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


ECHOSTAR SATELLITE CORP., et )
al., )

Plaintiffs, )
vs. ) No. SACV 03-950 DOC
) Day 17, Volume I
NDS GROUP PLC, et al., )
Defendants. )
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REPORTER'S TRANSCRIPT OF PROCEEDINGS Jury Trial

Santa Ana, California
Wednesday, May 7, 2008

Debbie Gale, CSR 9472, RPR
Federal Official Court Reporter
United States District Court
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Santa Ana, California 92701
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Echostar 2008-05-07 D17V1

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I N D E X

PROCEEDINGS

Plaintiffs' Closing Argument

SANTA ANA, CALIFORNIA, WEDNESDAY, MAY 7, 20908 Day 17, Volume I
(8:16 a.m.)
(Outside the presence of the jury.)

THE COURT: Okay. We're back on the record. Good morning, Counsel.

This is out of the presence of the jury.

The Court's carefully reread the Unilogic case again after our discussion last evening. I want to reiterate so there's no misunderstanding that defendants will be able to argue that they were damaged for the purposes of satisfying the element of their CUTSA counterclaim, although you'll not be able to send the question of damages amount to the jury.

Now, you told me last evening that you weren't going to state a specific amount of damages. The difficulty from your perspective is that the jury has no place to place damages.

So I understand, Mr. Snyder, from our discussion last evening, you weren't going to say it was worth a hundred thousand dollars. You've been damaged and you need to be able to argue that to the jury and I agree.

In the Unilogic case the court explained that it was not necessary to submit the liability issue to the jury in order to allow the trial court thereafter to determine a
reasonable royalty or impose an injunction because no evidence was presented to allow the court to determine what royalty would be reasonable, and the court was obviously not willing to seek injunctive relief, quote/unquote.

Citing Unilogic v. Burroughs Corporation at 10 Cal.App.4th 612, the language being found at 628, 1992 case. This language in Unilogic implies that if the court had been willing to consider injunctive relief, then it would have been proper to submit the liability question to the jury.

Here, this Court has made no indication that it would be unwilling to grant injunctive relief if liability was found. Accordingly, the Court will submit the liability question to the jury.

However, Unilogic also makes clear that the claims for damages should not go forward where the party raising the claim did not present evidence of damage specific to the dispute at hand and relevant to the measure of damages. That's found at page 627.

Here, there's been no evidence regarding the amount of damages, although there has been evidence that damage occurred. Accordingly, the determination of the damage amount will not be submitted to the jury, as indicated in the Rule 50 order. And plaintiffs' Rule 50 motion on the CUTSA counterclaim was granted as to damages
only.

Also, the informal request last evening to remove
the entire counterclaim by plaintiffs is denied.

Now, one more question before you argue this morning.

Is everyone satisfied with the language on page 75 in the jury instructions? And I sent out an e-mail last night about 10:30 -- I don't know what time, 11:00, regarding, along with others, with respect to the RICO enterprise. You previously agreed to that, it was written that way, there were brackets around it. I just want to make certain everybody's looked at that.

Mr. Hagan, are you satisfied?

MR. HAGAN: Yes, Your Honor.

THE COURT: Mr. Snyder?

MR. SNYDER: Yes, Your Honor. Thank you.

THE COURT: Now, if there's nothing further, I'll
summon the jury at 8:30.

Anything further, Mr. Hagan?

MR. HAGAN: No, Your Honor.

MR. WELCH: We've got to get our PowerPoints.
THE COURT: Okay. Let me get out of your way,
then, so you can get clear.

Mr. Snyder, anything further?

MR. SNYDER: Nothing further, thank you.

THE COURT: Okay. Let me give you a 10-minute break, and we'll get back to you.
(Recess held at 8:19 a.m.)
(In the presence of the jury.)

THE COURT: The jury's present. All counsel are still present.

Counsel, if you would please be seated. The parties are present. Thank you for your courtesy.

First of all, good morning.
MEMBERS OF THE JURY: Good morning.

THE COURT: It's been a long journey. This is the closing arguments by counsel.

Let me remind you that just as opening statements are not evidence, the closing arguments by counsel are not evidence. You've heard the evidence. It's come from the witness stand and from depositions and stipulations.

We're a day ahead of schedule. I told you that last evening. I thought that we'd conclude all of the evidence Tuesday, somewhat forewarned you of that; but because of counsel's hard work with both parties, we're prepared for those closing arguments by both sides and the jury instructions today.

If we can accomplish that, what that means is that when you come back next Tuesday --

And you're returning Monday evening --

A JUROR: 10:00 o'clock.

THE COURT: -- 3:00 o'clock in the morning and coming directly to court. I'm just kidding.

A JUROR: I'll come straight here.
THE COURT: What that means is you're able to come right into session on Tuesday and start your deliberation process.

We're well-aware that one or more of you have personal obligations. You'll keep those obligations as you told us about. But $I$ want to make certain that there's no rush to judgment in this matter because of any personal obligation. We're going to make this work. And that's because you've been so kind, literally, to donate your time.

Neither counsel wants to lose any of the eight of you. We've discussed how we will proceed, and it's just very clear that all counsel on all sides want to keep this jury intact, and they're very appreciative of your service, as, of course, the Court is humbled and appreciates your service.

The last thing is you know I have no hours. My hours are -- literally, I'm a workaholic. I think there was a sun out yesterday. Did anybody see it?

But I have to tell you, and I'll compliment all counsel before we begin. They've been here many, many times until midnight. They've been here most of the weekends.

And one of the benefits is that we haven't had any sidebars. You've seen minimal disruption. We haven't been out in the hallway. We tried to keep your lunches to an hour. We've tried to usually start promptly at 8:00 o'clock and go until 5:00 on most occasions.

So it's a real compliment to them that the enthusiasm for their case and their willingness to work those hours with the Court have really given us, I think, a trial that really could have taken six or seven weeks, frankly, with some of the interruptions that can occur, and have literally taken us four weeks almost to the day.

