1 IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
2 WACO DIVISION

3 VERVAIN, LLC * February 6, 2025
*
4 VS. * CIVIL ACTION NOS.
*
5 KINGSTON TECHNOLOGY * AU:24-CV-254
COMPANY, INC., ET AL. *
6 PHISON ELECTRONICS *
CORPORATION * AU:24-CV-259
7

BEFORE THE HONORABLE ALAN D ALBRIGHT
8 MARKMAN HEARING (via Zoom)

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01:31 1 (Hearing begins.)

01:31 2 DEPUTY CLERK: A civil action in Cases

01:32 3 AU:24-CV-254, Vervain LLC versus Kingston Technology

01:32 4 Company, Incorporated, et al., and Case AU:24-CV-259,

01:32 5 Vervain LLC versus Phison Electronics Corporation.

01:32 6 Cases called for a Markman hearing.

01:32 7 THE COURT: Announcements from counsel

01:32 8 starting with the plaintiff, please.

01:32 9 MR. WHITEHURST: Good morning -- or I

01:32 10 should say afternoon, Your Honor. Alan Whitehurst from

01:32 11 McKool Smith for plaintiff Vervain. And with me on the

01:32 12 line are Chris McNett and Christian Dorman.

01:32 13 You already know Mr. McNett. He's

01:32 14 appeared before you several times. But Mr. Dorman is

01:32 15 new to our firm and one of our more junior attorneys.

01:32 16 And we're pleased today that he's going to have the

01:33 17 opportunity to handle Term 8, memory space, and Term

01:33 18 10, memory element.

01:33 19 THE COURT: Okay. I look forward to it.

01:33 20 MR. WHITEHURST: Yes. And if it's okay,

01:33 21 I was also going to introduce real quickly Dr. Rao.

01:33 22 He's on the line as well. He's the co -- one of the

01:33 23 cofounders of Vervain and the inventor of the

01:33 24 patents-in-suit.

01:33 25 And also with us today is Gerald Amen,

01:33 1 president and head of licensing for Vervain.
01:33 2 THE COURT: Always a pleasure when
01:33 3 clients attend. It's part of the reason I do these
01:33 4 things by Zoom so that folks can easily attend. I'm
01:33 5 glad they are.
01:33 6 MR. WHITEHURST: Thank you, Your Honor.
01:33 7 MR. CARRANO: Good afternoon, Your Honor.
01:33 8 This is Cono Carrano of Akin for the Kingston entities.
01:33 9 And with me today is Andy Rosbrook. He's going to be
01:33 10 arguing one term. And Ryan Stronczer, who just got
01:33 11 admitted today. He will be -- with your Court, that
01:33 12 is -- he'll be arguing --
01:34 13 (Laughter.)
01:34 14 MR. CARRANO: -- another term. There was
01:34 15 a little confusion about that admission. But he
01:34 16 also -- also with us are I think several people from
01:34 17 Kingston. Tracy Chang, for one. I don't know who else
01:34 18 but there might be a gang of people here from Kingston.
01:34 19 THE COURT: That'd be great. All
01:34 20 welcome.
01:34 21 So let's start with the first claim term.
01:34 22 Give me just one second.
01:34 23 MR. CHIN: Oh, I'm sorry.
01:34 24 THE COURT: Sure.
01:34 25 MR. CHIN: I'm sorry, Your Honor. If you

01:34 1 don't mind, I'd like to make an introduction.
01:34 2 THE COURT: Sure. Of course.
01:34 3 MR. CHIN: Doug Chin, counsel for Phison
01:34 4 Electronics Corporation. My colleague and I, Steve
01:34 5 Chow, will be arguing the -- we'll be presenting the
01:34 6 oral arguments for Phison.
01:34 7 There are some other members of our firm
01:34 8 in the gallery. But today it's going to be me and
01:34 9 Steve that'll be presenting the oral argument.
01:34 10 THE COURT: Sounds just great.
01:34 11 We'll take up first the claim term MLC
01:35 12 nonvolatile memory.
01:35 13 MR. CHOW: Good afternoon, Your Honor.
01:35 14 This is Stephen Chow.
01:35 15 With the Court's leave, I'd like to argue
01:35 16 the MLC and SLC memory module terms together. I think
01:35 17 that'll save some time.
01:35 18 THE COURT: I hate saving time.
01:35 19 (Laughter.)
01:35 20 THE COURT: That would be just fine.
01:35 21 MR. CHOW: Okay. And if I may ask to
01:35 22 share the screen.
01:35 23 THE COURT: I don't know how to do that,
01:35 24 but --
01:35 25 MR. CHOW: Yeah. I can do it, I think.

01:35 1 Okay. Do you see the screen?
01:35 2 THE COURT: I do. Yes, sir.
01:35 3 MR. CHOW: Okay. Again, we'd like to
01:35 4 argue this including a screen to the presubmitted
01:35 5 slides.
01:35 6 The defendants' position is not a repeat
01:35 7 of Western Digital's. We agree with plaintiff that the
01:35 8 floating gate cell used in both SLC and MLC memory is
01:35 9 capable of storing electrical charges representing one
01:36 10 or multiple bits of information.
01:36 11 The issue is not the storage capacity of
01:36 12 that floating gate cell. What the issue is, is what is
01:36 13 an SLC NVM, a nonvolatile memory module, as
01:36 14 distinguished from a MLC nonvolatile memory module in
01:36 15 the claims, in the patent specification, and in the
01:36 16 intrinsic evidence that Dr. Rao submitted with his 2012
01:36 17 application.
01:36 18 Those provide not only the support but
01:36 19 the language for the claims. In fact, other than SLC
01:36 20 and nonvolatile memory module and MLC -- SLC
01:36 21 nonvolatile memory module are the only descriptions of
01:36 22 the -- a very complex system that is claimed.
01:36 23 The purported advantages of this -- of
01:36 24 the eight patents includes, from the specification,
01:37 25 both the speed, the cost, and the endurance of

01:37 1 different mixes of the SLC and MLC memory.
01:37 2 So as we say, that scope is not directed
01:37 3 only to storage capacity but the structure necessary
01:37 4 for the MLC and SLC memory module.
01:37 5 And what I'd like to point out is that
01:37 6 the term "memory module" is used in each of the
01:37 7 seven -- in each of -- except one of the eight patents.
01:37 8 And the -- if you look at Claim 1 of the '298 patent,
01:37 9 which is repeated through the first three patents, is
01:37 10 that there's an MLC module, there's an SLC module, and
01:37 11 a controller that's adapted.
01:37 12 Now, the adaptation is extensive for the
01:37 13 controller. But nothing is said about really what is
01:37 14 an MLC and SLC. In fact, for a layperson, MLC and SLC
01:38 15 has no meaning whatsoever. It's only in the context of
01:38 16 a person of ordinary skill in the art that there would
01:38 17 be a customary or ordinary meaning for those -- for
01:38 18 those people.
01:38 19 And frankly the -- the patents rely upon
01:38 20 an understanding by a POSITA of all the issues such as
01:38 21 erasing, reading, and writing. None of that sets forth
01:38 22 an MLC or SLC.
01:38 23 So the issues, as I mentioned, was that,
01:38 24 well, there's some concern about density. There's some
01:38 25 concern about access speed and lifetime endurance. And

01:38 1 endurance is the one that has been stated most
01:38 2 prominently. But these distinct memory structures
01:38 3 allow operations that give rise to other
01:38 4 characteristics.
01:38 5 So the -- I can get back to this.
01:38 6 Essentially what's disclosed are MLC modules, SLC
01:38 7 modules. The patents do not disclose something else.
01:38 8 The differences in how SLC and MLC
01:39 9 memories read and write show that they're structurally
01:39 10 different.
01:39 11 So -- and Dr. Rao, he submitted his prior
01:39 12 patent which included a Samsung SLC chip. And that was
01:39 13 really called a flash memory. And only -- the cells
01:39 14 are only a small part of this array of cells. So
01:39 15 really this memory includes all the structure.
01:39 16 Again, this is also in submitted art.
01:39 17 Dr. Rao knew about this for many years.
01:39 18 SLC memory, not called SLC memory at the time, because
01:39 19 it was really only two levels; that is, either on or
01:39 20 off, was around -- was introduced by -- back in 1988.
01:39 21 Over the next eight years and then by
01:40 22 1998, there was something called MLC technique. And
01:40 23 the MLC technique was distinguished by -- the earliest
01:40 24 reference we found to SLC was in the Cho document which
01:40 25 referred to -- referred to the -- referred to

