete  
23 reports summarizing the status of Nagra piracy, correct?

24 A They didn't see at the time of monitoring the VIP  
25 cards. At the time of monitoring, maybe he did not see the

1 VIP cards.

2 Q Did you ever reprimand Mr. Conus for providing  
3 incomplete reports?

4 A No, I don't recall that.

5 Q If you believe Mr. Conus's reports were incomplete, did  
6 you ever ask him to add additional information that you  
7 believed was relevant?

8 A I -- I don't recall.

9 Q Let's take a look at a couple additional reports,  
10 Mr. Kudelski.

11 Michael, if you could hand the witness Exhibits 1687  
12 and 1671.

13 BY MR. EBERHART:

14 Q Mr. Kudelski, Exhibit 1687 is a report from Joel Conus  
15 to you and others dated May 30th, 2002; is that correct?

16 A Yes.

17 Q And Exhibit 1671 is a report from Joel Conus to you and  
18 others dated August 26th, 2002, correct?

19 A Yes.

20 Q And these are both updates on the status of EchoStar  
21 piracy, correct?

22 A Yes.

23 MR. EBERHART: Your Honor, defendants offer  
24 Exhibits 1671 and 1687.

25 THE COURT: Any objection?

1 MR. NOLL: No objection.

2 THE COURT: Both are received.

3 (Defendants' Exhibit Nos. 1671 and 1687 are  
4 received into evidence.)

5 BY MR. EBERHART:

6 Q Mr. Kudelski, both of these reports state that the  
7 status of the DNASP-003 card is, quote, "Hole closed. Some  
8 cards have blocker software," correct?

9 A When they put blockers in the card, there are VIP  
10 rights that they want to protect.

11 Q My question to you, sir, is both Exhibit 1671 and 1687  
12 list the status of the DNASP-003 cards as "Hole closed.  
13 Some have blocker software," correct?

14 A Yes, that is what is written.

15 Q So on May 30th, 2002, and August 26th, 2002, Nagra's  
16 internal reports listed the cards as being "Hole closed.  
17 Some cards have blocker software," correct?

18 A That is what is written.

19 Q And that hole that has been closed is the buffer  
20 overflow hole, correct?

21 A I can't say. I can't say for sure, but as far as I'm  
22 concerned, it's the application of the recipe on the cards  
23 that haven't received the patch. And on the other cards  
24 that have not received the patch, you can still install the  
25 VIP rights and put a blocker to protect --

1 Q So your belief is that the hole that has been closed,  
2 as referenced in these reports, is the hole that was exposed  
3 by the xbr21 posting in December 2000, correct?

4 A I cannot confirm that, because the date is much farther  
5 away.

6 Q Okay. So sitting here today before this jury, you  
7 don't know what hole was closed, as reflected in  
8 Exhibit 1671 and 1687?

9 A I can say today that the last portion of the cards that  
10 had received the patch could not be attacked by hackers.

11 Q And those cards could not be attacked using the method  
12 shown in the xbr21 posting made in December of 2000,  
13 correct?

14 A I cannot certify that. I cannot say that.

15 Q Are you aware, sir, of the xbr21 posting from  
16 December 2000?

17 A I've seen it.

18 Q And are you aware of the method that Nagra and EchoStar  
19 claim was exposed by that posting?

20 A Could I see that again?

21 Q The xbr21 posting?

22 A Yes.

23 MR. EBERHART: Michael, could you show the  
24 witness 511-A, please. It's in evidence.

25 Charlie, you could put that up.

1 THE WITNESS: Could you repeat the question,  
2 please?

3 BY MR. EBERHART:

4 Q Are you familiar with the xbr21 post of December 23rd,  
5 2000, that's shown in Exhibit 511-A?

6 A I've -- I've seen it.

7 Q And this is the method or recipe that NagraStar and  
8 EchoStar claim allowed pirates to attack the ROM 3 cards,  
9 correct?

10 A No. It is a post that gives a recipe, but I cannot say  
11 that that is the recipe.

12 Q And so sitting here today, you don't know whether this  
13 is the recipe that Nagra attacked through its ECMs?

14 A No. All I can say is that the developers told me that  
15 this is an application of the recipe.

16 Q And did the developers tell you that this was an  
17 application of the recipe that they attacked through their  
18 update in February 2001?

19 A I do not understand the question.

20 Q Did the developers tell you that the application of the  
21 recipe that you contend is reflected in Exhibit 511-A was  
22 something they attacked through their update to the ROM 3  
23 cards in February 2001?

24 A We protected, we do not -- we do not attack. I do not  
25 understand.

1 Q I'll rephrase my question, sir.

2 Did the developers tell you that they protected the  
3 ROM 3 cards against the method or recipe shown in  
4 Exhibit 511-A through the update to the ROM 3 cards that was  
5 issued in February 2001?

6 A This recipe was no longer applicable if the card had  
7 received the patch at the -- the patch was broadcast.

8 Q So following the broadcast of the patch in  
9 February 2001, this method or recipe shown in Exhibit 511-A  
10 would no longer work on the cards that accepted the update,  
11 correct?

12 A No, they did not work at the time the patch was  
13 broadcast.

14 Q Do you know when the patch was broadcast to the ROM 3  
15 cards to fix the vulnerability shown in Exhibit 511-A?

16 A Looking at the monitoring reports, I think it was in  
17 February.

18 Q So following the broadcast of that patch in  
19 February 2001, isn't it correct that the ROM 3 cards that  
20 accepted that update were not vulnerable to the method or  
21 recipe shown in Exhibit 511-A?

22 A No. At the date in February when it was applied, the  
23 card could not receive it, but that does not mean that it  
24 couldn't receive it later on.

25 Q But at least as of the date that the patch was applied

1 in February 2001, the method or recipe shown in  
2 Exhibit 511-A would no longer work to access the ROM 3  
3 cards, correct?

4 A Could you repeat the question?

5 Q At least as of the date that the patch was broadcast in  
6 February 2001, the method or recipe shown in Exhibit 511-A  
7 could not be used to access ROM 3 cards that accepted that  
8 update.

9 A It was true at the time that I received the patch.  
10 That does not mean it was true later on.

11 Q We've looked at a lot of Mr. Conus's reports on Friday  
12 and today, Mr. Kudelski. Do any of those reports after  
13 February of 2001 indicate that the hole was open?

14 A The reports he showed me do not deny it, but there were  
15 reports every day, and there are other reports that say that  
16 it was reopened.

17 Q Really? Well, let's take a look at some more reports,  
18 Mr. Kudelski.

19 You've looked at Exhibit 1687 and 1671. Those both say  
20 that the ROM 3 hole is closed, correct?

21 A The reports I've been shown.

22 Q I'm sorry, sir, was that a "yes"?

23 A The reports that I was shown said that. That does not  
24 mean it is true.

25 Q So Mr. Conus's reports are false; is that your

1 testimony to this jury?

2 A Not at all, no. The reports that I was shown said it  
3 was closed, but there are other reports that say other  
4 things.

5 Q Well, these reports in 2002 both say the DNASP ROM 3  
6 hole was closed, correct?

7 A The reports I was shown said that.

8 Q Let's look at some additional reports, sir.

9 Michael, could you show the witness Exhibits 1670 and  
10 1596.

11 BY MR. EBERHART:

12 Q Exhibit 1670 is an e-mail report from Mr. Conus to you  
13 dated January 29th, 2003, correct?

14 A Yes.

15 Q And Exhibit 1596 is a report dated January 30th, 2003,  
16 from Dominique Bongard to you and others, and this relates  
17 to the ExpressVu system, correct?

18 A Yes.

19 MR. EBERHART: Your Honor, defendants move  
20 Exhibits 1596 and 1670.

21 THE COURT: Any objection?

22 MR. NOLL: No objection, your Honor.

23 THE COURT: Received.

24 (Defendants' Exhibit Nos. 1596 and 1670 are  
25 received into evidence.)



1 BY MR. EBERHART:

2 Q Mr. Kudelski, Exhibit 1670, which is dated January 29,  
3 2003, says the same thing as the DNASP-003 card, quote,  
4 "Hole closed. Some cards have blocker software," correct?

5 A That's -- that's what it says at that date.

6 Q And that's the same thing that the reports that we just  
7 looked at from May of 2002 and August of 2002 said, correct?

8 A Yes, but that does not mean there was no changes  
9 between the two.

10 Q And these were reports that you sent to your customer,  
11 NagraStar, correct?

12 A Yes, we sent them to Alan Guggenheim with NagraStar.

13 Q And you intended for these reports to be relied on by  
14 NagraStar, correct?

15 A Yes, these were the reports that showed the status of  
16 the monitoring, the status on the internet.

17 Q You also provided similar reports to your customer,  
18 Bell ExpressVu, correct?

19 A Yes.

20 Q And looking at Exhibit 1596, that is an example of one  
21 of the reports you provided to Bell ExpressVu, correct?

22 A Yes.

23 Q And so Bell ExpressVu also used the ROM 3 card,  
24 correct?

25 A Yes.

1 Q And in Exhibit 1596, you list the status of the ROM 3  
2 card as "Hole closed. Some cards have blocker software,"  
3 correct?

4 A Yes, at that date.

5 Q And that is the same status that you list for EchoStar  
6 on the previous date, January 29th, 2003, correct?

7 A Yes, that's what is written.

8 MR. EBERHART: Michael, please show the witness  
9 Exhibit 1676.

10 BY MR. EBERHART:

11 Q Sir, Exhibit 1676 is an e-mail from an address called  
12 "Monitoring" to you and others, and it's dated June 16,  
13 2003, correct?

14 A Yes, that is what is written.

15 Q And this is a further update on the status of the  
16 ExpressVu system as of that date, correct?

17 A Yes, that talks about ExpressVu.

18 MR. EBERHART: Defendants offer Exhibit 1676,  
19 your Honor.

20 THE COURT: Any objection?

21 MR. NOLL: No objection.

22 THE COURT: Received.

23 (Defendants' Exhibit No. 1676 is received  
24 into evidence.)

25

1 BY MR. EBERHART:

2 Q Now, this document also shows the status of the  
3 DNASP-003 cards as, quote, "Hole closed. Some cards have  
4 blocker software," correct?

5 A Yes, at that date, it says that some cards -- some  
6 cards are closed, and some others have the blocker software.

7 Q Was your team still preparing these reports for  
8 EchoStar in June of 2003?

9 A Yes. Normally in June, we -- we used to prepare those  
10 reports every day.

11 Q Now, this is an ExpressVu report, correct?

12 A Yes.

13 Q Do you know why no EchoStar reports for June 2003 were  
14 produced to us?

15 A I cannot say why. As far as -- as far as I'm  
16 concerned, the reports were made every day, and there  
17 were -- there might have been exception.

18 Q Let's talk about a different topic, sir.

19 Do you remember on Friday we discussed Exhibit 812,  
20 which was an e-mail from EchoStar's president and COO, Mike  
21 Dugan, where he was demanding action against piracy in  
22 January of 2001?

23 A Can you -- can you show me the report?

24 Q Absolutely.

25 Michael, could you show the Exhibit 812 to the witness,

1 please.

2 THE WITNESS: Yes, I remember talking about this  
3 report on Friday.

4 BY MR. EBERHART:

5 Q And this was an e-mail from Mr. Dugan entitled, "Guys,  
6 I want action," correct?

7 A Yes, that is what he said.

8 Q And that was action against piracy that he wanted,  
9 correct?

10 A I -- I don't know if that's what he means, but that's a  
11 possible explanation.

12 Q Isn't it true, sir, that the body of Mr. Dugan's e-mail  
13 is talking about different steps to fight piracy of the  
14 EchoStar system?

15 A I don't see any elements other than security.

16 Q And by "security," you mean security against piracy of  
17 the EchoStar system, correct?

18 A There are certain things that I do not understand in  
19 the sentences, so I can only imagine. These are -- this is  
20 all I can do; these are not facts.

21 Q You don't know whether Mr. Dugan's e-mail is talking  
22 about fighting piracy of the EchoStar system; is that your  
23 testimony?

24 A Maybe in part, but I cannot say if that's all it is  
25 talking about.

1 Q Mr. Dugan later congratulated your team for the  
2 progress they made fighting piracy, correct?

3 A Yes, that's -- that's what it says, and that is a part  
4 of the e-mail.

5 Q Now, sir, let me -- let me clarify.

6 About 10 months later, in January of 2001, isn't it  
7 true that Mr. Dugan congratulated your team for the success  
8 they had had in fighting EchoStar piracy?

9 A Can you show me the post where he said that, because  
10 it's not the same one.

11 MR. EBERHART: Michael, could you show the witness  
12 Exhibit 1690, please.

13 BY MR. EBERHART:

14 Q Mr. Kudelski, Exhibit 1690 is an e-mail dated  
15 November 29th, 2001, from Alan Guggenheim to you and others,  
16 correct?