Lastly, if you decide to deliberate -- you may decide to start deliberating this evening after I read the jury instructions to you. That's fine. Just call out about 5:00 or 6:00 o'clock and give us some indication of how long you'd like to be here.

The light's always on. So if you want to stay until 8:00 o'clock, that's great. I'm not encouraging you, but I'm not discouraging you either. And you'll see how that unfolds. You'll set your own hours.

Sometimes, if you approach a loggerhead and just a clear mind the next day leads to going home at 4:00 or 5:00 o'clock, do that. Get off to a fresh start.

At all times remember this: During your deliberations, the only time you're gathering to discuss
this matter is as a collective body, our jury.

And therefore, when counsel starts -- I have to tell you I'm very, very proud of this system. And the reason it works is because we have conscientious, ethical, honest jurors who come in and come together with commonsense experience, all that wisdom, follow the law that I'll instruct you at the end of this case.

Now, counsel for a moment may have different styles. I've told them when $I$ was practicing, it was okay, and I give counsel the opportunity to what I call "strut."So they can use this center portion if they'd like to and strut around. And that means some of them may use charts on different occasions. And if they do, you may see other counsel informally move to this side of the courtroom so they can see what's occurring. But I don't want to take away their enthusiasm of their presentation.

Now, if any of them get in the jury box with you, we'll stop that. But I don't need to be so formal that it stops their style. But that's style, just because another counsel's quieter or another counsel's more boisterous, that has nothing to do with the presentation of the evidence. It's not a likability contest or a dislikability contest. It's the evidence.

So, Counsel, as long as we can hear both of you and as long as you go slowly -- all right. Then, this is
closing arguments. The way they'll be divided is as follows: Each side has two and a half hours. They'll call their own recesses when they get to a logical point. Mr. Welch will argue on behalf of plaintiffs EchoStar and NagraStar. He has two hours for his opening. He'll call a break someplace in between for about 20 minutes.

Then, Mr. Snyder, we'll see where we are.

We may send you to lunch early so he can start after lunch. Opposing counsel will decide that. He has two and a half hours as a collective block, and he may call one or more recesses during that period of time.

Then Mr. Welch for EchoStar has an hour for

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rebuttal. Those are the limitations.
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Mr. Welch, it's 8:46. Your opening statement.

MR. WELCH: Thank you, Your Honor. PLAINTIFFS' CLOSING ARGUMENT

MR. WELCH: It's been a long time coming. As I said when I did my opening, EchoStar --

THE COURT: This isn't going to work. Use the lectern or the microphone.

MR. WELCH: -- they're my family and they're my friends. And I've got a lot of passion for this case and I've got a lot of passion for them, as my whole team does. And sometimes we may have gone a little too far. Our styles
may have been a little abrupt, and for that I apologize. We care about our client. And they care about us. So we did the best we could do.

And now I'm gonna get to the evidence, and I apologize if our styles rubbed anybody the wrong way, but don't hold that against our client. I ask you for that.

So let's get to it.

So when we started out, I told you about my
client. I don't think we need to get into too much detail about that.

So what is it that you're here to do? We filed a lawsuit, and we've got five claims. You'll hear about those. You'll see some instructions that the court reads to you later. And then y'all have some special verdict forms where you answer specific questions.

Now our five claims. There's claim 1, which is a
DMCA claim. That's a Digital Millennium Copyright Act claim. Then we'll have a second claim, which is a DMCA claim, too. And then we'll have a Communications Act claim and then two California Penal Code claims.

And all these claims pretty much center around the fact that we had copyrighted programming. We had it protected, and the defendants engaged in a pattern of conduct designed to override our conditional access system, violate the copyrights of programmers, and put this
information out on the Internet for people to use, to harm not only us but to harm consumers, because consumers are the ones that ultimately pay in the end, as we've seen.

So let's set the backdrop.
We heard the testimony about NDS. It works in the marketplace. And in 1990 through ' 95 and '96, they had a system that was hopelessly compromised. We all know that. They had the BSkyB system, and they had no digital platform whatsoever.

Their first digital platform was DirecTV in the United States. The United States has one of the largest television markets there is. And they saw what was coming on the horizon: Digital satellite television. And from that, they could springboard into a bunch of different products and services. So they desperately wanted to get into that market so they could complete their global domination of the conditional access market. So they lock up the contract with DirecTV in '92, and DirecTV launches in ' 94.

What do we know? We know that DirecTV was hopelessly hacked starting in late '95, early '96, and it stayed that way.

Now, they relate to market. They also -- you heard testimony about a company called ASkyB. They wanted not only the conditional access business, but News

Corporation wanted to be in the distribution business as well. It wanted to have its tentacles out in as many places as possible.

So they formed a company called ASkyB. You have BSkyB in Britain; you have ASkyB in America. But they were late to market, they didn't have a good product. So what did they do? They approached us in 1996.

We entered into a merger agreement with 'em, or a letter of intent. This was in February of '97. The terms of that agreement, what was crucial was that the combined entity would use the conditional access system that was most secure and economical. Well, the problem was their system was hopelessly compromised and they could not fix it.

At that point in time, you also had DirecTV that was constantly complaining to them, and those concerns began to escalate through '96, '97 and '98.

So you had two things coming down simultaneously. You had their dispute with DISH Network where they had to prove that their system was better, and they also had to save the DirecTV contract.

So we can skip through the DISH Network launching.
So NDS attempts to get us to switch. NDS was in
crisis. This is important. They continued to be hacked worldwide, but we didn't have a worldwide epidemic. You heard various individuals. You heard Mr. Peled testify
about that; you also heard Mr. Rubin testify about that. And their relationship with their important customer, DirecTV, was in jeopardy. That's pretty much a given at this point.

You may recall that DirecTV paid -- they approached Nagra and they paid Nagra a hundred thousand dollars to get into that. You'll see that. That's Exhibit 1565. I'm gonna identify some of the key exhibits for you, and some of 'em you'll have to read. Some of 'em you'll recall.