01:40 1 multilevel programming cell as opposed to a single
01:40 2 level programming cell.
01:40 3 But essentially the idea that all this
01:40 4 was involved in same distinguished between each other
01:40 5 was in 2001 and many other documents that Dr. Rao
01:40 6 submitted, but talked about dual mode.
01:40 7 And this dual mode versus -- sometimes
01:40 8 they call it SLC mode. Sometimes they call it binary
01:40 9 mode. Sometimes they just call it, you know, one-bit
01:40 10 mode. But it was always distinguished. And none of
01:40 11 that documentation talks about a SLC mode as SLC
01:41 12 memory.
01:41 13 And all these were filed in 2012.
01:41 14 Dr. Rao put in both his prior patent as well as 40
01:41 15 documents that set forth a lot of the details that are
01:41 16 used to understand -- for anyone to understand the
01:41 17 specification.
01:41 18 Because really, although there is
01:41 19 statement that there is some wear leveling and some
01:41 20 possibility of quicker and -- wear on SLC memory as
01:41 21 opposed to MLC -- I'm sorry -- MLC memories as opposed
01:41 22 to SLC memories, all this stuff really relates to how
01:41 23 things are written or read or erased. And none of --
01:41 24 all this is background knowledge assumed by the POSITA.
01:41 25 So words matter. Cell versus memory

01:41 1 versus module.

01:41 2 Intrinsic evidence was not before the

01:41 3 Court in the Western Digital case. Essentially what

01:42 4 we've proposed is both the prior patent that was

01:42 5 incorporated by reference with the 40 documents, of

01:42 6 which we've cited perhaps 12 of these patents.

01:42 7 What Dr. Rao claimed was a system rather

01:42 8 than a method of use. Such as binary or pseudoMLC mode

01:42 9 of distinct MLC and SLC modules. It was his choice of

01:42 10 structural modules versus modes. And he knew. He's

01:42 11 very well read and widely and technically astute, and

01:42 12 he knew this when he filed both the '916 patent and the

01:42 13 IDS documents.

01:42 14 So again this is not just admitted prior

01:42 15 art but it's the 2012 vocabulary of the POSITA.

01:42 16 Just very quickly, I've mentioned this

01:42 17 one already. At the beginning, SLC memory was a single

01:42 18 program level memory. That changed over the years.

01:42 19 And today, we may find a lot of conversions with what

01:43 20 Vervain would like to argue.

01:43 21 But MLC memory is multipage memory. This

01:43 22 is shown in -- this is how MLC took off. You read one

01:43 23 page of a logical data and then you write -- you write

01:43 24 a first page and then you write a second page. In

01:43 25 between this, you have to read the first page.

01:43 1 So there's a lot of mechanics that the --
01:43 2 this is -- to write two pages, it's not something that
01:43 3 is in SLC memory. Noting -- not in what was in 1988 or
01:43 4 since that's called SLC memory.
01:43 5 So again, SLC memory's distinct from SLC
01:43 6 mode. I've shown the Cho document distinguishing dual
01:43 7 mode, compare it to SLC NAND flash memory.
01:43 8 Again, Dr. Rao showed a separate MLC and
01:43 9 SLC flash and also specifically called each of these
01:44 10 eight -- in Figure 4 each of the eight-plus modules,
01:44 11 and they could be chips, and only relative to two SLC
01:44 12 chips.
01:44 13 And it's said in the specification that
01:44 14 that kind of proportion is -- would be useful for the
01:44 15 kinds of things that the patent discloses in the
01:44 16 claims.
01:44 17 Well, in the specification and in the
01:44 18 pre-2018 patent claims, the basis for the system claim
01:44 19 is adapted to perform some disclosed function. There's
01:44 20 no new hardware.
01:44 21 The patent owners reply at two -- again,
01:44 22 I said the real dispute is MLC capable memory. But
01:44 23 it's MLC memory operating in binary mode, not SLC
01:44 24 memory.
01:44 25 Dr. Rao never discloses nor claims NAND

01:44 1 flash memory operated in SLC mode. And again,
01:44 2 contrasting that with the controller adapted to not the
01:45 3 nonvolatile memory adapted to operate in MLC or SLC
01:45 4 mode, but distinct SLC and MLC memory modules.
01:45 5 How are they distinguished? MLC memory
01:45 6 can operate in SLC mode. SLC memory cannot operate in
01:45 7 MLC mode. That is, store more than one level of
01:45 8 logical pages in an SLC memory physical page as
01:45 9 understood by the POSITA.
01:45 10 Now, just getting to the point where I
01:45 11 know Your Honor thought that "module" did not need to
01:45 12 be described, but module was put in. It's one of a
01:45 13 very few words that are used to describe the components
01:45 14 of the claimed system.
01:45 15 The term "module" was -- appeared in the
01:45 16 first three patents. It vanished in the '300 patent
01:45 17 and returned for the remaining patents. And it is
01:46 18 important.
01:46 19 And I think that what -- where the
01:46 20 distinction is is that the circuitry that we are -- the
01:46 21 defendants argue is necessary to define what an SLC
01:46 22 memory is and the MLC memory is, that circuitry could
01:46 23 be part of other circuitry.
01:46 24 The term "module" just means more like
01:46 25 specifically that it's something that's complete in

01:46 1 itself and it's interchangeable. That's something that
01:46 2 dropped in this module. And this is what a POSITA
01:46 3 would think. And that's why we make the distinction
01:46 4 that we need to see what -- how these patents give
01:46 5 notice to the public of what is claimed. And with SLC
01:46 6 memory module and MLC module, not MLC memory operating
01:46 7 in different ways.
01:46 8 Thank you.
01:46 9 THE COURT: Does anyone else want to
01:47 10 challenge the Court's construction?
01:47 11 MR. CARRANO: Your Honor, just to recap a
01:47 12 little bit from the Kingston's perspective. We agree
01:47 13 with what Phison said.
01:47 14 So -- but to -- in summary, the patent --
01:47 15 the patents at issue here, and they're all common
01:47 16 specification, they're all in essence the alleged
01:47 17 invention, discloses an architecture. An architecture
01:47 18 with two types of memory, SLC and MLC.
01:47 19 And the architecture's predicated on four
01:47 20 factors: speed, endurance, capacity, and expense.
01:47 21 Four factors on how the inventor came up with the
01:47 22 alleged invention. He -- it's a trade-off of all four
01:47 23 factors to lead to what they disclose as the
01:47 24 architecture.
01:47 25 What Vervain's construction calls for is

01:48 1 one of those four factors, capacity. It ignores speed,
01:48 2 it ignores cost, and ignores endurance.
01:48 3 So the only thing that brings those
01:48 4 factors into the equation is defendants' construction
01:48 5 where it calls for at least a structure of an MLC, a
01:48 6 structure for an SLC, and structure and -- Kingston's
01:48 7 construction has structure in there. Phison's
01:48 8 construction has more words toward the structure.
01:48 9 But what our view is, on this side of the
01:48 10 V, is structure matters because the named inventor told
01:48 11 us it matters. That's how that the predicate for the
01:48 12 whole architecture in which this alleged invention is
01:48 13 predicated on.
01:48 14 To take out one of those four factors,
01:48 15 capacity, one bit, two bit, multiple bits, whatever you
01:48 16 want to call capacity, undermines the predicate for the
01:48 17 alleged invention.
01:48 18 So we, defendants' side, think the
01:49 19 structure aspect of it needs to be infused in the
01:49 20 construction, one, for proper scope and, two, to give
01:49 21 some credence to how this architecture was developed in
01:49 22 the first place.
01:49 23 Thank you.
01:49 24 THE COURT: I'll be back in a second.
01:49 25 (Pause in proceedings.)

