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 16, Volume I
Defendants. )
$\qquad$ )

## REPORTER'S TRANSCRIPT OF PROCEEDINGS

 Jury TrialSanta Ana, California
Tuesday, May 6, 2008

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Federal Official Court Reporter
United States District Court
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08-05-06 EchoStarD16V1

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SANTA ANA, CALIFORNIA, TUESDAY, MAY 6, 2008 DAY 16 - VOLUME I (8:05 a.m.)
(The following proceedings is taken outside the presence of the jury.)

THE COURT: We are on the record in EchoStar versus NDS.

Counsel, good morning. I hope all of you had a nice weekend.

There was a motion in limine filed with the Court yesterday excluding certain subjects concerning Dr. Peled's testimony.

And Mr. Snyder, thank you for the e-mail. We got that last evening; it's appreciated.

I know that EchoStar hasn't had time, obviously, to respond to the motions, nor write anything up, and I'm not certain when we'll do that. Is there any concern if we -- if you call Dr. Kudelski first and we try to buy some time over the lunch hour to resolve these issues, or at a late break?

MR. HAGAN: That's fine, your Honor.

THE COURT: It concerns five areas. Let me give you some tentative thoughts just for a moment. And these are only tentative, because of course, I haven't had the courtesy of hearing from -- from EchoStar, and obviously
because it was filed last -- yesterday afternoon, and you probably didn't get it until last evening, so -The first in-limine motion concerns Michael Kleiner's (phonetic) relationship with NDS. Michael Kleiner was a co-founder of NDS, and he was forced out of the company in 1992, and NDS found that he was conspiring with another employee to defraud NDS.

NDS successfully sued Kleiner, and at present, the testimony doesn't seem relevant to the Court, but once again, these are just tentative thoughts and only one-sided, because I only have one-sided briefing under 401. And unless plaintiffs can point to some relevance, just initially, and with one-sided briefing, it doesn't seem to be relevant under 402.

Concerning Israeli tax authorities' investigation, at some point, a question arose as to whether NDS should be treated as an Israeli or United Kingdom company. The Israeli tax authorities investigated NDS, and the dispute was settled. On the face of it, until I hear from EchoStar, it seems to be facially irrelevant under 401. It seems to be character evidence, basically, which is inadmissible under 404.

Concerning Boris Floricic's suicide, F-l-o-r-i-c-i-c-s, Boris Floricic committed suicide under suspicious circumstances, apparently at a park in West

Germany after writing a research paper on reverse engineering and meeting with NDS employees. Now, it's my understanding that NDS documents were actually found on his body; is that correct?

MR. SNYDER: No, your Honor. I'm not aware of that -- that at all.

THE COURT: Okay. Plaintiffs alluded in their Complaint to -- Floricic's suicide being connected in some way to Rupert Murdoch. Tentatively, this seems relevant, if at all, only as to impermissible character evidence under 401, 402 and 404. Additionally, whatever probative value, may be substantially outweighed by the prejudicial impact and the undue consumptive -- consumption of time. In other words, I -- I want to know what the nexus is between the suicide in West Germany -- and it was in a park, wasn't it? MR. HAGAN: Yes, your Honor. THE COURT: He was the gentleman whose stockings
were --
MR. HAGAN: Was found hanging from a -- a tree in
the park.

THE COURT: Hanging from a tree. So I need to hear why you believe that that's relevant, where we are going with this, and remember, this is only one-sided briefing so far. These are just initial thoughts that we could put together last evening and early this morning.

The fourth is Yossi Tsuria, T-s-u-r-i-a, and the Dome of the Rock. Yossi Tsuria was involved in some fashion with the attempt to bomb the Dome of the Rock in the early 1980s. According to Reuven Hasak, he was convicted and sent to, quote-unquote, "a prison without walls" by Israeli authorities for knowing what the -- about the plot and failing to report it to police.

Now, some of this evidence flowed in during Hasak's testimony, and I forget which party raised this evidence, but it came in without objection at the time, and I don't know whether EchoStar raised it or NDS. I just -- I just don't recall.

It may have been appropriate during Hasak's testimony to show the level of steps taken by NDS to prevent elicit activities by employees, in other words, the employment of this gentleman. Apparently, plaintiffs are going to contend that NDS hired hackers and quote-unquote, "criminals." Therefore, they are negligent in hiring and failing to adequately supervise them. In this sense, Tsuria's character would be an issue and would be admissible, however, its relevance is -- is of great concern to the Court, as the conduct alleged was that of terrorism, and it's not directly related to piracy or hacking in this case, and of course, has the potentiality to inflame the jury based on the allegations that Tsuria was a terrorist.

That's why I'd had a sidebar with counsel in the hallway, and it really encouraged both of you to get out the fact that this was not terrorism aimed at the United States, which I think a lot of our jurors would have assumed when this came flowing into evidence.