17 A Yes.

18 Q And you received this as part of your work for  
19 NagraVision, NagraCard?

20 A Yes, from NagraCard, NagraVision.

21 MR. EBERHART: Your Honor, defendants offer  
22 Exhibit 1690.

23 THE COURT: Any objection?

24 MR. NOLL: No objection.

25 THE COURT: Received.

1                   (Defendants' Exhibit No. 1690 is received  
2                   into evidence.)

3 BY MR. EBERHART:

4 Q       In this e-mail, Mr. Kudelski, Alan Guggenheim is  
5 forwarding an e-mail from Mr. Dugan. Mr. Dugan's e-mail is  
6 dated November 29th, 2001, correct?

7 A       Yes, that's what is written.

8 Q       And Mr. Guggenheim writes to you, "Congratulations, and  
9 thanks for the good work," correct?

10 A       Yes, I imagine that was for countermeasures.

11 Q       And Mr. Dugan's e-mail is entitled "Recent security  
12 team progress," correct?

13 A       Yes, that is what is written in the header.

14 Q       And in the body, he writes, quote, "Just a note to tell  
15 you how much your recent deliverables are worth to our  
16 company. I realize there was a huge amount of effort,  
17 teamwork, design and testing that was needed for your recent  
18 efforts to combat piracy and drive signal security for DISH  
19 Network. I greatly appreciate all your hard work and  
20 dedication and commend your recent advances. Keep up the  
21 fight."

22           Did I read that correctly?

23 A       Yes, that's what is written.

24 Q       And Mr. Dugan was writing this to you -- to your team  
25 immediately following a very successful ECM that you had

1 launched to take out blocker devices and blocker software,  
2 correct?

3 A That is possible. I do not see that information in  
4 this piece.

5 MR. EBERHART: Michael, would you please show the  
6 witness Exhibit 1690 -- I'm sorry, 1691.

7 BY MR. EBERHART:

8 Q Mr. Kudelski, Exhibit 1691 is another update from Joel  
9 Conus. This is dated November 28th, 2001, correct?

10 A Yes.

11 MR. EBERHART: Your Honor, defendants offer  
12 Exhibit 1691.

13 THE COURT: Any objection?

14 MR. NOLL: No objection.

15 THE COURT: Received.

16 (Defendants' Exhibit No. 1691 is received  
17 into evidence.)

18 BY MR. EBERHART:

19 Q Mr. Conus -- I'm sorry. Mr. Kudelski, Mr. Conus's  
20 e-mail is dated one day before Mr. Dugan's congratulatory  
21 e-mail that is Exhibit 1690, correct?

22 A Yes.

23 Q And so in this e-mail, one day before Mr. Dugan  
24 congratulates your team, Mr. Conus writes "The ECM Number 9  
25 has been very successful. Most blocker devices as well as

1 cards with blocker software went down (IRD kill)."

2 Did I read that correctly?

3 A Yes.

4 Q Okay.

5 A That is what is written.

6 Q Okay. So on November 28th, 2001, your team issued a  
7 very successful ECM against blockers for the ROM 3 cards,  
8 correct?

9 A Yes. On that day, we had a countermeasure that was  
10 efficient, yes, but that does not mean that there were no  
11 attacks just after that.

12 Q Let's look down at the bottom of the page of that  
13 exhibit. It says, just like the other reports we've looked  
14 at this morning, sir, "DNASP-003, hole closed. Some cards  
15 have blocker software," correct?

16 A Yes, that is what is written, but that means that there  
17 are cards that are still blocked, and some with blocker  
18 software.

19 MR. EBERHART: Mike, would you hand the witness  
20 Exhibit 1260, please.

21 Charlie, this is already in evidence, so you  
22 should put it up.

23 BY MR. EBERHART:

24 Q Taking a look at the second page of Exhibit 1260, this  
25 is the EchoStar ECM history document that we reviewed on



1 Friday.

2 A Yes.

3 Q This document begins with ECM Number 4 in  
4 November 2000. Why doesn't this document list ECMs 1, 2 and  
5 3?

6 A I don't know.

7 Q When was the first ECM performed against piracy of the  
8 EchoStar system?

9 A I don't recall the date.

10 Q You were in charge of ECMs, though, correct?

11 A I was in charge of countermeasures, yes.

12 Q And was that first ECM undertaken in response to  
13 EchoStar's demand for a card swap?

14 A I was doing countermeasures. I was not aware of any  
15 counter -- of any card swaps at that time.

16 MR. EBERHART: Michael, could you show the witness  
17 Exhibit 828, please.

18 It was already in evidence, Charlie.

19 BY MR. EBERHART:

20 Q Mr. Kudelski, Exhibit 828 is a letter dated July 2nd,  
21 1999, from EchoStar to NagraStar demanding a card swap in  
22 response to a compromise of the Nagra security system,  
23 correct?

24 A That is what is written.

25 Q But it's your testimony you weren't aware of any demand

1 for a card swap made by EchoStar in the 1999 period?

2 A No, I'm not aware of that.

3 Q Moving to another topic, sir.

4 Isn't it a fact that NagraVision and NagraCard  
5 collected information related to DirecTV piracy?

6 A As far as I'm concerned, we saw things on the internet  
7 regarding NagraVision and other systems, such as DirecTV.

8 Q And your team sometimes collected the information  
9 regarding piracy of the DirecTV system, correct?

10 A Yes, we showed what was state of the art on the  
11 internet.

12 Q It's a fact, though, isn't it, sir, that your team  
13 actually obtained the contents of websites that were devoted  
14 to DirecTV piracy?

15 A We -- we could see the information on the two systems,  
16 since they were the same systems as the ones that were  
17 holding the information about our own system.

18 (Interruption in the proceedings.)

19 THE WITNESS: The -- the sites that were showing  
20 the information were the same for the both systems, so yes,  
21 we saw the information on the other system as well.

22 BY MR. EBERHART:

23 Q Did your team ever obtain a complete dump of a site  
24 devoted to DirecTV piracy?

25 A What kind of a dump?

1 Q A dump of all the contents of the site?

2 A In general, when you conduct monitoring, you take all  
3 the information that is on the site. I -- I cannot say if  
4 we had a complete or a partial dump of the site, the site  
5 that contained information for us and for DirecTV.

6 MR. EBERHART: Michael, please show the witness  
7 Exhibit 1672.

8 BY MR. EBERHART:

9 Q Mr. Kudelski, Exhibit 1672 is another monitoring report  
10 from Joel Conus, and this report is dated July 26th, 2001,  
11 correct?

12 A Yes, that is what is written.

13 Q And you received this in the course of your work for  
14 NagraVision, NagraCard, correct?

15 A Yes.

16 MR. EBERHART: Defendants offer Exhibit 1672,  
17 your Honor.

18 THE COURT: Any objection?

19 MR. NOLL: No objection.

20 THE COURT: Received.

21 (Defendants' Exhibit No. 1672 is received  
22 into evidence.)

23 BY MR. EBERHART:

24 Q About three-quarters of the way down the page, sir,  
25 Mr. Conus writes as follows:

1           "The hackhu.com site has closed down. It was mainly  
2 about hacking the latest DTV," that means DirecTV, "card,  
3 the HU. If anyone is interested, I have made a complete  
4 dump of that site a few months ago."

5           Did I read that correctly?

6           A     Yes.

7           Q     And Mr. Conus goes on to write, "It contains some  
8 pretty valuable information about DTV hacking," correct?

9           A     That's what is written.

10          Q     And that was valuable information about hacking the  
11 DirecTV system, correct?

12          A     Those were useful information. I cannot say it was for  
13 hacking DirecTV.

14          Q     Doesn't Mr. Conus write that the information is, quote,  
15 "about DirecTV hacking"?

16          A     Yes, that's correct. That's what he says.

17          Q     Why was information about DirecTV hacking pretty  
18 valuable to NagraVision and NagraCard?

19          A     In order to learn the hackers and figure out the  
20 hackers, it's important to know their language. The DirecTV  
21 hacks were the first ones, and therefore, the -- the  
22 language that was implemented at that time was the one used  
23 later on. And in order for us to understand what they were  
24 talking about for us, it was important for us to read those  
25 reports in order to figure out what they were saying for us,

1 and just in order to learn the language.

2 Q So at the time your team pulled this dump of the  
3 hackhu.com site, is it your testimony that the EchoStar  
4 system was not hacked?

5 A No, I didn't say that.

6 Q So at the time your team pulled this complete dump of  
7 the hackhu.com site, EchoStar was already hacked, correct?

8 A Yes.

9 Q But it's your testimony that you needed to pull the  
10 information from a DirectTV hacking site in order to  
11 understand the EchoStar hacks; is that correct?

12 A No. I said that for us to understand -- when you're  
13 attacked, the vocabulary of the hacker, it is necessary for  
14 us to understand the terms, the terminology. And the  
15 terminology used is the same for both, and that's why we  
16 went into the habit of reading what happened to both  
17 systems.

18 Q Now, you went further and set up a security lab in  
19 Denver that had DirectTV piracy devices in it, correct?

20 A The lab that was put in place in Denver was there to  
21 make a triage of the different existing devices.

22 Q And those included DirectTV devices, correct?

23 A Yes, because when we obtained the devices, we did not  
24 know if they worked for us or for DirectTV. Quite often when  
25 they sell a device, for one, it will not work on one, but it

1 will work on the other.

2 Q And you would test those devices to see whether they  
3 worked on the DirecTV system, correct?

4 A First of all, to check or see if they worked on our  
5 devices, and then if they didn't, to see what else was --  
6 they were doing, basically.

7 Q So if that piracy device didn't work on the EchoStar  
8 system, you would hook it up to a DirecTV system and see if  
9 the piracy device worked for DirecTV, correct?

10 A Yes, I wasn't doing that personally, but we thought  
11 that was a good thing to do to -- somebody in the  
12 audience -- yeah, I had asked to make a triage and to only  
13 get the interesting devices, but I cannot say that that is  
14 indeed what happened.

15 Q And when the team in Denver tested DirecTV piracy  
16 devices, they obtained without a subscription the DirecTV  
17 programming, correct?

18 A I do not understand the question.

19 Q You testified earlier that the team in the Denver lab  
20 tested DirecTV piracy devices, correct?

21 A That was -- it was asked of them to check and see which  
22 system the device would operate, would be operable on.

23 Q So they tested those devices against both the EchoStar  
24 system and the DirecTV system, correct?

25 A I cannot say what they actually did. That was what was

1 asked of them.

2 Q So they were asked to test against both the EchoStar  
3 system and the DirecTV system, correct?

4 A They were asked to do triage and to select the devices  
5 for us, but, however, I cannot say if that is actually what  
6 was implemented.

7 Q Isn't it a fact that the security lab in Denver was  
8 specifically directed to obtain the most popular DirecTV  
9 piracy device?

10 A I don't remember that part explicitly, but that is a  
11 possibility.

12 MR. EBERHART: Michael, please show the witness  
13 Exhibit 683.

14 This is in evidence, Charlie.

15 BY MR. EBERHART:

16 Q Mr. Kudelski, this is an e-mail that has two parts to  
17 it. The first part on December 17th, 2002, is written by  
18 you, and the second part, also on December 17th, 2002, is  
19 written by Alan Guggenheim, correct?

20 A Yes.

21 Q And Alan Guggenheim's e-mail is discussing organizing  
22 the security lab in Denver, correct?

23 A Yes.

24 Q And he instructs Peter Kuykendall to "Set up and  
25 maintain the security lab with, among other things, DirecTV,

1 one device, the most popular," correct?

2 A Yes, that was the anticipated work. That was the  
3 target work.

4 Q And that was the most popular DirectTV piracy device at  
5 that time, correct?

6 A It says that it was interested in putting the most  
7 popular -- the most popular into the lab, yes.

8 Q And those were the most popular piracy devices,  
9 correct?

10 A I cannot say.

11 Q You cannot say whether what Mr. Guggenheim was  
12 directing Mr. Kuykendall to do was to acquire the most  
13 popular piracy devices for the Denver security lab?

14 A That's not written in here.

15 Q Well, let's take a little closer look, sir.

16 Mr. Guggenheim writes, "This is to confirm what we  
17 expect and how we are getting organized for the security lab  
18 in Denver," correct?

19 A Yes, that is what is written.

20 Q He goes on to write, "Your function for this part of  
21 your job will be," and then he gives six numbered tasks,  
22 correct?

23 A Yes.

24 Q And number two includes "Set up and maintain the  
25 security lab with DirectTV, one device, the most popular,"



1 correct?

2 A (No audible response.)

3 Q And number three --

4 THE INTERPRETER: Just a minute.

5 THE WITNESS: The device, I do not know if he's  
6 talking about set-top boxes or something else.

7 BY MR. EBERHART:

8 Q Well, we are going to continue reading, sir. I think  
9 it becomes abundantly clear.

10 He goes on to write in number three, "Keep up to date  
11 and send to Cheseaux daily the devices status report, what  
12 is working, what is not," correct?

13 A Yes.

14 Q And number four, "Send to Cheseaux regular updates on  
15 all new devices, including schematics, software, hardware,  
16 how to make it work for dummies document," correct?

