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

- - - - -

ECHOSTAR SATELLITE CORPORATION,)
et al.,)
Plaintiffs,)
vs.) No. SACV 03-950 DOC
NDS GROUP PLC, et al.,) Day 13, Volume II
Defendants.)
_____)

REPORTER'S TRANSCRIPT OF PROCEEDINGS
Jury Trial
Santa Ana, California
Wednesday, April 30, 2008

Debbie Gale, CSR 9472, RPR
Federal Official Court Reporter
United States District Court
411 West 4th Street, Room 1-053
Santa Ana, California 92701
(714) 558-8141

EchoStar 2008-04-30 D13V2

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By Mr. Eberhart 37

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1 **SANTA ANA, CALIFORNIA, WEDNESDAY, APRIL 30, 2008**

2 **Day 13, Volume II**

3 (10:16 a.m.)

10:16:53 4 (In the presence of the jury.)

10:16:54 5 THE COURT: All right. The jury's present. All
10:16:55 6 counsel are present.

10:16:56 7 And, Counsel, if you would like to call your next
10:17:00 8 witness, please.

10:17:02 9 MR. SNYDER: Defendants call by video Peter
10:17:04 10 Kuykendall.

10:17:06 11 THE COURT: Once again, the court reporter, by
10:17:07 12 stipulation of counsel, need not take verbatim the
10:17:14 13 transcript of the video; but it will be included in the
10:17:18 14 running daily.

10:17:19 15 Thank you. Counsel, if you would like to play
10:17:21 16 that video.

10:17:22 17 MR. SNYDER: Thank you.

10:18:01 18 *(Excerpt of video deposition of Peter*
10:18:05 19 *Kuykendall, transcript herein incorporated as*
10:18:05 20 *provided by defense counsel, played as follows:)*

10:18:46 21 **KUYKENDALL VIDEO CLIPS**

10:18:46 22 **Page Range: 005:25-6:6**

10:18:46 23 5:25 Q. Good morning, Mr. Kuykendall.

10:18:46 24 6: 6

10:18:46 25 6: 1 A. Good morning.

10:18:46 1 6: 2 Q. First, am I pronouncing your name correctly?
10:18:46 2 6: 3 A. Yes.
10:18:46 3 6: 4 Q. Good. Can you please state your full name for
10:18:46 4 6: 5 the record.
10:18:46 5 6: 6 A. Peter Owen, O-w-e-n, Kuykendall.
10:18:46 6 **Page Range: 014:12-15:7**
10:18:46 7 14:12 Q. (BY MR. DILGER) And before you worked with
10:18:46 8 14:13 Comcast, where were you employed?
10:18:46 9 14:14 A. At NagraStar.
10:18:46 10 14:15 Q. For how long were you employed with NagraStar?
10:18:46 11 14:16 A. I started in 2002 and left in March of 2006.
10:18:46 12 14:17 Q. Why did you leave NagraStar?
10:18:46 13 14:18 A. I had a better opportunity at Comcast.
10:18:46 14 14:19 Q. Why did you consider the Comcast opportunity a
10:18:46 15 14:20 better one?
10:18:46 16 14:21 A. It was a better overall compensation package.
10:18:46 17 14:22 Q. So money?
10:18:46 18 14:23 A. Money, opportunity for advancement.
10:18:46 19 14:24 Q. And what was your role while at NagraStar?
10:18:46 20 14:25 A. I had a couple of roles. I started out as a
10:18:46 21 15: 15
10:18:46 22 15: 1 set-top box engineer, and in that role I was a --
10:18:46 23 well, I
10:18:46 24 15: 2 was a set-top box engineer. I then transitioned to
10:18:46 25 doing

10:18:46 1 15: 3 that half-time and working for J.J. Gee in the field
10:18:46 2 15: 4 security department. So I was half-time for J.J. and
10:18:46 3 15: 5 half-time set-top box; and after some period of time,
10:18:46 4 I
10:18:46 5 15: 6 transitioned fully to field security, and we hired
10:18:46 6 15: 7 someone else to do the set-top box engineering.

10:18:46 7 **Page Range: 015:20-16:6**

10:18:46 8 15:20 Q. So from the time you arrived at NagraStar until
10:18:46 9 15:21 early 2003, you did no field security work; is that
10:18:46 10 15:22 right?

10:18:46 11 15:23 A. I -- I did some initially. I -- my initial
10:18:46 12 15:24 employment with NagraStar was in, I think, February or
10:18:46 13 15:25 March of 2002 as a part-time contractor doing field --
10:18:46 14 16: 16

10:18:46 15 16: 1 for field security for J.J. up until late May of that
10:18:46 16 16: 2 year.

10:18:46 17 16: 3 Q. And then in late May, you began as a set-top
10:18:46 18 16: 4 box engineer?

10:18:46 19 16: 5 A. Yes, as a full-time regular employee at that
10:18:46 20 16: 6 time.

10:18:46 21 **Page Range: 016:16-17:12**

10:18:46 22 16:16 Q. Yeah. My understanding is that from late May
10:18:46 23 16:17 to early 2003, you were a set-top box engineer; is
10:18:46 24 that
10:18:46 25 16:18 correct?

10:18:46 1 16:19 A. Yes. That's correct.

10:18:46 2 16:20 Q. And as a set-top box engineer, you did no field

10:18:46 3 16:21 security work, is that correct, during that time

10:18:46 4 frame?

10:18:46 5 16:22 A. My recollection is that that is correct.

10:18:46 6 16:23 Q. And then in early 2003, you were given a

10:18:46 7 16:24 role -- an additional role of working with J.J. Gee in

10:18:46 8 16:25 the field security department?

10:18:46 9 17: 17

10:18:46 10 17: 1 A. Yes.

10:18:46 11 17: 2 Q. And that you held that for some portion of time

10:18:46 12 17: 3 of six to 12 months?

10:18:46 13 17: 4 A. As a half-time position, yes.

10:18:46 14 17: 5 Q. And then after that six to 12 months period was

10:18:46 15 17: 6 over, you transitioned to full-time field security

10:18:46 16 work?

10:18:46 17 17: 7 A. Yes.

10:18:46 18 17: 8 Q. And then is it correct that you held the

10:18:46 19 17: 9 full-time field security work position until your

10:18:46 20 17:10 departure from NagraStar?

10:18:46 21 17:11 MR. FERGUSON: Form, foundation.

10:18:46 22 17:12 A. Yes.

10:18:46 23 **Page Range: 019:18-20:3**

10:18:46 24 19:18 Did your set-top box responsibilities change

10:18:46 25 19:19 after you started also doing field security work?

10:18:46 1 19:20 MR. FERGUSON: Form.

10:18:46 2 19:21 A. Well, the role changed over time.

10:18:46 3 19:22 Q. (BY MR. DILGER) In what way?

10:18:46 4 19:23 MR. FERGUSON: Form.

10:18:46 5 19:24 A. As -- after I had worked there a little while

10:18:46 6 19:25 in the set-top box role, I started assisting on an

10:18:46 7 effort

10:18:46 8 20: 20

10:18:46 9 20: 1 to design a new generation -- some specifications for

10:18:46 10 a

10:18:46 11 20: 2 new generation of set-top boxes to -- that is intended

10:18:46 12 to

10:18:46 13 20: 3 be more secure.

10:18:46 14 **Page Range: 020:16-20:25**

10:18:46 15 20:16 Q. (BY MR. DILGER) Were there any changes being

10:18:46 16 20:17 contemplated at that time to the card used in

10:18:46 17 conjunction

10:18:46 18 20:18 with the set-top box?

10:18:46 19 20:19 MR. FERGUSON: Form, foundation.

10:18:46 20 20:20 A. When I arrived at NagraStar, they were already

10:18:46 21 20:21 in the process of getting ready to deploy a new card.

10:18:46 22 20:22 Q. (BY MR. DILGER) This is the Nagra 2 card?

10:18:46 23 20:23 MR. FERGUSON: Form.

10:18:46 24 20:24 A. Our name for it was Aladdin. I'm not familiar

10:18:46 25 20:25 with the "Nagra 2" terminology.

10:18:46 1 **Page Range: 023:16-24:5**

10:18:46 2 23:16 Q. Okay. You indicated that you transitioned some
10:18:46 3 23:17 of your work over to field security work. What is your
10:18:46 4 23:18 definition of field security work?

10:18:46 5 23:19 A. J.J. Gee was the manager of the field security
10:18:46 6 23:20 department at that time, so I worked at his direction,
10:18:46 7 23:21 and my definition would be whatever he directed me to
10:18:46 8 do
10:18:46 9 23:22 would be field security work.

10:18:46 10 23:23 Q. And what did Mr. Gee direct you to do during
10:18:46 11 23:24 your time working for him? If you'd like, you can
10:18:46 12 23:25 confine your answer to broad terms. We can be more
10:18:46 13 24: 24
10:18:46 14 24: 1 specific later.

10:18:46 15 24: 2 A. One activity was Internet research as to piracy
10:18:46 16 24: 3 activities. Another activity was analysis of evidence.
10:18:46 17 24: 4 Another activity was analysis of commercially
10:18:46 18 available
10:18:46 19 24: 5 piracy devices.

10:18:46 20 **Page Range: 078:4-78:24**

10:18:46 21 78: 4 Q. Do you know an individual named Christopher
10:18:46 22 78: 5 Tarnovsky?

10:18:46 23 78: 6 MR. FERGUSON: Foundation.

10:18:46 24 78: 7 A. I know of him.

10:18:46 25 78: 8 Q. (BY MR. DILGER) What do you know of

10:18:46 1 78: 9 Mr. Tarnovsky?

10:18:46 2 78:10 A. My understanding is that he is alleged to be

10:18:46 3 78:11 some sort of double agent, the interface between NDS

10:18:46 4 and

10:18:46 5 78:12 the pirate world.

10:18:46 6 78:13 Q. Do you have any information connecting

10:18:46 7 78:14 Mr. Tarnovsky to EchoStar piracy?

10:18:46 8 78:15 A. I don't.

10:18:46 9 78:16 Q. Do you know anyone who does have that

10:18:46 10 78:17 information?

10:18:46 11 78:18 MR. FERGUSON: Foundation, calls for

10:18:46 12 78:19 speculation.

10:18:46 13 78:20 A. Not personally, no.

10:18:46 14 78:21 Q. (BY MR. DILGER) What do you mean by "Not

10:18:46 15 78:22 personally"?

10:18:46 16 78:23 A. I am not aware of anyone who has some sort of

10:18:46 17 78:24 solid proof.

10:18:46 18 **Page Range: 082:11-82:19**

10:18:46 19 82:11 Q. (BY MR. DILGER) Okay. Do you have any

10:18:46 20 82:12 evidence that connects any EchoStar piracy to the

10:18:46 21 Nipper

10:18:46 22 82:13 posting?

10:18:46 23 82:14 MR. FERGUSON: Foundation.

10:18:46 24 82:15 A. None that I can recall.

10:18:46 25 82:16 Q. (BY MR. DILGER) Do you have any evidence that

10:18:46 1 82:17 connects Christopher Tarnovsky to the Nipper posting?

10:18:46 2 82:18 MR. FERGUSON: Foundation.

10:18:46 3 82:19 A. None that I can recall.

10:18:46 4 **Page Range: 085:7-85:16**

10:18:46 5 85: 7 Q. (BY MR. DILGER) I can -- I'll restate it. Do

10:18:46 6 85: 8 you recall any evidence -- seeing any evidence that

10:18:46 7 85: 9 suggested a connection between NDS and EchoStar

10:18:46 8 piracy?

10:18:46 9 85:10 MR. FERGUSON: Same objection.

10:18:46 10 85:11 A. No.

10:18:46 11 85:12 Q. (BY MR. DILGER) So, to your knowledge, while

10:18:46 12 85:13 at NagraStar, you were exposed to no evidence that

10:18:46 13 85:14 suggested NDS was involved in EchoStar piracy?

10:18:46 14 85:15 MR. FERGUSON: Foundation.

10:18:46 15 85:16 A. Not that I can recall.

10:18:46 16 **Page Range: 202:7-203:20**

10:18:46 17 202: 7 Q. Earlier, we talked about the Nipper Clauz

10:18:46 18 202: 8 posting, and you testified that you couldn't recall

10:18:46 19 202: 9 anything about that posting; is that correct?

10:18:46 20 202:10 A. Yes.

10:18:46 21 202:11 Q. So it's fair to say that you have no evidence

10:18:46 22 202:12 connecting Mr. Tarnovsky to that posting; is that

10:18:46 23 202:13 correct?

10:18:46 24 202:14 MR. FERGUSON: Foundation.

10:18:46 25 202:15 A. None that I can recall.