So they paid a hundred thousand dollars, and NDS had to come up with a solution to maintain this relationship. So what was their solution? Did they try to make a better product? Did they try to give DirecTV something that would secure their revenues? No.

What they did, as you will see in Exhibit 189 --
this is a document that went to Reuven Hasak, and this talked about how they were going to proceed. And we call this the "main story" document. And so you'll be able to see this. And they talk about the problems that they have, and they talk about how they want to get into the market in the United States.

So that's one of the critical documents that I think you need to look at to set the stage in your own mind. And they clearly say in here that they've got reputation
problems, people don't trust 'em, and their system's not
secure and their product's not good.
So what was their solution? Their solution was to
go out, not make their situation better but to harm
everybody else. You can either climb over somebody with a
better product, or you can drag them down. They chose to
drag the marketplace down because they couldn't keep up with
the piracy.

So what did they do? They hired the two best hackers in the world. They hired Christopher Tarnovsky and Oliver Kommerling. You didn't get to hear from Oliver Kommerling because he was not able to come. But you did hear from Christopher Tarnovsky.

So what do we know about Christopher Tarnovsky? He's an admitted satellite pirate. He was hired by NDS in 1997. NDS knew he was a criminal at the time they hired him. He admits to hacking their own client both before and after they hired him. He continued his other pirate activities while employed by NDS. And he used numerous aliases. And these aliases will be important because they go to undermine the defendants' entire claim that somebody else was Nipper.

They're very crafty. They know how to cover their tracks.

So what else did they do? You heard Mr. Peled
talk about Mr. Kommerling designing, and then they manufactured this lab. And the lab became operational in '97. This was part of their plan. So they create the Black Hat team. It's located in Israel, and the members include Mr. Shkedy, Mr. Mordinson, and Mr. Chaim Shen-Orr.

The goal was to hack not only the EchoStar code but other competitors' codes.

So who's Zvi Shkedy? Mr. Shkedy was the principal hardware engineer. He worked at the Haifa research lab, and he deconstructed the card itself. He was the hardware engineer. He's the guy that first took the card and he de-layers it and he does all these steps.

So who's David Mordinson? He's also a member of the Black Hat team. You'll remember, Mr. Hagan cross-examined Mr. Mordinson. He's a software engineer. He's the guy that takes the information, and he turns all this binary stuff into something we can actually understand. He's also located at the Haifa lab, and he developed the hack software that you ultimately see in Exhibit 98.

Now, this is an important document. This is 1568.

Because they knew ultimately one day they may have a
problem. So this is an internal document. And it shows you -- when they get up here and they want to talk about this user ID resolves to somebody else, this is very important because this is internal, talking to the internal
lab people. And it instructs them they need to be absolutely certain there is not the hidden possibility of identifying the ID of the EchoStar card that their code comes from.

Now, if they're not doing anything wrong, why did they need to hide the ID of the EchoStar card? This is their own internal document.

So they need to make sure that some kind of a fingerprint or receiver serial number in the code is developed. They can do this if they have a code from a second card. And we know they'll sit there and they'll talk about Dawn Branton and all these things. These are all misdirections. The point is they needed to cover their tracks, and so they tried to find a variety of ways to do it.

But what we found out is -- if you also look in this document, it talks about the box ID that they actually used. It says, "box CA ID." It starts with an $R$ number. And the critical thing for now, remember that it ends in 2225. Okay.

One of the last things that happened in the trial was we read in a stipulation. And you probably didn't know what it was about because we didn't go through the screen shots. But what's significant about that stipulation -it's Exhibit 2600. This is a screen shot from EchoStar, and
it shows you that this box resolves to Christopher

Tarnovsky. So they're starting their plan. They say they have to hide where the box comes from, but they left their tracks in that one document. And we were able to track it back to Mr. Tarnovsky. So don't let 'em say Mr. Tarnovsky's not involved.

So they get the box and they get the card from Mr. Tarnovsky. We've all seen the DISH Network Smart Card. The first thing they did was they had to remove the gold chip from the card, and that's what they worked from. That's the brains of the card. And it's protected by the metallic covering.

So what they had to do was remove the metallic covering so they could expose the internal working of the chip. They did that by using the nitric acid to dissolve the metal layer. And this is what they end up looking at.

So what did they do next? They used the FIB that we talked about. It's very expensive.

Now, remember, News Corporation paid for this lab. They paid for the operations of this lab because it assisted them in building their media empire not only for conditional access but for programming and for the distribution of that programming.

Next thing they did is they used a probing station to extract the code from the chip. These were the things
that Mr. Shkedy did.

So we take all those things, and what do we get? They get a dump of the code from the card. So that code is then given to Mr. Mordinson to do something with it. So he takes all these ones and zeros and he comes up with something that's readable, because not everybody is trained in reading the ones and zeros. They had a plan. They had to figure it out. They had to figure it out how to make it user friendly.

And you'll see all these things in the Headend Report, which is Exhibit 98. He did all this work, all these different charts.

So the next thing he had to do, once we know that he dumped the code -- as we talked about in the opening, you have to marry the card to the box. You can't just take any card, because when you activate the card, it has an additional layer of protection so that you couldn't take the card out and just put it in anybody else's box -- go to your neighbors and move down the street and everybody gets free TV.

So EchoStar had placed an additional layer of protection for itself, and this was called the box pairing keys. So what they had to do is they had to figure out how are we going to get the box pairing keys. So they had to come to the United States. This is what we call the
"planes, trains and automobiles."

They flew overseas. They stop off in Washington. They get in the car, they drive to one location and they use the sniffer. Now, you remember, Mr. Tarnovsky helped design and build the sniffer. So what they did is they used the sniffer to log the stream. Because what comes down in the stream are the box pairing keys.

So now that they have the box pairing keys in their hand, what do they do? They fly back to Israel to understand how they work. And so what did they do? They came up with E3M, the EchoStar Three Musketeers. And what does that mean? All for one, one for all.

And so they were able to take a card with basic programming, and they were able to get all the entitlements. That was their plan.

