

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

PARTEC AG,
Patent Owner

IPR2025-00318
Patent 11,537,442 B2

Record of Oral Hearing
Held: April 14, 2026

BEFORE: JAMESON LEE, MITCHELL G. WEATHERLY, and
PETER SHAPIRO, Administrative Patent Judges.

IPR2025-00318
Patent 11,537,442 B2

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The above-entitled matter came on for hearing on April 14, 2026,
commencing at 10:00 a.m., via video teleconference.

P R O C E E D I N G S

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JUDGE LEE: Good morning. Welcome to the Board. I'm Judge Jameson Lee. My colleagues on the panel are Judge Mitchell Weatherly, to my right, and Judge Peter Shapiro, who is appearing remotely, but he's on the screen to my left and behind me. This is the oral hearing for IPR2025-00318. The Petitioner is Microsoft Corporation. The Patent Owner is ParTec AG.

Would Counsel for each side please introduce themselves and let us know who will be presenting arguments today, starting with Petitioner?

MR. MASON: Yes. Good morning, Your Honor. Andy Mason on behalf of Petitioner. I will be presenting today.

JUDGE LEE: Oh, can you speak into that microphone?

MR. MASON: Yeah. Andy Mason for the Petitioner.

JUDGE LEE: Thank you.

MR. MASON: And I will be presenting on behalf of Petitioner today, and with me today is Frank Morton-Park.

JUDGE LEE: Thank you so much.

MR. HEIM: Good morning, Your Honor. Michael Heim with Heim Payne & Chorush, representing the Patent Owner, ParTec. With me today is Chris Limbacher. He may also be doing some of the presentation as well.

JUDGE LEE: Thank you very much. This hearing is open to the public, and there is a public access line. Can you confirm that there has been no motion to seal in this case and that nothing in the record of these

1 proceedings need to be kept confidential in this hearing?

2 MR. MASON: Petitioner confirms that.

3 MR. HEIM: Same for Patent Owner, Your Honor.

4 JUDGE LEE: Thank you. Each side has been authorized 60
5 minutes of total argument time. The Petitioner will go first and may reserve
6 time for rebuttal. When the Petitioner has finished in its first time up, the
7 Patent Owner will present and may also reserve time for rebuttal. When the
8 Patent Owner is finished in its first time up, the Petitioner returns to present
9 its rebuttal. And after that, we finish with Patent Owner's surrebuttal.

10 And please identify yourself when you begin your argument, and
11 please bring the microphone closer to you and speak robustly into the
12 microphone. If you're just a step back, the microphone is not going to pick
13 up it. And I noticed the microphone on the podium doesn't extend as far as
14 we'd like to the speaker here.

15 And when referring to the demonstratives, papers, and exhibits,
16 please identify the slide number or paper number or exhibit number, so we
17 can go ahead and access it on our computer here.

18 And please bear in mind, the purpose of the oral hearing is to
19 present your case based on the arguments and evidence of record. And you
20 may not introduce new evidence or new arguments for the first time here at
21 the oral hearing.

22 And Petitioner, when you are ready, you may begin. Let me know
23 if you want to reserve some time for rebuttal.

24 MR. MASON: Yes, Your Honor. I would like to reserve 20
25 minutes for rebuttal.

1 JUDGE LEE: Thank you.

2 MR. MASON: Are you able to see it from the lectern now?

3 (Pause.)

4 JUDGE LEE: Yeah, I'm sorry. Judge Shapiro is having technical
5 difficulties.

6 MR. MASON: So am I. So am I.

7 JUDGE LEE: We'll restart the time when we're ready.

8 MR. MASON: Okay.

9 (Pause.)

10 MR. MASON: There we go. Thank you, sir. And can you hear
11 me okay?

12 JUDGE LEE: Okay. We can go.

13 MR. MASON: Judge Shapiro?

14 JUDGE SHAPIRO: Yes.

15 MR. MASON: Okay. I just want to make sure he can hear you.

16 May it please the Board -- oh, are you going to reset the time or
17 -- may it please the Board, Andy Mason on behalf of Petitioner, Microsoft
18 Corporation. I'd like to reserve 20 minutes for rebuttal.

19 I'd like to start with just a brief overview of prior art Budenske, as
20 many of the issues in this hearing center around Patent Owner's attacks on
21 Budenske.

22 At a high level, Budenske teaches techniques for optimally
23 mapping and remapping subtasks to different processors in a heterogeneous
24 computing system. So, we have a heterogeneous system with two or more
25 different processor types. It teaches that the system runs an application that

1 is broken into a set of subtasks that are iteratively executed, and that at each
2 iteration, the system determines the optimal mapping of subtasks to
3 processors within that system.

4 And if I could invite the Panel to Slide 6, this is Budenske, Exhibit
5 1005, page 391.

6 PARTICIPANT: I'm sorry to interrupt. Counsel, I believe your
7 mic is off. I'm going to go check right now.

8 MR. MASON: Oh, yeah. No, the green light was not on, yeah.

9 PARTICIPANT: Now it's on?

10 MR. MASON: Now, it's on. Can you --

11 PARTICIPANT: Okay.

12 MR. MASON: Is this okay, Judge Shapiro?

13 (No audible response.)

14 MR. MASON: Okay. Thank you. So, if I could invite the Panel,
15 we're at Exhibit 1005, page 391, and we see here at the top, Budenske talks
16 about a set of subtasks. And then, as we see in the first line as well, it's
17 iteratively executing these subtasks.

18 And then we go down to the middle of this passage, and it's talking
19 about how it uses dynamic parameters, and after all subtasks have completed
20 execution for a given iteration, it evaluates those dynamic parameters about
21 the system, and then it uses those dynamic parameters to, as we see here, in
22 the fourth or fifth line from the bottom, to estimate if it's worthwhile to
23 reconfigure the assignment of processing resources to subtasks with the goal
24 of reducing execution time of the next iteration. So, at each iteration, it's
25 perpetually trying to optimize the mapping of subtasks to processors.

1 And we see this throughout Budenske. If I could invite the Panel
2 to Slide 37 of Petitioner's demonstratives, this is Exhibit 1005, page 387.
3 We see here on the third line, it's again talking about remapping of the
4 application subtasks to processors, and it discusses how this is done in the
5 second line: real-time online, so as the system is executing. And then, again,
6 we see that this is in a heterogeneous parallel hardware platform.

7 On the very next line, it explains what it means by a mapping
8 again. A mapping is a matching of application subtasks to processors and a
9 scheduling for the execution order of these subtasks. And then it explains,
10 as well, how this decision, how this mapping was made. It's using
11 heuristics, so it's a heuristic-based decision.

12 JUDGE LEE: Mr. Mason, it's Judge Lee.

13 MR. MASON: Yes, sir.

14 JUDGE LEE: So, in a nutshell, what exactly is Lippert missing?

15 MR. MASON: Well, Lippert? Or I was just speaking about
16 Budenske, so --

17 JUDGE LEE: You were talking about Budenske? All right.

18 MR. MASON: Yeah, yeah. So, I think, yeah, so Budenske has
19 these --

20 JUDGE LEE: Oh, on Slide 6, that was --

21 MR. MASON: Slide 6 was Budenske.

22 JUDGE LEE: I was looking at 6, and it has Lippert on the left-
23 hand side.

24 MR. MASON: On Slide 6?

25 JUDGE LEE: Oh, no, the '442 -- that's the '442 Patent. The

1 passage on the right is Budenske, right, on Slide 6?

2 MR. MASON: On Slide 6, there's just one passage on Slide 6 of
3 our -- this is Petitioner's demonstratives, right?

4 JUDGE LEE: Thank you.

5 MR. MASON: Okay. Just, okay. And I'll pause so you can ask
6 your question. I believe your question was, what is Budenske missing? Is
7 that --

8 JUDGE LEE: No. I understand. I got a little mixed up because I
9 got the slides mixed up. No. I'm clear now.

10 MR. MASON: You're clear. Okay. Great. And so, I think
11 -- okay. So we're now on Slide 6.

12 I think if I could invite the Panel to Slide 8, at the top here, we
13 have a specific example. This is Exhibit 1005, page 398. Budenske gives a
14 particular example. We have four types of processors, 16 of each type. And
15 then this particular application has 50 subtasks, and it talks about searching
16 all possible assignments of subtasks to machines. And we see the all
17 possible assignments of subtasks to machines. And in order to perform that
18 search, it uses what it describes as a heuristic. And the heuristic is just -- it's
19 an algorithm for helping to make this determination. And there were many
20 different types of algorithms.

21 If we could turn to Slide 20 of Petitioner's demonstratives, this is
22 Budenske again, the same page, Exhibit 1005, page 398. It explains at the
23 very top, any good heuristic could be employed. And it gives two types of
24 examples. It says we could use an online heuristic that's executed during run
25 time, so as it's actually executing, or we could use a heuristic that might take

1 a little bit longer. And so, we run that offline, and then, in combination with
2 an online heuristic, use some predetermined mappings to select the best
3 heuristic still at run time. So Budenske describes these heuristics, two
4 different types.

5 And then, if we turn back to Slide 8, on the bottom portion here,
6 this is Exhibit 1005, page 404. Budenske explains how it teaches to use
7 these techniques for other application domains and classes of hardware
8 platforms. And I think we also see elsewhere in Budenske where it teaches
9 that these -- people should experiment with this, try it with different
10 applications, and notes that his own group, which I believe was in Colorado,
11 was going to be testing it out on different --

12 JUDGE LEE: Yeah, Mr. Mason, it's Judge Lee. So I understand,
13 and I can see that Budenske has a lot of disclosures saying what you just said
14 it says. It wants to do this. It wants to do that. But a big issue in this case
15 is, well, does it really teach you how to do it? I notice that there is a quote
16 saying the IOS has not been implemented; such an implementation is a
17 major undertaking and outside the scope of this paper.

18 Can you explain a little bit about that? I mean, what is the major
19 undertaking that's keeping Budenske from going ahead and describing in
20 more detail about the implementation?

21 MR. MASON: I don't think there was any major obstacle to
22 Budenske actually implementing this. I think what the paper makes clear,
23 even in that passage that is repeatedly cited by Patent Owner, is that the
24 focus of this is this HC Kernel and the different ways that we're going to
25 map and remap the subtasks to the processors. It says, yeah, implementing

1 this IOS would be an undertaking, but it does not suggest -- it would suggest
2 maybe it would take some time.

3 JUDGE LEE: No, I see what you're saying, but the word is there.
4 It says major undertaking. So, you're saying, well, just ignore the word
5 major. It's an undertaking, but no big deal, is what you're saying, but I'd like
6 to be a little more persuaded. Why does it use the word major undertaking
7 and outside the scope of this paper?

8 MR. MASON: Yeah. Well, I think the -- yeah, yeah, yeah.

9 JUDGE LEE: Try a little more so you can persuade me that it's
10 something that we can say, oh, it's not really major.

11 MR. MASON: Yes. Well, I think this goes a little bit, I think, to
12 Patent Owner's enablement arguments, or maybe entirely to their enablement
13 arguments. And I think, there, what we have to remember is that
14 enablement looks at the prior art as a whole, right? And Budenske is being
15 combined with Lippert. Lippert already discloses a system, a heterogeneous
16 system of computation nodes.

17 And if I could invite the Board to Slide 9 of Petitioner's
18 demonstratives, this is Lippert, right? So it already has this system with
19 computation nodes, booster nodes, a communication infrastructure; it has a
20 resource manager. And it describes how that resource manager and the
21 system that it provides can flexibly map the computation nodes to the
22 booster nodes. It's monitoring information about the system to dynamically
23 perform that mapping.

24 And so, when you have that system combined with Budenske's
25 teachings on how to be continually mapping and remapping the processors, a

1 skilled artisan would have had no issues implementing that. I mean, to the
2 extent there is any deficiencies in Budenske itself, Lippert fills those gaps
3 and those deficiencies.

4 JUDGE LEE: I'm thinking that is it because -- because I don't
5 think that you actually have to implement something for the art to be good,
6 right? A lot of references, they just talk about something. They don't have
7 to actually build it and go, I built it, so it works. Most art, they don't actually
8 implement anything. They just describe whatever is claimed, right? So
9 could it be this is just saying, hey, well, if I have to actually build this thing,
10 it's going to be -- it's going to take a lot of time, so I'm not going to do that;
11 I'm just going to talk about it?

12 MR. MASON: Yeah, no. And I think that's exactly the point with
13 especially -- I mean, you can see this in patents. You see this in academic
14 papers like Budenske, where there's embodiments described, teachings
15 explained, but they may not necessarily be themselves building the entire
16 system out because they already know like, okay, I know I could do this if I
17 wanted to spend the money to do it, but my focus here is to tell people about
18 this novel, this interesting approach toward, in this case, of remapping.