Now, the other side of that coin, though, is that the virtue of each of your respective corporations, EchoStar and NDS, has been testified to voluminously by different witnesses. So it may have relevance in terms of not only the type of people being hired, but the depth of their prior activity, their unsavoriousness (sic), but once again, it appears to be for character, except I noticed that Hasak was very, very voluntary. He was quick to put in that this was a prison without walls, and the only import of that answer could have been "no harm, no foul, he's really not very dangerous." And with the voluntariness of that statement, it may have a great effect in terms of the fact that no, this is a relatively involved and dangerous character. So I'm going to wait to hear your response, but right now, that hangs in balance. I am just not certain until I hear the courtesy of -- or have the courtesy of EchoStar replying. Concerning Kommerling's statements concerning Chris Tarnovsky, Dr. Peled's testimony contains statements regarding conversations with NDS joint venturer Oliver Kommerling. Kommerling indicated to Dr. Peled that he
believed -- allegedly that he believed that Tarnovsky was responsible for hacking into the Canal+ and EchoStar systems, and that Tarnovsky posted the results on the internet. Kommerling advised Peled to contact Tarnovsky, and Peled may or may not have done so. It's still unclear to this Court whether Dr. Peled then called Tarnovsky and had a direct conversation with him.

Did he from the deposition that you've undertaken?
MR. WELCH: No, sir, your Honor. Ray Adams
contacted --

THE COURT: Thank you. So Dr. Peled did not?
MR. WELCH: He contacted Kommerling.
THE COURT: All right.

Now, statements made by Tarnovsky are claimed the admissions of a party-agent within the scope of his agency. There is evidence in the record sufficient to demonstrate that Tarnovsky was involved in piracy and/or anti-piracy efforts within NDS and was hired for his skill as a gifted hacker. Statements that he was involved in hacking and piracy were plainly within the scope of Tarnovsky's employment. Therefore, the statements are admissible as non-hearsay pursuant to Federal Rule of Evidence $801(d)$.

Kommerling's statements were also statements of a party's agent within the scope of his agency. While Kommerling was no longer an employee, he certainly was a
joint venturer and continued to work on NDS's behalf. He was intimately involved in the Haifa laboratory. The fact that Kommerling set up a shell corporation to conduct business with multiple companies does not foreclose the possibility that he still acted as NDS's agent insofar as he was reporting potential misconduct by NDS employees to Dr. Peled. It defies common sense to think that NDS stopped exercising control over Kommerling because he became, quote-unquote, "an independent consultant" after working as an NDS employee. Because Kommerling was also hired as a skilled hacker, the scope of his agency included piracy, anti-piracy and hacking. Moreover, the fact that he was reporting this to Dr. Peled suggests that it was within the scope of Kommerling's employment relationship with NDS. The testimony also comes in under the residual hearsay exception pursuant to Federal Rule of Evidence, 807. It bears sufficient guarantees of trustworthiness in that it was made by a contractor or agent of NDS to NDS's CEO, if this is true. It suggests a motive to be truthful and provide good information, continued employment with one or -- of two major firms in the CAS market. Additionally, there was some indication that Dr. Peled followed up on these conversations, suggesting that Dr. Peled himself believed the information to be truthful. The evidence is offered to prove a material fact.

That is, that Tarnovsky was responsible for hacking EchoStar and the December 2000 postings, and also, the continued activities pursuant to the Court's ruling allowing the Canal+ evidence to come before this jury. It's also more probative than other evidence on that issue. Testimony coming directly from NDS's CEO is especially probative, not only on the fact that the conduct occurred, but on NDS's response, if any, to that conduct. And finally, it serves the general purposes of the rules of evidence and interest of justice to allow the evidence in that allayed the jury substantially in finding the truth of who committed the acts in issue will bear significantly on NDS's response to those acts.

Even if the statements were not admitted for the truth, they proved Dr. Peled's, and therefore, NDS's knowledge of Tarnovsky's conduct. This, combined with the fact that NDS did not evidently do anything to remedy that contact, would be circumstantial evidence of NDS's complicity in the scheme, as well as the fact that Tarnovsky was acting asking within the scope of his employment.

Moreover, the jury may well consider NDS's knowledge of any misconduct in their efforts, if any, to remedy that misconduct when assessing punitive conduct. Therefore, the evidence is admissible, both for its truth, and for non-hearsay purposes.

Now, that's tentative, also. Of course, I haven't heard EchoStar's position. I can imagine what your position would be.

So, once again, going back, it appears, to me, Michael Kleiner's relationship with NDS is irrelevant at the present time.

Number two, the Israeli tax authorities' investigation appears to be impermissible character evidence. It appears on the face of it to be irrelevant.

