

EXHIBIT C

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

* * * * *

BEDROCK COMPUTER
TECHNOLOGIES, LLC,

Civil Action No.

Plaintiff

6:09-CV-269-LED

vs.

SOFTLAYER TECHNOLOGIES, INC.,
ET AL.,

Defendants

* * * * *

VIDEOTAPED DEPOSITION OF: ALEXEY KUZNETSOV

Taken before Isabelle Klebanow, Registered
Professional Reporter and Notary Public, pursuant to
Notice, at the offices of Goltsblat BLP Law Firm,
Capital City Complex, Moscow City Business Center, 8,

Prennenskaya Nab. Building 1, Moscow, Russia, on

Thursday, January 27, 2011, commencing at 1:15 p.m.

1 A. Yes. Exactly.
 2 Q. Okay. And did you testify that the lines below
 3 this comment remove records?
 4 A. Yes.
 5 Q. And did you also testify that, going back toward
 6 the top of the page, the `rt_garbage_collect` function
 7 also removed records?
 8 A. Yes.
 9 Q. Okay. So is it your understanding that there are
 10 two portions of code in `rt_cache-add` that remove
 11 records?
 12 A. Yes.
 13 Q. What was the purpose -- strike that.
 14 Why did you put two different places -- strike
 15 that. I'm sorry. Let me try to ask the question more
 16 correctly.
 17 Why did you include two sections of code in this
 18 function that each remove records?
 19 A. Even though they do the same thing, they work
 20 quite differently.
 21 `Rt` -- the first way, which does globals, can't
 22 remove entry, is much more efficient in the sense that
 23 it counts all the tables. So you can't write to the
 24 situation when one part of table is more empty and
 25 another has a lot of entries. So when we add an entry

1 to some part of hash table, this counts all the table to
 2 balance through all of it.
 3 From the other hand, it is a slow process. We
 4 have to count through all the table. It's expensive.
 5 It's much cheaper to remove some entries which are
 6 already under hand. We add them to some hash line.
 7 We already can count forward through the list to
 8 find some entries to remove right there, in hope then,
 9 if we are lucky, hash table size will not grow above the
 10 limit and the first function, `rt_garbage_collect`, will
 11 probably even never will be triggered.
 12 Q. You referred to the `rt_garbage_collect` function
 13 as expensive, is that correct?
 14 A. Yes.
 15 Q. What do you mean by expensive?
 16 A. It takes quite a lot CPU resources, CPU time, to
 17 count through all the hash table, which could be quite
 18 large in size.
 19 Q. Okay. And just to back up just one more time. I
 20 think you testified that `rt_cache-add` calls
 21 `rt_garbage_collect`?
 22 A. Yes.
 23 Q. What does it mean to call `rt_garbage_collect`?
 24 A. To use this function as part of work, and then it
 25 calls up -- it uses some piece of code from the

1 function. Then it goes to the original code.
 2 Q. Okay. Right below the comment that says Cleanup
 3 duplicate and aged off entries, I think -- one, two --
 4 three lines below it, there's a line that starts with
 5 the word While.
 6 Do you see that?
 7 A. Yes.
 8 Q. Do you know what the purpose of that line is?
 9 A. Yes. This line start of cycle which counts
 10 through hash table chain.
 11 Q. And do you see, immediately below the while
 12 statement, do you see an opening brace?
 13 A. Yes.
 14 Q. What does that signify?
 15 A. That everything which after this line until the
 16 closing brace is used -- is executed for each entry in
 17 this hash table chain.
 18 Q. And where is the closing brace that you referred
 19 to?
 20 A. Closing brace is on the next page, on the first
 21 line on the next page.
 22 Q. Okay. And so, just to be clear, is the closing
 23 brace you're referring to on page 9314, and it's
 24 immediately above the `restore_flags` line?
 25 A. Yes.