19 JUDGE LEE: So am I hearing you saying that the major
20 undertaking here is talking about, hey, it's going to be time-consuming, not
21 that it's going to cause me so many problems that I don't know how to do it,
22 that I can't figure it out? It's just it's going to take time to do it. I'm not
23 going to do it here.

24 MR. MASON: Yeah, I think that's exactly right, and I think that
25 that's noted in the Institution Decision as well that there's, you know, in

1 enablement, there's a difference between, a big difference between, a lack of
2 perfection or actually carrying something out and something being enabled.
3 I mean, I think here, especially if we look at the level of skill in the art, I
4 think the skilled artisans would have had no issue taking Budenske's
5 teachings and implementing them.

6 And I think that's particularly true, as we saw on Slide 20, because
7 one of the major attacks that Patent Owner makes is, oh, Budenske doesn't
8 tell you how to perform this mapping and remapping. And I think, if you
9 look on Slide 20, this is Budenske, Exhibit 1005, 398, it says, any good
10 heuristic would do. And that tells you, okay, skilled artisans would know of
11 different algorithms, different heuristics to do this. But not only that, it
12 provides specific heuristics, and it cites to papers providing details on those
13 heuristics. So it's giving full guidance on how to implement this.

14 JUDGE WEATHERLY: What is meant by a genetic algorithm?

15 MR. MASON: I'm not going to -- I don't -- it's a particular class of
16 algorithms that somehow, I think, derives from the natural world. I'm not
17 going to pretend to understand exactly how they work.

18 JUDGE WEATHERLY: Sure.

19 MR. MASON: But it's a particularly complex type of algorithm, is
20 my understanding.

21 JUDGE WEATHERLY: And bracketed references to 20, 24, and
22 28 is just citations to other papers, I suppose?

23 MR. MASON: That is correct, Your Honor.

24 JUDGE WEATHERLY: Okay.

25 JUDGE LEE: Can I follow up with that? Because it has this other

1 sentence: “For simplicity, it is assumed that if an implementation of a given
2 task uses multiple processors, all processors will be of the same type.” It
3 says if implementation. Has it implemented an implementation where all the
4 processors are the same type, or is that also just talk?

5 MR. MASON: So, well, I think I want to maybe clarify. What it's
6 referring to here with implementation is that this is just a given iteration of
7 that subtask. So, if we remember, you have a set of subtasks, and that set is
8 iteratively executed, right? And at each iteration, you're evaluating the
9 dynamic parameters and then, you know, mapping or remapping.

10 What this is talking about is just for an implementation, i.e., a
11 given iteration of a given subtask. So all this is talking about, one, this is
12 just a simplifying example for purposes of explanation, but two, it's only
13 talking about what happens with one subtask. And whenever --

14 JUDGE LEE: Right, but even then, I don't think it has actually
15 built an actual system with all processors being of the same type. I mean,
16 even that implementation is still just talk, isn't it?

17 MR. MASON: Oh, yeah. Yeah, you're saying, have they built a
18 system?

19 JUDGE LEE: Yeah.

20 MR. MASON: Yeah, no. I think, yeah. Yeah, this is still just talk.
21 I don't think they purport in this paper to have actually built this system.
22 They're explaining to others how this system would work and why it would
23 work, right?

24 JUDGE LEE: I see. So they just chose to describe this simpler
25 version.

1 MR. MASON: Yeah.

2 JUDGE LEE: But they really haven't built anything.

3 MR. MASON: Yeah, my understanding is that this does not
4 disclose an actual building of the system. I think, later, Kwok described
5 implementations of the system that tested it out, and this was in 2007, 2008.
6 And Kwok was one of the coauthors with Budenske. But as of this time,
7 they're providing the teachings. But I mean, we submit that these teachings
8 still inform a skilled artisan of how to implement this subtask division and
9 then how to assign subtasks to the --

10 JUDGE LEE: I see. Thank you. Your reply mentioned something
11 like, well, the challenged patent also does not describe much. I'd like to get
12 into that a little bit. Have they actually included any disclosure in the
13 challenged patent disclosure which is more than what Budenske describes
14 about how to figure out, in any one iteration, the dynamic parameters that
15 might help one determine a better combination for the next iteration? What
16 disclosure have they had?

17 MR. MASON: Yeah, yeah, the challenged '442 Patent provides no
18 explanation of how to perform this reconfiguration or redistribution,
19 whatever term you used for it, but it has -- an example is on Slide 26 of our
20 demonstratives. This is from column 4, line 27 of the Patent. It just says,
21 "The application manager then performs a reassignment of the subtasks for a
22 subsequent iteration." And there might be other passages that describe the
23 same reassignment, but they never say here's how you do the reassignment.

24 So we submit that in most instances, Budenske provides much
25 more disclosure on how to implement this system, how to do this mapping

1 and remapping than the '442 Patent itself.

2 JUDGE LEE: That's why I'm asking. Because it is a little
3 puzzling, I want to make sure that that is the case. So you're sure you can't
4 find anything in the challenged patent which is -- gives us substantively
5 more than what Budenske gives?

6 MR. MASON: Yeah, I mean, I am confident that there is nothing
7 in the -- I mean, we'll see what Counsel says when they come up. They may
8 dispute, but I -- we have identified nothing in the '442 Patent.

9 JUDGE LEE: Because they did give a list of things. They say
10 Budenske doesn't tell you how to do this, how to do that, like four or five
11 different things, right? But you're saying neither does their spec.

12 MR. MASON: Yeah, neither does their spec, yeah. So, and I
13 think we can break it down a little bit if you're just talking as to the basic
14 infrastructure, right, the hardware. Lippert has all the hardware. There's no
15 dispute. Lippert has computation nodes. It has booster nodes. It has a
16 resource manager. It has the communication infrastructure. It has that
17 whole system. There's no dispute. That's satisfied by Lippert.

18 And then, Patent Owner also alleges, oh, well, they don't really
19 explain how the -- how this mapping and remapping will occur. Well,
20 Budenske, as we just discussed, has these algorithms, and it points to papers
21 identifying specific algorithms and says any good heuristic would do, which
22 tells you, even in 1998, people knew ways to solve this problem and were
23 solving this type of problem using algorithms.

24 JUDGE LEE: I'll tell you, another thing that bothers me a little is
25 this language, fundamental research. It does appear in Kwok Exhibit 1007,

1 right?

2 MR. MASON: Correct, Your Honor.

3 JUDGE LEE: And Patent Owner says, well even ten years later, it
4 was still talking about fundamental research, making it sound like we haven't
5 figured anything out yet. Can you tell us what's going on with use of the
6 word fundamental research in Kwok?

7 MR. MASON: Yeah. And so, what Kwok is referring to, and
8 even Budenske alluded to this, but is this -- but Budenske, I think, uses the
9 term intractable problem of when you want to have the best solution at any
10 given iteration, right? But to come up with the best solution might take too
11 long to actually make good use of that solution.

12 And so, the computer scientists, mathematicians were constantly
13 trying to figure out, like, okay, can we come up with a better heuristic and
14 better algorithm? That doesn't mean there weren't existing algorithms. It
15 just means this fundamental issue of trying to figure out, like can we
16 improve upon this algorithm, that's probably still ongoing today, would be
17 my guess.

18 JUDGE WEATHERLY: I think what I hear you saying is the
19 perfect answer takes too long to figure out for what the next iteration should
20 be, how the resource allocation should go in the next iteration. So we're
21 going to create a subset of guesses and a mechanism for measuring the
22 performance of the last iteration to make our best guess as one that will be
23 better from the subset that we've identified of possible outcomes, and that
24 that is a fundamental research issue: how to improve the, for lack of a better
25 word, efficacy, or efficiency of the selection of that. What's the next

1 iteration? How is it going to be? How are resources going to be allocated
2 on the next iteration? Is that the kind of fundamental research you're talking
3 about?

4 MR. MASON: I think that's a fair way to characterize it, yeah. I
5 mean, yeah, no, exactly. I think you're just -- you're trying -- to find the
6 perfect solution, we might spend the rest of our lives doing that, or it would
7 certainly take too long to be useful. And so, as you said, whether it's a
8 subset or a way of, you know, on each iteration, sort of focusing on what
9 might be the best candidates for the remapping, but it --

10 JUDGE WEATHERLY: I forget which slide of yours, but there's
11 a slide that has, I think, it was 4 times 10 to the 50th or something?

12 MR. MASON: Yes. Yeah, I think that's Slide 8 that includes that
13 quote, yeah.

14 JUDGE WEATHERLY: Yeah.

15 MR. MASON: And so, this is the one specific implementation,
16 right? Yeah, it's 4 times 16 to the 50th power.

17 JUDGE WEATHERLY: Right.

18 MR. MASON: And, no, it's right.

19 JUDGE WEATHERLY: That's a big number.

20 (Laughter.)

21 JUDGE WEATHERLY: And while there is maybe one perfect
22 solution among allocations of resources in that, from among that large
23 number of possible outcomes, it's a waste of time to figure out which one is
24 the best one.

25 MR. MASON: Yeah, or it might not --

1 JUDGE WEATHERLY: But not a waste of time to figure out one
2 that might be better.

3 MR. MASON: Yeah. Or maybe it's not a waste of time. Maybe
4 you just don't have the time, right? So it's like --

5 JUDGE WEATHERLY: Or you don't have the time, right.

6 MR. MASON: Yeah, yeah. So it's saying, like -- it's a balance, so
7 I think that's the intractable problem.

8 JUDGE WEATHERLY: Okay.

9 MR. MASON: And it's changing over time as well, right? As we
10 see by the time of Lippert, there were faster computers and better computing
11 resources, so maybe you might want a slightly different algorithm, or you
12 might want to weight the algorithm slightly different, but I think it's
13 important to note, right? So, even in Budenske, right, says "A heuristic is
14 used, as is common in the heterogeneous computing field."

15 So, even at this time, right, these -- and that's why it was an
16 intractable problem, is because in this field where you've got different
17 processor types, the academics were continually working on trying to find
18 the best algorithms, and like I said, to this day are still trying to find the
19 perfect algorithm for their current situation. But that doesn't mean Budenske
20 is not enabling. It's certainly enabling, and certainly if you combine it with
21 Lippert, it's more than enabling.

22 JUDGE LEE: Thank you. I think, if I understand you and Judge
23 Weatherly correctly, this is something like -- we've gone to the moon more
24 than 60 years ago. America put humans on the moon, but I think there's still
25 fundamental research going on about putting people on the moon 60 years

1 later. I mean, it hasn't really been solved. Like, it's ordinary skill in the art,
2 is that --

3 MR. MASON: Yeah, and I wouldn't -- and I would submit that
4 this is not even as complex as going to the moon. I mean that, to me, going
5 to the moon is a big deal, but I think your point is well taken, right? It's like,
6 we know how to do that. We know the problems associated with going to
7 the moon. Yeah, if we propose new ideas, you know, whether it's SpaceX or
8 Blue Origin or somebody else proposing new ideas of going to the moon,
9 okay, you've got this basic framework, this foundation, skilled artisans
10 would be working with and know that --

11 JUDGE LEE: So there's no conflict between Budenske actually
12 having taught enough to meet the claim versus, well, ten years later, there's
13 still fundamental research going on in some way.

14 MR. MASON: Yeah, no, there's no conflict whatsoever. I mean,
15 it's Budenske. The fact that they were continually trying to perfect --

16 JUDGE WEATHERLY: In particular, in the context that's defined
17 by the claim, which doesn't seek perfect reallocation of resources in any
18 way, it just say reallocation.

19 MR. MASON: Yep, correct. And I think, even if we look at, you
20 know, the only algorithm or the only -- I'm sorry -- type of application
21 described in the '442 Patent, right, so we remember what this is focused on is
22 taking an application, breaking it down in the subtasks. The only application
23 they describe in the patent -- and they don't even claim this -- is Monte Carlo
24 simulation. Well, those have been around, as our expert explained, for over
25 50 years, right? And so, you know, the claim doesn't even -- is even broader

1 than that. So the claim does not require any particular type.

2 JUDGE LEE: Yeah, I may get this wrong, but all you need to
3 meet the claim is two computing units and one booster. And there's not too
4 many combinations therein. So, in the first iteration, let's say you use both
5 of the main ones. You don't use the booster. Is it that hard to figure out, oh,
6 I have this task here that's better performed by this specialized booster, so
7 the next time around, I'm not going to use two computation units. I'm going
8 to use one here and one there. That's all you need to meet the claim, right?

9 MR. MASON: Yeah. Yeah, and you could have an application
10 that had two subtasks, right? One subtask assigned to one processor type,
11 and another subtask assigned to another processor type.

