

EXHIBIT 32

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA (SAN FRANCISCO)

APPLE COMPUTER, INC.,)	
)	
Plaintiff,)	
)	
-against-)	Case No.
)	C-06-00019
BURST.COM, INC.,)	(MHP)
)	
Defendant.)	

DEPOSITION of JOEL HALPERN, an Expert Witness,
taken by Defendant at the offices of Susman Godfrey,
L.L.P., 590 Madison Avenue, New York, New York, on
Monday, November 13, 2006, commencing at 10:11 a.m.,
before Charleane M. Heading, a Registered Professional
Reporter and Notary Public within and for the State of
New York.

1 Halpern
2 it.
3 Q Where does it say that? Help me out
4 here because I don't see that language. Where
5 does it say that?
6 A It says, "storing the compressed
7 representation of the audio/video source
8 information."
9 So you have to have compressed the
10 whole program before you store it.
11 Q So the entire program that's being
12 compressed, in your view, needs to be stored at
13 some point, correct?
14 A That is certainly one of the things
15 it says, yes.
16 Q So at some point you need to store
17 the fully compressed source information, correct?
18 A You need to -- yes.
19 Q But you cannot start the storage
20 process until compression has been fully completed
21 under your construction, is that correct?
22 A The patent is written as a single
23 set of steps. I'm sorry. Yes, that is -- you
24 can't do it that way.
25 Q So what happens to those bits that

1 Halpern
2 claim doesn't apply.
3 So the question is, the question --
4 I can't answer the question as you've asked it.
5 Q I'm sorry. I missed that. Why
6 can't you answer my question?
7 A Because you're hypothesizing
8 something about the way storage works and what
9 constitutes the storage of the claim which is the
10 storage of the complete program and I don't know,
11 and you're then saying isn't it impossible to do
12 something. Well, I don't know if it's impossible
13 but the way you worded your question, anything
14 would be impossible.
15 Q Well, the storage that's claimed is
16 storage of the time compressed representation,
17 right?
18 A Uh-huh.
19 Q We can at least agree on that point,
20 right?
21 A Yes.
22 Q And -- are you okay on time?
23 A You can keep going through this
24 series of questions.
25 Q Okay. I'm trying to figure out what

1 Halpern
2 are, are being compressed before they're stored?
3 Where do they go?
4 A I don't know.
5 Q Is there any place they could
6 possibly go before storage?
7 A That depends on what the
8 construction of storage and random access storage
9 would mean.
10 Q Well, it talks about storing the
11 time compressed representation, correct?
12 A Uh-huh.
13 Q Okay. Where is the time compressed
14 representation before it is stored?
15 A Not specified.
16 Q Where could it be?
17 A It's not specified.
18 Q Because it's a technical
19 impossibility, correct?
20 I mean just, is there a way to fully
21 compress it and not start the storage process
22 before full compression takes place?
23 A Your question seems to presume that
24 all storage in the machine is this storage. If
25 that's true, then even if you do it in pieces the

1 Halpern
2 would happen to the signal after, after it's time
3 compressed in your world but before it's stored.
4 A I'm asked to hypothesize what they
5 might have done. There are things they could do.
6 There are things I could imagine but I'm stuck
7 guessing and I don't --
8 Q What are they?
9 A -- as an expert choose to guess.
10 Guessing is not what experts are supposed to do.
11 You're asking me to guess where it
12 might be. There isn't the random access storage
13 for the time compressed representation.
14 Q I'm trying to figure out under your
15 view of the things that requires this lock step
16 approach, how the claimed invention could ever
17 operate, Mr. Halpern.
18 A That isn't the analysis I've
19 performed.
20 Q Have you thought about that? Have
21 you thought about whether your claim
22 constructions, you know, make technical sense in
23 the context of actually having an operable system?
24 A I believe you're asking two
25 different questions.