Okay. Now, we come to a fork in the road with NDS. They want to say what they did was legitimate reverse engineering. If that was true, the proof would be in the pudding. It would be in Exhibit 98.

But they hit a path. And they could have taken the road less traveled. They chose not to. What they did is they went down a path designed to create harm, because they didn't need to take these additional steps from this point forward.

So what do they do? They come over to make sure
their hack works. And if it was legitimate, they wouldn't do all these different steps. They wouldn't go one place and another, rent a car, drive around.

So they go to a subscriber's home to get a receiver. They pick up the receiver. They go back to Baltimore. They fly to Cleveland. They rent another car, and then they head into Canada.

Now, what's important to remember is where they go. They go to Ontario, Canada. Why is Ontario important? Because they're gonna tell you that Jim Waters in the Barrie group are in Ontario and that Jim Waters is Nipper. Okay.

They go to Ontario. They probably have a connection to Jim Waters if you believe that Mr. Waters is Nipper. Why do they choose to go to Ontario? They could have chose anywhere.

They could have just asked us and got our authorization or our approval if they weren't trying to fly below the radar.

So they determine that their hack works. And you'll see in the report what's important is section 4. What they design is a commercial hack. They don't say, "We found that their chip is better and that we need to change our chip. We've learned how to do better ECM's." They don't do these things.

In fact, as you recall Mr. Peled testifying and
everybody testifying, they thought our chip was inferior. And if it was inferior, why did it take six months? If you knew it was bad, you knew you weren't going to learn anything from it, then just throw it by the wayside or be able to crack it fairly quickly.

This took a large industrial commercial effort. They had to have the state-of-the-art lab. They had to have two of the brightest engineers in the world along with having Mr. Tarnovsky and Mr. Kommerling, who is an expert in attacking Smart Cards. They had all these people. They took their best brains, they took their money and they put it on this project.

What they should have been doing -- did they put any evidence that Mr. Mordinson and Mr. Shkedy went and attacked their own card, tried to figure out how to make it better, determine what those vulnerabilities are?

Where is a project NDS report? How come they didn't bring that? How come they didn't bring a single document to show that they took the findings that are set forth in Exhibit 98. Ask 'em when Mr. Snyder gets up here, "Where is the report where you made your chip better?"

He's not gonna be able to do it.

So they prepare the detailed written report, and important sections are gonna be, like I said, 4 and 4.3. And those are the 3 M Hack in Practice.

Why would you call it "Hack in Practice"? Why not call it "reverse engineering and let's make our chip better"? They don't do that. And we know it's targeted towards DISH Network in the USA. Why not just call it the Thomson chip and, "Here's the flaws. Let's make sure we don't suffer from those same flaws. And here's what we learned from it." But they don't do it.

And you can look through the report. It's very detailed. They did a good job of making a manual for hacking. It included the code. It's got the Nipper phrase in there. We know it's our code.

So what do we know happened next? We know from Mr. Shkedy that he shared the report with Oliver Kommerling, the master at attacking Smart Cards.

In addition, both Mr. Mordinson and Mr. Tarnovsky admit that the report was shown to Mr. Tarnovsky in California. Now, there's some dispute as to when the report was shown. We say it was shown in '98 or '99. They say it was shown in 2001. But what's important to know is that it was shown during the P3 period.

Now, the $P 3$ period started in February of '99. So it clearly falls within our time frame. If he didn't show it until 2001 -- you've got to remember the state of piracy in 2001. Our card was already hacked. We were trying to run ECM's. We were putting the patches out. So this would
have been old news in 2001.

So if it was old news when he takes it to Mr. Tarnovsky's house, why are they so secretive about it? Why does Mr. Tarnovsky not want to touch it? What's so valuable about this report anymore?

The reason that he didn't want to touch it and the reason that they shredded it is because it was during the operative time period, and they knew what they were going to do with the information. They were going to use it.

Because if you go back and you look at the earlier white paper that we have with Mr. Hasak's name on it, the main story, and some of the other exhibits, they needed money, money, money.

And to fund these pirate operations, they have to come up with a distribution network. And the distribution network provides them with cash so they can conceal their operations.

So another thing that's interesting -- if you have any doubt that they were involved in this, we start talking about coincidences, coincidences, coincidences. The Headend Report is dated November 1st of '98. It's clear in this litigation the first time anybody saw a posting of a partial code of EchoStar was also in November '98. You'll see that in Exhibit 2008. It's by Nipper. And it's dated

November 12 th, 11 days after the Project Headend Report
comes out.

Coincidence? I don't think so.

Now, what are the odds that you had two
state-of-the-art labs, two of the world's best hardware and software engineers, two of the best hackers on your payroll? It took them six month to do this. Who else was putting six months and all these resources into hacking our system? If you believe them, this post was done by somebody totally unrelated to NDS. That makes no sense. Two people at the same time, spent the same amount of money, hired the same people and created the same recipe? It doesn't make any sense.

So what else do we know?

Mr. Tarnovsky learned the contents of the report, and he built the infamous Stinger. And then he hired his friend Al Menard. We all know that Al Menard was a well-known pirate with the website called dr7 in Canada. And Mr. Menard and Mr. Tarnovsky had been friends.

So what NDS did is they task him to go utilize his
friends to create a distribution network. Because,
remember, this operation has to self-fund. They have to get
cash, and they also want to do harm to us.
And what's important about the way they release the information? In '98 we knew they were in negotiations with DirecTV. So what they did to stop the train was they
posted the information on the Internet. But just a little bit, enough to cause DirecTV some concern, not to go forward.

So what they probably did in negotiations was, hey, look at this website. It's up there. We all know from Mr. Peled's testimony that they tell people when other systems are hacked.

You also saw Exhibit 1270, which is their internal top secret marking guide where they flaunt how badly

EchoStar is hacked. So we know that's their modus operandi.

And if you have any doubts as to whether Al Menard is involved in this scheme with Mr. Tarnovsky, all you have to do is look at Exhibits 988, 989, 990 and 991. These are e-mails from Al Menard.