10:18:46 1 202:16 Q. (BY MR. DILGER) And you have no evidence
10:18:46 2 202:17 connecting NDS to that posting, either; is that fair
10:18:46 3 to
10:18:46 4 202:18 say?
10:18:46 5 202:19 MR. FERGUSON: Foundation.
10:18:46 6 202:20 A. Yes. That's correct.
10:18:46 7 202:21 Q. (BY MR. DILGER) Is it fair to say that you
10:18:46 8 202:22 have no evidence connecting Mr. Tarnovsky to any
10:18:46 9 posting
10:18:46 10 202:23 of EchoStar-related code?
10:18:46 11 202:24 MR. FERGUSON: Same objection.
10:18:46 12 202:25 A. Yes.
10:18:46 13 203: 203
10:18:46 14 203: 1 Q. (BY MR. DILGER) Is it fair to say that you
10:18:46 15 203: 2 have no evidence connecting NDS to any posting of
10:18:46 16 203: 3 EchoStar-related code?
10:18:46 17 203: 4 MR. FERGUSON: Same objection.
10:18:46 18 203: 5 A. Yes.
10:18:46 19 203: 6 Q. (BY MR. DILGER) And it's true that you have no
10:18:46 20 203: 7 evidence connecting Mr. Tarnovsky to any piracy of
10:18:46 21 203: 8 EchoStar's signal?
10:18:46 22 203: 9 MR. FERGUSON: Same objection.
10:18:46 23 203:10 A. Yes.
10:18:46 24 203:11 Q. (BY MR. DILGER) And it's correct that you have
10:18:46 25 203:12 no evidence connecting NDS in any fashion to any

10:18:46 1 piracy
10:18:46 2 203:13 of EchoStar's signal?
10:18:46 3 203:14 MR. FERGUSON: Foundation.
10:18:46 4 203:15 A. Yes.
10:18:46 5 203:16 Q. (BY MR. DILGER) And it's fair to say that you
10:18:46 6 203:17 have no evidence connecting the Nipper Clauz posting
10:18:46 7 and
10:18:46 8 203:18 any subsequent piracy of EchoStar's system?
10:18:46 9 203:19 MR. FERGUSON: Foundation.
10:18:46 10 203:20 A. None that I can recall.
10:18:46 11 **Page Range: 030:21-31:15**
10:18:46 12 30:21 Q. Have you heard of a group operating out of
10:18:46 13 30:22 Barrie, Ontario, a pirate group for EchoStar piracy
10:18:46 14 30:23 operating out of Barrie, Ontario?
10:18:46 15 30:24 A. I recall hearing that city name, Barrie,
10:18:46 16 30:25 Ontario, in the context of piracy.
10:18:46 17 31: 31
10:18:46 18 31: 1 Q. What have you heard about Barrie, Ontario?
10:18:46 19 31: 2 A. Just that. I just have a recollection of some
10:18:46 20 31: 3 discussions around Barrie, Ontario.
10:18:46 21 31: 4 Q. Do you recall who these discussions were with?
10:18:46 22 31: 5 A. I believe it would be J.J. Gee. That's my
10:18:46 23 31: 6 recollection.
10:18:46 24 31: 7 Q. Do you recall when you had this discussion?
10:18:46 25 31: 8 A. No.

10:18:46 1 31: 9 Q. Were you asked to monitor any piracy out of

10:18:46 2 31:10 Barrie, Ontario?

10:18:46 3 31:11 A. I don't recall.

10:18:46 4 31:12 Q. Were you asked to do any investigation

10:18:46 5 31:13 whatsoever about a group operating out of Barrie,

10:18:46 6 31:14 Ontario?

10:18:46 7 31:15 A. I'm sorry. I don't recall.

10:18:46 8 **Page Range: 074:17-75:23**

10:18:46 9 74:17 Q. (BY MR. DILGER) I'm handing what's been

10:18:46 10 74:18 previously marked Exhibit 206. I'd like you to take a

10:18:46 11 74:19 look at that document, if you could.

10:18:46 12 74:20 A. Okay.

10:18:46 13 74:21 (The deponent perused the exhibit.)

10:18:46 14 74:22 Q. If you go to the page listed ESC 0080120, it's

10:18:46 15 74:23 page 5 of that e-mail, midway through the e-mail page,

10:18:46 16 it

10:18:46 17 74:24 says, "I wIll dUmP ALL vErSiOns oF tHe WeSt CoDe. LoOk

10:18:46 18 74:25 FoR iT hErE! Nipper Clauz 00," which I read to be

10:18:46 19 Nipper

10:18:46 20 75: 75

10:18:46 21 75: 1 Clauz 2000. Do you see that?

10:18:46 22 75: 2 A. I see it.

10:18:46 23 75: 3 Q. Are you familiar with this posting?

10:18:46 24 75: 4 MR. FERGUSON: During what time period? Any

10:18:46 25 75: 5 time period?

10:18:46 1 75: 6 Q. (BY MR. DILGER) Are you familiar with this
10:18:46 2 75: 7 posting right now?
10:18:46 3 75: 8 A. No. It doesn't ring a bell to me now, but it
10:18:46 4 75: 9 appears to be a genuine e-mail that I sent.
10:18:46 5 75:10 Q. It says here that "I also did a USENET search
10:18:46 6 75:11 on the poster (Dr7_al@my-deja.com) and came up with a
10:18:46 7 75:12 couple of hits that returned the same thing (see
10:18:46 8 below)."
10:18:46 9 75:13 Do you see that?
10:18:46 10 75:14 A. Yeah.
10:18:46 11 75:15 Q. It says, "That currently resolves to Ontario,
10:18:46 12 75:16 Canada." Do you recall doing a USENET search on the
10:18:46 13 75:17 poster of this?
10:18:46 14 75:18 A. Not this specific one.
10:18:46 15 75:19 Q. You don't recall doing this?
10:18:46 16 75:20 A. No.
10:18:46 17 75:21 Q. Were you ever asked to investigate the -- this
10:18:46 18 75:22 Nipper posting, to your recollection?
10:18:46 19 75:23 A. Not that I recall.
10:18:46 20 **Page Range: 149:17-150:8**
10:18:46 21 149:17 I'm handing you what's been marked Exhibit 685.
10:18:46 22 149:18 Take a moment to familiarize yourself with this
10:18:46 23 document.
10:18:46 24 149:19 A. Okay.
10:18:46 25 149:20 (The deponent perused the exhibit.)

10:18:46 1 149:21 Okay.

10:18:46 2 149:22 Q. It says, "Hello, gentlemen," and I'm looking at

10:18:46 3 149:23 midway through the second page. "JJ has asked me to

10:18:46 4 send

10:18:46 5 149:24 this document to you for immediate review. I'm sorry

10:18:46 6 to

10:18:46 7 149:25 drop this on you on such short notice. JJ says we

10:18:46 8 need

10:18:46 9 150: 150

10:18:46 10 150: 1 to have your comments on it today, because our

10:18:46 11 customer's

10:18:46 12 150: 2 need is urgent. Thanks, Peter Kuykendall."

10:18:46 13 150: 3 Do you see that?

10:18:46 14 150: 4 A. Yes.

10:18:46 15 150: 5 Q. Is that a message from you to Mr. Kudelski,

10:18:46 16 150: 6 Mr. Valsecchi and Mr. Nicholas?

10:18:46 17 150: 7 A. Yes. The second man's name is Patrick

10:18:46 18 150: 8 Valsecchi.

10:18:46 19 **Page Range: 135:2-137:19**

10:18:46 20 135: 2 Q. (BY MR. DILGER) I'm handing you what's been

10:18:46 21 135: 3 marked Exhibit 683. It appears to be an e-mail from

10:18:46 22 135: 4 Henri Kudelski to Dominique Bongard, Joel Conus,

10:18:46 23 Cedric

10:18:46 24 135: 5 Groux, Nicholas Christophe, and Alan Guggenheim, and

10:18:46 25 it's

10:18:46 1 135: 6 in French, and then Alan Guggenheim forwards it --
10:18:46 2 135: 7 forwards it on to you. Do you see that?
10:18:46 3 135: 8 A. Yes.
10:18:46 4 135: 9 Q. It was dated December 17, 2002. Do you see
10:18:46 5 135:10 that?
10:18:46 6 135:11 A. Yes.
10:18:46 7 135:12 Q. And it appears to be instructions for setting
10:18:46 8 135:13 up the security lab in Denver. You see that?
10:18:46 9 135:14 A. Yes.
10:18:46 10 135:15 Q. And it asks you to set up a list of items to
10:18:46 11 135:16 set up in the security lab; is that correct?
10:18:46 12 135:17 A. Yes.
10:18:46 13 135:18 Q. And it also lists functions that you were to
10:18:46 14 135:19 carry out as part of your job. Do you see that?
10:18:46 15 135:20 A. Yes.
10:18:46 16 135:21 Q. Based on your testimony today, at Point 1,
10:18:46 17 135:22 "Evidence analysis reports," it appears that you
10:18:46 18 carried
10:18:46 19 135:23 out that function; is that correct?
10:18:46 20 135:24 A. Yes.
10:18:46 21 135:25 Q. Point No. 2, "Set up and maintain the security
10:18:46 22 136: 136
10:18:46 23 136: 1 lab with EchoStar, one each of the main devices,"
10:18:46 24 what is
10:18:46 25 136: 2 that?

10:18:46 1 136: 3 A. Alan was referring to the devices that 80
10:18:46 2 136: 4 percent of the pirates use to steal the signal.
10:18:46 3 136: 5 Q. And did you set up the lab with each of the
10:18:46 4 136: 6 main devices for EchoStar piracy?
10:18:46 5 136: 7 MR. FERGUSON: Calls for -- calls for
10:18:46 6 136: 8 speculation.
10:18:46 7 136: 9 A. No. We -- I never set up a lab, per se. I
10:18:46 8 136:10 made a few efforts in that direction but never did
10:18:46 9 get
10:18:46 10 136:11 the lab set up.
10:18:46 11 136:12 Q. (BY MR. DILGER) So this never happened, you
10:18:46 12 136:13 never had a security lab set up in Denver?
10:18:46 13 136:14 A. I never did, no.
10:18:46 14 136:15 Q. Okay. And it says "Bell ExpressVu, 1 to 3
10:18:46 15 136:16 devices most prevalent." Did you set up any devices
10:18:46 16 most
10:18:46 17 136:17 prevalent?
10:18:46 18 136:18 MR. FERGUSON: Calls for speculation.
10:18:46 19 136:19 A. No.
10:18:46 20 136:20 Q. (BY MR. DILGER) So you never monitored the
10:18:46 21 136:21 feed, the Bell ExpressVu feed?
10:18:46 22 136:22 A. I would sporadically. If an interesting hack
10:18:46 23 136:23 or interesting device came along, I would test that,
10:18:46 24 but
10:18:46 25 136:24 it was not a routine ongoing lab that sort of daily

10:18:46 1 136:25 monitored that sort of thing.

10:18:46 2 137: 137

10:18:46 3 137: 1 Q. And you never monitored the EchoStar feed using

10:18:46 4 137: 2 pirate devices?

10:18:46 5 137: 3 A. Well, again, it was in the same mode as Bell

10:18:46 6 137: 4 ExpressVu. It was very sporadic. If something new and

10:18:46 7 137: 5 interesting would come along, I would do it.

10:18:46 8 137: 6 Q. And then below -- on the third, it says, "DTV,

10:18:46 9 137: 7 1 device (the most popular)."

10:18:46 10 137: 8 What is Mr. Guggenheim requesting that you do

10:18:46 11 137: 9 here?

10:18:46 12 137:10 MR. FERGUSON: Foundation, calls for

10:18:46 13 137:11 speculation?

10:18:46 14 137:12 A. My understanding was a DirectTV device.

10:18:46 15 137:13 Q. (BY MR. DILGER) Pirate device?

10:18:46 16 137:14 A. Yes.

10:18:46 17 137:15 Q. So Mr. Guggenheim was asking you to set up a

10:18:46 18 137:16 pirate device for DirectTV to monitor the DirectTV feed

10:18:46 19 137:17 using -- hacking into the DirectTV feed?

10:18:46 20 137:18 MR. FERGUSON: Same objection.

10:18:46 21 137:19 A. Yes.

10:18:46 22 **Page Range: 203:23-205:15**

10:18:46 23 203:23 Do you know what the DN-10 hack is?

10:18:46 24 203:24 MR. FERGUSON: Foundation.

10:18:46 25 203:25 A. Yes. The -- the symbol DN-10 is sort of hacker

10:18:46 1 204: 204

10:18:46 2 204: 1 shorthand for the so-called ROM10 version of the

10:18:46 3 DNASP002

10:18:46 4 204: 2 Smartcard.

10:18:46 5 204: 3 Q. (BY MR. DILGER) And what is the DN-10 hack?

10:18:46 6 204: 4 A. I don't remember the details off the top of my

10:18:46 7 204: 5 head. I do remember that it was somehow technically

10:18:46 8 204: 6 different from the hack for the other cards, the

10:18:46 9 lower

10:18:46 10 204: 7 numbered cards.

10:18:46 11 204: 8 MR. DILGER: That one? Oh, there we go.

10:18:46 12 204: 9 (Deposition Exhibit 689 was marked.)

10:18:46 13 204:10 Q. (By MR. DILGER) Handing you what's been marked

10:18:46 14 204:11 Exhibit 689.

10:18:46 15 204:12 A. Okay.

10:18:46 16 204:13 Q. At the very end of the second page, it says,

10:18:46 17 204:14 "This is the web page with the complete details of

10:18:46 18 204:15 getting into the back door of the ROM10 that was

10:18:46 19 204:16 referenced (and censored) in Renee's report today."

10:18:46 20 Do

10:18:46 21 204:17 you see that?

10:18:46 22 204:18 A. Yes.

10:18:46 23 204:19 Q. Is this what you're referring to when you talk

10:18:46 24 204:20 about the DN-10 hack?

10:18:46 25 204:21 A. Yes.

10:18:46 1 204:22 Q. And what was the DN-10 -- how did the DN-10
10:18:46 2 204:23 hack work?
10:18:46 3 204:24 A. It was another method of getting into the cards
10:18:46 4 204:25 so that you could reprogram it to be suitable for
10:18:46 5 pirate
10:18:46 6 205: 205
10:18:46 7 205: 1 applications.
10:18:46 8 205: 2 Q. And you call it a back door here. What do you
10:18:46 9 205: 3 mean by that?
10:18:46 10 205: 4 A. The back door is a term that refers to a second
10:18:46 11 205: 5 access system into the card, the primary access
10:18:46 12 system
10:18:46 13 205: 6 being the way the set-top box talks to it through
10:18:46 14 certain
10:18:46 15 205: 7 messages that are cryptographically secured to go to
10:18:46 16 that
10:18:46 17 205: 8 card. The back door is a second method to talk to it
10:18:46 18 205: 9 independent of that.
10:18:46 19 205:10 Q. All other things being equal, is it fair to say
10:18:46 20 205:11 that a card with a back door is less secure than a
10:18:46 21 card
10:18:46 22 205:12 without a back door?
10:18:46 23 205:13 MR. FERGUSON: Opinion, calls for
10:18:46 24 205:14 speculation.
10:18:46 25 205:15 A. Yes.