Boris Floricic's suicide, on the face of it, it appears unduly consumptive of time, extremely prejudicial. The import is that a suicide took place with the auspices of it being a murder. We can't go anyplace else with that. Apparently, the German authorities believe this to be a suicide. There is a lot of inference out there that it was a murder, and his body was apparently dragged to the location. The difficulty is this. I don't know how -- how you use it. In other words, I'm stretching my imagination to find out how that would be relevant. If documents were found on him, the argument could be made that these are NDS documents, but certainly if somebody within that organization, by the wildest stretch of imagination, wanted him killed, why would somebody leave NDS documents on him? It seems rather silly and very unprofessional.

So I'm deeply concerned about the -- the suicide.

Where does that take us, except into another couple weeks, if you want, of -- of death testimony, and you can get the West German authorities here. And so if $I$ open that door, I'm opening it all the way, and I'm reluctant to do that.

And finally, Tsuria and the Dome of the Rock, that's really in play. Reuven Hasak was more than happy to tell us, in so many words, the virtue of this employee by, you know, not being in prisoned within -- a prison without walls. And the virtue of these different corporations about never doing anything wrong, whether it's EchoStar or NDS, appears to be nonsensical at this point. And the equality of hiring this gentleman, whatever his special skills were, may be relevant. I don't know if he's an accomplished hacker, and therefore, he has the qualities that would be limited and would probably lead me to exclude him, or if he's a security person. And if he's a security person, the criminality of trying to blow up the Dome of the Rock, regardless of what religion is involved, is rather astounding, but I'm waiting to see why it's relevant. I'm concerned.

And finally, I'm concerned whether the prejudicial effect finally outweighs the prejudicial value in the last analysis. Although it's already before the jury, and I've already cautioned both of you to clean this up so that when terrorism was mentioned and this gentleman was mentioned at
our sidebar, I was very pleased to see, I think, Mr. Snyder, you know, take that extra step, and thank you. I think our jurors would have assumed that this was a terrorist aimed at the United States. So on one hand, the cat's already out of the bag. I'm not too sure what the harm is at this point, not making it clear, and the spill over already occurs to NDS, however this -- I think there was also some general mention of Dome of the Rock in the testimony before. It's just how long you dwell on it.

Now, I'll simply wait for the next recess, but EchoStar has rested. I've given you the opportunity to reopen if you like to. Would you like to continue your position of resting at this time?

MR. SNYDER: Yes, your Honor.

THE COURT: Okay.

MR. SNYDER: Although, as previously indicated, in compliance with the Court's Order, Dr. Peled is present. THE COURT: Thank you very much. Now, I've also had the representation that Dr. Peled will be called, and he will be called, but the order will be this. I'm not giving you the opportunity of changing your order. Your order will be Andre Kudelski. He will be your first witness. I will control that. As a courtesy, he's flown here. We'll get him on and off the stand. Dr. Peled has been here twice, now. We'll get to

Dr. Peled as soon as we finish Andre Kudelski.

What other evidence do you have in rebuttal?

MR. HAGAN: That is it, your Honor.

THE COURT: None?

Have you worked out the stipulations?

MR. HAGAN: We have worked out the stipulation, and we're -- we're waiting for the defense counsel's office to courier it up here. We have the additional exhibits to attach to it.

THE COURT: Okay. And then it's surrebuttal. You know if Dr. Peled is testifying, Andre Kudelski is testifying. Rupert Murdoch has been invited, but I'm not going to force him in, as I did -- I'm not going to force him in. I am not sure what the relevance is, yet, so --

MR. SNYDER: Your Honor, we currently don't anticipate any additional witnesses. There is the possibility that we would want to call Mr. Dan Dehan (phonetic) to respond to certain testimony that may be elicited from Andre Kudelski.

THE COURT: Okay. Concerning the items of evidence before I bring this jury in to open court, I know that you worked with Kristee yesterday and concerning the items of evidence on behalf of EchoStar.

MS. WILLETTS: Your Honor, I believe we've reached -- reached a stipulation as to a couple of

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outstanding items that weren't officially offered into
evidence with the exception of one document, which is the --
    THE COURT: Let's hear the stipulation first.
Let's see how far you've gotten.
    MS. WILLETTS: I don't believe we've yet drafted
up the actual language, yet, but we have an agreement in
principle on the items to be included.
    THE COURT: This will be the stipulation. We're
going to state it on the record. We'll do it now.
    MS. RICKETTS: Your Honor, with respect to
Exhibit 17, 19, 27 --
    THE COURT: Exhibit 17, 19 --
    MS. RICKETTS: 27, Exhibit 988, 89.
    THE COURT: Just a moment. 27, 988.
    I'm going to repeat them back to you.
    29.
    MS. WILLETTS: Not 29, your Honor.
    THE COURT: I'm going to do this again. We are
going to slow way down, okay?
    First exhibit, what is it?
    MS. RICKETTS: Exhibit 17?
    THE COURT: No. I thought it was 1117.
    MS. RICKETTS: No, your Honor, I'm sorry. 17.
    THE COURT: Okay. Exhibit 17.
        MS. RICKETTS: 19.
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THE COURT: 19.