And now we remember that one of Mr. Tarnovsky's aliases or nics was "Von." So if you look at the e-mail -and these are in '99. Now, in '99 they hadn't yet come out with a device to reprogram the cards. I don't want to jump over the rail there. So they just originally posted part of the ROM code to stop the DirecTV train.

And then in '99 some significant things happened.
You recall from Dr. Peled's testimony, Chris
Tarnovsky admitted to posting the Canal+ code. He admitted that to Oliver Kommerling, who's an employee and a consultant of NDS. And he did that in March of '99. Okay.

They didn't have devices yet. They were still working on 'em. And at the same time he sends an e-mail to Mr. Ron Ereiser, and what he does is -- Mr. Ereiser wants the Canal+ code. Chris Tarnovsky screws up. He sends him the EchoStar code. And that's March '99. Eerily similar. They'll tell you it's merely a coincidence or the e-mail's a fake.

So going back to the Al Menard e-mails. "I called Von on the phone, mentioned the problem. He told me that he is sending another box." We all know "Von" is Chris Tarnovsky.

What else?
10-21-99, "Vonnie is on the job."
March of 2000, "Get some coin together. I've got to ship to Von this week."

So he's got to pay Mr. Tarnovsky money. So he's dealing with his distributors. And then also July of 2000 . All these relate to Christopher Tarnovsky, if there's any doubt in your mind that he was part of this operation.

And I'll get to it. There's one of these that's
real important. He mentions the word in one of the
e-mails -- and I'll find it. He says "we." Now, his e-mail is to an individual, and he says "we are providing information."

It's not one of these. I'll find it.

Now, why would he be writing an e-mail? If I was
writing an e-mail to you and I said "Here's the
information," I wouldn't say "We are providing information."
I'd say "Here it is" or "I'm providing information." So
I'll show you that when we get to it.
So what did they do? We all know from Mr. Peled's
testimony that to have a successful hack -- remember, he was
on the stand. First he said, "I don't know what you're
talking about, a successful hack. I've never given a
presentation."

Then I showed him a presentation. The first thing you've got to do is you've got to reverse-engineer. Then you've got to get the keys. Then you have to create a pirate device. And then you have to distribute that pirate device.

So did they do that here? We know they
reverse-engineered. That's in '98. We know they got the box keys and card keys from planes, trains and automobiles. We know they created a pirate device called a Stinger and a sniffer. And the last thing, they've got to distribute this pirate device and the cards. So they set up the distribution network.

You've got the Black Hat team, which includes Shkedy and Mordinson. Then you've got Tarnovsky. They provide the report to Tarnovsky. And then you have Allen Menard and Chris Tarnovsky. Allen Menard would send money
to Chris Tarnovsky. And in exchange for that, Chris Tarnovsky would provide him with cards or reprogram 'em. And what happened from that point down is you had Mr. Menard used his friends, which are Dave Dawson, Andre Sergei, Sean Quinn and Stan Frost. Now, you all remember Mr. Frost. He was tethered to the mic. He took the Fifth Amendment on everything related to the piracy. But he didn't get a white pony from NDS, and he didn't use Mary Poppins. So we know he knows the difference.

But when it came to implicating NDS, he took the Fifth for a very good reason, because they set all this up. They knew about it. They knew about the checkered past of all these people, and they knew of Chris Tarnovsky's ties. So what happened is these individuals would send money to Al Menard, he'd ship 'em cards, and then these cards would go out. And they could be used against EchoStar.

So the next exhibit we have, if there's any doubt that Mr. Tarnovsky was involved -Have you got that one, Chad?

Well, we'll skip through that for now.

This is "Jon Segoli," where he ships a code, and you can see that it is the Thomson chip, which is our chip, the 16CF54. We're all aware of that.

So we know that Arthur Von Neumann is Chris

Tarnovsky. We know he had it in his possession. We know he was sending it around. We know he admits to doing the same thing with Canal+.

And we also know -- we found out when we took Abe Peled's deposition. We got to depose him the Wednesday of last week. And we found out that Mr. Kommerling had told Mr. Peled that Chris Tarnovsky was involved in the EchoStar piracy and posted the code. Just like he did with Canal+. Canal+, he did it on dr7. Our code was posted on dr7.

You have all these tracks leading to the Haifa lab and leading to Mr. Tarnovsky.

Another thing you have is a chat room log. You have "Von." We all know who "Von" is. This is September 27th of '99. "I am the only person who knows how to hack Nagra's card." That is not entirely true. Mr. Mordinson and Mr. Shkedy know as well. And what does Mr. Tarnovsky say? "I shall lead you to the promised land at \$350 a card."

We'll get to that one later.

The next thing they do is they order him to create an account on PiratesDen. And what's significant about this, this is in October of 2000. You'll see an e-mail on it. What happened before October of 2000? In August of 2000 Mr. Tarnovsky gets found out.

You remember Detective Cumberland. Detective

Cumberland got on the stand. He told us about the cash. He got two shipments that they found. But what they also found, and you'll see it in Exhibit 1034, is that he was receiving these packages almost every other day. It's just what they were able to find. Remember the belated birthday gift, four, five, six months late?

Now, what's important about the PiratesDen and the dr7 is he creates an account on PiratesDen, and that's gonna be the December 24 th post. And he uses the Nipper alias. And this contains the instructions for posting it. And also he uses NipperClause. He's the only one that there's any evidence that Nipper is tied to. You'll see that in Exhibit 39, which is the e-mail registration for ChrisVon@s4.interpass.com.

You have ICG reports, Exhibit 27 and Exhibit 19. And those clearly tie Christopher Tarnovsky to the Nipper alias.

So really what this comes down to is: Do you believe that Mr. Tarnovsky is Nipper? Once you reach that conclusion, everything else falls into place.

So how else do we know that Chris Tarnovsky posted the infamous NipperClause post? Nobody has the actual post 'cause it was only up for a short while. But you have Exhibit 113.