10:18:46 1 **Page Range: 205:20-205:24**

10:18:46 2 205:20 Q. (BY MR. DILGER) And it's correct that the
10:18:46 3 205:21 DN-10 hack exploited that back door in the ROM10
10:18:46 4 card; is
10:18:46 5 205:22 that right?

10:18:46 6 205:23 MR. FERGUSON: Foundation.

10:18:46 7 205:24 A. Yes.

10:18:46 8 **Page Range: 206:10-207:16**

10:18:46 9 206:10 Q. But it's your recollection that the DN-10 hack,
10:18:46 10 206:11 in fact, did work?

10:18:46 11 206:12 A. Oh, yes.

10:18:46 12 206:13 Q. You say that quite emphatically. Why?

10:18:46 13 206:14 A. It became widespread very quickly. It was
10:18:46 14 206:15 posted on a public hacker board that anyone could
10:18:46 15 read.

10:18:46 16 206:16 Q. And once they had that information about the
10:18:46 17 206:17 ROM10, they had pretty much access to free television
10:18:46 18 on
10:18:46 19 206:18 the DNASP002 signal, right?

10:18:46 20 206:19 MR. FERGUSON: Foundation.

10:18:46 21 206:20 A. Yes. Well, they already did, using the ROM2
10:18:46 22 206:21 and 3 cards under that system. This gave them similar
10:18:46 23 206:22 access with the ROM10 card.

10:18:46 24 206:23 Q. (BY MR. DILGER) Right. So once you had access
10:18:46 25 206:24 on any version of the cards, you had access to the

10:18:46 1 DNASP

10:18:46 2 206:25 signal, right?

10:18:46 3 207: 207

10:18:46 4 207: 1 A. Yes.

10:18:46 5 207: 2 Q. When did the switch to the ROM -- from the

10:18:46 6 207: 3 DNASP002 system to the Aladdin system, when did that

10:18:46 7 207: 4 complete? When was the DNASP signal turned off?

10:18:46 8 207: 5 A. I believe we were still broadcasting the old

10:18:46 9 207: 6 DNASP002 signal when I left. I think so.

10:18:46 10 207: 7 Q. In 2006?

10:18:46 11 207: 8 A. Yes.

10:18:46 12 207: 9 Q. When following the introduction of the Nagra 2

10:18:46 13 207:10 card are you aware that the Nagra 2 card became

10:18:46 14 207:11 compromised?

10:18:46 15 207:12 A. Meaning the Aladdin card?

10:18:46 16 207:13 Q. Excuse me, the Aladdin card.

10:18:46 17 207:14 MR. FERGUSON: Foundation.

10:18:46 18 207:15 A. My recollection is that it was compromised

10:18:46 19 207:16 almost immediately after it was deployed.

10:18:46 20 **Page Range: 150:22-151:10**

10:18:46 21 150:22 Q. Do you recall drafting a report about FTA

10:18:46 22 150:23 security issues?

10:18:46 23 150:24 A. Yes.

10:18:46 24 150:25 Q. And what was that report about? I'd like to

10:18:46 25 151: 151

10:18:46 1 151: 1 question you about it, but it has not been produced
10:18:46 2 to us
10:18:46 3 151: 2 in discovery, so I have to ask you what it's about.
10:18:46 4 151: 3 A. My recollection is that this was from the era
10:18:46 5 151: 4 when the free-to-air or FTA piracy boxes were just
10:18:46 6 coming
10:18:46 7 151: 5 online, and they very quickly became a problem to us;
10:18:46 8 and
10:18:46 9 151: 6 so I did my initial analysis of the problem to
10:18:46 10 determine
10:18:46 11 151: 7 how effective they were and what their weaknesses
10:18:46 12 might
10:18:46 13 151: 8 be, et cetera. And it appears, from reading this
10:18:46 14 e-mail,
10:18:46 15 151: 9 that this was my first draft of this document, and I
10:18:46 16 was
10:18:46 17 151:10 asking for comments.
10:18:46 18 **Page Range: 152:2-152:16**
10:18:46 19 152: 2 Q. So at this time, in 2003, Bell ExpressVu was
10:18:46 20 152: 3 having serious FTA security problems?
10:18:46 21 152: 4 MR. FERGUSON: Foundation -- foundation.
10:18:46 22 152: 5 A. My recollection is that when the FTA box hacks
10:18:46 23 152: 6 came online, they first attacked DISH and then pretty
10:18:46 24 152: 7 quickly afterwards, within a pretty short time, they
10:18:46 25 152: 8 attacked Bell ExpressVu, as well.

10:18:46 1 152: 9 Q. (BY MR. DILGER) And why was the customer's
10:18:46 2 152:10 need urgent?
10:18:46 3 152:11 MR. FERGUSON: Foundation, calls for
10:18:46 4 152:12 speculation.
10:18:46 5 152:13 A. My recollection is that -- that the customers
10:18:46 6 152:14 were very worried about this. They were very aware of
10:18:46 7 152:15 this, and they wanted to get out in front of it as
10:18:46 8 152:16 quickly as possible.
10:18:46 9 **Total Length - 00:24:30**
10:18:34 10
10:42:23 11 MR. SNYDER: That's the end of defendant's
10:42:25 12 designations.
10:42:26 13 Your Honor, I believe that of the exhibits that
10:42:28 14 were referenced, Nos. 206 and 685 are already in evidence.
10:42:36 15 Defendants move 683 and 689.
10:42:40 16 THE COURT: Any objection?
10:42:45 17 MR. WELCH: You gave me 685, Darin.
10:42:49 18 Your Honor, we have no objection to 689.
10:42:53 19 THE COURT: And you're going to look at 683 for a
10:42:55 20 moment?
10:42:57 21 MR. WELCH: Yes, Your Honor.
10:42:58 22 THE COURT: Are you going to play
10:43:01 23 cross-designations of this witness by the plaintiff?
10:43:04 24 MR. HAGAN: There are, Your Honor.
10:43:22 25 THE COURT: Why don't we play those at this time.

10:43:23 1 *(Excerpt of video deposition of Peter*
10:43:27 2 *Kuykendall, transcript herein incorporated as*
10:43:29 3 *provided by plaintiff's counsel, played as*
10:43:29 4 *follows:)*

10:43:33 5 **PLAINTIFFS' DEPOSITION COUNTER-OFFERINGS FOR**
10:43:33 6 **PETER KUYKENDALL**

10:43:33 7 **Total Length - 11 sec. 6sec**

10:43:33 8 **Description: Page 006:4-6:6**

10:43:33 9 6: 4 Q. Good. Can you please state your full name for
10:43:33 10 6: 5 the record.

10:43:33 11 6: 6 A. Peter Owen, O-w-e-n, Kuykendall.

10:43:33 12 **Description: Page 009:22-9:24**

10:43:33 13 9:22 Q. Okay. You understand that you are testifying
10:43:33 14 9:23 under oath today?

10:43:33 15 9:24 A. Yes.

10:43:33 16 **Description: Page 209:14-209:20**

10:43:33 17 209:14 Q. Mr. Kuykendall, you began working for NagraStar
10:43:33 18 209:15 in the early part of 2002, correct?

10:43:33 19 209:16 A. Yes.

10:43:33 20 209:17 Q. And you have no personal knowledge regarding
10:43:33 21 209:18 EchoStar's or Nagra -- NagraStar's investigation into
10:43:33 22 209:19 satellite piracy prior to early 2002, correct?

10:43:33 23 209:20 A. Correct.

10:43:33 24 **Description: Page 88:10-88:17**

10:43:33 25 88:10 Can you recall the names of any individuals you

10:43:33 1 88:11 investigated regarding satellite piracy of EchoStar's
10:43:33 2 88:12 system?

10:43:33 3 88:13 A. Mostly my role was evidence analysis, and the
10:43:33 4 88:14 names of the accused person were generally available
10:43:33 5 to
10:43:33 6 88:15 me in the report, but in almost all cases they didn't
10:43:33 7 88:16 mean anything to me. I didn't -- I don't remember who
10:43:33 8 88:17 they were. That -- that's the extent of it.

10:43:33 9 **Description: Page 169:20-170:4**

10:43:33 10 169:20 Q. (BY MR. DILGER) Earlier, we talked about
10:43:33 11 169:21 reverse engineering of pirate devices, and
10:43:33 12 specifically
10:43:33 13 169:22 it's my understanding that you reverse-engineered
10:43:33 14 certain
10:43:33 15 169:23 pirate devices for EchoStar technology, correct?

10:43:33 16 169:24 A. Yes.

10:43:33 17 169:25 Q. And -- but you never recalled ever
10:43:33 18 170: 170

10:43:33 19 170: 1 reverse-engineering pirate devices for any other
10:43:33 20 170: 2 competitor's technology; is that correct?

10:43:33 21 170: 3 A. No, just the EchoStar and Bell ExpressVu
10:43:33 22 170: 4 systems.

10:43:33 23 **Description: Page 032:21-33:3**

10:43:33 24 32:21 Q. (BY MR. DILGER) Do you have an understanding
10:43:33 25 32:22 as to when Haifa's findings were published on a pirate

10:43:33 1 32:23 site?

10:43:33 2 32:24 A. No. I don't recall the date.

10:43:33 3 32:25 Q. Was it before you arrived at NagraStar?

10:43:33 4 33: 33

10:43:33 5 33: 1 A. Yes.

10:43:33 6 33: 2 Q. But you have no idea when except for before

10:43:33 7 33: 3 2002?

10:43:33 8 **Description: Page 033:5-33:8**

10:43:33 9 33: 5 A. The system had already been pirated by the time

10:43:33 10 33: 6 I got there, to NagraStar.

10:43:33 11 33: 7 Q. (BY MR. DILGER) The DNASP002 system?

10:43:33 12 33: 8 A. Yes.

10:43:33 13 **Description: Page 065:16-65:21**

10:43:33 14 65:16 Q. (BY MR. DILGER) My understanding, from your

10:43:33 15 65:17 testimony in the Soupanthong case, is that an in-depth

10:43:33 16 65:18 analysis of a card would require the assistance of

10:43:33 17 65:19 NagraVision.

10:43:33 18 65:20 A. Of a card, yes. We were not privy to the

10:43:33 19 65:21 internals of the card.

10:43:33 20 **Description: Page 154:25-155:2**

10:43:33 21 154:25 Q. (BY MR. DILGER) Is there a connection between

10:43:33 22 155: 155

10:43:33 23 155: 1 the word Nipper and the NagraVision code used in the

10:43:33 24 155: 2 card, to your understanding?

10:43:33 25 **Description: Page 155:7-155:13**

10:43:33 1 155: 7 A. Yes.

10:43:33 2 155: 8 Q. (BY MR. DILGER) And what is that connection?

10:43:33 3 155: 9 A. There is a string of characters embedded as

10:43:33 4 155:10 part of the code of genuine DNASP002 cards that

10:43:33 5 includes

10:43:33 6 155:11 the term Nipper.

10:43:33 7 155:12 Q. And what is the purpose of that string of

10:43:33 8 155:13 characters, to your knowledge?

10:43:33 9 Description: Page 155:15-155:18

10:43:33 10 155:15 A. My understanding is that that was used as a

10:43:33 11 155:16 flag, that if we ever saw that in a pirate device,

10:43:33 12 that

10:43:33 13 155:17 we would know that it was our code that had been

10:43:33 14 copied

10:43:33 15 155:18 in there.

10:43:33 16 **Description: Page 098:23-98:24**

10:43:33 17 98:23 Q. And why was the DNASP002 system easy to attack

10:43:33 18 98:24 with the low-cost piracy devices?

10:43:33 19 **Description: Page 099:2-99:16**

10:43:33 20 99: 2 A. Once the information is released, say, in the

10:43:33 21 99: 3 form of a script of how to attack the card, it becomes

10:43:33 22 99: 4 easy for a person of average skill to apply that

10:43:33 23 script

10:43:33 24 99: 5 to a card and attack it.

10:43:33 25 99: 6 THE REPORTER: I'm sorry, ". . . to a card" --

10:43:33 1 99: 7 THE DEPONENT: And attack the card.

10:43:33 2 99: 8 Q. (BY MR. DILGER) So when the information is

10:43:33 3 99: 9 released in the form of a script, is it fair to say

10:43:33 4 that

10:43:33 5 99:10 the vulnerabilities of the card become apparent to

10:43:33 6 99:11 hackers of average skill?

10:43:33 7 99:12 A. I would say it becomes possible for a hacker of

10:43:33 8 99:13 average skill to hack a Smartcard once a script is

10:43:33 9 99:14 released.

10:43:33 10 99:15 Q. Is it your understanding that such a script was

10:43:33 11 99:16 released for the DNASP002 cards?

10:43:33 12 **Description: Page 099:18-99:18**

10:43:33 13 99:18 A. Yes.

10:43:33 14 **Description: Page 101:9-101:11**

10:43:33 15 101: 9 Q. And why is it your understanding that the

10:43:33 16 101:10 existence of these scripts pointed to a release of

10:43:33 17 101:11 information about the DNASP002 system?

10:43:33 18 Description: Page 101:13-101:21

10:43:33 19 101:13 A. These scripts are very complicated. The odds

10:43:33 20 101:14 of them being put together randomly are just

10:43:33 21 101:15 astronomically low. In my opinion, it requires a

10:43:33 22 101:16 fundamental knowledge of the memory content of the

10:43:33 23 card,

10:43:33 24 101:17 which is not publicly disclosed or was not, in order

10:43:33 25 to

10:43:33 1 101:18 write a script that could access it.

10:43:33 2 101:19 Q. (BY MR. DILGER) How would one obtain a

10:43:33 3 101:20 fundamental knowledge of the memory content of the

10:43:33 4 101:21 DNASP002 cards other than through talking to

10:43:33 5 NagraVision?