1 Halpern
 2 I have definitely thought about
 3 whether my claims constructions make technical
 4 sense.
 5 Q In the context of a fully operable
 6 transceiver as claimed?
 7 A I believe that's a different
 8 analysis.
 9 Q And you haven't done that analysis
 10 yet?
 11 A Correct.
 12 Q Fair enough.
 13 Under your claim constructions, the
 14 time compressed representation must be fully
 15 stored in random access storage before the
 16 transmission or output process begins. Correct?
 17 A Correct.
 18 Q Using your time compression
 19 construction, where would the time compression
 20 take place in the context of these claims?
 21 A The time compression has to take
 22 place in the step that says compressing to a time
 23 compressed representation.
 24 Q Okay. That's before the storage,
 25 correct?

1 Halpern
 2 a time period associated with a real time
 3 representation of said audio/video source
 4 information."
 5 That occurs after input and before
 6 storage.
 7 Q Now, what type of time compression
 8 would create a time compressed representation
 9 before storage?
 10 (Pause)
 11 A Some form of time compression that
 12 produced a representation that could then be
 13 stored.
 14 Q I want a specific type of time
 15 compression that can create a time compressed
 16 representation before storage. Can you give me
 17 one specific type?
 18 A I'm sorry. I don't understand the
 19 question. What do you mean by type?
 20 Q Any, any apparatus or structure in
 21 your time compression world that would create a
 22 time compressed representation for storage?
 23 A A structure that set up the
 24 necessary components for transmitting in a shorter
 25 time period with the same bits and stored, and

1 Halpern
 2 A Yes.
 3 Q Okay. Is it your view that the time
 4 compressed representation, using your time
 5 compression, is stored in random access storage
 6 using the same bits as the audio/video source
 7 information?
 8 A I'm sorry.
 9 Q Okay. Let me start over then. That
 10 was a poor question.
 11 You agree that claims require the
 12 storage of time representation?
 13 A Yes.
 14 Q When one performs time compression
 15 on the audio/video source information -- well, let
 16 me back up.
 17 Are you saying that time compression
 18 is performed before storage in your constructions?
 19 A The claims do require that.
 20 Q Okay. Where is that performed?
 21 A '995. "Compression means, coupled
 22 to said input means, for compressing said
 23 audio/visual source information into a time
 24 compressed representation thereof having an
 25 associated burst time period that is shorter than

1 Halpern
 2 associated with it a time period would constitute
 3 such a time compressed structure.
 4 Q Describe for me what one such
 5 structure.
 6 A I haven't -- that wasn't, I mean --
 7 first off, that isn't, my job wasn't to form an
 8 expert opinion as to what kind of structure they
 9 might have described that they didn't describe.
 10 We've already discussed the fact
 11 they didn't describe the time compression. They
 12 don't give the mechanism for doing it. Assuming
 13 they did it, then they could be stored.
 14 Q You can't give any type of structure
 15 for me today that would accomplish your time
 16 compression before storage, is that correct?
 17 MR. BROWN: Objection. That
 18 mischaracterizes his testimony. He
 19 just did that.
 20 A I gave you an example of something
 21 where the compression structure sets up the
 22 necessary processing so that the later
 23 transmission would be at a higher rate and stores
 24 that time period with, marks the time period with
 25 the representation so that the right time

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1 Halpern
 2 compressed transmission would occur later.
 3 Q What's --
 4 A That's a time compressed
 5 representation.
 6 Q What structure is it though?
 7 Describe it for me.
 8 A In some other invention, it would
 9 probably be a processor with suitable programming.
 10 I don't know what it would be. Here they didn't
 11 include the structure.
 12 Q In your time compression world, it's
 13 the same bits that are stored, correct?
 14 A Yes.
 15 Q If you look at the bits that
 16 represent the audio/video source information and
 17 you compare those bits to the time compressed
 18 representation, the bits are going to be the same,
 19 correct?
 20 A Yes.
 21 Q So what's the difference between the
 22 audio/video source information and the time
 23 compressed representation?
 24 A Whatever is needed to cause it to be
 25 time compressed.