01:50 1 THE COURT: I don't need to hear a
01:50 2 response on Claim Terms 1 and 4. I'm going to maintain
01:50 3 my preliminary construction.
01:50 4 With regard to 2 and 5, can we do these
01:50 5 together also or would you like to take up 2 and 5
01:51 6 separately?
01:51 7 MR. CHOW: Your Honor, I think we did
01:51 8 cover 2 and 5.
01:51 9 THE COURT: Oh, I'm sorry. This wasn't
01:51 10 the numbers that I was given. So...
01:51 11 MR. CHOW: So we did 1 and 2 and 4 and 5.
01:51 12 So with --
01:51 13 THE COURT: Okay. Okay. I got it.
01:51 14 So now we're on 3. 3 is blocks.
01:51 15 MR. WHITEHURST: That's correct, Your
01:51 16 Honor.
01:51 17 MR. CHIN: Yes, Your Honor.
01:51 18 THE COURT: And the defendants are
01:51 19 arguing that those are indefinite?
01:51 20 MR. CHIN: That's correct, Your Honor.
01:51 21 THE COURT: Okay. I'll take that up.
01:51 22 MR. CHIN: Okay. Just going to share
01:51 23 screen here.
01:51 24 Okay. Your Honor, from defendants' point
01:51 25 of view, blocks -- excuse me. I'm going a little too

01:52 1 fast here.

01:52 2 The issue is for defendants that the

01:52 3 claims do not explicitly specify the type of block. So

01:52 4 how would a person of ordinary skill have understood

01:52 5 the boundaries of the claim?

01:52 6 And when the specification is considered,

01:52 7 there's at least three different types -- three

01:52 8 different ways blocks are referenced. The

01:52 9 specification references logical blocks, blocks of

01:52 10 data, and physical blocks.

01:52 11 And when the claims themselves are

01:52 12 referenced, there's not an explicit description of what

01:52 13 types of blocks are discussed. So it has to be in

01:52 14 fair -- inferred from context perhaps what type of

01:52 15 block is discussed.

01:52 16 So in '240 patent Claim 1, erasable

01:52 17 blocks, due to the nature -- their description of it --

01:53 18 THE COURT: Hold on. Let me back up

01:53 19 here.

01:53 20 The words "blocks," if we did a count,

01:53 21 would probably be in here, what, like a billion times,

01:53 22 something like that, in the patent?

01:53 23 MR. CHIN: That's probably fair, Your

01:53 24 Honor. Yes.

01:53 25 THE COURT: So what you want me -- you

01:53 1 know, and I get it. You know, I've heard other judges
01:53 2 complain, oh, I was a government major and now I'm
01:53 3 having to do this. And I'm happy to do it.
01:53 4 But how does our system work if someone
01:53 5 prosecutes a patent and we have an examiner skilled in
01:53 6 the art who sees blocks about a thousand times. And
01:53 7 lets -- how -- why -- I don't -- when y'all come in
01:53 8 here and argue this -- I'm not picking on you. I mean,
01:53 9 you're representing your client. You have to do what
01:54 10 you have to do.
01:54 11 But it -- I'm just saying it's insane to
01:54 12 me that you all think I'm in a position, after an
01:54 13 examiner has allowed -- this isn't like where it might
01:54 14 be grammatical, you know, where they say there's a --
01:54 15 there are logical blocks where the first, third, and
01:54 16 fifth and you can't tell which block it is. I get
01:54 17 that.
01:54 18 But this was -- here, you can read all
01:54 19 three. The logical address is the address at which the
01:54 20 logical block of physical sector. The examiner saw
01:54 21 that. This is achieved by creating virtual small
01:54 22 blocks of data or sectors. In most cases, the
01:54 23 controller maintains a lookup table to translate the
01:54 24 memory array physical block address, PBA.
01:54 25 The examiner allowed this. How -- I

01:54 1 don't get your argument on how it's in --- how one
01:54 2 skilled in the art would find the word "block"
01:55 3 indefinite. How does our system work if an inventor
01:55 4 can go and get a patent that says this and a judge can
01:55 5 just say, no. That's indefinite. I don't get it.
01:55 6 MR. CHIN: I understand what you're
01:55 7 asking, Your Honor.
01:55 8 And I'd just like to highlight in
01:55 9 defendants' opening brief, we did say in the
01:55 10 alternative, we'd be fine with the plain and ordinary
01:55 11 meaning where the construction would allow for some
01:55 12 references of blocks to refer to blocks of data and
01:55 13 some to refer to physical blocks or blocks of memory.
01:55 14 So the reason why defendants are arguing
01:55 15 indefiniteness now is because it's -- it's primarily in
01:55 16 relation to the position that Vervain took when it
01:55 17 proposed this term for construction saying it's only
01:55 18 physical blocks.
01:55 19 And if we're going to take a hard line
01:55 20 and say that it's only physical, well, then that can't
01:55 21 work in the context of these patents. And that's why
01:56 22 we have this argument as indefinite.
01:56 23 However, we did say in the alternative,
01:56 24 if we want to take a --
01:56 25 THE COURT: I get that now. Why don't

01:56 1 you focus then only on why my construction, which is
01:56 2 proposed by the plaintiff, I get it, why it can't be
01:56 3 limited to only a physical group of memory cells? Why
01:56 4 don't you focus on that? And maybe you were headed
01:56 5 that way and I just interrupted you. So I apologize if
01:56 6 I did.
01:56 7 MR. CHIN: I appreciate that, Your Honor.
01:56 8 And I didn't mind at all.
01:56 9 I guess the best way to discuss that is
01:56 10 this last term here in the '298 patent, this last
01:56 11 reference to blocks in subsection D of Claim 1, the
01:56 12 text says: Allocate those blocks that receive the most
01:56 13 frequent writes by transferring the contents of those
01:56 14 blocks to the SLC nonvolatile memory module.
01:56 15 Well, if you're allocating the blocks but
01:57 16 you're transferring the contents of those blocks,
01:57 17 there's a little confusion here. Transferring the
01:57 18 contents of those blocks sounds like you're talking
01:57 19 about data, but -- so you're not -- so you're probably
01:57 20 talking about allocating the contents of the container.
01:57 21 So you're talking about data blocks.
01:57 22 But if we -- if we agree with Vervain's
01:57 23 construction, which defendants do not, that every
01:57 24 reference to blocks is physical, it's impossible to
01:57 25 allocate the container itself to something.

01:57 1 We're talking about the contents, which
01:57 2 is the data, which is really why that's the crux of
01:57 3 defendants' indefiniteness argument and the reason why
01:57 4 we say, in the alternative, we would accept a plain and
01:57 5 ordinary meaning that would allow for some references
01:57 6 to be blocks of data and some references to be physical
01:57 7 blocks.
01:57 8 THE COURT: A response to that, please?
01:58 9 MR. MCNETT: Thank you, Your Honor.
01:58 10 The Court's prior construction that of in
01:58 11 a nonvolatile memory, a physical group of memory cells
01:58 12 is correct. It's consistent with both the claims and
01:58 13 the specification.
01:58 14 The Court previously, you know, held this
01:58 15 in the summary judgment order in the Western Digital
01:58 16 case. The face of the claim confirms that the blocks
01:58 17 are in a nonvolatile memory and are physical addresses.
01:58 18 And the specification confirms that they're physical
01:58 19 addresses as well.
01:58 20 So let's take a look at Claim 1 of the
01:59 21 '298 patent. We can see in yellow it begins talking
01:59 22 about the physical MLC nonvolatile memory module
01:59 23 comprising a plurality of individually erasable blocks.
01:59 24 And every time we later refer to blocks,
01:59 25 it's talking about those same blocks.