10:43:33 6 **Description: Page 101:24-101:25**

10:43:33 7 101:24 A. Well, one way would be to reverse-engineer the

10:43:33 8 101:25 card.

10:43:33 9 **Description: Page 104:3-104:5**

10:43:33 10 104: 3 Q. (BY MR. DILGER) Is it your understanding that

10:43:33 11 104: 4 pirates -- some pirates would have had the

10:43:33 12 capabilities

10:43:33 13 104: 5 of reverse engineering the DNASP002 system?

10:43:33 14 **Description: Page 104:7-104:14**

10:43:33 15 104: 7 A. I don't know of any. It's a pretty big

10:43:33 16 104: 8 industrial-scale effort.

10:43:33 17 104: 9 Q. (BY MR. DILGER) In what way?

10:43:33 18 104:10 A. This kind of effort often will involve exotic

10:43:33 19 104:11 techniques such as electron beam -- excuse me,

10:43:33 20 electron

10:43:33 21 104:12 beam microscopy, focused ion beam, microprobing,

10:43:33 22 other

10:43:33 23 104:13 such attacks that require big, exotic, expensive

10:43:33 24 104:14 equipment.

10:43:33 25 **Description: Page 162:14-162:16**

10:43:33 1 162:14 Q. So at the time that a -- the script was
10:43:33 2 162:15 available, is it fair to say that the NagraStar card
10:43:33 3 was
10:43:33 4 162:16 completely compromised?

10:43:33 5 **Description: Page 162:19-162:23**

10:43:33 6 162:19 A. That's my recollection, and that's the
10:43:33 7 162:20 implication of the data that's there.

10:43:33 8 162:21 Q. (BY MR. DILGER) So once you have that script,
10:43:33 9 162:22 though, the NagraCard is basically open for
10:43:33 10 inspection by
10:43:33 11 162:23 any pirate with moderate skills; is that correct?

10:43:33 12 **Description: Page 162:25-162:25**

10:43:33 13 162:25 A. Yes. That's correct.

10:43:33 14 **Description: Page 177:21-177:23**

10:43:33 15 177:21 Q. Were you involved in any communications with
10:43:33 16 177:22 EchoStar regarding dissatisfaction with the security
10:43:33 17 of
10:43:33 18 177:23 the NagraStar/NagraVision conditional access card?

10:43:33 19 **Description: Page 177:25-177:25**

10:43:33 20 177:25 A. Yes.

10:43:33 21 **Description: Page 180:2-181:9**

10:43:33 22 180: 2 Q. Right. Okay. So sometime around late 2002 or
10:43:33 23 180: 3 early 2003, you recall starting those meetings?

10:43:33 24 180: 4 A. Yes.

10:43:33 25 180: 5 Q. And what did the individuals at EchoStar tell

10:43:33 1 180: 6 you about their dissatisfaction? What complaints were
10:43:33 2 180: 7 they making at these meetings?

10:43:33 3 180: 8 A. Generally the complaint was that the system was
10:43:33 4 180: 9 hacked, and we -- and it stayed hacked. The complaint
10:43:33 5 180:10 was that we couldn't kind of seal it down again and
10:43:33 6 hold
10:43:33 7 180:11 it down.

10:43:33 8 180:12 Q. What was being discussed in terms of trying to
10:43:33 9 180:13 seal it down and hold it down?

10:43:33 10 180:14 A. We would discuss the extent of the problem, the
10:43:33 11 180:15 nature of the hacks, the nature of the
10:43:33 12 countermeasures,
10:43:33 13 180:16 propose different strategies for countermeasures,
10:43:33 14 things
10:43:33 15 180:17 like that.

10:43:33 16 180:18 Q. Aside from ECMs, were there any other
10:43:33 17 180:19 countermeasures that were being discussed?

10:43:33 18 180:20 A. Yes.

10:43:33 19 180:21 Q. What were those countermeasures?

10:43:33 20 180:22 A. We would discuss making changes to the key
10:43:33 21 180:23 stream. We would discuss software changes to the
10:43:33 22 180:24 receivers, the set-top boxes. We would discuss
10:43:33 23 180:25 potentially doing a card swap. We'd even discuss
10:43:33 24 doing a
10:43:33 25 181: 181

10:43:33 1 181: 1 receiver swap.

10:43:33 2 181: 2 Q. Excluding the card swap and the ECMs, which of

10:43:33 3 181: 3 those countermeasures did you actually implement?

10:43:33 4 181: 4 A. Well, we -- we did make changes to the data

10:43:33 5 181: 5 stream. We did make changes to the set-top box code.

10:43:33 6 I

10:43:33 7 181: 6 think that's all I listed, right? Oh, we did not do a

10:43:33 8 181: 7 receiver swap while I was there.

10:43:33 9 181: 8 Q. And when did you first recall discussing a card

10:43:33 10 181: 9 swap with EchoStar?

10:43:33 11 **Description: Page 181:11-181:15**

10:43:33 12 181:11 A. I believe it was right away in one of my first

10:43:33 13 181:12 meetings in that security group, if not the first

10:43:33 14 181:13 meeting.

10:43:33 15 181:14 Q. (BY MR. DILGER) Were -- were ECMs effective in

10:43:33 16 181:15 preventing piracy of EchoStar's signal?

10:43:33 17 **Description: Page 181:17-181:19**

10:43:33 18 181:17 A. They had varying degrees of effectiveness.

10:43:33 19 181:18 Q. (BY MR. DILGER) Is it accurate to say that

10:43:33 20 181:19 they ranged from ineffective to effective?

10:43:33 21 **Description: Page 181:21-181:23**

10:43:33 22 181:21 A. I would characterize them as all the way from

10:43:33 23 181:22 ineffective to completely effective for some amount

10:43:33 24 of

10:43:33 25 181:23 time ranging from hours to months.

10:43:33 1 **Description: Page 188:10-188:11**

10:43:33 2 188:10 Q. Do you recall when a decision was made to swap
10:43:33 3 188:11 out the DNASP002 system with the Aladdin system?

10:43:33 4 **Description: Page 188:13-188:24**

10:43:33 5 188:13 A. No. When I came to work for NagraStar, they
10:43:33 6 188:14 were well on the road to developing Aladdin with the
10:43:33 7 188:15 intent of deploying it when it was ready.

10:43:33 8 188:16 Q. (BY MR. DILGER) At the time you came to work
10:43:33 9 188:17 for NagraStar, Aladdin cards were already in the
10:43:33 10 field,

10:43:33 11 188:18 correct?

10:43:33 12 188:19 A. No.

10:43:33 13 188:20 Q. There were no Aladdin cards in the field in
10:43:33 14 188:21 2002?

10:43:33 15 188:22 A. Not that I'm aware of. We had them in our lab,
10:43:33 16 188:23 testing them and developing them, but there were none
10:43:33 17 in
10:43:33 18 188:24 field trials, as far as I know.

10:43:33 19 **Total Length - 00:11:06**

10:43:36 20
10:54:25 21 THE COURT: Does that conclude the
10:54:28 22 cross-designation?

10:54:30 23 MR. HAGAN: Yes, sir.

10:54:30 24 THE COURT: Call your next witness.

10:54:32 25 MR. WELCH: We have no objection to 683.

10:54:34 1 THE COURT: Thank you very much. 683 is also
10:54:36 2 received.

10:54:38 3 *(Exhibit No. 683 received in evidence.)*

10:54:39 4 MR. SNYDER: And we moved 685 and 689.

10:54:43 5 MR. WELCH: No objection.

10:54:44 6 THE COURT: Those are received.

10:54:45 7 MR. SNYDER: Thank you, Your Honor.

10:54:46 8 *(Exhibit No. 685 received in evidence.)*

10:54:47 9 *(Exhibit No. 689 received in evidence.)*

10:54:51 10 MR. SNYDER: Defendants call James Emerson.

10:54:54 11 THE COURT: Sir, if you would be kind enough to
10:54:56 12 raise your right hand, please.

10:55:01 13 **JAMES J. EMERSON, DEFENSE WITNESS, SWORN**

10:55:04 14 THE WITNESS: I do.

10:55:05 15 THE COURT: Thank you, sir.

10:55:05 16 If you would please be seated in the witness box.

10:55:14 17 Sir, would you state your full name for the jury.

10:55:17 18 THE WITNESS: James J. Emerson.

10:55:20 19 THE COURT: Would you spell your last name,
10:55:22 20 please.

10:55:22 21 THE WITNESS: E-M-E-R-S-O-N.

10:55:25 22 THE COURT: This is direct examination on behalf
10:55:27 23 of NDS by Mr. Eberhart.

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DIRECT EXAMINATION

BY MR. EBERHART:

Q. Good morning.

You've been hired by NDS to provide expert testimony in this case, correct?

A. I've not dealt directly with NDS, but exclusively with outside counsel for NDS.

Q. And have you provided expert witness testimony in other cases?

A. At least one other.

Q. And without telling us any opinions you may have formed, what were you asked to do in connection with this case?

A. I was asked to review information and evidence that was in the possession of ICG and determine whether any of it was relevant potentially to a post described in the Fourth Amended Complaint as the NiPpEr2000 post.

Q. And did you form any opinions as a result of your research?

A. Oh, yes, sir.

Q. Let's cover your background for a minute before we get to your opinions.

What is your educational background, sir?

A. I have a bachelor of arts degree in law and justice, an advanced degree, a master of military art and science, and

10:56:55 1 about 20 credits in graduate level forensic work.

10:57:00 2 Q. Do you have any specialized certifications?

10:57:04 3 A. Yes, sir, several of 'em.

10:57:05 4 Q. What are those?

10:57:06 5 A. I am a certified computer forensic specialist, and I
10:57:13 6 also am a computer hacking forensic investigator by
10:57:16 7 certification, and I possess the National Security Agency's
10:57:20 8 certification for their Information Security Assessment
10:57:22 9 Methodology.

10:57:24 10 Q. Okay. Are there any requirements that you need to meet
10:57:28 11 in order to become a computer -- certified computer forensic
10:57:33 12 specialist?

10:57:34 13 A. Both of the certifications required extensive written
10:57:37 14 testing. The first certification as a certified computer
10:57:41 15 forensic specialist required a practical demonstration of
10:57:47 16 skills as well.

10:57:48 17 Q. When did you receive those certifications?

10:57:50 18 A. The first I received in 2003 -- or very early 2003 --
10:57:55 19 and the second I received in the beginning of this year.

10:57:59 20 Q. And what is the National Security Agency's Information
10:58:04 21 Assessment Methodology?

10:58:07 22 A. The National Security Agency has a set of standards by
10:58:11 23 which they garner information security across their
10:58:19 24 responsible areas of the government. Not just within their
10:58:22 25 own agency, but with the Department of Defense, for example.

10:58:26 1 And the standards that are developed within that methodology
10:58:30 2 are designed for the assessment of risk, the evaluation and
10:58:34 3 measurement of risk, and a basis for defending against that
10:58:39 4 risk.

10:58:40 5 Q. And what requirements did you have to meet to become
10:58:43 6 certified in the NSA's information assessment methodology?

10:58:49 7 A. That was also a period of instruction with a written
10:58:52 8 test to demonstrate proficiency.

10:58:55 9 Q. Now, you're currently employed by Internet Crimes
10:58:57 10 Group, or ICG, correct?

10:59:00 11 A. Yes, sir.

10:59:01 12 Q. What did you do before you were employed by ICG?

10:59:04 13 A. I worked for a company that was called
10:59:06 14 IXP, Incorporated for a little over a year. And that
10:59:14 15 company was in the business of installing 911 centers, all
10:59:19 16 forms of technology, emergency operation centers, command
10:59:23 17 and control-type facilities.

10:59:30 18 Q. And what did you do prior to working for IXP?

10:59:34 19 A. I was in the United States Marine Corps for 25 years.

10:59:41 20 Q. Did you receive any education relating to computer
10:59:44 21 hacking or computer forensics while you were employed by the
10:59:48 22 Marine Corps?

10:59:49 23 A. Not specifically forensics. Information security,
10:59:51 24 though.

10:59:52 25 Q. What training did you receive on information security

10:59:54 1 while you were in the Marines?

10:59:56 2 A. I attended the Navy's Information Systems Security
10:59:59 3 Management course.

11:00:01 4 Q. Okay. And what was the Navy Information Systems
11:00:07 5 Security Management course?

11:00:10 6 A. It was a course designed much like the NSA program to
11:00:15 7 familiarize you intimately with standards for both defensive
11:00:21 8 information in all domains that are to -- there are several
11:00:25 9 basic domains, such as computer security, computer
11:00:31 10 communication security, personnel or administrative
11:00:34 11 security, physical security -- just the ability to
11:00:37 12 physically lock the infrastructure and protect it
11:00:43 13 appropriately as well as the ability to manage change
11:00:46 14 across -- involving technical platforms.

11:00:48 15 So this course was designed to give you an
11:00:52 16 understanding of all those domains, to be able to deal with
11:00:55 17 risk, and to protect information within the Department of
11:00:59 18 Defense and specifically the Department of the Navy.

11:01:01 19 Q. And have you ever received training from the FBI
11:01:04 20 National Academy?

11:01:07 21 A. Yes, sir.

11:01:07 22 Q. What training did you receive from them?

11:01:09 23 A. I was a student at the FBI National Academy in 1987 and
11:01:14 24 went through their 17-week program.

11:01:17 25 Q. Okay. What was the focus of that 17-week program, just

11:01:19 1 briefly, sir?

11:01:24 2 A. The FBI National Academy is a program where the Federal
11:01:27 3 Bureau of Investigation reaches out to law enforcement at
11:01:32 4 state, local, and tribal as well as military agencies that
11:01:37 5 are in the business of law enforcement and provides them
11:01:41 6 with professional education, foundational education,
11:01:44 7 forensics, communications. I had a course on organizing and
11:01:52 8 operating a task force related to narcotics interdiction
11:01:56 9 while I was there. I had a stress management course while I
11:02:00 10 was there. So it was a well-rounded professional education
11:02:04 11 program.