1 Q. So is it your testimony that, between the opening
 2 brace under the while loop and that closing brace at the
 3 top of 9314, that the code in between those two braces
 4 is executed in the while loop?
 5 A. Yes.
 6 Q. Okay. Going back to the `rt_garbage_collect`
 7 function, did you testify that that function is a
 8 garbage-collection process?
 9 A. It's just a term. I -- I -- the term wasn't
 10 written by me. But probably it's just a term used by
 11 software programmers for -- garbage collection is a
 12 process of removal all unneeded data, and they link the
 13 sources to the system.
 14 So, yes, I testified that the function
 15 `rt_garbage_collect` do garbage collection.
 16 Q. And so is -- do you know if the code within the
 17 while loop is also performing garbage collection?
 18 A. It is.
 19 Q. So you have two garbage-collection routines in
 20 this function?
 21 A. Yes.
 22 (Exhibit No. 3 marked for
 23 identification.)
 24 Q. Okay. I am handing you what has been marked as
 25 Exhibit 3 -- not just yet.

1 I am handing you what has been marked as
2 Exhibit 3 (indicating). If you go by the Bates numbers
3 at the bottom right side of the page, it begins with
4 DEF00001013 and it ends on DEF00001043.

5 A. Yes.

6 Q. Do you recognize this document?

7 A. Yes. This is a doc content of the file. It is
8 that file. It is a file of rt.

9 Q. Okay. And who -- who wrote this file?

10 A. It was written by many people. But, actually, I
11 think 90 percent or more of this file was written by me.

12 Q. And when did you write -- strike that.

13 So do you see your name on the first page of this
14 document?

15 A. Yes.

16 Q. So were you one of the people who wrote this
17 document?

18 A. Yes.

19 Q. Okay. And when did you -- and so you wrote a
20 portion of this document, is that right?

21 A. Yes.

22 Q. And other people wrote other portions?

23 A. Yes.

24 Q. When did you write your portion of this document?

25 A. I wrote it in 1995.

1 Q. Okay. And is the portion that you wrote the
2 portion that we discussed earlier in connection with
3 Exhibit 2, which is the patch?

4 A. Yes.

5 Q. Okay. So take a look at this, and I want to ask
6 you if this is a true and correct copy of route.c from
7 Linux version 1.3.52.

8 A. Yes. I think so. I cannot say it's exact. You
9 just gave me this document.

10 Q. Okay. Mr. Kuznetsov, if you take a look at
11 Exhibit 1, which is your declaration --

12 A. Yes.

13 Q. -- if you look at the second page of that, do you
14 see paragraph 6 on the second page?

15 A. Yes.

16 Q. And it says that, Linux kernel version 1.3.52?

17 A. Yes. When I signed -- before I signed the
18 document, I verified accurately that documents which
19 were identified by those labels are genuine ones.

20 Q. Okay.

21 A. But I just -- you didn't tell me that it is that
22 document.

23 Q. Okay. Do you see the numbers at the bottom right
24 side of the first page?

25 A. Yes. I understand.

1 Q. Okay. And so those numbers on the bottom of the
2 page correspond to the numbers in paragraph 6?

3 A. Yes.

4 Q. Okay. So -- and when you signed the declaration
5 on December 15, 2010, you personally verified that this
6 was -- that the version of Linux 1.3.52 --

7 A. Yes.

8 Q. -- represented by these pages is a true and
9 correct copy?

10 A. Yes.

11 Q. Okay. Let's turn to page -- let's see -- to
12 page 1036. And just let me know when you find that
13 page.

14 A. Okay. I found it.

15 Q. Okay. Thank you. Do you see a line around the
16 middle of the page that starts with, Static void
17 rt_cache-add?

18 A. Yes.

19 Q. Okay. And is that the same function rt_cache-add
20 that we discussed earlier today?

21 A. Yes.

22 Q. Okay. And do you know if any other portions of
23 route.c use the rt_cache-add function?

24 A. Yes.

25 Q. Do you know what portions those are?

1 A. I can find it. A function -- for example, it's a
2 function next to rt_cache-add function,
3 ip_rt_slow_route. The function is responsible for
4 creation of a new routing cache entry.