01:59 1 And defendants in their briefing, as I
01:59 2 understand it, they agree for the vast majority of
01:59 3 these that it can be a physical block. Really the
01:59 4 sticking point is down at -- in the allocate step,
01:59 5 subpart D.
01:59 6 But it's clear, right, it's clear that
01:59 7 that can be a physical block as well, right? It says:
01:59 8 Allocate those blocks by transferring the respective
01:59 9 contents of those physical blocks -- right, those
01:59 10 blocks are physical blocks -- to other physical blocks
02:00 11 in SLC. Right?
02:00 12 That's what the claim language says. It
02:00 13 is consistent with the physical construction.
02:00 14 And if we take a look, this -- almost
02:00 15 this same argument was actually made. This is from
02:00 16 Western Digital's briefing in the prior case. They
02:00 17 said that allocate or segregate only makes sense in the
02:00 18 context of logical blocks.
02:00 19 The Court's already reviewed this
02:00 20 argument and already rejected this argument. It should
02:00 21 do the same here.
02:00 22 THE COURT: Any rebuttal?
02:00 23 MR. CHIN: Yes, Your Honor.
02:00 24 We'd just like to point out that in the
02:00 25 Western Digital and Micron cases, there was never an

02:00 1 argument regarding indefiniteness.
02:00 2 Micron and Western Digital argued only
02:00 3 that the claim should be given its plain and ordinary
02:00 4 meaning, but they didn't discuss the difficulty here if
02:01 5 we take a hard and fast interpretation of these blocks
02:01 6 as only physical.
02:01 7 Thank you.
02:01 8 THE COURT: You bet.
02:01 9 Anything else?
02:01 10 Okay. I'll be back in a second.
02:01 11 (Pause in proceedings.)
02:03 12 THE COURT: The Court's going to maintain
02:03 13 its preliminary construction.
02:03 14 Moving on to No. 6. Controller. Adapted
02:03 15 to perform, and goes on from there. And the Court
02:03 16 found plain and ordinary meaning and found that 112(6)
02:03 17 did not apply.
02:03 18 I'll hear from defendants on this.
02:03 19 MR. CARRANO: Thank you, Your Honor.
02:03 20 Next slide.
02:03 21 Okay. So defendants' position is that
02:03 22 112(6) applies, and that once that's applied, there's
02:03 23 no disclosure of corresponding structure; therefore,
02:03 24 the term is invalid.
02:03 25 Next slide.

02:03 1 So here's an instance where it's -- the
02:03 2 term comes up, the "controller" term comes up. And as
02:03 3 you can see, the highlighted sections have controller
02:03 4 on top and then at least four recited functions.
02:04 5 Next slide.
02:04 6 And then the next slide, we augmented
02:04 7 that claim to just put means in there. And you can see
02:04 8 this is in classic means-plus-function form.
02:04 9 On top of those functions that are
02:04 10 recited in the previous claim, other functions with
02:04 11 controller and FTL are cited in other patents. And
02:04 12 we've mapped those other functions across those other
02:04 13 patents that have additional functions beyond the four
02:04 14 that we just illustrated.
02:04 15 So in short, controller and FTL is
02:04 16 recited and there's at least -- I think a total of
02:04 17 eight or nine functions tied to the word "controller."
02:04 18 So as a predicate, in our view, clearly written in
02:04 19 means-plus-function format.
02:04 20 Next slide.
02:04 21 So of course, means is not in the claims.
02:04 22 So that's where we apply Williamson. Williamson tells
02:05 23 us there's two inquiries. Inquiry 1, whether or not
02:05 24 the term itself has sufficiently definite structure.
02:05 25 THE COURT: I have done 400 Markmans.

02:05 1 MR. CARRANO: Okay.
02:05 2 THE COURT: I don't -- I really don't
02:05 3 need what Williamson says.
02:05 4 MR. CARRANO: Okay. Great.
02:05 5 So just the point being then, where we,
02:05 6 defendants, are focusing on Williamson, Inquiry 2 only.
02:05 7 Vervain in their briefing largely focuses on Williamson
02:05 8 Inquiry 1.
02:05 9 So there's a disconnect. They never
02:05 10 really addressed our points directly. They addressed
02:05 11 whether or not there's some structure in controller.
02:05 12 We're not saying there isn't.
02:05 13 We're saying that a controller doesn't
02:05 14 have sufficient structure to perform the recited
02:05 15 functions, which are between four and nine functions
02:05 16 across all the patents.
02:05 17 So that's the crux of the argument.
02:05 18 We're addressing Williamson Inquiry 2. They've largely
02:05 19 focused on 1, so not responsive to our position.
02:05 20 Next slide.
02:05 21 So in our view, we've come forward with
02:06 22 evidence and argument as to Inquiry 2 gets this into
02:06 23 112(6). Vervain really doesn't head-on address that.
02:06 24 They address that -- they address the Inquiry 1 again
02:06 25 and they never address whether or not there's any

02:06 1 structure disclosed if there is 112(6).
02:06 2 So -- so what they don't do is in the
02:06 3 alternative, if 112 does apply, what the corresponding
02:06 4 structure would be. We're saying it's not disclosed;
02:06 5 they're just silent on that.
02:06 6 So two parts with this. One, they really
02:06 7 didn't address our Inquiry 2 position. And two, they
02:06 8 never had a backup plan if 112(6) does apply, what the
02:06 9 corresponding structure would be or what would be
02:06 10 disclosed.
02:06 11 Next slide.
02:06 12 So they waive -- effectually waived
02:06 13 any -- or meaningfully waived any response to our
02:06 14 positions.
02:06 15 So not to go into this too much, but the
02:06 16 cases rely on largely are Williamson of course, and
02:07 17 Egenera, just that some structure's not enough,
02:07 18 specifically when there's recited functions applied to
02:07 19 the term at issue. And then we have two cases --
02:07 20 district court cases that were affirmed at the Federal
02:07 21 Circuit, Velocity and Konami, which are reasonably on
22 point for this case.
02:07 23 In both cases, both two cases, Konami and
02:07 24 Velocity found controller and processor, close cousin
02:07 25 to controller, were -- 112 was applied and the

02:07 1 corresponding structure was not there or not disclosed,
02:07 2 so therefore indefinite. So we think that these two
02:07 3 cases are instructive on this case.
02:07 4 Next slide.
02:07 5 So there's on -- this analysis on this
02:07 6 slide here is a repeat of what I've said. And largely
02:07 7 speaking is that the only structure for a controller in
02:07 8 the spec is an off-the-shelf part. It's an
02:08 9 off-the-shelf controller. So you go to a store. You
02:08 10 buy a controller.
02:08 11 Is it a physical thing? Yes. It is.
02:08 12 Can it execute basic instructions? Yes.
02:08 13 It can.
02:08 14 For some cases that -- that's good enough
02:08 15 for corresponding structure under 841. In this case,
02:08 16 it is not. Because that controller has to be
02:08 17 programmed and programmed to do apparently or allegedly
02:08 18 the novel features to this patent. So there's -- these
02:08 19 novel features by -- for way of example, we listed up
02:08 20 on slide -- this slide here.
02:08 21 So these are allegedly novel features.
02:08 22 So you can't go to the store and buy a controller to do
02:08 23 these features. And allegedly these features are not
02:08 24 in the prior art as of the patent.
02:08 25 So one of their arguments about, well,

02:08 1 one of ordinary skill would just look at the prior art
02:08 2 and figure out how to do it, well, then the patent's
02:08 3 invalid on the face of it. We'll take that, but I
02:08 4 don't think that's really their position.
02:08 5 Their position is just to try to come up
02:08 6 with something to point to about the corresponding
02:08 7 structure.
02:08 8 Next slide.
02:08 9 So we presented evidence that -- from our
02:09 10 expert that a general-purpose processor, as the Court
02:09 11 knows, has to be programmed to do specific functions or
02:09 12 execute a program, and that that program is obviously
02:09 13 not in the claim and also not disclosed in the
02:09 14 corresponding specification.
02:09 15 Next slide.
02:09 16 This slide, again, is kind of a repeat of
02:09 17 what I said already, that Vervain at best argues that,
02:09 18 yeah, processor has a structure. That's good enough.
02:09 19 No. That's not good enough for Inquiry
02:09 20 2, which is our argument.
02:09 21 And the Fed Circuit has continually --
02:09 22 consistently rejected the proposition that Vervain
02:09 23 argues here, that a POSITA could find ways to program
02:09 24 it. That's not good enough. That's not good enough to
02:09 25 keep it out of the realm of 112(6) and that's not good

02:09 1 enough to avoid invalidity under 112(2) if it is
02:09 2 112(6).
02:09 3 Next slide.
02:09 4 So just to more specifically, even if,
02:10 5 even if they don't have corresponding structure --
02:10 6 THE COURT: I know -- I know all this.
02:10 7 MR. CARRANO: Okay. So do you have any
02:10 8 questions for me then?
02:10 9 THE COURT: No.
02:10 10 MR. CARRANO: All right. Thank you.
02:10 11 THE COURT: A response?
02:10 12 MR. WHITEHURST: Thank you, Your Honor.
02:10 13 Alan Whitehurst for Vervain.
02:10 14 We just heard some arguments about
02:10 15 Vervain waved arguments under the second part of --
02:10 16 THE COURT: Don't need to hear a waiver
02:10 17 argument.
02:10 18 MR. WHITEHURST: That's not true.
02:10 19 And as Your Honor knows, Inquiry 2 only
02:10 20 is relevant if you can get past Inquiry 1. And, you
02:10 21 know, much like you acknowledge for blocks,
02:10 22 "controller" is a term that examiners have seen
02:10 23 thousands of times and it's regularly used in patent
02:10 24 claims.
02:10 25 And as counsel admitted, the claims don't