12 JUDGE LEE: And that task happens to be the specialized one that
13 this booster is a perfect fit for, and that would meet the claim?

14 MR. MASON: Yes, it would. Yeah, it would meet the claim.
15 Yeah, and then on the next iteration, perhaps, something changes, and it
16 determines, like, actually we want to mix things up and, actually, this other
17 subtask can be best performed on the booster, right? Yeah, the claim
18 encompasses -- is incredibly broad and encompasses even the most basic
19 situations, as you described.

20 JUDGE LEE: Thank you. If I can, I'd like to move into this, the
21 dynamic parameters.

22 MR. MASON: Yes.

23 JUDGE LEE: Patent Owner makes the argument that the spec
24 distinguishes results of the execution of the subtasks from information
25 relating to execution of the subtasks, and therefore, they say Budenske

1 would not meet Limitation 1.3 because what you relied on as the dynamic
2 parameters, according to them, are the results of execution of subtasks rather
3 than information relating to it.

4 MR. MASON: Yeah.

5 JUDGE LEE: Are you familiar with that argument?

6 MR. MASON: Yeah, yeah. No, I'm ready to speak to that
7 argument.

8 JUDGE LEE: Okay.

9 MR. MASON: I just wanted to let you finish your question.

10 JUDGE LEE: They say you relied on like four things. I don't
11 remember which four are -- one of them is scalability. Another one has to
12 do with something. But it seems to me, all of them appear to be
13 observations on what happened during the execution. It doesn't seem like
14 any one of them is the intended target of the execution of the subtasks. Can
15 you --

16 MR. MASON: Yeah, no. I mean, I agree with that. And I think if
17 we turn to Petitioner's Slide 21, right, it talks about monitoring the run-time
18 values of the dynamic parameters and making a decision based on those
19 dynamic parameters. And I think Your Honor might have been referring to
20 our Slide 22 and the particular example from Budenske. This is from
21 Budenske, Exhibit 1005, page 393. It provides four exemplary dynamic
22 parameters, right? We have the number of objects of interest being tracked
23 in the last image frame.

24 JUDGE LEE: Yeah, thank you. On Slide 22, that's where I want
25 to get to. Look at Number 2, the average size of the objects currently being

1 tracked. I don't think that that's the intended target of the results of
2 execution. I mean, the tasks aren't there to figure out the size of the object.
3 That's just something you happen to observe while you're executing the tasks
4 in the --

5 MR. MASON: Precisely, yes. Each of these dynamic parameters
6 here is an observation about what occurred in the processing of the -- during
7 the last iteration, right? And I think, you know, we see that Number 1 and
8 Number 2, like, right, the number of objects. There's no indication that this
9 application is outputting the number of objects. What it's doing is trying to
10 show on a screen, you know, vehicles on a -- it's my understanding is this
11 particular application is showing a field or where military vehicles are
12 moving around, so it can track what's happening on the battlefield.

13 JUDGE LEE: Because I wonder where would you draw the line?
14 These are in results of execution. I can't think of something that would not
15 be.

16 MR. MASON: Look, I mean, and I think that's sort of where
17 Patent Owner's argument falls short is just -- like, if you extend their
18 argument, it's like, yes, everything, ultimately, is going to somehow result
19 from executing this application, right? And so, there's nothing that wouldn't
20 be excluded from the claim. But I think if you look at the actual claim
21 language, it's anything relating to the processing, right?

22 And so, one, I think they're wrong in reading the spec as they do to
23 exclude the results of the execution. But, two, I think, you know, they
24 haven't explained what the results of the execution is, but to my
25 understanding, that's -- and I think yours as well, Judge Lee, is that it's just

1 the output of the application, what the application was written to do, right?

2 Not sort of --

3 JUDGE LEE: Do they have examples in their spec about, well,
4 this is the results of the execution, this is information relating to execution?
5 Do they have examples of one versus the other?

6 MR. MASON: I have not seen examples of the results of the
7 execution, and I haven't heard an explanation as to what exactly that means.
8 I think they're trying to tie it to anything flowing from this processor
9 running, but that's just -- looking at the '442 Patent and then looking at this
10 claim language, that reading just does not hold up.

11 So, and I think especially, like if you're looking at Number 3 here,
12 whether the lighting conditions in the last frame required requantization for
13 better contrast, so this is clearly an observation. Like, did it have to perform
14 an additional requantization, right? This is not something that it's outputting
15 on the screen that's showing the battle. So these are clearly observations.
16 These are clearly -- this is clearly information related to the processing.

17 JUDGE LEE: Right. I think that's the only one you specifically
18 pointed out in the reply, but you haven't given up on the other three?

19 MR. MASON: Oh, absolutely not, no. Yeah, the -- we focused on
20 that one because that uses the language, you know, that it does. And I think
21 Number 4 also, right? Number 4 discusses whether special processing was
22 required. Well, you don't tell the user, hey, in creating this image for you,
23 we used special processing. That's something internal. That's something
24 that's being used to do the remapping.

25 JUDGE LEE: So, how would you get that information? I mean, is

1 that the typical task of a daemon?

2 MR. MASON: Yeah, exactly. So I was just going to see -- you
3 beat me to the punch. So that's what -- I mean, daemons were well known. I
4 think this is, again, in the background of the petition. We explain the state
5 of the art, and we explain what skilled artisans would have known. And
6 skilled artisans would have known that computing clusters of this type
7 regularly used daemons, which were background processes, right? So it's
8 not interfering with your actual application, but they're able to efficiently
9 gather information from that application that's running and then provide it
10 back to a central daemon, which can use it to make further decisions.

11 JUDGE LEE: Yeah, I can follow that, but I think your petition or
12 reply goes further than that. You definitely have that it's obvious you use a
13 daemon for that purpose, but don't you also have another argument saying,
14 well, that's not based on obviousness, and you kind of just say, well, yeah,
15 that's what daemons do, so it discloses it?

16 MR. MASON: Well, yeah, I think --

17 JUDGE LEE: So that I don't follow.

18 MR. MASON: Okay. So, yeah. We have two arguments. We
19 have -- the first argument is just Lippert and Budenske alone render the
20 daemons obvious. And that's because Lippert itself expressly discloses
21 using a daemon on its resource manager. And then we point out the
22 knowledge --

23 JUDGE LEE: So even that is based on 103?

24 MR. MASON: Yeah, even that's 103, yes. Yeah.

25 JUDGE LEE: Because Lippert uses daemons for something.

1 MR. MASON: Yeah.

2 JUDGE LEE: And then you go, well, in the combination, just use
3 the daemon for this.

4 MR. MASON: Yes. Yeah, so within the combination -- and I
5 think if we look at Petition, pages 8 to 10, you know, there's no dispute from
6 Patent Owner that skilled artisans knew that clusters often used daemons, a
7 daemon being a background process that performs a specific task, and two,
8 that typical computing clusters included a daemon at every cluster node to
9 enable monitoring and control of the node by a central resource management
10 daemon. So our expert explained this was just what people knew, and he
11 cited, you know, copious references explaining, like, daemons were sort of
12 like, in a sense, of a mechanical field.

13 JUDGE LEE: Even then, it's a 103. It's never, well, it discloses it.
14 It discloses using the daemon for this purpose; is that right? Because that is
15 --

16 MR. MASON: Yeah, yeah, but we do -- we do not reply -- yeah,
17 no, we do not rely on an express disclosure.

18 So, the first ground, it is that it would have been obvious in view of
19 the knowledge of a skilled artisan. So someone looking at this would say,
20 oh, I need to gather information in the background kind of. Daemon is the
21 way that everybody did this. It would be like saying, if I want information
22 from a motor vehicle, a car, well, I'm going to put sensors at various
23 locations. Like, I'm not going to have somebody there just standing with a
24 heat gun or whatever, trying to figure out what the temperature is. I'm going
25 to have -- put a sensor at various locations in the car. So that's what

1 daemons were.

2 But, you know, to avoid Patent Owner saying, oh, you're filling in
3 a gap just based on expert testimony and background references, we have
4 Kambatla, and this is on Slide 35 of our demonstratives. Kambatla, as we
5 can see here on the right-hand side, has daemons at each of its worker nodes
6 in the system.

7 And so, we have explained that to the extent this is not obvious
8 based on Budenske/Lippert alone, Kambatla provides express teachings on
9 putting these daemons on the different nodes in the systems. And it also,
10 Kambatla, and this is Exhibit 1006 at paragraph 59, cited in the reply at page
11 24, says, worker nodes may have different hardware. And it goes on, and
12 the scheduling based on worker nodes will have different resource types in
13 its platforms. That's at paragraph 71 of Exhibit 1006.

14 So Kambatla contemplates, okay, we're going to have a system
15 that's got resources of different types. Regardless of your resource type,
16 regardless of the hardware at your different node, you're still going to put a
17 daemon there, and skilled artisans knew how to do that.

18 JUDGE LEE: What about there is testimony from your own
19 expert. He seems a little impressed with the claim. I'd like you to just
20 explain that if you can.

21 MR. MASON: Yeah, so I think the testimony was, he said, oh,
22 that's -- I think he appreciated, like, oh, this claim might -- you know, you
23 might be able to do fault tolerance with this claim, and he said that's cool.
24 But that's a far cry from any sort of industry praise. I think that was the
25 reflection of him realizing, like, oh, this claim that has a lot of language

1 might be useful for fault tolerance. But as we point out in the reply, Lippert
2 itself already discusses fault tolerance.

3 So, I mean, this argument of -- I think it seems to be kind of a
4 secondary considerations argument. Like, one, they don't show industry
5 praise based on the claimed invention, and --

6 JUDGE LEE: Well, yeah, it's not industry-wide. It's one guy, but
7 it's your guy.

8 MR. MASON: Yeah. No, that's our guy. He's making this
9 observation: Oh, it's cool; it does that. But if you look at Lippert, I mean,
10 and so, we don't think that rises to the level of any kind of meaningful
11 secondary considerations that's given any weight at all. It certainly doesn't
12 outweigh the strong case of obviousness. But two, that feature was in the
13 prior art. Lippert itself discloses this can be used for fault tolerance. And
14 we discuss that in the reply. So, you know, you can't have a --

15 JUDGE LEE: Oh, I didn't catch that, but --

16 MR. MASON: You can't have a secondary consideration.

17 JUDGE LEE: That's true.

18 MR. MASON: Yeah.

19 JUDGE LEE: You can't be too impressed with something that was
20 pre-existing.

21 MR. MASON: Yeah, yeah.

22 JUDGE LEE: Do you point that out in your reply that that was
23 pre-existing?

24 MR. MASON: Yes, we do. Yeah, we point out that Lippert itself
25 discloses that. I think that I can --

1 JUDGE SHAPIRO: Counsel, this is Judge Shapiro. I know you
2 moved on to Claim 5, but I had two follow-ups from Claim 1. And I was
3 just wondering, so, first of all, did I hear -- I think I heard you say that you
4 disagreed with Patent Owner that there's a clear and unambiguous disavowal
5 of claim scope. Is that your position?

6 MR. MASON: What's the clear and ambiguous disavowal that
7 you're talking about?

8 JUDGE SHAPIRO: Yeah, with respect to it cannot, that Claim 1
9 cannot relate to the results, that argument. I thought I heard you say you
10 disagreed with that claim interpretation.

11 MR. MASON: Oh, yeah, yeah. No, we certainly -- I think Patent
12 Owner is -- I think, yeah. What, as I understand your question is, do we
13 agree with their argument that the results of the execution are somehow not
14 -- do not relate to the processing. If you look at that passage, it talks about
15 the results of the execution, and then this goes on to discuss information
16 concerning the processing. And so, it's just not clear exactly what they're
17 referring to, and Patent Owner certainly hasn't explained that further.

18 And so one reading that could understand relating to the processing
19 is encompassing both of those things. But even if, results of the execution is
20 excluded from the claims and something not encompassed by the claims,
21 what Budenske is talking about, its dynamic parameters, are not the results
22 of the execution. They

23 JUDGE SHAPIRO: Right. I understood that. I understood that
24 part of the argument. I was focused on your actual disagreement with the
25 claim interpretation. Is that in your briefing?

1 MR. MASON: I believe it is. Like, I don't know if I can give you
2 a cite right now.

3 JUDGE SHAPIRO: Okay. That's fine.

4 MR. MASON: I think we addressed that in reply, yeah, but --

5 JUDGE LEE: Yeah, it's Judge Lee. I think Judge Shapiro is
6 asking you whether you agree that there is such a distinction made
7 unambiguously in the spec. Because I do see that one sentence where they
8 go, whatever is information concerning the execution is not the results of
9 execution. I don't know. I'm not sure what that means. Are you saying that
10 it's too unclear to give it a clear, unambiguous distinction that they want?