5 And then close to end -- it's page 1039 -- it
6 calls rt_cache-add.

7 Q. Okay. So it's your testimony that
8 ip_rt_slow_route calls the rt_cache-add function?

9 A. Yes.

10 Q. And, also, could you please turn to the page
11 ending in 1032.

12 A. Okay.

13 Q. Do you see a function that says rt_redirect_1 at
14 the top of the page?

15 A. Yes.

16 Q. And do you see, around the middle of the page,
17 there's a statement that says rt_cache-add?

18 A. Yes, yes, yes.

19 Q. So what is happening at that line where it says
20 rt_cache_add?

21 A. Rt_cache-add adds new cache entries, so it's
22 called when we have to add new cache entry. Function
23 rt_redirect_1 creates stockhold redirected entry.

24 It's special kind of entry which triggered by a
25 network event that, when we send packet to some router,

<p style="text-align: right;">Page 62</p> <p>1 Is that the same while statement that we 2 discussed earlier in connection with your patch? 3 A. Yes. 4 Q. Okay. And so is this a while loop? 5 A. Yes. 6 Q. And can you identify the beginning and ending of 7 that while loop? 8 A. Yes. 9 Q. Okay. Please do. 10 A. Beginning is a line which starts from the word 11 While. It's a line which starts from word While. It 12 immediately follows comment which we discussed which 13 starts cleanup duplicated and aged off entries. 14 And this loop ends right before line containing 15 restore flags. 16 Q. Just so the record is clear, the entire while 17 loop is contained on page 1037, correct? 18 A. Yes. 19 Q. And so does this while loop continue walking 20 through the records in the linked list that was accessed 21 earlier? 22 A. Yes. 23 Q. And so does the while loop start over at the 24 beginning of the linked list? 25 A. Not -- it continues scan the linked list.</p>	<p style="text-align: right;">Page 64</p> <p>1 (Short recess taken.) 2 THE VIDEOGRAPHER: On the record. This 3 is cassette No. 3, and the time is 4:35. 4 Sorry. 3:35. 5 Q. Okay. Mr. Kuznetsov, thank you. We are back on 6 the record. 7 And shortly before we took our break, you -- we 8 were discussing the while loop contained on page 1037, 9 in rt_cache-add. 10 If you look at the line below the cli in the 11 while loop, the if statement, could you -- what does 12 that if statement do? 13 A. This statement checks the current routing cache 14 entry can be deleted. It's either expired or duplicate. 15 Q. Okay. And if the record is expired, what happens 16 next? 17 A. If the record is expired, it is deleted from hash 18 chain. Routing cache size is decreased. Then it's 19 destroyed, and we proceed with current table of the hash 20 chain. 21 Q. Very good. And does any of the lines of code in 22 the while loop go back to the head of the linked list? 23 A. No. 24 (Exhibit No. 4 marked for 25 identification.)</p>
<p style="text-align: right;">Page 63</p> <p>1 Current head of linked list is already new. So we 2 have -- this While continues scan through linked list, 3 but new entries. 4 We don't want to delete these entries, so we 5 continue the scan of table of linked list. 6 Q. Okay. Can you describe what happens within this 7 while loop? 8 A. Yes. We check -- we scan through all the chain, 9 and analyze each routing cache entry which we encounter 10 for the full condition. 11 First, we check that this entry is too old and 12 not a reference right now. In this case, we can delete 13 this entry. This entry is expired. And also we check 14 that this entry points to the same destination which -- 15 to the same destination as entry which we have just 16 added. So we must delete this entry. 17 So if one of these conditions is satisfied, we 18 unlink current entry from hash chain, decrease size of 19 cache size to follow the fact that we deleted some 20 entry, and destroy this routing entry. 21 The function rtfree destroys current entry, and 22 after this we continue the scanning table for link. 23 Q. Okay. 24 THE VIDEOGRAPHER: This is the end of 25 tape No. 2. Off the record. Time is 3:22.</p>	<p style="text-align: right;">Page 65</p> <p>1 Q. I would like to introduce another exhibit. This 2 is Exhibit 4. 3 Mr. Kuznetsov, I'm handing you what's been marked 4 as Exhibit 4 (indicating). It is -- if you go by the 5 number at the bottom of the page, it starts with DEF. 6 It starts with DEF00009321 -- 7 A. Yes. 8 Q. -- and continues through DEF00009349. 9 A. Yes. 10 Q. Do you recognize this document? 11 A. Yes. It is the same file. Probably it is of -- 12 according to the number before -- 13 (Witness peruses documents.) 14 A. I don't see reference to this number. 15 Q. Let's also use -- let's use the bottom number 16 then that says KS-DEF. And it starts with -- 17 A. Page 6 -- yes -- I don't see it. Oh, yes. I 18 found it. It's statement No. 3 in my declaration. Yes, 19 it is the same file. 20 Q. And what is this document? 21 A. It is the same file. 22 Q. So is it route.c? 23 A. Yes. 24 Q. And which version of Linux? 25 A. It's from kernel 1.3.42.</p>