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1 Halpern
 2 Q What is it, sir? I can't figure it
 3 out. Can you tell me, please?
 4 A I haven't formed -- I haven't
 5 attempted to answer that question.
 6 Q Well, the claims talk about two
 7 different things: Number one, an audio/video
 8 source information and, number 2, a time
 9 compressed preparation. Correct?
 10 A Yes.
 11 Q And you've told me that those two
 12 things are, quote, "the same things," correct?
 13 A They have to contain the same bits.
 14 The time compressed representation, for example,
 15 has to also include an associated burst time
 16 duration.
 17 Q And where would that be included?
 18 Would there be other bits?
 19 A Yes.
 20 Q Where would those bits be?
 21 MR. BROWN: Objection.
 22 Incomplete hypothetical. Vague.
 23 A I don't know.
 24 Q You don't know?
 25 A Because it -- they would be in some

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1 Halpern
 2 structure other than what's disclosed because
 3 there is no structure disclosed for this. They'd
 4 end up in the storage -- sorry.
 5 The other answer -- maybe I
 6 misunderstood your question. I thought you meant
 7 where would they be during the compression.
 8 In the storage, they end up in the
 9 storage of the time compressed representation
 10 which we have the structure for in the report and
 11 that, those, that information would have to be in
 12 that information.
 13 So DRAM, SRAM, CMOS memory or
 14 optical disk memory is where that would end up
 15 along with the other stored time compressed
 16 representation.
 17 Q So does the patent spec disclose a
 18 random access storage that actually stores the
 19 time compressed representation as claimed?
 20 A I believe it stores structure link
 21 for storing and that if the time compression
 22 mechanism existed, if you could get a time
 23 compressed representation, then we could get to
 24 storing that.
 25 Q In your time compression world, are

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1 Halpern
 2 you saying additional bits are added to the time
 3 compressed representation?
 4 A You asked me to guess one method.
 5 One way to do it would be that.
 6 Q Well, what would those bits
 7 designate?
 8 MR. BROWN: Asked and
 9 answered.
 10 Q Well, let me just walk through this
 11 because I'm confused. I'm sorry.
 12 You've got bits that represent the
 13 source information, correct?
 14 A Uh-huh.
 15 Q And you're saying those same bits
 16 are also contained in the time compressed
 17 representation, correct?
 18 A Uh-huh.
 19 Q Okay. And then you're saying the
 20 compression step adds additional bits, is that
 21 correct?
 22 MR. BROWN: Asked and
 23 answered.
 24 A You have to have associated duration
 25 and you might, one hypothetical -- you asked me to

1 Halpern
 2 A I recall seeing it.
 3 Q Okay. If Burst is correct that this
 4 term "input means" is not subject to Section 112,
 5 paragraph 6, would you agree with the Burst
 6 construction?
 7 A I don't know. I haven't analyzed
 8 that case. That's, because you have to be careful
 9 about the meaning of terms.
 10 If this is not a 112.6 term, I would
 11 have to step back and figure out what it would
 12 precisely mean and that isn't an analysis I've
 13 done and it would be unfair to you to say "yes" or
 14 "no" to that answer, to that question.
 15 Q So you don't have an objection to
 16 the Burst construction nor do you endorse it if
 17 the claim limitation input means is not subject to
 18 112.6, right?
 19 A I have not analyzed it. I do not,
 20 therefore, at this time have an objection nor do I
 21 at this time agree with it.
 22 Q Okay. Fair enough.
 23 In the second paragraph, you mention
 24 a modem as being an input means. Is that correct?
 25 A Yes.

1 Halpern
 2 A I believe the correct term or the
 3 correct structure from the patent is the modem.
 4 Q Would you add the modem to your
 5 constructions for input means on the '705 and '932
 6 patent as well?
 7 A Certainly not on '932.
 8 Q But on the '705 would you add it?
 9 A I would have to go look.
 10 (Pause)
 11 A Yes, I believe I would.
 12 Q So you wish to amend your report for
 13 the input means in the '995 and '705 to include
 14 modem, correct?
 15 A They appear in my opinion and they
 16 should have appeared in the details.
 17 Q Okay.
 18 A But modem appears, again, in the
 19 '705 summary and it should have appeared in the
 20 details as well.
 21 Q The Burst construction, if this
 22 phrase is construed under the 112.6, includes a
 23 microwave satellite transceiver?
 24 A For which patent?
 25 Q For the '995 patent, for example.