MS. RICKETTS: And 27.

THE COURT: And 27.

MS. RICKETTS: 988.

THE COURT: Okay.

MS. RICKETTS: 989 .

THE COURT: All right.

MS. RICKETTS: 990 and 991.

THE COURT: 991. Thank you.
MS. RICKETTS: With respect to those seven
exhibits, those are subject to NDS's motion in limine. We understand that the record reflects that those were admitted over our objection, so we are stipulating that they can be put into evidence subject to the fact that we're -- without waiving our objections that are already in the record.

THE COURT: I understand. That -- that will not hurt your appellate rights, then, if I've made an incorrect ruling.

MS. RICKETTS: Right.
THE COURT: That's fair.

MS. RICKETTS: That's --

THE COURT: They are received.
(Plaintiffs' Exhibit Nos. 17, 19, 27, 988, 989, 990 and 991 are received into evidence.)

MS. RICKETTS: Then with respect to Exhibit 75,

103 and 1082, as well as 53, we have stipulated that those can be put into the record.

THE COURT: All right. 75, 103, 1082 and 53 are received.
(Plaintiffs' Exhibit Nos. 53, 75, 103 and 1082 are received into evidence.)

MS. RICKETTS: We are in the midst of preparing redacted copies of interrogatory responses from each side that are going to be admitted into evidence. That includes Exhibit 1073 and a new Exhibit 1073-A.

THE COURT: Okay.

MS. RICKETTS: And we have an agreement with respect to 1296 and 1297 , right?

MS. WILLETTS: Yes.

THE COURT: 1296 and --

MS. RICKETTS: 1297.

THE COURT: 1297, okay.

MS. RICKETTS: And --

THE COURT: And are each of these to be received into evidence, 1073, or is it the redacted 1073-A?

MS. RICKETTS: Redacted 1073 and redacted 1073-A.

THE COURT: Okay. Both are received, then.
(Plaintiffs' Exhibit Nos. 1073 and 1073-A are received into evidence.)

THE COURT: And 1296?

MS. RICKETTS: Is redacted, and that's -- we've stipulated that that should be received into evidence.

THE COURT: Okay. And 1297?

MS. RICKETTS: Is not redacted.

THE COURT: Is not redacted?

MS. RICKETTS: But it should be in evidence.

THE COURT: Okay. Each of those are received, 1073 in a redacted form; 1073-A, redacted form; 1296, redacted form; 1297 in its entirety, non-redacted.
(Plaintiffs' Exhibit Nos. 1073, 1073-A, 1296
and 1297 are received into evidence.)

MS. RICKETTS: Non-redacted, yes.

THE COURT: Okay.
MS. RICKETTS: And then, that just leaves

Exhibit 12-A, which is a duplicate of 191.

THE COURT: Well, then 191 is relevant. 12-A was
the first item that came into evidence.

MS. RICKETTS: I don't believe -- most of the testimony, your Honor, has been with respect to 1291 , and that one's in evidence, 191, I'm sorry. 191 is in evidence.

THE COURT: No, the first -- the first item marked was 12-A.

MS. WILLETTS: I believe, your Honor, it was the first time it was discussed was -- was with reference to 12-A, and we don't have an official transcript showing that
it was received into evidence, but it was the first item discussed.

THE COURT: It was the one -- it was the first one marked. I'm going to take the first in time. It's as simple as that.

MS. RICKETTS: Well, your Honor, with respect -if $I$ may just be heard with respect to that Exhibit, 12 -I'm sorry, 191. The significance of 191 is that it's a document from EchoStar's document production.

THE COURT: Work it out. Otherwise, it's 12-A. In other words, I'm glad to accept both, as long as there is a limiting instruction or comment by the court so that each of you can show where the document came from, but if you put me to the test, it's 12-A.

MS. RICKETTS: Okay.

THE COURT: Simple as that.

MS. WILLETTS: Then, we would say both.

THE COURT: Okay, both. All right. So 12-A and 191, and that will give each of you the advantage of showing where it came from, and that's fair. And so it will be one of the few documents that we have that's duplicated, and that way you can each argue that it came from the other party, okay?

MS. RICKETTS: Okay.

THE COURT: Okay.

MS. RICKETTS: Thank you, your Honor.

THE COURT: Now, do you have anything else on behalf of EchoStar or NDS, or does that conclude all of the documents that were in contention?

MS. WILLETTS: There -- there is one document, it's the stipulation that we have reached regarding the screen shots relating to Christopher Tarnovsky's account and the Don Branton account, and that's still being worked out.

THE COURT: Well, you don't have much time left to work that out.

MR. SNYDER: I believe that we provided the Court with a written version of that and signed it by both parties on Friday evening.

MR. HAGAN: The only thing that's left to do is to -- is to put the actual screen shots behind the stipulation, as I understand if, but we are having another copy brought up to the Court so that we can file a complete copy so that there is not going to be any problems with --

THE COURT: No problems.

