

EXHIBIT C

CERTIFIED COPY

In The Matter Of:

ARISTA RECORDS LLC, et al.

v.

LIME GROUP LLC, et al.

SINNREICH, Ph.D., ARAM A. - Vol. 1
February 11, 2011

CONTAINS CONFIDENTIAL PORTIONS

MERRILL CORPORATION

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1 ARAM A. SINNREICH, PH.D.

2 It's -- it's really -- it's -- it's as much a 09:21:22

3 sociological field as it is an economic field. 09:21:26

4 So it seeks to understand the 09:21:28

5 interactions between different kinds of social 09:21:30

6 institutions and the ways in which those 09:21:34

7 interactions can be quantified and 09:21:38

8 organizationally represented. 09:21:44

9 Q. So what kind of social institutions 09:21:46

10 are we talking about here? 09:21:48

11 A. Well, we could be talking about 09:21:50

12 commercial institutions, we could be talking 09:21:52

13 about regulatory institutions, we could be 09:21:54

14 talking about media organizations. 09:21:56

15 Q. Okay. And just explain a little 09:22:00

16 bit more what the economic aspect of your 09:22:00

17 studies was. What specifically have you studied 09:22:02

18 in terms of economics? 09:22:06

19 A. Well -- 09:22:08

20 MR. OLLER: In relation to that, 09:22:10

21 what he's just described, or -- or from any 09:22:12

22 source? 09:22:16

23 MS. YOUNG: From any source. 09:22:16

24 MR. OLLER: Okay. 09:22:16

25 A. I have also done what's called 09:22:18

1	ARAM A. SINNREICH, PH.D.	
2	network analysis, which is a quantitative	09:22:26
3	methodology that seeks to understand the -- the	09:22:30
4	structure of relationships between organizations	09:22:34
5	or individuals, and often those relationships	09:22:36
6	are economic relationships.	09:22:42
7	So, for instance, I conducted some	09:22:42
8	research on the subject of payola in the music	09:22:44
9	industry and charted the flows of the exchange	09:22:50
10	of dollars and airtime within the network	09:22:52
11	constituted by record labels, broadcasting	09:22:58
12	companies and independent promoters.	09:23:04
13	So you could say that is an	09:23:06
14	economic study, although the field, technically	09:23:10
15	speaking, is more sociological.	09:23:12
16	A lot of the field of	09:23:14
17	communication, which is where I got my	09:23:16
18	doctorate, draws upon economic, sociology and	09:23:18
19	other fields to integrate them into a systemic	09:23:22
20	understanding of how media and other	09:23:26
21	institutions interrelate.	09:23:28
22	Q. Okay. Well, tell me all the	09:23:32
23	courses you've taken in economics. You've taken	09:23:34
24	the doctoral level -- is it course or courses in	09:23:36
25	political economy? How many courses?	09:23:40

1	ARAM A. SINNREICH, PH.D.	
2	methodologies were a required element of my	09:25:10
3	doctoral degree.	09:25:14
4	Q. But your degree is not in	09:25:16
5	statistics?	09:25:18
6	A. That's correct.	09:25:18
7	Q. Your degree is in what?	09:25:20
8	A. Communication.	09:25:20
9	Q. So tell me what you learned about	09:25:22
10	statistics in the course of getting your degree.	09:25:24
11	A. Well, I had several required	09:25:30
12	classes on quantitative methodologies at the	09:25:36
13	outset of my doctoral coursework, and then	09:25:42
14	following that, I took several classes in which	09:25:46
15	quantitative methodologies, including	09:25:50
16	statistics, were required elements of the	09:25:54
17	coursework; and I independently, both to fulfill	09:25:58
18	the requirements of those classes and for	09:26:12
19	additional research purposes, performed	09:26:14
20	statistical analyses and presented the results	09:26:18
21	of those analyses at conferences and published	09:26:24
22	them in peer reviewed publications.	09:26:26
23	Q. So tell me which publications	09:26:30
24	you've authored where you've used statistical	09:26:34
25	methodologies.	09:26:38

1	ARAM A. SINNREICH, PH.D.	
2	A. Are you including conference	09:26:42
3	publications or just --	09:26:44
4	Q. Well, let's go through your list	09:26:44
5	and you can tell me about them. So let's look	09:26:46
6	at Exhibit 2 to your expert report, which has	09:26:50
7	been marked as Exhibit 1 for purposes of this	09:26:52
8	deposition. Just tell me on this list, in which	09:26:54
9	of these publications did you employ a	09:26:58
10	statistical methodology?	09:27:00
11	A. The -- okay. So the Sinnreich,	09:27:02
12	Latonero and Gluck 2009 is based on a survey	09:27:16
13	that I co-fielded and co-wrote. It's largely --	09:27:20
14	that is largely a qualitative publication,	09:27:26
15	although I don't remember off the top of my	09:27:28
16	head, it may have some of the quantitative data	09:27:30
17	that we arrived at through statistical	09:27:32
18	methodologies.	09:27:36
19	Q. And let's just take them each in	09:27:38
20	turn. Was this one peer reviewed?	09:27:40
21	A. Yes. Specifically we created a	09:27:42
22	computer model of how information would flow in	09:27:54
23	networks with various kinds of technologies, and	09:28:00
24	we employed statistical methodologies in order	09:28:06
25	to build that model. That was also peer	09:28:10

1	ARAM A. SINNREICH, PH.D.	
2	reviewed.	09:28:12
3	Q. Okay. I see you had a co-author on	09:28:12
4	that.	09:28:16
5	A. I had two, yes.	09:28:16
6	Q. Two co-authors.	09:28:16
7	Who actually did -- who actually	09:28:18
8	devised the methodology that was employed there,	09:28:18
9	was that you personally?	09:28:22
10	A. Yes.	09:28:24
11	Q. And who ran the model, was that you	09:28:24
12	personally?	09:28:26
13	A. Jessie Gilbert, the third author,	09:28:28
14	was the computer scientist.	09:28:30
15	Q. Okay. And then who analyzed the	09:28:32
16	conclusions of the model?	09:28:34
17	A. Myself and Professor Chib.	09:28:36
18	Q. Okay.	09:29:00
19	A. So a great many of these Jupiter	09:29:00
20	publications from 2000, 2001 and 2002 employed	09:29:04
21	statistical methodologies.	09:29:08
22	Looking at the titles right now ten	09:29:10
23	years later, I couldn't tell you which ones did,	09:29:10
24	but probably the majority of them included data	09:29:14
25	that was analyzed statistically.	09:29:18

1 ARAM A. SINNREICH, PH.D.

2 Q. And am I correct that when you were 09:29:22
3 at Jupiter, that was before you did your 09:29:22
4 graduate coursework? 09:29:24

5 A. Well, it was before I did my 09:29:26
6 doctoral coursework. 09:29:28

7 Q. Doctoral.

8 A. I had a master's degree at the 09:29:30
9 time. 09:29:32

10 Q. And before coming to Jupiter, did 09:29:32
11 you have any training in statistics -- 09:29:34
12 statistics or quantitative methodologies? 09:29:36

13 A. No, no, I didn't. 09:29:36

14 Q. So were you the person who was 09:29:38
15 doing the statistical analysis that's described 09:29:40
16 in these studies? 09:29:42

17 A. I was working in conjunction with a 09:29:42
18 statistician to design and analyze the data from 09:29:44
19 the surveys. 09:29:48

20 Q. So what was your role in the 09:29:50
21 statistical -- in designing and implementing the 09:29:54
22 statistical methodology? 09:29:56

23 A. It was fairly thorough. My role 09:29:58
24 included designing the survey instrument, 09:30:04
25 deciding what questions would be appropriate to 09:30:08

1 ARAM A. SINNREICH, PH.D.
2 ask, strategically organizing the questions in a 09:30:12
3 way that would allow us to perform certain 09:30:18
4 statistical operations, such as cluster analysis 09:30:20
5 and cross-tabulation on them. 09:30:24
6 The analysis of both the top line 09:30:28
7 and the -- the statistically operated data that 09:30:30
8 came back from the survey and the strategic 09:30:36
9 analysis wrapped around that statistical 09:30:40
10 analysis. 09:30:42
11 Q. In terms of devising the study so 09:30:46
12 that it was methodologically sound, as a matter 09:30:50
13 of statistical science, what was your 09:30:52
14 contribution? 09:30:56
15 A. Well, early on --
16 Q. And I'm talking -- sorry. I'm 09:30:56
17 talking about the Jupiter studies. 09:30:56
18 A. Sure. 09:30:58
19 Early on it -- it was more minimal 09:30:58
20 because, as you point out, I didn't have a 09:31:02
21 background in statistical methodologies. 09:31:04
22 However, over the course of my time 09:31:06
23 at Jupiter, working with statistical methods, I 09:31:08
24 gained a degree of expertise that enabled me to 09:31:12
25 participate to a greater degree in that process. 09:31:14

1 ARAM A. SINNREICH, PH.D.

2 Q. Okay. As you sit here today, do 09:31:18
3 you consider yourself qualified to opine about 09:31:20
4 whether or not a statistical methodology is 09:31:22
5 valid and reliable? 09:31:26

6 A. Well, it depends on the -- how 09:31:28
7 esoteric the methodology is, but for standard 09:31:28
8 methodologies, absolutely. 09:31:32

9 Q. And what are -- what do you 09:31:34
10 consider standard statistical methodologies? 09:31:34

11 A. Well, among the ones that we talked 09:31:38
12 about, so there -- correlation regression 09:31:40
13 cluster analysis, the -- the use of 09:31:44
14 stochastically determined distributions and 09:31:50
15 understanding the behaviors of populations, the 09:31:54
16 evaluation of survey instruments and other 09:31:56
17 statistical instruments in producing reliable 09:31:58
18 data, the use of statistic software in order to 09:32:02
19 perform mathematical operations on the data set. 09:32:12

20 I'd -- I'd say that's a short list. 09:32:14

21 Q. What would you consider outside of 09:32:18
22 the area of your expertise on statistics and the 09:32:20
23 reliability of statistical methodologies? 09:32:24

24 A. Well, for example, there's a 09:32:26
25 technique called multi-varied analysis, that's 09:32:28

1	ARAM A. SINNREICH, PH.D.	
2	more complex, and I don't have expertise in that	09:32:32
3	methodology.	09:32:34
4	And there are many, many more that	09:32:36
5	I couldn't even tell you the names of.	09:32:38
6	Q. So going back to Exhibit 2 to your	09:32:50
7	report, have you identified for me all of the	09:32:52
8	publications in which you personally employed	09:32:56
9	some sort of statistical methodology?	09:32:58
10	A. Yes, accounting for the fact that I	09:33:00
11	can't identify the exact Jupiter reports that	09:33:02
12	contains that methodology, but I can say that,	09:33:10
13	confidently, the majority of them did.	09:33:14
14	Q. Fair enough.	09:33:16
15	Now, you're a professor, correct?	09:33:16
16	A. That's correct.	09:33:20
17	Q. And do you teach statistics --	09:33:20
18	A. No.	09:33:22
19	Q. -- to students?	09:33:22
20	A. No, I don't -- well, that's not	09:33:24
21	entirely true. I don't teach courses in	09:33:28
22	which -- at this point I don't teach courses in	09:33:32
23	which statistics is one of the methodologies.	09:33:34
24	That being said, I have graduate	09:33:38
25	students whom I advise in the use of statistics	09:33:40

1	ARAM A. SINNREICH, PH.D.	
2	for their research.	09:33:44
3	Q. Okay. Take a look, please, at	09:33:50
4	Exhibit 1 to your report.	09:33:52
5	This is a copy of your CV.	09:33:58
6	Is that right?	09:34:00
7	A. That's correct.	09:34:00
8	Q. And is this current?	09:34:00
9	A. I believe it is, yes.	09:34:02
10	Q. So there's nothing you want to add	09:34:08
11	or change?	09:34:10
12	A. No.	09:34:10
13	Q. Okay. You say that you've produced	09:34:14
14	ongoing research related to the field in which	09:34:16
15	you teach as a professor at Rutgers.	09:34:18
16	A. That's correct.	09:34:20
17	Q. Have you cited all of that research	09:34:22
18	in the exhibit we just looked at where you list	09:34:24
19	all your publications?	09:34:28
20	A. Well, the research -- no, because	09:34:28
21	not all the research is published.	09:34:30
22	Q. Okay. Are you undertaking any	09:34:36
23	research or have you -- do you have research	09:34:38
24	that's not published that bears on the subjects	09:34:40
25	in your report?	09:34:44

1	ARAM A. SINNREICH, PH.D.	
2	review essays, which may at those journals be	09:55:46
3	subject to a different process. I don't	09:55:50
4	remember.	09:55:54
5	Q. Okay.	09:55:54
6	A. And I believe that's the total	09:55:54
7	list.	09:55:58
8	Q. Okay. So just an interesting point	09:56:04
9	for me.	09:56:06
10	You say you've been a working	09:56:06
11	musician for 20 years?	09:56:08
12	A. I have.	09:56:10
13	Q. And do you ever make -- have you	09:56:10
14	ever made your works available for sharing on a	09:56:14
15	peer-to-peer network?	09:56:16
16	A. Yes, I have.	09:56:16
17	Q. Which one?	09:56:16
18	A. A fairly broad variety. I'd say I	09:56:18
19	probably did it first on the Napster network,	09:56:22
20	I've used LimeWire to do that. I have used	09:56:26
21	BitTorrent to do that, Kazaa. And more broadly	09:56:36
22	speaking, I've made unencrypted MP3s of my	09:56:42
23	studio and live recordings available on the	09:56:52
24	Internet in a format that encourages sharing.	09:56:54
25	Q. Do you sell your music, as well?	09:57:00

1	ARAM A. SINNREICH, PH.D.	
2	A. I do.	09:57:04
3	Q. Through what channels?	09:57:06
4	A. A pretty broad range. My bands	09:57:08
5	have had distribution deals with indie	09:57:12
6	aggregators like the Orchard and CDBaby, which	09:57:18
7	cede both physical and digital versions of the	09:57:24
8	music to dozens, if not more, retailers.	09:57:26
9	I've also had distribution deals	09:57:32
10	with local retailers in New York and Los	09:57:34
11	Angeles, songs that I've written and/or	09:57:38
12	performed on have been -- appeared on other	09:57:40
13	peoples' records, some of which were independent	09:57:44
14	and some of which were label affiliated songs,	09:57:48
15	songs that I've recorded have appeared on	09:57:54
16	compilations that have been put out by other	09:57:58
17	record companies and distributed through	09:58:00
18	channels that I'm not even aware of.	09:58:02
19	So a fairly broad range of	09:58:04
20	channels.	09:58:06
21	Q. Have your -- have you noticed an	09:58:08
22	increase in the sales of your work since you	09:58:14
23	started distributing your content on	09:58:16
24	peer-to-peer and other avenues?	09:58:20
25	A. Absolutely. Actually, the -- a	09:58:22

1 ARAM A. SINNREICH, PH.D.

2 recent example is we posted a live recording of 09:58:24

3 a set of -- of one of my bands last year and I 09:58:30

4 tweeted it and then my tweet got retweeted by a 09:58:36

5 few people who have a lot of followers, and 09:58:38

6 there was something in the order of a thousand 09:58:42

7 downloads of that MP3 within the next day or 09:58:44

8 two, just based on the bit.ly link alone, which 09:58:48

9 is a URL shortening technology that allows you 09:58:52

10 to see how many people have clicked on that 09:58:54

11 particular URL. 09:58:58

12 And then that quarter, our royalty 09:58:58

13 check from -- I don't remember whether it was 09:59:02

14 the Orchard or CDBaby, but one with of them was 09:59:08

15 several hundred percent larger than it normally 09:59:12

16 was. 09:59:16

17 Q. Have you ever noticed a decline in 09:59:28

18 the number of recordings you've been able to 09:59:30

19 sell after your works were made available on 09:59:34

20 peer-to-peer services? 09:59:36

21 A. No. 09:59:40

22 Q. Well, do you believe that 09:59:40

23 distribution of copyrighted content should be 09:59:44

24 controlled by whoever owns the copyright? 09:59:48

25 A. Yes. 09:59:50

1	ARAM A. SINNREICH, PH.D.	
2	Q. Have you used LimeWire?	10:02:14
3	A. Yes.	10:02:14
4	Q. And you said you used it to	10:02:14
5	distribute your own works, right?	10:02:18
6	A. That's correct.	10:02:20
7	Q. Did you use it to access other	10:02:20
8	works?	10:02:22
9	A. Yes, I did.	10:02:22
10	Q. How many songs have you downloaded	10:02:24
11	from LimeWire?	10:02:26
12	A. Probably fewer than a hundred.	10:02:28
13	Q. And over what course -- what period	10:02:38
14	of time did you use LimeWire?	10:02:40
15	A. I couldn't tell you exactly, but I	10:02:42
16	used it at various points in time while it was	10:02:44
17	available from 2001 to 2010.	10:02:48
18	Q. How many hours have you spent on	10:02:52
19	LimeWire?	10:02:54
20	A. Probably fewer than ten.	10:02:56
21	Q. And when you say "fewer than," do	10:03:00
22	you mean close to but not up to ten?	10:03:04
23	A. I couldn't tell you --	10:03:06
24	Q. Because fewer than ten could be one	10:03:06
25	hour, so --	10:03:10

1 ARAM A. SINNREICH, PH.D.

2 A. If it were one hour, I would have 10:03:10
3 said probably an hour. 10:03:12

4 Q. So when you say fewer than ten 10:03:12
5 hours, give me a range what you're talking about 10:03:14
6 here. 10:03:18

7 A. It could be four-and-a-half hours, 10:03:18
8 it could be seven hours, it could be 10:03:20
9 nine-and-a-half hours. 10:03:22

10 Q. And you said you've downloaded 10:03:24
11 fewer than a hundred songs from LimeWire. And, 10:03:26
12 again, fewer could mean I downloaded one song 10:03:30
13 from LimeWire. 10:03:32

14 A. Sure. 10:03:34

15 Q. Could you try to be more precise 10:03:34
16 there? 10:03:36

17 A. I would say on the order of a few 10:03:36
18 albums worth. 10:03:38

19 Q. And were you downloading albums as 10:03:40
20 whole things, or were you downloading individual 10:03:42
21 songs? 10:03:46

22 A. Probably for the most part 10:03:50
23 individual songs. 10:03:50

24 Q. And at the time that you were 10:03:56
25 downloading these songs, were you aware that you 10:03:58

1	ARAM A. SINNREICH, PH.D.	
2	A. That's correct.	10:09:08
3	Q. Okay. Really quick, just to hit	10:09:10
4	some of the points in your CV and then we can	10:09:12
5	get more into the substance of the report.	10:09:14
6	A. Okay.	10:09:18
7	Q. So you're now teaching at Rutgers	10:09:18
8	and you're an associate professor there -- an	10:09:22
9	assistant professor, I'm sorry.	10:09:24
10	Are you -- are you tenured?	10:09:26
11	A. No.	10:09:26
12	Q. Are you on the tenure track?	10:09:28
13	A. Yes.	10:09:30
14	Q. Radar Research, you currently are	10:09:36
15	involved with Radar Research as a consultant?	10:09:40
16	A. And a co-owner, yes.	10:09:44
17	Q. Okay. And what percent of your	10:09:44
18	time is devoted to Radar versus teaching?	10:09:46
19	A. Well, obviously depends on the	10:09:50
20	month, but on the whole, about 20 percent is	10:09:52
21	Radar and 80 percent is my academic work.	10:09:58
22	Q. And this would be, say, over the	10:10:00
23	course of a year?	10:10:02
24	A. Yes.	10:10:04
25	Q. Okay. And what percent of income	10:10:06