11 MR. MASON: Yeah, yeah. And maybe that puts a finer point on
12 Judge Shapiro's question. Yeah, that is -- like, it does not rise to the level of
13 a clear disavowal of what the claim encompasses because

14 JUDGE LEE: Because I guess the basis would be -- I don't know
15 what they're disavowing because the two are so intermixed. I'm not sure
16 where to draw the line, where one is one, and the other is the other.

17 MR. MASON: Yeah.

18 JUDGE LEE: And if we say they're different, then we're kind of in
19 a mess.

20 MR. MASON: Yeah, I agree.

21 JUDGE LEE: Is that what you're saying that you -- I didn't pick up
22 on it, but Judge Shapiro said you disagreed with their saying.

23 MR. MASON: I think we disagree with it, but I mean, I think but I
24 think we disagree with it, but I don't know that this received a lot of attention
25 in the briefing just because there was so many issues. I think the important

1 thing is, though, is relating to the processing is a very, very broad term. And
2 it certainly encompasses the observations about the processing that
3 Budenske discloses. So I don't even know that there's really a claim
4 construction issue that need be resolved here.

5 JUDGE LEE: Right. And the --
6 (Simultaneous speaking.)

7 MR. MASON: -- plain and ordinary meaning.

8 JUDGE LEE: The results are actually related -- they're the most
9 related to the execution.

10 MR. MASON: Yeah.

11 JUDGE LEE: So how can we carve out the thing, the results as
12 not being related to the results of execution?

13 MR. MASON: Yeah. And this hits on a point is that relating to
14 the processing is not used in the specification itself. And we submit that's
15 broader than the term concerning the processing.

16 I've only got two minutes left. I want to just pause and make sure
17 there are no questions.

18 (Simultaneous speaking.)

19 JUDGE LEE: Claim 3, you want to talk about Claim 3 a little bit?

20 MR. MASON: Well, Judge Shapiro, do you have a -- did I answer
21 all your questions?

22 JUDGE SHAPIRO: I think I have one more question, but Claim 3
23 is more important, so yeah, I'll give you time.

24 MR. MASON: Okay. Yes. So, Claim 3, so on its face, this
25 language further distribution is non-limiting. There's no article that would

1 suggest an antecedent for the further distribution. There's no other language
2 in Claim 3 tying it to the specific further distribution recited in Claim 1. For
3 example, it does not recite further distribution of the plurality of subtasks.
4 There's no indication.

5 And then two, I think if we look to the specification, this is on
6 Slide 30, Exhibit 1001, column 2, lines 22 to 29, it's talking about the
7 resource manager and the role played by the resource manager. The
8 resource manager is altering the assignment of computation nodes and
9 booster nodes to each other, right? And if we look at the claim language up
10 here, it's talking about the resource manager and what the resource manager
11 does.

12 And so, the petition talked about this. The reply talked about this.
13 The most logical reading of this is that Claim 3 is talking about the resource
14 manager reassigning computation nodes to booster nodes. It's not talking
15 about the subtasks. And I think the lack of an article, the lack of any other
16 language tying it back to Claim 1, makes that clear.

17 I think another clue this shouldn't be read narrowly is that Claim 2
18 already specifies that the -- what the application manager is doing. And in
19 Claim 2, we see them use the words the further distribution, so it's referring
20 back to the specific further distribution.

21 And I think if we look at Claim 4, Claim 4 further clarifies, like,
22 what that -- what the resource manager is doing. It's dynamically altering
23 these assignments. So we submit that the intrinsic records shows that the
24 generating is -- and especially when we're talking about the resource
25 manager, the resource manager dynamically altering the further distribution,

1 that further distribution is the assignment of computation nodes and booster
2 nodes, as the petition mapped it to in the Budenske/Lippert combination.

3 But in any event, even if -- even under Patent Owner's
4 construction, we've explained --

5 JUDGE LEE: You're welcome to use more time, but it will come
6 out of your rebuttal.

7 MR. MASON: Understood, Your Honor. Yeah, I think we -- this
8 is Exhibit 130, paragraph 51, and also the reply at pages 2021, we explained
9 why even under Patent Owner's construction --

10 JUDGE WEATHERLY: You're on Slide 44, yes?

11 MR. MASON: Oh, yes. I'm sorry. Slide 44, but yeah, and this is
12 our expert explaining why, even under Patent Owner's construction of this
13 term, it would have been obvious. They submit that was a belated argument,
14 but that was an argument we raised, an explanation we raised in direct
15 response to their unexpected claim construction of this term, which we
16 submit is unreasonable.

17 And then, one last point on -- I wanted to touch on they've raised
18 the district court claim construction and alleged an inconsistency. District
19 court has construed the term as plain and ordinary meaning. Our
20 construction, they say -- they claim that our construction was some overly
21 narrow construction. In district court, Microsoft proposed this specific
22 construction, which is simply that the set of subtasks is the same set of
23 subtasks throughout the claim, throughout each iteration. The petition maps
24 it that way, and we can see that on Slide 41 and 42 of our demonstratives.

25 Slide 41, this is the petition page 28. We explain how the initial

1 iteration through these set of subtasks, right? And this is for Element 1.2,
2 and then for Element 1.3, the later iteration, we explain again, to use for the
3 next execution iteration through the subtask. So we're mapping it to the
4 same set of subtasks. There's no inconsistency here. The only reason
5 Microsoft proposed that construction in district court was so that the jury
6 would understand it is the same set of subtasks throughout the claim.

7 Patent Owner -- and that was in direct response to Patent Owner
8 indicating that it was going to argue in district court a different -- that it
9 could be different sets of subtasks throughout the claim. And so, I think the
10 judge's order reflects that it's a plain and ordinary meaning and reflects that
11 this is throughout.

12 And one other point I want to add is, Patent Owner was on notice
13 of this construction in August of 2025, roughly a month before it filed its
14 Patent Owner Response. So, if it really thought there was some
15 inconsistency or issue, it would have raised this in its Patent Owner's
16 response.

17 I will pause. If there are no further questions, I can reserve my
18 time.

19 JUDGE SHAPIRO: I have a question. This is Judge Shapiro. So,
20 for Claim 3, I'm just trying to understand. So the further distribution is
21 mapped to Lippert's disclosure of altering the assignments of those from -- to
22 each other; is that correct?

23 MR. MASON: Oh, well, yeah. So what Lippert describes is the
24 mapping of computation -- or booster nodes to computation nodes. So, no.
25 So there's two different types of mappings. It's computation nodes to

1 booster nodes, right? So sort of like each -- there might be instances where
2 you've got a booster node associated with a computation node, but then
3 there's also the mapping of subtasks among the different processing nodes.
4 And so, what Lippert discloses --

5 JUDGE SHAPIRO: But does it -- oh, go ahead.

6 MR. MASON: What Lippert expressly discloses and focuses on is
7 that mapping of booster nodes to computation nodes. And I don't think
8 there's any dispute about that.

9 JUDGE SHAPIRO: So doesn't that reading of Claim 3 sort of
10 conflate Claims 3 and 4? Like, is there any difference? Like, what's the
11 difference between Claim 4 and Claim 3 then?

12 MR. MASON: I mean, there's -- it's a slight difference in
13 language. I mean, dynamically alters the assignment of if we -- which I
14 believe -- let me just pull up the claim.

15 Yeah, Claim 4 talks about dynamically altering the assignment of
16 the plurality of computation nodes and the plurality of booster nodes to each
17 other during the computation of the computation tasks. And Claim 3 is the
18 further distribution during computing. So we would submit that, further
19 distribution is broader and encompasses, this alters the assignment of.

20 JUDGE SHAPIRO: Well, I mean, but it seems like -- I mean, is
21 there something else in Claim 3 that's not in Claim 4? Because it seems like,
22 from what you just said, that they're coextensive.

23 MR. MASON: Yeah, you know, we -- yeah, they're not co-
24 extensive. Claim 4 also discusses the resource manager receiving the
25 information, such that the resource manager does that. So, I guess, or

1 maybe one way of putting it is Claim 4 provides a deeper explanation of the
2 actual process that occurs when the resource manager does this -- alters this
3 further distribution. And we --

4 JUDGE SHAPIRO: Okay.

5 MR. MASON: Yeah, so, any further questions at this point?

6 JUDGE LEE: Just to wrap up, so the district court claim
7 construction, the parties have already submitted it a couple of months ago,
8 right? We have --

9 MR. MASON: Yeah, the claim construction order has been
10 submitted.

11 JUDGE LEE: Thank you. So you used up five minutes of
12 rebuttal. You still have 15 left.

13 MR. MASON: Thank you, Your Honor.

14 MR. HEIM: Excuse me, Your Honors. If we could just have a
15 few minutes to try to reconnect our system, we're going to try to run it from
16 the table while I present up here.

17 (Pause.)

18 MR. HEIM: With the Court's permission, can Mr. Limbacher sit
19 up here and run the presentation while I do the presentation?

20 JUDGE LEE: Yeah. You mean --

21 MR. HEIM: We're just going to bring a chair. We can bring a
22 chair up.

23 JUDGE LEE: Sure.

24 (Pause.)

25 MR. HEIM: Ready when you are, Your Honor.

1 JUDGE LEE: Yeah. What would you like to reserve?

2 MR. HEIM: Fifteen minutes, please.

3 JUDGE LEE: Okay. Here we go. Thank you.

4 MR. HEIM: May it please the Board, Michael Heim, for the
5 Patent Owner, ParTec. Slide 41, I'm going to start there. What I'd like to do
6 is to talk about the claim language. There are three issues relative to the
7 claim language.

8 PARTICIPANT: I'm sorry to interrupt, Counsel. I have IT that
9 has an additional extension cord, and they can bring it in.

10 MR. HEIM: Okay. So --

11 PARTICIPANT: So, if you and if the Panel wouldn't mind if we
12 paused?

13 (Whereupon, the above-entitled matter went off the record at 10:53
14 a.m. and resumed at 10:56 a.m.)

15 MR. HEIM: Ready when you are.

16 JUDGE LEE: Are you ready?

17 MR. HEIM: Ready. May it please the Board, Michael Heim, for
18 the Patent Owner, ParTec. Mr. Limbacher is also with me, Chris Limbacher,
19 and he is also going to address certain issues.

20 I'm going to start by focusing on the claim language of Claim 1
21 and Claim 9, which raise three issues that we have contended are not present
22 in the combination of Lippert/Budenske, or in the additional reference,
23 Kambatla.

24 The first one -- and I'm going to take them in the order that they
25 appear in the claim, so I'm going to first talk about generating a further

1 distribution, with the highlight on the word generate. We're going to talk
2 about the using information related to processing as point number two. And
3 then, thirdly, I'm going to address the further distribution. Next, I'm going to
4 jump to Claim 3, and then Mr. Limbacher, to the extent time permits, will
5 address the enabling issue in Claims 5 and 9.

6 And so, with that, I'm going to start with the generate piece, and if
7 we could have the next slide, Slide 42. The claim language, this is the last
8 limitation of Claim 1. It's Limitation 1.3, requires generating, and you do it
9 using information relating to the processing of the plurality of subtasks to
10 get further distributions. And so, the focus again, as I said, is on the word
11 generate. And in Claim 9, there's a similar limitation that requires update a
12 distribution. The parties have more or less treated those limitations as being
13 the same.

14 Let's go to the next slide, Slide 43. So, Budenske, what does
15 Budenske disclose? Budenske indicates that, in the second sentence, that the
16 contribution of this paper is that you're going to present a methodology for
17 real-time online input data dependent remapping using a previously stored
18 offline statically determined mapping. And so, that is how Budenske works,
19 right?

20 So Budenske does all of this work offline. It does all these
21 computations. It determines the mappings, all done offline. The generation
22 of the mappings is all done offline. And then what happens is, as you run
23 the application, the system will then select one mapping. And in fact, if you
24 look at the slides that were presented in Microsoft's presentation, that's what
25 they say. And I'll go back to that in just a second. So Budenske is using a

1 previously stored, a previously computed offline determined mapping.

2 We go to the next slide. That's Slide 44. In the abstract, it says
3 essentially the same thing. The study focuses on a particular application
4 domain, iterative automatic target recognition tasks, and if it makes a
5 decision to remap, the operating system is able to select a mapping, which is
6 appropriate for the given state of the application, from a stored set of
7 mappings previously derived with an offline heuristic. So --

8 JUDGE WEATHERLY: So does your argument boil down to that
9 selecting from predefined or previously defined mappings is not generating?