11:02:05 12 Q. And did you receive any other technical experience
11:02:09 13 while you were a member of the Marine Corps?

11:02:12 14 A. Well, I've had a great deal of responsibility with
11:02:17 15 regard to technology over the years as I increased in rank
11:02:23 16 and progressed across my career. That started with
11:02:27 17 responsibility for network administration in some of the
11:02:30 18 earlier days of Banyan VINES-style networks, and I continued
11:02:37 19 to receive those kinds of additional duties across my career
11:02:40 20 for being in the right place at the right time in some
11:02:45 21 cases.

11:02:45 22 In other cases, because I had some technical focus, I
11:02:48 23 found myself immersed into communication security
11:02:54 24 investigations, classified material, security programs,
11:02:57 25 personnel security. I ran the largest personnel security

11:03:02 1 reliability program the Marine Corps has. And so there's
11:03:06 2 some examples.

11:03:08 3 Q. Mr. Emerson, if you could slow down a little bit, I
11:03:12 4 think the court reporter would appreciate a slightly slower
11:03:15 5 pace.

11:03:17 6 A. Certainly.

11:03:17 7 Q. Were you honorably discharged from the Marines?

11:03:22 8 A. I'm technically a retired Marine.

11:03:24 9 Q. What was your rank when you retired from the Marines?

11:03:28 10 A. Lieutenant Colonel.

11:03:29 11 Q. How long have you been employed by ICG?

11:03:32 12 A. Five and a half years.

11:03:34 13 Q. And what is your role at ICG?

11:03:37 14 A. Currently I am the vice president who's responsible for
11:03:41 15 the antipiracy practice.

11:03:44 16 Q. And what types of duties and activities do you
11:03:48 17 undertake as part of your role as vice president in the
11:03:52 18 antipiracy practice?

11:03:54 19 A. We tend to investigate the human aspect of piracy, the
11:04:01 20 technology that's involved in piracy, and acquire and
11:04:04 21 preserve evidence related to piracy where we have a
11:04:08 22 corporate client that's a victim.

11:04:11 23 MR. EBERHART: Your Honor, at this time defendants
11:04:13 24 offer James Emerson as an expert in Internet investigations
11:04:17 25 and computer forensics.

11:04:22 1 MS. WILLETTS: No objection, Your Honor.

11:04:23 2 THE COURT: Okay. You may proceed.

11:04:24 3 BY MR. EBERHART:

11:04:30 4 Q. Mr. Emerson, can you explain in a little more detail

11:04:34 5 what kind of research you were asked to perform in

11:04:36 6 connection with this case?

11:04:39 7 A. ICG, or the Internet Crimes Group, possesses a great

11:04:44 8 deal of forensic evidence related to satellite piracy as a

11:04:48 9 result of the work that we've done for DirecTV over the last

11:04:52 10 four, five years. And specifically, that body of

11:04:58 11 information and evidence -- initially I was asked to look at

11:05:02 12 it and see whether there was evidence that was related to in

11:05:07 13 any way claims in the Fourth Amended Complaint. So that's

11:05:14 14 essentially my original guidance.

11:05:16 15 Q. Okay. And the Fourth Amended Complaint is the Fourth

11:05:20 16 Amended Complaint filed by the plaintiffs --

11:05:23 17 THE COURT: Well, just a moment. This isn't going

11:05:24 18 to be expert testimony in relation to the complaint. He's

11:05:27 19 not going to be putting in front of the jury his opinion

11:05:31 20 about the allegations. He can speak about his expertise,

11:05:34 21 tracing, et cetera, and that's what he's limited to.

11:05:37 22 MR. EBERHART: He is not going to be.

11:05:38 23 THE COURT: I hope we're not going there.

11:05:40 24 MR. EBERHART: No, we're not going there,

11:05:41 25 Your Honor. We are --

11:05:43 1 THE COURT: All right. Let's move along.

11:05:44 2 BY MR. EBERHART:

11:05:46 3 Q. Mr. Emerson, you were asked specifically to investigate

11:05:49 4 certain aliases that were listed in the Fourth Amended

11:05:52 5 Complaint, correct?

11:05:54 6 A. That's correct.

11:05:54 7 Q. Okay. And ICG was compensated for your work in this

11:05:59 8 matter, correct?

11:05:59 9 A. That's correct, yes.

11:06:03 10 Q. Now, you mentioned certain forensic evidence that is in

11:06:06 11 the possession of ICG. Could you explain to the jury what

11:06:10 12 you mean by that?

11:06:12 13 A. ICG's been involved as an agent of DirecTV in actions

11:06:17 14 they've taken to mitigate certain piracy.

11:06:21 15 THE COURT: I'm sorry. He said, what evidence do

11:06:22 16 you have in your possession?

11:06:24 17 THE WITNESS: I'm sorry, Your Honor.

11:06:25 18 Forensic evidence.

11:06:28 19 THE COURT: What?

11:06:28 20 THE WITNESS: Mirrored images of hard drives that

11:06:31 21 were associated with pirate websites.

11:06:33 22 THE COURT: Thank you.

11:06:33 23 BY MR. EBERHART:

11:06:34 24 Q. So these were hard drives that were seized or obtained

11:06:36 25 from people who are operating pirate websites?

11:06:42 1 A. That's correct, yes.

11:06:45 2 Q. And are you familiar with something called Pirate Base?

11:06:48 3 A. I am, yes.

11:06:50 4 Q. What is Pirate Base?

11:06:52 5 A. It's essentially a large index system that allows ICG
11:06:59 6 to search globally across what is a lot of evidence more
11:07:04 7 efficiently.

11:07:08 8 Q. Did you conduct any searching of Pirate Base or other
11:07:12 9 material in ICG's possession related to the NiPpEr2000
11:07:17 10 posting?

11:07:20 11 A. Yes, sir, I did.

11:07:21 12 Q. Okay. What work did you do?

11:07:24 13 A. The first thing that I did was to take key words that
11:07:28 14 were provided by outside counsel for NDS and to run searches
11:07:32 15 in Pirate Base.

11:07:35 16 MR. EBERHART: Okay. Michael, if you could show
11:07:37 17 the witness Exhibit 191. It's already admitted.

11:07:45 18 *(Document displayed.)*

19 BY MR. EBERHART:

11:07:56 20 Q. Sir, is Exhibit 191 a copy of the NiPpEr2000 posting
11:08:01 21 that you were asked to investigate?

11:08:02 22 A. It appears to be.

11:08:03 23 THE COURT: Now, this exhibit also has another
11:08:05 24 marking, doesn't it, Counsel? What's the dual marking?

11:08:08 25 MR. SNYDER: You may be referring to 511-A,

11:08:11 1 Your Honor, which is the posting on dr7. That's, I believe,
11:08:14 2 a different posting than this one.

11:08:17 3 MS. WILLETTS: This posting is also 12-A,
11:08:20 4 Your Honor.

11:08:21 5 MR. SNYDER: Oh.

11:08:21 6 THE COURT: It's also 12-A.

11:08:23 7 (To the jury:) A couple of these items have been
11:08:25 8 dual marked. They're not intended to overemphasize the
11:08:29 9 argument. This came in originally in EchoStar's
11:08:32 10 presentation as 12-A. It's coming in during the defense
11:08:37 11 presentation as 191. I want to make certain that you don't
11:08:41 12 overemphasize the document because it appears twice
11:08:45 13 potentially in the jury room, and counsel frankly haven't
11:08:47 14 worked that out yet with the Court. So I just want to
11:08:51 15 forewarn you that's a prior document.

11:08:53 16 Counsel.

17 BY MR. EBERHART:

11:08:56 18 Q. What did you do in order to search for information
11:08:59 19 related to the post shown in Exhibit 191?

11:09:03 20 A. Took the user name as it's been identified in my work
11:09:08 21 of NiPpEr2000 and searched that user name across the
11:09:14 22 database to determine whether there were any instances of
11:09:18 23 that particular text string anywhere in the evidence that we
11:09:21 24 held.

11:09:22 25 Q. Did you find that user name?

11:09:24 1 A. Yes, sir.

11:09:27 2 MR. EBERHART: Michael, could you show the witness

11:09:29 3 Exhibit 726-A.

11:09:31 4 BY MR. EBERHART:

11:09:47 5 Q. Sir, what is Exhibit 726-A?

11:09:50 6 A. This Exhibit 726-A is a forensic production that I

11:09:53 7 created.

11:09:55 8 Q. And this is a forensic production that you prepared in

11:09:59 9 the course of your work in this case?

11:10:01 10 A. Yes, sir.

11:10:03 11 MR. EBERHART: Your Honor, defendants offer

11:10:04 12 Exhibit 726-A.

11:10:08 13 MS. WILLETTS: We object to lack of foundation.

11:10:09 14 We don't know yet how he's prepared this exhibit.

11:10:13 15 THE COURT: Sustained.

11:10:13 16 BY MR. EBERHART:

11:10:15 17 Q. Mr. Emerson, could you describe how you -- the steps

11:10:18 18 you took in order to generate Exhibit 726-A?

11:10:23 19 A. This exhibit was extracted forensically from the active

11:10:27 20 database files for -- which we had in evidence -- which were

11:10:31 21 related to DSS chat, which was a segment of PiratesDen.

11:10:38 22 Q. Okay. Let's step back for a minute.

11:10:40 23 What was DSS chat?

11:10:43 24 A. DSS chat was the public forum for the website that was

11:10:47 25 better known as PiratesDen.

11:10:50 1 Q. And how did ICG obtain information that was part of DSS
11:10:57 2 chat?

11:11:00 3 A. On June 26th of 2003, we were agents for a civil action
11:11:08 4 in Canada against a defendant Darryl Gray. And at that
11:11:12 5 time, we made forensic duplications of all of the software
11:11:15 6 that was related to Mr. Gray's computers in both the website
11:11:22 7 sense and his personal computers.

11:11:24 8 Q. And did Mr. Gray's computers include information
11:11:28 9 related to DSS chat and PiratesDen?

11:11:33 10 A. Yes, that's correct.

11:11:35 11 Q. And did the information in Exhibit 726-A come from a
11:11:38 12 search of the information that was obtained from Mr. Gray?

11:11:43 13 A. Yes, sir.

11:11:43 14 MR. EBERHART: Your Honor, defendants offer
11:11:44 15 Exhibit 726-A.

11:11:47 16 THE COURT: Counsel?

11:11:47 17 MS. WILLETTS: No, objection.

11:11:48 18 THE COURT: Received.

11:11:49 19 *(Exhibit No. 726-A received in evidence.)*

11:11:50 20 *(Document displayed.)*

12:59:57 21 BY MR. EBERHART:

11:11:57 22 Q. Would you explain, Mr. Emerson, for a moment what
11:12:00 23 Exhibit 726-A shows?

11:12:04 24 A. 726-A is essentially the record for the post from the
11:12:10 25 database. It's in raw form. It's not presented in the same

11:12:13 1 way that it would have been viewed from the website, but
11:12:17 2 it's the data that was in that post table, and specifically
11:12:21 3 the record for the post which we saw in Exhibit 191.

11:12:28 4 Q. Did you take any additional steps to search for data
11:12:33 5 related to the post that's shown in Exhibit 191 and
11:12:38 6 Exhibit 726-A?

11:12:40 7 A. Yes, sir, we did.

11:12:41 8 Q. What were those steps?

11:12:44 9 A. This was extracted from the database itself. The steps
11:12:48 10 that we subsequently took related to the entire storage
11:12:54 11 media that was related to where these active database files
11:12:58 12 existed. So we ran forensic tools across the entire drive
11:13:02 13 to find out if there were any presence of the text string
11:13:06 14 "Nipper" on that drive. That was of the context of the
11:13:10 15 search.

11:13:10 16 Q. Okay. And what did you find?

11:13:12 17 A. We identified a series of files which were not in the
11:13:17 18 active database. They were in a separate folder marked
11:13:21 19 "hold." And one of those files was entitled "post" --
11:13:26 20 P-O-S-T -- ".isd." It was a database file, a data file for
11:13:33 21 the database, and we examined that file and found relevant
11:13:36 22 information to the post as well.

11:13:38 23 Q. Okay. And you've talked about a database file. What
11:13:42 24 application was that database intended for use with?

11:13:46 25 A. The database software was MYSQL. It's an open source

11:13:53 1 free database software that's very capable and as a result
11:13:57 2 very popular in --

11:13:59 3 Q. Was that database, to your knowledge, intended to
11:14:02 4 support any particular application?

11:14:06 5 A. Well, the database, as we understood PiratesDen and
11:14:11 6 specifically DSS chat, contained the data behind the forum.
11:14:17 7 And again, the database interacts with both the web server
11:14:22 8 and a piece of software that's known as vBulletin, made by a
11:14:27 9 company called Jelsoft. And the vBulletin software in
11:14:31 10 concert with the database creates the forum in an HTML or a
11:14:36 11 browser-like view as you see in 191, Exhibit 191,
11:14:40 12 originally.

11:14:41 13 Q. And so was the database that you found -- was that the
11:14:45 14 database that supported the forums of the PiratesDen
11:14:48 15 website?

11:14:49 16 A. Yes, sir.

11:14:50 17 MR. EBERHART: Michael, could you show the witness
11:14:53 18 Exhibit 726-B.

01:59:57 19 BY MR. EBERHART:

11:15:07 20 Q. Mr. Emerson, what is Exhibit 726-B?

11:15:13 21 A. This is a forensic production created by our director
11:15:16 22 of forensics, currently Lacy Walker, at my request. He ran
11:15:20 23 the second search that we just discussed across the entire
11:15:25 24 hard drive, and this is essentially an artifact from the
11:15:30 25 file I just described.

11:15:31 1 Q. And at the top of the page it says, "EnCase report."