17 A Yes.

18 Q And number five, "Report on effect of your lab of ECMs  
19 and fixes," correct?

20 A Yes.

21 Q And number six, "Analysis and identification of  
22 potential weaknesses in pirate devices for Cheseaux to  
23 design ECMs," correct?

24 A Yes.

25 Q And so the devices being set up in the Denver lab were

1 piracy devices, correct?

2 A For the EchoStar parts, yes, that's true. And for the  
3 DirecTV part, most probably.

4 Q So your best --

5 A I -- I cannot affirm that. I cannot confirm that.

6 Q Your best testimony is that most probably the Denver  
7 lab was setting up DirecTV piracy devices, correct?

8 A I -- I could not say what it meant exactly for DTV.

9 Q Do you believe that Denver security lab was reverse  
10 engineering legitimate DirecTV set-top boxes and cards?

11 A Could you repeat the question, please?

12 Q Do you believe the Denver security lab was reverse  
13 engineering legitimate DirecTV set-top boxes and Smart  
14 Cards?

15 A No, no, we cannot say that. As far as I am concerned,  
16 they were not doing that. As far as I'm concerned, it was  
17 just a matter of triage, the triage of devices. I don't see  
18 any reason why they would do reverse engineering.

19 Q That was a triage of pirate devices, correct, sir?

20 A Yes, that was the objective.

21 Q At the time of this e-mail, December -- December 17th,  
22 2002, who was Peter Kuykendall?

23 A It was somebody who worked for NagraStar.

24 Q So Peter Kuykendall was the NagraStar employee who was  
25 directed to set up the security lab in Denver, correct?

1 A Yes, that's what is written.

2 Q Let's look down at your portion of Exhibit 683, the  
3 earlier e-mail, which you wrote in French, correct?

4 A Yes.

5 Q And looking at the second paragraph of that e-mail, and  
6 specifically, at the last two sentences of that e-mail, you  
7 write that "Mr. Kuykendall is not to have access to any of  
8 Nagra's documents. He is supposed to give us the point of  
9 view of a hacker," correct?

10 A Yes, that's what is written. That's what I've written.

11 Q So your intention in setting up the security lab in  
12 Denver was to have your employee, or the NagraStar employee,  
13 Peter Kuykendall, give you the point of view of a hacker,  
14 correct?

15 A No. The objective -- what I meant in the sentence I  
16 wrote was that he should not have any internal information  
17 from Nagra, and that he would learn from what is published  
18 on the internet, and -- and that he should see the point of  
19 view of the hacker at that level. The objective was to see  
20 how they would use the information on the internet to  
21 program the devices without having any other information.

22 Q So you thought it was valuable to NagraStar and  
23 EchoStar to have someone inside the company who had the  
24 point of view of a hacker, correct?

25 A It was important to have somebody who didn't have any

1 internal information in order to see how he was going to  
2 work with what was published by the hackers.

3 Q And what you wrote is "He will give us the point of  
4 view of the hackers," correct?

5 A My exact description was "the point of view of what he  
6 can learn from a hacker."

7 Q Sir, does the word "learn" appear anywhere in that last  
8 sentence?

9 A That is what I meant. That is what I wanted to say.

10 Q But you didn't write that in this sentence, did you?

11 A That is what you need to read into "the point of view  
12 of a hacker."

13 MR. EBERHART: I -- I would like the translator to  
14 literally translate the last sentence of the second  
15 paragraph, please.

16 THE INTERPRETER: "Peter is going to provide us  
17 with all the devices and the programmers, in parentheses,  
18 (and the schematics), closed parentheses --

19 MR. EBERHART: That's the wrong sentence, sir.  
20 I'd like the last sentence of the prior paragraph, please.

21 THE INTERPRETER: "He is going to give us the  
22 point of view of the hackers only."

23 BY MR. EBERHART:

24 Q The word "learn" does not appear in that sentence, does  
25 it, sir?

1 A No, but I explained the objective.

2 Q Let's take a look at the first sentence you wrote in  
3 that e-mail. And you're indicating there that you are going  
4 to put Peter Kuykendall on the employee list for ExpressVu,  
5 correct?

6 A Yes, that's what is written.

7 Q So Mr. Kuykendall was going to be carried on the books  
8 of ExpressVu as their employee, correct?

9 A No, that's not what I said.

10 Q Okay. What does that first sentence say, sir, the last  
11 part that says "You can put Peter on the list for  
12 ExpressVu"?

13 A That was -- that meant that he could receive the  
14 monitoring reports for ExpressVu.

15 Q Isn't that contrary, sir, to your statement below that  
16 he is not to have access to any Nagra documents?

17 A No, not at all, because the information contained in  
18 the monitoring reports is what comes from the internet.

19 Q So he was not allowed to have any documents from Nagra,  
20 but he was allowed to have the monitoring reports; that's  
21 your testimony?

22 A The -- they -- they do not give out any information  
23 from people in the development field. The monitoring  
24 reports are things that are -- are information that are  
25 internal, but not internal to the company. They are from

1 the internet.

2 Q Are you aware of an individual who went by the name  
3 "Voyager"?

4 A Yes.

5 Q And Voyager -- sorry, sir. Were you still finishing  
6 your answer?

7 A Yes, I know the nickname.

8 Q And Voyager is an individual whose real name is  
9 William Janson, correct?

10 A That's what I heard.

11 Q And Mr. Janson was a pretty dangerous pirate, correct?

12 A I -- I do not -- I am not aware of that statement.

13 MR. EBERHART: Michael, please show the witness  
14 Exhibit 829.

15 BY MR. EBERHART:

16 Q Sir, Exhibit 829 is an e-mail from Joel Conus dated  
17 March 21 -- I'm sorry, March 26th, 2001, to you and others,  
18 correct?

19 A Yes.

20 Q And you received this as part of your work for  
21 NagraVision, NagraCard?

22 A Yes.

23 MR. EBERHART: Defendants offer Exhibit 829,  
24 your Honor.

25 THE COURT: Any objection?

1 MR. NOLL: No objection.

2 THE COURT: Received.

3 (Defendants' Exhibit No. 829 is received into  
4 evidence.)

5 BY MR. EBERHART:

6 Q And in Exhibit 829, Mr. Conus writes to you, "Voyager  
7 seems to be quite well-informed apart from that. I wish we  
8 knew who he is. He seems pretty dangerous," correct?

9 A That's what is written.

10 Q And so Mr. Conus was saying that Voyager, who we now  
11 know is William Janson, was a pretty dangerous pirate,  
12 correct?

13 A That -- that was his opinion at that time.

14 Q Did you have a different opinion about Voyager?

15 A Yes, I have a different opinion. I think he's a good  
16 person.

17 Q So Mr. Conus thought that Voyager was a pretty  
18 dangerous pirate, but you think he's a good person?

19 A Yes, at that time, that's what he thought.

20 Q But you think, contrary to Mr. Conus, that Voyager is a  
21 good person?

22 A I said now, for me, it's a good person.

23 Q And the Kudelski Group hired Voyager, correct?

24 A Yes.

25 Q And Voyager is named William Janson, correct; we

1 covered that?

2 A That was a nickname he was using.

3 Q And Mr. Janson was involved in satellite piracy,  
4 correct?

5 A That is what I've been told. I can't say that it was  
6 Voyager.

7 Q And he's still working for the Kudelski Group today,  
8 correct?

9 A Yes.

10 Q One last thing, sir. In Exhibit 829, Mr. Conus writes,  
11 "What about starting to do some stalking on that guy,"  
12 referring to Voyager. "Can you get his IP from a forum?  
13 Maybe GS2 can help."

14 Did I read that correctly?

15 A Yes.

16 Q And GS2 is Charles Perlman, correct?

17 A I don't know.

18 Q You don't know.

19 But what Mr. Conus is writing is that GS2 could help  
20 you get an IP address for Voyager from one of the pirate  
21 forums, correct?

22 A That's what is written.

23 Q And you have no reason to believe that GS2 is anyone  
24 other than Charles Perlman, do you?

25 A I don't -- I don't recall having seen GS2. I don't



1 remember.

2 Q Are you aware that NagraStar still employs  
3 Charles Perlman today?

4 A No.

5 MR. EBERHART: Pass the witness.

6 THE COURT: Cross-examination.

7 MR. NOLL: Thank you, your Honor.

8 CROSS-EXAMINATION

9 BY MR. NOLL:

10 Q Good morning, Mr. Kudelski.

11 A Hello.

12 Q David Noll on behalf of the plaintiffs, EchoStar,  
13 NagraStar. I just have a few questions for you this  
14 morning, sir.

15 Now, you recall counsel for NDS showed you  
16 Exhibit 511-A, which we know is the xbr21 post; do you  
17 recall that, sir?

18 A Yes.

19 Q Now, I understood your testimony to be that this was a  
20 hack recipe; is that right?

21 A Yes, it's a hacker's recipe.

22 Q Okay. Now, do ECMS -- you testified about them  
23 earlier. Do ECMS attack hack recipes, sir?

24 A No. ECMS attack cards. They attack pirate devices,  
25 but not the recipes.

1 Q And it's true that the patches that we talked about, or  
2 that you talked about in your testimony, are what actually  
3 attacked the pirate recipe, such as what we are seeing in  
4 the xbr21 post; is that correct?

5 A The patch protects against recipes.

6 Q And I believe your testimony today and on Friday is  
7 that your work at NagraVision and NagraCard is on the ECMs  
8 and not the patches; is that correct, sir?

9 A Yes, I work only on ECMs. The patches are made by the  
10 development team.

11 Q So if we wanted to know what the patches to the Smart  
12 Card code did, we would have to ask somebody else from  
13 NagraVision or NagraCard, such as Christophe Nicolas; is  
14 that correct, sir?

15 A Yes, it is Christophe Nicolas who is -- had --  
16 Christophe Nicolas is Olivier Brique's supervisor, and they  
17 deal with development.

18 Q And you were the team leader of the countermeasure  
19 efforts that NagraVision and NagraCard does for EchoStar; is  
20 that correct?

21 A Yeah, I -- that was my function, my position at the  
22 time, and my supervisor was also Christophe Nicolas.

23 Q And is it your testimony, sir, that NagraVision and  
24 NagraCard had to do many ECMs after the December 2000  
25 postings?

1 A Yes, we had to do many ECMs.

2 Q And is the reason that NagraVision and NagraCard had to  
3 do all these ECMs was because the pirates were continuing to  
4 attack the EchoStar Smart Card with the information they  
5 learned from the December postings?

6 MR. EBERHART: Objection. Calls for speculation.

7 THE COURT: Overruled.

8 THE WITNESS: Yes, and the reason is that when you  
9 publish an ECM, the ECM is valid only at the time it is  
10 published, and only then. And after that, you always have  
11 devices that find -- that circumvent the device.

12 THE INTERPRETER: I'm sorry, "that circumvent the  
13 ECM."

14 BY MR. NOLL:

15 Q Let's talk just for a moment about the Denver lab.

16 Do you recall you just gave some testimony about a lab  
17 in Denver for pirate devices?

18 A Yes.

19 Q Now, counsel asked you if you were -- what you were  
20 doing with these pirate devices, and I believe your  
21 testimony was that this lab was a triage; do you recall  
22 that?

23 A Yes, and that was the objective that I was -- I saw in  
24 it for my team.

25 Q Do you know if NagraStar was creating piracy devices

1 against the DirecTV system in this lab in Denver?

2 A I've never heard that would create any type of pirate  
3 devices.

4 Q So according to your testimony, EchoStar, NagraStar,  
5 NagraVision were just collecting piracy devices that were on  
6 the open market at this triage lab in Denver; is that  
7 correct?

8 A Yes, that was the objective.

9 Q And the reason was to analyze these piracy devices and  
10 to understand how they worked; is that correct?

11 A It was to see if they worked, and to receive them and  
12 prepare countermeasures, and the objective was to make them  
13 work.

14 Q Now, on Friday, you testified that Alan Guggenheim --  
15 you confirmed to Alan Guggenheim in an e-mail that the  
16 NagraVision research and development department told you  
17 that the ROM 3 patch that was originally issued was  
18 categorically effective; do you recall that?

19 A Yes, that was my opinion at that time, but I saw later  
20 on that that was false.

21 Q And so your opinion changed; is that right?

22 A Yes, my opinion changed. I -- we did not think that a  
23 card could get attacked again, but our opinion changed over  
24 time.

25 Q And was the hole in the card opened over time?

1 A Yes.

2 Q And how do you know that?

3 A Because I looked at the monitoring reports, and I saw  
4 that the card was reopened.

5 Q You were showed a series of monitoring reports by  
6 defendants' counsel that said the card -- the hole was  
7 closed; do you recall that?

8 A Yes, I saw the reports.

9 Q And so I understand you correctly, your testimony is  
10 there's certain reports that indicate otherwise, that the  
11 hole is open; is that correct?

12 A Yes.

13 Q Now, another question you were asked by -- by defense  
14 counsel was why no reports were produced after 2003; do you  
15 recall that?