Now, Mr. Pizzo got on the stand. And they'd like
to talk about 511-A a lot. That's Mr. Pizzo's post on December 23rd. He says he was the first one to actually post.

But he's wrong. How do we know he's wrong?
Because on December 22nd, Mr. Tarnovsky, allegedly from Belgium, writes "the cat's out of the bag" e-mail. This is significant for a variety of reasons. The first one is that it is December 22nd; it is before Marco Pizzo. And you'll see in there that Mr. Tarnovsky says that the EchoStar code was posted on dr7. Dr7's his friend.

Now, if the post was only up for a short period of time, how did Mr. Tarnovsky, sitting over in Belgium, get a hold of this post, know it was up there and tell everybody? He's bragging about it on December 22 nd.

Now, they say that one of Mr. Tarnovsky's job was to keep his eye on piracy on the Internet.

Now, let's think about this for a second. That was his job, and he's trying to figure out the state of piracy. In reality, what would happen? If he saw the EchoStar code posted, he wouldn't label this "Cat's out of the bag." He would say, "FYI. Hey, guys, look what I found." Before you can have a cat get out of the bag, you have to have a cat in the bag. If they had the cat in the bag, Mr. Tarnovsky let it out. And once the cat's out, you can't get it back in, and they knew that. So why did he
choose to phrase it this way, and why did he send it to the higher-ups at NDS?

Because they told him to.

And then you have ultimately the December 24 th post, which is the recipe.

Now, Exhibit 998 is a NipperClause text file. And that becomes important because you remember Dr. Rubin's testimony, Avi Rubin. He says that the 998 and the 98 are pretty much the same. They have the same DNA. They have the same four pillars. And that's another way that you can tie the Nipper post to NDS. There's so many ways to tie Nipper to NDS.

With all the resources that they've used, all the money that they've spent, how come they didn't put Nipper on the stand? And I'll tell you why. Because we did. Nipper is Chris Tarnovsky. What they have is a lot of smoke and mirrors. They have a cleaning crew. They've got

Jim Waters. They have a variety of people. But none of these people ever had motive to do this.

You've got to ask yourself who had a reason to do this? They haven't told you any reason. The best they've got is that there was a dispute between Jim Waters and his engineer. Now, why would they put themselves out of business? If they're in the business of selling black boxes, selling cards, when they post, they automatically put
themselves out of business. That doesn't make any sense. But NDS, on the other hand, their goal and their desire was to hurt Nagra, keep the DirecTV contract, and pay EchoStar back. And they were successful in doing those things.

So the other evidence, Exhibit 39: You can look at the e-mail registration, NiPpEr2000,

ChrisVon@s4.Interpass.com. All this becomes a foregone conclusion when you remember Dr. Peled's testimony that Chris Tarnovsky admitted it. That's Exhibit 998. It has the Nipper terminology in it.

And then you've got Exhibit 12-A, which is the NiPpEr2000 post on December 24 th. So you get to look at those.

This is the "cat's out of the bag" e-mail where he says, "There is a public file on the Internet. I saw www.Interesting Devices.com as well as www.dr7.com." That's December 22nd. He was Johnny-on-the-spot, the very first one, because he posted it. Nobody else beats him to it. They have no evidence that anyone else beat him to it. All roads lead to Chris Tarnovsky.

You also have the trap door report, which is Exhibit 19 by ICG. And remember, ICG did not have a dog in this fight at the time they prepared all these documents: 17, 19 and 27. They were retained by DirecTV when DirecTV
was in litigation with NDS. And what they found out was that Chris Tarnovsky was Nipper. That didn't help them in their lawsuit. So we got lucky that we were able to get this stuff.

And remember that the News Corporation bought

DirecTV. And unfortunately, one of the things that happened is, we were stuck with just these reports, because after DirecTV was purchased, what happened at ICG is, they destroyed their underlying documents. But what we do know about these documents is, Mr. Bedser got up here on the stand, and he said, "I still stand by the information today." They can come up -- and they can come up with all sorts of reasons why you shouldn't believe 17 , shouldn't believe 19, and shouldn't believe 27. But he still stands by it today. And they had no reason to point Chris Tarnovsky as the same person as Nipper, none whatsoever.

So you'll see in the charts, and it will tie Mr. Tarnovsky to Nipper.

So what did all that mean? You had our code. In the beginning, you had very limited security breach. So we just did a visual here so you kind of get an understanding. I'm sure you already do. You sat through this thing for four weeks. Everybody's probably tired. We'll just roll through these slides.

So they have the EchoStar code, and so they put
some holes in it. We've got to picture this dam as all our revenues. There's our subscribers. And Nagra built us a sturdy dam, a dam that has stood the test of time.

You heard Mr. Kudelski get on the stand. And they want to say, "Well, you just started up with a digital system." Let's talk about Mr. Kudelski's analog system v. their analog system. Five cards in six years. That's their track record. Mr. Kudelski's track record? An analog system: 10 years. Digital system: They get cracked almost immediately after going live with DirecTV. Mr. Kudelski's system: steady and strong until they do the reverse engineering, until they put their plan in play to, instead of making their product better, to tear the competitors down.

So what we tried to do was plug up these holes.

They want to talk about the patch and the ECM. We did the best we could. What's important to remember is -and you remember this from Dr. Peled -- they want to say you should have changed it out faster. You should have patched it. You should have done all these things. But remember Dr. Peled said it is the satellite platform operator's decision, and NDS does not second-guess a platform operator's decision, because they have a variety of consequences they need to think about. They don't just have knee-jerk reactions and go out and start swapping cards.

You try to fight it in a measured response. And that's what we tried to do.

So after February 21, you had the hackers, and they were given this recipe. Now you can put a little salt here; you can put a little pepper here. Everybody has their different flavor. And once they got this cookbook, this recipe, this hacking manual for dummies -- and you remember Mr. Kudelski got on the stand -- they told you allowed a moderate-level hacker for the first time to create their own cards.