02:11 1 say the word "means." Could Dr. Rao have used
02:11 2 means-plus-function language? He did not. Instead, he
02:11 3 used the term "controller."
02:11 4 And as you know, defendants have a burden
02:11 5 to overcome the presumption that 112(6) doesn't apply.
02:11 6 And they can't do that. "Controller" is not a nonce
02:11 7 term.
02:11 8 We've already distinguished the case that
02:11 9 was displayed by Kingston's counsel Konami. It wasn't
02:11 10 talking about controller. It was talking about a
02:11 11 different situation, a game controller.
02:11 12 In instances like the claims here, where
02:11 13 you're talking about the controller, the Federal
02:11 14 Circuit has already addressed that.
02:11 15 If we could put up Vervain's Slide 58.
02:11 16 MR. MCNETT: If defendants could take
02:11 17 down their slides, please. Thank you.
02:12 18 MR. WHITEHURST: Your Honor, as you know,
02:12 19 the Federal Circuit in Telecordia and SySmex --
02:12 20 If we could go to Slide 59, please.
02:12 21 Well, we don't need the slides.
02:12 22 But as the Federal Circuit has already
02:12 23 said, controller is sufficient structure and
02:12 24 means-plus-function does not apply. Especially here,
02:12 25 where the term "means" was not used.

02:12 1 THE COURT: I'll be back in a second.
02:12 2 MR. WHITEHURST: Thank you, Your Honor.
02:12 3 (Pause in proceedings.)
02:13 4 THE COURT: The Court is going to
02:13 5 maintain its construction.
02:13 6 Next up is No. 7, data integrity test.
02:13 7 I just have a difficult time believing
02:14 8 anyone's asking me to construe the words "data
02:14 9 integrity test."
02:14 10 So having said that, if defendants really
02:14 11 want to take up my time doing that.
02:14 12 MR. CHIN: Thank you, Your Honor. I'm
02:14 13 just -- I'm sorry, Your Honor. Please go ahead.
02:14 14 THE COURT: No, please.
02:14 15 MR. CHIN: We just need to make one point
02:14 16 for defendants' side, and that's really with respect to
02:14 17 what was said in the prosecution history. That's
02:14 18 really the core of this argument here and then we can
02:14 19 move on.
02:14 20 But basically, there was a disclaimer --
02:14 21 defendants' position is that there was a disclaimer
02:14 22 during the prosecution of the -- I believe it was the
02:14 23 '300 patent, specifically in this 2020 remarks that the
02:14 24 applicant made during prosecution.
02:14 25 In that, they distinguished error

02:14 1 correction codes, EDCs, CRCs from the data integrity
02:15 2 test and they said it was a compare operation. So this
02:15 3 really goes to what was represented during the
02:15 4 prosecution history, Your Honor.
02:15 5 And then after that representation was
02:15 6 made in applicant's remarks, then some of the later
02:15 7 claims were amended to explicitly state this
02:15 8 comparison.
02:15 9 So that's really what we're arguing here,
02:15 10 Your Honor. So that's -- that's what we have for you.
02:15 11 Thank you.
02:15 12 THE COURT: Okay. I'm going to maintain
02:15 13 my construction.
02:15 14 Next up is No. 8, memory space.
02:15 15 Defendant argues that it's indefinite, and I'll take
02:15 16 that up.
02:15 17 MR. STRONCZER: Thank you, Your Honor.
02:15 18 Ryan Stronczer for the defendants.
02:15 19 The argument here is pretty simple.
02:15 20 The -- first of all, the term "memory space" is not
02:15 21 used anywhere in the specification.
02:15 22 And the plaintiffs, you know, in their
02:15 23 briefing they essentially say it means three different
02:16 24 things. They say it can mean logical memory space --
02:16 25 logical memory, physical memory, or just the concept of

02:16 how much memory is available in a system, whether
02:16 that's nonvolatile, volatile, you know, there's no
02:16 like -- they don't -- they don't distinguish either.
02:16 Their example is when you're a child
02:16 knowing the iPad runs out of memory space. Well,
02:16 that's not what's claimed in the -- that's not what --
02:16 how the claims are -- how the claims recite memory
02:16 space.
02:16 And if the defendants or -- can -- or
02:16 sorry, plaintiffs can take down their slides, I can
02:16 share mine.
02:16 Oh, there we go.
02:16 So here, you know, here, for example, in
02:16 the '300 patent, the memory space contains a volatile
02:16 memory space and a nonvolatile memory space. And so
02:16 that contains both multilevel and SLC and MLC.
02:17 And if we look at Claim -- if we look at
02:17 some of the other claims here, the -- you know, in the
02:17 '369 patent, it refers -- you know, arguably it refers
02:17 to both logical and physical -- well, it expressly says
02:17 logical and physical memory space.
02:17 But here, it says volatile memory space
02:17 and nonvolatile memory space, so...
02:17 And then in the '546, it just says memory
02:17 space with no guidance.

02:17 1 And in '300, it says the nonvolatile
02:17 2 memory only can be mapped into the MLC -- into the
02:17 3 memory space, which then suggests it's a logical
4 division.
02:17 5 But then, for example, the '612 patent,
02:17 6 it says the memory space contains MLC space and a
02:17 7 random access volatile memory element. So that, in the
02:17 8 '612 claims, it mixes physical and logical and -- into
02:17 9 the same memory space.
02:17 10 So from our perspective, there's just
02:18 11 no -- the term just has no real guidance in the
02:18 12 specification or its usage in the claims as to whether
02:18 13 it refers to physical or volatile -- physical or
02:18 14 logical memory space.
02:18 15 THE COURT: Were you finished? I
02:18 16 couldn't tell.
02:18 17 MR. STRONCZER: Oh, sorry. Yes, Your
02:18 18 Honor.
02:18 19 THE COURT: A response?
02:18 20 MR. DORMAN: Yes, Your Honor. This is
02:18 21 Christian Dorman on behalf of Vervain.
02:18 22 And the crux of defendants' arguments is
02:18 23 that memory space is indefinite because it can be used
02:18 24 in different contexts. And we think that this only
02:18 25 proves that memory space is a broad simple term that

02:18 1 should be given its plain and ordinary meaning.
02:18 2 And if we can go to the next slide.
02:18 3 Memory space is used throughout the
02:18 4 asserted patents, including here in Claim 1, simply to
02:18 5 refer to a volatile memory space and a nonvolatile
02:18 6 memory space.
02:19 7 Go to the next slide.
02:19 8 Again, the crux of this argument is
02:19 9 whether a person of ordinary skill would have
02:19 10 understood what is meant by memory space. And looking
02:19 11 at the evidence, we think the answer to that question
02:19 12 is clearly yes.
02:19 13 In Dr. Rao's patents, he refers to a
02:19 14 memory storage space. And that's shown at the top of
02:19 15 this slide. And a memory space simply refers to where
02:19 16 data is stored. And a memory storage space refers to
02:19 17 the total amount of storage space available in the
02:19 18 memory.
02:19 19 And beyond that, Phison uses memory space
02:19 20 in its own patents. So Phison here is arguing that a
02:19 21 person of ordinary skill wouldn't have understood this
02:19 22 term, but at the same time, their own engineers use
02:19 23 this term in their patents. And we think this shows
02:19 24 that they must have understood what the term meant
02:19 25 then.