16 A Could you please ask the question again?

17 Q Sure. I believe counsel showed you a report that  
18 related to monitoring of Bell ExpressVu around the 2003 time  
19 frame; do you recall that?

20 A Yes.

21 Q And then counsel asked, why are there no EchoStar  
22 reports around this 2003 time frame; do you recall that?

23 A Yes, I remember.

24 Q Well, were you aware, sir, that the parties, the  
25 plaintiff and defendant in this case, agreed not to produce

1 any documents after June 2003?

2 A I didn't remember the date.

3 MR. NOLL: Okay.

4 I am going to pass the witness. No further  
5 questions.

6 THE COURT: Redirect.

7 REDIRECT EXAMINATION

8 BY MR. EBERHART:

9 Q Two questions, Mr. Kudelski.

10 Are you aware that the last monitoring report that was  
11 produced to us for EchoStar is dated January of 2003?

12 A No, I didn't know. I had no knowledge of that.

13 Q I'd like you to take a look at Exhibit 1260.

14 Exhibit 1260 is the EchoStar ECM history that we  
15 reviewed on Friday and today. Isn't it a fact, sir, that  
16 that document reflects ECMs were performed prior to the  
17 December 2000 postings?

18 A That is what is written.

19 Q And it's also a fact that this ECM history omits ECMs  
20 Number 1, 2 and 3 that would have occurred prior to  
21 November 2000, correct?

22 A Yes, at first glance. There is no description here.

23 Q Now, you testified on Friday that --

24 A Excuse me.

25 Q Go ahead.

1 A Could you repeat your --

2 Q Isn't it a fact, sir, that Exhibit 1260, which is the  
3 EchoStar ECM history, omits discussion of ECM 1, ECM 2 and  
4 ECM 3?

5 A Could you please repeat the question before, before  
6 that one.

7 Q Isn't it true, sir, that you conducted ECMs prior to  
8 the postings in December 2000?

9 A Yes.

10 Q And isn't it true, sir, that Exhibit 1260 omits a  
11 description of ECM 1, ECM 2 and ECM 3?

12 A They are not documented.

13 Q And those ECMs would have occurred prior to the date of  
14 ECM Number 4, which is November of 2000, correct?

15 A Yes, that seems to be reasonable.

16 Q Now, you testified today that your opinion about  
17 whether the February 2001 patch was categorically effective  
18 had changed, correct?

19 A Yes.

20 Q And did your opinion change since last Friday when you  
21 gave your testimony about that categorically effective  
22 patch?

23 A As far as I'm concerned, it was efficient at the date.

24 Q Mr. Kudelski, you testified that -- sorry, you are  
25 still continuing? If you have something to add to your

1 answer, please continue.

2 A That is what the development team had told me. And as  
3 far as I'm concerned, yes, I -- I considered that at that  
4 particular date or point in time, it was efficient.

5 Q Now, Mr. Kudelski, your counsel asked you about  
6 Mr. Conus's monitoring reports, correct?

7 A Yes.

8 Q And you testified that you thought there were other  
9 reports from Mr. Conus that showed the ROM 3 hole as open,  
10 correct?

11 A Yes.

12 Q Did your counsel show this jury any report after the  
13 February 2001 patch that showed the hole as open?

14 A As far as I'm concerned, it was a given. As -- as far  
15 as I'm concerned, they must have it.

16 Q Are you aware of any reports in 2002 or 2003 that show  
17 the ROM 3 hole as open?

18 A I can't be specific about the dates, but I know that  
19 between 2001, 2002 and 2003, there were reports where the  
20 card was reopened.

21 MR. EBERHART: May I approach, your Honor?

22 THE COURT: You may.

23 BY MR. EBERHART:

24 Q Mr. Kudelski, I've shown you -- I've handed you an  
25 additional report from Mr. Conus in August of 2001, correct?



1 A Yes.

2 Q And that additional report also shows that the hole is  
3 closed as of August 2001, correct?

4 A Yes. Yes, it says it's closed on certain cards.

5 Q And it says it's closed on the ROM 3 card, correct?

6 A It says it was closed on certain 003 cards, and that  
7 other cards had a blocker.

8 Q And that's the same text that we saw in a number of  
9 Mr. Conus's reports that we discussed this morning and last  
10 Friday, correct?

11 A In essence, that's what we saw on certain dates.  
12 Different reports say different things.

13 Q But at this time, this jury hasn't been shown any  
14 reports that show something different after February 2001,  
15 correct?

16 A I haven't seen it here.

17 Q In August of 2001, that document shows that the ROM 3  
18 hole was closed, correct?

19 A Yes, that is what is written.

20 Q I --

21 A It says it is closed, and that other cards have a  
22 blocker.

23 Q Okay. And I've shown you additional reports this  
24 morning in December of 2001 that show "The hole was closed.  
25 Some cards have blocker software," correct?

1 A Yes, you showed us other reports that had this  
2 sentence.

3 Q And I showed you additional reports in 2002 and 2003  
4 that show that "The hole was closed," the ROM 3 hole was  
5 closed. Some cards had blocker software," correct?

6 A Yes, you showed us that.

7 Q And at the time of the 2002 -- withdrawn.

8 At the time the decision was made to conduct a card  
9 swap of the EchoStar system, the ROM 3 hole was still  
10 closed, wasn't it?

11 A I do not know at which -- on which date the card swap  
12 occurred.

13 Q And you don't know the --

14 A I do not know at what time it was scheduled.

15 Q You don't know when the decision was made to conduct a  
16 card swap of the EchoStar DNASP-II system?

17 A No, I do not know when the decision was made to make a  
18 swap. I was not involved in the swap aspect.

19 MR. EBERHART: Defendants offer the additional  
20 August 2001 report shown to Mr. Kudelski.

21 THE COURT: What exhibit number?

22 MR. EBERHART: We need to assign a new exhibit  
23 number to it, your Honor.

24 THE COURT: Do so.

25 MR. EBERHART: We will do so.

1 THE COURT: Okay.

2 MR. EBERHART: Michael, what's next in order?

3 MR. O'DONNELL: 2501.

4 MR. EBERHART: 2501, your Honor.

5 THE COURT: 2501.

6 Any objection to its receipt?

7 MR. NOLL: No objection.

8 THE COURT: Received.

9 (Defendants' Exhibit No. 2501 is received  
10 into evidence.)

11 MR. EBERHART: Nothing further.

12 THE COURT: Okay. Recross.

13 We'll take a break right after recross.

14 RE CROSS EXAMINATION

15 BY MR. NOLL:

16 Q Mr. Kudelski, Mr. Eberhart asked you if you were ever  
17 shown any report that indicated that the ROM 3 hole was open  
18 in the 2002 time frame; do you recall that?

19 A Yes, he asked that.

20 Q And your testimony is that you have seen reports that  
21 indicate that the ROM 3 hole was open in the 2002 time  
22 frame; is that correct, sir?

23 MR. EBERHART: Objection. Misstates prior  
24 testimony.

25 THE WITNESS: Yes, I saw reports saying that it

1 was open in the time frame 2001, 2003.

2 BY MR. NOLL:

3 Q And in the same time frame, you are aware of reports  
4 that indicate that the hole can be reopened as well,  
5 correct?

6 A Yes.

7 MR. NOLL: Okay. No further questions.

8 THE COURT: Mr. Kudelski, we are going to place  
9 you on a 72-hour call, as we are with all of those persons  
10 testifying outside of the continental United States. If  
11 you're needed back, we'll be courteous. We'll notify you,  
12 but we'll expect you to be back in court within 72 hours. I  
13 doubt that you will testify, but just in case, we don't want  
14 to have to find you. I am going to ask you to remain  
15 available no later than the second week in May.

16 Let's just arbitrarily pick a date. I'm holding  
17 everybody else until May 15th.

18 Counsel, I'm going to hold Mr. Kudelski and the  
19 remainder of the witnesses, at the maximum, until May 15th,  
20 now. I think that's a safe date.

21 All right. May 15th. We think the case will  
22 conclude earlier, but May 15th, and we'll notify you.

23 Thank you very much. You may step down.

24 Ladies and gentlemen, why don't you take a recess.

25 You're admonished not to discuss this matter

1 amongst yourselves, nor form or express any opinion  
2 concerning the case.

3 Counsel, have a nice recess.

4 (Recess.)

5 -oOo-

6 CERTIFICATE

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

14  
15 Date: April 30, 2008

16  
17  
18 \_\_\_\_\_  
19 JANE C.S. RULE, U.S. COURT REPORTER  
20 CSR NO. 9316  
21  
22  
23  
24  
25

<b>A</b>	53:15 <b>arbitrarily</b> 52:16 <b>art</b> 26:10 <b>asked</b> 30:12,21 31:1,2,4 43:19 45:13,21 48:5 51:16,19 <b>aspect</b> 50:18 <b>assign</b> 50:22 <b>ASSOCIATES</b> 2:3 <b>attack</b> 13:8,24 41:23,24,24 43:4 <b>attacked</b> 12:10,11 13:13,17,22 29:13 42:3 44:23 <b>attacks</b> 24:11 <b>Attorneys</b> 2:3,6 2:10,13,18,20 <b>audible</b> 33:2 <b>audience</b> 30:12 <b>August</b> 10:18 11:15 17:7 48:25 49:3,17 50:20 <b>available</b> 52:15 <b>aware</b> 12:15,18 25:14,25 26:2 38:2,12 41:2 45:24 46:10 48:16 52:3 <b>a.m</b> 4:3	<b>blocked</b> 24:17 <b>blocker</b> 7:4,8,16 7:17 8:17 11:8 11:13,17,25 17:4 18:2 19:4,6 23:1,1,25 24:1 24:15,17 49:7 49:22,25 50:5 <b>blockers</b> 7:13 8:23 11:9 24:7 <b>body</b> 20:12 22:14 <b>Bongard</b> 16:16 <b>books</b> 37:7 <b>bottom</b> 24:12 <b>boxes</b> 33:6 34:10 34:13 <b>break</b> 51:13 <b>briefly</b> 5:6 <b>Brique's</b> 42:16 <b>broadcast</b> 14:7,8 14:13,14,18 15:5 <b>buffer</b> 11:19	49:4,6,7,21,25 50:5 <b>carried</b> 37:7 <b>CARTER</b> 1:3 <b>case</b> 45:25 52:13 52:21 53:2 <b>categorically</b> 44:18 47:17,21 <b>Center</b> 2:13 <b>CENTRAL</b> 1:2 <b>certain</b> 8:22 20:18 45:10 49:4,6,11 <b>CERTIFICATE</b> 53:6 <b>certify</b> 12:14 53:8 <b>CHAD</b> 2:4 <b>change</b> 47:20 <b>changed</b> 44:21,22 44:23 47:18 <b>changes</b> 17:8 <b>charge</b> 25:10,11 <b>Charles</b> 40:16,24 41:3 <b>Charlie</b> 6:2 12:25 24:21 25:18 31:14 <b>check</b> 30:4,21 <b>Cheseaux</b> 33:11 33:14,22 <b>CHRISTINE</b> 2:5 <b>Christophe</b> 42:13 42:15,16,22 <b>circumvent</b> 43:11 43:12 <b>claim</b> 12:19 13:8 <b>clarify</b> 21:5 <b>clear</b> 33:9 <b>closed</b> 8:16,20,22 11:7,12,16,19 12:1,7 15:20 16:3,6 17:4 18:2 19:3,6 24:14 28:1 36:18 45:7 49:3,4,5,6,18,21 49:24 50:4,5,10 <b>closer</b> 32:15 <b>code</b> 7:4,8,17 42:12 53:9 <b>collected</b> 26:5,8 <b>collecting</b> 44:5	<b>combat</b> 22:18 <b>comes</b> 37:18 <b>commend</b> 22:20 <b>company</b> 22:16 35:23 37:25 <b>complete</b> 9:17 26:23 27:4 28:3 29:6 <b>compromise</b> 25:22 <b>concerned</b> 9:15 11:22 19:16 26:6 34:15,16 47:23 48:3,14 48:15 <b>concerning</b> 53:2 <b>conclude</b> 52:22 <b>conduct</b> 27:2 50:8 50:15 <b>conducted</b> 47:7 <b>Conference</b> 53:13 <b>confirm</b> 12:4 32:16 34:5 <b>confirmed</b> 44:15 <b>conformance</b> 53:12 <b>congratulated</b> 21:1,7 <b>congratulates</b> 23:24 <b>Congratulations</b> 22:8 <b>congratulatory</b> 23:20 <b>considered</b> 48:3 <b>constitutes</b> 6:23 <b>contained</b> 27:5 37:17 <b>contains</b> 28:7 <b>contend</b> 13:21 <b>contents</b> 26:13 27:1 <b>continental</b> 52:10 <b>continue</b> 33:8 48:1 <b>continued</b> 4:13,15 <b>continuing</b> 43:3 47:25 <b>contrary</b> 37:15 39:20
<b>B</b>	<b>back</b> 4:7 52:11,12 <b>basically</b> 30:6 <b>Battery</b> 2:14,20 <b>begins</b> 25:3 <b>behalf</b> 41:12 <b>belief</b> 12:1 <b>believe</b> 9:18 10:5 34:9,12 40:23 42:6 43:20 45:17 <b>believed</b> 8:19 10:7 <b>Bell</b> 17:18,21,23 45:18 <b>best</b> 34:4,6	<b>C</b>		
		<b>California</b> 1:2,17 1:23 2:15,21 4:1 <b>call</b> 52:9 <b>called</b> 18:11 <b>Calls</b> 43:6 <b>card</b> 8:20 11:7,9 14:6,23 17:3,23 18:2 25:13,15 25:21 26:1 28:2 42:12 43:4 44:23,25 45:4,6 48:20 49:5 50:8 50:11,16 <b>cards</b> 5:9,19,20 7:3,12,13,13,15 7:15,16 8:16,16 8:22,23 9:13,25 10:1 11:8,12,16 11:17,22,23 12:9,11 13:8,23 14:3,4,10,15,19 15:3,7 17:4 18:2 19:3,3,5,6 24:1 24:7,14,17 34:10,14 41:24		