1 ARAM A. SINNREICH, PH.D.
2 A. That's correct. 10:16:10
3 Q. So can you list all the cases in 10:16:10
4 which you've either been retained or testified 10:16:12
5 and tell me what you did in each one? 10:16:16
6 A. Sure. 10:16:18
7 Grokster was the first one, and my 10:16:18
8 role there was to testify to the substantial 10:16:20
9 non-infringing uses of Grokster and StreamCast. 10:16:24
10 And I was deposed in that case. 10:16:32
11 Q. Okay. 10:16:34
12 A. I provided expert witness testimony 10:16:36
13 on behalf of RealNetworks in their case with MLB 10:16:38
14 Advanced Media. I believe those documents are 10:16:46
15 sealed, so I'm not sure whether it's my legal 10:16:48
16 obligation to tell you the details or not to. 10:16:52
17 MR. OLLER: If they're sealed 10:16:54
18 pursuant to a court order, you should not. 10:16:56
19 THE WITNESS: Yes, so I should not. 10:16:58
20 Q. Can you give me -- I mean, can you 10:17:00
21 just give me a general sense -- 10:17:02
22 MR. OLLER: Subject matter? 10:17:06
23 Q. -- of the subject matter? 10:17:06
24 A. The subject matter was the market 10:17:12
25 impact of the relationship between the two 10:17:14

1	ARAM A. SINNREICH, PH.D.	
2	parties in the case.	10:17:16
3	Q. What market was it in?	10:17:16
4	A. The market for streaming media.	10:17:20
5	Q. Okay. Go on.	10:17:28
6	A. I -- I submitted testimony to UMG	10:17:28
7	versus Lindor, which is, as you know, a file	10:17:34
8	sharing case against an alleged file sharer --	10:17:38
9	MR. OLLER: Let me just -- I know	10:17:42
10	personally that the witness sometimes uses the	10:17:46
11	term "testimony" to apply to declarations and	10:17:48
12	the like. I want to make sure that when he says	10:17:52
13	"testimony," he means actual testimony.	10:17:54
14	Q. What specifically --	10:17:58
15	THE WITNESS: Fair enough.	10:17:58
16	Q. -- did you do in Lindor?	10:18:00
17	A. Okay. So that was a -- that was --	10:18:02
18	I submitted what may have been a declaration and	10:18:02
19	not testimony in that case where I attested to	10:18:04
20	the prevalent wholesale rates for the sale of	10:18:08
21	digital singles. And I provided, I believe it	10:18:14
22	was testimony, technically speaking, in the Sony	10:18:24
23	rootkit case which in -- which was a class	10:18:28
24	action suit against Sony -- I think it was Sony	10:18:32
25	BMG at the time -- which had been -- had caused	10:18:36

1	ARAM A. SINNREICH, PH.D.	
2	a lot of damage on consumers' home appliances	10:18:40
3	and computers by virtue of their use of root	10:18:46
4	kit-based spyware technology on their CDs.	10:18:50
5	MS. YOUNG: Okay. There's -- I	10:18:54
6	think we're running out of videotape, so why	10:18:54
7	don't we stop so that we can change the tape.	10:18:58
8	THE WITNESS: Okay.	10:19:00
9	THE VIDEOGRAPHER: Going off the	10:19:00
10	record at 10:18. This marks the ends of tape	10:19:02
11	number one.	10:19:04
12	(Recess taken.)	10:19:06
13	THE VIDEOGRAPHER: We are back on	10:27:42
14	the record at 10:28 a.m. This marks the	10:28:22
15	beginning of tape number two.	10:28:24
16	BY MS. YOUNG:	10:28:26
17	Q. Before we broke, you were going	10:28:26
18	through cases in which you'd been hired to	10:28:28
19	provide expert testimony, and you listed the	10:28:32
20	Grokster case, RealNetworks, UMG versus Lindor,	10:28:34
21	the Sony case.	10:28:38
22	A. Um-hum.	
23	Q. Are there any other cases in which	10:28:40
24	you've been hired to provide expert testimony or	10:28:42
25	advice?	10:28:46

1	ARAM A. SINNREICH, PH.D.	
2	music, correct?	10:38:16
3	A. Correct.	10:38:16
4	Q. Okay. In Page 10, at the end of	10:38:24
5	the paragraph you were just looking at, you say,	10:38:26
6	"Today's labels are decreasingly in the business	10:38:28
7	of selling artists' records and increasingly in	10:38:30
8	the business of selling the artists themselves."	10:38:34
9	Do you see that?	10:38:36
10	A. Yes, I do.	10:38:36
11	Q. So what's the source of your	10:38:36
12	information for that statement?	10:38:38
13	A. Conversations with industry	10:38:40
14	executives, reading industry publications,	10:38:44
15	speaking with artists, speaking with artists'	10:38:48
16	representatives, like managers and agents, and,	10:38:54
17	in general, being involved in the music industry	10:38:58
18	over the past decade and a half.	10:39:00
19	Q. Okay. Remember at the beginning I	10:39:04
20	asked you who you talked to to form your	10:39:06
21	opinions that were expressed in this report?	10:39:10
22	A. Yes.	10:39:12
23	Q. And you didn't mention	10:39:12
24	conversations with industry executives. You	10:39:14
25	didn't mention conversations with artists.	10:39:18

1	ARAM A. SINNREICH, PH.D.	
2	A. Right.	10:39:20
3	Q. And now you're telling me that you	10:39:20
4	did rely on those conversations -- those kinds	10:39:22
5	of conversations to form these opinions?	10:39:24
6	A. I didn't begin the report as a	10:39:26
7	tabula rasa with no experience and no opinions.	10:39:30
8	I wrote this report drawing on a decade and a	10:39:34
9	half of research and involvement in the music	10:39:36
10	industry.	10:39:40
11	And the -- the conversations that	10:39:42
12	I'm talking about happened outside of the scope	10:39:44
13	of preparing this report, but they -- they	10:39:46
14	certainly influenced my opinions as expressed in	10:39:48
15	the report.	10:39:52
16	Q. When was the last time you had a	10:39:52
17	conversation you were relying on for purposes of	10:39:56
18	rendering the statement that I just read to you	10:40:00
19	from your report?	10:40:02
20	A. One that I relied on for this	10:40:10
21	report? I couldn't tell you. I -- half of the	10:40:12
22	people that I know and speak to on an ongoing	10:40:18
23	basis are involved in some way in the digital	10:40:20
24	music or media industries or in research into	10:40:24
25	those industries.	10:40:28

1 ARAM A. SINNREICH, PH.D.

2 So the conversations that I told 10:40:28
3 you about before weren't conversations that were 10:40:34
4 directed towards the ends of answering questions 10:40:38
5 that I needed to address in the course of 10:40:38
6 writing the report. 10:40:42

7 There -- however, there is a halo 10:40:42
8 of ongoing conversation with other members of 10:40:44
9 the industry and the music and technology 10:40:48
10 communities that continues to inform my opinion 10:40:54
11 and expertise over time. 10:40:56

12 Q. Okay. What industry executives did 10:41:00
13 you talk to who informed your opinion that 10:41:02
14 today's labels are decreasingly in the business 10:41:04
15 of selling records and increasingly in the 10:41:08
16 business of selling the artists? 10:41:10

17 A. I couldn't tell you specifically. 10:41:12

18 Q. Can you tell me generally? 10:41:14

19 A. I have -- I continue to speak to 10:41:18
20 people at -- at record labels, at management 10:41:24
21 companies, at technology firms, in media 10:41:30
22 companies, journalists, analysts. 10:41:32

23 You know, there are -- there are 10:41:38
24 literally hundreds of people that I am in 10:41:38
25 regular contact with. 10:41:42

1 ARAM A. SINNREICH, PH.D.

2 Q. The people at the record labels you 10:41:42
3 talk to -- 10:41:44

4 A. Yes. 10:41:46

5 Q. -- is that at all record labels? 10:41:46

6 A. I couldn't say with 100 percent 10:41:50
7 confidence that every record label is 10:41:58
8 represented, but it's people from a broad swath 10:42:00
9 of industry. 10:42:04

10 I mean, as you know, executives 10:42:04
11 tend to move from company to company and job to 10:42:06
12 job with fairly -- fair regularity. So many 10:42:10
13 people that I am in contact with worked at label 10:42:14
14 X in a given year and label Y in another year 10:42:20
15 and in technology company Z in another year. 10:42:24

16 Q. What kind of position do these 10:42:28
17 people who you are in regular communication with 10:42:30
18 hold? And I'm talking specifically about the 10:42:32
19 people that work in the record industry for 10:42:34
20 record labels. 10:42:38

21 A. There are people who are in the 10:42:38
22 digital divisions of the labels, people who work 10:42:46
23 in the legal divisions of the labels, people who 10:42:50
24 work in marketing and promotion and people who 10:42:54
25 work in A&R. 10:42:58

1	ARAM A. SINNREICH, PH.D.	
2	Q. And are these people the heads of	10:43:02
3	their groups, are they -- where are they on the	10:43:06
4	corporate ladder?	10:43:12
5	A. Well, I'd say they span the range	10:43:12
6	from, you know, director level to chief	10:43:16
7	executives.	10:43:20
8	Q. Give me the names of the people	10:43:26
9	that you are in regular contact with from the	10:43:30
10	record labels.	10:43:32
11	MR. OLLER: Today?	10:43:34
12	MS. YOUNG: No, people he's talked	10:43:36
13	with to form the opinions that are expressed in	10:43:38
14	his report.	10:43:40
15	MR. OLLER: Your question was	10:43:40
16	present tense, the people who he is -- read back	10:43:40
17	the question.	10:43:44
18	(Record read.)	10:43:44
19	MR. OLLER: You can answer.	10:43:56
20	THE WITNESS: Okay.	
21	A. One of the primary avenues that I	10:44:04
22	communicate with record label executives is	10:44:06
23	called the PHO list, which you may be aware of.	10:44:10
24	It's an ongoing email mediated communication	10:44:14
25	between different people who work in the	10:44:20

1	ARAM A. SINNREICH, PH.D.	
2	industry.	10:44:22
3	And there -- you know, there --	10:44:26
4	there are all variety of people who work at	10:44:30
5	various labels who participate in that	10:44:34
6	conversation. You know, I can't sit down and	10:44:38
7	give you, you know, any kind of a comprehensive	10:44:42
8	list off the top of my head. I have, you know,	10:44:44
9	record label executives who are friends of mine	10:44:48
10	on Facebook or whom I follow on Twitter or who I	10:44:50
11	sit on panels with at conferences.	10:44:56
12	It would be difficult for me to --	10:44:58
13	to give you any kind of meaningful or	10:45:02
14	comprehensive list off the top of my head. It's	10:45:04
15	certainly something that I could compile for you	10:45:08
16	after -- after today if you like.	10:45:10
17	MR. OLLER: You don't have to do	10:45:14
18	that.	10:45:14
19	THE WITNESS: Okay.	10:45:14
20	MR. OLLER: If you -- if you recall	10:45:16
21	names off the top of your head, I think that's	10:45:18
22	what she's asking, if there are particular	10:45:18
23	people --	10:45:20
24	Q. I'm asking for names of people.	10:45:20
25	A. All right. So --	

1	ARAM A. SINNREICH, PH.D.	
2	Q. If can you give me any names, I	10:45:22
3	would like to know the names.	10:45:24
4	A. So Jim Griffin, who until recently	10:45:28
5	was working at Warner, or Jack Foreman also at	10:45:30
6	Warner, Michael Nash, Seth Schachner -- who	10:45:32
7	else -- Ted Cohen who's a former label	10:45:44
8	executive, Jeremy Silver who's a former label	10:45:48
9	executive.	10:45:52
10	I don't know, that's a -- that's a	10:45:58
11	short list of people who I have been in contact	10:46:00
12	with. But, again, you know -- you know, there	10:46:04
13	is, you know, Albhy Galuten, Larry Kenswil.	10:46:14
14	There are -- there are just people who I	10:46:20
15	routinely engage in an ongoing community-based	10:46:24
16	conversation about the dynamics of the music	10:46:30
17	industry with through the various forums that	10:46:34
18	I've described.	10:46:38
19	It's not like I have a -- you know,	10:46:38
20	a regular meeting where I go and sit down with	10:46:40
21	the top brass at label X, Y or Z and they give	10:46:42
22	me all of their strategic insights. It's --	10:46:48
23	it's a much more, you know, community-based	10:46:50
24	process.	10:46:54
25	Q. Do you have one-on-one	10:46:54

1	ARAM A. SINNREICH, PH.D.	
2	conversations with any of these people?	10:46:56
3	A. Yes.	10:46:58
4	Q. Without anyone else present?	10:46:58
5	A. Yes.	10:47:02
6	Q. Okay. How often does that happen?	10:47:02
7	A. It depends. If I'm doing a piece	10:47:02
8	of research, it happens fairly frequently. If	10:47:06
9	I'm not working on a relevant piece of research,	10:47:10
10	then it doesn't happen as frequently -- as	10:47:14
11	frequently.	10:47:16
12	Q. How many of the people that I	10:47:16
13	just -- that you just listed have you had	10:47:18
14	one-on-one conversations with where it wasn't	10:47:20
15	PHO or a conference or something else --	10:47:24
16	A. Right.	
17	Q. -- where other people were present?	10:47:26
18	A. Recently, like within what time	10:47:28
19	frame? I mean, I've had one-on-one	10:47:30
20	conversations with all those people. But you	10:47:34
21	mean within the last week, month, year?	10:47:36
22	Q. Let's say within the last year.	10:47:38
23	A. Jim Griffin, Jack Foreman, probably	10:47:44
24	Ted Cohen. I don't know.	10:47:56
25	Q. Okay. All right. Let's move on.	10:48:06

1	ARAM A. SINNREICH, PH.D.	
2	whether these -- these studies were performed in	11:01:44
3	a methodologically sound way?	11:01:48
4	A. I would not have included them if I	11:01:50
5	didn't believe that they were.	11:01:52
6	Q. Were you familiar with all of the	11:02:00
7	statistical methodologies that were used in all	11:02:10
8	of these studies?	11:02:12
9	A. No. Some of them involved complex	11:02:12
10	economic analyses that are beyond the scope of	11:02:18
11	my expertise.	11:02:20
12	Q. Tell me which ones.	11:02:20
13	A. Off the top of my head, I don't	11:02:24
14	remember which ones. Some of them are more	11:02:26
15	survey-based, some of them are more theoretical.	11:02:28
16	For instance, the Gopal one, I	11:02:42
17	believe, was more theoretical, possibly Peitz	11:02:46
18	and Waelbroeck, but I would have to look at the	11:02:56
19	studies to -- to render a more conclusive	11:03:00
20	opinion.	11:03:06
21	Q. Is it fair to say, though, that at	11:03:06
22	least some of these studies used statistical	11:03:08
23	methodologies that you are not qualified to	11:03:10
24	assess the reliability or validity of?	11:03:14
25	A. Yes.	11:03:16

1	ARAM A. SINNREICH, PH.D.	
2	Q. What about the studies that used	11:03:22
3	survey methodologies, do you feel qualified to	11:03:24
4	assess the validity or reliability of those	11:03:26
5	methodologies?	11:03:30
6	A. Yes.	11:03:30
7	Q. And what about the economic	11:03:34
8	analyses offered in these studies, do you feel	11:03:38
9	qualified to assess the validity or reliability	11:03:40
10	of that analysis?	11:03:42
11	A. Well, it depends on the study, but	11:03:44
12	in some cases, yes.	11:03:46
13	Q. And in some cases, no?	11:03:48
14	A. Yes, correct. In some cases, yes,	11:03:48
15	and in some cases, no.	11:03:54
16	Q. Okay. And do you purport to offer	11:03:56
17	an opinion about the relative merits of any of	11:03:58
18	these studies?	11:04:02
19	A. Not beyond the fact that I thought	11:04:02
20	they merited inclusion in the report.	11:04:06
21	Q. Well, what qualified for meriting	11:04:10
22	inclusion in your report?	11:04:18
23	A. Well, when you're a research	11:04:18
24	professional, you can -- you develop a sense of	11:04:20
25	whether individual pieces of research are -- are	11:04:22

1	ARAM A. SINNREICH, PH.D.	
2	written in a -- using methodologies that are	11:04:28
3	supportable, written by people who understand	11:04:32
4	what they're doing and what they're talking	11:04:36
5	about and published in venues that -- that have	11:04:38
6	reputations for methodological rigor.	11:04:42
7	Q. Okay. So one criterion is what	11:04:48
8	publication?	11:04:50
9	A. Yep.	11:04:50
10	Q. You said another -- another	11:04:52
11	criteria would be who the author is?	11:04:54
12	A. Yes.	11:04:56
13	Q. Okay. And can you elaborate on	11:04:58
14	that?	11:05:00
15	A. Well, authors who are either in	11:05:00
16	academic positions or who work for known private	11:05:06
17	research firms are part of institutions that	11:05:12
18	have certain standards that lend them a halo	11:05:14
19	of -- of, you know, confidence.	11:05:18
20	Q. And by academic positions, are you	11:05:28
21	talking about people who are professors and --	11:05:30
22	A. Professors or post-doctoral	11:05:34
23	researchers or people who have the oversight and	11:05:36
24	the reputation of the departments that they're	11:05:38
25	affiliated with, yes.	11:05:42

1	ARAM A. SINNREICH, PH.D.	
2	Q. Okay. What other criteria would	11:05:44
3	make a publication something you'd want to cite	11:05:46
4	in your report?	11:05:48
5	A. Well, part of it would have to do	11:05:48
6	with the quality of the presentation of the	11:05:50
7	data. You can tell from reading something	11:05:56
8	whether somebody is -- has expertise in -- in	11:05:58
9	both the methodologies and theoretical	11:06:04
10	foundations of -- that they're bringing to bear	11:06:06
11	on the -- on the data.	11:06:10
12	You know, I read -- a large part of	11:06:12
13	my job is to -- to read other peoples' research	11:06:14
14	and evaluate whether it's -- it's valid or not.	11:06:18
15	So I don't only do that on behalf	11:06:20
16	of my students. I do it on behalf of peer	11:06:22
17	review journals -- I'm a peer reviewer -- and --	11:06:24
18	and book publishers.	11:06:28
19	And so it's a subtle and	11:06:28
20	multi-faceted process, but one that, you know,	11:06:32
21	in essence, has to do with being able to -- to	11:06:38
22	infer from the presentation of data how valid	11:06:40
23	its analysis and methodologies are.	11:06:46
24	Q. What magazines or publications are	11:06:48
25	you a peer reviewer for?	11:06:50

1 ARAM A. SINNREICH, PH.D.
2 A. Sociological Quarterly, 11:06:54
3 International Journal of Communication, Journal 11:06:58
4 of Communication, American Quarterly. Maybe two 11:07:02
5 or three others. 11:07:10
6 I mean, what happens is typically 11:07:10
7 you'll just get a request via email or less 11:07:12
8 often by phone from a journal saying, we have an 11:07:18
9 article that falls within your bailiwick, we'd 11:07:22
10 like you to take a look at it and do some peer 11:07:24
11 review. 11:07:28
12 So, off the top of my head, those 11:07:28
13 are the journals I can think of -- oh, also 11:07:30
14 University of Massachusetts Press, which was the 11:07:32
15 publisher of my book. I peer reviewed another 11:07:34
16 book manuscript for them. But there are 11:07:38
17 probably two or three others that I didn't name. 11:07:40
18 Q. Okay. Okay. So you acknowledge 11:07:44
19 that there are studies that have come out the 11:07:50
20 other way, finding that there's a negative or 11:07:52
21 neutral effect of file sharing on music sales, 11:07:56
22 correct? 11:08:00
23 A. Yes. 11:08:00
24 Q. Okay. How many studies are you 11:08:00
25 aware of that find a negative effect of file 11:08:02

1 ARAM A. SINNREICH, PH.D.
2 sharing on music sales or revenues? 11:08:04
3 A. Somewhere on the order of ten, you 11:08:06
4 know, on par with the ones that I cited in terms 11:08:10
5 of the general, you know, site of -- location of 11:08:14
6 publication or position of -- of the authors. 11:08:16
7 Q. And have you read all those 11:08:22
8 studies? 11:08:24
9 A. No. 11:08:24
10 Q. Why not? 11:08:30
11 A. I've had limited time, and my role, 11:08:32
12 as I understand it, in preparing this report was 11:08:38
13 to say whether there was credible evidence that 11:08:40
14 file sharing had beneficial market effects. 11:08:44
15 Q. So you didn't take the time to 11:08:46
16 examine the evidence on the other side? 11:08:48
17 A. I'm -- 11:08:50
18 MR. OLLER: Object to the form. 11:08:50
19 A. I'm willing to accept that there is 11:08:52
20 credible evidence on the other side, and so I 11:08:54
21 did not take the time to examine it. 11:08:56
22 Q. You say, "It's neither my role nor 11:09:02
23 my intention to dispute these findings," at 11:09:04
24 Page 30. 11:09:08
25 What findings are you referring to 11:09:10