02:19 1 Going to the next slide.
02:19 2 Memory space is also used in line with
02:19 3 its plain and ordinary meaning in textbooks in the art.
02:19 4 Including the Micheloni textbook describes a memory
02:20 5 space where data are actually stored. And the fact
02:20 6 that Micheloni includes this definition or description
02:20 7 of a memory space in line with its plain and ordinary
02:20 8 meaning, we think further supports that this term
02:20 9 certainly is not indefinite.
02:20 10 And one point here is that Vervain's
02:20 11 expert Dr. Sunil Khatri reviewed the evidence and he
02:20 12 submitted an expert report. And in that report, he
02:20 13 explained that his opinion is that memory space simply
02:20 14 refers to where data is stored and this term simply is
02:20 15 not indefinite.
02:20 16 This lies in contrast to defendants who
02:20 17 are working with an expert and decided not to
02:20 18 provide --
02:20 19 THE COURT: I give no weight to whatever
02:20 20 you guys have an expert come in and say on
02:20 21 indefiniteness. No weight. So you can move on.
02:20 22 MR. DORMAN: Okay. Thank you, Your
02:20 23 Honor.
02:20 24 And we would just sum up that memory
02:20 25 space is a simple broad term that simply refers to

02:21 1 where data is stored and just because it's broad does
02:21 2 not mean it's indefinite.
02:21 3 And if Your Honor doesn't have any
02:21 4 questions, that'll be all from Vervain.
02:21 5 THE COURT: A response?
02:21 6 MR. STRONCZER: Yes. Just briefly, Your
7 Honor.
02:21 8 The issue isn't that memory space -- that
02:21 9 a POSITA wouldn't have understood the term "memory
02:21 10 space" to have a general meaning in the art. The issue
02:21 11 is that in the claims, there's no -- there's no
02:21 12 adjective or no modifier attached to the memory space
02:21 13 to indicate whether it's referring to a physical or a
02:21 14 logical concept when the claims appear to mix the two
02:21 15 in the same -- mix the two usages in the same claim.
02:21 16 THE COURT: Okay. Again, were you done?
02:21 17 MR. STRONCZER: Yeah. I'm sorry, Your
02:21 18 Honor. Unless you have any questions.
02:21 19 THE COURT: Anything else?
02:21 20 MR. DORMAN: No, Your Honor.
02:22 21 THE COURT: Okay. I'll be back in a
02:22 22 second.
02:22 23 (Pause in proceedings.)
02:22 24 THE COURT: The Court will maintain its
02:22 25 preliminary construction.

02:22 1 I'll next take up No. 9, controller,
02:22 2 maintain controlling, performing controller, et cetera.
02:22 3 MR. CHOW: Yes, Your Honor. I'll be very
02:22 4 brief on this.
02:23 5 THE COURT: No. There's no --
02:23 6 actually -- I mean, you're welcome to be brief. I
02:23 7 don't believe you, but -- that you'll basically brief.
02:23 8 (Laughter.)
02:23 9 THE COURT: But this is one that I
02:23 10 think -- I'm happy to take whatever time we need on it.
02:23 11 I think this one could use a fulsome argument. So take
02:23 12 whatever time you'd like, please.
02:23 13 MR. CHOW: Yeah. This -- again, this --
02:23 14 Your Honor is well familiar with the IPXL case. And
02:23 15 all I would like to say for the record is that, in
02:23 16 conjunction with -- our view is that controller was the
02:23 17 open area that -- other than the SLC and MLC modules,
02:23 18 was the open area for what the controller does.
02:23 19 And we have trouble saying that the
02:23 20 controller has certain functions. Here, the -- it is
02:23 21 stated in the patent owner's reply as well as
02:23 22 Dr. Khatri that basically says the claims describe how
02:23 23 the controller is configured to store data and
02:24 24 configured to operate.
02:24 25 But there is no such description in how

02:24 1 the controller's configured. It's only a recitation of
02:24 2 the steps. And that's our contention that claims don't
02:24 3 recite configuration such as every time the host
02:24 4 requires a write, one would send this signal to that
02:24 5 signal. And none of that's in there.
02:24 6 So the concern is that the configuration
02:24 7 has to be presumed from the ordinary NAND flash
02:24 8 controllers. And that the -- up and down the line in
02:24 9 all our contentions this -- this is not disclosed. And
02:24 10 certainly here, we talk about method steps. They're
02:24 11 really supposedly follow figures 3A and 3B which is a
02:24 12 method for utilizing a NAND flash memory system. This
02:24 13 is the data integrity test.
02:24 14 But again, the way it's set up in terms
02:24 15 of verbs, the definiteness meets the other aspect of
02:25 16 IPXL/MPEP, which is it doesn't give notice of who's
02:25 17 responsible for making these method steps.
02:25 18 I think that Your Honor has our briefing
02:25 19 on this.
02:25 20 THE COURT: I do.
02:25 21 MR. CHOW: Thank you.
02:25 22 THE COURT: A response?
02:25 23 MR. MCNETT: Yes, Your Honor.
02:25 24 Hold on one second. If defendants could
02:25 25 take their slides down, please.

02:25 1 MR. CHOW: Sure.

02:25 2 MR. MCNETT: Your Honor, the '300 patent

02:25 3 simply does not include method steps in the apparatus

02:25 4 claim as IPXL has. It claims a controller that's part

02:25 5 of the apparatus and it explains through a wherein

02:25 6 clause how that controller is configured to operate.

02:26 7 And that is consistent with the case law on the issue.

02:26 8 So let's take a look at Claim 1.

02:26 9 We've got at least one controller to

02:26 10 operate memory elements. And then it explains that

02:26 11 it's that, you know, the controller is configured to

02:26 12 maintain the address table. It's configured to control

02:26 13 access. It's operable to store data. And -- right?

02:26 14 And that it's configured to perform a data integrity

02:26 15 test.

02:26 16 And that's -- that type of claiming is

02:26 17 permissible under the Federal Circuit's decision in

02:26 18 Mastermine, where they -- where the Federal Circuit

02:26 19 held that verbs can represent permission -- permissible

02:26 20 functional language to describe capabilities of a

02:26 21 physical module.

02:27 22 And if you look at the claim in

02:27 23 Mastermine, it's very similar to the claim here. So

02:27 24 they have a reporting module and they say wherein that

02:27 25 reporting module presents, receives a selection from

02:27 1 the user, and generates a database query. All of those
02:27 2 things are permissible and they don't render the claim
02:27 3 indefinite.
02:27 4 The cases that defendants relied on in
02:27 5 their briefing to show -- to argue indefiniteness were
02:27 6 substantially different.
02:27 7 So IPXL itself said the system of Claim 2
02:27 8 wherein the user uses the input means. All right? It
02:27 9 talks about specifically action by a user. We don't
02:27 10 have any claim language of that type in any of the
02:27 11 asserted claims here.
02:28 12 Similarly, Rembrandt, there, they had a
02:28 13 device comprising a first buffer means, a fractional
02:28 14 encoding means, and a comprising transmitting. And
02:28 15 that -- that doesn't make sense. You've got a device
02:28 16 that comprises a verb.
02:28 17 Again, we don't have that same language.
02:28 18 We have -- we don't say that the controller comprises
02:28 19 performing. Right? We say wherein, right, the
02:28 20 controller maintains an address table and all the other
02:28 21 things that are part of the claim.
02:28 22 And finally, the Power Integrations case
02:28 23 that they relied on in their briefing, it's got similar
02:28 24 issues, right? It's -- it claims when a control signal
02:28 25 is received, and then says that that control signal is

02:28 1 provided that somebody else has certain conditions for
02:29 2 providing that control signal.
02:29 3 Again, we don't have anything akin to
02:29 4 that here.
02:29 5 So this -- so this term is completely
02:29 6 consistent with the Federal Circuit's case law on
02:29 7 indefiniteness and it needs no construction and it's
02:29 8 not indefinite.
02:29 9 Thank you.
02:29 10 THE COURT: Any response?
02:29 11 MR. CHOW: Just a response that we
02:29 12 started with, that we do not agree that what is -- that
02:29 13 the claims show how it's operated or how, et cetera.
02:29 14 And I would urge the comparison with the
02:29 15 cases that suggest this is a capability question. But
02:29 16 there is no -- in our view, that it's the -- is not
02:29 17 disclosed by the claims how the operation works. No
02:29 18 source, no -- in many cases no source, no destination,
02:30 19 or how it's sent there.
02:30 20 THE COURT: Anything else?
02:30 21 MR. MCNETT: No, Your Honor.
02:30 22 THE COURT: Okay. I'll be back in a
02:30 23 second.
02:30 24 (Pause in proceedings.)
02:31 25 THE COURT: The Court is going to