<p><b>Conus</b> 6:5,8,12,17 6:22 7:11,24 9:18,22 10:2,14 10:17 16:12 23:9,19,24 27:10,25 28:7 28:14 38:16 39:6,10,17,20 40:10,19 48:9 48:25</p> <p><b>Conus's</b> 7:7 9:16 10:5 15:11,25 23:19 48:6 49:9</p> <p><b>COO</b> 19:20</p> <p><b>CORPORATI...</b> 1:6 2:2</p> <p><b>correct</b> 5:20 6:6 6:15,17,19 7:9 7:14,18,25 8:3 8:17,21,25 9:13 9:23 10:15,18 10:21 11:8,13 11:17,20 12:3 12:13 13:9 14:11,19 15:3 15:20 16:6,13 16:17 17:4,7,11 17:14,18,21,24 18:3,6,13,16 19:4,11 20:6,9 20:17 21:2,16 22:6,9,12 23:2,9 23:21 24:8,15 25:10,23 26:9 27:11,14 28:8 28:11,16 29:7 29:11,19,22 30:3,9,17,20,24 31:3,19,22 32:1 32:5,9,18,22 33:1,12,16,19 33:23 34:1,7,19 34:25 35:3,9,14 35:24 36:4 37:5 37:8 38:9,11,18 39:8,12,23,25 40:4,8,16,21 42:4,8,14,20 44:7,10 45:11 46:21 47:14,18</p>	<p>48:6,10,25 49:3 49:5,10,15,18 49:25 50:5 51:22 52:5 53:10</p> <p><b>correctly</b> 6:25 7:5 22:22 24:2 28:5 40:14 45:9</p> <p><b>counsel</b> 2:1 4:6,7 4:8,19 5:3 41:15 43:19 45:6,14 45:17,21 48:5 48:12 52:18 53:3</p> <p><b>counter</b> 25:15</p> <p><b>countermeasure</b> 24:9 42:18</p> <p><b>countermeasures</b> 8:5 22:10 25:11 25:14 44:12</p> <p><b>couple</b> 10:9</p> <p><b>course</b> 8:2 27:13</p> <p><b>court</b> 1:1,22,22 4:6,12,23 8:8,10 10:25 11:2 16:21,23 18:20 18:22 21:23,25 23:13,15 27:18 27:20 38:25 39:2 41:6 43:7 46:6 48:22 50:21,24 51:1,5 51:8,12 52:8,12 53:18</p> <p><b>courteous</b> 52:11</p> <p><b>covered</b> 40:1</p> <p><b>create</b> 44:2</p> <p><b>creating</b> 43:25</p> <p><b>Cross</b> 3:6</p> <p><b>Cross-examinat...</b> 41:6,8</p> <p><b>CSR</b> 1:21 53:19</p> <p><b>current</b> 6:9,13,18 6:24</p> <p><b>customer</b> 17:10 17:17</p> <p><b>C.S</b> 1:21 53:18</p> <hr/> <p style="text-align: center;"><b>D</b></p> <hr/> <p><b>D</b> 2:5,19 3:1</p>	<p><b>daily</b> 33:11</p> <p><b>dangerous</b> 38:11 39:8,11,18</p> <p><b>DARIN</b> 2:11</p> <p><b>date</b> 7:10 12:4 14:22,25 15:5 17:5 18:4,6,16 19:5 25:9 33:10 46:2 47:13,23 48:4 50:11 52:16,20 53:15</p> <p><b>dated</b> 5:17 6:4 7:24 10:15,18 16:13,15 17:2 18:12 21:14 22:6 23:9,20 25:20 27:10 38:16 46:11</p> <p><b>dates</b> 48:18 49:11</p> <p><b>David</b> 1:3 2:5,12 41:12</p> <p><b>day</b> 1:10 4:2 5:17 15:15 19:10,16 23:20,23 24:9</p> <p><b>days</b> 4:21</p> <p><b>deal</b> 42:17</p> <p><b>December</b> 7:25 8:19 9:4,13 12:3 12:12,16 13:4 31:17,18 34:21 34:21 42:24 43:5 46:17 47:8 49:24</p> <p><b>decision</b> 50:8,15 50:17</p> <p><b>dedication</b> 22:20</p> <p><b>defendant</b> 45:25</p> <p><b>defendants</b> 1:10 2:9 3:14,15,16 3:17,18,19,20 3:21,22 4:11 8:6 8:11 10:23 11:3 16:19,24 18:18 18:23 21:21 22:1 23:11,16 27:16,21 38:23 39:3 45:6 50:19 51:9</p> <p><b>defense</b> 45:13</p> <p><b>deliverables</b></p>	<p>22:15</p> <p><b>demand</b> 25:13,25</p> <p><b>demanding</b> 19:21 25:21</p> <p><b>Denver</b> 29:19,20 30:15,19 31:7 31:22 32:13,18 33:25 34:6,9,12 34:25 35:12 43:15,17 44:1,6</p> <p><b>deny</b> 15:14</p> <p><b>department</b> 44:16</p> <p><b>describes</b> 6:8</p> <p><b>description</b> 36:5 46:22 47:11</p> <p><b>design</b> 22:17 33:23</p> <p><b>developers</b> 13:14 13:16,20 14:2</p> <p><b>development</b> 37:23 42:10,17 44:16 48:2</p> <p><b>device</b> 29:25 30:7 30:9,22 31:9 32:1,4,25 33:5 43:11</p> <p><b>devices</b> 23:1,25 29:19,21,22,23 30:2,5,13,16,20 30:23 31:4 32:8 32:13 33:11,15 33:22,25 34:1,7 34:17,19 35:21 36:17 41:24 43:11,17,20,25 44:3,5,9</p> <p><b>devoted</b> 26:13,24</p> <p><b>different</b> 19:18 20:13 29:21 39:14,15 49:12 49:12,14</p> <p><b>DILGER</b> 2:11</p> <p><b>direct</b> 3:6 4:13,15</p> <p><b>directed</b> 31:8 34:25</p> <p><b>directing</b> 32:12</p> <p><b>DirectTV</b> 26:5,7,9 26:14,24 27:5 28:2,11,13,15 28:17,20 29:10</p>	<p>29:19,22,24 30:3,8,9,15,16 30:20,24 31:3,8 31:25 32:4,25 34:3,7,10,13 44:1</p> <p><b>disagree</b> 9:16</p> <p><b>discuss</b> 52:25</p> <p><b>discussed</b> 19:19 49:9</p> <p><b>discussing</b> 5:8,16 31:21</p> <p><b>discussion</b> 47:3</p> <p><b>DISH</b> 22:18</p> <p><b>District</b> 1:1,2,22</p> <p><b>DNASP</b> 16:5</p> <p><b>DNASP-II</b> 50:16</p> <p><b>DNASP-003</b> 5:19 5:20 7:12 8:16 8:20 9:13 11:7 11:12 17:3 19:3 24:14</p> <p><b>document</b> 19:2 24:25 25:3,4 33:16 46:16 49:17</p> <p><b>documented</b> 47:12</p> <p><b>documents</b> 4:19 4:21 5:3,5 35:8 37:16,19 46:1</p> <p><b>doing</b> 25:14 30:6 30:10 34:16 43:20</p> <p><b>Dominique</b> 16:16</p> <p><b>doubt</b> 52:13</p> <p><b>drive</b> 22:18</p> <p><b>DTV</b> 28:2,8 34:8</p> <p><b>Dugan</b> 19:21 20:5 21:1,7 22:5,24 23:23</p> <p><b>Dugan's</b> 20:12,21 22:5,11 23:20</p> <p><b>dummies</b> 33:16</p> <p><b>dump</b> 26:23,25 27:1,4 28:4 29:2 29:6</p> <hr/> <p style="text-align: center;"><b>E</b></p> <hr/> <p><b>E</b> 3:1</p>
---	--	--	--	---

<b>earlier</b> 30:19 35:3 41:23 52:22	46:16,19 47:7 47:13	21:22 22:1 23:6 23:8,12,16,21 24:13,20,24 25:17,20 27:7,9 27:16,21 31:13 35:2 38:14,16 38:23 39:3,6 40:10 41:16 46:13,14 47:2 47:10 50:21,22 51:9	14:17,19,22 15:1,6,13 47:17 48:13 49:14	<b>getting</b> 32:17
<b>Eberhart</b> 2:12 3:7 4:14,16 5:2,15 5:22,24 6:3 7:23 8:6,13 9:6,11 10:13,23 11:5 12:23 13:3 16:11,19 17:1 18:8,10,18 19:1 20:4 21:11,13 21:21 22:3 23:5 23:7,11,18 24:19,23 25:16 25:19 26:22 27:6,8,16,23 31:12,15 33:7 36:13,19,23 38:13,15,23 39:5 41:5 43:6 46:8 48:21,23 50:19,22,25 51:2,4,11,16,23	<b>effect</b> 33:18 <b>effective</b> 44:18 47:17,21 <b>efficient</b> 24:10 47:23 48:4 <b>effort</b> 22:16 <b>efforts</b> 22:18 42:19 <b>elements</b> 20:15 <b>Embarcadero</b> 2:13 <b>employee</b> 34:24 35:12,12 37:4,8 <b>employs</b> 41:2 <b>engineering</b> 34:10 34:13,18 <b>entitled</b> 20:5 22:11 <b>essence</b> 49:11 <b>et</b> 1:6,9 2:2,9 <b>everybody</b> 52:17 <b>evidence</b> 3:13 6:1 8:12 11:4 12:24 16:25 18:24 22:2 23:17 24:21 25:18 27:22 31:14 39:4 51:10 <b>exact</b> 36:5 <b>exactly</b> 34:8 <b>examination</b> 3:4 4:14,15 46:7 51:14 <b>example</b> 17:20 <b>exception</b> 19:17 <b>Excuse</b> 46:24 <b>exhibit</b> 3:13 5:13 5:16,23 7:11,20 7:22,24 8:7,11 8:15,25 10:14 10:17 11:3,11 12:8 13:5,21 14:4,9,15,21 15:2,6,19 16:12 16:15,24 17:2 17:20 18:1,9,11 18:18,23 19:19 19:25 21:12,14	<b>Exhibits</b> 3:11 10:11,24 16:9 16:20 <b>existing</b> 29:21 <b>expect</b> 32:17 52:12 <b>explained</b> 37:1 <b>explanation</b> 20:11 <b>explicitly</b> 31:10 <b>exposed</b> 12:2,19 <b>express</b> 53:1 <b>ExpressVu</b> 16:17 17:18,21,23 18:16,17 19:11 37:4,8,12,14 45:18 <b>e-mail</b> 16:12 18:11 19:20 20:5,12,21 21:4 21:14 22:4,5,5 22:11 23:20,21 23:23 31:16,21 34:21 35:3,5,6 37:3 38:16 44:15	<b>Federal</b> 1:22 <b>FEY</b> 2:24 <b>field</b> 37:23 <b>fight</b> 20:13 22:21 <b>fighting</b> 20:22 21:2,8 <b>figure</b> 28:19,25 <b>find</b> 43:11 52:14 <b>finished</b> 9:7 <b>finishing</b> 38:5 <b>first</b> 8:15 25:7,12 28:21 30:4 31:17 37:2,10 46:22 <b>five</b> 33:18 <b>fix</b> 14:15 <b>fixes</b> 33:19 <b>following</b> 4:4 6:22 6:25 14:8,18 22:25 <b>follows</b> 27:25 <b>foregoing</b> 53:9 <b>form</b> 53:1 <b>format</b> 53:12 <b>forum</b> 40:12 <b>forums</b> 7:1 40:21 <b>forwarding</b> 22:5 <b>Fountainview</b> 2:6 <b>four</b> 33:14 <b>frame</b> 45:19,22 51:18,22 52:1,3 <b>Francisco</b> 2:15,21 <b>French</b> 2:24 35:3 <b>Friday</b> 5:8,17 15:11 19:19 20:3 25:1 42:6 44:14 46:15,23 47:20 49:10 <b>function</b> 32:20 42:21 <b>further</b> 6:4 18:15 29:18 46:4 51:11 52:7	<b>gives</b> 6:8 13:10 32:21 <b>glance</b> 46:22 <b>Go</b> 46:25 <b>goes</b> 6:22 28:7 32:20 33:10 <b>going</b> 4:20 5:4 6:24 33:8 36:1 36:16,21 37:3,7 46:4 52:8,14,18 <b>good</b> 4:17,18 22:9 30:11 39:15,18 39:21,22 41:10 <b>greatly</b> 22:19 <b>Group</b> 1:9 2:9 39:23 40:7 <b>GS2</b> 40:13,16,19 40:23,25 <b>Guggenheim</b> 17:12 21:15 22:4,8 31:19 32:11,16 44:14 44:15 <b>Guggenheim's</b> 31:21 <b>guy</b> 40:11 <b>Guys</b> 20:5
<b>EchoStar</b> 1:6 2:2 6:6 10:20 12:18 13:8 18:5 19:8 19:13 20:14,17 20:22 21:8 24:25 25:8,21 26:1 29:3,7,11 30:7,23 31:2 34:2 35:23 41:12 42:19 43:4 44:4 45:21 46:11,14 47:3 50:9,16				<hr/> <b>H</b> <hr/> <b>habit</b> 29:16 <b>hack</b> 41:20,23 <b>hacked</b> 29:4,7 <b>hacker</b> 29:13 35:9 35:13,19,24 36:6,12 <b>hackers</b> 7:2 12:10 28:19,20 36:2,4 36:22 <b>hacker's</b> 41:21 <b>hackhu.com</b> 28:1 29:3,7 <b>hacking</b> 7:1 28:2 28:8,10,13,15 28:17 29:10 <b>hacks</b> 28:21 29:11
<b>EchoStarD12V1</b> 1:25				
<b>EchoStar's</b> 19:20 25:13				
<b>ECM</b> 22:25 23:24 24:7,25 25:3,7 25:12 43:9,9,13 46:14,19 47:3,3 47:3,4,11,11,11 47:14				
<b>ECMs</b> 13:13 25:4 25:10 33:18,23 41:22,23,24 42:7,9,24 43:1,3				
		<hr/> <b>F</b> <hr/> <b>fact</b> 26:4,12 31:7 46:15,19 47:2 <b>facts</b> 20:20 <b>false</b> 15:25 44:20 <b>familiar</b> 13:4 <b>far</b> 9:14 11:21 19:15,15 26:6 34:15,16 47:23 48:3,14,14 <b>farther</b> 12:4 <b>February</b> 5:10,17 13:18,23 14:5,9	<hr/> <b>G</b> <hr/> <b>general</b> 27:2 <b>gentlemen</b> 52:24	