11:15:36 2 What is EnCase?

11:15:37 3 A. EnCase is a forensic tool, a fairly popular forensic
11:15:42 4 tool, manufactured by Guidance Software.

11:15:45 5 MR. EBERHART: Your Honor, at this time,
11:15:46 6 defendants offer Exhibit 726-B.

11:15:49 7 THE COURT: Any objection?

11:15:50 8 MS. WILLETTS: No objection, Your Honor.

11:15:51 9 THE COURT: Received.

11:15:52 10 *(Exhibit No. 726-B received in evidence.)*

11:15:52 11 *(Document displayed.)*

11:15:52 12 BY MR. EBERHART:

11:15:56 13 Q. If you could focus at the top of the page there,
11:15:59 14 there's some information there that says, "File name post
11:16:02 15 ISD." What does that mean, sir?

11:16:05 16 A. That is essentially the file that I just described, the
11:16:08 17 metadata for that file in the sense that it is the name of
11:16:12 18 the file as we found it on that drive.

11:16:15 19 Q. Okay. And so am I correct to understand that those
11:16:18 20 first seven lines describe attributes of the file that
11:16:23 21 Mr. Walker searched with EnCase to locate these results?

11:16:35 22 A. Yes, sir.

11:16:36 23 Q. Looking down into the body of this EnCase report, the
11:16:38 24 first entry seems to be a posting by someone using the name
11:16:43 25 "2therealking." Am I correct about that?

11:16:47 1 A. Yes, sir.

11:16:48 2 Q. Do you know who 2therealking was?

11:16:51 3 A. I don't recall his name.

11:16:53 4 Q. Okay.

11:16:53 5 A. I've seen the user name before.

11:16:55 6 Q. Okay. Let's go down first to the bottom of the page.

11:17:00 7 What's shown there, beginning with "There will be no

11:17:02 8 boxes anymore"?

11:17:07 9 A. We're looking at essentially the text that's viewable

11:17:11 10 by the EnCase native viewer as it looks at the overall

11:17:19 11 content of that file. We're only seeing a text view. The

11:17:23 12 viewer in this forensic tool is capable of looking at the

11:17:27 13 text.

11:17:29 14 Q. Turning to the last page of Exhibit 726-B, what

11:17:34 15 information is shown on that page?

11:17:45 16 A. There's a -- looks to be a statement and the name

11:17:50 17 NiPpErClAuZ00 and what appears to be an Internet protocol

11:17:57 18 address.

11:17:58 19 Q. Okay. And what information on that page is the

11:18:01 20 Internet protocol address?

11:18:04 21 A. It's 209.91.172.170.

11:18:11 22 Q. And what is an Internet protocol address?

11:18:15 23 A. To get data from one point on the Internet to another

11:18:19 24 point on the Internet requires a way to route the pieces of

11:18:26 25 that data as it flows. The Internet protocol is a base

11:18:31 1 protocol that's used for addressing in that sense, routing
11:18:36 2 in that sense. This is an example of an Internet protocol
11:18:41 3 address.

11:18:47 4 Q. Is the post that is shown in 726-B that begins with
11:18:51 5 "There will be no boxes anymore" and ends with that IP
11:18:55 6 address, is that the same post as shown in Exhibit 726-A and
11:19:00 7 Exhibit 191?

11:19:05 8 A. Substantively the text appears to be the same; the
11:19:11 9 exception being that there's an IP address in this file
11:19:14 10 included. Whereas, in the active database export depicted
11:19:20 11 in 726-A, there was no IP address. It simply was 0000.

11:19:27 12 Q. So only in Exhibit 726-B were you able to locate an IP
11:19:32 13 address for this posting?

11:19:34 14 A. Yes, sir, that's correct.

11:19:45 15 Q. Mr. Emerson, to your knowledge, has anyone else
11:19:50 16 determined that this same IP address that you found for the
11:19:53 17 NiPpEr2000 posting was associated with that posting?

11:19:58 18 A. Yes, sir, to my knowledge.

11:20:00 19 Q. Who found that same information?

11:20:03 20 A. My understanding is that the testimony of
11:20:07 21 Ms. Renee Coltharp included a discussion of this IP address.

11:20:14 22 Q. Did you review Ms. Coltharp's deposition testimony?

11:20:18 23 A. Yes, sir, I did.

11:20:19 24 Q. What is your understanding of who Renee Coltharp is?

11:20:22 25 A. My understanding was that she was the investigator who

11:20:24 1 worked for EchoStar.

11:20:47 2 MR. EBERHART: Michael, could you show the witness

11:20:50 3 Exhibit 192.

11:20:50 4 BY MR. EBERHART:

11:20:56 5 Q. Mr. Emerson, what is Exhibit 192?

11:21:00 6 A. It appears to be a print of a vBulletin admin control

11:21:08 7 panel view. More importantly, the IP address and the user

11:21:16 8 name NiPpEr2000 are both depicted as what appears to be a

11:21:20 9 response to a query.

11:21:21 10 Q. When you say "a vBulletin administrator panel," what do

11:21:26 11 you mean by that?

11:21:28 12 A. Someone was able with administrator access to go into

11:21:32 13 the database through a browser and query the database in

11:21:38 14 various ways.

11:21:38 15 Q. Okay. And did Ms. Coltharpe testify about this

11:21:43 16 Exhibit 192?

11:21:44 17 A. Yes, sir.

11:21:45 18 Q. And did she testify that this was the IP address that

11:21:49 19 she had received for the NiPpEr2000 posting?

11:21:53 20 A. Yes, sir, she did.

11:21:54 21 Q. And does this document bear a date?

11:21:57 22 A. It does. February 21st, 2001.

11:22:04 23 Q. And did Mrs. Coltharpe testify about where she obtained

11:22:08 24 Exhibit 192?

11:22:09 25 A. I believe her testimony stated that it came from

11:22:12 1 Charles Perlman.

11:22:16 2 MR. EBERHART: Your Honor, at this time defendants

11:22:17 3 offer Exhibit 192.

11:22:20 4 MS. WILLETTS: No, objection, Your Honor.

11:22:21 5 THE COURT: Received.

11:22:22 6 *(Exhibit No. 192 received in evidence.)*

11:22:23 7 *(Document displayed.)*

11:59:57 8 BY MR. EBERHART:

11:22:28 9 Q. Looking near the top of Exhibit 192, it indicates IP

11:22:33 10 addresses by this user, NiPpEr2000, correct?

11:22:38 11 A. Yes, sir.

11:22:39 12 Q. And it lists 209.91.172.170, correct?

11:22:46 13 A. Yes, sir.

11:22:47 14 Q. And that's the same IP address that you found when you

11:22:51 15 searched Darryl Gray's hard drives that had been seized from

11:22:55 16 him, correct?

11:22:56 17 A. That's correct.

11:23:03 18 Q. Can an IP address help us identify the location of a

11:23:08 19 particular computer user?

11:23:10 20 A. Yes, sir, I believe so.

11:23:12 21 Q. Have you prepared some slides to help explain your

11:23:15 22 testimony about this issue?

11:23:17 23 A. Yes, sir.

11:23:18 24 Q. Okay.

11:23:21 25 MR. EBERHART: Charlie, if we could put up the

11:23:24 1 first slide.

11:23:25 2 (Document displayed.)

11:23:25 3 BY MR. EBERHART:

11:23:26 4 Q. Mr. Emerson, what does this slide show?

11:23:36 5 A. I'd like to start using an analogy of a phone number,
11:23:40 6 which is much more familiar to most people, and the
11:23:46 7 relationship of a phone number with regard to geography.

11:23:50 8 Q. Okay.

11:23:52 9 A. We started with a country code. In the case here,
11:23:56 10 someone dialing from outside the United States would dial
11:23:59 11 011 as a country code to make a connection in the
11:24:02 12 United States. And then next, we'd have to enter an area
11:24:09 13 code to get us into a particular region. The next component
11:24:16 14 of a phone number is an exchange code, and then finally the
11:24:24 15 subscriber line with a very symmetrical relationship to
11:24:34 16 geography as we use that particular type of number.

11:24:37 17 Q. Now, were you able to determine the geographic location
11:24:40 18 of the NiPpEr2000 posting based on the IP address that you
11:24:45 19 located and Ms. Coltharpe located?

11:24:48 20 A. Yes, sir, I believe so.

11:24:48 21 Q. Could you explain to the jury how the IP address helps
11:24:53 22 you to locate the geography from which the NiPpEr2000 post
11:24:58 23 originated?

11:24:59 24 A. Well, Internet protocol addresses are not as
11:25:03 25 symmetrical in their relationship to a physical device or a

11:25:07 1 physical computer. There are segments of that address,
11:25:12 2 three digits in each case -- up to three digits in each
11:25:16 3 case -- which is related to either a network or a particular
11:25:23 4 host, depending on how large the grouping of numbers is that
11:25:27 5 it's within.

11:25:28 6 To manage this process, there are regional Internet
11:25:33 7 registries. The North American registry or registrar, ARIN,
11:25:38 8 is responsible for assignment of this particular address,
11:25:42 9 209.91.172.170.

11:25:48 10 Q. And can you determine further from information that's
11:25:54 11 available to you the geographic location of where the
11:25:56 12 NiPpEr2000 post originated?

11:26:00 13 A. Next, we go to the AR.

11:25:28 15 To manage this process there are regional Internet
11:25:33 16 registries. The North American registry or registrar ARIN
11:25:38 17 is responsible for assignment of this particular address.
11:25:42 18 209.91.172.170.

11:25:48 19 Q. And can you determine further from information that's
11:25:54 20 available to you the geographic location of where the
11:25:57 21 NiPpEr2000 post originated?

11:26:00 22 A. Next we go to the ARIN database, and we query the
11:26:05 23 database with regard to who has been registered to use that
11:26:10 24 particular IP address. And in this particular case, the
11:26:13 25 registrant for that address is Vianet Internet Solutions,

11:26:18 1 and they're a Canadian ISP. Their offices are in Sudbury,
11:26:22 2 Ontario.

11:26:26 3 Q. And during what period was Vianet the registrant for
11:26:30 4 the IP address 209.91.172.170?

11:26:36 5 A. There are two particular protocols for querying
11:26:40 6 registration information with regard to Internet addresses.
11:26:43 7 One is a "who is" query.

11:26:52 8 Q. Slow down, Mr. Emerson.

11:26:52 9 A. Sorry.

11:26:52 10 The newer form of query is a referred "who is" query,
11:26:57 11 and it's a newer protocol and designed to be more granular,
11:27:03 12 more detailed with regard to the type of information that
11:27:07 13 you can obtain by querying.

11:27:09 14 If we were to run a "who is" query, we would see very
11:27:13 15 simply that Vianet owns a block of addresses which I intend
11:27:17 16 to show you contains this particular address.

11:27:19 17 If we run a referred "who is" query, we see that Vianet
11:27:25 18 owned that address as early as 1997.

11:27:52 19 Q. Did you conduct the "who is" and referred "who is"
11:28:00 20 queries for the IP address 209.91.172.170?

11:28:11 21 A. Yes, sir.

11:28:12 22 Q. What did you learn?

11:28:13 23 A. I learned that Vianet was, as early as 1997, the
11:28:16 24 registered owner, according to ARIN, of that IP address.

11:28:20 25 And it was confirmed by the referred "who is" in more

11:28:24 1 detail.

11:28:25 2 Q. And were you able to take any steps to further narrow
11:28:29 3 the geographic source of posting from IP address
11:28:33 4 209.91.172.170?

11:28:45 5 A. First of all, the address is clearly inside of the
11:28:47 6 block assigned to this service provider.

11:28:50 7 The next step would be to determine generally what the
11:28:54 8 service provider's area of service is with regard to
11:28:59 9 defining their geography, where their infrastructure will
11:29:04 10 be, where the IP addresses will be.

11:29:07 11 Q. Before you move on to that, Mr. Emerson, explain what
11:29:10 12 you mean by a block of IP addresses.

11:29:12 13 A. If a computer is going to communicate with another
11:29:15 14 computer publicly over the Internet, it has to have a
11:29:20 15 routable, a public address. And in the case of a service
11:29:25 16 provider who's offering a range of services -- it might be
11:29:30 17 cable Internet access or DSL-style access to small offices
11:29:37 18 or to individuals, private homes -- they have to have
11:29:41 19 sufficient IP addresses to accommodate what they expect
11:29:44 20 their market to be in terms of use, their subscriber base.

11:29:52 21 Q. You were going to describe the steps you took to
11:29:55 22 determine the geographic scope of Vianet's services.

11:29:59 23 A. The very next thing that was done after we identified
11:30:03 24 the service provider was to actually run what's called a
11:30:08 25 trace route. That is very simply sending packets across

11:30:15 1 that route from my location to the address 209.91.172.170
11:30:23 2 and to look at the various hosts that are passing that
11:30:29 3 particular set of packets along to its destination. Those
11:30:34 4 hosts have naming conventions that reveal geography and the
11:30:41 5 path of that particular transmission.

11:30:44 6 So in this particular case, it appeared that Barrie,
11:30:47 7 Ontario was the actual location that the responses I was
11:30:54 8 getting was coming from inside Vianet's network.

11:31:00 9 The second thing that I did was I looked at databases
11:31:04 10 that specialize in geography in relationship to IP
11:31:10 11 addresses. Quova is a company that has a very large and
11:31:16 12 very reliable database that's used to assist online
11:31:20 13 merchants who are trying to avoid being defrauded by
11:31:27 14 Internet transactions where the actual location of the IP
11:31:32 15 address might set off a flag if it were to be incompatible
11:31:36 16 with the other information they received in that
11:31:38 17 transaction.

11:31:39 18 Quova's database -- and they collect information from a
11:31:42 19 lot of different sources with regard to geography across
11:31:46 20 their customer base where they see the presence of IP
11:31:49 21 addresses in a block. And they have technical ways to
11:31:52 22 collect data.