MR. HAGAN: -- different versions.

THE COURT: No problems.

MR. HAGAN: Correct.

THE COURT: All right. We'll see. All right. Okay. Then, any reason for me not to get the jury, then?
(No audible response.)

THE COURT: All right. Kristee, if you would be so kind to get the jury for us.
(The following proceedings is taken in the presence of the jury.)

THE COURT: Good morning, again.

The jury is present. All counsel are present.

Counsel, thank you for your courtesy. If you'd please be seated.

And Counsel, in rebuttal on behalf of EchoStar, your first witness, please.

MR. HAGAN: Thank you, your Honor. EchoStar -EchoStar calls the CEO of Kudelski Group, Andre Kudelski.

THE COURT: Thank you. And if you'd ask the gentleman to step forward, please.

And thank you, and the interpreter is present, also.

If you'd ask Mr. Kudelski to stop at that location, and ask the gentleman to raise his right hand, please. Kristee, who is the clerk, will administer the oath to him.

ANDRE KUDELSKI, PLAINTIFFS' WITNESS, SWORN

THE WITNESS: I do.

THE COURT: Thank you, sir. Would you please be seated, here, in the witness box on my left.

And Counsel, if you'd like to retrieve these documents on the edge of the witness box, please.

Sir, would you state your full name for the record, please.

THE WITNESS: My name is Andre Kudelski.

THE COURT: And would you spell your last name for the jurors, please.

THE WITNESS: It's K-u-d-e-l-s-k-i.

THE COURT: Thank you.
Now, you have an interpreter with you. Do you feel comfortable communicating in English to the jury?

THE WITNESS: I will at least try to do so.
THE COURT: And if you have problems, would you stop and make certain that you rely on the interpreter so you fully understand the questions, or if you need to answer in your native language, it can be reinterpreted at any time; is that acceptable to you, sir?

THE WITNESS: Yes, sir.

THE COURT: And if the jurors have any difficulty understanding the gentleman, just raise your hand. But otherwise, we'll proceed slowly, and I'll make counsel go slowly with the questions.

Counsel, direct examination, Mr. Hagan.

MR. HAGAN: Thank you, your Honor.

## DIRECT EXAMINATION

BY MR. HAGAN:

Q Good morning, Mr. Kudelski.
A Good morning Mr. Hagan.

Q Before we get started today, I'd like to give you an opportunity to introduce yourself to the ladies and gentlemen of the jury and tell them a little bit about what you do.

A My name is Andre Kudelski. I'm born in 1960 in Lausanne, Switzerland. My father has founded a company called Kudelski in 1951. So company has been active for more than 57 years, first, in professional tape recorders, and after, in digital TV conditional access, but just meantime, analog paid TV system. In the first three decade of the company, the company has worked by producing professional tape recorders for radio industry, for movie industry, but also for governmental agencies. And many product have been developed for the U.S. government, including some for the $F B I$ to track, how to say, criminals.

Now, in 1991, I have had the opportunity to become the chairman and CEO of the company, my goal, and that was a difficult challenge. I was 31 years old, wants to transform the company from a company that was in a situation that was not easy due to a very strong competition from the Far East, and to transform this company in a new sector that was first
analog paid TV, and after, digital paid TV.
So company was counting about 100 employee in 1991, and we have built our team up to 2,700 employee just now. We have today close to 400 employees working for us in United States, and we are a net exporter from United States with the different elements that we do here.

Q Thank you, Mr. Kudelski.

Now, you mentioned that part of Kudelski Group or the family -- Kudelski family of companies deals with conditional access technology. And we've heard a lot about that during this trial, so we won't go into it, but what $I$ want to focus you on first is the analog system. Did the Kudelski family of companies provide conditional access technology for analog systems?

A Yes, and I will phrase it we have started this company in 1984, a diversification program to develop analog paid TV system. The system was digital processing analog paid TV, and we have been awarded the Canal+ group in 1989. This technology has been deployed over the '90s, with over 15 million decoder with Smart Card, so smart key deployed. And we have the conditional access of this system that has been completely secure for more than 10 years, and we were very proud of having a concept of zero piracy in this technology.

Q Now, at some point, you changed your focus to digital
systems and conditional access technology for digital
systems; is that correct?
A That's correct. We have to adapt our company to a
changing environment. The television was going digital, and
we have explore way to enter into digital TV market. And we
have responded to different request for information and for
proposal, and we won in February -- in February 1995 a
contract with EchoStar.
Q And is EchoStar Kudelski's largest client here in the
United States?
A Yes, it is, and so basically, we were very proud of
being selected as a small company by EchoStar. EchoStar was
also a much smaller company than it is today, and we have
tried to build together something that was new and
challenging.
Q Now, what is the primary goal of the conditional access
technology that the Kudelski family of companies provides to
EchoStar for use in its DISH -- DISH Network here in the
United States?
A So the primary goal of the conditional access,
especially our conditional access, is to protect contents
against illegal user. So idea is that content needs to be
purchased by an operator like EchoStar and to have something
fair. You have people that get access to these contents
without paying EchoStar, and EchoStar is able to pay its
content providers. And so basically, our technology was here and is here today to protect the contents that EchoStar is sending and broadcasting to the end users.