10 MR. HEIM: Exactly.

11 JUDGE WEATHERLY: Now, why wouldn't it be updating, which
12 is the verb that's used -- update is used in Claim 9.

13 MR. HEIM: Well, because in their petition, they have treated
14 Claim 9 --

15 JUDGE WEATHERLY: In your view, why would it not be
16 updating?

17 MR. HEIM: If we go back to the claim just for a second --

18 JUDGE WEATHERLY: In other words, selecting from a
19 predefined set of solutions, update -- I read update as change the
20 distribution.

21 MR. HEIM: Even if you read updated more broadly, you still have
22 to update, and you do it based on receiving information that are operating in
23 at least the portion of the plurality of --

24 JUDGE WEATHERLY: That's a different part of your argument,
25 right?

1 MR. HEIM: Well, it goes with generate because you're generating
2 in response to that live information that you're receiving. So, two parts, you
3 generate.

4 JUDGE WEATHERLY: Yes.

5 MR. HEIM: And you're doing it based on this real-time
6 information that you're getting.

7 JUDGE WEATHERLY: I'm trying to tease out a difference
8 between generate and update.

9 MR. HEIM: I'll tell you, I agree, might be broad, might be broader
10 than generate, but still, you have a timing component here. Whether it's
11 generate or whether it's update, you're doing it in response. You're doing it
12 using the information from the processes.

13 JUDGE WEATHERLY: This concept, is it part of what you had
14 described as your "generate argument", or is that -- or is this timing aspect,
15 is it --

16 MR. HEIM: There are two parts to it.

17 JUDGE WEATHERLY: Right. And I'm trying to just keep them
18 all -- keep all of your arguments straight, and if you're -- if what you're really
19 trying to tell me is that there's overlap between two arguments here -- in
20 other words, when I go back to your Slide 41, okay, you characterize your
21 generate argument as generate further distribution using information --

22 MR. HEIM: Exactly.

23 JUDGE WEATHERLY: -- related to processing.

24 MR. HEIM: Because that -- I'm sorry.

25 JUDGE WEATHERLY: But as I understand Budenske, even if I

1 agree with your argument that selecting from a group of predefined
2 reallocations or redistribution, maybe is a better way to put it, is not
3 generating the distributions, here's the problem that ultimately I'm having.
4 Even if I agreed with your way of interpreting the concept generate, I don't
5 see how your argument works for Claim 9.

6 MR. HEIM: Because whether you're generating or updating, you
7 do it using information related to processing. The way that the offline
8 heuristics work, they don't do it using information related to processing.
9 They do --

10 JUDGE WEATHERLY: But which one of those is selected for the
11 next iteration is based on -- is related to information about the processing,
12 isn't it?

13 MR. HEIM: Well, 9 is broad. I agree 9 is broader than Claim 1. I
14 see your point with respect to the updating. But if we focus on Claim 1, so
15 the generate, let's focus on Claim 1. I get your point on Claim 9. But on
16 generate, the selecting is not generating. You have created it offline. You
17 baked the cake.

18 JUDGE WEATHERLY: I understand that position. I'm not sure I
19 agree with it right now or not, but what I'm really trying to do is understand
20 whether it's -- you've acted as if Claims 1 and 9 really recite the same thing
21 and mean the same thing in this context, and I'm not sure that they do.

22 MR. HEIM: Let me just be clear for the record. What I'm doing is
23 I'm responding to their petition. They have taken the petition that Claim 9
24 on this issue stands or falls with Claim 1. I see a difference in the claim
25 language. They have not pointed out the difference in the claim language.

1 That was the point I was making, Your Honor.

2 JUDGE WEATHERLY: Okay.

3 MR. HEIM: Let's go to Slide 44 again. So, again, the mappings,
4 the precomputed mappings, they happen offline. They are not happening
5 live, and what does that mean? That means that they are doing the mappings
6 before they have the information related to the processing. That necessarily
7 has to be the case because you do all of that before you begin the processing.
8 So they can't meet the claim language. So the way their system works is,
9 they take this enormous amount of time. We heard about all the --

10 JUDGE WEATHERLY: So does it matter if the selecting of the
11 mapping is based on information that is, "relating to the processing of the
12 plurality of subtasks," in your view?

13 MR. HEIM: Well, it matters because selecting is not generating.
14 That's the --

15 JUDGE WEATHERLY: But if the selecting were done based on
16 information relating to processing of the plurality of subtasks, would the
17 -- would that phrase in Limitation 1.3, the phrase being information relating
18 to the processing, would it be satisfied if Budenske were doing its selecting
19 of distributions for the next iteration that way?

20 MR. HEIM: If they were generating instead of selecting.

21 JUDGE WEATHERLY: Let's say I agree with you that Budenske
22 is talking about selecting, not generating.

23 MR. HEIM: Understand.

24 JUDGE WEATHERLY: Isn't it doing the selecting based on
25 information relating to the processing of plurality of subtasks?

1 MR. HEIM: Well, we have a separate argument about that, as
2 you've already noted in a second, about what that information has to be, but
3 they are select -- so they have a --

4 JUDGE WEATHERLY: So the answer to my question is no?

5 MR. HEIM: So the answer -- well, there's a separate issue.
6 Relative to this particular issue, there's an offline component, right? There's
7 an offline component of Budenske, and that's where the generating occurs.

8 JUDGE WEATHERLY: All right. Well --

9 MR. HEIM: The selecting is online. I agree with you; the
10 selecting is done online.

11 JUDGE WEATHERLY: Let me stop you. The universe of
12 possible distributions that Budenske has set aside by doing some work
13 offline, let's say there are 20 of them. I'm just making up the number. I
14 understand Budenske as monitoring the performance of its system and
15 saying we're going to select distribution number 5 from our list of 20 based
16 on information we've gathered about the last iteration through the subtasks.

17 I hear you arguing that Budenske's set of 20 possible
18 redistributions isn't based, can't be based on information relating to the
19 processing of the subtasks. I think I agree with you, but what I don't agree
20 with is that Budenske doesn't do selecting based on information relating to
21 the processing.

22 MR. HEIM: Agreed.

23 JUDGE WEATHERLY: And I think --

24 MR. HEIM: With the caveat --

25 JUDGE WEATHERLY: I think that's all the claim requires. It

1 doesn't require -- probably tipping my hand. I don't read the claim as
2 requiring that the potential redistributions can't be selected from a set, a
3 subset of known solutions.

4 MR. HEIM: So you're --

5 JUDGE WEATHERLY: And I see you. I see you shaking your
6 head. This is my deposition skills, making the record clear. But I'm trying
7 to tease out where the flaws are that you're alleging in the Petitioner's
8 mapping of the prior art to the -- for the claim onto the prior art. And I feel
9 like I'm not doing a fantastic job, or maybe collectively, we're pulling in
10 different directions. I'm not sure where we're going off the rails.

11 MR. HEIM: The claim requires generating using information
12 related to processing. So, first, it has to detect the information related to
13 processing. Then it generates. So there's a timing component there.

14 The way that Budenske works, and I don't -- there's no debate
15 about it. They say it I don't know how many times. The way it works is that
16 they are going to generate -- look at Figure 2. They are going to generate
17 those mappings. So it generates the DDGs, the data dependency graphs.
18 And from that, it's going to eventually generate the mappings. It's got a
19 generator in Figure 2 that does that. This is all done offline. So everything
20 is generated in -- relative to Figure 2 of Budenske.

21 In fact, if you could, switch to Budenske Exhibit 1005.

22 JUDGE WEATHERLY: Which slide are you -- you're just on the
23 exhibit itself?

24 MR. HEIM: I'm just on the exhibit itself, yes. If you go to Figure
25 2, top of the page, Figure 2 is the offline components. What do we see when

1 we look at the offline components? If you can blow that up, yeah. You
2 have a scenario generator. You have an ATR Kernel generator. You have
3 the Kernel MDDG generator. Those are all the things that happen offline.
4 That's where the generating is occurring in Budenske.

5 If we go down to Figure 3, further down on this page, that's offline.
6 Those are the offline components. This is the online components. What do
7 you have? You have the ATR Kernel that's providing an index. It's going to
8 say, hey, I have 120 different mappings. And it's up to the kernel monitor.
9 It is as you said. It is looking at the dynamic parameters, and based on the
10 dynamic parameters, it's doing a best-fit case. And it says, okay, I want five.
11 It selects five. The generation occurred beforehand. It didn't occur based on
12 the real-time operations of the system.

13 The claim requires generating using the information related to
14 processing. It doesn't say generate and then later use it. It says generate it
15 using that information. And that's the basic point that we're making here
16 relative to this limitation.

17 Let's go back to Slide 45. So what is their response to this? Their
18 only response that they have made is, well, in a few instances, it says
19 something more than select; it says select and instantiate. And based on that,
20 they have, with no support, no construction, no evidence whatsoever, they
21 say instantiate means generate.

22 JUDGE WEATHERLY: I think, if I understand that position
23 correctly, and Petitioner can correct me if -- I'm sure they will if they think
24 I'm off. Is that Budenske's selecting a mapping for the next iteration is a
25 way of generating a distribution for processing in -- thereby, in a further

1 computing iteration. In other words, this isn't just generate a new mapping.
2 The claim does say generate a new mapping, but it's generate a new mapping
3 that's going to be used in the next iteration.

4 And so, Budenske, when it describes selecting from among its
5 offline defined remappings for the next iteration, that is a kind of generating
6 for the next iteration. I'm not sure if I understand that if I'm understanding
7 it correctly, I'm not sure if I'm persuaded by that or not. Right now, I'm
8 really just thinking out loud, trying to understand the distinction between the
9 two parties.

10 MR. HEIM: Understand.

11 JUDGE WEATHERLY: As they're orbiting around this word
12 generating, and whether the same issue exists in the same way for Claim 9,
13 and I really don't think that it does, as I sit here right now.

14 MR. HEIM: If I could --

15 JUDGE WEATHERLY: Because Claim 9 doesn't use generating.

16 MR. HEIM: Fair enough. If I could make a simple analogy, if I
17 go into the bakery and I buy a cake, I didn't bake the cake. I didn't generate
18 the cake. I selected a cake. I bought it. And there's a million analogies we
19 can make, but that's the basic difference that we see here is, they're doing
20 things offline, and then they have a piece that's online. That's their
21 contribution. I mean, that's what they -- they're saying that they developed
22 in that one little piece that you see in front of you.

23 JUDGE WEATHERLY: By they, you mean Budenske?

24 MR. HEIM: Budenske, yes. Let me just go to the next slide, Slide
25 46, please. And so, this is back to the claim language. I think we've made a

1 point. I don't want to beat the horse to death. But at the end of the day, you
2 have to generate. You have to do it using information related to the
3 processing.

4 JUDGE WEATHERLY: Let me pause for a second.

5 MR. HEIM: Absolutely.

6 JUDGE WEATHERLY: I think we may have lost Judge Shapiro.

7 (Pause.)

8 JUDGE WEATHERLY: I see a video.

9 JUDGE SHAPIRO: Sorry. I'm back.

10 JUDGE WEATHERLY: Okay. We paused. I think we paused
11 right as you dropped off.

12 JUDGE SHAPIRO: Yeah, we've been having some intermittent
13 connection issues.

14 JUDGE WEATHERLY: Yeah, okay. We're going to start back.

15 MR. HEIM: So, just to summarize for the sake of Judge Shapiro,
16 the point here is the claim requires generating using information relating to
17 the processing of the subtasks. In Budenske, the generating occurs offline
18 before you have any processing information related to the plurality of
19 subtasks. So the mapping is occurring in Budenske before that information
20 exists.

21 Let's go to the next slide, and let's go to the next point. The next --

22 JUDGE WEATHERLY: Does your claim then require that there's
23 -- that after an iteration occurs of subtasks, a custom-made redistribution or
24 further distribution is required for the next iteration in every instance? In
25 other words, there can be no, for lack of a better word, standard rack of suit

1 sizes to select from. Every time you do an iteration, now you have to design
2 a further distribution based on information relating to the processing?

3 MR. HEIM: Claim 1 is only covering two iterations. It's covering
4 a first iteration and a further iteration.

5 JUDGE WEATHERLY: Right.

6 MR. HEIM: So, two.

7 JUDGE WEATHERLY: And the further distribution can't exist
8 before the first iteration happens?

9 MR. HEIM: The generating of the second one occurs as part of
10 processing the first one.

11 JUDGE WEATHERLY: So my question goes back to, does the
12 claim only fully cover systems in which the further distribution for the next
13 iteration is always custom-made, and it's always based on information
14 relating to the previous iteration?

15 MR. HEIM: Always is too strong because that's suggesting more
16 than the two iterations.

17 JUDGE WEATHERLY: No, it's not too strong if I'm following
18 your argument about the distinction between generating and selecting.

19 MR. HEIM: No. This is a claim construction issue relative to first
20 iteration and subsequent iteration. It doesn't say every subsequent iteration.