NDS no longer could retain control of this distribution network because the trail was getting closer and closer to them. They had to run from

Detective Cumberland. They had to run from the investigation into their activities. So we tried to fight it off with ECMs, and ultimately the holes get bigger.

We can't combat the piracy, and ultimately the whole dam breaks, and we have to do a card swap.

Now, what's important to know is Exhibit 1270.

This is the internal marketing document at NDS. And if you recall that document, it's dated May of 2001 . And in that document, they flaunt the fact that EchoStar's hacked. And if you look in that document, it also says that EchoStar and Nagra cannot effectively combat the piracy with ECMs. They'll get up here, and they'll talk about ad nauseam ROM
hole opened, ROM hole closed, ROM hole opened, ROM hole closed. But listen to their own people that were involved in this hack. They said you can't fix it with an ECM, and it will eventually lead to a swap-out. And that's what happened.

So did NDS do it? You've got NDS engineer David Mordinson admit that you need -- to develop the hack, a person would need the Project Headend Report. Okay. We know that Mr. Tarnovsky had it. We know that NDS had it. You would need the code, which they got. You would need the CPU, which they had. And you'd need technical knowledge of software codes.

And Mr. Mordinson admitted he's not aware of anyone else in the world that was capable of a hack that NDS engineers developed for DISH other than NDS, which brings me to another point.

You remember the testimony of Mr . Mordinson when he said he was at Christopher Tarnovsky's house and they were talking about the ECM that Nagra and EchoStar put out. And what he said was, he was personally offended that somebody was able to shut down the hack. Now, if it wasn't his hack, why would he care? Why would he be personally offended that somebody was smarter than he was? Because if it wasn't his hack, he wouldn't have any dog in that hunt.

So that's one of the things that you just need to
think about: Why would he react that way?

So what other evidence do you need to know? We've got Chris Tarnovsky linked to Nipper. You don't need to link the NipperClause to the Project Headend Report. But if you want to, Dr. Rubin tells you that the project Headend Report, the NipperClause post, are materially identical. They exploit the same buffer overflow vulnerability. They utilize the same RAM ghost effect. These are his four pillars. This is where he says the DNA is the same. It requires sophisticated understanding of EchoStar's index variable. And they use invalid checksums to hack EchoStar's Smart Card. And Dr. Rubin links the Nipper post to NDS's hacking in Israel. It's either one in the same, or they work together.

So you've got Mr. Tarnovsky under investigation. We know about the Mail and More accounts in San Marcos. He lies to the Mailbox [sic] and More people saying he's a student at Southwest Texas University. And the interesting thing is that you've got NDS paying for this. They're paying for this mailbox scheme. Why? Their undercover cop story just doesn't work.

Now, another thing that $I$ want you to look at in Exhibit 1034: They want to sit there and try and argue that the contact between Mr. Mordinson and Mr. Shkedy is tenuous at best. But if you look in Exhibit 1034, what you'll find
is that there is a section in there that talks about prior to them finding the cash, there's like 80 to 100 telephone calls between Mr. Tarnovsky and various places in Europe. So if they want to argue that wait a minute, he didn't have any way to get this information, Mr. Tarnovsky's a smart, smart guy. Who's to say that Mr. Tarnovsky was not involved in planes, trains, and automobiles when they fly over in '98? If they wanted to conclusively prove to you that these two men didn't get together, where are their passports? They didn't show you any of that information. But it's firmly within their control. They could have shown you, "Hey, Mr. Mordinson's passport -- I've got no entries. I didn't go to California." They could have shown Mr. Tarnovsky's passport if he was truly in Belgium. But whether you believe he's in Belgium or not, he's still involved. Because when he's in Belgium, where was he going? He was with his wife for Christmas, and he was going to a technical interchange in Israel at the same time the cat's out of the bag.

So they find the 40,000 in cash. It's hidden in the CD players. You'll see it in Exhibit 1034. He talks about how he finds the cash. So you can go through those. And we know that it's related to Al Menard because they check the fingerprints with the R.C.M.P. And the R.C.M.P. traces the fingerprints back to Al Menard's friend,

Mr. Mervin Main.

Now, another interesting document -- you can take this, and you can have a handful of documents, and you can figure this case out. I mean, it's complex. But there's little bitty crumbs everywhere.

And one of 'em happens to be 782 , which is
Mr. Tarnovsky's tax return. It's very interesting on the very last page. You've got $\$ 7500$ cash coming from Mr. Menard in the year 2000. You've got a $\$ 5,000$ bonus from NDS Israel that Mr. Peled says, "He must have done something good for us." Now, I don't know if it was a Christmas bonus or not, but it came some time in 2000. And it's the only time Mr. Tarnovsky ever got a bonus from NDS Israel. Why? He's working for Harper Collins. NDS Americas is paying for his equipment, paying for his Mailbox (sic) and More. They've got this big scheme to cover all this stuff up. And you've got Al Menard tied in. And the interesting thing here is, we talk about our $\$ 20,000$. We know it's not the first time he got cash because this is the Ron Ereiser money when they let him pirate DirecTV.

So we went through all this. The package would be delivered. We've got the fingerprints.

So what do they do? What's their big investigation? We know that Dr. Peled was informed that Mr. Tarnovsky admitted to Oliver Kommerling that

Mr. Kommerling was involved with offering the Canal+ code. They've got all these signs. So what is their big investigation? They send Mr. Hasak to go talk to Mr. Tarnovsky. Okay. How come we can find the cash tied up to Mr. Tarnovsky but they can't? They say they fire Mr. Tarnovsky in April of 2007 -- based on information we gave them.

They want to talk about shoddy investigations: Mr. Gee didn't do this, Mr. Gee didn't do that. They sent Mr. Hasak to go talk to Mr. Tarnovsky and get to the bottom of everything. So what do they do? They give him a lie detector test. They only ask him if he's got loyalty to NDS .