Q Now, is the system that EchoStar uses here in the United States, is that the analog system or the digital system?

A It's a digital system. Today we have, how to say, deployed at EchoStar the second generation of digital TV conditional access system from Nagra.

Q Now, you testified a moment ago that with respect to the analog system, the Kudelski conditional access technology remained uncompromised for a decade; is that correct?

A That's correct.

Q And was EchoStar aware of that when they entered into negotiations to use the Kudelski conditional access technology?

A I would say that EchoStar, from my understanding, was looking to have a solution that was following open standards, and one of the open standards that was created in the early '90s was DVB. And they were looking for a DVB compliant system, and basically, the two major suppliers that have proven to know how to do conditional access system in analog, because before digital was really widely introduced, it's the closest conditional access system that
can be used in a digital TV environment were the European conditional access system, because the way it were treated in analog was still digital -- was already digital. So basically, one of the logical, how to say, choice would have been surprise to the European market.

Q And when did Kudelski first start putting its conditional access technology into EchoStar's products?

A So it's a delivery -- the volume delivery have started in first quarter to -- by 1996.

Q And during the year 1996, did EchoStar or Kudelski's conditional access technology used in the United States suffer from any piracy?

A May you just repeat the question?
Q Certainly.

In the year 1996, was the conditional access technology that you provided to EchoStar and used in the United States, was that technology secure?

A Yes.
Q And then in the year 1997, was the technology that you provided to EchoStar here in the United States secure?

A Yes.

Q And for the majority of 1998, was that technology secure?

A Absolutely.

Q Now, when was the first time that you learned that

EchoStar's conditional access technology in the United States was compromised?

A The first element that $I$ heard were between very end of 1998 and early 1999 where we have seen some sign, some that people have had access to memory of our Smart Card.

Q And what were those signs?

A The signs were some contents extract of this memory on the internet.

Q And as you understood it, that content was published on piracy-related websites?

A That's my understanding.
Q And through the course of this litigation, have you learned that the defendants engaged in any efforts to hack EchoStar's conditional access technology in 1998?

A Unfortunately, yes.

Q Okay. Let's take a quick look at Exhibit 98.
Have you seen this document before, Mr. Kudelski?

A I have seen it two to three days ago.
Q And can you describe for the jury in your own words what this document is.

A I must say that my -- when I have seen the content of this document, I have been pretty shocked. The reason for that is basically my understanding is that our competitor has done reverse engineering of our Smart Card. When -when $I$ have had a look at this document, $I$ have come to a
different conclusion. It's not what I would consider as a reverse engineering, but a hack manual that allow people, not really specialists, to enter into the Smart Card and to manipulate and to take control of the Smart Card.

What I have also a problem with is own -- our own company we do test our own Smart Cards, and I can see that such a report even done internally on our own product would not be a good idea. What you need in such an analysis is to find what are the strengths, what are the weaknesses, but in principle in the ways that you can correct a problem, not in a way that if such a document or part of this document is all disappearing or in hands that are uncontrollable creates unlimited damage. And that is basically what I'm not comfortable with, as I would not be comfortable to have within my own organization a document like that.

Q Now, Mr. Kudelski, did you have -- when you were first provided with this report, did you have an opportunity to review it?

A I have had a quick reading over this document.
Q And I understand that -- that you believe it is a description of how to hack EchoStar and Kudelski's conditional access technology, but did you see any part of this document, this report, that described lawful reverse engineering or how to use the results of that to improve the defendants' technology?

A I'm afraid that $I$ have not seen a lot of element that $I$ consider important. My understanding is the following: In the way we have designed our technology, and the technology is not just a Smart Card, it's a system plus a Smart Card, we have integrated specific element in terms of architecture, specific element to create the possibility to adapt a Smart Card to specific changing environment. And that are elements that we are proud of, and I have seen no sign within this report about this point.

Q Now, Mr. Kudelski, if you would, turn briefly to page 16 of 40 . It's at the bottom right-hand corner. You'll see the page number.

A Yes.

Q Section 4 and 4.1 are entitled "3M hack in practice, DISH Network USA." Can you describe for the jury what those two sections of the defendants' report describe.

MR. STONE: Objection. Best evidence.
THE COURT: Overruled.

You may answer the question, sir.

THE WITNESS: Thank you.
I understand that not only that was an attempt to
see what -- how to hack, theoretically, but how to really
realize manipulation of a Smart Card to convert a legitimate
Smart Card into a pirate Smart Card. In addition to that, I see some elements, technically, to give very important
insight how to attack the Smart Cards through some buffer attack.