<b>HAGAN</b> 2:4	<b>identification</b>	26:18	4:11,17 5:25	<b>listed</b> 11:16
<b>halfway</b> 6:10	3:13 33:21	<b>involved</b> 40:3	8:14 10:10,14	<b>literally</b> 36:14
<b>hand</b> 10:11 24:19	<b>imagine</b> 20:19	50:18	11:6 15:12,18	<b>little</b> 32:15
<b>handed</b> 48:24	22:10	<b>IP</b> 40:12,20	17:2 21:14 22:4	<b>LLP</b> 2:10,18
<b>happened</b> 29:16	<b>immediately</b>	<b>IRD</b> 24:1	23:8,19 25:20	<b>longer</b> 14:6,10
30:14	22:25	<b>issued</b> 5:9 14:5	27:9 31:16	15:2
<b>happening</b> 7:1	<b>implemented</b>	24:6 44:17	39:23 40:7	<b>look</b> 10:9 15:17
<b>hard</b> 22:19	28:22 31:6		41:10 46:9	16:8 24:12,24
<b>hardware</b> 33:15	<b>important</b> 28:20	<b>J</b>	47:24 48:5,24	32:15 35:2 37:2
<b>HARTSON</b> 2:18	28:24 35:25	<b>Jane</b> 1:21 53:18	50:20 51:16	46:13
<b>header</b> 22:13	<b>included</b> 29:22	<b>Janson</b> 38:9,11	52:8,18	<b>looked</b> 5:6 9:1
<b>heard</b> 38:10 44:2	<b>includes</b> 32:24	39:11,25 40:3	<b>Kudelski's</b> 4:13	15:11,19 17:7
<b>held</b> 53:11	<b>including</b> 33:15	<b>January</b> 16:13,15	<b>Kuykendall</b> 31:24	24:13 45:3
<b>Hello</b> 41:11	<b>incomplete</b> 9:18	17:2 18:6 19:22	32:12 34:22,24	<b>looking</b> 7:11 8:14
<b>help</b> 40:13,19	9:22 10:3,5	21:6 46:11	35:7,13 37:4,7	14:16 17:20
<b>Henri</b> 3:7 4:9,11	<b>indicate</b> 15:13	<b>JEAN-MARIE</b>		35:5
4:13	45:10 51:21	2:24	<b>L</b>	<b>lot</b> 15:11
<b>hired</b> 39:23	52:4	<b>job</b> 32:21	<b>L</b> 2:11,19	
<b>history</b> 24:25	<b>indicated</b> 51:17	<b>Joel</b> 6:5 10:14,17	<b>lab</b> 29:18,20	<b>M</b>
46:14,19 47:3	<b>indicating</b> 37:3	23:8 27:10	30:19 31:7,22	<b>M</b> 2:4,5
<b>HOGAN</b> 2:18	<b>individual</b> 38:2,8	38:16	31:25 32:7,13	<b>maintain</b> 31:25
<b>hold</b> 7:20 52:18	<b>information</b> 6:23	<b>Judge</b> 1:3 4:22	32:17,25 33:18	32:24
<b>holding</b> 26:17	10:6 23:3 26:5,8	<b>Judicial</b> 53:13	33:25 34:7,9,12	<b>March</b> 6:4 7:7
52:16	26:15,17,20,21	<b>July</b> 25:20 27:10	34:25 35:11	38:17,17
<b>hole</b> 8:16,20,22	27:3,5 28:8,10	<b>June</b> 18:12 19:8,9	43:15,16,21	<b>market</b> 44:6
11:7,12,16,19	28:12,14,17	19:13 46:1	44:1,6	<b>matter</b> 34:17
11:20 12:1,2,7	29:10 35:16,20	<b>jury</b> 1:16 4:5 12:6	<b>Ladies</b> 52:24	52:25 53:11
15:13,20 16:6	35:21 36:1	16:1 48:12	<b>language</b> 28:20	<b>maximum</b> 52:19
17:4 18:2 19:3	37:17,22,24	49:13	28:22 29:1	<b>mean</b> 14:23 15:10
24:14 44:25	43:4		<b>latest</b> 28:2	15:24 17:8
45:6,11 48:9,13	<b>inside</b> 35:23	<b>K</b>	<b>launched</b> 23:1	20:16 24:10
48:17 49:2,18	<b>install</b> 11:24	<b>Keep</b> 22:20 33:10	<b>Law</b> 2:3,6,10,13	<b>means</b> 20:10
49:24 50:4,4,9	<b>instructs</b> 31:24	<b>KENNETH</b> 2:19	2:18,20	24:16 28:2
51:17,21 52:4	<b>intended</b> 17:13	<b>kill</b> 24:1	<b>leader</b> 8:4 42:18	<b>meant</b> 34:8 35:15
<b>Honor</b> 8:6,9	<b>intention</b> 35:11	<b>kind</b> 26:25	<b>learn</b> 28:19 29:1	36:9 37:13
10:23 16:19,22	<b>interested</b> 28:3	<b>KLEIN</b> 2:19	35:17 36:6,7,24	<b>mention</b> 9:2
18:19 21:21	32:6	<b>knew</b> 39:8	<b>learned</b> 43:5	<b>method</b> 12:11,18
23:11 27:17	<b>interesting</b> 30:13	<b>know</b> 12:7 13:12	<b>learned</b> 43:5	13:7 14:3,9,20
38:24 41:7	<b>internal</b> 11:16	14:14 19:13	<b>legitimate</b> 34:10	15:1,6
48:21 50:23	35:16 36:1	20:10,21 25:6	34:13	<b>Michael</b> 2:12 5:13
51:4	37:25,25	28:20 29:24	<b>letter</b> 25:20	5:22 7:22 10:11
<b>HONORABLE</b>	<b>internet</b> 17:16	33:5 38:7 39:11	<b>let's</b> 7:21 10:9	12:23 16:9 18:8
1:3	26:6,11 35:18	40:17,18 41:16	15:17 16:8	19:25 21:11
<b>hook</b> 30:8	35:20 37:18	42:11 43:25	19:18 24:12	23:5 25:16 27:6
<b>hours</b> 52:12	38:1	45:2 46:12	32:15 35:2 37:2	31:12 38:13
<b>Houston</b> 2:7	<b>interpreter</b> 2:24	48:18 50:11,13	43:15 52:16	51:2
<b>HU</b> 28:3	4:22,25 9:5,7	50:14,15,17	<b>level</b> 35:19	<b>microphone</b> 4:22
<b>huge</b> 22:16	33:4 36:16,21	<b>knowledge</b> 46:12	<b>limited</b> 7:3	4:24
	43:12	<b>Kristee</b> 4:24	<b>list</b> 4:19 5:3 11:12	<b>Mike</b> 19:20 24:19
<b>I</b>	<b>Interruption</b>	<b>Kudelski</b> 3:7 4:9	18:1,5 25:4 37:4	<b>minute</b> 7:20 33:4
			37:11	