1	ARAM A. SINNREICH, PH.D.	
2	there?	11:09:12
3	A. The ones that you were just	11:09:12
4	referring to, the findings of the negative or	11:09:14
5	neutral economic impact of file sharing.	11:09:18
6	Q. Okay. So I -- I just want to be	11:09:20
7	clear.	11:09:22
8	Nothing that you've said in your	11:09:22
9	report is intended to dispute studies finding	11:09:24
10	that file sharing has had a negative effect on	11:09:26
11	music sales or revenues?	11:09:30
12	MR. OLLER: Object to the form.	11:09:32
13	A. That's correct.	11:09:36
14	Q. Let's turn now to Page 13, please.	11:10:16
15	And actually the full sentence that I want to	11:10:34
16	point you to starts at the very end of Page 12	11:10:36
17	with the word "Therefore."	11:10:40
18	A. Um-hum.	
19	Q. And then you say, "Even if file	11:10:40
20	sharing were solely responsible for the losses	11:10:44
21	reported by labels, each downloaded song would	11:10:46
22	account for only a small fraction of its retail	11:10:48
23	equivalent in lost revenue."	11:10:52
24	A. Correct.	11:10:54
25	Q. So what is the small fraction?	11:10:56

1 ARAM A. SINNREICH, PH.D.
2 for free on the Internet, how many of those 11:26:00
3 formats allow you, the moment that you download 11:26:04
4 a file, to make it instantaneously available to 11:26:06
5 everyone else on the same network? 11:26:10
6 A. On the same network? I couldn't 11:26:14
7 tell you a number, but it's relatively easy to 11:26:18
8 make any file available freely on the Internet 11:26:22
9 instantly accessible to any number of people 11:26:24
10 through social media. 11:26:28
11 Q. And are you -- 11:26:30
12 A. Which is, for instance, what I do. 11:26:32
13 I mean, as soon as I had access to the Lupe 11:26:34
14 Fiasco and Kills tracks, I tweeted about them, 11:26:38
15 along with 140 characters' worth of critique and 11:26:42
16 people went on and -- and accessed those files 11:26:46
17 via my sharing. 11:26:48
18 Q. Now, in this report, you talk about 11:27:00
19 different factors that you say have contributed 11:27:02
20 to declining music sales revenues, right? 11:27:04
21 A. In -- tell me which -- 11:27:06
22 Q. I think it's Section 3(a) -- 11:27:08
23 A. Yes. 11:27:12
24 Q. -- starting at, I think it's little 11:27:12
25 iii, correct, on Page 14? 11:27:16

1	ARAM A. SINNREICH, PH.D.	
2	A. Correct. "Many different factors"?	11:27:22
3	Q. Yes.	11:27:26
4	A. Okay.	
5	Q. And you say in the introductory	11:27:26
6	paragraph to that section that "Several other	11:27:28
7	contributory factors have had a significant	11:27:30
8	negative impact on the market."	11:27:32
9	Do you see that?	11:27:34
10	A. Yes.	11:27:36
11	Q. Okay. What do you mean by	11:27:36
12	significant?	11:27:38
13	A. A statistically non-negligible	11:27:42
14	impact.	11:27:46
15	Q. And you say "statistically	11:27:46
16	non-negligible." Is this something you've	11:27:48
17	measured as a matter of statistics?	11:27:52
18	A. No, no, I have not done statistical	11:27:54
19	analysis on it, but the -- the power and scope	11:27:56
20	of these factors would indicate me to believe	11:28:06
21	that -- that if were such an analysis performed	11:28:12
22	or possible, it would be significant.	11:28:14
23	Q. And you say the power and scope of	11:28:16
24	each of these factors. Is that something that	11:28:18
25	you analyzed empirically when you did this	11:28:20

1	ARAM A. SINNREICH, PH.D.	
2	report?	11:28:24
3	A. Yes. Changing consumer psychology	11:28:24
4	is something I have analyzed empirically and am	11:28:30
5	continuing to analyze empirically.	11:28:34
6	Small scale commercial CD	11:28:36
7	bootlegging was analyzed empirically by	11:28:40
8	representatives of the plaintiffs. Economic	11:28:42
9	recession has been analyzed empirically by the	11:28:46
10	federal government. Increased competition for	11:28:48
11	consumer entertainment spending has been	11:28:50
12	analyzed empirically by several market research	11:28:54
13	firms.	11:28:58
14	Bankruptcy of music retailers and	11:28:58
15	decline of shelf space, while it's not been	11:29:00
16	analyzed empirically, it's a very large market	11:29:04
17	effect that has been broadly described and --	11:29:08
18	and bemoaned by the industry itself.	11:29:14
19	Maturation of the CD format and end	11:29:18
20	of the replacement cycle, I have not empirically	11:29:20
21	analyzed this, but based on statements by record	11:29:26
22	label executives, I would believe that they have	11:29:30
23	performed empirical analysis. For instance,	11:29:34
24	Lyor Cohen's statement on Page 18 that --	11:29:40
25	Q. But you don't -- sorry, go ahead.	11:29:42

1	ARAM A. SINNREICH, PH.D.	
2	A. -- that the replacement cycle	11:29:44
3	inflation's end was the, quote, biggest	11:29:48
4	challenge facing his company when he took over.	11:29:50
5	And end of minimum advertised	11:29:54
6	pricing for CDs, yes, the empirical evidence is	11:29:56
7	in the average retail price of the CDs, which	11:30:00
8	has been documented pretty thoroughly during	11:30:04
9	that time.	11:30:06
10	Unbundling, one of the reports that	11:30:06
11	I cite earlier deals with the question of	11:30:10
12	unbundling in an empirical way. I think I might	11:30:14
13	quote it here -- if I can find -- oh, Elberse,	11:30:24
14	yeah.	
15	Shrinking artist rosters, I cite	11:30:30
16	empirical analyses in that section. Increased	11:30:34
17	competition from used and independently	11:30:38
18	distribute -- distributed music, as I say in	11:30:40
19	this section, it can't be established	11:30:42
20	empirically because there's no researcher with	11:30:44
21	access to the data. That being said, there are	11:30:48
22	journalistic analyses that demonstrate	11:30:52
23	considerable effect.	11:30:56
24	So on the whole, yes, I would say	11:30:58
25	that most of this is empirically supported.	11:31:00

1	ARAM A. SINNREICH, PH.D.	
2	Q. Did you personally, in preparing	11:31:04
3	this report, set out to analyze empirically the	11:31:06
4	effect that these different factors have?	11:31:10
5	A. No.	11:31:12
6	Q. Okay. Did you, in preparing this	11:31:12
7	report, attempt to quantify the magnitude of the	11:31:14
8	effect of these factors?	11:31:16
9	A. No.	11:31:18
10	Q. Okay. Do you have any idea	11:31:22
11	quantitatively what effect each of these factors	11:31:24
12	had in, as you say, contributing to declining	11:31:28
13	music sales and revenues?	11:31:32
14	MR. OLLER: Object to the form.	11:31:32
15	A. It would be difficult, for reasons	11:31:34
16	that we've already discussed, to discretely	11:31:36
17	attribute a percentage of the effect to any	11:31:38
18	single given factor because there are many	11:31:44
19	interaction effects between the factors.	11:31:46
20	For instance, the recession	11:31:48
21	influences the market for brick and mortar	11:31:50
22	retail, and so on and so forth.	11:31:54
23	Q. Well, did you attempt to quantify	11:31:56
24	the effect of the factors in combination on	11:31:58
25	declining music sales and revenues?	11:32:04

1	ARAM A. SINNREICH, PH.D.	
2	A. No.	11:32:06
3	Q. Okay. And I want to go through	11:32:10
4	each of these factors a little bit more and talk	11:32:12
5	about -- talk about them.	11:32:16
6	All right. Changing Consumer	11:32:20
7	Psychology and Market Expectations. You say	11:32:22
8	that -- this is on Page 14 toward the bottom --	11:32:24
9	"Digital music provided music fans with an	11:32:28
10	unprecedented degree of choice over their	11:32:30
11	consumption habits, control over their music	11:32:34
12	listening experiences, volume of content to	11:32:36
13	choose from and portability in their music	11:32:38
14	listening venues," correct?	11:32:42
15	A. Correct.	11:32:44
16	Q. Shouldn't that make digital music	11:32:46
17	more, and not less, valuable to consumers?	11:32:48
18	A. Well, it depends on your measure of	11:32:50
19	value. It makes it more valuable to consumers	11:32:52
20	in terms of the total amount of time and	11:32:56
21	attention that they're devoting towards	11:33:00
22	listening to music.	11:33:02
23	It's also making them probably	11:33:04
24	invest in a lot of music technologies that can	11:33:10
25	be used to access music with -- with portions of	11:33:14

1	ARAM A. SINNREICH, PH.D.	
2	wallet share.	11:33:20
3	So if you measure value in that	11:33:20
4	kind of broader holistic sense, yes. If you're	11:33:22
5	asking about value purely as represented through	11:33:26
6	the retail market, no, because it's not an	11:33:28
7	accurate barometer of consumer sentiment.	11:33:30
8	Q. And why is that?	11:33:34
9	A. Because, as I describe in the	11:33:36
10	report, the labels and other industry players	11:33:38
11	have not been -- have not effectively and	11:33:42
12	rapidly accommodated their business models and	11:33:48
13	distribution models to the changing needs of	11:33:52
14	the -- of the marketplace.	11:33:54
15	Q. Could another reason that the	11:33:58
16	market is not an accurate barometer of consumer	11:33:58
17	sentiment be that many consumers are acquiring	11:34:04
18	their music for free so that's not picked up on	11:34:06
19	the radar?	11:34:10
20	A. Certainly many consumers are	11:34:12
21	acquiring their music for free, but there's	11:34:12
22	little question that they continue to spend a	11:34:16
23	significant amount of their wallet share on	11:34:20
24	music and music related products and services.	11:34:22
25	Q. But is one of the reasons why the	11:34:24

1	ARAM A. SINNREICH, PH.D.	
2	market might not be an accurate barometer of	11:34:24
3	consumer sentiment, that some consumers are	11:34:28
4	choosing to spend -- choosing not to spend their	11:34:30
5	dollars and instead just getting the music for	11:34:32
6	free?	11:34:34
7	A. Some consumers, yes.	11:34:34
8	Q. You also say -- I'm now on Page 15	11:34:36
9	at the bottom of the section -- "The labels	11:34:44
10	themselves are to blame for taking a decade to	11:34:46
11	absorb the significance of this shift in market	11:34:50
12	demand."	11:34:52
13	Why are you saying it took a	11:34:54
14	decade?	11:34:54
15	A. Sorry. I -- I don't see the	11:34:56
16	sentence.	11:34:58
17	Q. It's at the very end of this	11:34:58
18	section, right above B.	11:35:00
19	A. Yes.	11:35:04
20	Q. Do you see where I am?	11:35:04
21	A. Yes. Okay.	11:35:06
22	So the question is: Why do I say a	11:35:10
23	decade?	11:35:12
24	Q. Yeah, why do you say it took a	11:35:14
25	decade for the labels to absorb the significance	11:35:16

1 ARAM A. SINNREICH, PH.D.

2 of this shift in market demand and for failing 11:35:18

3 to accommodate it sooner? 11:35:22

4 A. Well, the shift began at least as 11:35:22

5 early as 1999 with the introduction of Napster 11:35:24

6 into the marketplace. And as recently as 2010, 11:35:28

7 public filings by -- by major record labels have 11:35:30

8 acknowledged that they've been slow to react to 11:35:34

9 changes in -- in the market. 11:35:36

10 Q. And so that's what you're referring 11:35:38

11 to when you say it took a decade to absorb 11:35:40

12 the --

13 A. Well, that's --

14 Q. -- significance of that shift? 11:35:44

15 A. -- one of the many indicators that 11:35:44

16 that's the case. 11:35:48

17 I mean, it was not until 2007, for 11:35:50

18 instance, eight years after the introduction of 11:35:52

19 Napster into the marketplace, that the major 11:35:54

20 labels allowed non-DRM encrypted music to be 11:35:56

21 sold through retailers. That's eight years, 11:36:02

22 that's nearly a decade, despite the fact that 11:36:04

23 there was abundant evidence of consumer demand 11:36:06

24 for that product early on. 11:36:10

25 Q. Yeah, we're going to talk about 11:36:12

1 ARAM A. SINNREICH, PH.D.
2 they've been very successful in terms of market 11:37:18
3 share, but their sales volume is -- is leveling 11:37:20
4 off, so they haven't been successful in taking 11:37:24
5 that early success and translating it to a 11:37:26
6 consistently growing market. 11:37:30
7 Q. Were -- let me ask you: Were there 11:37:30
8 significant sales of downloads before iTunes 11:37:32
9 opened? 11:37:34
10 A. No, not major label downloads. 11:37:36
11 MR. OLLER: Counsel, we -- we 11:37:40
12 can -- we can correct this later. I'm happy 11:37:42
13 to -- I think it's undisputed and the record 11:37:44
14 shows iTunes started in 2003, but I just throw 11:37:48
15 that out. 11:37:52
16 THE WITNESS: No, I don't think 11:37:52
17 that's the case. 11:37:54
18 MR. OLLER: iTunes, Apple iTunes? 11:37:56
19 THE WITNESS: Yeah. Well, there -- 11:37:58
20 there's several things called iTunes. There's 11:38:00
21 iTunes software, there's the iTunes music store 11:38:00
22 which started later, yeah. 11:38:02
23 Q. Okay. 11:38:04
24 MR. OLLER: I didn't know what you 11:38:04
25 were asking about. 11:38:06

1 ARAM A. SINNREICH, PH.D.

2 Q. So when did the iTunes music store 11:38:06
3 start? 11:38:10

4 A. Yeah, I think that's 2003. That 11:38:10
5 sounds about right. 11:38:12

6 Q. And when you said iTunes started in 11:38:12
7 2001, what were you referring to? 11:38:14

8 A. I was thinking about the market 11:38:16
9 introduction of the iPod, actually. That was a 11:38:18
10 misstatement by me. 11:38:20

11 Q. Okay. So iPod came first in 2001? 11:38:22

12 A. Yes, that's correct. 11:38:24

13 Q. And then came iTunes in 2003? 11:38:26

14 A. Yes. 11:38:30

15 Q. Okay. Okay. Factor number 2 on 11:38:32
16 your list is an increase in small scale 11:38:34
17 commercial CD bootlegging, correct? 11:38:36

18 A. Yes. 11:38:38

19 Q. And you say that this has been 11:38:38
20 analyzed empirically by the plaintiffs? 11:38:40

21 A. That's correct. 11:38:42

22 Q. And what are you referring to? 11:38:44

23 A. By representatives of the 11:38:46
24 plaintiffs.

25 Q. Okay.

1	ARAM A. SINNREICH, PH.D.	
2	A. I'm referring -- I'm referring to	11:38:46
3	the IFPI music piracy report from June 2002 that	11:38:46
4	I cite in the footnote.	11:38:54
5	Q. Okay. And did you rely on any	11:38:54
6	other source in offering empirical support for	11:38:56
7	your conclusions expressed in the section on	11:39:00
8	small scale of commercial CD bootlegging?	11:39:02
9	A. No, although it's a subject that	11:39:06
10	I've continued to read trade articles about over	11:39:10
11	the years. So this was not my first	11:39:12
12	introduction to the subject --	11:39:14
13	Q. Got it.	
14	A. -- but this was the only empirical	11:39:16
15	evidence that I leveraged in writing the report.	11:39:18
16	Q. You say, "Pirate CD-R sales had	11:39:22
17	tripled in the course of a single year to 450	11:39:26
18	million units."	11:39:28
19	A. Yes.	11:39:30
20	Q. What year was that?	11:39:30
21	A. 2001, I believe.	11:39:32
22	Q. Okay. And what were pirate CD-R	11:39:34
23	sales doing before 2001?	11:39:36
24	A. They were one-third the size.	11:39:38
25	Q. And did you look at what they were	11:39:40

1	ARAM A. SINNREICH, PH.D.	
2	doing in 1999?	11:39:42
3	A. I didn't really need to because	11:39:48
4	CD-Rs were not massively penetrated in the	11:39:50
5	marketplace until the end of the '90s.	11:39:54
6	Q. Okay. Did you look at what	11:39:56
7	happened to CD-R -- pirate CD-R sales after	11:39:58
8	2001?	11:40:00
9	A. Well, they continue to be mentioned	11:40:02
10	in RIAA and IFPI publications from time to time.	11:40:04
11	And, as I say, there continue to be trade	11:40:08
12	stories about it, especially globally speaking.	11:40:10
13	So there are certain markets like	11:40:12
14	China, for instance, where it's considered to be	11:40:16
15	a rampant problem.	11:40:18
16	Q. But did you do anything to look at	11:40:20
17	the empirical data about what happened after	11:40:22
18	2001 in terms of pirate CD-R sales?	11:40:26
19	A. No, that was the last empirical	11:40:30
20	data that I -- that I used for my report.	11:40:30
21	Q. Okay. And the IFPI data, what	11:40:30
22	geographic area does it cover?	11:40:34
23	A. I believe it was global.	11:40:34
24	Q. Okay. So 4 -- 450 million units is	11:40:36
25	a number of pirate CD-R sales globally, correct?	11:40:38

1	ARAM A. SINNREICH, PH.D.	
2	A. In 2001 or '2, yes.	11:40:42
3	Q. That's a global number?	11:40:44
4	A. Yes.	11:40:46
5	Q. Okay. Do you know what the numbers	11:40:46
6	in the U.S. were at that time?	11:40:48
7	A. I don't.	11:40:50
8	Q. Did you attempt to determine what	11:40:50
9	they were in preparing your report?	11:40:52
10	A. No.	11:40:54
11	Q. Would that have been relevant to	11:40:56
12	your analysis?	11:40:56
13	A. Yes, but it's a question of limited	11:40:58
14	time and scope. I could certainly -- if -- if	11:41:00
15	the primary subject of my analysis had been the	11:41:04
16	pirate CD-R market, I would have devoted more	11:41:08
17	time and attention to it.	11:41:12
18	Q. And do you know if pirate CD-R	11:41:14
19	sales are more prevalent in areas abroad than	11:41:16
20	they are in the United States?	11:41:20
21	A. I -- I think certain markets they	11:41:20
22	are, yes.	11:41:22
23	Q. And did you attempt to quantify the	11:41:22
24	extent to which pirate CD sales contributed to	11:41:28
25	the decline in revenues?	11:41:30

1	ARAM A. SINNREICH, PH.D.	
2	A. No.	11:41:32
3	Q. Are you aware of how many songs	11:41:32
4	were downloaded over peer-to-peer networks	11:41:34
5	compared to the number of pirate CD sales?	11:41:36
6	A. No.	11:41:40
7	Q. Do you know how many songs were	11:41:42
8	downloaded over LimeWire during the time period	11:41:44
9	of its existence?	11:41:46
10	A. No.	
11	Q. Would that have been relevant to	11:41:48
12	your analysis?	11:41:48
13	A. Broadly speaking, yes.	11:41:50
14	Q. Did you ask to get those numbers	11:41:50
15	from LimeWire?	11:41:52
16	A. No.	11:41:54
17	Q. Did you do anything to try and	11:41:54
18	determine what those numbers were?	11:41:56
19	A. Yes.	11:41:58
20	Q. What did you do?	11:41:58
21	A. I looked at publicly reported data	11:42:00
22	from -- and descriptions of data from Big	11:42:04
23	Champagne, which is a third-party research	11:42:10
24	organization that looks at file sharing	11:42:12
25	networks.	11:42:14