BY MR. HAGAN:

Q And are you familiar with the term "3M card" or "EchoStar 3M card"?

A Absolutely. We are speaking about cards that were originally EchoStar cards that are legitimate user or non-initialized cards that will be turned to pirate cards through manipulation following what is written in this report.

Q Now, Mr. Kudelski, you are not here to say that you believe all reverse engineering in the marketplace is bad, are you?

A Absolutely. So $I$ believe that reverse engineering, if you do that for specific purpose and with specific rules, is something that is absolutely regular and can benefit to the industry.

Q But do you believe that in this particular instance, especially looking at the contents of Exhibit 98, that the defendants went beyond lawful reverse engineering?

A But once more, for me, here the reverse engineering part is very limited. The part that is really detailed is how to hack. It's not to understand the strength and the weaknesses or to do something that is compatible, but it's basically a report that hurts.

Q And in fact, the Kudelski family of companies has done some lawful reverse engineering?

A Yes, we have done.
Q Can you tell us about one example of that?

A One example is that we have tried to enter the U.S. cable market, and basically, the U.S. cable market is and was a duopoly between Motorola and Scientific Atlanta. So FCC has, for example, tried for years to find a way to open this market for the benefit of the end user.

We have initiated a program, first to address new, how to say, cable operators, but also, to find a way to be compatible with the existing decoder base within U.S. cable. To doing that, we have authorized that a team has looked through reverse engineering, how to make our solution compatible with the scrambling, descrambling and transport stream of Motorola.

Q So it's your opinion that testing compatibility or reverse engineering products in the market to determine whether or not your product is compatible with that technology, that can be done for a lawful and legitimate purpose?

A That's my opinion. I would say that to avoid any element of doubt, we have asked to have lawyers following very precisely what is done in such entity in a way that we strictly follow all the elements that should be done.

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Q Now, turning back to EchoStar's security system --
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A I was -- sorry.
Q Go ahead.
A I was just interested to add one element, is to say
that we have had for years very good relationship with
Motorola, and we continue to have such a good relationship.
Q And Motorola was one of the companies involved in the
compatibility reverse engineering?
A They were the ones that we were looking after.
Q Now, Mr. Kudelski, turning back to the state of piracy
of EchoStar system in late 1998, do you believe that the
defendants' report describing how to hack EchoStar system
had any impact on the state of piracy of EchoStar system in
the United States?
A I'm convinced.
MR. STONE: Objection. Speculation. Closing
argument.
THE COURT: Well, it's foundational, but Counsel,
I -- I'm concerned about the general opinion, you know, just
the answer "yes." I don't know where this is going. Is it
the --
MR. HAGAN: I'll rephrase the question, your
Honor.
THE COURT: In 1998, if this isn't made public,
I -- I don't see how a conclusion can be drawn. I think I'm
going to sustain the objection at this time and have you
restate the question.
MR. HAGAN: Thank you, your Honor.
BY MR. HAGAN:
Q Mr. Kudelski, the date of this report is November 1st
of 1998. After the date of this report, did your technology
used in EchoStar security system in the United States, did
it become vulnerable to piracy?
A It has become gradually vulnerable. I would say that
basically the first information that have been filed on the
internet end of '98, early '99 was not just enough to
compromise in a complete way the security of our system. We
have countermeasure. We have all sort of element to play
against that. It's when more than the content, but the
recipe has been posted on internet, then we have had a
serious issue.
Q Was Kudelski and NagraStar able to effectively combat
the level of piracy in 1999 and 2000?
A Yes, we were, and we have been able to successfully
deploy countermeasure and to limit the effect of piracy that
were just to very few individuals and not material at this
time.
Q Did anything in particular happen in the end of --
of -- excuse me. Did anything in particular happen at the
end of 2000 that caused a change in the status of EchoStar
piracy?
A That has been, from my understanding during the last
few days, end of December 2000 a posting on the internet
that have given not only information of what was inside the
Smart Card, but basically recipes that allow to enter into a
Smart Card to take control for any person that is a pirate
without very advanced experience, and that is making a lot
as a difference.
Q And after those December 2000 postings of the hacking
recipe, did Kudelski and NagraStar and EchoStar continue to
try to combat piracy through software patches and electronic
countermeasures?
A Of course. I would say that replacing Smart card in
the field is something that is not easy, not easy for the
operator and not easy for the end user. That's an element
where you can lose some subscriber. So everything that we
can do to maintain the security was done, and that is also a
question of reputation for our company.
Q Now, did there come a point in time where Kudelski,
NagraStar and EchoStar had to work together to complete a
card swap?
A Yes. We have first discuss in 2001, but basically the
decision to make a complete swap, so when we refer to a
swap, it's sending new Smart Card through mail to subscriber
in a way that they replace existing Smart Card. So final
decision was taken in the range of 2003.
Q Now, during the 1998 time frame when the defendants'
technology was compromised and the Kudelski technology was
secure, were you approached by DirecTV with an offer of them
to solicit proposals to a new CA provider?
MR. STONE: Objection.
THE WITNESS: Yes.
MR. STONE: Misstates the testimony in evidence.
THE COURT: By DirecTV?
MR. HAGAN: Yes, your Honor.
THE COURT: Just restate the question. I don't
think I understood it. Just restate it.
BY MR. HAGAN:
Q Did there come a point in time in 1998 where DirecTV
approached the Kudelski family of companies?
THE COURT: You may answer the question.
THE WITNESS: Yes, we have been approached to make
a proposal of our technology to make a commercial offer, and
later on we got a contract of $\$ 100,000$ to look more into
details how we can not only introduce our technology, but
replace by our technology, technology of our competitor.
BY MR. HAGAN:
Q And at the time that you were approached by DirecTV,
did they explain to you why they were looking for a new
conditional access provider?