1 Q. Okay. And is this a true and correct copy of the
2 route.c from above?
3 A. Yes. I identified this.
4 Q. Okay. And does this -- does Exhibit 4, this
5 version of route.c, include the code you wrote that was
6 included in the patch that was Exhibit 2 today?
7 A. Yes.
8 Q. And if you turn to the page ending in 708 --
9 using the bottom set of numbers, it starts with KS-DEF
10 and ends with 708, do you see that page?
11 A. Yes.
12 Q. And do you see, near the top of that page,
13 rt_cache-add?
14 A. Yes.
15 Q. And is this the same rt_cache-add function that
16 we saw in your patch that was Exhibit 2 in today's
17 deposition?
18 A. Yes. Exactly the same.
19 Q. Okay. Do you know if this version of route.c was
20 made publicly available at any time?
21 A. Yes. It was publicly available as Linux version
22 1.3.42.
23 Q. Okay. Do you know when this version of route.c
24 was made publicly available?
25 A. Actually, I cannot tell this exactly. But I

1 verified before that it was issued on November 17 of
2 1994. November 16.
3 Q. So what year -- excuse me. What date was it
4 available on?
5 A. November 16, 1994.
6 Q. 1994?
7 A. 5. I'm sorry. 1995.
8 Q. So just to make the record clear, this version of
9 route.c was publicly available on November 16, 1995?
10 A. Yes.
11 Q. And how -- and how could someone have accessed
12 this document in 1995?
13 A. He could go to FTP site where Linux kernels are
14 stored to download huge file which contains all the
15 files related to Linux kernels.
16 This file was numbered 1.3.42, and you could
17 unpack the file and to fetch the file route.c from
18 there.
19 Q. Okay. Do you know anyone who accessed this file
20 in 1995?
21 A. The question is more complicated. Yes, of
22 course. It was -- at least it was me, Alan Cox, Linus
23 Torvalds. So --
24 But I can't -- many people who downloaded that
25 file, but I cannot tell who exactly it was.

1 Q. But --
2 A. I know it was thousands of people.
3 Q. Okay. And you downloaded that file in 1995?
4 A. Yes. Particularly I downloaded exactly at the
5 day when it was published.
6 Q. Okay. Very good. Let's introduce another
7 exhibit.
8 (Exhibit No. 5 marked for
9 identification.)
10 Q. I am handing you what has been marked as
11 Exhibit 5. It is -- let's see.
12 If we use the numbers at the bottom right corner
13 of the page, it starts with DEF00007865 and ends at
14 DEF00007899.
15 And do you recognize this document?
16 A. Yes.
17 Q. And what is it?
18 A. It's almost the same document. It's different
19 previous one in few lines. It's document from a little
20 later kernel version, as I testified before, kernel
21 version 1.3.51.
22 Q. So is this a true and correct copy?
23 A. Yes, it is true, true accurate copy of file
24 route.c from Linux version 1.3.51.
25 Q. Okay. And turning to the page ending in 7892,

1 you see rt_cache-add at the top?
2 A. Yes.
3 Q. Okay. And is this the same rt_cache-add function
4 that is in Exhibit 2?
5 A. Yes.
6 Q. Okay. And was this document ever publicly
7 available?
8 A. Yes. It was publicly available as part of kernel
9 1.3.51.
10 Q. And when was it first publicly available?
11 A. On or around December -- December 27, 1995.
12 Q. And how could someone have accessed this document
13 in 1995?
14 A. Could unload this document as part of Linux
15 source archive version by No. 1.3.52, after unloading
16 the FTP site.
17 Q. And do you know anyone who accessed this document
18 in 1995?
19 A. Yes. It was me; Linus Torvalds, who created the
20 document, at least Alan Cox, to whom this patch was
21 submitted. But I downloaded it.
22 Q. Okay.
23 (Exhibit No. 6 marked for
24 identification.)
25 Q. Handing you now what has been marked as