21 JUDGE WEATHERLY: No, I understand that.

22 MR. HEIM: That's my only point.

23 JUDGE WEATHERLY: Well, except that the system -- the claim
24 doesn't just cover a method of performing two iterations, really. It's
25 designed to cover an ongoing process, right, where the second iteration

1 becomes the first iteration for the next iteration, if you'll pardon me, my use
2 of the phrase.

3 MR. HEIM: It is a situation where you have to have that
4 capability. I agree. Now, do you avoid infringement, for example, because
5 you have one iteration out of 10,000 where it doesn't change? No, you don't,
6 as long as you have it between a first and -- a first one and subsequent one.

7 JUDGE WEATHERLY: Well, but not changing they'd already
8 -- the further distribution being the same for the next iteration, right? That's
9 the point -- I think that's the case that you just described as being still
10 possibly infringing, so long as you don't know that the further distribution
11 isn't the same as the last one until it's been generated.

12 MR. HEIM: I would say a little more -- with a little more clarity,
13 you have a first; you have a second. The second one is generated based on
14 the operation of processing the first.

15 JUDGE WEATHERLY: And you don't know what it is until after
16 the first iteration has happened and processing has occurred using
17 information relating to the processing of that plurality of subtasks.

18 MR. HEIM: Yes, sir. Yes. And --

19 JUDGE WEATHERLY: And if it happens that the further
20 distribution is the same as the previous distribution, well, okay, that's still a
21 further distribution in the meaning of the claim.

22 MR. HEIM: Well, for further distribution, when we get to that,
23 and I think as the Board has already said, there has to be a change, right?
24 There has to be a change for the --

25 JUDGE WEATHERLY: No. Now you're saying two different

1 things, it sounds like.

2 MR. HEIM: I'm saying you infringe if you do it one time. As long
3 as you have an instance where the further distribution is based on
4 information during the processing and it changes, then you fall within the
5 claim. If you never change it --

6 JUDGE WEATHERLY: I think you said two things that are
7 mutually exclusive, but --

8 MR. HEIM: I don't think so.

9 JUDGE WEATHERLY: We'll have to agree to disagree. We can
10 move on.

11 MR. HEIM: Okay. Slide 47, the second point is what is the
12 information? The information must be processor-related information.

13 Let's go to the next slide. And --

14 JUDGE WEATHERLY: Processor-related information?

15 MR. HEIM: It's --

16 JUDGE WEATHERLY: I thought it was information relating to
17 the processing.

18 MR. HEIM: Absolutely. That's just -- I shortened it. Information
19 related to the processing of the plurality of subtasks.

20 So, let's go to the next slide. So, we're at Slide 49. I'm going to
21 point to two specification passages. And the first appears at column 14,
22 lines 19 through 31. And what the specification teaches us is that during the
23 first iteration of the tasks, the results of the execution of the subtasks are
24 collected together with the information from the daemons concerning the
25 processing of subtasks. That's the language we see in the claim: process the

1 information concerning the processing or relating to the processing of the
2 subtasks. And so, the patent is clearly identifying two different things.

3 And then, if we go to the next slide, Slide 50, this is at column 4,
4 48 through 63. This passage begins by noting that you can adjust the
5 distribution of the subtasks between the CNs and the boosters, based on
6 scalability. And as another example, it may also be influenced by
7 information learned about the processing of the subtasks and any need to call
8 further subtasks during the processing.

9 And it gives an example. If a first subtask is being handled by a
10 booster and it requires information from a second subtask that's being
11 handled -- that's not being handled by the booster, it can cause an interrupt.
12 So your process, your particular subtask, now has to wait. And so, that's
13 being identified, and the suggestion here is, so rather than do that, the
14 application manager is arranged using the information provided to adjust the
15 groupings of the subtasks for assignment to the computation nodes and
16 boosters.

17 And what it says just above that is you can move the subtask to be
18 processed by the same booster. So, when we're talking about information
19 related to the processing, this is the specific example that they give about
20 one way you do that. You look to see whether or not you have interrupts.
21 You look to -- wait to see if a particular node is waiting or has to wait. It's
22 delayed for data. And they're going to use that approach in order to
23 determine if they need to change that distribution. There was a question --

24 JUDGE LEE: This is Judge Lee. I'm sorry. You've spent a long
25 time saying this is the example. I'm not seeing what the example is. As

1 clear as you can, what is the example of something that relates to processing
2 of the execution of the subtasks rather than the results of execution of the
3 subtasks?

4 MR. HEIM: This is looking at a particular node that is performing
5 processing. It is seeing not the output. It's seeing that it had to wait. There
6 was a wait-state caused by an interrupt while it was waiting for data. And
7 so, what it says is, let's move. Let's move that subtask to the same node so
8 that the two different operations --

9 JUDGE LEE: Wait, wait, wait. So, the occurrence of an interrupt
10 is what you're saying the example is?

11 MR. HEIM: Yes.

12 JUDGE LEE: Okay. So, it's the quick answer is, is it interrupt?
13 Because no subtask was performed to produce an interrupt, so the fact that
14 you got an interrupt is something that is related to the processing of the
15 subtask. So, the answer is, the example is an interrupt.

16 MR. HEIM: It's an interrupt or a delay, yes, that's --

17 JUDGE LEE: An interrupt or a delay. So those are like
18 observations about what happened while you were executing the subtasks,
19 right?

20 MR. HEIM: Yes.

21 JUDGE LEE: So aren't all of what they relied on the same kind of
22 observations?

23 MR. HEIM: No.

24 JUDGE LEE: Why?

25 MR. HEIM: Let's go to the next slide. They are looking at the

1 dynamic parameters. And this is what they say about the dynamic
2 parameters. They say the result of the processing of the subtasks, the values
3 of the dynamic parameters, they're equating that to information relating to
4 the processing. They themselves are saying they're using the results. That's
5 what the dynamic parameters are. That's in their petition. This is Slide 51,
6 petition at 30 and 31.

7 Next slide, Slide 52 --

8 JUDGE WEATHERLY: So, on your Slide 49, is your argument
9 that because the specification describes collecting two different kinds of
10 information, one being results of the execution and two being information
11 from daemons, that that means that information relating to processing can't
12 be results of execution?

13 MR. HEIM: That's part of it, yes. The results are one thing that
14 are obtained, and then the other is information concerning the processing of
15 subtasks. They're making a distinction about information related to
16 processing of the subtasks and the results of the subtasks here, and then they
17 give an example in the next slide, Slide 50, of exactly the sort of information
18 we're talking about.

19 JUDGE SHAPIRO: So, Counsel, your -- is it this passage, 4 19
20 through 31, that you think shows a clear and unambiguous disavowal of
21 claim scope for the information term in the claims?

22 MR. HEIM: I think this passage makes a distinction between the
23 information concerning processing of subtasks and the results, that there's a
24 clear distinction --

25 JUDGE WEATHERLY: Right, but the next sentence then implies

1 that the application manager does a reassignment effectively based on both
2 -- all of that information.

3 MR. HEIM: The claim doesn't recite -- it could easily have recited
4 based on information or results, or and results. It could have tracked the
5 language in the specification, and it doesn't do that.

6 JUDGE WEATHERLY: To me, there's only a very loose
7 relationship between information relating to the processing of the plurality
8 of subtasks, that's the claim language. And "information from the daemons
9 concerning the processing of the subtasks" from the spec. Those aren't the
10 same words. Concerning, relating, that's one way in which those phrases are
11 different. What we're trying to tease out is whether results of the execution
12 are information that is relating.

13 You're saying that, because the spec says that information from
14 daemons concerning the processing, you want us to read this spec sentence
15 as if it says the information from the daemons relating for processing
16 -- relating to the processing of the subtasks. There's not a clean mapping
17 between the spec and the language in your claim that I think you want us to
18 see.

19 And the reason we're being so persnickety about it is because of
20 this notion of disavowal is something that has to be really clear and
21 unambiguous. It can't just be my spec lists two different kinds of
22 information here, and our claim uses a phrase that's sort of similar to one of
23 them but not the other, so we're going to limit the claim to only referring to
24 one of these kinds of information but not the other.

25 Is there any other place, for example, where the spec focuses on

1 the results to make it clear that results is a fundamentally -- is a qualitatively
2 different kind of information; it's not information that's relating to the
3 processing as claimed?

4 MR. HEIM: If we go to the next slide, it doesn't mention results.

5 JUDGE WEATHERLY: Okay.

6 MR. HEIM: However, it makes it clear that it's information about
7 the processing that is occurring in the processing. It's not occurring as the
8 result of the processing. It is detecting a problem in the processing, and it is
9 suggesting a redistribution.

10 JUDGE WEATHERLY: I don't think we're -- we believe that the
11 claim doesn't cover using information like if there's been an interrupt, a
12 daemon sends a -- sets a flag or something that says there was an interrupt
13 during the last iteration as being a type of, "information relating to the
14 processing". What we're trying to tease out is whether results of the iteration
15 are also a kind of information relating to the processing of the plurality. You
16 want us to interpret the claim in such a way that it excludes results as that
17 -- from that universe of information.

18 MR. HEIM: Yes, information related to processing should be
19 construed as information that's learned about the processing of a subtask.
20 It's not the result of a subtask.

21 JUDGE WEATHERLY: Okay. Okay.

22 JUDGE LEE: This is Judge Lee. I want to add a little bit here. It
23 seems to me that the keyword is not result. It's execution. You know, in
24 computer science and software engineering, when you execute code,
25 something happens. It has to happen, right? I think that's consistent with

1 what you're saying. When you execute the code, this is the result. There's
2 no ands or ifs or buts about it. When you execute, this is what you get.
3 Everything else is something about the processing. Isn't that, yes, what
4 you're saying?

5 MR. HEIM: Absolutely.

6 JUDGE LEE: Right. Then I'm in agreement with that, but it
7 doesn't help your case, though, because when you execute code, very little
8 has to happen. Most of what goes on is information about the execution and
9 not necessarily the results of execution.

10 You know, all the parameters they've identified are all the
11 tangential things that relate to the execution, but they don't necessarily have
12 to happen as a result of the execution. You don't have to follow all these
13 things. You don't have to check this, check that, you know? It says add one
14 and one, it's going to give you two. Two is the only result of the execution.
15 Everything else about it is information relating to processing of the code, so
16 the claim would cover very little by that definition, the results of execution
17 versus information relating to processing of the subtasks.

18 MR. HEIM: If we could just go for a second to 52, and then I'll
19 move on. Go to 52, I'm sorry. Fifty-three. So the dynamic parameters,
20 what it says is that -- the dynamic parameters are the things that are going to
21 change during run time that cause the execution to be longer, and those are
22 things that are computed by the application as it executes.

23 If we go to the next slide, Slide 54, what they identify are four
24 dynamic parameters in this example, right? It's the number of objects of
25 -- it's the number of tanks. It's the size of the tanks. It is the lighting

1 conditions, and was there cloud cover. And so, what does it do in response
2 to those things? It makes -- it will do a remapping based on those results.
3 Or it will go, and it will select a different index based on those. But each of
4 those is going to -- it could -- it's either a result, or it's going to impact
5 whether you have to call more subtasks, right? That's really what's going to
6 happen here when you detect like 3 and 4. You're going to have to perform
7 additional subtasks.

8 And the reason I want to point that out is, I now want to go to the
9 further processing limitation, Slide 20. And just to be clear, their petition
10 says those are results, so the further distribution --

11 JUDGE LEE: I have to stop you there. They didn't really say --
12 they say results, but they say it's the results of the processing, not results of
13 the execution. So you're not being true to your own distinction. You refer
14 back to your own distinction in the spec as you're distinguishing processing
15 from execution. And that's exactly what they say. What the dynamic
16 parameters relate to are the results of the processing. They're not saying
17 they are results of the execution.

18 So, that's the way I read it. You know, it seems consistent with the
19 claim. They're not results of execution of the code. They're the results of
20 the processing, which is tangential to the execution of the code. So, I don't
21 know, maybe tell me why I'm reading it wrong.

22 MR. HEIM: It's information related to the processing. If you
23 -- you're conflating that --

24 JUDGE LEE: That's why they're related to processing, because
25 they're results of the processing.

1 MR. HEIM: But you're ignoring the distinction that was made in
2 the specification. You're ignoring the example, and you're just -- you're
3 pulling the results. I mean, the specification --

4 JUDGE LEE: Well, they can't use the -- there's a difference
5 between results of execution and results of the processing. You can't just
6 hang everything on the word results because that's a generic word. They can
7 use it to modify execution of the task or to modify a processing of the tasks.
8 You know, they're not the same. Processing and execution aren't the same in
9 this context. Execution of the task is execution of the task. Processing of
10 the task is something tangential that relates to the execution.

