

EXHIBIT O



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In The Matter Of:

ARISTA RECORDS LLC, et al.

v.

LIME GROUP LLC, et al.

SINNREICH, Ph.D., ARAM A. - Vol. 1

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MERRILL CORPORATION

LegalLink, Inc.

225 Varick Street
10th Floor
New York, NY 10014
Phone: 212.557.7400
Fax: 212.692.9171

1 ARAM A. SINNREICH, PH.D.

2 available online to a URL that could be shared 11:24:52
3 with anybody. 11:24:54

4 Q. Are those downloading services, 11:24:56
5 either of them? 11:24:58

6 A. Well, SoundCloud has download 11:24:58
7 functionality integrated into it. I don't 11:25:00
8 remember whether The Kills song had a download 11:25:04
9 button enabled. But once something -- as I 11:25:06
10 discuss in my report, once something is 11:25:10
11 available freely online, whether in streaming or 11:25:12
12 download format, it's a very simple matter, 11:25:14
13 in -- in some ways simpler than using file 11:25:18
14 sharing, for a consumer to -- to download it and 11:25:20
15 have permanent access to it. 11:25:24

16 Q. And why is it so simple? 11:25:26

17 A. Well, there are a range of 11:25:26
18 different technologies and tools, including many 11:25:28
19 browser plug-ins that enable consumers to -- to 11:25:30
20 rip a stream, to make a stream permanently 11:25:36
21 available on their local hard drive with the 11:25:38
22 click of a button, and those tools have been 11:25:40
23 downloaded hundreds of millions of times, if not 11:25:42
24 more. 11:25:46

25 Q. So the goods that are being offered 11:25:58

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 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	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.)

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