11:31:54 23 Quova also concurred that Barrie was the geographical
11:31:58 24 location for that IP address.

11:32:10 25 Q. Did you do -- withdrawn.

11:32:14 1 To your knowledge, did Ms. Coltharp of NagraStar,
11:32:18 2 EchoStar conduct any -- make any effort to identify the
11:32:25 3 geographic location of this same IP address?

11:32:29 4 A. Yes, sir, I believe so.

11:32:31 5 MR. EBERHART: Michael, could you show the witness
11:32:34 6 Exhibit 193-A.

7 BY MR. EBERHART:

11:32:49 8 Q. Mr. Emerson, what is Exhibit 193-A?

11:32:54 9 A. It's what I referred to already in testimony as a "who
11:32:58 10 is" lookup.

11:32:59 11 Q. And why don't you explain briefly what a "who is"
11:33:05 12 lookup is?

11:33:06 13 A. In this particular case, it appears here that the
11:33:11 14 provider of this tool is kloth.net, K-L-O-T-H.

11:33:20 15 Ms. Coltharp, or whoever actually ran this "who is," simply
11:33:25 16 used their tool online to put the IP address 209.91.172.170
11:33:33 17 through a query process. Ultimately this particular service
11:33:38 18 would have to query a "who is" lookup in ARIN's database.

11:33:44 19 ARIN is the authoritative database for this information.

11:33:53 20 Q. And, Mr. Emerson, does Exhibit 193-A indicate when this
11:33:58 21 search was run?

11:34:24 22 A. I'm sorry, I don't see a date indicated on the exhibit.

11:34:26 23 Q. I think you're probably looking at the first page of
11:34:26 24 the copy. If you look on the second page -- part of the
11:34:31 25 content is obscured on the first page by the exhibit

11:34:34 1 sticker.

11:34:35 2 A. The second page of the exhibit has February 22nd, 2001

11:34:38 3 annotated.

11:34:40 4 Q. And what did Ms. Coltharp find when she tried to locate

11:34:46 5 the geography from which the 209.91.172.170 IP address

11:34:54 6 originated?

11:34:57 7 A. Based on this exhibit, it appears that she was able to

11:35:01 8 determine the service provider that the IP address was

11:35:08 9 registered to and their location in Sudbury, Ontario.

11:35:13 10 Q. What was the name of that service provider?

11:35:15 11 A. Vianet Internet Solutions.

11:35:18 12 Q. Is that the same service provider that you found was

11:35:20 13 the registrant for this IP address?

11:35:23 14 A. Yes, sir, it is.

11:35:24 15 MR. EBERHART: Your Honor, defendants offer

11:35:25 16 Exhibit 193-A.

11:35:27 17 THE COURT: Any objection?

11:35:28 18 MS. WILLETTS: No, objection, Your Honor.

11:35:29 19 THE COURT: Received.

11:35:29 20 *(Exhibit No. 193-A received in evidence.)*

11:35:31 21 *(Document displayed.)*

11:35:31 22 BY MR. EBERHART:

11:35:44 23 Q. Mr. Emerson, Exhibit 193-A shows Vianet Internet

11:35:47 24 Solutions on 128 Larch Street, Suite 301, in Sudbury,

11:35:54 25 Ontario. Do you have any understanding as to operations

11:36:04 1 that Vianet might have in Sudbury?

11:36:06 2 A. Based on what they advertise publicly, this would be

11:36:10 3 their business offices.

11:36:12 4 Q. And how far is Sudbury from Barrie, Ontario?

11:36:16 5 A. I believe that I determined it was approximately

11:36:18 6 180 miles.

11:36:34 7 Q. Mr. Emerson, is it your opinion that the NiPpEr2000

11:36:38 8 posting originated from Barrie, Ontario?

11:36:44 9 A. Yes, sir, it is.

11:36:45 10 Q. And have you explained to us today the basis for that

11:36:49 11 opinion?

11:36:50 12 A. Yes, sir, I believe I have.

11:36:51 13 Q. And to your knowledge, did Peter Kuykendall of

11:36:59 14 NagraStar ever attempt to research the location of any of

11:37:04 15 the postings that are at issue in this litigation?

11:37:10 16 A. Based on evidence that I've reviewed, which is

11:37:17 17 originating from Mr. Kuykendall, he provided an e-mail with

11:37:23 18 what appeared to be a "pasting" of two Usenet postings

11:37:29 19 containing content that is similar to the NiPpEr2000 post.

11:37:34 20 MR. EBERHART: Okay. Michael, could you show the

11:37:36 21 witness Exhibit 206. It's already in evidence.

11:37:52 22 *(Document displayed.)*

11:59:57 23 BY MR. EBERHART:

11:37:53 24 Q. Mr. Emerson, you were in the courtroom when the jury

11:37:56 25 saw Mr. Kuykendall's video where he testified about

11:37:57 1 Exhibit 206, correct?

11:38:00 2 A. That's correct.

11:38:00 3 Q. And is this the e-mail from Mr. Kuykendall that you
11:38:05 4 reviewed and were mentioning a couple minutes ago?

11:38:07 5 A. Yes, sir, it is.

11:38:09 6 Q. Mr. Kuykendall's e-mail is dated January 9, 2004,
11:38:17 7 correct?

11:38:17 8 A. Yes, sir.

11:38:18 9 Q. And he references a Usenet search. What is a Usenet
11:38:24 10 search?

11:38:25 11 A. Usenet, U-S-E-N-E-T, is an environment which is more
11:38:33 12 commonly known as news groups. There's a number of ways to
11:38:38 13 access the topical portions where people post information,
11:38:44 14 much like a forum, into news group posting areas.

11:38:50 15 Q. And does Usenet -- withdrawn.

11:38:56 16 Does a search of Usenet enable you to identify an IP
11:38:59 17 address associated with a particular Usenet post?

11:39:03 18 A. A Usenet post, much like an e-mail, has a header with
11:39:10 19 information that was used to direct that particular content,
11:39:15 20 its origin, you know, its destination, basic information
11:39:20 21 that would be necessary to get it from point A to point B.
11:39:24 22 In Exhibit 206, there are headers depicted in addition to
11:39:29 23 the actual content that was posted.

11:39:32 24 Q. And does Exhibit 206 indicate an IP address for the
11:39:38 25 postings that are contained in that e-mail?

11:39:40 1 A. Yes, sir.

11:39:42 2 Q. Okay. And what is the IP address that's shown for
11:39:47 3 those postings?

11:39:49 4 A. 209.91.172.154.

11:39:59 5 Q. Have you been able to -- withdrawn.
11:40:01 6 Did Mr. Kuykendall make efforts to locate the geography
11:40:07 7 from which that IP address originated?

11:40:15 8 A. He uses the terminology that the address that we're
11:40:21 9 discussing resolves to Ontario, Canada.

11:40:25 10 Q. Okay. And these -- the content in Exhibit 206, this is
11:40:30 11 not the NiPpEr2000 posting, is it?

11:40:33 12 A. The content's similar to the NiPpEr2000 posting;
11:40:36 13 however, there's additional content there with regard to
11:40:39 14 text, and it appears to be a pasting of content from some
11:40:44 15 other location.

11:40:45 16 Q. And what is the additional content that's contained in
11:40:48 17 Exhibit 206?

11:40:55 18 A. At the top of the post -- would you like me to read it?

11:40:58 19 Q. Sure.

11:40:58 20 A. "Charlie, please fry these cards. We don't know how to
11:41:03 21 unloop yet!" That was not in the NiPpEr2000 post. From
11:41:12 22 there down it seems to be consistent with the NiPpEr2000
11:41:16 23 post until we get to the very bottom of the post where there
11:41:22 24 is some information, almost a salutation or a footer on the
11:41:27 25 post that is sent via deja.dot.com and then a uniform

11:41:36 1 resource locator, or URL, for that particular website.

11:41:50 2 Q. Now, Mr. Kuykendall indicated in his e-mail that the IP
11:41:54 3 address currently resolves to Ontario, Canada. Did he also
11:41:58 4 indicate a particular service provider in Ontario?

11:42:09 5 A. There is a host name that follows what I read earlier
11:42:14 6 about resolving to Ontario that indicates Vianet as the
11:42:21 7 service provider in the domain.

11:42:23 8 Q. And were you able to determine whether the IP address
11:42:27 9 shown in Exhibit 206 is also part of the IP address block
11:42:34 10 registered to Vianet?

11:42:42 11 A. Yes, it was clearly in the block.

11:42:44 12 MR. EBERHART: Charlie, could you put up the
11:42:46 13 next-to-last slide from the demonstration.

11:42:47 14 BY MR. EBERHART:

11:42:48 15 Q. And looking at the demonstrative that you showed the
11:42:51 16 jury a few minutes ago, could you tell the jury what the
11:42:54 17 range was for Vianet's assigned block of IP addresses?

11:42:59 18 A. Well, there are different classes of blocks of IP's.
11:43:06 19 Vianet has what is termed a "class B," a portion of a
11:43:12 20 class B block. And the way that a class, a block of IP's is
11:43:19 21 determined is based on where the network address stops and
11:43:23 22 where the addressing begins for the particular computer or
11:43:26 23 device that uses the address.

11:43:31 24 In the case of the larger block for Vianet, the network
11:43:35 25 address stops at 209.91, which points to us that -- points

11:43:42 1 out to us that it's part of a class B block.

11:43:46 2 In this particular case the address from the header in
11:43:51 3 Exhibit 206 is in the same class C block, much closer, only
11:43:59 4 255 opportunities there for deviation. And 170 and 154 is
11:44:08 5 the mere difference between the two addresses.

11:44:14 6 Q. And so am I correct to understand that Vianet had
11:44:20 7 registered all of the IP addresses between 209.91.128.0 and
11:44:31 8 209.91.191.255?

11:44:36 9 A. Yes, sir, that's correct.

11:44:37 10 Q. And that's what's shown in your demonstrative?

11:44:40 11 A. It is.

11:44:40 12 Q. And the IP address shown on Exhibit 206 falls inside of
11:44:44 13 that range registered to Vianet?

11:44:47 14 A. It does.

11:44:47 15 Q. And looking at page 5 of Exhibit 2006.

11:44:54 16 THE COURT: Just to be sure, you mean Exhibit 206?

11:44:58 17 MR. EBERHART: I do, Your Honor.

11:44:59 18 THE COURT: All right. And that means that the
11:45:01 19 154 falls within.

11:45:03 20 MR. EBERHART: Yes, Your Honor.

11:45:03 21 THE COURT: Thank you.

11:45:03 22 BY MR. EBERHART:

11:45:05 23 Q. Okay. Looking at page 5 of Exhibit 206 near the
11:45:10 24 bottom, what is the text that begins near the bottom of that
11:45:14 25 page?

11:45:15 1 A. Well, that appears to be a second Usenet header.

11:45:19 2 Q. And what does that indicate to you?

11:45:22 3 A. There were, based on the news group annotation in that

11:45:28 4 header, two unique postings here.

11:45:33 5 Q. And those are two unique postings that contain the

11:45:37 6 substance of the NiPpEr2000 post?

11:45:40 7 A. With the additions described already.

11:45:42 8 Q. And what is the time and date on which these two

11:45:52 9 postings to Usenet were made?

11:45:55 10 A. They were both made on 24 December, the year 2000. One

11:46:01 11 was made at 15:32 GMT, and one was made at 15:06:39 GMT,

11:46:16 12 fairly close.

11:46:17 13 Q. And this second post that begins on page 5 of

11:46:20 14 Exhibit 206, does that have the same originating IP address

11:46:26 15 as the first post that's shown on page 1 of Exhibit 206?

11:46:31 16 A. They're identical in the headers.

11:46:33 17 Q. So that also is an IP address that resolves to Vianet?

11:46:38 18 A. Yes, sir.

11:46:43 19 Q. Now, you testified earlier that Vianet had their

11:46:47 20 offices in Sudbury, Ontario, correct?

11:46:51 21 A. Yes, sir.

11:46:51 22 Q. And is that corporate office location consistent with a

11:46:57 23 user who resided in Barrie, Ontario?

11:47:03 24 A. It's consistent with what they advertise as their

11:47:06 25 service area.

11:47:07 1 Q. Okay. Now, other than the IP address that you located
11:47:25 2 for the NiPpEr2000 posting, did you find any other
11:47:30 3 information about NiPpEr2000 in the data that is held by
11:47:33 4 ICG?

11:47:34 5 A. Yes, sir, I did.

11:47:36 6 Q. What did you find?

11:47:38 7 A. I found a user record. The way that the website was
11:47:45 8 designed, the database had a separate table to catalog
11:47:54 9 information for registered users. And in that table there
11:47:56 10 was a record for NiPpEr2000, the user name NiPpEr2000.

11:48:01 11 Q. What sort of information was contained in that user
11:48:04 12 record?

11:48:06 13 A. I can't recall off the top of my head. Everything
11:48:09 14 but -- as examples, I'll give you -- there was a user ID for
11:48:15 15 that user record. There was an e-mail address for that user
11:48:19 16 record. There would have been a date that the user joined
11:48:22 17 that website, registered for that website. There would have
11:48:25 18 been a date that they last posted on the website. There
11:48:30 19 would have been a date that they were last active on the
11:48:34 20 website. And there could have been a range of other
11:48:37 21 settings with regard to the personal profile information
11:48:42 22 regarding that particular account.

11:48:44 23 Q. And what was the e-mail address shown for the
11:48:47 24 NiPpEr2000 registration?

11:48:49 25 A. As I recall, it was ChrisVon@s4.interpass.com.

11:49:07 1 Q. And what is interpass.com?

11:49:11 2 A. They appear to be a service provider that's no longer
11:49:13 3 in business.

11:49:15 4 Q. Do you have any understanding of what Interpass offered
11:49:19 5 back in the year 2000?

11:49:22 6 A. They offered e-mail service. They offered Internet
11:49:25 7 access.