1 Halpern
 2 Q Is that -- that's the
 3 transceiver/receiver 22 shown in Figure 2,
 4 correct?
 5 A I believe so.
 6 Q I noticed in your construction on
 7 the next page on the '995 patent that you did not
 8 include the modem. Was that an error or was that
 9 intentional?
 10 A I believe the modem should be listed
 11 there.
 12 Q Okay. Well, so you believe part of
 13 your construction for input means in the '995
 14 should include modem?
 15 A Yes.
 16 Q Should it include the word "modem"
 17 or the audio/video transceiver/receiver that's
 18 identified as item 22 in Figure 2?
 19 A I used modem because in column 8,
 20 they refer to a modem.
 21 Q As an example?
 22 A As the actual structure for that.
 23 Q Okay. So you would disagree with
 24 using the words audio/video transmitter/receiver,
 25 instead of modem?

1 Halpern
 2 A Okay.
 3 Q Would you disagree with including a
 4 microwave satellite transceiver for the '995 input
 5 means? And specifically I'm looking at column 2,
 6 line 50 and line 51. That talks about satellite
 7 transmission or reception.
 8 Do you see that, sir?
 9 A I see that line. I believe there's
 10 no other reference to microwaves so that although
 11 it's described in the summary, it's not, it's not
 12 connected and it's not, the structure isn't clear.
 13 Q So if that summary -- strike that.
 14 Does the satellite transmission or
 15 reception passage that appears in the summary
 16 suggest to you that one type of suitable input
 17 means is a satellite transceiver?
 18 A It suggests that at some point, they
 19 were thinking about the relevance of satellite
 20 transceivers but they did not, in spelling out the
 21 structures in the embodiment, carry through.
 22 I -- that's why it's not there. I'm
 23 looking at '995.
 24 Q Not there in your construction?
 25 A Yes.

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1 Halpern
 2 Compound.
 3 A I'm not -- I don't understand the
 4 question.
 5 Q Well, you've referred to several
 6 prior art references in support of your time
 7 compression construction, correct?
 8 A Yes. Yes.
 9 Q If you look at how you've construed
 10 time compression, have you construed it in a
 11 manner that would cover the type of time
 12 compression that is taught in all of those
 13 references?
 14 MR. BROWN: Same objection.
 15 A I'm having trouble understanding a
 16 question. I'm sorry.
 17 Q Okay. Well, you've given several
 18 examples of what you call time compression in
 19 these prior art references, right?
 20 A Yes.
 21 Q And I just want to understand
 22 whether those examples would fall within the scope
 23 of the claims as you've construed them for that
 24 specific time compression construction.
 25 A I believe time compression, as it is

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1 Halpern
 2 used in all of the cited prior art, and time
 3 compression and time compressed representation as
 4 it is used in the claims refer to the same
 5 process.
 6 Q In the '995, one example of the
 7 compressor/decompressor 26 is the A.M.D. chip,
 8 correct?
 9 A Yes.
 10 Q There is nothing in the
 11 specification of the '995 that suggests that Burst
 12 was trying to limit the compressor/decompressor to
 13 that specific A.M.D. chip, correct?
 14 A I don't believe I can recall
 15 anything that limited it to only that one, but
 16 that is the only substantiation described for
 17 that.
 18 Q So in 1988, would one of ordinary
 19 skill understand that other chips could perform
 20 data compression algorithms to achieve data
 21 compression as described in the '995
 22 specification?
 23 A My focus in the analysis was on what
 24 components were described, not what other things
 25 are equivalent as known by one of ordinary skill

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 2 in the art.
 3 I understand that's relevant, but
 4 that isn't what I did my report on and I haven't,
 5 I certainly haven't gone to try to determine what
 6 the best description of the equivalents. Does it
 7 have to be another fax chip or is it -- I don't
 8 know what the right set of things that would be
 9 equivalent precisely, because it's important to be
 10 precise, would be because that wasn't an analysis
 11 I had been asked to do.
 12 Q Well, would you agree that in 1988,
 13 other chips existed that could perform data
 14 compression?
 15 A Yes.
 16 Q And specifically the type of data
 17 compression disclosed in the Burst patent,
 18 correct?
 19 A There are other chips, there were
 20 other chips in 1988 that could do the same kind of
 21 data compression that the A.M.D. chip described in
 22 '995.
 23 Q At the bottom of page 28 --
 24 A Of my report?
 25 Q Yes. You say, "Compression' is a