1 ARAM A. SINNREICH, PH.D.

2 Q. And based on your research, what do 11:42:14

3 you understand the -- the number of songs that 11:42:18

4 were downloaded over LimeWire to be? 11:42:18

5 A. I don't know. 11:42:20

6 Q. Okay. You mention, factor 11:42:24

7 number 3, the widespread economic recession. 11:42:28

8 This is on Page 16. 11:42:30

9 Did you make any attempt to 11:42:34

10 determine the magnitude that the effect of 11:42:36

11 either or both -- either or both of the 11:42:38

12 recessions you mentioned had on music sales in 11:42:40

13 the United States? 11:42:44

14 A. You mean a direct causal 11:42:46

15 relationship between the recession and the size 11:42:50

16 of the -- of the hit that the music market took? 11:42:52

17 Q. Correct. 11:42:54

18 A. No. 11:42:54

19 Q. Are you aware of any studies that 11:42:54

20 have analyzed that issue? 11:42:58

21 A. No. It's a good subject, though, 11:43:00

22 for a piece of research. 11:43:02

23 MS. YOUNG: We have just a few 11:43:12

24 minutes left on the tape, so why don't we stop 11:43:14

25 quickly so it can be changed. 11:43:16

1	ARAM A. SINNREICH, PH.D.	
2	THE VIDEOGRAPHER: We're going off	11:43:18
3	the record at 11:42 a.m. This marks the end of	11:43:20
4	tape number two.	11:43:24
5	(Recess taken.)	11:43:26
6	THE VIDEOGRAPHER: We are back on	11:51:02
7	the record at 11:50 a.m. This marks the	11:51:10
8	beginning of tape number three.	11:51:14
9	BY MS. YOUNG:	
10	Q. We were talking about the different	11:51:16
11	factors you list that you believe contributed to	11:51:18
12	the decline -- the decline in record industry	11:51:20
13	sales and revenues.	11:51:24
14	And I want to talk now about	11:51:24
15	increased competition for consumer retainment	11:51:26
16	spending, which starts at Page 16.	11:51:30
17	You say that home video sales --	11:51:34
18	well, let me back up.	11:51:38
19	You said earlier that the empirical	11:51:38
20	research that's been done on this issue has been	11:51:42
21	done by market research firms?	11:51:44
22	A. Correct.	11:51:46
23	Q. Are you aware of other empirical	11:51:48
24	research that supports what you're discussing in	11:51:50
25	this section?	11:51:56

1	ARAM A. SINNREICH, PH.D.	
2	A. I'm aware that it is a subject that	11:51:56
3	is researched fairly broadly, but I am not aware	11:51:58
4	of specific publications that I could list for	11:52:00
5	you at the moment.	11:52:02
6	Q. Are all of the specific	11:52:02
7	publications you're aware that address these	11:52:04
8	issue -- this issue listed in your report?	11:52:06
9	A. No.	11:52:08
10	Q. No.	11:52:10
11	So what did you -- so when you were	11:52:16
12	picking sources to rely on in your report,	11:52:20
13	footnoting them and whatnot, were you trying to	11:52:22
14	pick the best most representative sources that	11:52:26
15	you could find?	11:52:28
16	A. Within the time constraints that I	11:52:28
17	had, yes.	11:52:30
18	Q. Okay. And you've mentioned that a	11:52:34
19	couple of times. What time constraints were you	11:52:36
20	operating under?	11:52:38
21	A. Well, you know, I have a full-time	11:52:40
22	job as a college professor, so I had to prepare	11:52:40
23	the testimony during the times when I wasn't	11:52:44
24	fulfilling my duties as a -- as a professor.	11:52:46
25	Q. And when did you submit your	11:52:50

1	ARAM A. SINNREICH, PH.D.	
2	report?	11:52:52
3	A. I believe --	11:52:52
4	MR. OLLER: Object to the form.	11:52:56
5	What do you mean by submit?	11:52:58
6	A. That's a good question.	11:52:58
7	MR. OLLER: This -- this report?	11:53:00
8	MS. YOUNG: I guess -- well, the	11:53:02
9	date is on it.	11:53:04
10	MR. OLLER: The date -- if that's	11:53:04
11	what you mean.	11:53:06
12	MS. YOUNG: Yeah.	11:53:06
13	Q. Okay. So in the limited time	11:53:12
14	period you were given, did you try and find the	11:53:16
15	best most relevant sources to rely on and	11:53:18
16	include in your report?	11:53:20
17	A. Yes.	11:53:20
18	Q. Okay. You refer to -- and you	11:53:22
19	mentioned that market research firms have	11:53:26
20	analyzed the increased competition from consumer	11:53:28
21	retainment spending?	11:53:32
22	A. Correct.	11:53:34
23	Q. Okay. You say that home video	11:53:36
24	sales in the U.S. doubled between with 2000 and	11:53:38
25	2005, growing by roughly eight million?	11:53:40

1	ARAM A. SINNREICH, PH.D.	
2	A. Eight billion.	11:53:44
3	Q. Eight billion, I'm sorry. Eight	11:53:46
4	billion, my mistake.	11:53:48
5	And you cite a New York Times	11:53:50
6	article for that -- that --	11:53:54
7	A. Yes.	11:53:56
8	Q. -- statement, correct?	11:53:58
9	Is there any other basis for the	11:54:00
10	numbers that you're offering here?	11:54:02
11	A. Yes. As I said before, I read a	11:54:02
12	lot of trade journals. It's a subject of	11:54:06
13	ongoing concern and comment within trade	11:54:08
14	publications.	11:54:12
15	Q. Okay. So the numbers that were	11:54:12
16	cited in the New York Times article, are those	11:54:14
17	consistent with what you've read in other	11:54:18
18	publications?	11:54:20
19	A. Yes.	11:54:20
20	Q. Where is this eight million number	11:54:20
21	coming from?	11:54:22
22	MR. OLLER: Billion.	11:54:24
23	Q. Billion, I'm sorry.	11:54:24
24	Eight billion number coming from?	11:54:26
25	A. There was a chart in the article.	11:54:28

1	ARAM A. SINNREICH, PH.D.	
2	Q. And you got eight billion from the	11:54:32
3	chart?	11:54:36
4	A. Correct, roughly eight billion.	11:54:36
5	Q. And where did you get the 2000 and	11:54:38
6	2005 endpoints?	11:54:40
7	A. The article was published in 2005.	11:54:42
8	Q. Okay. And so where did the 2000	11:54:46
9	endpoint come from?	11:54:48
10	A. The chart in the article, I	11:54:50
11	believe.	11:54:56
12	Q. Does it matter --	11:54:56
13	A. I correct myself. The article was	11:54:58
14	published in 2006. So --	11:55:00
15	Q. Okay.	
16	A. -- 2005 was the most recent year	11:55:02
17	during which there was data.	11:55:04
18	Q. Do you think -- did the chart show	11:55:12
19	what happened in the years in between 2000 and	11:55:14
20	2005?	11:55:16
21	A. Yes.	11:55:16
22	Q. Okay. And what did it show?	11:55:18
23	A. Well, that there was -- in the	11:55:22
24	early years of the decade, there was	11:55:24
25	considerable growth in the marketplace, largely	11:55:28

1 ARAM A. SINNREICH, PH.D.

2 because the new DVD format was -- had a little 11:55:32

3 bit of a replacement cycle itself, the way the 11:55:34

4 CDs had 15 years earlier. And due to the rapid 11:55:38

5 proliferation of that technology, toward the end 11:55:44

6 of the decade, it plateaued. 11:55:46

7 Q. Okay. And what happened after 2005 11:55:50

8 in terms of home video sales? 11:55:54

9 A. They've been much more stagnant. 11:55:56

10 Q. Did you consider what happened 11:55:58

11 after 2005 in offering the opinions that you 11:56:00

12 offer about increased competition for consumer 11:56:04

13 retainment spending? 11:56:06

14 A. Yes. 11:56:06

15 Q. When you say "home video," what 11:56:16

16 does that include? 11:56:18

17 A. I believe that the figure I cite 11:56:20

18 only include the retail distribution of physical 11:56:24

19 home video formats like DVD, Blu-ray and VHS. 11:56:30

20 Q. Okay.

21 A. As you probably know, there -- even 11:56:38

22 as those retail sales have tapered off in recent 11:56:38

23 years, there's been a boom in other monetized 11:56:44

24 video distribution such as Netflix. 11:56:46

25 Q. Okay. And that's not included in 11:56:50

1	ARAM A. SINNREICH, PH.D.	
2	your report?	11:56:52
3	A. No.	11:56:52
4	Q. Why is it not included in your	11:56:52
5	report?	11:56:54
6	MR. OLLER: Well, hold on.	11:56:54
7	A. I -- I --	
8	MR. OLLER: You're saying Netflix	11:56:56
9	is not mentioned in the report? It's in the	11:56:56
10	very next paragraph.	11:57:02
11	Q. It's not included in the numbers	11:57:04
12	that are being reported in this report, right?	11:57:06
13	MR. OLLER: Fine, fine.	11:57:10
14	A. That's correct.	11:57:10
15	Q. Okay. Why -- did you try to get	11:57:12
16	numbers for Netflix? Why aren't Netflix numbers	11:57:14
17	included in the report?	11:57:18
18	A. Again, this was a short section of	11:57:20
19	a long report, and I was looking for numbers	11:57:22
20	that indicated the point rather than provided	11:57:24
21	comprehensive coverage of the subject.	11:57:26
22	Q. Okay. Do you include rentals in	11:57:30
23	your analysis?	11:57:32
24	A. No.	11:57:34
25	Q. Would that have been relevant?	11:57:34

1 ARAM A. SINNREICH, PH.D.

2 A. Yes. And I've -- I've actually 11:57:36
3 done research on -- on the home video market in 11:57:38
4 the past on behalf of Sony Pictures, Radar did 11:57:42
5 research on behalf of Sony. 11:57:46

6 So it's a subject that -- that I've 11:57:48
7 spent some time on over the years, but at the 11:57:50
8 moment, while I was writing the report, this is 11:57:54
9 what I had access to. 11:57:56

10 Q. And do you know what was happening 11:57:58
11 with the rentals during the time period that you 11:58:00
12 were asked to look at for purposes of the 11:58:02
13 report? 11:58:04

14 A. Well, the brick and mortar video 11:58:04
15 rental industry took a very large hit, and 11:58:08
16 Blockbuster obviously went from one of the 11:58:10
17 dominant distributors to an embattled one. 11:58:12

18 But during the same period of time, 11:58:18
19 digital streaming and download rentals 11:58:20
20 skyrocketed. 11:58:24

21 Q. So would you say that we're not 11:58:26
22 really getting the full picture when we look 11:58:28
23 just at home video sales, we're not looking at 11:58:32
24 the rental market? 11:58:34

25 A. We're not getting a comprehensive 11:58:36

1 ARAM A. SINNREICH, PH.D.
2 description of the total market. 11:58:38
3 Q. You also look at video games, and 11:58:44
4 you say video game console and game sales nearly 11:58:48
5 trimmed between 2000 and 2008, growing from \$8 11:58:52
6 billion to \$24.1 billion -- 11:58:56
7 MR. OLLER: 21.4. 11:58:58
8 Q. -- 21.4. I'm sorry. 11:59:00
9 And you cite an NPD group study for 11:59:02
10 that? 11:59:08
11 A. Correct. 11:59:08
12 Q. Is there any other basis for these 11:59:08
13 numbers that you reference in your report? 11:59:10
14 A. NP -- no, but NPD is considered to 11:59:16
15 be the premier provider of market figures 11:59:20
16 related to that industry. 11:59:22
17 And, in fact, I believe they're the 11:59:24
18 ones that are used by the trade associations' 11:59:24
19 publications. 11:59:28
20 Q. So you consider them to be a 11:59:30
21 reliable -- 11:59:30
22 A. Very.
23 Q. -- source of data? 11:59:32
24 A. Yes. 11:59:32
25 Q. Have you relied on them in your own 11:59:34

1	ARAM A. SINNREICH, PH.D.	
2	research and analysis?	11:59:38
3	A. Yes.	11:59:38
4	Q. Okay. So here you mention an	11:59:46
5	eight-year span of time between 2000 and 2008.	11:59:48
6	Do you know what was happening with	11:59:52
7	the video game market between 2000 to 2008?	11:59:54
8	A. Yes.	11:59:56
9	Q. Okay. Can you describe generally	11:59:56
10	what course it took?	11:59:58
11	A. There was a new generation of	12:00:00
12	consoles released during that time period in the	12:00:04
13	middle of the decade that spurred a renewed	12:00:08
14	consumer interest in purchasing software and	12:00:12
15	peripherals.	12:00:18
16	There was also a growth in online	12:00:18
17	gaming, both what's known as hardcore gaming via	12:00:22
18	games like World of Warcraft which, at its	12:00:28
19	apogee, had something like 11 or 12 million	12:00:32
20	simultaneous users, and -- through casual	12:00:34
21	gaming, which is not included, I believe, in	12:00:40
22	these figures and accounts for another several	12:00:40
23	billion dollars in consumer expenditures and	12:00:44
24	revenues.	12:00:46
25	Q. What do you mean by casual gaming?	12:00:48

1 ARAM A. SINNREICH, PH.D.

2 A. Games like, for instance, FarmVille 12:00:52
3 on Facebook. 12:00:54

4 Q. Okay. So the kinds you might find 12:00:56
5 on social networks and things like that? 12:00:58

6 A. Correct. 12:01:00

7 Q. Okay. You said there was a new -- 12:01:00
8 new generation of consoles that came on the 12:01:02
9 scene during this time period. 12:01:06

10 Roughly what year was that? 12:01:08

11 A. The -- I think the -- the Nintendo 12:01:10
12 Wii was released in 2005, maybe it was released 12:01:14
13 in the U.S. in '06, but somewhere -- I think 12:01:18
14 it's 2005. The XBox 360 from Microsoft was also 12:01:18
15 2005, and Play Station III from Sony was maybe 12:01:26
16 2006. It was all within a year or two time 12:01:32
17 frame. 12:01:36

18 Q. And what about online gaming, when 12:01:36
19 did that come on the scene in a big way? 12:01:38

20 A. Well, it's been growing steadily 12:01:40
21 since -- since before the days of the graphical 12:01:44
22 browser. So even 20 years ago, there were 12:01:48
23 people playing online text-based games. 12:01:50

24 And as the power of people's home 12:01:56
25 computers has grown and as the speed with which 12:01:58

1	ARAM A. SINNREICH, PH.D.	
2	they were networked to one another has	12:02:02
3	increased, consumer interest in and time spent	12:02:04
4	on and money spent on and revenues made from	12:02:06
5	online games has grown.	12:02:08
6	Q. And what about casual gaming, when	12:02:10
7	did that start?	12:02:16
8	A. That is more of a recent phenomenon	12:02:16
9	that started in the -- it became a significant	12:02:20
10	phenomenon with the -- the growth of social	12:02:22
11	networking and portable network devices in the	12:02:24
12	early to mid-2000s.	12:02:28
13	Q. Okay. So the -- the growth in the	12:02:32
14	video game market from 2000 to 2008 wasn't	12:02:34
15	constant, is that right, or it didn't grow at a	12:02:38
16	constant even rate?	12:02:42
17	A. It was not a linear growth curve,	12:02:42
18	no.	12:02:46
19	Q. And what happened in the video game	12:02:50
20	market after 2008?	12:02:52
21	A. Software titles took kind of a	12:02:54
22	beating for the last year or two.	12:02:56
23	Q. So the market has declined since	12:03:00
24	2008, is that what you're saying?	12:03:02
25	A. Measured in terms of retail sales	12:03:04

1 ARAM A. SINNREICH, PH.D.
2 of software titles, yes. If you included all 12:03:06
3 the revenues from casual gaming and from Android 12:03:10
4 and IOS-based portable games, I'm not sure 12:03:14
5 whether you would see a net growth or decrease. 12:03:20
6 Q. But do you know what those numbers 12:03:22
7 are? 12:03:24
8 A. Not off the top of my head. 12:03:24
9 Q. Okay. You then say, "Many other 12:03:30
10 examples can be cited, including a boom in 12:03:34
11 consumer expenditures for premium cable, 12:03:38
12 broadband, Internet access, mobile voice and 12:03:40
13 data contracts, online video rental" -- there 12:03:42
14 you mention Netflix -- and mobile applications, 12:03:46
15 collectively accounting for tens of billions of 12:03:50
16 dollars in spending each year." 12:03:52
17 And my question is: Where does the 12:03:54
18 tens of billions of dollars figure come from? 12:03:56
19 A. From top line market sizing figures 12:04:08
20 that are publicly available for these various 12:04:12
21 industries. 12:04:16
22 So, you know, broadband access 12:04:18
23 has -- you know, if you look at data from Pew or 12:04:22
24 any of the many, many, many sources for it, has 12:04:24
25 grown from a minority to a majority of American 12:04:28

1	ARAM A. SINNREICH, PH.D.	
2	Internet households during this time frame.	12:04:32
3	Broad -- broadband on average costs	12:04:34
4	two or three times what dialup costs. You can	12:04:36
5	do back-of-envelope math and -- and get the	12:04:40
6	general scale of the revenues accruing from that	12:04:44
7	channel. And that's basically the method that I	12:04:48
8	used to come up with that rough tens of billions	12:04:50
9	of dollars.	12:04:54
10	Q. A back-of-the-envelope math?	12:04:54
11	A. Back-of-envelope math, looking at	12:04:56
12	the general size and cost structure of these	12:04:58
13	different channels.	12:05:02
14	Q. And when you looked at the general	12:05:04
15	size and cost structure of the different	12:05:06
16	channels, what sources did you consult?	12:05:08
17	A. Some of it was cited in the	12:05:12
18	research that I -- I have cited here. Some of	12:05:18
19	it was just general trade publications or	12:05:20
20	pre-existing expertise on my part.	12:05:22
21	Q. And you say that they collectively	12:05:32
22	account for tens of billions of dollars in	12:05:36
23	spending each year.	12:05:38
24	A. That's correct.	12:05:40
25	Q. What years are you talking about?	12:05:40

1	ARAM A. SINNREICH, PH.D.	
2	A. Let's say for the last five years.	12:05:48
3	Q. Well, you're saying "let's say,"	12:05:52
4	but what did you actually do -- you described	12:05:54
5	this back-of-the-envelope methodology.	12:05:56
6	What years were you looking at?	12:06:00
7	A. For the most part, I was looking --	12:06:02
8	well, when I look at growth curves, I was	12:06:04
9	looking at the available data for the -- the	12:06:06
10	range of years that -- that are covered by the	12:06:10
11	data publications.	12:06:14
12	For the back-of-envelope analysis,	12:06:14
13	I was simply looking at the most recent data	12:06:16
14	about cost and penetration.	12:06:20
15	That's -- that's why it's a very	12:06:22
16	rough figure. I don't say it's 22.3 billion or	12:06:24
17	14.1 billion. It's -- it's -- the general range	12:06:28
18	in which the aggregate revenues are is in the	12:06:32
19	tens of billions.	12:06:36
20	Q. Okay. But it's also an absolute	12:06:38
21	number, right?	12:06:40
22	A. No, it's a range of -- it's a very	12:06:40
23	broad range of numbers.	12:06:42
24	Q. Broad range of numbers.	12:06:44
25	And did you consider, you know, how	12:06:46

1	ARAM A. SINNREICH, PH.D.	
2	spending might have gone up or down or trends in	12:06:48
3	spending over the time period we're talking	12:06:52
4	about, which is 2000 --	12:06:54
5	A. Yes.	12:06:56
6	Q. -- to 2010?	12:06:56
7	A. Yes.	12:07:00
8	For each of these -- for each of	12:07:00
9	the revenue channels I mention in that	12:07:04
10	paragraph, the trend has been positive during	12:07:06
11	that time period.	12:07:08
12	Q. Has it been uniformly positive?	12:07:08
13	A. I can't attest to whether there	12:07:10
14	have been down years, but the overall trend has	12:07:12
15	been upwards.	12:07:16
16	Q. And has it been a linear growth?	12:07:16
17	A. No. The market growth is never	12:07:18
18	linear.	12:07:20
19	Q. Did you analyze how much more	12:07:22
20	people were spending on each of these forms of	12:07:24
21	entertainment?	12:07:28
22	A. Only in the most broad sense.	12:07:28
23	Q. What do you mean by that?	12:07:30
24	A. The kind of back-of-envelope	12:07:32
25	analysis that I was talking about before.	12:07:34

1 ARAM A. SINNREICH, PH.D.

2 Again, this was one paragraph in a 60-page, 12:07:36
3 single-spaced report. So I didn't devote more 12:07:40
4 than the allotted amount of time to it. 12:07:46

5 Q. So are you offering an opinion here 12:07:48
6 that the dollars that were spent on these forms 12:07:50
7 of entertainment substituted for dollars that 12:07:52
8 otherwise would have been spent on music? 12:07:56