A They have given us two reason, reason of security and reason of having the impression to pay very high prices. Q After the negotiation process with DirecTV and the Kudelski family of companies submitting proposals to

DirecTV, did they ultimately decide to switch to your technology?

A No, they have not chosen to switch to our technology.

Q And do you recall approximately when that was?
A I would say that it's second half 1999.

Q And that was shortly after the encryption technology or conditional access technology used by EchoStar here in the United States began to suffer from a minimal level of piracy, correct?

A That's my understanding.

Q Did DirecTV indicate to you in any way why they decided not to switch?

MR. STONE: Objection. Hearsay.
THE COURT: Well, let's find out. I'm going to
sustain that. Is he personally present when "they," I'd like to know who, when, where.

MR. HAGAN: Certainly, your Honor.
THE COURT: Who's discussing this with the
gentleman, or if he's hearing this from other people within his organization, and if so, who.

BY MR. HAGAN:

Q Mr. Kudelski, did you personally attend meetings and conferences with representatives of DirecTV during the period in time where they were considering switching to your technology?

A Yes.

Q And do you recall the names of any of those DirecTV representatives?

A I can give you names. Dennis Flatee (phonetic), Greg Gagnon (phonetic), Mr. -- maybe Crosby, but that a few example. I have also met, but later on, with Mr. Hachtenstein (phonetic). So that just three example, but when we have meetings -- and Ray Kahn, of course. I cannot not remember him. And so, basically we have had quite a number of meetings when you have up to 20 people of DirecTV present in the room.

Q And when DirecTV communicated their intent not to switch to your conditional access technology, did they explain to you why?

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A I --
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MR. STONE: Objection. Hearsay. Sorry.

THE COURT: Overruled. You may state the answer. You may answer, sir.

THE WITNESS: Okay. I have got information in different phases. First information I have got was question of security not to switch from one system that was broken to
another system that was not perfectly secure.
Second element was to say not to take the risk of the legal litigation with NDS. What I have understood after by discussing with people from DirecTV in the following years is that that has been some report shown to DirecTV by our competitors about the potential weaknesses of our technology.

BY MR. HAGAN:

Q Do you believe that the report that they are referring to, DirecTV was referring to, is Exhibit 98?

A That's my understanding.
Q Now, Mr. Kudelski, based on the meetings that you had and discussions that you had with DirecTV representatives, do you believe that they would have changed to your technology if they had not learned that your technology was compromised in the United States?

MR. STONE: Objection. Speculation. Hearsay.
THE COURT: Overruled. He can state his opinion.

You can state your opinion, sir.

THE WITNESS: My opinion was that I was pretty
confident that $I$ was able to win this deal.

MR. HAGAN: Thank you, Mr. Kudelski.
THE WITNESS: You're welcome.

THE COURT: Cross-examination. This would be

Mr. Stone on behalf of NDS.

MR. STONE: Thank you, your Honor.
CROSS-EXAMINATION
BY MR. STONE:

Q Mr. Kudelski, did I hear you correctly that you said it was within the last few days that you gained the understanding that there was some postings on the internet in December 2000 that caused some piracy?

A My understanding was, since $I$ had it, was the first
time I have had access to such a document.

Q Did you testify there was -- within the last few days that you gained this understanding about the December 2000 postings?

A May you just rephrase the question?
Q Sure.

Did you just testify that it was only within the last few days that you gained an understanding about some December 2000 postings?

A No. It was about this specific posting and the consequences.

Q Who made the posting?
A My understanding from the last few days, that it's
Nipper is the name.
Q Have you ever heard of xbr21?
A I have heard the name, but I cannot tell you who is.
Q Now, you remember me from taking your deposition last
night, correct?
A Yes.
Q In this courtroom or courthouse?
A It was on the other one.
(Live reporter switch with Debbie Gale.)
-oOo-
-OOO-

CERTIFICATE

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

Date: May 7, 2008

JANE C.S. RULE, U.S. COURT REPORTER CSR NO. 9316

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