11 MR. HEIM: In the interest of time, I'd like to move to Claim 3, if I
12 may?

13 JUDGE LEE: Sure.

14 MR. HEIM: Slide 65. Okay. Let's go to the next slide, Slide 66.
15 All right. So, this claim, we have the further distribution that appears in
16 Claim 1. And as we've been talking about, it uses information related to the
17 processing. Claim 2 introduces an application manager that receives the
18 information and determines the further distribution. And then we get to
19 Claim 3, and I'm just going to focus on the portion of 3.2 here.

20 It says, "The application manager receives the information and
21 processes the information, provides it as an input to the resource manager,
22 and the resource manager dynamically alters further distribution during the
23 computing of the computation tasks." They say, well, it doesn't say the
24 further distribution. The flip side is, it doesn't say a further distribution or an
25 further distribution. And so, based on that, they mapped this claim to

1 Lippert.

2 And Lippert, what Lippert does, if we could have the next slide,
3 they map this to Lippert, paragraph 13. Next slide, Slide 68, please.
4 Paragraph 13 of Lippert is talking about assigning a booster to a
5 computation node. It's not discussing distribution at all. It's assigning a
6 booster to a computation node.

7 So, next slide, Slide 69, their petition. What's their argument for
8 making that? Well, they say the resource manager dynamically alters further
9 distribution encompasses the limitation of Claim 4, right? They're saying
10 you can read it out far enough so that it covers 4.

11 Next slide, please, Slide 70. But the language here on Slide 70, we
12 can see, is different. Claim 3 is referring to dynamically altering the further
13 distribution. Further distribution was used in Claim 1 and Claim 2 to refer
14 to distribution of the subtasks, and Claim 4 is dynamically altering
15 assignment of the plurality of computation nodes and the plurality of booster
16 nodes to each other. They're reading this limitation in Claim 3 to mean the
17 same thing as Claim 4, as Judge Shapiro identified.

18 JUDGE WEATHERLY: So, dynamically altering assignment of
19 plurality of computation nodes and the plurality of booster nodes to each
20 other is not a subset of dynamically altering further distribution? It's a
21 different thing altogether?

22 MR. HEIM: Yes, that's correct. And all you have to do is look at
23 Claim 1 and Claim 2 to see that.

24 So, next slide, Slide 70. Let's go to 74, please. Well, I'm sorry.

25 JUDGE SHAPIRO: Counsel, can I ask you a question? This is

1 Judge Shapiro. So, let's say we accept this hypothetically. This isn't a
2 ruling, but let's say we accept that Lippert/Budenske combination renders
3 Claim 1 obvious, meaning that the system can generate a further distribution
4 of subtasks. Wouldn't a person of ordinary skill naturally configure the
5 resource manager to execute that distribution?

6 MR. HEIM: They are relying on Lippert for a teaching that it
7 doesn't teach. Their petition is deficient, and we all know that they are wed
8 to the petition that they filed in this case. And so, the answer is that they've
9 gone beyond the petition in order to make that argument. Lippert doesn't
10 show what they say it shows.

11 JUDGE WEATHERLY: I think what I hear you saying is that, if
12 anything, Lippert shows what's recited in claim -- or the limitation that's
13 introduced in Claim 4. It doesn't meet all limitations of Claim 4 because, of
14 course, Claim 4 includes all limitations of Claim 3. And your argument is
15 that Lippert doesn't describe dynamically altering further distribution.

16 But Lippert does disclose dynamically altering -- altering. I don't
17 know why I say altering. Altering assignment of nodes, computation
18 nodes and booster nodes to each other. That recital in the Claim 4, that
19 limitation introduced in Claim 4, in your view, is a completely different kind
20 of task than altering further distribution.

21 MR. HEIM: Correct.

22 JUDGE WEATHERLY: Okay.

23 MR. HEIM: With that, I'm going to pass the mic to Mr.
24 Limbacher to address just a point or two real quick in the time we have.

25 JUDGE WEATHERLY: He's not going to give you any grief at

1 all for only leaving him two-and-a-half minutes, is he?

2 MR. LIMBACHER: I'll try to be very brief, Your Honors. Chris
3 Limbacher for Patent Owner. I'd like to address a few of the points that
4 came up regarding the enablement of Budenske if I may. I'm going to go to
5 -- this is Slide 34 of our demonstratives.

6 So, one of the things that was suggested that if something is a
7 major undertaking, that just means that it takes a lot of time. The evidence
8 of record rejects that. The concept of Budenske was worked on for at least
9 seven years, and seven years later, they still considered it to be -- core
10 components of it to be fundamental research issues.

11 Now, there was a suggestion that fundamental research issues are
12 issues for which you might already have a solution, and you're just trying to
13 refine it, but all evidence of record rejects that point, as well. So, this is
14 Petitioner's expert saying they work -- that he knows they worked on it for a
15 number of years. It was not a trivial problem.

16 I'm moving to Slide -- this is Slide 37 of our deck. This is where
17 the definition of fundamental research was addressed by our expert. It's
18 sometimes referred to as basic research. It's research without specific
19 applications, and it leads to subsequent applied research. So, if you're trying
20 to implement something, that may well be, okay, now we're performing
21 applied research to figure out how to implement it. If you're performing
22 fundamental research, you're nowhere near implementing it. You don't have
23 a solution.

24 And their expert said that. He said that exact thing. I'm on Slide
25 38 of our demonstratives. If you already have a solution, then it's not really

1 considered fundamental. So this wasn't a situation where they had a
2 solution, they were refining it. They did not have a solution. Seven years
3 later, they still didn't have a solution. That is an undue -- unreasonable
4 amount of experimentation by any standard.

5 JUDGE SHAPIRO: Counsel, who has the burden on showing
6 enablement? Is it Petitioner or Patent Owner for Budenske?

7 MR. LIMBACHER: In this situation, I believe it's Petitioner, Your
8 Honor. Now, there is a presumption that the Patent Owner has to come
9 forward with evidence of non-enablement. That's only when a reference is
10 not -- is enabling on its face. Budenske is very clearly not an enabling
11 reference on its face. It says it didn't implement anything. It says it had to
12 make simplifying assumptions just to move forward. The Kwok reference
13 emphasizes Budenske was never implemented. It says it's a major
14 undertaking.

15 So, all of those things together, that plus the expert testimony,
16 makes it very clear that this is not enabling on its face. And as a result, it
17 would not be Patent Owner's burden to come forward with evidence on it.
18 And I can provide a case law cite, but it's in my notes, so if you'll allow me
19 one minute to grab that for you.

20 JUDGE WEATHERLY: Is it in the papers?

21 MR. LIMBACHER: I don't know that that point is in the paper
22 because I don't think that that argument has been raised before now.

23 JUDGE WEATHERLY: Okay.

24 JUDGE LEE: Well, you have another time up. When you come
25 up next, you can tell us.

1 MR. LIMBACHER: Yes, Your Honor. I'll do so.

2 JUDGE SHAPIRO: And just as a follow-up, is Patent -- is that
3 why Patent Owner didn't go through all the Wands factors, because Patent
4 Owner didn't think it was its burden to show non-enablement on Budenske?

5 MR. LIMBACHER: Well, Your Honor, it's that, and it's that the
6 Wands factors are non-exclusive, and again, it being non-enabling on its
7 face, it wasn't necessary to hit all of those. But on top of that, I would say
8 that much of our analysis goes to the Wands factors.

9 So, for example, right with the claims, you know, we address
10 what's required by further distribution. We address what the information
11 consisted of; nature of the invention, we address the heterogeneous nature of
12 the invention; the architecture, the interplay between the architecture and the
13 methodology that's claimed; you know, the state of the prior art, including
14 why Budenske, as a reference from 1998, wouldn't have been relevant to the
15 problems of today.

16 Even if we didn't expressly say we're addressing this factor, this
17 factor, this factor, we addressed all of those things throughout the record.
18 So, even if it turned out that we did have the burden on that, we have
19 addressed it, Your Honor.

20 JUDGE SHAPIRO: Okay.

21 JUDGE LEE: Can you respond to their saying your spec doesn't
22 have anything more than what's in Budenske anyway, so what do you
23 disclose that will enable one of ordinary skill to actually figure out from the
24 last iteration what better combinations of different types of processors would
25 be better for the next iteration of the same subtasks?

1 MR. LIMBACHER: So --

2 JUDGE WEATHERLY: Especially if it has to be done in real-
3 time.

4 MR. LIMBACHER: So, first, Your Honor, I would say up until
5 now, it hasn't been necessary for us to address the enablement of the '442
6 Patent, given the limited scope of an IPR proceeding, but I'm happy to give
7 some examples here that I must acknowledge would be non-exhaustive
8 given --

9 JUDGE LEE: But, yeah, your time, you'll be using up your time
10 anyway. That's just what's in my mind. You could answer or not.

11 MR. LIMBACHER: Yes, Your Honor. I'll do that right now.
12 Give me one moment, please. I'm putting up the '442 Patent.

13 So, one thing I'll point out first is the '442 Patent is describing both
14 an architecture and a methodology. You have an architecture where you
15 have booster nodes and computation nodes arranged such that they can be
16 assigned to each other, and at the same time, you're placing the daemons
17 within the computation nodes and booster nodes specifically. That way they
18 can provide that kind of live data to provide the necessary updates that can
19 be based off of the information related to the processing, versus, say, as
20 we've said, the results of the processing.

21 So, I'd say Figure 1 shows the exemplary architecture. The patent
22 discusses that at column 2, line 66 to column 3, line 38. Again, you can see
23 how it shows the specific, not just nodes generally, but computation nodes
24 and booster nodes. It discloses how the information from the daemons
25 located in those nodes can be used to dynamically update how the tasks

1 should be processed.

2 You can see examples of this, column 3, lines 59 to column 4, lines
3 63, as well as column 5, lines 10 to 24. And also, if you look at column 4,
4 lines 48 to 63, that paragraph provides an example of how the daemons
5 could be used to adjust the distribution of subtasks by moving a subtask to a
6 different processing node.

7 I realize it's been a very brief update, but given time constraints, if
8 there are no additional questions for me

9 JUDGE LEE: Yeah, but they seem pretty general. They're not
10 specific, right? All those sections you mentioned, they don't seem like the
11 kind of thing that takes years and undue experimentation to arrive at, to
12 arrive at something like, oh, figuring out which node is better. I mean, what
13 -- how do you persuade me that that addition is what would have taken a
14 POSITA years and undue experimentation to arrive?

15 MR. LIMBACHER: Well, Your Honor, I would also say that part
16 of it is the fact that it describes a situation where you're not just having a set
17 architecture dedicated to something.

18 You have a situation where computation nodes and booster nodes
19 can be assigned to each other, and the recognition that that can require an
20 additional solution that requires the distribution based on the specific
21 information described in the patent that wouldn't necessarily be the case for
22 something like Budenske, which is dedicated to a single task: automated
23 target recognition. It has the hardware. It knows how many processors it
24 has at all times. That's why it can do everything offline. So I would say
25 that, if nothing else, the recognition of the problem and then the addressing

1 that problem would be parts of that.

2 So, if there's no further questions, I'll reserve the rest of my time.

3 JUDGE LEE: Thank you.

4 MR. LIMBACHER: Thank you, Your Honors.

5 JUDGE LEE: And you have 15 left.

6 (Off-microphone comments.)

7 JUDGE LEE: Patent Owner, I'm sorry. You actually have only 9
8 minutes left. I'm corrected by Judge Weatherly.

9 MR. HEIM: Yes. Yes, thank you.

10 MR. LIMBACHER: Understood, Your Honor.

11 JUDGE WEATHERLY: That was the second iteration of our
12 computation tasks on that list.

13 JUDGE LEE: He's the special processor.

14 JUDGE WEATHERLY: I'm the booster node.

15 (Laughter.)

16 MR. MASON: I was going to throw it in, but I didn't think it was
17 my place.

18 (Laughter.)

19 MR. MASON: May it please the Board, Andy Mason again, on
20 behalf of Petitioner, Microsoft Corporation. So I was just -- since we were
21 just talking about enablement, I'll just touch on that very briefly.

22 Patent Owner gets at least three things wrong on enablement. One,
23 enablement looks at the prior art as a whole, and Patent Owner is just
24 picking nits about Budenske. All the things that Counsel was just discussing
25 that it purportedly described in the '442 Patent are found in Lippert, the other

1 reference in our combination, namely, computation nodes, booster nodes, a
2 way of communicating between the computation nodes and booster nodes, a
3 resource manager. All of that was in Lippert, so the disclosure that was
4 pointed to didn't account for the fact that we have another reference in our
5 combination.