02:31 1 maintain its preliminary construction.
02:31 2 No. 10 is memory element which defendant
02:31 3 argues is indefinite. I'll hear that argument, please.
02:31 4 MR. CHIN: Thank you, Your Honor.
02:31 5 Very quickly, Your Honor, we just want to
02:31 6 make two main points with respect to memory element.
02:31 7 As you know, defendants' construction is
02:31 8 that this is indefinite. And it does appear a number
02:31 9 of times in the later-issued patents.
02:31 10 But the two main points we want to make
02:31 11 is that Vervain claims that this issue here is about
02:32 12 breadth. Defendants' position is not that you can't
02:32 13 have a broad term in a claim.
02:32 14 The question here is whether or not using
02:32 15 a broad term like this is going to, with the assistance
02:32 16 from the specification, inform a person of ordinary
02:32 17 skill as to the scope of these claims. And there's
02:32 18 nothing in the specification regarding memory element
02:32 19 that helps a person of ordinary skill ascertain what
02:32 20 the scope of these claims is.
02:32 21 And even when memory element is looked at
02:32 22 in terms of the claims across the five patents that use
02:32 23 it, sometimes memory element is referred to items that
02:32 24 are mapped to memory space. Sometimes it's referring
02:32 25 to random access volatile memory that's not in memory

02:32 1 space. Just to name two examples.
02:32 2 And that's the crux of defendants'
02:32 3 argument suggesting that this term should be
02:32 4 indefinite.
02:33 5 Thank you, Your Honor.
02:33 6 THE COURT: Okay. I'm going to find the
02:33 7 claim term not indefinite.
02:33 8 Next up, I'll take up stored data.
02:33 9 MR. CARRANO: So -- yeah. Stored data.
02:33 10 Next slide.
02:33 11 So just briefly again. Stored data is
02:33 12 two aspects of this, where the data's located and the
02:33 13 scope of data. What data can constitute within the
02:33 14 scope of the claim.
02:33 15 Next slide.
02:33 16 Next slide.
02:33 17 Next slide.
02:33 18 We'll go to the next slide. We'll just
02:33 19 keep on going. Yeah. This slide here.
02:33 20 So, Your Honor, I'd like to just focus on
02:33 21 the disclosure itself.
02:34 22 So disclosed embodiment. Data comes in
02:34 23 from the processor. It goes into the controller. And
02:34 24 that's described or -- as received data. And that data
02:34 25 is then stored into DRAM or the volatile memory and

02:34 1 then ultimately stored into the nonvolatile memory, the
02:34 2 MLC/SLC.
02:34 3 So data comes in, stored in volatile
02:34 4 memory DRAM, and also stored in nonvolatile memory,
02:34 5 MLC/SLC. So data's always the same or it should be the
02:34 6 same.
02:34 7 The crux of the alleged invention is in
02:34 8 essence, if there's errors, we can correct it. So when
02:34 9 data's stored, it might get corrupted somehow and we
02:34 10 can correct it and restore it someplace else.
02:34 11 But the data, the data in which this
02:34 12 patent's described and how the applicant distinguished
02:34 13 the prior art is just payload data or operable data or
02:34 14 user data, just data. And the data should be the same
02:35 15 in all those locations, coming in, stored in volatile
02:35 16 memory, and stored in nonvolatile memory.
02:35 17 So I'll take this term a little bit in
02:35 18 context with retained data because that's the next term
02:35 19 as well.
02:35 20 So the adjective, stored data versus
02:35 21 retained data, the way the applicant or the patentee
02:35 22 described it, it's based on the location of where that
02:35 23 data is stored. Retained data's stored in the DRAM or
02:35 24 the volatile memory, and stored data is in the
02:35 25 nonvolatile or MLC/SLC.

02:35 1 So our construction for stored data is
02:35 2 received data stored in nonvolatile memory. Just -- it
02:35 3 just applies the data which is in a number of places to
02:35 4 a particular site, the site in which the patent talks
02:35 5 about, where stored data is.
02:35 6 We just want to make sure that there's no
02:35 7 ambiguity about when you're talking about data, which
02:36 8 data are we talking about, or more specifically, where
02:36 9 that data is.
02:36 10 So our construction is just to ensure
02:36 11 that everyone knows or should know what the claims are
02:36 12 calling for and giving notice to what -- what set of
02:36 13 data we're talking about, retained data versus stored
02:36 14 data or received data. Those are the three
02:36 15 possibilities.
02:36 16 So what we're trying to do with our
02:36 17 construction is just nail that down. Because there are
02:36 18 times in the claims where it just calls for data.
02:36 19 And then we've seen this before with
02:36 20 other terms, without the adjective "stored,"
02:36 21 "retained," or "received," it creates an ambiguity. So
02:36 22 we're not saying it's invalid. We're just saying that
02:36 23 it requires construction.
02:36 24 So that's one part of this for both
02:36 25 stored and retained data is where that data is in this

02:36 1 system. Is it coming in? Is it stored in volatile
02:36 2 memory? Or is it stored in nonvolatile memory? And
02:36 3 each one of those has a different modifier: Received
02:36 4 is coming in, stored in nonvolatile memory, retained in
02:36 5 DRAM or volatile memory.
02:36 6 The other aspect of this --
02:37 7 Next slide. Go down to -- keep going.
02:37 8 So one point on this, so that's how the
02:37 9 spec describes stored data. And that's confirmed in
02:37 10 the '546 prosecution history where the applicant was
02:37 11 talking about one of the amendments, and it couldn't be
02:37 12 clearer about this. We have a quote here from the file
02:37 13 history, and it makes it clear what's stored data,
02:37 14 what's --
02:37 15 Will you go back -- back -- back one?
02:37 16 I'm sorry. Yeah.
02:37 17 This is the quote. This is the quote in
18 this slide here.
02:37 19 It makes it clear that there's received
02:37 20 data, stored data, and retained data in those three
02:37 21 different places. Coming in, in the MLC/SLC, and also
02:37 22 in the DRAM or volatile memory.
02:37 23 So again, our construction is just to
02:37 24 make clear where in the claims just calls for data,
02:37 25 which -- what site is it in. That's why we have our

02:37 1 construction.

02:37 2 Okay. Go to the next slide.

02:37 3 And the applicant also distinguished the

02:38 4 prior art on this issue about where the data is in

02:38 5 relation to distinguishing prior art. They

02:38 6 distinguished the comparison test about where you're

02:38 7 getting the data from to do the comparison.

02:38 8 In, for example, Yu reference, it was not

02:38 9 coming from the stored -- is not coming from the

02:38 10 volatile memory. So they basically say -- the

02:38 11 applicant says that the -- Yu does not use stored data.

02:38 12 So all this is consistent -- not

02:38 13 disclaimer. What we're saying here, this is just

02:38 14 consistent use of the terms as we construe them.

02:38 15 Next slide.

02:38 16 Okay. So this is more about -- now this

02:38 17 is the second part. The first part was the adjective

02:38 18 about where the data is in the system. This part is

02:38 19 about the scope of data.

02:38 20 So the patent itself just talks about

02:38 21 data. And we have some evidence from our expert that

02:38 22 says a POSITA would understand data to be payload data

02:38 23 or just user data.

02:38 24 The specification doesn't -- you don't

02:38 25 need an expert for this -- the specification does not

02:39 1 disclose error codes like CRC codes or ECC codes. It
02:39 2 doesn't express -- doesn't expressly disclose those as
02:39 3 data, nor does the patent expressly talk about doing
02:39 4 comparisons using error correction codes.
02:39 5 So basically the patents all across the
02:39 6 board are divorced from the use or the possession of
02:39 7 error correction codes.
02:39 8 And then the file history --
02:39 9 Next page.
02:39 10 So in -- what is done in the patent as
02:39 11 far as detecting errors is a brute force comparison
02:39 12 between what is stored in the retain -- stored in
02:39 13 volatile memory or retained data with what is stored in
02:39 14 the nonvolatile memory or the stored data, and a brute
02:39 15 force comparison between the two.
02:39 16 Now, error correction codes of course, as
02:39 17 you know, in 2011, 2013, 2014, whatever time frame of
02:39 18 the patents, were well-known. The inventor did not use
02:40 19 that in his description about how you do the
02:40 20 comparison. So error correction codes or any codes
02:40 21 like that, either generated or part of data, are not
02:40 22 within the scope of the claims.
02:40 23 So again, our construction is meant to be
02:40 24 clear where the data is in the claims. When the claims
02:40 25 call for data, we want to be clear as to is it in