9 A. Yes. Consumers in aggregate have a 12:07:56
10 finite amount of discretionary spending. 12:08:00

11 Q. And what's the empirical basis 12:08:02
12 for -- for saying that these dollars that were 12:08:04
13 spent on these other forms of entertainment 12:08:08
14 substituted for dollars that otherwise would 12:08:10
15 have been spent on music? 12:08:12

16 A. Well, in my experience surveying 12:08:12
17 consumers about their entertainment and media 12:08:14
18 spending habits, they're -- I have found 12:08:18
19 conclusive evidence that consumers shift 12:08:22
20 spending from one channel to another channel and 12:08:26
21 that certain channels can cannibalize other 12:08:28
22 channels. 12:08:32

23 And that's very consistent with 12:08:32
24 research that's been performed by others in the 12:08:34
25 field throughout the entire time that I've been 12:08:38

1	ARAM A. SINNREICH, PH.D.	
2	reading market research.	12:08:42
3	Q. Okay. So you cite your own	12:08:42
4	experience?	12:08:44
5	A. Yes.	12:08:46
6	Q. And then you cite other research.	12:08:46
7	I want you to tell me what research that is.	12:08:48
8	A. Well, published reports by Jupiter,	12:08:52
9	Forester, Gartner, IVC, NPD, Pew, there -- there	12:08:54
10	are -- Yankee Group. There are many, many being	12:09:02
11	many different providers of market information	12:09:06
12	that quantify through surveys and through other	12:09:12
13	forms of analysis how consumer expenditures	12:09:16
14	shift from -- from one channel to another over	12:09:20
15	time.	12:09:30
16	Q. Okay. Are you attempting to	12:09:30
17	quantify how much money was substituted by --	12:09:32
18	let me rephrase that.	12:09:34
19	Are you attempting to quantify how	12:09:36
20	much money people were spending on other forms	12:09:40
21	of entertainment that they might otherwise have	12:09:40
22	spent on music?	12:09:44
23	A. No.	12:09:46
24	Q. And are you offering an opinion	12:09:46
25	about how much of the decline in music sales is	12:09:48

1	ARAM A. SINNREICH, PH.D.	
2	attributable to competition from other forms of	12:09:52
3	entertainment?	12:09:54
4	A. No.	12:09:54
5	Q. Do you think that can be measured?	12:09:54
6	A. No.	12:09:58
7	Q. Why not?	12:09:58
8	A. For the reasons that we've talked	12:09:58
9	about a few times during this deposition, which	12:10:02
10	is that the many different factors don't operate	12:10:04
11	discretely, but in confluence with one another.	12:10:08
12	Q. What factors operate in confluence	12:10:10
13	with this particular factor that we're talking	12:10:14
14	about now?	12:10:16
15	A. Well, the recession obviously has	12:10:18
16	an influence on overall consumer spending, and	12:10:20
17	it also causes consumers to reprioritize their	12:10:24
18	discretionary spending. The success or failure	12:10:26
19	of the retailers in the marketplace influences	12:10:30
20	the availability, price points and consumer	12:10:32
21	knowledge of and interest in the products.	12:10:36
22	The -- obviously the CD format cycle and end of	12:10:42
23	MAP pricing are both -- and unbundling are very	12:10:46
24	music specific, so those don't have as many	12:10:48
25	interaction effects -- although, you know, to a	12:10:50

1 ARAM A. SINNREICH, PH.D.
2 certain extent, the end of minimum advertised 12:10:54
3 pricing, which is small letter g, changed the 12:10:56
4 balance of power between music retailers away 12:10:58
5 from music specific retailers to big box 12:11:02
6 retailers, like Walmart and Best Buy and, in so 12:11:04
7 doing, brought more consumers interested in 12:11:08
8 buying music into those retail establishments 12:11:10
9 where they were exposed to products in these 12:11:14
10 other categories and probably accelerated the 12:11:16
11 cannibalization of consumer spend from music to 12:11:20
12 other entertainment products. 12:11:22
13 So, as I was saying, there are 12:11:24
14 many, many different interaction effects that 12:11:26
15 you could identify between the factors. 12:11:30
16 Q. Okay. The next factor you talk 12:11:36
17 about is the bankruptcy of music retailers and 12:11:38
18 the decline in shelf space, at the top of 12:11:42
19 Page 17. 12:11:48
20 A. Yep. 12:11:48
21 Q. Can you just explain your reasoning 12:11:50
22 here why it is that you think this factor led to 12:11:52
23 declines in record label sales and revenues? 12:11:56
24 A. Sure. 12:12:00
25 I think, again, there were many 12:12:00

1 ARAM A. SINNREICH, PH.D.
2 relevant format to consumers overall. 12:18:28
3 So the -- the bulk of new releases 12:18:30
4 were becoming available either primarily or 12:18:38
5 entirely in CD format, meaning there was no 12:18:42
6 requirement that they be replaced by a CD. 12:18:44
7 Also, exacerbating that was the -- 12:18:48
8 the de-emphasis on non-CD formats in -- in 12:18:56
9 retail environments. So there was essentially a 12:18:58
10 whole -- a decade-long ascension of CD to the 12:19:00
11 dominant format, and by the time that was done, 12:19:04
12 more or less all of the replacing that was going 12:19:12
13 to happen had happened and there wasn't a lot 12:19:14
14 left to be done. 12:19:16
15 Q. Okay. For that last statement, all 12:19:16
16 of the replacing that was going to have happened 12:19:18
17 had happened -- 12:19:20
18 A. Right. 12:19:22
19 Q. -- what empirical evidence do you 12:19:22
20 have about when that point was reached? 12:19:26
21 A. I don't have a -- I didn't cite a 12:19:28
22 specific point because I don't have empirical 12:19:32
23 evidence regarding that specific point. 12:19:36
24 I mean, this is a trend, not a -- a 12:19:36
25 discrete event encapsulated at a specific moment 12:19:40

1 ARAM A. SINNREICH, PH.D.

2 of time. So if you think of it as a -- as -- I 12:19:46

3 think I describe it as a cycle, the reason it's 12:19:48

4 described as a cycle, it begins, it reach is its 12:19:50

5 apogee and then -- then it ends. 12:19:54

6 Q. Okay. Are you aware of any 12:19:56

7 academic literature that attempts to gauge the 12:19:56

8 impact of the replacement phenomenon on record 12:20:00

9 sales? 12:20:04

10 A. Yes. I've seen academic literature 12:20:04

11 on the subjects. 12:20:08

12 Q. What have you seen? 12:20:08

13 A. I couldn't cite titles or authors 12:20:10

14 off the top of my head. 12:20:12

15 Q. Did you review that literature in 12:20:14

16 connection with preparing this report? 12:20:16

17 A. No. I think I would have cited it 12:20:20

18 if I had. 12:20:22

19 Q. Do you know what that literature 12:20:22

20 has concluded? 12:20:24

21 A. Yeah, I think it supports the 12:20:26

22 consensus opinion that -- that there was a CD 12:20:28

23 replacement cycle that began in the late '80s or 12:20:32

24 early '90s and lasted until the end of the '90s. 12:20:36

25 Q. Are you aware of any academic 12:20:38

1	ARAM A. SINNREICH, PH.D.	
2	literature that reaches the opposite	12:20:40
3	conclusion --	12:20:42
4	A. No.	12:20:42
5	Q. -- that there was no -- I'm sorry.	12:20:44
6	So what kind of music was being	12:21:12
7	replaced by CDs?	12:21:14
8	A. Everything that was being made	12:21:16
9	available on CD that had previously been made	12:21:18
10	available on other formats.	12:21:22
11	Q. I think you said earlier, though,	12:21:24
12	for the most part, new releases weren't being	12:21:24
13	replaced because if you just wanted a new	12:21:28
14	release, you'd go get it on CD, you wouldn't buy	12:21:30
15	the cassette or the LP?	12:21:34
16	A. Correct.	12:21:34
17	Q. So, again, are you offering any	12:21:36
18	opinion about how much of the decline in music	12:21:40
19	sales is attributable to this replacement -- the	12:21:42
20	end of the replacement cycle?	12:21:44
21	A. No, I don't think that's a	12:21:46
22	quantifiable figure.	12:21:48
23	Q. All right. You've mentioned	12:21:54
24	minimum advertised pricing a couple of times, so	12:21:56
25	let's talk about that.	12:21:58

1	ARAM A. SINNREICH, PH.D.	
2	Do you know for how many years	12:22:04
3	minimum advertised pricing was used to price CDs	12:22:06
4	in the United States?	12:22:10
5	A. No.	12:22:10
6	Q. Do you know roughly what time	12:22:10
7	period minimum advertised pricing was used for?	12:22:12
8	A. I'm not sure.	12:22:16
9	Q. Have you considered whether record	12:22:20
10	label revenues increased and to what extent when	12:22:24
11	MAP was introduced?	12:22:28
12	A. Yes. I know that MAP was standard	12:22:30
13	practice throughout the 1990s, which was a	12:22:32
14	period of time during which the value of the	12:22:38
15	retail industry increased considerably.	12:22:40
16	Q. Okay. You said it was standard	12:22:44
17	practice in industry through the 1990s. Can you	12:22:44
18	be more specific about the time period in which	12:22:48
19	you believe it was standard practice for MAP?	12:22:52
20	A. I think throughout the entire	12:22:54
21	1990s, it was standard practice, but I don't	12:22:56
22	know specific dates.	12:23:00
23	Q. Do you know what the MAP price was?	12:23:06
24	A. Not off the top of my head,	12:23:12
25	although I've seen the figure, so a wholesale	12:23:14

1 ARAM A. SINNREICH, PH.D.
2 price in the range of maybe -- well, the MAP 12:23:20
3 price wasn't wholesale, it was retail -- I think 12:23:22
4 it was in the range of \$15, but I don't remember 12:23:26
5 the exact figure. 12:23:28
6 Q. And where did you see that figure, 12:23:30
7 where is -- where is that from? 12:23:32
8 A. I've read many articles about MAP 12:23:36
9 pricing over the years. You know, most of them 12:23:38
10 I haven't read since the end of MAP pricing a 12:23:40
11 decade ago, which is why my memory is not as 12:23:44
12 clear as it would be if it were more recent. 12:23:46
13 Q. Okay. So you say here, starting at 12:23:48
14 Page 18 and going over to Page 19 -- 12:24:02
15 A. Yes. 12:24:06
16 Q. -- "Given that many music retailers 12:24:06
17 immediately reduced prices from the \$15 range to 12:24:10
18 the \$10 range following the end of MAP pricing 12:24:14
19 in 2000, it is likely that this is a significant 12:24:18
20 contributory factor in market devaluation." 12:24:20
21 A. Yes. 12:24:20
22 Q. So what's your basis for saying 12:24:22
23 that prices were reduced from 15 to 10 dollars? 12:24:24
24 A. There are several bases. One, I've 12:24:28
25 seen figures -- although I couldn't find them 12:24:32

1	ARAM A. SINNREICH, PH.D.	
2	when I was writing this, so I didn't cite	12:24:36
3	them -- showing the average retail price of new	12:24:38
4	CDs during the time period and price comes down	12:24:40
5	from roughly the \$15 range to the -- roughly the	12:24:44
6	\$10 range.	12:24:46
7	Second of all, during this period	12:24:48
8	of time, while I was employed at Jupiter, I -- I	12:24:50
9	was in frequent contact with retailers and NARM,	12:24:56
10	which is the music retailer trade organization,	12:25:00
11	in fact, keynoted the NARM industry conference	12:25:04
12	in, I think, both 2001 and 2002, if I'm not	12:25:08
13	mistaken, maybe it was 2000, 2001, but for	12:25:12
14	two -- two consecutive years, so I was exposed	12:25:16
15	on an ongoing basis to the concerns about --	12:25:18
16	about pricing from the retail sector.	12:25:20
17	Q. Okay.	12:25:24
18	MR. OLLER: Can I just wait for ten	12:25:26
19	seconds to get him some water.	12:25:30
20	THE WITNESS: Thank you.	12:25:32
21	(Discussion held off the record.)	
22	BY MS. YOUNG:	12:26:04
23	Q. So you say many music retailers	12:26:04
24	immediately reduced their prices when MAP	12:26:08
25	pricing ended.	12:26:10

1	ARAM A. SINNREICH, PH.D.	
2	How many retailers?	12:26:12
3	A. I don't know off the top of my	12:26:14
4	head.	12:26:16
5	Q. Do you know roughly what percentage	12:26:16
6	of retailers reduced their prices immediately?	12:26:18
7	A. Well, I know that the big box	12:26:20
8	retailers who accounted for a -- at that time	12:26:22
9	probably a plurality of brick and mortar CD	12:26:30
10	sales reduced their prices instantaneously after	12:26:34
11	that -- that ruling came down.	12:26:42
12	Q. And after -- okay. What ruling are	12:26:44
13	you referring to?	12:26:46
14	A. The -- the settlement in the MAP	12:26:46
15	pricing investigation.	12:26:52
16	Q. Okay. And what's your basis for	12:26:56
17	saying that the -- the big box retailers	12:26:58
18	immediately reduced their prices?	12:27:02
19	A. Again, I was in contact with the	12:27:04
20	retailers at the time. The head of the retailer	12:27:08
21	trade organization was somebody I spoke to on an	12:27:12
22	ongoing basis. I was paying attention to the	12:27:16
23	marketplace. There were many articles written	12:27:18
24	about it, some of which I was probably quoted	12:27:22
25	in. It was -- it was a matter of common	12:27:24

1	ARAM A. SINNREICH, PH.D.	
2	knowledge within the music industry.	12:27:26
3	Q. Have you heard of the term	12:27:30
4	"elasticity"?	12:27:34
5	A. Yes, but I couldn't define it for	12:27:36
6	you.	12:27:38
7	Q. Okay. So what empirical evidence	12:27:50
8	do you have that because of reductions in prices	12:27:54
9	as a result of the end of MAP, revenues	12:27:58
10	decreased?	12:28:00
11	A. Well, it's a matter of standard	12:28:06
12	logic.	12:28:08
13	Q. Explain that logic to me.	12:28:08
14	A. Well, if -- if the -- if the price	12:28:10
15	point for a product is \$15 and a hundred people	12:28:14
16	buy that product, the retail value of those	12:28:20
17	exchanges will be \$1,500; if the product is	12:28:24
18	priced at \$10, then the retail value of those	12:28:30
19	exchanges will be \$1,000.	12:28:34
20	Q. If the same 100 people buy the	12:28:36
21	product?	12:28:38
22	A. If the same 100 people buy the	12:28:38
23	product, absolutely.	12:28:40
24	Q. Would you agree with me that some	12:28:42
25	people might be more willing to buy a product	12:28:42

1	ARAM A. SINNREICH, PH.D.	
2	that's priced lower?	12:28:46
3	A. Yes. And that's part of the reason	12:28:46
4	why the big box retailers were fighting for	12:28:48
5	lower price points.	12:28:50
6	Q. So can you say, just by looking at	12:28:52
7	the fact that prices declined, that revenues	12:28:54
8	also necessarily declined?	12:28:56
9	A. Well, it's a multi -- again, it's a	12:29:00
10	multifaceted process.	12:29:02
11	You know, the -- again, when prices	12:29:06
12	come down, purchasing volume tends to go up, but	12:29:08
13	then a secondary -- a second order effect of	12:29:12
14	prices coming down was to drive more retailers	12:29:14
15	out of the music business, which made	12:29:18
16	availability lower, which brought the aggregate	12:29:20
17	value of the sales down. So it's kind of a	12:29:22
18	seesaw where there are many contributory factors	12:29:26
19	at work at the same time.	12:29:32
20	I don't have an empirical study	12:29:34
21	showing you that -- that the aggregate value of	12:29:38
22	the music retail market came down exactly by	12:29:40
23	this dollar figure due to exactly that and only	12:29:44
24	that factor.	12:29:46
25	MS. YOUNG: Okay. We're at a	12:30:00

1 ARAM A. SINNREICH, PH.D.

2 represents -- represents market demand for 13:23:10

3 sales, that question is really up in the air 13:23:15

4 because, as I point out in the report, there's a 13:23:17

5 range of research demonstrating the positive 13:23:20

6 market effects of file sharing on retail sales 13:23:25

7 and other ones disputing those findings. 13:23:28

8 Q. And we talked about that research 13:23:30

9 earlier, correct? 13:23:35

10 A. Correct. 13:23:36

11 Q. You said that there was a reduction 13:23:41

12 in artist rosters that predated the advent of 13:23:42

13 file sharing. By how many years did it predate 13:23:46

14 the advent of file sharing? 13:23:51

15 A. Well, again, we're not talking 13:23:53

16 about a discrete event. It's not like one day 13:23:55

17 there are a thousand artists signed and the next 13:23:59

18 day there were 500 artists signed, but I would 13:24:02

19 say the trend predates the advent of file 13:24:03

20 sharing by the better part of a decade. 13:24:06

21 Q. And what's your basis for saying 13:24:10

22 that? 13:24:11

23 A. Having read trade articles during 13:24:13

24 that time period about reductions in artist 13:24:16

25 rosters and market analyses about the effect of 13:24:18

1	ARAM A. SINNREICH, PH.D.	
2	those reductions.	13:24:22
3	Q. Okay. And, again, are you offering	13:24:25
4	any opinion about how much the decline in music	13:24:27
5	sales is attributable to this set of factors,	13:24:30
6	shrinking artist revenues, fewer album release,	13:24:33
7	fewer shipments?	13:24:37
8	A. Not as discrete from the other	13:24:37
9	factors, no.	13:24:39
10	Q. You also talk about increased	13:24:41
11	competition from used and independently	13:24:43
12	distributed music, starting at Page 21, right?	13:24:45
13	A. Yes.	13:24:51
14	Q. And you say -- why -- why did you	13:24:55
15	include this in your report? And the reason I'm	13:25:00
16	asking is I'm trying to understand what point	13:25:02
17	you're making here.	13:25:05
18	A. I can tell you about what point I'm	13:25:06
19	making. Maybe that'll answer the first half of	13:25:09
20	the question, as well.	13:25:12
21	Q. Yes.	13:25:14
22	A. The point I am making is that if we	13:25:14
23	look at the amount of money that consumers are	13:25:16
24	willing to spend for recorded music products at	13:25:20
25	retail, a percentage of that has always been for	13:25:23

1	ARAM A. SINNREICH, PH.D.	
2	recording are untallied?	13:26:51
3	A. Correct.	13:26:52
4	Q. Okay. How can you know that it	13:26:55
5	represents a significant volume of sales then?	13:26:57
6	A. From personal communications with	13:27:00
7	retailers over the years, as well as trade	13:27:03
8	articles on the subject, including the -- the	13:27:06
9	Billboard article that I site in my report.	13:27:10
10	Q. Okay. So, I mean, what kind of	13:27:14
11	numbers are we talking about here for sales of	13:27:15
12	used recordings?	13:27:19
13	A. I would like to know the answer to	13:27:20
14	that question more than most people, but I	13:27:21
15	don't.	13:27:25
16	Q. Okay. So we don't know whether	13:27:25
17	we're talking about a million used recordings or	13:27:27
18	a hundred million?	13:27:29
19	A. We do not know the actual figure.	13:27:35
20	Given that used CD sales had grown by 2007 to 10	13:27:38
21	to 20 percent of overall CD revenues for	13:27:44
22	retailers interviewed by Ed Christman, we're	13:27:47
23	probably talking about hundreds of millions of	13:27:52
24	dollars.	13:27:55
25	Q. Okay. And do you know which	13:27:55

1	ARAM A. SINNREICH, PH.D.	
2	A. Yeah.	13:32:01
3	The way that SoundScan collects its	13:32:02
4	data is from point of sale purchases --	13:32:04
5	Q. Okay.	
6	A. -- at retailers. Obviously they	13:32:07
7	don't get data from every single retail exchange	13:32:09
8	ever made, so what they do is they extrapolate	13:32:12
9	from their sample what the size of the market	13:32:16
10	is.	13:32:18
11	Now, any sampling methodology like	13:32:18
12	that is going to overrepresent the larger	13:32:20
13	players within that sample and underrepresent	13:32:24
14	the smaller ones or the ones who are so small	13:32:27
15	that they're not captured at all.	13:32:30
16	That's been a fairly broad	13:32:32
17	criticism of SoundScan's for a while. SoundScan	13:32:35
18	has accommodated that in many ways, including	13:32:38
19	tracking online retail, which they didn't for	13:32:41
20	many years during the growth of online retail,	13:32:44
21	but considering how long the long tail is, the	13:32:47
22	vast majority of points of purchase are not	13:32:50
23	accounted for.	13:32:54
24	Q. And what do you mean by long tail?	13:32:54
25	A. Long tail is a phrase coined by	13:32:56