<p><b>Misstates</b> 51:23  <b>moment</b> 43:15  <b>monitoring</b> 9:24  9:25 14:16  17:16 18:12  27:2,9 37:14,18  37:20,23 45:3,5  45:18 46:10  48:6  <b>months</b> 21:6 28:4  <b>morning</b> 4:17,18  5:6,7 24:14  41:10,14 49:9  49:24  <b>move</b> 16:19  <b>Moving</b> 26:3  <b>MYERS</b> 2:10</p> <hr/> <p style="text-align: center;"><b>N</b></p> <p><b>N</b> 3:1  <b>Nagra</b> 5:9 8:19  9:19,23 12:18  13:13 25:22  35:17 37:16,19  <b>NagraCard</b> 8:3  21:19,20 26:4  27:14 28:18  38:21 42:7,13  42:19,24 43:2  <b>NagraStar</b> 13:7  17:11,12,14  25:21 34:23,24  35:12,22 41:2  41:13 43:25  44:4  <b>NagraVision</b> 8:3  21:19,20 26:4,7  27:14 28:18  38:21 42:7,13  42:19,23 43:2  44:5,16  <b>Nagra's</b> 11:15  35:8  <b>name</b> 3:6 38:2,8  <b>named</b> 39:25  <b>NATHANIEL</b>  2:11  <b>NDS</b> 1:9 2:9 41:15  <b>necessary</b> 29:13  <b>need</b> 4:9,22 36:11</p>	<p>50:22  <b>needed</b> 22:17 29:9  52:11  <b>Network</b> 22:19  <b>never</b> 44:2  <b>new</b> 33:15 50:22  <b>nice</b> 53:3  <b>nickname</b> 38:7  40:2  <b>Nicolas</b> 42:13,15  42:16,22  <b>Noll</b> 2:5 3:8 8:9  11:1 16:22  18:21 21:24  23:14 27:19  39:1 41:7,9,12  43:14 46:3 51:7  51:15 52:2,7  <b>non-updated</b> 7:3  <b>normal</b> 8:2  <b>normally</b> 9:9 19:9  <b>Nos</b> 3:15,16 11:3  16:24  <b>note</b> 22:14  <b>notify</b> 52:11,22  <b>November</b> 21:15  22:6 23:9 24:6  25:4 46:21  47:14  <b>number</b> 7:2 23:24  25:3 32:24 33:3  33:10,14,18,21  46:20 47:14  49:8 50:21,23  <b>numbered</b> 32:21</p> <hr/> <p style="text-align: center;"><b>O</b></p> <p><b>O</b> 1:3  <b>objection</b> 8:8,9  10:25 11:1  16:21,22 18:20  18:21 21:23,24  23:13,14 27:18  27:19 38:25  39:1 43:6 51:6,7  51:23  <b>objective</b> 34:20  35:15,19 37:1  43:23 44:8,12  <b>obtain</b> 26:23 31:8</p>	<p><b>obtained</b> 26:13  29:23 30:16  <b>occurred</b> 46:20  47:13 50:12  <b>offer</b> 8:6 10:23  18:18 21:21  23:11 27:16  38:23 50:19  <b>Official</b> 1:22  <b>Oh</b> 4:23  <b>Okay</b> 8:19 12:6  24:4,6 37:10  41:22 46:3  49:23 51:1,12  52:7  <b>Olivier</b> 42:16  <b>omits</b> 8:24 46:19  47:3,10  <b>ones</b> 26:16 28:21  <b>oOo</b> 53:5  <b>open</b> 15:13 44:6  45:11 48:9,13  48:17 51:17,21  52:1  <b>opened</b> 44:25  <b>operable</b> 30:22  <b>operate</b> 30:22  <b>opinion</b> 9:20,21  9:22 39:13,14  39:15 44:19,21  44:22,23 47:16  47:20 53:1  <b>order</b> 28:19,23,25  29:1,10 36:1  51:2  <b>organized</b> 32:17  <b>organizing</b> 31:21  <b>originally</b> 44:17  <b>outside</b> 52:10  <b>overflow</b> 11:20  <b>Overruled</b> 43:7  <b>O'DONNELL</b>  2:12 51:3  <b>O'MELVENY</b>  2:10</p> <hr/> <p style="text-align: center;"><b>P</b></p> <p><b>page</b> 6:10 7:11  8:15 24:12,24  27:24 53:12</p>	<p><b>paragraph</b> 35:5  36:15,20  <b>parentheses</b>  36:17,18  <b>part</b> 20:24 21:3  21:18 31:10,17  31:18 32:20  34:3 37:11  38:20  <b>partial</b> 27:4  <b>particular</b> 48:4  <b>parties</b> 45:24  <b>parts</b> 31:16 34:2  <b>pass</b> 41:5 46:4  <b>patch</b> 11:23,24  12:10 14:7,7,8  14:12,14,18,25  15:5,9 42:5  44:17 47:17,22  48:13  <b>patches</b> 42:1,8,9  42:11  <b>people</b> 37:23  <b>performed</b> 25:7  46:16  <b>period</b> 26:1  <b>Perlman</b> 40:16,24  41:3  <b>person</b> 39:16,18  39:21,22  <b>personally</b> 30:10  <b>persons</b> 52:9  <b>Peter</b> 31:24 34:22  34:24 35:13  36:16 37:4,11  <b>pick</b> 52:16  <b>piece</b> 23:4  <b>piracy</b> 6:5,13 9:19  9:23 10:21  19:21 20:8,13  20:16,22 21:2,8  22:18 25:7 26:5  26:9,14,24  29:19 30:7,9,15  30:20 31:9 32:4  32:8,13 34:1,7  40:3 43:25 44:5  44:9  <b>pirate</b> 33:22  34:19 38:11</p>	<p>39:11,18 40:20  41:24 42:3  43:17,20 44:2  <b>pirates</b> 6:14 13:8  43:3  <b>place</b> 29:20 52:8  <b>plaintiff</b> 45:25  <b>plaintiffs</b> 1:7 2:2  41:12  <b>PLC</b> 1:9 2:9  <b>please</b> 5:11,14,22  6:20 7:22 9:5,5  12:24 13:2 18:8  20:1 21:12 23:5  24:20 25:17  27:6 31:12  34:11 36:15,20  38:13 45:16  47:5 48:1  <b>point</b> 6:9,23 35:8  35:13,18,24  36:3,5,11,22  48:4  <b>popular</b> 31:8 32:1  32:4,7,7,8,13,25  <b>portion</b> 12:9 35:2  <b>position</b> 42:21  <b>possibility</b> 31:11  <b>possible</b> 20:11  23:3  <b>post</b> 13:4,10 21:9  41:16 42:4  <b>posting</b> 12:3,12  12:15,19,21  <b>postings</b> 42:25  43:5 46:17 47:8  <b>potential</b> 33:22  <b>POV</b> 6:9,18,21  7:19  <b>prepare</b> 19:9  44:12  <b>prepared</b> 9:18  <b>preparing</b> 19:7  <b>presence</b> 4:5  <b>present</b> 2:23 4:7  <b>president</b> 19:20  <b>PRESIDING</b> 1:3  <b>pretty</b> 28:8,17  38:11 39:8,11  39:17</p>
--	--	--	---	---

<b>previous</b> 18:6	19:3 22:14	<b>referring</b> 40:12	24:13 28:25	19:5 21:3 24:13
<b>prior</b> 8:25 36:20	28:14	<b>reflect</b> 9:12	37:14,18,20,24	28:16 32:6
46:16,20 47:7		<b>reflected</b> 12:7	45:3,5,8,10,14	37:11 49:4,5,6
47:13 51:23	<b>R</b>	13:21	45:22 48:6,9,16	49:21
<b>probably</b> 34:3,6	<b>R</b> 2:12	<b>reflects</b> 5:19	48:19 49:9,12	<b>scheduled</b> 50:14
<b>proceed</b> 4:8	<b>read</b> 6:16 7:5	46:16	49:14,23 50:1,3	<b>schematics</b> 33:15
<b>proceedings</b> 1:15	22:22 24:2 28:5	<b>regarding</b> 26:7,9	51:20,25 52:3	36:18
4:4 26:18 53:11	28:24 36:11	<b>regular</b> 33:14	<b>reprimand</b> 10:2	<b>screen</b> 6:2
<b>produce</b> 45:25	40:14	<b>regulations</b> 53:13	<b>research</b> 44:16	<b>second</b> 6:20 24:24
<b>produced</b> 19:14	<b>reading</b> 6:25	<b>related</b> 26:5 45:18	<b>response</b> 25:12,22	31:18 35:5
45:14 46:11	29:16 33:8	<b>relates</b> 16:16	33:2	36:14 52:15
<b>program</b> 35:21	<b>real</b> 38:8	<b>relevant</b> 10:7	<b>RESUMED</b> 4:11	<b>Section</b> 53:8
<b>programmers</b>	<b>realize</b> 22:16	<b>relied</b> 17:13	<b>return</b> 4:9	<b>secure</b> 5:20 7:15
36:17	<b>Really</b> 15:17	<b>remain</b> 52:14	<b>reverse</b> 34:9,12	<b>secured</b> 5:9 7:12
<b>programming</b>	<b>reason</b> 9:8 34:18	<b>remainder</b> 52:19	34:18	<b>security</b> 8:4 20:15
30:17	40:23 43:2,8	<b>remember</b> 5:10	<b>review</b> 4:21 5:5	20:16,16 22:11
<b>progress</b> 21:2	44:9	5:21 19:19 20:2	<b>reviewed</b> 24:25	22:18 25:22
22:12	<b>reasonable</b> 47:15	31:10 41:1	46:15	29:18 31:7,22
<b>protect</b> 11:10,25	<b>recall</b> 10:4,8 25:9	45:23 46:2	<b>RICHARD</b> 2:19	31:25 32:13,17
<b>protected</b> 13:24	40:25 41:15,17	<b>reopened</b> 15:16	<b>right</b> 4:6 41:20	32:25 34:9,12
14:2	43:16,21 44:18	45:4 48:20 52:4	44:21 51:13	34:25 35:11
<b>protects</b> 42:5	45:7,15,19,22	<b>repeat</b> 5:1 13:1	52:21	<b>see</b> 6:10,11 9:2,8
<b>provide</b> 6:22	51:18	15:4 34:11 47:1	<b>rights</b> 7:13 8:24	9:24,25 12:20
36:16	<b>receipt</b> 51:6	47:5	9:12 11:10,25	20:15 23:3
<b>provided</b> 17:17	<b>receive</b> 14:23,24	<b>repeating</b> 6:14	<b>ROM</b> 5:9 13:8,22	26:15 30:2,4,5,8
17:21	37:13 44:11	<b>rephrase</b> 14:1	14:3,4,14,19	30:21 34:17
<b>providing</b> 6:13	<b>received</b> 5:6 8:2	<b>report</b> 5:8,11,16	15:2,7,20 16:5	35:18,19 36:1
10:2	8:10,11 11:2,4	5:25 6:8 9:1,12	17:23 18:1 24:7	44:11
<b>publish</b> 43:9	11:23,24 12:10	10:14,17 16:12	44:17 48:9,17	<b>seeing</b> 42:3
<b>published</b> 7:4,8	14:7 15:9 16:23	16:15 19:11,23	49:5,17 50:4,9	<b>seen</b> 12:17 13:6
7:18 35:17 36:2	16:25 18:22,23	20:3 27:9,10	51:17,21	40:25 49:16
43:10	21:18,25 22:1	33:11,18 45:17	<b>Room</b> 1:23	51:20
<b>pull</b> 29:9	23:15,16 27:13	46:10 48:12,25	<b>Rule</b> 1:21 53:18	<b>select</b> 31:4
<b>pulled</b> 29:2,6	27:20,21 38:20	49:2 50:20		<b>sell</b> 29:25
<b>pursuant</b> 53:8	39:2,3 51:8,9	51:17	<b>S</b>	<b>send</b> 33:11,14
<b>put</b> 6:2 11:9,25	<b>recess</b> 52:24 53:3	<b>reported</b> 53:10	<b>SACV</b> 1:8	<b>sent</b> 7:25 17:10,12
12:25 24:22	53:4	<b>Reporter</b> 1:22	<b>safe</b> 52:20	<b>sentence</b> 35:15
29:20 37:4,11	<b>recipe</b> 11:22 13:7	53:18	<b>San</b> 2:15,21	36:8,10,14,19
<b>putting</b> 32:6	13:10,11,13,15	<b>REPORTER'S</b>	<b>Santa</b> 1:17,23 4:1	36:20,24 37:2
	13:17,21 14:3,6	1:15	<b>satellite</b> 1:6 2:2	37:10 50:2
<b>Q</b>	14:9,21 15:1,6	<b>reports</b> 9:16,18	40:3	<b>sentences</b> 20:19
<b>question</b> 5:1	41:20,21 42:3	9:23 10:3,5,9	<b>saw</b> 8:25 26:6,21	35:6
11:11 13:1,19	<b>recipes</b> 41:23,25	11:6,16 12:2	43:23 44:19	<b>series</b> 45:5
14:1 15:4 30:18	42:5	14:16 15:11,12	45:3,8 49:8,11	<b>session</b> 4:7
34:11 45:13,16	<b>recross</b> 3:6 51:12	15:14,15,15,17	51:25	<b>set</b> 29:18 31:24
47:5	51:13,14	15:21,23,25	<b>saying</b> 6:14 9:17	32:24 33:25
<b>questions</b> 41:13	<b>Redirect</b> 3:6 46:6	16:2,3,5,7,8	28:25 39:10	34:25
46:5,9 52:7	46:7	17:6,10,13,15	51:25	<b>setting</b> 34:7 35:11
<b>quite</b> 29:24 39:7	<b>reference</b> 8:24	17:17,21 19:7	<b>says</b> 6:17,19,21,21	<b>set-top</b> 33:6 34:10
<b>quote</b> 11:7 17:3	<b>referenced</b> 12:2	19:10,13,16	7:17 8:22 17:3,5	34:13