02:40 1 nonvolatile memory or volatile memory or received data.
02:40 2 And second, by applicant's own use of the
02:40 3 term, it does not include any type of error correction
02:40 4 codes within the data or the generation of error
02:40 5 correction codes to do the comparison.
02:40 6 Next slide.
02:40 7 Okay. So I've handled a lot of this
02:40 8 already.
02:40 9 All right. So in summary, our
02:40 10 construction is receive data -- this is for stored
02:40 11 data. Received data that's stored in nonvolatile
02:40 12 memory.
02:40 13 And again, the key parts here is that
02:41 14 we're focusing on the adjective "stored," where it's
02:41 15 stored, and then two, the scope of data being payload
02:41 16 data or just user data not including error correction
02:41 17 codes, which were distinguished in the file history
02:41 18 with the prior art.
02:41 19 Thank you.
02:41 20 THE COURT: Okay. The Court is going to
02:41 21 maintain its preliminary construction on that.
02:41 22 On Claim Term 12, retain data, the Court
02:41 23 is going to maintain its plain and ordinary meaning
02:41 24 construction.
02:41 25 And I have two claim terms left and

02:41 1 20 minutes left before my next hearing. So you all
02:41 2 deal with these accordingly. 13 and 14, both of which
02:41 3 you argue are indefinite.
02:41 4 We'll start with Claim Term 13.
02:41 5 MR. ROSBROOK: Your Honor, this is Andy
02:41 6 Rosbrook speaking on behalf of defendants.
02:42 7 This is the maximize term, just to make
02:42 8 sure we're on the same page.
02:42 9 THE COURT: I have 13 is: The mapping is
02:42 10 performed as necessitated by the system to maximize
02:42 11 lifetime. No. 14 is remapping and transfer data.
02:42 12 MR. ROSBROOK: Fantastic. I think we're
02:42 13 on the same page.
02:42 14 So for this "mapping is performed to
02:42 15 maximize lifetime" term, defendants argue it's
02:42 16 indefinite because there's no objective guidance in the
02:42 17 patents to inform a person of skill in the art how to
02:42 18 tell when you've maximized the lifetime in accordance
02:42 19 with the alleged invention.
02:42 20 Now, Vervain's main argument is that
02:42 21 "maximize" merely means an increase in the lifetime.
02:42 22 That it's identical to another word used in the claims,
02:42 23 and that -- the word "enhanced." But the patent
02:42 24 themselves show otherwise. And I think probably the
02:42 25 best evidence for seeing this is in the claims

02:43 1 themselves.

02:43 2 Up on the screen, I've pulled up Claim 1

02:43 3 of the '300 patent.

02:43 4 And toward the end of that claim, you've

02:43 5 got two steps. First step, up top here on the slide in

02:43 6 blue, you have a mapping step that is performed to

02:43 7 maximize the lifetime.

02:43 8 Then later, after there's been a data

02:43 9 integrity test failure, there's a remapping that

02:43 10 happens. And there, the goal has changed. You're no

02:43 11 longer trying to maximize the lifetime, you're just

02:43 12 trying to achieve enhanced endurance.

02:43 13 What we think this particular claim

02:43 14 illustrates very clearly is that the patentee knew how

02:43 15 to say "enhanced." It knew how to express this concept

02:43 16 of only increasing the endurance. But that's not what

02:43 17 they chose to do in this first instance up here in

02:43 18 blue. There, they specifically chose a different word,

02:44 19 "maximize lifetime."

02:44 20 And as the Court is well aware, it's a

02:44 21 fundamental precept that different words within the

02:44 22 claim will carry different meanings. And because of

02:44 23 that, we can't presume that "maximize" means enhance in

02:44 24 these claims.

02:44 25 It's also Vervain's own evidence supports

02:44 1 defendants' position. They've put in this selection
02:44 2 from Merriam-Webster. They've -- the very first listed
02:44 3 description there is that it means -- "maximize" means.
02:44 4 THE COURT: I don't care. I don't care
02:44 5 about extrinsic evidence.
02:44 6 MR. ROSBROOK: Fully fair.
02:44 7 The -- Vervain's other argument is a bit
02:44 8 of misdirection. They say that lifetime and endurance
02:44 9 are interchangeable. Or lifetime and endurance are
02:45 10 interchangable. Those aren't the words that we're
02:45 11 fighting about here.
02:45 12 We actually agree that lifetime and
02:45 13 endurance are interchangeable. And it's because the
02:45 14 specification makes it clear that they are. It -- when
02:45 15 it uses the term "lifetime," it says lifetime, and then
02:45 16 behind it, it puts in parentheses endurance, that's
02:45 17 express. That's clear. That's what Vervain's in re
02:45 18 Personal Web case requires in order to treat different
02:45 19 claim terms as interchangeable.
02:45 20 But that's not what we see with the
02:45 21 "maximize" term. The word -- there's nothing clear or
02:45 22 explicit treating the word "maximize" as
02:45 23 interchangeable with anything in the specification.
02:45 24 That's because maximize isn't in the
02:45 25 specification at all. The first time it appears is

02:45 1 here in '300 patent, Claim 1, four patents into this
02:45 2 family and seven years after the initial application
02:45 3 was filed.
02:45 4 So there really is no guidance from the
02:46 5 spec saying that maximize should be treated identically
02:46 6 to the word "enhanced." It has to mean something more
02:46 7 than just a mere increase in lifetime.
02:46 8 Final point I'd like to make, Your Honor,
02:46 9 is that regardless of what understanding of maximize
02:46 10 you have, it's still indefinite. Whether you take
02:46 11 defendants' plain and ordinary meaning or plaintiff's
02:46 12 plain and ordinary meaning, it's still indefinite.
02:46 13 And that's because there's no guidance
02:46 14 under either of those definitions as to how to know
02:46 15 when the lifetime is maximized.
02:46 16 Defendants have cited the CA, Inc. case.
02:46 17 We think that's very instructive. That was one that
02:46 18 was not treated in the Western Digital or Micron cases.
02:46 19 And there, the Court held that "maximize" is a term of
02:46 20 degree. And so a person of skill in the art would need
02:47 21 objective -- would need objective guidance as to -- to
02:47 22 determine how much of an increase constitutes
02:47 23 maximizing.
02:47 24 "Maximizing" was the term at issue there.
02:47 25 Unlike any of the other cases that plaintiff cites

02:47 1 here.

02:47 2 The same reasoning in the CA case applies

02:47 3 here. What is the -- what is the boundary? What

02:47 4 increase in lifetime is enough to go from not maximized

02:47 5 to maximized?

02:47 6 Patents don't answer that question.

02:47 7 Plaintiffs haven't answered that question in their

02:47 8 briefs and so that renders the "maximize" term

02:47 9 indefinite.

02:47 10 And that's all I have unless you have any

02:47 11 questions or there's any response.

02:47 12 THE COURT: Court is going to maintain

02:47 13 its preliminary construction.

02:47 14 We'll move to the final claim term. I'll

02:47 15 hear argument on that. Which is Claim Term 14.

02:48 16 MR. CHIN: Thank you, Your Honor.

02:48 17 I think that defendants are going to rest

02:48 18 on the briefs for term 14.

02:48 19 THE COURT: Okay. The Court is going to

02:48 20 maintain its preliminary construction of plain and

02:48 21 ordinary meaning, not indefinite.

02:48 22 And to make clear with respect to Claim

02:48 23 Term 13, the Court finds it's not indefinite either.

02:48 24 Is there anything else? I'll start with

02:48 25 plaintiff. Is there anything else we need to take up?

02:48 1 MR. WHITEHURST: No, Your Honor.
02:48 2 THE COURT: And for either defendant, is
02:48 3 there anything we need take up?
02:48 4 MR. CARRANO: Not for Kingston, Your
02:48 5 Honor. Thank you.
02:48 6 MR. CHIN: Not for Phison, Your Honor.
02:48 7 THE COURT: Thank you to all the clients
02:48 8 who took the time and -- to show up and I hope to see
02:48 9 you guys in person in the near future. Take care.
02:48 10 (Hearing adjourned.)
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1 UNITED STATES DISTRICT COURT)
2 WESTERN DISTRICT OF TEXAS)
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4
5 I, Kristie M. Davis, Official Court
6 Reporter for the United States District Court, Western
7 District of Texas, do certify that the foregoing is a
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