1 ARAM A. SINNREICH, PH.D.

2 Chris Anderson, who is the editor of Wired 13:33:00

3 Magazine, and what it basically means is if you 13:33:03

4 were to look at a chart where the Y axis, the 13:33:06

5 vertical axis, was the number of songs or the 13:33:09

6 number of sales or whatever volumetric figure 13:33:12

7 you want to use and the X axis is the number of 13:33:15

8 artists or releases or sources, what you would 13:33:18

9 find is -- is a distribution curve that looks 13:33:24

10 like this, which is to say that a very small 13:33:27

11 number of sources account for a very large 13:33:30

12 number of transactions, and a very large number 13:33:32

13 of sources independently account for a very 13:33:35

14 small number of transactions, but Anderson's 13:33:38

15 argument is that collectively that long tail 13:33:41

16 represents as much aggregate transaction as the 13:33:44

17 mainstream part of the curve. 13:33:48

18 Q. Okay. And is this phenomenon 13:33:53

19 something that's been studied empirically? 13:33:54

20 A. Yes. 13:33:59

21 Q. And can you -- how has it been 13:34:00

22 studied and by whom? 13:34:02

23 A. It's been studied by industry 13:34:03

24 organizations, by academics, by journalists and 13:34:06

25 by others. There's a lot of contentious debate 13:34:10

1	ARAM A. SINNREICH, 'PH.D.	
2	about it right now. There's an economist named	13:34:14
3	Wil Page who works for British Collection	13:34:18
4	Society who has disputed many of Anderson's	13:34:20
5	findings, for instance.	13:34:24
6	Q. And is there a consensus that's	13:34:25
7	emerged in the literature on the subject?	13:34:27
8	A. The consensus is that the long tail	13:34:29
9	is a real phenomenon, but the question of -- of	13:34:33
10	its relative market size or the significance of	13:34:40
11	that relative size is something that's debated.	13:34:42
12	Q. Okay. And do you have a sense, in	13:35:02
13	your opinion, how much SoundScan might	13:35:05
14	undercount independent sales?	13:35:08
15	A. No, I don't -- I think that would	13:35:09
16	be a very difficult thing to quantify.	13:35:11
17	Q. Okay.	
18	A. I mean, if you were, for instance,	13:35:17
19	to include the, let's say, roughly 5 to 10	13:35:21
20	million bands that play in various venues across	13:35:24
21	the country in a given year, bands or artists,	13:35:28
22	many of whom are selling their own CDs or MP3s	13:35:32
23	in the venues when they're playing to shows,	13:35:38
24	does SoundScan capture any of those	13:35:41
25	transactions? Probably not, but those	13:35:44

1 ARAM A. SINNREICH, PH.D.
2 LimeWire, there were no places where large 13:37:59
3 number of -- large numbers of songs by non -- 13:38:02
4 by -- by non-label affiliated musicians could be 13:38:09
5 made available to the public in large numbers. 13:38:13
6 Q. And you actually do attempt to put 13:38:25
7 some numbers around this market. You say that 13:38:27
8 collectively these independent musicians 13:38:32
9 represent millions of untallied sales and tens 13:38:35
10 or hundreds of millions of dollars annually in 13:38:37
11 consumer music expenditures. 13:38:42
12 Where are you getting those 13:38:44
13 numbers? 13:38:46
14 A. Well, I cite two examples, so two 13:38:46
15 of the larger aggregators of non-label 13:38:48
16 affiliated -- primarily non-label affiliated 13:38:50
17 recording artists are CDBaby and TuneCore. 13:38:53
18 There are several others, as well, some of which 13:38:59
19 I cited. The Orchard is another example of one. 13:39:01
20 And depending on how you look at it, MySpace 13:39:05
21 and -- there -- there are many ways in which 13:39:08
22 independent musicians can now make their music 13:39:10
23 available to the world at large. ReverbNation 13:39:13
24 is another one. 13:39:16
25 But I -- I looked at the -- at 13:39:17

1 ARAM A. SINNREICH, PH.D.

2 press materials for TuneCore and CDBaby and 13:39:18

3 found the numbers that I reported in this 13:39:21

4 report, which is that TuneCore, for instance, 13:39:23

5 had -- was responsible for \$32 million in sales 13:39:27

6 in 2009 and that in roughly a year-and-a-half, 13:39:30

7 CDBaby had -- was responsible for roughly a 13:39:35

8 hundred million dollars in retail value. 13:39:42

9 Q. I'm sorry. Where -- where are you 13:39:49

10 getting the CDBaby number from? Is that in your 13:39:51

11 report? 13:39:55

12 A. Yes. CDBaby said that it has paid 13:39:55

13 out a total of \$157 million to its artists to 13:40:00

14 date, half of which was in the prior 18 months. 13:40:04

15 MR. OLLER: I think it's one-third. 13:40:08

16 A. My mistake. I misremembered the 13:40:09

17 data, I'm sorry. It's one-third -- 13:40:12

18 Q. One-third.

19 A. -- not one-half. 13:40:13

20 So it would have been roughly \$67 13:40:14

21 million in a year -- \$67 million in retail value 13:40:22

22 during a year-and-a-half. 13:40:26

23 Q. Okay. And when CDBaby says it's 13:40:27

24 paid out a total of 157 million to artists to 13:40:30

25 date, is that since it was opened? 13:40:34

1	ARAM A. SINNREICH, PH.D.	
2	A. Yes.	13:40:35
3	Q. And when was CDBaby opened?	13:40:35
4	A. About a decade ago.	13:40:38
5	Q. It says \$157 million over the	13:40:39
6	course of a decade.	13:40:42
7	A. Half of it over the course of 18	13:40:43
8	months, so there's a --	13:40:45
9	MR. OLLER: One-third.	13:40:46
10	Q. One-third.	13:40:47
11	A. Sorry. I don't know why that	13:40:48
12	number is stuck in my head.	13:40:50
13	One-third over the course of 18	13:40:51
14	months, which indicates a pretty steep growth	13:40:53
15	curve over that time.	13:40:55
16	Q. So many more of those songs were	13:40:56
17	being -- I'm sorry, these are payments.	13:41:01
18	So it's paying much more much more	13:41:03
19	recently, right?	13:41:05
20	A. Yes. The -- the volume of sales	13:41:07
21	transacted by the independent aggregators has	13:41:10
22	increased drastically in recent years.	13:41:14
23	Q. And how recent has that increase	13:41:17
24	been?	13:41:19
25	A. Well, clearly if one-third of the	13:41:19

1 ARAM A. SINNREICH, PH.D.
2 ten-year span is accounted for by a 13:41:22
3 year-and-a-half, it's a logarithmic scale, that 13:41:26
4 is to say, it's -- it's an accelerating growth 13:41:30
5 curve. 13:41:34
6 Q. Okay. And the data points you 13:41:45
7 looked at, TuneCore and CDBaby, are both digital 13:41:47
8 distributors? 13:41:52
9 A. Primarily. CDBaby also 13:41:52
10 distributed -- because they started ten years 13:41:55
11 ago, distributed physical goods, but they've 13:41:56
12 been phasing out their physical inventory in 13:42:00
13 favor of digital. 13:42:02
14 Q. So how do you know that the 13:42:03
15 accelerated growth you're seeing in TuneCore and 13:42:04
16 CDBaby isn't just a result of the distribution 13:42:08
17 paradigm shifting from physical sales and 13:42:11
18 physical retailers to online sources? 13:42:14
19 A. I'm sure that's part of -- 13:42:16
20 that's -- that's one of the factors accounting 13:42:18
21 for it, but that doesn't dispute my premise at 13:42:20
22 all. 13:42:26
23 Independent musicians did not have 13:42:26
24 as much access to those physical retail outlets 13:42:28
25 as they do to the online retail outlets because 13:42:33

1	ARAM A. SINNREICH, PH.D.	
2	of the cost of distribution that we were talking	13:42:36
3	about before.	13:42:38
4	Q. Okay. Do you know what percent of	13:42:38
5	the songs on LimeWire were songs by independent	13:42:40
6	artists?	13:42:43
7	A. I'm not sure I understand the	13:42:44
8	parameters of your question. Are you talking	13:42:45
9	about the number of transactions, or are you	13:42:47
10	talking about the aggregate number of titles	13:42:49
11	that you could list?	13:42:51
12	Q. Let's talk about downloads. What	13:42:52
13	percent of the downloads from LimeWire were	13:42:54
14	independent -- from independent artists?	13:42:56
15	A. I don't know.	13:42:59
16	Q. And, again, are you attempting to	13:43:02
17	offer any sort of opinion about what percent of	13:43:04
18	the decline in total record -- record label	13:43:08
19	sales is attributable to the independent market?	13:43:10
20	A. No.	13:43:14
21	Q. Let's go to the next section of	13:43:18
22	your report on page -- Section 3(a)4.	13:43:21
23	MR. OLLER: What page is that?	13:43:33
24	MS. YOUNG: It's Page 22.	13:43:36
25	And it's titled, "To the extent	13:43:40

1	ARAM A. SINNREICH, PH.D.	
2	that freely available online music has affected	13:43:42
3	music sales, LimeWire's role is minimal."	13:43:46
4	And just explain to me what your	13:43:49
5	point is in this section of the report. What	13:43:51
6	are you trying to say, what opinion are you	13:43:53
7	offering?	13:43:55
8	A. I'm offering the opinion that there	13:43:55
9	are so many channels through which music fans	13:43:58
10	can access music freely over the Internet that	13:44:01
11	LimeWire's absence from that mix would have a	13:44:05
12	minimal effect, that -- and, therefore, that	13:44:09
13	the -- the aggregate impact of LimeWire on the	13:44:15
14	behavior of that marketplace and the -- the	13:44:18
15	market opportunities is negligible compared to	13:44:23
16	the bulk of those other factors.	13:44:26
17	Q. Okay. Are you offering an opinion	13:44:39
18	that these other free offerings contributed to a	13:44:40
19	decline in music sales?	13:44:43
20	A. To the extent that -- am I	13:44:45
21	offering an opinion -- can you repeat the	13:44:53
22	question?	13:44:54
23	MS. YOUNG: Can he have the	13:44:55
24	question read back -- can I have the question	13:44:55
25	read back, please.	13:44:57

1	ARAM A. SINNREICH, PH.D.	
2	than other peer-to-peer file services?	13:47:32
3	A. No, I -- I could not evaluate the	13:47:37
4	relative merits of the LimeWire user experience.	13:47:39
5	Q. You've used LimeWire, right?	13:47:41
6	A. Yes.	13:47:42
7	Q. Have you used other peer-to-peer	13:47:43
8	services?	13:47:45
9	A. Yes.	13:47:46
10	Q. Which other peer-to-peer services	13:47:46
11	have you used?	13:47:48
12	A. I've -- I've used Napster, I've	13:47:49
13	used Kazaa, I've used Morphius, I've used Views	13:47:51
14	and I've used BitTorrent.	13:48:00
15	I think that that's probably a	13:48:05
16	substantial, if not entirely comprehensive list.	13:48:07
17	Q. Do you have any observations about	13:48:09
18	how the user experience on LimeWire compared to	13:48:11
19	the experience you had when you -- you were	13:48:13
20	using those other peer-to-peer services?	13:48:15
21	A. My experience was that they were	13:48:17
22	minimally differentiated.	13:48:19
23	Q. When you say "minimally	13:48:21
24	differentiated," what do you mean?	13:48:23
25	A. None of the user experiences, to	13:48:26

1	ARAM A. SINNREICH, PH.D.	
2	my -- in my direct experience of them, stood out	13:48:30
3	as being significantly unique or preferential or	13:48:36
4	easier to use than the others.	13:48:42
5	Q. Okay. And that's based only on	13:48:45
6	your own personal experience with using --	13:48:47
7	A. Correct.	13:48:49
8	Q. -- the peer-to-peer networks?	13:48:50
9	A. Yes.	13:48:52
10	Q. You mentioned branding as something	13:48:52
11	that might differentiate one peer-to-peer	13:48:54
12	service from another.	13:48:57
13	Do you have an opinion about	13:49:00
14	whether LimeWire was successful in	13:49:02
15	differentiating its brand?	13:49:07
16	A. No.	13:49:08
17	Q. Okay. You also mentioned marketing	13:49:08
18	and promotion as a factor that may differentiate	13:49:10
19	peer-to-peer services.	13:49:14
20	Do you have an opinion about	13:49:15
21	whether LimeWire's marketing and promotion	13:49:17
22	differentiated it from other services?	13:49:19
23	A. No.	13:49:22
24	Q. And you also mentioned network	13:49:23
25	effects. Do you have an opinion as to how	13:49:26

1	ARAM A. SINNREICH, PH.D.	
2	merchandise and touring which is -- which are	14:04:42
3	revenue streams that the labels themselves	14:04:45
4	increasingly participate in.	14:04:47
5	Q. Okay. And we'll talk about those	14:04:49
6	later.	14:04:51
7	You mentioned music blogs and	14:04:53
8	search engines as vehicles through which	14:04:55
9	consumers can access free music on the Internet.	14:04:58
10	And Page 23, you say, "There are	14:05:04
11	thousands of active music blogs collectively	14:05:08
12	garnering millions of monthly users."	14:05:11
13	Where are those numbers coming	14:05:13
14	from?	14:05:15
15	A. There are music blog search engines	14:05:18
16	that will list them. There are sites like	14:05:20
17	Google blog search, Technorati, Hype Machine,	14:05:23
18	Elbows, and the range of blogs that you can	14:05:29
19	search via those is very, very broad.	14:05:33
20	In fact, some sites like Technorati	14:05:36
21	actually rank the blogs in -- in order of size	14:05:39
22	or importance.	14:05:42
23	Q. So how did you determine that there	14:05:44
24	were thousands of active music blogs?	14:05:47
25	A. It's through looking at those sites	14:05:52

1	ARAM A. SINNREICH, PH.D.	
2	Q. Okay. You talk about online	14:08:56
3	storage services on Page 24.	14:08:59
4	A. Yep.	14:09:03
5	Q. Is that the same thing as locker	14:09:04
6	services?	14:09:12
7	(Clarification for the reporter.)	14:09:12
8	A. Broadly speaking, yes.	14:09:12
9	Q. Okay.	
10	A. They're -- they're not all locker	14:09:14
11	services.	14:09:16
12	Q. I see.	14:09:16
13	So locker services is a more narrow	14:09:17
14	subset of what you're talking about here?	14:09:21
15	A. I would -- semantically, I would	14:09:23
16	say that's the case, yes.	14:09:25
17	Q. Okay. So describe to me what you	14:09:26
18	mean by online storage services.	14:09:29
19	A. Well, an example -- RapidShare, for	14:09:32
20	instance, and Megaupload, you could call them	
21	locker services because you upload a file and it	14:09:35
22	lives on the server and it has a discrete URL.	14:09:38
23	There are other services that	14:09:42
24	perform similar feats, but they're not as	14:09:44
25	static, they're more dynamic, for instance, a	14:09:48

1 ARAM A. SINNREICH, PH.D.
2 TransferBIGFiles or YouSendIt. 14:09:50
3 So those are really online storage 14:09:53
4 in the sense that they provide server space for 14:09:55
5 files but not lockers in the sense that they're 14:09:57
6 not static locations that people can return to 14:09:59
7 time after time to store and retrieve 14:10:02
8 information. 14:10:05
9 Q. Okay. So you say that -- you cite 14:10:06
10 some heavily tracked sites that receive millions 14:10:11
11 of visitors each month. 14:10:15
12 Do you know sort of overall how 14:10:17
13 many people are using online storage services? 14:10:20
14 A. No. 14:10:23
15 Q. How many of these services existed 14:10:28
16 during the time period of LimeWire's existence? 14:10:31
17 A. I couldn't quantify an answer for 14:10:34
18 you. 14:10:36
19 Q. When did these online storage 14:10:36
20 services first start to be used? 14:10:39
21 A. Well, as early as the late 1990s, 14:10:40
22 we saw the launch -- or maybe it was around 14:10:45
23 2000, 2001 -- we saw the launch of my.mp3.com, 14:10:48
24 which was the first one I was aware of, so it's 14:10:53
25 been roughly a decade. 14:10:56

1 ARAM A. SINNREICH, PH.D.

2 Q. Okay. You say that millions of 14:10:58
3 MP3s and music videos are available on these 14:11:01
4 sites. How do you know that millions of MP3s 14:11:04
5 and music videos are available through storage 14:11:07
6 services? 14:11:11

7 A. That is an inference from having 14:11:15
8 made a great many searches for files on search 14:11:17
9 engines like FileTube that aggregate 14:11:22
10 directories of the contents of those lockers and 14:11:27
11 also from looking at the prevalence of the usage 14:11:29
12 of those lockers across a range of different 14:11:31
13 sites, like blogs. 14:11:34

14 Q. Okay. So you personally went in 14:11:36
15 and tried to search for music on these lockers. 14:11:37

16 A. Correct. 14:11:40

17 Q. Is that what you're saying? 14:11:41

18 A. Yes. 14:11:42

19 Q. And what kind of searches did you 14:11:42
20 do that lead you to believe that there are 14:11:45
21 millions of songs and music videos available on 14:11:47
22 these sites? 14:11:50

23 A. Well, it's difficult, for instance, 14:11:50
24 to find any popular music that's not hosted on 14:11:52
25 one of those sites. 14:11:56

1 ARAM A. SINNREICH, PH.D.

2 So given that it's difficult to 14:11:59
3 find something that isn't, the presumption is 14:12:01
4 that most is. 14:12:03

5 Q. Okay.

6 A. And -- and also given the volume of 14:12:08
7 traffic that goes there, the natural supposition 14:12:10
8 is that everybody is not going to download the 14:12:13
9 same Katy Perry song, but given that the music 14:12:15
10 listening audience has diverse tastes, that a 14:12:20
11 large volume of traffic popularly represents a 14:12:25
12 diversity of different files and destinations. 14:12:27

13 Q. And how has the availability of 14:12:30
14 free content on these online storage services 14:12:31
15 affected record label revenues? 14:12:37

16 A. I don't know. 14:12:38

17 Q. And you can't say whether it's had 14:12:43
18 a positive or a negative effect? 14:12:45

19 A. Well, I -- I can't say 14:12:47
20 definitively. My guess would be that there's a 14:12:51
21 higher percentage of usage that is 14:12:52
22 substitutional with these services than with 14:12:57
23 other ones because it's less fundamentally a 14:13:00
24 social service, which is part of what adds the 14:13:05
25 value to a lot of the other services, but I -- I 14:13:08

1	ARAM A. SINNREICH, PH.D.	
2	MR. OLLER: Because it's not --	14:19:47
3	it's not --	14:19:49
4	Q. -- your discussion --	14:19:50
5	MS. YOUNG: Well, let -- let me ask	14:19:50
6	my question.	14:19:51
7	MR. OLLER: Okay.	
8	MS. YOUNG: Let me ask my question.	14:19:52
9	Q. Does your discussion of a cappellas	14:19:52
10	and instrumental versions, is your discussion	14:19:55
11	relevant to your conclusion as to the effect	14:19:57
12	that file sharing has had on record label sales	14:19:59
13	and revenue?	14:20:03
14	THE WITNESS: Can you repeat the	14:20:07
15	question back, please?	14:20:08
16	(Record read.)	14:20:09
17	A. Yes, insofar as it demonstrates the	14:20:25
18	complicity of the plaintiffs in encouraging the	14:20:29
19	free distribution of content online and	14:20:33
20	demonstrates the range of channels that are	14:20:37
21	alternatives to LimeWire for the -- for access	14:20:39
22	to that content by consumers.	14:20:42
23	Q. Are you saying that the	14:20:48
24	distribution of a cappellas and instrumental	14:20:51
25	versions somehow drove users to use peer-to-peer	14:20:54