11:49:28 8 Q. And where was Interpass located in the year 2000?

11:49:32 9 A. Based on WebCache on the Internet, they appear to have
11:49:36 10 had their offices in Ottawa.

11:49:39 11 Q. And that's Ottawa, Ontario?

11:49:42 12 A. Yes, sir.

11:49:42 13 Q. What did the information on the NiPpEr2000 account
11:49:45 14 indicate for a creation date for that user name?

11:49:51 15 A. I don't have that information in front of me. If I
11:49:53 16 could refer to my report or -- I don't know that off the top
11:50:01 17 of my head.

11:50:02 18 Q. Okay.

11:50:12 19 MR. EBERHART: May I approach, Your Honor?

11:50:13 20 THE COURT: You may.

11:59:57 21 BY MR. EBERHART:

11:50:25 22 Q. I've handed you what's marked as Exhibit 2055.
11:50:35 23 Looking at Exhibit 2055, are you able to determine the
11:50:39 24 date the NiPpEr2000 account was created?

11:50:42 25 A. Yes, sir.

11:50:43 1 Q. What is that date?

11:50:45 2 A. The -- it's referred to as a "join date" in the user
11:50:49 3 record. That's the specific name for the field in the user
11:50:52 4 table. And the date was December 24th, 2000. And the time
11:50:58 5 is 8:23:53.

11:51:07 6 Q. And is that -- can you determine whether that's shown
11:51:12 7 in GMT or some other time zone?

11:51:17 8 A. This is calculated in GMT. This date as it's presented
11:51:21 9 in this report was derived from a different format in their
11:51:26 10 database and calculated.

11:51:30 11 Q. Were you able to determine the date on which the
11:51:34 12 NiPpEr2000 address was -- withdrawn -- the NiPpEr2000 user
11:51:40 13 registration was last used?

11:51:48 14 A. The last post date was the year 2000, December 24th,
11:51:54 15 and the time is 8:26:29, or under 3 minutes after the
11:52:03 16 account was created.

11:52:05 17 Q. So the account was created and then it was used only
11:52:09 18 3 minutes later -- withdrawn.

11:52:13 19 So the account was created. It was used up until a
11:52:17 20 period that ended three minutes later, and according to the
11:52:20 21 records you obtained, it was never used again?

11:52:24 22 A. Yes, sir, that's correct.

11:52:24 23 Q. And does this record indicate how many posts were made
11:52:28 24 with this account?

11:52:29 25 A. Yes, sir. There was a single post made.

11:52:32 1 Q. So only one post was made using this account?

11:52:37 2 A. That's correct.

11:52:37 3 Q. Now, did you search Pirate Base for other occurrences
11:52:42 4 of the e-mail address that was associated with the
11:52:45 5 NiPpEr2000 registration?

11:52:48 6 A. Yes, sir.

11:52:49 7 Q. And what did you find?

11:52:50 8 A. I found no other instances of that address in our
11:52:55 9 database.

11:53:01 10 Q. Now, you also testified earlier about looking at
11:53:04 11 certain aliases that were listed in the Fourth Amended
11:53:07 12 Complaint.

11:53:09 13 What did you do to research those aliases?

11:53:17 14 A. The aliases were searched in a broad fashion. So if
11:53:27 15 Nipper would have been one of those aliases, it would have
11:53:31 16 been searched in an open sense with a wild card attached to
11:53:36 17 the search so that Nipper followed by anything would return
11:53:40 18 in the search. It was searched that way as an e-mail
11:53:43 19 address; it was searched that way as a user name. That's
11:53:47 20 one example.

11:53:47 21 Q. And you obtained that list of addresses by looking at
11:53:50 22 the Plaintiff's Fourth Amended Complaint, correct?

11:53:53 23 A. Yes, sir.

11:53:54 24 Q. And what did you determine by conducting those
11:53:58 25 searches?

11:54:00 1 A. I determined that there were 149 matches from our
11:54:09 2 database for the searches related to that set of words in
11:54:13 3 the complaint. And of those 149 matches, 126 of them we
11:54:23 4 recovered IP addresses for.

11:54:27 5 MR. EBERHART: Michael, could you show the witness
11:54:30 6 Exhibit 726-D.

11:59:57 7 BY MR. EBERHART:

11:54:44 8 Q. What is Exhibit 726-D, Mr. Emerson?

11:54:48 9 A. This was an exhibit that I produced that reflects the
11:54:52 10 results of those searches that I just described.

11:54:58 11 MR. EBERHART: Your Honor, defendants offer
11:55:00 12 Exhibit 726-D.

11:55:02 13 THE COURT: Any objection?

11:55:03 14 MS. WILLETTS: No, objection, Your Honor.

11:55:04 15 THE COURT: Received.

11:55:04 16 *(Exhibit No. 726-D received in evidence.)*

11:55:14 17 *(Document displayed.)*

11:55:14 18 BY MR. EBERHART:

11:55:16 19 Q. Taking a look at the top line on the first page of
11:55:21 20 Exhibit 726-D, what information is laid out in the different
11:55:32 21 columns of this exhibit?

11:55:33 22 A. The first column is an annotated website. It's, in
11:55:38 23 fact, the database that the match was found inside of. And
11:55:43 24 it relates to a particular pirate website.

11:55:47 25 Then you'll find the user name that was recovered from

11:55:51 1 the user table from that website, then the user ID, a unique
11:55:58 2 numerical ID assigned in the user table, then an IP address
11:56:04 3 where one was recovered.

11:56:05 4 And then there's a column that I populated based on the
11:56:09 5 same process that's already been described for the
11:56:11 6 NiPpEr2000 post for geographic location for that particular
11:56:17 7 IP address. Then there's a "join date" field where that
11:56:22 8 particular user account was registered to that particular
11:56:27 9 site.

11:56:28 10 There's a field called "last post," which, had there
11:56:31 11 been any posts, there would be a date in that field
11:56:35 12 according to the way the databases were administered. If
11:56:39 13 it's annotated "never," it's an indication to make it easy
11:56:42 14 to understand that there had been no posts recorded for that
11:56:46 15 particular user account.

11:56:47 16 There's a date field for the last time that user
11:56:50 17 account is attributed to visiting that site. And then
11:56:55 18 finally there's an e-mail address field for the e-mail
11:56:58 19 address which was in the user record for that particular
11:57:01 20 user name.

11:57:03 21 Q. Let's take as an example the first entry. Please
11:57:07 22 explain to the jury what it shows for the user name xbr21.

11:57:14 23 A. PirateDen, "PD," stands for PirateDen, the underscore
11:57:19 24 and then members. This was the database, which is different
11:57:22 25 from DSS Chat. This was their paid membership, private

11:57:27 1 membership portion of the PirateDen website. That database
11:57:30 2 showed a user xbr21 having that user name.

11:57:36 3 There's a user ID of 7619. There's an IP address
11:57:42 4 208.190.208.242. My geographical location for that address
11:57:51 5 is St. Louis, Missouri. There's a join date for that user
11:57:59 6 of March 16, 2001, 20:50. It indicates that that user does
11:58:05 7 not have a record of posting as that account is recorded.

11:58:10 8 The last visit for that user is recorded as
11:58:13 9 November 2nd, 2001, 2:9. And the e-mail address -- I'll
11:58:19 10 spell it -- is A-C-T-A-R-U-S, actarus@swbell.net.

11:58:32 11 Q. Now, are you aware that an individual named Marco Pizzo
11:58:37 12 from St. Louis, Missouri came in here earlier in the trial
11:58:41 13 and testified that he was xbr21?

11:58:44 14 A. I learned that yesterday.

11:58:50 15 Q. Did your review of the alleged aliases contained in the
11:58:56 16 Fourth Amended Complaint indicate to you that more than one
11:58:59 17 person was using some of these aliases?

11:59:07 18 A. There are indications, based on geographical dispersion
11:59:12 19 and based on the diversity of e-mail addresses, that there's
11:59:15 20 a good likelihood that for some of the aliases, multiple
11:59:19 21 individuals were operating with those aliases.

11:59:23 22 Q. In your experience, is a user name a reliable way to
11:59:33 23 identify a particular individual?

11:59:37 24 A. With regard to the pirate sites that we have evidence
11:59:39 25 for, the user controls exclusively what that user name is.

11:59:44 1 So if I were to register for PirateDen, I could
11:59:48 2 register for PirateDen as George Bush, and I would be George
11:59:52 3 Bush on that site, assuming that no one else had already had
11:59:56 4 a claim on that particular screen name.

11:59:59 5 Q. Let's take a look at page 2 of Exhibit 726-D. I'll
12:00:04 6 remind you that the front page is duplicated.

12:00:08 7 A. Thank you.

12:00:08 8 Q. Look for the stamp at the bottom. Looking near the
12:00:11 9 bottom of that page, do you see several registrations for
12:00:15 10 someone using an e-mail address nipper@isys.ca?

12:00:23 11 A. I do, yes.

12:00:24 12 Q. And where do those --

12:00:26 13 *(Document displayed.)*

12:00:26 14 BY MR. EBERHART:

12:00:29 15 Q. Are there IP addresses associated with those Nipper
12:00:32 16 e-mail addresses?

12:00:34 17 A. There are, looks like, two unique IP addresses.

12:00:38 18 Q. And where do those IP addresses resolve?

12:00:42 19 A. Sudbury, Ontario.

12:00:45 20 Q. One of those user names that was registered with the
12:00:49 21 nipper@isys.ca address is silverdaddy, correct?

12:00:56 22 THE COURT: Counsel, could you give us a page
12:00:58 23 number? Is it 726-D 001?

12:01:02 24 MR. EBERHART: 002, Your Honor.

12:01:04 25 THE COURT: 002. Just a moment.

12:01:07 1 MR. EBERHART: And we're about three quarters down
12:01:10 2 the page.

12:01:17 3 THE COURT: Thank you.

12:01:17 4 BY MR. EBERHART:

12:01:18 5 Q. So one of the user names that was registered using
12:01:20 6 nipper@isys.ca is silverdaddy, correct?

12:01:28 7 A. Yes, sir.

12:01:29 8 Q. And what site was that registered on?

12:01:35 9 A. The annotation there in column one is "decoder." The
12:01:40 10 site was actually "Decoder News."

12:01:43 11 Q. And do you see silverdaddy registering more than once
12:01:49 12 on this page?

12:01:52 13 A. I see silverdaddy at least three times on this page.

12:02:00 14 Q. Okay. And each time silverdaddy uses either
12:02:04 15 nipper@isys.ca or nipper@sprint.ca as the e-mail address?

12:02:09 16 A. That's correct.

12:02:10 17 Q. And the ".ca," what does that signify in an e-mail
12:02:14 18 address?

12:02:15 19 A. Canada.

12:02:16 20 Q. Are you aware that Ron Ereiser used the nickname
12:02:19 21 "silver"?

12:02:21 22 A. I'm not personally aware that that's the case.

12:02:24 23 Q. Having examined these aliases in Pirate Base data and
12:02:30 24 other data that ICG possesses, did you form any opinions
12:02:35 25 about whether these aliases were connected to Chris

12:02:39 1 Tarnovsky?

12:02:44 2 A. First of all, across the span of information that we
12:02:49 3 recovered from these searches, the most reliable piece of
12:02:53 4 information appears to be the IP address. It's the only
12:02:56 5 piece of information that the user does not have direct
12:02:59 6 control over. It's assigned as a process of a connection.

12:03:05 7 The second issue for me is, based on what limited
12:03:13 8 knowledge I had of the individual Chris Tarnovsky stated in
12:03:18 9 the claim, I don't have any information here to tie
12:03:24 10 authoritatively to Chris Tarnovsky.

12:03:37 11 MR. EBERHART: Michael, could you show the witness
12:03:42 12 Exhibit 511-A, please.

12:03:51 13 BY MR. EBERHART:

12:03:51 14 Q. Before we get to that, Mr. Emerson, in all the
12:03:53 15 materials you reviewed, did you see any connection between
12:03:55 16 Mr. Tarnovsky and the NiPpEr2000 posting?

12:03:59 17 A. No, sir.

12:04:01 18 Q. Have you seen Exhibit 511-A before, sir?

12:04:07 19 *(Document displayed.)*

12:04:10 20 THE WITNESS: To be honest, I think the first time
12:04:13 21 I saw this was yesterday.

12:04:14 22 BY MR. EBERHART:

12:04:15 23 Q. Okay. Now, did you do searches on the phrase "there
12:04:20 24 will be no boxes anymore"?

12:04:23 25 A. Yes, sir.

12:04:23 1 Q. And you searched that across the data that ICG
12:04:28 2 possesses?
12:04:29 3 A. I did, yes.
12:04:30 4 Q. Were you able to find this posting in the databases
12:04:34 5 that ICG possesses?
12:04:36 6 A. The content of this post, I believe, I found multiple
12:04:39 7 times within the database.
12:04:41 8 Q. Did you find this content as posted by xbr21?
12:04:50 9 A. Not in the context of this site, dr7.
12:04:56 10 Q. And that's because you don't have the dr7 database,
12:05:00 11 correct?
12:05:01 12 A. That's exactly the case.
12:05:02 13 Q. So were you able to determine any IP address that was
12:05:05 14 associated with the xbr21 posting on dr7?
12:05:09 15 A. No, sir. We have no evidence related to dr7.
12:05:13 16 MR. EBERHART: Pass the witness.
12:05:14 17 THE COURT: All right. Why don't we go to lunch.
12:05:15 18 We'll resume at 1:00 o'clock.
12:05:18 19 You're admonished not to discuss this matter
12:05:21 20 amongst yourselves nor to form or express any opinion
12:05:26 21 concerning this case.
12:05:27 22 Have a nice recess.
12:05:29 23 Okay. Counsel, 1:00 o'clock.
12:05:31 24 *(Lunch recess held at 12:05 p.m.)*
12:05:36 25 *(Further proceedings reported in Volume II.)*

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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: April 30, 2008

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