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1 Exhibit 6. It's -- using the numbers at the bottom
2 center of the page, it starts with DEF00008567 and
3 continues through DEF 00007601.
4 Do you recognize this document?
5 A. Yes.
6 Q. And what is this document?
7 A. It is the same document, slightly modified. Some
8 parts were fixed. Little features were added. And this
9 document was published as part of Linux kernel version
10 2.0.1.
11 Q. Okay. And was this document publicly available?
12 A. Yes.
13 Q. And when was it first publicly --
14 A. This document was publicly available around
15 July 3, 1996.
16 Q. Okay. And how would someone have accessed this
17 document in 1996?
18 A. Anyone could download Linux source archive
19 version 2.0.1, to unpack it, and to fetch file route.c
20 from there.
21 Q. Do you know if anyone accessed this document in
22 July 1996?
23 A. I downloaded the document.
24 I don't know personally anyone who did the same,
25 but I can surely say that this document, all the archive

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1 was created and put to FTP site by Linus Torvalds. So
2 he obviously accessed the document.
3 Q. Okay. Let's turn to the page ending in 8592.
4 A. Okay.
5 Q. And do you see line 1299? It says `rt_cache_add`?
6 A. Yes.
7 Q. What is on line 1299?
8 A. It's beginning of the first `rt_cache-add`.
9 Q. We've discussed `rt_cache-add` earlier today.
10 Is this the same function -- are there any
11 differences between the `rt_cache-add` in this document
12 and the `rt_cache-add` we discussed in Exhibit 2?
13 A. No. It is exactly the same function. The file
14 was changed a little, but no changes were made for this
15 function.
16 Q. Okay.
17 (Exhibit No. 7 marked for
18 identification.)
19 Q. I am now handing you what has been marked as
20 Exhibit 7. Using the numbers at the bottom center of
21 the page, it starts with DEF00008602, and it continues
22 through DEF8605.
23 Do you see that?
24 A. Yes.
25 Q. Have you seen this document before?

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1 A. Yes.
2 Q. And what is it?
3 A. It's a so-called header file for routing cache.
4 It contains some definition comment shared by file
5 `route.c` and another component of Linux kernel.
6 Q. Okay. And so this is a true and correct copy of
7 the `route.h` file from Linux version 2.0.1?
8 A. Yes.
9 Q. And was this document publicly available?
10 A. Yes. This document was made publicly available
11 simultaneous with file `route.c`.
12 Q. Okay. And do you know if anyone accessed this
13 document in 19- -- July 1996?
14 A. Yes. I did.
15 Q. Okay. If you turn to the second page, at
16 line 65, and you see the word `struct rtable`?
17 A. Yes.
18 Q. What does that mean?
19 A. It's -- this structure contains all the data for
20 a particular routing cache entry. It contains all the
21 data, including destination where to send this packet
22 and linkage in hash table.
23 Q. Okay. And you see line 67? It says `struct`
24 `rtable *rt_next`.
25 A. Yes.

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1 Q. What does that line do?
2 A. This is pointer to the next element in hash
3 table, which is in the linkage in routing hash table
4 which we discussed before.
5 Q. Right. So is it a pointer to the next element in
6 the linked list?
7 A. Yes.
8 Q. Okay. And if you look then on line 98, it says,
9 `extern struct rtable`. That's where the line starts.
10 And then it says, `ip_rt_hash_table`.
11 What does this line mean?
12 A. This line declares -- describes hash table which
13 contains pointers to hash chains consisting of `struct`
14 `rtable`, which we just discussed.
15 Q. Okay. And so were records corresponding to
16 routing cache entries stored in that hash table?
17 A. Yes.
18 Q. Okay. All right. Mr. Kuznetsov, are any
19 defendants in this case paying you for your time in
20 connection with this deposition?
21 A. No.
22 Q. Do you have as -- do you have any opinion on the
23 validity of US patent No. 5,893,120?
24 A. Yes.
25 MR. CASSADY: Object to form.