1	ARAM A. SINNREICH, PH.D.	
2	file sharing services?	14:20:58
3	A. No, that's not what I'm saying.	14:21:00
4	Q. Are you saying that LimeWire	14:21:01
5	acquired more users or people downloaded more	14:21:03
6	because record companies made available their	14:21:05
7	works for free in a cappellas and instrumental	14:21:08
8	versions?	14:21:11
9	A. That's probably the case.	14:21:11
10	Q. Why is that the case?	14:21:13
11	A. Because an a cappella or an	14:21:14
12	instrumental version can give rise to thousands,	14:21:17
13	if not hundreds of thousands, of -- of different	14:21:20
14	versions of a popular song. And fans of a	14:21:22
15	popular artist or song are -- are apt to be	14:21:26
16	interested in hearing several different versions	14:21:29
17	of that song and to find those versions will	14:21:32
18	look in the channels where they're available.	14:21:38
19	Q. And so the record labels, by	14:21:44
20	releasing a cappellas and instrumental versions,	14:21:46
21	you're saying were partly responsible for	14:21:49
22	driving users to LimeWire?	14:21:51
23	A. Indirectly, yes. And I -- I think	14:21:52
24	knowingly.	14:22:01
25	Q. Well, were they also knowingly	14:22:07

1	ARAM A. SINNREICH, PH.D.	
2	driving uses to LimeWire by releasing albums in	14:22:09
3	general?	14:22:12
4	A. No, I don't think that's a	14:22:13
5	necessary logical conclusion.	14:22:18
6	Q. Okay. Creative commons licensing.	14:22:25
7	Again, what point are you trying to make here?	14:22:27
8	A. The point I'm trying to make here	14:22:34
9	is that many labels and artists have proactively	14:22:38
10	released songs under licenses that encourage the	14:22:49
11	free redistribution of those songs online.	14:22:52
12	Q. Okay. And the bulk -- you say,	14:23:00
13	though, that the bulk of these artist and songs	14:23:01
14	are not major record label affiliated, right?	14:23:02
15	A. Correct.	14:23:06
16	Q. Do you know how many are major	14:23:06
17	record label affiliated?	14:23:08
18	A. No, I don't have the quantitative	14:23:10
19	answer to that question.	14:23:11
20	(Discussion held off the record.)	
21	BY MS. YOUNG:	14:23:32
22	Q. Okay. And you also mention mix	14:23:32
23	tapes and rewarding DJs for mashups and remixes,	14:23:36
24	correct?	14:23:43
25	A. Right.	14:23:43

1 ARAM A. SINNREICH, PH.D.

2 Q. So, again, what point are you 14:23:44
3 making here? 14:23:46

4 A. The point that I'm making is that, 14:23:47
5 as evidenced by their rewarding of the DJs, the 14:23:50
6 labels see benefit in the production of 14:23:55
7 alternative versions of the works that they 14:23:58
8 control under copyright and encourage their 14:24:02
9 proliferation through non-traditional channels. 14:24:07

10 Q. And so are -- are you suggesting 14:24:11
11 that this is another way in which the labels 14:24:12
12 have indirectly sort of rooted users toward 14:24:14
13 services like LimeWire and other peer-to-peer 14:24:21
14 services? 14:24:24

15 A. Yes. And more broadly, you know, 14:24:24
16 non-retail-based distribution environments. 14:24:27

17 Q. Like what? 14:24:29

18 A. Well, mix tape networks are almost 14:24:31
19 entirely either online or physical non-retail, 14:24:34
20 you know, parking lots, street corners, barber 14:24:39
21 shops. 14:24:43

22 Q. And how big is the mix tape market? 14:24:44

23 A. It hasn't been quantified, to my 14:24:46
24 knowledge. 14:24:52

25 Q. Okay. Do you have any sense about, 14:24:52

1	ARAM A. SINNREICH, PH.D.	
2	you know, percentage-wise --	14:24:54
3	(Telephonic interruption.)	14:25:00
4	THE WITNESS: Sorry about that.	
5	Sorry. Start that over again.	14:25:02
6	Q. I realize it hasn't been	14:25:02
7	quantified, but do you have a sort of rough	14:25:05
8	estimate of how big that market is?	14:25:08
9	A. No.	14:25:10
10	Q. You talk about rewarding DJs for	14:25:11
11	mashups and remixes.	14:25:14
12	What's your basis for saying that	14:25:16
13	this happens?	14:25:18
14	A. A variety, including having	14:25:21
15	interviewed dozens of DJs for my book Mashed Up,	14:25:22
16	many of whom talked about having direct contact	14:25:28
17	with record labels.	14:25:31
18	Q. How many have had direct contact	14:25:33
19	with record labels?	14:25:35
20	A. I don't have a specific	14:25:36
21	quantitative answer for you.	14:25:38
22	Q. How many are -- how many instances	14:25:40
23	are you personally aware of where a record label	14:25:41
24	paid a DJ tens of thousands of dollars to	14:25:44
25	include the labels' music on mixes?	14:25:48

1	ARAM A. SINNREICH, PH.D.	
2	A. The only mixed tape DJ whom I've	14:25:51
3	spoken to about whom that's the case is DJ	14:25:55
4	Drama.	14:26:01
5	Q. Okay. Did he tell you --	14:26:01
6	(Clarification for the reporter.)	
7	Q. Did DJ Drama tell you about other	14:26:02
8	DJs who received similar offers?	14:26:06
9	A. He indicated that it was a fairly	14:26:09
10	common practice at the higher echelons of mix	14:26:11
11	tape DJs.	14:26:14
12	Q. And how would he know that?	14:26:18
13	A. He is a central figure in that	14:26:21
14	community.	14:26:29
15	Q. All right. Let's move on to the	14:26:53
16	next section of your report. Let's talk about	14:26:55
17	the section called spurring additional revenue	14:27:09
18	streams, starting on Page 30.	14:27:12
19	A. Okay.	14:27:22
20	Q. Okay. So one of the additional	14:27:23
21	revenue streams you say for the labels are 360	14:27:24
22	deals?	14:27:27
23	A. Correct.	14:27:28
24	Q. Can you explain what you mean by a	14:27:28
25	360 deal?	14:27:31

1	ARAM A. SINNREICH, PH.D.	
2	Q. Do you have any idea what percent	14:28:32
3	record labels get out of 360 deals?	14:28:34
4	A. Yes.	14:28:37
5	Q. Okay. What percent?	14:28:38
6	A. If I had to make a guesstimate of	14:28:40
7	the range, I would say it ranges from 10 to 30	14:28:44
8	percent.	14:28:47
9	Q. What's your -- I'm sorry. Finish	14:28:47
10	your answer.	14:28:49
11	A. Depending on the revenue stream,	14:28:50
12	depending on the artist, depending on the label,	14:28:52
13	depending on the deal.	14:28:55
14	Q. And what's that guesstimate based	14:28:56
15	on?	14:28:58
16	A. Conversations with artists,	14:29:01
17	conversations with their representatives,	14:29:04
18	conversations with people at labels, reading the	14:29:06
19	trade press.	14:29:10
20	Q. And have you specifically asked	14:29:11
21	them what percent do record labels get under a	14:29:14
22	360 deal?	14:29:16
23	A. Yes.	14:29:17
24	Q. And what have you heard in	14:29:18
25	response?	14:29:20

1	ARAM A. SINNREICH, PH.D.	
2	A. There's no boilerplate deal.	14:29:20
3	Q. And have you heard 10 to 30 percent	14:29:23
4	as a number that people have told you?	14:29:27
5	A. I've heard numbers in that range.	14:29:28
6	Q. Okay. What numbers have people	14:29:32
7	told you?	14:29:34
8	A. I don't recall specific numbers at	14:29:34
9	this point in time.	14:29:35
10	Q. Okay. And what evidence do you	14:29:46
11	have that any revenue made by the labels through	14:29:49
12	360 deals has been spurred by peer-to-peer file	14:29:52
13	sharing?	14:29:56
14	A. The fact that a great many artists,	14:29:58
15	attorneys, labels representatives and artists	14:30:07
16	representatives have touted the benefits of file	14:30:10
17	sharing for driving sales of concert tickets and	14:30:16
18	merchandise and for spurring third-party	14:30:19
19	interest in licensing artists' recordings for	14:30:22
20	synchronization or other uses.	14:30:27
21	Q. So are you referring largely to	14:30:28
22	anecdotal evidence?	14:30:30
23	A. Yes.	14:30:32
24	Q. Are you referring to only anecdotal	14:30:32
25	evidence?	14:30:36

1 ARAM A. SINNREICH, PH.D.

2 Q. Okay. And can you just explain to 14:37:34
3 me what the -- to the extent that the labels 14:37:36
4 derive additional revenues from performance 14:37:43
5 rights, what that has to do with peer-to-peer. 14:37:45

6 A. It doesn't have a -- a whole lot to 14:37:56
7 do with peer-to-peer. 14:37:59

8 Q. Why do you say that? 14:38:00

9 A. These are revenues that are 14:38:04
10 delivered through licensed channels, either 14:38:06
11 negotiated or statutory, and those revenues 14:38:08
12 don't accrue from peer-to-peer channels, except 14:38:15
13 for licensed peer-to-peer channels. 14:38:19

14 Q. Okay. You also talk about synch 14:38:21
15 rights revenues. And I have a similar question, 14:38:25
16 which is: What do synch rights revenues have to 14:38:28
17 do with peer-to-peer? 14:38:31

18 A. Well, to a certain degree -- well, 14:38:32
19 it doesn't have a direct relationship. 14:38:35

20 To a certain degree, synch rights 14:38:39
21 revenues are influenced by peer-to-peer 14:38:41
22 behaviors in terms of giving -- providing a more 14:38:45
23 accurate impression of what the market demand 14:38:53
24 for various acts is, so that music licensors, 14:38:55
25 you know, producers of television shows, movies 14:38:59

1 ARAM A. SINNREICH, PH.D.

2 or what have you, will make better decisions in 14:39:02
3 terms of which songs they want to license and at 14:39:07
4 what rates they're willing to license them. 14:39:10

5 Q. Okay. You also talk about music 14:39:12
6 video games. And same question: What does this 14:39:14
7 have to do with peer-to-peer? 14:39:19

8 A. It's the -- pretty much the -- the 14:39:23
9 same situation. Bands that are more successful 14:39:26
10 due to, in part, to the degree of consumer 14:39:30
11 interest that's exhibited via peer-to-peer are 14:39:37
12 more likely to get licensing deals in these 14:39:40
13 channels and -- and to recognize revenues as a 14:39:44
14 result of that. 14:39:49

15 Q. What's your basis for saying that 14:39:50
16 they're more likely to get their songs on 14:39:51
17 video -- music video games just because they're 14:39:58
18 followed on peer-to-peer networks? 14:40:01

19 A. Well, peer-to-peer is at this point 14:40:03
20 a vital element of the production of demand and 14:40:06
21 the -- the marketing and promotion of certain 14:40:12
22 artists and -- and songs to the -- to the 14:40:19
23 public. 14:40:21

24 And music -- music -- music 14:40:21
25 directors and other licensors of music for -- 14:40:22

1 ARAM A. SINNREICH, PH.D.
2 for products are aware of the overall degree of 14:40:26
3 consumer interest in and hype around a band, in 14:40:29
4 part, due to activity on those file sharing 14:40:33
5 networks. 14:40:36
6 Q. Okay. And, again, what's your 14:40:38
7 basis for saying that? Have you talked to these 14:40:41
8 promoters? I mean, have you -- 14:40:44
9 A. Yes, I've spoken to music directors 14:40:44
10 about what influences their licensing behaviors. 14:40:47
11 Q. Okay. Who have you talked to? 14:40:51
12 A. When I was in Los Angeles, I knew a 14:40:53
13 number of people who were in the business of 14:40:57
14 music licensing. 14:41:00
15 Q. When you were in Los Angeles at the 14:41:01
16 USC -- 14:41:06
17 A. Correct. 14:41:08
18 (Clarification for the reporter.) 14:41:11
19 Q. And are you still in contact with 14:41:11
20 those people? 14:41:13
21 A. Only socially. I haven't done any 14:41:14
22 research on the subject any time recently. 14:41:16
23 Q. Okay. You say that "Labels get a 14:41:21
24 hefty royalty from music video games." 14:41:24
25 A. That's a quote. 14:41:27

1 ARAM A. SINNREICH, PH.D.

2 Q. Yeah. What -- what's the royalty? 14:41:29

3 A. If I knew, I would have said. 14:41:31

4 Q. Okay.

5 A. I did a significant amount of 14:41:35

6 research for the purpose of this report into 14:41:37

7 answering that question, and what I found was a 14:41:40

8 broad range of answers, to a certain degree 14:41:44

9 conflicting, from various sources in a position 14:41:50

10 to know. 14:41:53

11 So my sense is that, again, this is 14:41:54

12 a situation where there's a range of licensing 14:41:57

13 rates and structures and no boilerplate. 14:42:02

14 Q. And what's the range? 14:42:05

15 A. For -- typically -- as I understand 14:42:07

16 it, typically songs that are licensed for games 14:42:14

17 are licensed on a flat basis, that is, there's a 14:42:17

18 fee against anticipated volume of sales, and for 14:42:24

19 lesser known songs, it could be a few thousand 14:42:30

20 dollars, for better known songs, it could be a 14:42:33

21 half a million dollars and that there's an 14:42:36

22 entire range between them. 14:42:38

23 Furthermore, when games are -- 14:42:39

24 exceed the anticipated volumes of sales or have 14:42:41

25 downloadable content expansion packs or are in 14:42:44

1	ARAM A. SINNREICH, PH.D.	
2	point where they could hold the contents of the	15:37:55
3	CD on the hard drive?	15:37:58
4	A. Probably in the late 1980s.	15:38:02
5	Q. Okay. And do you know how many CDs	15:38:05
6	had been sold by that time?	15:38:07
7	A. Not off the top of my head, but a	15:38:09
8	fair number.	15:38:12
9	Q. And do you know how much hardware	15:38:13
10	had been sold for CDs by that time? By	15:38:16
11	hardware, I mean CDs players and things like	15:38:20
12	that.	15:38:22
13	A. Probably tens of millions of units.	15:38:22
14	Q. Okay. Let's talk about digital	15:38:23
15	rights management, which you call DRM for short.	15:38:25
16	A. Um-hum.	
17	Q. And I'll use the same shorthand.	15:38:28
18	What do you mean by DRM?	15:38:32
19	A. DRM refers to a range of different	15:38:33
20	technologies, all of which serve essentially the	15:38:36
21	same purpose, which is to wrap content in a kind	15:38:38
22	of data envelope that can only be unwrapped by	15:38:45
23	the designated recipient of that content, and --	15:38:49
24	and once it's unwrapped can only be used for	15:38:52
25	certain pre-ordained purposes.	15:38:55

1	ARAM A. SINNREICH, PH.D.	
2	Q. Okay. And you say that -- here you	15:39:01
3	say you published a research report in 1999 that	15:39:02
4	actually advocated that labels use DRM, right?	15:39:04
5	A. I did.	15:39:09
6	Q. And why were you advocating its	15:39:09
7	use?	15:39:12
8	A. At the time it was -- it was	15:39:15
9	becoming clear that the Internet was becoming a	15:39:17
10	platform for the massive dissemination of	15:39:19
11	copyrighted material. My clients included the	15:39:22
12	major labels and -- and other companies who --	15:39:27
13	whose business strategies were based around	15:39:30
14	controlling the distribution of copyrighted	15:39:32
15	materials, and I erroneously believed that the	15:39:35
16	genie which was poking its head out the	15:39:38
17	proverbial bottle could be stuffed back in at	15:39:42
18	that point.	15:39:45
19	Q. Okay. And with the benefit of	15:39:46
20	20/20 hindsight, you can now say that that was	15:39:50
21	wrong, right?	15:39:54
22	A. It was clear to me in a matter of	15:39:54
23	months that it was wrong because this report was	15:39:57
24	published possibly three or four months before	15:40:00
25	Napster came out.	15:40:02

1 ARAM A. SINNREICH, PH.D.

2 So once Napster happened, it was 15:40:03

3 more or less immediately obvious to a great many 15:40:05

4 people in the market that that genie would never 15:40:08

5 be back in the bottle. 15:40:11

6 Q. And at that point you felt that 15:40:13

7 your conclusions that you'd offered in that 15:40:15

8 report in 1999 were no longer valid? 15:40:17

9 A. That -- I believed at that point 15:40:21

10 that -- that the strategic use of DRM needed to 15:40:24

11 be re-evaluated, yes. 15:40:27

12 Q. Okay. Did you retract any of the 15:40:30

13 conclusions that you offer in your '99 report? 15:40:34

14 MR. OLLER: Object to the form. 15:40:36

15 A. I never published a formal 15:40:37

16 retraction because I published newer research 15:40:41

17 illuminating my evolved thinking on the use of 15:40:46

18 these technologies. 15:40:48

19 Q. And when did you publish that 15:40:48

20 research? 15:40:51

21 A. On an ongoing basis. 15:40:51

22 Q. Starting when? 15:40:53

23 A. At least monthly from -- subsequent 15:40:54

24 to the publication of that DRM report. 15:41:00

25 Q. I'm trying to ask when the first 15:41:03

1 ARAM A. SINNREICH, PH.D.
2 publication was that you issued that illuminated 15:41:05
3 your evolved thinking on whether DRM was a good 15:41:10
4 idea or not. 15:41:15
5 A. Either late '99 or early 2000. I 15:41:18
6 don't -- I couldn't tell you 11 years later what 15:41:23
7 the exact month was. 15:41:24
8 Q. And this is a publication that was 15:41:25
9 issued through Jupiter? 15:41:27
10 A. Correct. 15:41:28
11 Q. Okay. And the problem with DRM 15:41:30
12 include -- well, what are the problems with DRM? 15:41:40
13 A. Well, as I outline in my report, 15:41:43
14 they're -- they're multifold. 15:41:46
15 One of the main problems with DRM 15:41:48
16 is just that the technology didn't always work 15:41:51
17 as promised, and by not working, I mean that it 15:41:54
18 essentially made the content not usable and, 15:41:57
19 therefore, not valuable to -- to consumers. 15:42:01
20 Some DRM would be programmed in 15:42:06
21 such a way that the content had to check with -- 15:42:08
22 over the Internet with the server to make sure 15:42:13
23 that it was still licensed for use, and if the 15:42:16
24 consumer had an outage for some reason or if one 15:42:18
25 of the packets got lost on the Internet, the -- 15:42:22

1	ARAM A. SINNREICH, PH.D.	
2	indefinite basis.	15:43:37
3	And it a's -- it's a terrible	15:43:39
4	choice. There is no right answer. They chose	15:43:42
5	probably what the better answer was, which was	15:43:45
6	to discontinue the DRM servers, but in so doing,	15:43:47
7	they -- they rendered unplayable probably	15:43:51
8	millions of legally published files by	15:43:55
9	consumers, further cementing the opinion among	15:43:59
10	consumers that illegally distributed files were	15:44:05
11	superior in quality to legally distributed	15:44:07
12	files.	15:44:10
13	Another strategic problem with --	15:44:10
14	with DRM is that it created what economists	15:44:12
15	called path dependencies, that is, when you buy	15:44:15
16	a -- when you buy a certain model of razor, you	15:44:23
17	are then dependent on buying the razor blades	15:44:25
18	that match that razor. You can't buy a Schick	15:44:29
19	and then have, you know, a -- I don't know what	15:44:32
20	the other manufacturers are, but whatever -- you	15:44:34
21	can't buy razor X and then blades for razor Y.	15:44:38
22	And so what DRM essentially did was	15:44:42
23	create a digital version of that path dependency	15:44:44
24	where if you were using hardware X, you had to	15:44:46
25	use format Y, which was only available from	15:44:50