<b>show</b> 4:20 5:4,11 5:13,22 12:23 16:9 18:8 19:23 19:25 21:9,11 23:5 25:16 27:6 31:12 38:13 48:12,16 49:14 49:24 50:4	<b>soft</b> 8:23 <b>software</b> 8:17 11:8,13,17 17:4 18:2 19:4,6 23:1 24:1,15,18 33:15 49:25 50:5	42:22 <b>supposed</b> 35:8 <b>sure</b> 11:21 45:17 <b>swap</b> 25:13,21 26:1 50:9,11,16 50:18,18 <b>swaps</b> 25:15	41:22 44:14 46:23 47:16,24 48:8 <b>testify</b> 52:13 <b>testifying</b> 52:10 <b>testimony</b> 16:1 20:23 25:25 29:3,9 34:6 37:21 41:19 42:2,6,23 43:16 43:21 44:4 45:9 47:21 51:20,24	44:16 48:2 <b>topic</b> 19:18 26:3 <b>transcript</b> 1:15 53:10,12 <b>translate</b> 36:14 <b>translator</b> 36:13 <b>triage</b> 29:21 30:12 31:4 34:17,17 34:19 43:21 44:6
<b>showed</b> 15:14 17:15 26:10 41:15 45:5,17 48:9,13 50:1,3,6	<b>somebody</b> 30:11 34:23 35:25 42:12	<b>system</b> 6:6 16:17 18:16 20:14,17 20:22 25:8,22 26:9,17,21 28:11 29:4 30:3 30:8,8,22,24,24 31:3,3 44:1 50:9 50:16	<b>testing</b> 22:17 <b>Texas</b> 2:7 <b>text</b> 49:8 <b>thank</b> 4:6,12,23 41:7 52:23	<b>Trial</b> 1:16 <b>true</b> 15:9,10,24 20:12 21:7 34:2 42:1 47:7,10 53:9
<b>showing</b> 26:19	<b>sorry</b> 9:6 15:22 23:6,19 38:5,17 43:12 47:24	<b>systems</b> 26:7,15 26:16,20 29:17	<b>testing</b> 22:17 <b>Texas</b> 2:7 <b>text</b> 49:8 <b>thank</b> 4:6,12,23 41:7 52:23	<b>Tuesday</b> 1:18 4:1
<b>shown</b> 12:12 13:5 14:3,9,15,21 15:1,6,21,23 16:2,7 48:24 49:13,23 50:20 51:17	<b>specific</b> 48:18 <b>specifically</b> 31:8 35:6	<hr/> <b>T</b> <hr/>	<b>thanks</b> 22:9 <b>thing</b> 17:3,6 30:11 40:10	<b>two</b> 17:9 26:15 31:16 32:24 35:6 46:9
<b>shows</b> 8:15 19:2 49:2,17	<b>speculation</b> 43:6	<b>T</b> 2:3,4	<b>things</b> 16:4 20:18 26:6 31:25 37:24 49:12	<b>two-thirds</b> 8:14
<b>signal</b> 22:18	<b>stalking</b> 40:11	<b>take</b> 4:20 5:4 10:9 15:17 23:1 27:2 32:15 37:2 46:13 51:13 52:24	<b>think</b> 9:15,20 14:16 33:8 39:15,18,20 44:22 52:20,21	<b>type</b> 44:2
<b>similar</b> 17:17	<b>stalling</b> 7:2	<b>taken</b> 4:4	<b>thought</b> 30:10 35:22 39:17,19 48:8	<hr/> <b>U</b> <hr/>
<b>sir</b> 5:16 11:11 12:15 14:1 15:22 16:8 18:11 19:18 20:12 21:5 24:14 26:3,12 27:24 32:15 33:8 34:19 36:7 36:19,25 37:10 37:15 38:5,16 40:10 41:14,17 41:23 42:8,14 42:23 45:24 46:15 47:2,7,10 51:22	<b>stand</b> 4:10 <b>starting</b> 40:11 <b>state</b> 11:6 26:10 <b>statement</b> 37:15 38:12	<b>talk</b> 19:18 43:15	<b>three</b> 33:3,10 <b>three-quarters</b> 27:24	<b>understand</b> 13:19 13:25 20:18 28:23 29:11,12 29:14 30:18 44:10 45:9
<b>site</b> 26:23 27:1,3,4 27:4 28:1,4 29:3 29:7,10	<b>status</b> 5:19 6:5 8:15 9:19,23 10:20 11:7,12 17:15,16 18:1,5 18:15 19:2 33:11	<b>talked</b> 42:1,2	<b>time</b> 4:20 5:4 9:24 9:25 14:12 15:9 25:15 28:22 29:2,6 32:5 34:21 39:13,19 42:22 43:9 44:19,24,25 45:18,22 48:4 49:13 50:7,8,14 51:18,21 52:1,3	<b>understood</b> 41:19 <b>undertaken</b> 25:12
<b>sites</b> 26:19	<b>stenographically</b> 53:10	<b>talking</b> 20:2,13,21 20:25 28:24 33:6	<b>thought</b> 30:10 35:22 39:17,19 48:8	<b>United</b> 1:1,22 52:10 53:9,13
<b>sitting</b> 12:6 13:12	<b>step</b> 52:23	<b>talks</b> 5:18 18:17	<b>three-quarters</b> 27:24	<b>update</b> 5:9,18 6:5 7:14,24 8:24 13:18,22 14:4 14:10,20 15:8 18:15 23:8
<b>situation</b> 6:9,13 6:19,24	<b>steps</b> 20:13	<b>target</b> 32:3	<b>time</b> 4:20 5:4 9:24 9:25 14:12 15:9 25:15 28:22 29:2,6 32:5 34:21 39:13,19 42:22 43:9 44:19,24,25 45:18,22 48:4 49:13 50:7,8,14 51:18,21 52:1,3	<b>updates</b> 10:20 33:14
<b>six</b> 32:21 33:21	<b>STONE</b> 2:19	<b>tasks</b> 32:21	<b>title</b> 53:9	<b>use</b> 35:20
<b>Smart</b> 34:13 42:11 43:4	<b>Street</b> 1:23 2:14 2:20	<b>team</b> 8:4 19:7 21:1,7 22:12,24 23:24 24:6 26:8 26:12,23 29:2,6 30:15,19 42:10 42:18 43:24 48:2	<b>today</b> 4:20 5:4 12:6,9 13:12 15:12 40:7 41:3 42:6 46:15 47:16	<b>useful</b> 28:12
<b>SNYDER</b> 2:11 4:9	<b>submitted</b> 9:19,22	<b>teamwork</b> 22:17	<b>told</b> 13:14 40:5	<b>U.S</b> 53:18
	<b>subscription</b> 30:16	<b>tell</b> 13:16,20 14:2 22:14		<hr/> <b>V</b> <hr/>
	<b>success</b> 21:7	<b>terminology</b> 29:14,15		<b>valid</b> 43:9
	<b>successful</b> 22:25 23:25 24:7	<b>terms</b> 29:14		<b>valuable</b> 28:8,10 28:18 35:22
	<b>Suite</b> 2:7,14,21	<b>test</b> 30:2 31:2		<b>view</b> 6:9,23 7:7 35:9,13,19,24 36:4,5,11,22
	<b>summarizing</b> 9:23	<b>tested</b> 30:15,20,23		
	<b>supervising</b> 6:12	<b>testified</b> 30:19		
	<b>supervisor</b> 42:16			

<p><b>views</b> 6:13  <b>VIP</b> 7:12,16 8:24            9:12,24 10:1            11:9,25  <b>vocabulary</b> 29:13  <b>Volume</b> 1:10 4:2  <b>Voyager</b> 38:3,5,8            39:6,10,14,17            39:20,23,25            40:6,12,20  <b>vs</b> 1:8  <b>vulnerability</b>            14:15  <b>vulnerable</b> 14:20</p> <hr/> <p style="text-align: center;"><b>W</b></p> <hr/> <p><b>W</b> 2:11  <b>WADE</b> 2:3,4  <b>want</b> 11:10 20:6            52:13  <b>wanted</b> 20:8 36:9            42:11  <b>wasn't</b> 30:10            50:10  <b>way</b> 8:14 27:24  <b>weaknesses</b> 33:22  <b>websites</b> 6:14            26:13  <b>week</b> 52:15  <b>weekend</b> 5:4  <b>WELCH</b> 2:3,4  <b>well-informed</b>            39:7  <b>went</b> 24:1 29:16            29:18 38:2  <b>weren't</b> 25:25  <b>West</b> 1:23 2:13  <b>we'll</b> 51:13 52:11            52:11,12,22  <b>We're</b> 4:6  <b>we've</b> 15:11 24:13  <b>widely</b> 7:4,8,18  <b>WILLETTS</b> 2:5  <b>William</b> 38:9            39:11,25  <b>wish</b> 39:7  <b>withdrawn</b> 50:7  <b>witness</b> 3:6 4:11            5:1,13,22 7:22            9:7,8 10:11</p>	<p>12:24 13:1 16:9            18:8 19:25 20:2            21:11 23:6            24:19 25:16            26:19 27:6            31:12 33:5            38:13 41:5 43:8            46:4 51:25  <b>witnesses</b> 52:19  <b>word</b> 36:7,24  <b>work</b> 8:2 14:10,12            15:2 21:18 22:9            22:19 27:13            29:25 30:1,7            32:2,3 33:16            36:2 38:20 42:7            42:9 44:13  <b>worked</b> 29:24            30:3,4,9 34:23            44:10,11  <b>working</b> 33:12            40:7  <b>worth</b> 22:15  <b>write</b> 28:7,14            32:20 33:10            35:7 36:10  <b>writes</b> 7:12 22:8            22:14 23:24            27:25 32:16            39:6 40:10  <b>writing</b> 22:24            40:19  <b>written</b> 7:6 8:18            9:14 11:14,18            18:7,14 22:7,13            22:23 24:5,16            25:24 27:12            28:9 31:17,19            32:14,19 35:1            35:10,10 37:6            39:9 40:22            46:18 49:19  <b>wrong</b> 36:19  <b>wrote</b> 35:3,16            36:3 37:2</p> <hr/> <p style="text-align: center;"><b>X</b></p> <hr/> <p><b>X</b> 3:1  <b>xbr21</b> 12:3,12,15            12:21 13:4</p>	<p>41:16 42:4</p> <hr/> <p style="text-align: center;"><b>Y</b></p> <hr/> <p><b>yeah</b> 30:12 42:21</p> <hr/> <p style="text-align: center;"><b>0</b></p> <hr/> <p><b>003</b> 49:6  <b>03-0950-DOC</b> 1:8  <b>08-04-29</b> 1:25</p> <hr/> <p style="text-align: center;"><b>1</b></p> <hr/> <p><b>1</b> 25:4 46:20 47:3            47:11  <b>1-053</b> 1:23  <b>10</b> 21:6  <b>11</b> 3:16  <b>11th</b> 7:25 8:19            9:13  <b>1155</b> 5:16  <b>1185</b> 5:13  <b>1186</b> 5:23 7:11            8:25  <b>12</b> 1:10 4:2  <b>1260</b> 24:20,24            46:13,14 47:2            47:10  <b>15th</b> 52:17,19,21            52:22  <b>1596</b> 3:15 16:10            16:15,20,24            17:20 18:1  <b>16</b> 3:15 18:12  <b>1670</b> 3:15 16:9,12            16:20,24 17:2  <b>1671</b> 3:16 10:12            10:17,24 11:3            11:11 12:8            15:19  <b>1672</b> 3:17 27:7,9            27:16,21  <b>1674</b> 3:18 7:22,24            8:7,11,15  <b>1676</b> 3:19 18:9,11            18:18,23  <b>1687</b> 3:16 10:11            10:14,24 11:3            11:11 12:8            15:19  <b>1690</b> 3:20 21:12            21:14,22 22:1</p>	<p>23:6,21  <b>1691</b> 3:21 23:6,8            23:12,16  <b>17th</b> 31:17,18            34:21  <b>18</b> 3:19  <b>1999</b> 25:21 26:1</p> <hr/> <p style="text-align: center;"><b>2</b></p> <hr/> <p><b>2</b> 25:4 46:20 47:3            47:11  <b>2nd</b> 6:4 7:7 25:20  <b>2000</b> 12:3,12,16            13:5 25:4 42:24            46:17,21 47:8            47:14  <b>2001</b> 5:10,18 6:4            7:7,25 8:19 9:13            13:18,23 14:5,9            14:19 15:1,6,13            19:22 21:6,15            22:6 23:9 24:6            27:10 38:17            47:17 48:13,19            48:25 49:3,14            49:17,24 50:20            52:1  <b>2002</b> 10:15,18            11:15,15 16:5            17:7,7 31:17,18            34:22 48:16,19            50:3,7 51:18,21  <b>2003</b> 16:13,15            17:3 18:6,13            19:8,13 45:14            45:18,22 46:1            46:11 48:16,19            50:3 52:1  <b>2008</b> 1:18 4:1            53:15  <b>21</b> 3:20 38:17  <b>22nd</b> 5:17  <b>23</b> 3:21  <b>23rd</b> 13:4  <b>2401</b> 2:6  <b>2501</b> 3:22 51:3,4,5            51:9  <b>26th</b> 10:18 11:15            27:10 38:17  <b>2600</b> 2:14,21</p>	<p><b>27</b> 3:17  <b>275</b> 2:14,20  <b>28</b> 53:9  <b>28th</b> 23:9 24:6  <b>29</b> 1:18 4:1 17:2  <b>29th</b> 16:13 18:6            21:15 22:6</p> <hr/> <p style="text-align: center;"><b>3</b></p> <hr/> <p><b>3</b> 5:9 13:8,22 14:3            14:4,14,19 15:2            15:7,20 16:5            17:23 18:1 24:7            25:5 44:17            46:20 47:4,11            48:9,17 49:5,17            50:4,9 51:17,21  <b>30</b> 53:15  <b>30th</b> 10:15 11:15            16:15  <b>39</b> 3:14</p> <hr/> <p style="text-align: center;"><b>4</b></p> <hr/> <p><b>4</b> 3:7 25:3 47:14  <b>4th</b> 1:23  <b>41</b> 3:8  <b>411</b> 1:23  <b>415</b> 2:15,22  <b>46</b> 3:7</p> <hr/> <p style="text-align: center;"><b>5</b></p> <hr/> <p><b>51</b> 3:8,22  <b>511-A</b> 12:24 13:5            13:21 14:4,9,15            14:21 15:2,6            41:16  <b>558-7755</b> 1:24</p> <hr/> <p style="text-align: center;"><b>6</b></p> <hr/> <p><b>683</b> 31:13 35:2</p> <hr/> <p style="text-align: center;"><b>7</b></p> <hr/> <p><b>700</b> 2:7  <b>713</b> 2:8  <b>714</b> 1:24  <b>72</b> 52:12  <b>72-hour</b> 52:9  <b>753</b> 53:8  <b>77057</b> 2:7</p> <hr/> <p style="text-align: center;"><b>8</b></p> <hr/>
---	--	--	--	---

**8** 3:18  
**8:15** 4:3  
**812** 19:19,25  
**828** 25:17,20  
**829** 3:14 38:14,16  
38:23 39:3,6  
40:10

---

**9**

---

**9** 23:24  
**92701** 1:23  
**9316** 1:21 53:19  
**94111-3305** 2:15  
2:21  
**952-4334** 2:8  
**984-8700** 2:15,22