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 2 set of techniques; a means for compression is
 3 simply any structure that performs those
 4 techniques." Correct?
 5 A Yes.
 6 Q The means for compression that could
 7 perform the data compression could be, for
 8 example, the A.M.D. chip, right?
 9 A That would perform data compression,
 10 yes.
 11 Q Other chips could perform data
 12 compression, correct?
 13 A Yes.
 14 Q A CPU running a software algorithm
 15 could perform data compression in 1988, correct?
 16 A Depending on the constraints of the
 17 data compression algorithm. Some algorithms could
 18 be performed by CPUs.
 19 Q In 1988?
 20 A In 1988.
 21 Q Some decompression algorithms could
 22 be performed by CPUs, correct?
 23 A Correct.
 24 Q Those were actually implemented in
 25 that time frame, correct?

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1 Halpern
 2 A Yes.
 3 Q Would one of ordinary skill in 1988
 4 look at the compressor/decompressor 26 and
 5 understand it could be a CPU executing a
 6 compression software algorithm?
 7 Let me, let me -- I didn't phrase
 8 that properly so I'll strike it.
 9 In 1988, would one of ordinary skill
 10 look at the compressor/decompressor 26 and
 11 understand that it could be a CPU executing a data
 12 compression software algorithm?
 13 A Not in the patent, not in the
 14 specification of these patents with the claims.
 15 Q Let's not worry about the claims
 16 right now. You know, the spec talks about data
 17 compression, right? We've gone over that?
 18 A Yes.
 19 Q I think you told me that
 20 compressor/decompressor 26 could perform certain
 21 data compression, right?
 22 A Yes.
 23 Q Okay. So my question is in 1988,
 24 would one of ordinary skill look at the
 25 compressor/decompressor 26 and understand that it

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1 Halpern
 2 could be a CPU executing a data compression
 3 software algorithm?
 4 A I don't believe so.
 5 Q Why is that?
 6 A As I say in my report, there's
 7 multiple reasons. The patent specifically refers
 8 to the compression as occurring in 26 which is
 9 specifically identified as a separate structure
 10 from the CPUs that are discussed, CPU28 and CPU31.
 11 Neither the CPU -- the CPUs that are
 12 identified aren't identified as doing compression.
 13 Similarly, given the performance requirements, a
 14 general purpose processor in 1988 simply couldn't
 15 do the job.
 16 Q What performance requirements are
 17 you talking about?
 18 A Having an effective solution that
 19 can cope with the media.
 20 Q Can you be more specific?
 21 A Well, the easiest analysis is to
 22 merely keep up with real time from the source and
 23 you can't even come close to keeping up with real
 24 time with any compression algorithm, any data
 25 compression algorithm at all in 1988 running on a

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1 Halpern
 2 general purpose processor, a CPU such as they
 3 refer to for other CPU functions in this patent.
 4 Q You don't believe in 19 -- well,
 5 let's back up.
 6 Where does the patent say that
 7 there's a requirement for real time compression?
 8 A There are implications in the
 9 structure that suggested it would be likely to be
 10 built with the real time because there's only two
 11 pages, two video frames of RAM in the processing.
 12 Also, if you're talking about 2 hour
 13 programs, it's not, it's not an effective device
 14 if it takes hours and hours and days to perform
 15 its job.
 16 Very strange to have a device that
 17 takes days to compress something so that I can
 18 ship it faster than real time. I'm sorry. It
 19 doesn't make sense.
 20 Q Is there some language in the
 21 specification in particular that would support a
 22 conclusion that real time compression is required
 23 by the invention?
 24 A No.
 25 MR. BROWN: Asked and