1	ARAM A. SINNREICH, PH.D.	
2	retailer Z.	15:44:53
3	And Apple was the only company that	15:44:54
4	was able to effectively design, package and	15:44:58
5	market those interrelationships in a way that	15:45:03
6	was appealing to consumers and so were able to	15:45:07
7	command the -- the lion's share of the digital	15:45:11
8	music distribution business, which they still	15:45:14
9	have, by virtue of the path dependencies	15:45:16
10	established by the DRM that they use.	15:45:20
11	And, you know, obviously from an	15:45:24
12	economic and strategic standpoint, it didn't	15:45:25
13	benefit the labels to have a single retailer	15:45:27
14	control 70 percent of this vital sector of the	15:45:31
15	marketplace.	15:45:36
16	Q. Okay. Just a couple of follow-up	15:45:37
17	questions on that.	15:45:39
18	You mentioned that MTV, Yahoo! and	15:45:40
19	MSN had those difficulties where they basically	15:45:44
20	had to shut down and turn off their servers,	15:45:48
21	right?	15:45:54
22	A. Yes.	15:45:54
23	Q. Did the record labels have anything	15:45:54
24	to do with that?	15:45:56
25	A. Only by virtue of having	15:46:00

1	ARAM A. SINNREICH, PH.D.	
2	believe.	16:35:32
3	Q. Okay. But, collectively, do you	16:35:32
4	know what the range of potential damages is	16:35:35
5	that's being sought in this case?	16:35:39
6	A. No. I've read -- prior to my	16:35:41
7	engagement on the case, I had read that it was	16:35:43
8	in the billions, but I don't know what the	16:35:45
9	actual number is.	16:35:48
10	Q. If there were a damages award in	16:35:49
11	the billions, do you think that would deter	16:35:51
12	people from operating or financing illegal file	16:35:53
13	sharing services?	16:35:57
14	A. Not on a whole, no.	16:35:57
15	Q. Okay. Why not?	16:35:59
16	A. Well, for the reasons I already	16:35:59
17	talked about, although it's true that -- for a	16:36:04
18	variety of reasons.	16:36:08
19	One, in the wake of Grokster, it's	16:36:11
20	become, I think, clearer to the business	16:36:14
21	community that under current conditions file	16:36:17
22	sharing is not a viable investment anyway, so I	16:36:20
23	don't think there's a whole lot of money out	16:36:22
24	there funding commercial unlicensed file sharing	16:36:25
25	ventures at this point.	16:36:29

1	ARAM A. SINNREICH, PH.D.	
2	And consumer behaviors have	16:36:32
3	definitely moved on. File sharing, I can tell	16:36:34
4	you, among my students, I asked 20 students	16:36:36
5	enrolled in a class about music and technology	16:36:40
6	last week how many of them have used file	16:36:42
7	sharing networks in the last year, or something	16:36:46
8	like that. I think two of them raised their	16:36:48
9	hands.	16:36:50
10	And it's not that they are not	16:36:51
11	interested in digital music. They just have	16:36:52
12	other ways of gaining access to it, many of	16:36:54
13	which I outline in my report.	16:36:57
14	So file sharing is also, you know,	16:37:00
15	no longer a -- an innovative or even leading	16:37:02
16	edge paradigm for distribution. It's just one	16:37:08
17	of many, many, many different platforms that	16:37:11
18	people use to achieve the same ends.	16:37:13
19	Q. Okay. Well, let me ask my question	16:37:15
20	a little differently then --	16:37:17
21	A. Sure.	
22	Q. -- and not limit it to file	16:37:19
23	sharing.	
24	If there were a damages award in	16:37:21
25	excess of a billion dollars in this case, do you	16:37:23

1	ARAM A. SINNREICH, PH.D.	
2	think it would deter people from operating or	16:37:25
3	financing illegal music services?	16:37:28
4	A. No, I don't. Would you like me to	16:37:31
5	say why not?	16:37:34
6	Q. I would.	16:37:35
7	A. Okay. First of all, as I've	16:37:38
8	observed, everybody has ample evidence that	16:37:41
9	services that are found to be in violation of	16:37:50
10	copyright are liable for sufficient damages to	16:37:53
11	put them out of business, and, in fact, that	16:37:59
12	services can go out of business just defending	16:38:02
13	copyright infringement accusations, whether or	16:38:05
14	not they -- they are legitimate accusations.	16:38:11
15	So the addition of one more set of	16:38:17
16	damages to the pile, I don't think, would	16:38:24
17	significantly change the outlook of any	16:38:27
18	developers or investors.	16:38:31
19	That being said, you know, I'm not	16:38:34
20	an attorney, but I believe that there is	16:38:37
21	probably still a fair amount of legal gray area	16:38:40
22	that people are interested in examining in the	16:38:43
23	quest to find a workable music distribution	16:38:50
24	paradigm that can both deliver revenues to	16:38:53
25	operators and rights holders and match the needs	16:38:58

1	ARAM A. SINNREICH, PH.D.	
2	of today's online music consumers.	16:39:01
3	So I think that quest will probably	16:39:05
4	continue to drive the desire for people to	16:39:10
5	innovate.	16:39:13
6	And then there's the factor that we	16:39:14
7	were talking about before, which is the kind of	16:39:15
8	global community of coders who aren't interested	16:39:18
9	in, you know, making any money or delivering any	16:39:20
10	revenues necessarily to anybody and just want to	16:39:23
11	make cool tools that they think make the world a	16:39:27
12	more interesting place.	16:39:30
13	So I -- I don't really see -- I --	16:39:32
14	I can't really image a scenario in which the	16:39:35
15	presence or absence of a large damages award in	16:39:39
16	this case would significantly change the	16:39:42
17	availability of free music or the -- the overall	16:39:47
18	pace of innovation in -- in this arena.	16:39:53
19	Q. Let me ask you this: If you had	16:39:56
20	money that you wanted to invest in an unlicensed	16:39:59
21	Internet music distribution service, would the	16:40:02
22	fact that somebody got a \$1 billion award	16:40:05
23	against them from doing that deter you in any	16:40:08
24	way from investing your money in an illegal	16:40:12
25	distribution service?	16:40:14

1	ARAM A. SINNREICH, PH.D.	
2	A. Well, if it --	
3	MR. OLLER: Objection, lacks	16:40:16
4	foundation, incomplete --	16:40:17
5	MS. YOUNG: It's a hypothetical	16:40:18
6	question.	16:40:19
7	MR. OLLER: -- incomplete	16:40:19
8	hypothetical.	16:40:20
9	A. Hypothetically, not unless the	16:40:22
10	damages in this case were the first set of	16:40:24
11	damages that had been awarded against a digital	16:40:26
12	music distributor who was operating without	16:40:29
13	licenses.	16:40:31
14	And there's a law of diminishing	16:40:32
15	returns.	16:40:34
16	Q. And explain how that applies here.	16:40:35
17	A. Well, after -- after the first	16:40:38
18	massive damages against a convicted copyright	16:40:41
19	infringer are levied, that has a certain	16:40:45
20	chilling effect. After the -- the second set of	16:40:49
21	damages are -- or second giant settlement is --	16:40:52
22	is levied, that has, you know, a smaller but	16:40:57
23	significant chilling effect. The next one has	16:41:01
24	an even smaller addition to that. The next one,	16:41:03
25	and so on and so forth.	16:41:05

1	ARAM A. SINNREICH, PH.D.	
2	I mean, we've had -- you know, it's	16:41:07
3	been -- it's been a decade since Napster and I	16:41:10
4	think that anybody in a position to invest is	16:41:13
5	already -- regardless of the outcome of this	16:41:17
6	case, is already well-aware of what the, you	16:41:20
7	know, financial risks are.	16:41:22
8	Q. Okay. You say in your report that,	16:41:31
9	"The most likely effect of a large damages award	16:41:35
10	will be further erosion of the plaintiffs'	16:41:41
11	already tarnished reputation among consumers and	16:41:43
12	the business community, undermining their	16:41:46
13	ability to effectively counter any economic and	16:41:48
14	organizational challenges they face."	16:41:51
15	So are you saying that a large	16:41:55
16	damages award is actually against the	16:42:00
17	plaintiffs' interest?	16:42:01
18	A. Reputationally, absolutely.	16:42:02
19	Q. And are you trying to balance that	16:42:07
20	against any other factors?	16:42:10
21	A. Well, you asked a legitimate	16:42:11
22	question about whether the -- a large damage	16:42:14
23	award in this case would have any beneficial	16:42:22
24	effect on the financial outlook for the	16:42:25
25	plaintiffs.	16:42:27

1	ARAM A. SINNREICH, PH.D.	
2	It's a legitimate question. My	16:42:27
3	opinion is that the answer is no.	16:42:29
4	MS. YOUNG: Okay. Let me take a	16:42:41
5	minute to look over my notes.	16:42:42
6	(Multiple speakers.)	
7	MS. YOUNG: Go off the record.	16:42:49
8	THE VIDEOGRAPHER: Off the record	16:42:50
9	at 4:42 p.m.	16:42:51
10	(Recess taken.)	16:42:53
11	THE VIDEOGRAPHER: We are back on	16:54:08
12	the record at 4:53 p.m.	16:54:16
13	BY MS. YOUNG:	16:54:18
14	Q. You testified that the record	16:54:19
15	labels should have partnered with unlicensed	16:54:22
16	services instead of suing them, correct?	16:54:25
17	A. By and large, yes.	16:54:28
18	Q. Okay. What sort of business model	16:54:31
19	should they have used?	16:54:33
20	A. There are a range of possible ways	16:54:35
21	in which the innovative distribution platforms	16:54:40
22	presented by these services could have been	16:54:43
23	monetized.	16:54:47
24	There are successful examples of	16:54:48
25	micropayments base models, there are successful	16:54:50

1	ARAM A. SINNREICH, PH.D.	
2	Lala.com, you said, was a success?	16:58:55
3	A. Yes.	16:58:58
4	Q. And how are you defining its	16:58:58
5	success?	16:59:00
6	A. It was a -- I -- I don't have	16:59:01
7	access to their private commercial finances, but	16:59:05
8	it was successful in garnering consumer interest	16:59:14
9	in paying for a variety of different	16:59:17
10	distribution solutions at a variety of different	16:59:20
11	price points, which is the hallmark of	16:59:23
12	successful and functional marketplace.	16:59:26
13	Q. Do you know how much revenue	16:59:28
14	Lala.com made during its existence?	16:59:29
15	A. Not off the top of my head, no.	16:59:32
16	Q. Do you know how much of that	16:59:33
17	revenue came back to the labels?	16:59:34
18	A. No, I don't.	16:59:37
19	Q. Okay. What about Muxtape, why do	16:59:38
20	you view it as a successful experiment with some	16:59:42
21	of the business models that you have identified?	16:59:44
22	A. Well, even though they were very	16:59:46
23	short-lived, they had one of the steepest growth	16:59:49
24	curves that I've ever seen in terms of user	16:59:52
25	adoption and were also very highly regarded by	16:59:55

1	ARAM A. SINNREICH, PH.D.	
2	the critical press and the -- and the consumer	16:59:58
3	base whom I had access to.	17:00:02
4	And, again, this was a service that	17:00:04
5	combined promotional benefits with access	17:00:11
6	benefits for consumers and could have leveraged	17:00:16
7	a combination of some kind of incremental	17:00:20
8	payment with -- with advertising-based revenues.	17:00:23
9	Q. You say it could have. Did it?	17:00:26
10	A. No. In the short time that it had	17:00:28
11	open, it didn't have time to really establish a	17:00:32
12	revenue strategy.	17:00:35
13	Q. So this is still theoretical?	17:00:36
14	A. Most of this is, yes.	17:00:38
15	Q. There's a difference between	17:00:43
16	attracting users to your service and making	17:00:44
17	money off of those users, right?	17:00:48
18	A. Absolutely.	17:00:50
19	Q. Okay. Can you name one successful	17:00:50
20	experiment where some of the business models	17:00:55
21	you've suggested have actually made money off of	17:00:58
22	the users they've attracted?	17:01:01
23	A. Well, YouTube is a great example.	17:01:04
24	YouTube has a very high CPM rate for the	17:01:07
25	advertisements that it serves against the	17:01:13

1	ARAM A. SINNREICH, PH.D.	
2	who?	17:02:26
3	A. YouTube.	17:02:29
4	Q. Okay. Do you know what percent, if	17:02:29
5	any, the record labels make off of the CPM rate	17:02:31
6	that YouTube earns?	17:02:35
7	A. I'm not privy to their private	17:02:37
8	negotiations.	17:02:40
9	Q. Okay. So, theoretically, you're	17:02:45
10	saying the labels could have used some	17:02:47
11	combination of -- of these things to develop a	17:02:50
12	business model that would have allowed them to	17:02:53
13	monetize some of the user base that was coming	17:02:56
14	to these illegal services, correct?	17:03:00
15	A. Correct.	17:03:02
16	Q. And how much money would the record	17:03:03
17	labels have made from doing that?	17:03:06
18	A. Well, I did different calculations	17:03:07
19	while I was at Jupiter that looked at different	17:03:11
20	kinds of models for remuneration and, you know,	17:03:14
21	broadly speaking, you know, the -- it's a -- it	17:03:20
22	is a more complex question than it appears on	17:03:27
23	the face of it because what's essentially a	17:03:29
24	single monetization channel business is being	17:03:34
25	replaced by a multichannel business, that is to	17:03:38

1	ARAM A. SINNREICH, PH.D.	
2	say, in the old days, there was only one way	17:03:42
3	that record companies were remunerated for their	17:03:46
4	recorded music, and that was the	17:03:49
5	wholesale/retail model, and there was	17:03:52
6	essentially only one way that consumers could	17:03:53
7	come in contact with that music, at least on	17:03:58
8	demand -- the non-on demand version was	17:04:00
9	terrestrial radio or broadcasting -- and that	17:04:06
10	was going into record stores, choosing the music	17:04:09
11	they wanted to purchase and -- and buying it.	17:04:11
12	And that was a fairly successful	17:04:13
13	model, given the very constrained industrial and	17:04:15
14	technological capabilities that it afforded.	17:04:18
15	There was no dynamic -- there was not a very	17:04:24
16	dynamic range in price points, there was not at	17:04:26
17	all a dynamic range in product format.	17:04:29
18	Most consumers did not have access	17:04:31
19	to a broad range of content from which to	17:04:34
20	choose, but it was the only thing going and, as	17:04:37
21	such, it was fairly successful.	17:04:40
22	In the context of more content	17:04:42
23	than -- than consumers can possibly navigate,	17:04:46
24	coming through channels which are being	17:04:50
25	introduced almost on a monthly basis into their	17:04:53

1	ARAM A. SINNREICH, PH.D.	
2	semi-interactive digital music programming	17:09:14
3	service.	17:09:22
4	Q. And how do they make their	17:09:24
5	revenues, only off of ads?	17:09:27
6	A. No, they have -- they have a few	17:09:29
7	revenue streams. The two primary ones are	17:09:33
8	advertising, both audio insertion and	17:09:36
9	interface-based flash advertising, and also	17:09:40
10	upsells to a premium service that's	17:09:45
11	advertising-free and has some additional bells	17:09:51
12	and whistles.	17:09:52
13	And that "freemium" model -- that's	17:09:53
14	the kind of industry shorthand for -- for	17:09:57
15	that -- that bi-fold process -- has been held up	17:10:01
16	by many people as a -- as a very viable model	17:10:05
17	for attracting consumers and then converting	17:10:07
18	them to a higher value over the long term.	17:10:12
19	Q. Okay. Just a couple of clean-up	17:10:25
20	things, and then I think we'll be done.	17:10:28
21	Look at Page 23 to 24 of your	17:10:33
22	report, please. And just real quick, you say in	17:10:37
23	here -- I'm looking at the bottom of Page 23 and	17:10:55
24	24 and paraphrasing -- that the plaintiffs in	17:10:59
25	some cases actively distribute their music to	17:11:02

1	ARAM A. SINNREICH, PH.D.	
2	bloggers, understanding it will be shared.	17:11:04
3	A. Correct.	17:11:07
4	Q. And what plaintiffs do this?	17:11:08
5	A. I don't have specific examples, but	17:11:16
6	it's not uncommon on music blogs to see the	17:11:19
7	bloggers say, I just got this hot new single	17:11:23
8	from the promotion department at record label X,	17:11:27
9	here's what I think of it, here's a link to buy	17:11:30
10	the whole album on Amazon, or what have you.	17:11:33
11	Q. Okay. So you're basing it on what	17:11:37
12	you saw in the blog?	17:11:39
13	A. In many blogs, yes.	17:11:40
14	Q. In many blogs, okay.	17:11:55
15	A. Yes. And from trade press about	17:11:55
16	this practice.	17:12:01
17	Q. Okay. You also say -- I'm looking	17:12:02
18	at the bottom of Page 23 -- that the plaintiffs	17:12:03
19	allow these sites -- referring to music blogs	17:12:06
20	and so forth -- to distribute their music openly	17:12:08
21	and broadly.	17:12:12
22	What do you mean by allow there?	17:12:13
23	A. The -- again, the massive	17:12:17
24	availability via platforms that are subject to	17:12:18
25	DMCA regulations indicates that takedown notices	17:12:24

1 ARAM A. SINNREICH, PH.D.
2 in many cases have not been issued. 17:12:29
3 Now, there are cases in which 17:12:31
4 takedown notices are issued and typically a blog 17:12:33
5 will say this file is no longer available 17:12:36
6 pursuant to a DMCA takedown notice, but that's 17:12:38
7 the minority of cases if you look through the 17:12:43
8 contents of these blogs. 17:12:44
9 Q. So when you say the plaintiffs 17:12:45
10 allow their work to be distributed on blogs, you 17:12:48
11 mean they haven't sent a take -- sent a takedown 17:12:50
12 notice to the blog? 17:12:52
13 A. Correct. Well, that's the purpose 17:12:53
14 of the DMCA takedown notice, as I understand it, 17:12:56
15 is to give copyright owners a -- a quick and 17:12:59
16 effective recourse to stem the unpermitted 17:13:01
17 distribution of their work online. 17:13:05
18 Q. And you're inferring that if they 17:13:05
19 don't do that, they're, therefore, allowing 17:13:08
20 affirmatively their work to be shared? 17:13:10
21 A. Correct. 17:13:13
22 Q. Okay. And in the section previous 17:13:26
23 to that where you're talking about video 17:13:28
24 streaming downloaded conversion to MP3. I just 17:13:32
25 have a question about the last sentence where 17:13:35

1 ARAM A. SINNREICH, PH.D.
2 you talk about software tools that allow you to 17:13:37
3 download from YouTube and -- and other places. 17:13:40
4 You say that the functionality is 17:13:43
5 not limited to personal computers, and it's 17:13:45
6 available for mobile customers. You talk about 17:13:48
7 people jailbreaking their phones. 17:13:50
8 I'm just wondering why you're 17:13:53
9 mentioning that and what relevance it has to the 17:13:56
10 sharing of digital music. 17:13:59
11 A. Well, as a greater and greater 17:14:01
12 portion of Internet usage happens on 17:14:04
13 non-computer-based platforms, happens on 17:14:07
14 computer-enabled devices, it's relevant that 17:14:09
15 these tools are appearing on those devices, as 17:14:13
16 well. 17:14:18
17 Q. So explain that to me. The tools 17:14:18
18 appear on the device, and how does that allow 17:14:22
19 you to access music? 17:14:25
20 A. So I, for instance, downloaded 17:14:28
21 MeTube while it was freely available and legally 17:14:32
22 available in the iTunes music -- in the iTunes 17:14:34
23 software store. 17:14:38
24 What MeTube does is it allows you 17:14:38
25 to look at a YouTube video and then to download 17:14:41

1 ARAM A. SINNREICH, PH.D.
2 it locally from which you can burn it or 17:14:46
3 transfer it or turn it into a DVD or email it to 17:14:49
4 your friend or do anything that you can do with 17:14:53
5 1s and 0s that you have the permission to -- to 17:14:55
6 redistribute, technologically, not legally, of 17:15:00
7 course. 17:15:05
8 So the fact that -- that 17:15:06
9 non-PC-based platforms are entering the fray 17:15:10
10 shows that as consumers expand their -- the 17:15:13
11 range of their connections to -- to their 17:15:17
12 networks via additional devices and channels, 17:15:21
13 these tools are following them, and -- and 17:15:25
14 that -- that is part of -- it's an integral 17:15:28
15 element of computer -- of -- of Internet usage 17:15:31
16 regardless of the avenue of entry. 17:15:36
17 Q. Okay. 17:15:43
18 MS. YOUNG: Okay. I don't have 17:15:43
19 anything else. Thank you for your time. 17:15:44
20 MR. OLLER: Thank you. 17:15:46
21 MS. YOUNG: That's it.
22 (Continued on Jurat page.)
23
24
25