Okay. We've got all this information. We've got cash. We've got Mr. Kommerling offering the Canal+ code. We've got Mr. Kommerling being told by Mr. Tarnovsky that he was involved in Canal+ piracy, he was involved in Canal+ posting, he was involved in EchoStar piracy, he was involved in EchoStar posting. What didn't they ask him? They never asked him about posting EchoStar. They never asked him about the shipments from Menard. And they didn't ask him about piracy of any NDS competitor. If you're truly trying to get to the bottom of it, why didn't they do that? Because they knew.

Now, is this the first time they've done this.

And this is gonna be very important because we're asking you not only for damages, but we're asking you for punitive damages, and we also have a RICO claim. And in connection with the RICO claim, you're gonna be asked if they had a pattern and practice of engaging in these type of activities.

And we know that they did because it's not the first time they used this mailbox trick. They used it with Manassas, Virginia where they had the $\$ 20,000$. This was the Operation Johnny Walker that they let Mr. Tarnovsky keep the cash even after they terminated him. And he ultimately spent that money.

They don't file any customs forms. They try to keep this whole thing under the radar. They do not turn the money over to copyright holders. They do not inform law enforcement. They keep it in Mr. Tarnovsky's bank account. So it's not NDS's first time.

For the EchoStar, we know they reverse-engineered it, they hacked it, they created and used a reprogramming device. They concealed cash payments to Mr. Tarnovsky. They disclosed the instructions and information to assist piracy of the system, and they posted that hack on dr7 and Canal+.

Now, we don't represent Canal+, so we're not here to litigate the Canal+ case. But what we've been able to
determine is that they reverse-engineered, and they hacked it. They disclosed the instructions on the website, and the website was dr7. So it's similar conduct.

Okay. Is it just Canal+? Now, we know DirecTV. They created and used a reprogramming device. We know that. Mr. Ereiser told us that. Okay. They concealed cash payments? Yes. Disclosed instructions and information to assist piracy of the system? Yes. That was Operation Johnny Walker. So you can put all this together and see that there's the same pattern. They're running the same play over and over and over again because it's been effective.

Now, this is not the only time. There's also this October '99 document. And this talks about a company called ASTRO. And they had other activities that were part of their pattern. Remember how we talked about they had to mask the card I.D. or create a fake card I.D. so they wouldn't be found out? If you look at Exhibit 610, it says -- okay, this is from Avigail Gutman to Ray Adams.

Now, we know that Mr. Adams was head of worldwide security. He was over in Europe. Remember, he's the guy that -- whose document supposedly got stolen, but we know better because even Dr. Peled didn't believe it because the guy's wife's car got broken into. I mean, they can't even tell you that one with a straight face.

So what does Ms. Gutman tell Mr. Adams? "I would like to use it to avert their attention away from the system. But $I$ want to make sure with you that there is nothing about the box or card that can trace it back to us, is there?"

It's the same play: Hack it, make it look like another box that's not tied to them.

So we found you another piece. All these things come together. We just found the most pieces in our lawsuit because that's who I represent.

And do we know that Mr. Tarnovsky did this? If you look at the November 2000 e-mail -- remember Mr. Norris was on the stand? Mr. Noll was questioning him. Mr. Norris was at Mr. Tarnovsky's home, and right there in front of Mr. Norris, Mr. Tarnovsky reprogrammed an EchoStar access card. And you can see that in Exhibit 51.

So if there's any doubt in your mind that Mr. Tarnovsky, Mr. Norris, and NDS Americas were involved in this, that should be the end of the matter.

And what do they do? It wasn't just, you know, intellectual curiosity, Mr. Norris asking Mr. Tarnovsky, "Hey, can you do this? Let's watch some TV." What did they do? They reported up the chain. We don't have the blow-up for that one, but if you look at Exhibit 51, you'll see they reported up the chain to Yoni Shiloh. So it must have been
important to NDS Group to know that Mr. Tarnovsky could do this.

Now, this is about the same time that we have the black box. And remember Mr. Dionisi was on the stand, and Mr. Dionisi described his conversation with Chris Tarnovsky. Mr. Tarnovsky described the Stinger to him. He described his box.

Mr. Dionisi also told you that he met with Mr. Al Menard in Canada and another gentleman. And he saw a box that sounded much like the Stinger. And this box spit out 52 EchoStar cards. So it's another link Mr. Dionisi testified to.

So you've got Exhibit 2009. This is the cover-up. So make sure you look at this because you've got Oliver Kommerling involved. "Alex" is Oliver Kommerling, and it talks about what they did with his computer so that there would be no traces in the USA. One of the things that they're gonna argue is all this happened overseas or only affected places other than the United States. But you'll see that they constantly refer to USA.

Nothing existed technically to connect Alex to the card in either Canada, the USA, or Germany because they knew that what they were doing violated United States laws, the very laws that you're gonna be enforcing.

So we've got this slide. It's the timing. It
says in June 2003 we have had no choice but to file a lawsuit. Actually, as you recall, we originally filed our claim in September 2002. That was where we intervened in the Canal+ litigation. So we come up there, they settle their dispute, they resolved it with Canal+. So we had to come down here and file our lawsuit with Judge Carter. And what did they do? Shortly after that, they hired Al Menard. You would think they'd want to be running as far away from Al Menard as they could. But they hired him to surf the Internet at 6,000 bucks a month.

Now, this is the world's largest security and conditional access company. They can hack cards, they can design pirate software, pirate products, but they've got to pay this guy 380 grand to surf the Web.

Now, what do they do that's interesting? If these gentlemen are not tied together, why do they fire them both three days before Mr. Tarnovsky's deposition? I mean, only they know the answer, but they couldn't explain it to us.

MR. WELCH: Your Honor, at this time it would probably be a good time for a break.

THE COURT: All right. Ladies and gentlemen, you're admonished not to discuss this matter amongst yourselves nor form or express any opinion concerning the case.

We'll come and get you in about 20 minutes. Have
a nice recess.

Have a nice recess, Counsel.
(Recess held at 9:50 a.m.)
(Further proceedings reported by Jane Rule in Volume II.)


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