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1 Halpern
 2 answered.
 3 A That's not what I said. I didn't
 4 say it was required.
 5 Q Okay.
 6 A But it would be, it's what one --
 7 it's the order of that performance one would
 8 expect from the system and there are implications,
 9 not explicit language, but implications that lead
 10 one to that conclusion.
 11 Q I want to be very clear about this.
 12 Is there a requirement with respect to the claimed
 13 inventions?
 14 A There is an explicit requirement on
 15 the decompressor.
 16 Q Of what?
 17 A That it be able to function in real
 18 time.
 19 Q I'm talking about the compression
 20 that was found.
 21 A I believe it was implicit that it
 22 either be real time or at least near real time for
 23 the nature of the invention.
 24 Q In 1988, is it your testimony that
 25 real time or near real time data compression could

1 Halpern
 2 Q Okay. So you did actually analyze
 3 the A.M.D. spec sheet to figure out whether it
 4 could compress, data compress audio information,
 5 right?
 6 A Yes.
 7 Q And would it surprise you to learn
 8 that it could compress audio information?
 9 A Yes.
 10 Q Could chips that perform data.
 11 Compression back in 1988 compress audio in real
 12 time?
 13 A That would have depended on the chip
 14 design.
 15 Q Well, do you know if chip designs
 16 were available in 1988 to compress audio
 17 information in real time?
 18 A I believe there were such chips.
 19 Q Do you know whether there were data
 20 compression chips available in 1988 to compress
 21 full motion video in real time?
 22 A I don't know.
 23 Q You don't know one way or the other?
 24 A No.
 25 Q Would you agree with the concept

1 Halpern
 2 A If data compression were what were
 3 meant by the claims, then probably the A.M.D. chip
 4 that is disclosed is structure for data
 5 compression in the '95 patent.
 6 Q What do you mean "probably"? Is
 7 there some hesitation? Why did you use the word
 8 "probably"?
 9 A As we discussed, there's the
 10 question of capability to handle audio and video
 11 and whether that's relevant which I have not
 12 analyzed but which you raised and, therefore,
 13 raises questions in my head because you raised
 14 those questions.
 15 Q Let's look at the '95 patent,
 16 please, specifically claims 20 which covers, in
 17 part, decompression means. Correct?
 18 A Yes.
 19 Q You mentioned before that you
 20 thought the, either the Burst claims or Burst
 21 specification suggested that real time
 22 decompression is a requirement.
 23 Is that correct or not?
 24 A I said that, yes.
 25 Q So you do believe that on the

1 Halpern
 2 that hardware and data compression circuits can
 3 compress faster than a CPU running a software
 4 algorithm?
 5 A In 1988?
 6 Q Yes. In 1988, thank you.
 7 A In 1988, special purpose hardware
 8 circuitry, for example, for a specific data
 9 compression algorithm would generally outperform
 10 processors, general purpose processors.
 11 Q On page 31, you say, "While the
 12 disclosure of a single means for data compression
 13 might have supported claims directed to data
 14 compression, the patent as issued lacks support
 15 for claims limited to time compression," correct?
 16 I'm on lines 18, 19 and 20, sir.
 17 A Yes.
 18 Q I want you to assume that Burst is
 19 correct that the claims are directed to data
 20 compression and not to time compression, okay?
 21 A I hear you.
 22 Q Okay. Would it be your view if that
 23 assumption is correct that the specification
 24 discloses sufficient structure to achieve data
 25 compression?

1 Halpern
 2 decompression side, real time compression is a
 3 requirement?
 4 A Real time.
 5 Q I'm sorry. Real time decompression
 6 is a requirement.
 7 A Yes.
 8 Q Is that in the claims or the
 9 specification or both?
 10 A I recall it specifically in the
 11 claims. I do not remember whether there is also
 12 explicit similar text in the specification.
 13 Q You don't know of any express
 14 language in the specification that would suggest
 15 that real time decompression is required, is that
 16 correct?
 17 A I do not recall.
 18 Q Okay. Sitting here today, you can't
 19 think of any without, without going back and
 20 looking at the spec, right?
 21 A As I said earlier, it's been a while
 22 and I have to go back and look.
 23 Our earlier discussions have not
 24 been on the decompression side so I would have to
 25 look at those portions of the specification.