1 Q. Okay. So the affidavit was written and
2 controlled by Mr. Absher, right?
3 THE INTERPRETER: (Russian).
4 A. Yes.
5 Q. And after reviewing it, you signed it, right?
6 A. Yes.
7 Q. But you didn't make any edits to the draft that
8 Mr. Absher sent you, isn't that true?
9 A. If something was wrong there -- actually, the
10 document contains only facts. If some facts were not
11 true, I would edit it.
12 But, actually, I did not have to do any changes.
13 All the facts are correct, to all I know.
14 Q. So you signed the original version of the draft
15 that Mr. Absher sent you?
16 THE INTERPRETER: (Russian).
17 A. Yes.
18 Q. Okay.
19 A. What is original? I got a PDF file. I printed
20 it. I signed it. I sent it to Alton Absher.
21 Q. Okay. Now, Mr. Kuznetsov, we know you talked to
22 some of the defendants in this case. We know you talked
23 to some of the attorneys for the defendants in this
24 case.
25 But have you ever attempted to contact Dr. Nemes,

1 who's the inventor on the patent in this case?
2 MR. ABSHER: Object to form.
3 A. No.
4 Q. So you've never spoken with Dr. Nemes the
5 inventor on the patent in this case?
6 MR. ABSHER: Object to form.
7 A. No. I know definitely, no.
8 Q. So have you ever spoken with any attorneys from
9 Bedrock about this case?
10 A. No.
11 Q. So is it fair to say that you've only heard the
12 story from the side of the defendants in this case?
13 MR. ABSHER: Object to form.
14 A. Yes. First of all, yes, I heard the story only
15 from the -- only from defendants.
16 But the patent is filed in US patent system. I
17 read it independently, not under guidance of anybody.
18 Q. Okay. So isn't it true, sir, that, as of
19 December of 2010, you had reviewed the patent in this
20 case at least twice?
21 A. Yes.
22 Q. And now, isn't it true, sir, that the code
23 written by you does not actually collide with the afore-
24 mentioned patent because your code uses quite different
25 techniques, isn't that true?

1 MR. ABSHER: Object to form.
2 A. The code how it existed since 19- -- since 1997
3 and until 2008, when it was patched by Eric Dumazet,
4 indeed does not collide with the patent. That is my
5 statement. It doesn't collide with the patent.
6 But the piece of code which was added by Eric
7 Dumazet indeed collide with the patent. But this code
8 is just an insignificant improvement of my code which I
9 wrote in 1985.
10 And then, due to its utter inefficiency, it was
11 removed from the kernel at some point. For at least
12 five years, it wasn't used in Linux kernel. Not five.
13 More.
14 But the idea remained the same, and we knew how
15 to -- at some point, we knew how to improve it. So,
16 actually, it is seen from the code. The code which was
17 added by Eric Dumazet is exactly the same place which
18 was used in my code dated about 1995, and does almost
19 exactly the same thing.
20 Q. Okay. Mr. Kuznetsov, let me ask you a very
21 particular question.
22 So the code written by you in 1995 does not
23 actually collide --
24 A. No. My code --
25 Q. Sir, sir, Mr. Kuznetsov, let me finish my

1 question. One moment. I apologize. Let me finish my
2 question, okay?
3 It is true, sir, that the code written by you, in
4 1995, does not actually collide with the patent in this
5 case, because your code uses quite different techniques?
6 Isn't that true, sir?
7 MR. ABSHER: Object to form.
8 A. No. It is not true. My code, written in 1995,
9 directly collide with the patent. Actually, it used
10 exactly the same technique which was described in the
11 patent up to letter.
12 But this code was inefficient, and I removed that
13 code. This code was not in Linux kernel for many years.
14 And, at this time, Linux kernel didn't collide with the
15 patent because it used quite different expiration
16 technique.
17 Then, my idea from 1995, which existed in Linux
18 kernel at least for two years, was returned in another
19 incarnation and applied to Linux kernel by Eric Dumazet.
20 At this point it started to collide again.
21 Q. Now --
22 THE VIDEOGRAPHER: Sorry. Just a minute,
23 Jason. I have four minutes of tape. Shall I
24 change it right now?
25 MR. CASSADY: Yes.