6 Secondly, enablement looks at the enablement of whether you can
7 -- the prior art as a whole would allow a skilled artisan to practice the claim.

8 JUDGE WEATHERLY: The claim at issue.

9 MR. MASON: Yeah, the claim at issue, right? So, here, it's Claim
10 1, Claim 3, you know, all the claims of the '442 Patent. Patent Owner is
11 focusing again on nitpicking Budenske. It's not looking at, okay, given all
12 the teachings of the prior art, would you practice this very, very broad, very
13 basic claim? And it's undisputedly on this record, like, a skilled artisan
14 would be able to practice that.

15 And I think that the lack of disclosure in here -- and this is Slide
16 26. The lack of disclosure in the '442 Patent itself is really -- I mean, In re:
17 Epstein, and this is cited on page 11 of our reply, often gets cited, but I think
18 this is actually a case where it's on square with *In re Epstein*. And there, the
19 Federal Circuit affirmed that the prior art was enabled, holding that when the
20 Patent Owner's own disclosure fails to provide the same detailed information
21 concerning the claimed invention, skilled artisans would know of the
22 equipment and techniques to be used. So, I mean --

23 JUDGE WEATHERLY: The implication is that a cursory
24 disclosure in the patent is evidence indicating that people in the field
25 understand these tasks well enough that they don't have to be written down

1 and described again in detail.

2 MR. MASON: Precisely. It's effectively an omission.

3 JUDGE WEATHERLY: Yeah. I mean, I'll note that the patent
4 has just over two columns' worth of disclosure total on the detailed
5 description. Even given that pictures can be worth a thousand words, I'm
6 not so sure that that's a very robust disclosure, in my view.

7 MR. MASON: Well, and I will also point out, Judge Weatherly,
8 that there's only one figure in the patent, too, and that figure of the '442
9 Patent is barely distinguishable from figures in Lippert, our primary prior art
10 reference.

11 JUDGE LEE: Is the *Epstein* case cited?

12 JUDGE WEATHERLY: So, then we only give credit for a
13 thousand words for one figure.

14 MR. MASON: *Epstein* is cited on page 12 of the reply.

15 JUDGE WEATHERLY: Okay.

16 MR. MASON: I'm going to turn -- unless there are specific
17 questions, I'm going to turn back to the generating point that Counsel
18 discussed at the beginning of their presentation. And this relates to
19 generating -- Claim 1's generating a further distribution of a plurality of
20 subtasks.

21 And here, so Budenske, as we explain in the petition, Budenske
22 teaches looking at your dynamic parameters, right? And it's doing this
23 dynamically. Budenske, we see here, on the Slide 19, this is Budenske,
24 Exhibit 1005, at page 395. As the application is executing, right, you
25 monitor the run-time values of the dynamic parameters. And then, you

1 make a heuristically-based decision, and then you select and instantiate a
2 new mapping, right? And so, this satisfies the claimed generating a further
3 distribution, and it does so dynamically.

4 JUDGE WEATHERLY: Help me understand instantiate in that
5 sense. Select, I realize that I may be oversimplifying when I went earlier in
6 my example, 20 potential remappings; select from among the 20 and
7 instantiate, kind of like, for lack of a better word, load it up?

8 MR. MASON: Yes, that's my understanding that it's loaded up or
9 configure, right, the -- or just basically distribute, actually distribute these
10 subtasks among the different processors, so --

11 JUDGE WEATHERLY: So that it can be applied to the next

12 MR. MASON: For processing, yep. Sorry for interrupting.

13 JUDGE WEATHERLY: Right? Okay. So, back to my -- the
14 distinction I was trying to understand between generate and update, generate
15 being the root word used in Claim 1 and update being the root word used in
16 Claim 9, is there anything to the distinction there? Is there any distinction?
17 Is update a broader concept that it might involve selecting and then
18 instantiating, but generating -- Patent Owner says generating -- selecting
19 isn't generating.

20 MR. MASON: Yeah, no. Patent Owner is wrong on that front.
21 So, in the context of the claim -- so, I think -- first answering your, if the
22 question is complete, answering the first part of your question.

23 JUDGE WEATHERLY: Yeah.

24 MR. MASON: There may be a distinction. I think Patent Owner's
25 Counsel agreed there's probably -- maybe updating may be slightly broader

1 than generating. It's not clear on this record, and it wasn't briefed.

2 JUDGE WEATHERLY: Right.

3 MR. MASON: Nobody raised that issue. But here, we submit that
4 both are clearly satisfied by Budenske when it's selecting and instantiating.
5 And I think if you look at the petition on, you know, page 31, we're talking
6 about its selecting. And we quote this passage here, as shown on Slide 19,
7 page 395 of Budenske, and explain how it's analyzing these run-time values
8 and then selecting and instantiating. And in doing that, it's essentially, okay,
9 you're using this real-time information to determine your best mapping and
10 then make sure that it's actually -- your system is carrying out your -- is
11 processing, based on that new assignment.

12 JUDGE WEATHERLY: So, in your view, is the act of selecting a
13 type of generating?

14 MR. MASON: Yeah, well, it's this -- we submit that we mapped
15 in the petition selecting and instantiating, right? So it's this entire concept.
16 So, to the extent that generate just requires selecting, well, we have selecting
17 because we're using this information.

18 You know, and I think, if you look to Claim 2, Claim 2 talks about,
19 well, you know, you've determined a mapping. All right. And so, like, to
20 the extent that generate is just determining, well, the selection satisfies that.
21 If generating requires something more, if it requires actually configuring the
22 system with this processor, then that's satisfied by selecting and instantiating
23 in Budenske.

24 JUDGE WEATHERLY: Okay.

25 JUDGE LEE: It's Judge Lee here. I have a question. I was a little

1 confused when Counsel for Patent Owner earlier tried to distinguish Claim 1
2 from Claim 9 with regard to this issue, because when I look at the Patent
3 Owner Response, what they have for Claim 9 is just, for the same reasons
4 discussed above for Claim 1, Petitioner should lose. So, I didn't see any
5 Patent Owner distinction of arguments between Claim 1 and Claim 9 insofar
6 as this issue is concerned.

7 MR. MASON: That's my understanding, as well. I don't think
8 that's been a point of distinction between the parties in the briefing.

9 JUDGE WEATHERLY: It may be that I'm the only one who is
10 seeing the difference.

11 MR. MASON: Well, yeah, and there may be a difference, but I
12 think it's just -- it's not relevant to resolving these disputes. We submit
13 Budenske satisfies both. Patent Owner has focused on the term generating.
14 They have not focused on updating or raised any specific arguments as to
15 update. And we submit that updating here is a bit of broad -- or sorry,
16 generating a further distribution is very broad. And I think especially if you
17 look in the context of the claim, Claim 1 is a method for operating a
18 computer system, and this further distribution is for processing, right?

19 And so, in Budenske, when you select and instantiate, even in the
20 instance where some of the work was maybe done offline beforehand, you're
21 still making that final determination. You don't know what your actual
22 mapping of subtasks to processors is going to be until you see that real-time
23 online dynamic parameter information and use that.

24 JUDGE LEE: Yeah, I mean, it seems like that wasn't really a
25 mapping. That's like a preliminary preparation. And then, when you select

1 and substantiate it, that's when it happens.

2 JUDGE WEATHERLY: Select and load it.

3 MR. MASON: Yep.

4 JUDGE WEATHERLY: That is a kind of generating in your
5 view?

6 MR. MASON: Correct. Yeah, that is generating, on this claim.
7 Now, there may be different instances of generating when you're looking at
8 this patent, and you're looking at these claims. And I think, additionally,
9 petition, page 31 to 32, explain how Budenske also discloses an alternative,
10 wherein a fully online heuristic is used, right? And with this heuristic, the
11 mapping and the entirety of this mapping decision is made in real-time
12 between iterations, based on the dynamic parameters.

13 So even if Patent Owner were totally right and somehow the
14 offline screwed things up, we relied on this alternative mapping in
15 Budenske, as well, that discloses an online heuristic. And in our reply, we
16 pointed out that the POR does not dispute that Claim 1's generating is met by
17 Budenske's online instantiation at page 15. So, in any event, Budenske
18 satisfies this generating element of Claim 1.

19 JUDGE LEE: This is Judge Lee again. I got a little confused
20 when I saw a Patent Owner slide that has, as an item, Petitioner failed to
21 address the district court's claim construction. But the court didn't have a
22 claim construction order until March 2026, right? So what's the context? I
23 mean, by March 2026, all the replies, surreplies, everything is in, isn't it?
24 Was it already in?

25 MR. MASON: Yes, at that point in time, it was a non-issue, yeah.

1 And I think Patent Owner had raised the issue before, saying, oh, we
2 proposed this construction in district court beforehand. And as we pointed
3 out in our reply, there's just nothing to this argument. The petition applies
4 the plain and ordinary meaning. The district court has construed the term to
5 have its plain and ordinary meaning. The district court, in its order,
6 explained all Microsoft is asking me to do is to clarify what's plain and clear
7 from the claim itself for the jury, so I'm giving the term its plain and
8 ordinary meaning. We mapped to that plain and ordinary meaning.

9 JUDGE LEE: So, when I prepared for this hearing, I did review
10 the district court's claim construction order. I reviewed all the papers. I
11 didn't see any issue on the table about Petitioner supposedly having
12 addressed a district court construction, or Petitioner changed its position, or
13 Petitioner applied a different claim construction from what it did in district
14 court. Are there any such issues in the case now?

15 MR. MASON: We submit that there is no issue. If you look at the
16 petition, the petition mapped, you know, that their argument is, oh, you
17 argued for it under this district court claim construction, it's the same set of
18 subtasks that occurs in each iteration. Well, that's how we mapped it, and I
19 explained that in my opening. That's on Slides 41 through --

20 JUDGE LEE: So, what was that item in the Patent Owner's slide
21 about Petitioner failed to address the district court's claim construction?

22 MR. MASON: I don't understand the argument that they're
23 -- candidly, I don't understand the argument that they're making. I think
24 they're trying to make something of the fact that we took a claim
25 construction position in district court and alleging that we didn't map to that

1 construction, but they don't point to anything in our mapping that is deficient
2 under that supposed construction. In the petition, we applied the plain and
3 ordinary meaning.

4 JUDGE LEE: That wasn't in the Patent Owner Response, though,
5 I don't think.

6 MR. MASON: No, it wasn't. Yeah. So, yeah, we submit -- and
7 moreover, it should have been raised in the Patent Owner Response. By
8 raising it this late, they waived it because they were on notice of this
9 construction by August of last year and filed their Patent Owner Response in
10 September.

11 JUDGE LEE: And then we didn't get any call from the parties
12 after the district court's construction order to say, hey, in light of that
13 construction order, we need further briefing. There is no such event in this
14 case.

15 MR. MASON: That's correct. We see no issue here. The petition
16 maps. There's no -- under that construction of the district court, and there's
17 no inconsistency here.

18 JUDGE LEE: Thank you.

19 JUDGE SHAPIRO: Counsel, what about for -- this is Judge
20 Shapiro. What about for Claims 3 and 4? It does seem to me, I mean, from
21 today's presentation, that there's a disagreement over, whether the Claim 4 is
22 talking about a different limitation or adding in a different limitation, or it's a
23 subset of the Claim 3 limitation. So it seems like a claim construction
24 dispute.

25 MR. MASON: Yeah, that may be a claim construction dispute.

1 That did not arise in district court, however. But yeah, so speaking to that
2 Claim 3 dispute, I mean, I think the biggest point here is Patent Owner
3 would construe Claim 3 to cover something that the '442 Patent never
4 contemplated, and that's the resource manager reassigning subtasks to
5 different processors. If you read the '442 Patent, it explains, okay, the
6 resource manager performs the initial assignment of subtasks to processors,
7 but thereafter, it's the assignment manager that's going to be doing the
8 redistribution of things.

9 And so, Patent Owner wants to turn that on its head and say, oh,
10 well, Claim 3, the only way to possibly read it is that this is referring back to
11 Claim 1, and now we've also, in addition to the application manager which,
12 by the way, Claim 2 recites the application manager dealing with the further
13 distribution; they want to say that in Claim 3, that now this resource
14 manager is stepping in and also coming up with a further redistribution of
15 subtasks to processor types. But the patent just never contemplates it.

16 So I think, looking at that, they're trying to read -- you know,
17 they're not construing Claim 2 to just encompass that but to require these
18 acts never contemplated by the patent.

19 JUDGE LEE: Okay. But that's whether or not it has merit, it's a
20 legitimate argument, and that --

21 MR. MASON: Yeah, yeah. It's a dispute between the parties,
22 yeah. No, they are disputing that, and we saw that in their opening.

23 JUDGE LEE: So they raised it in the Patent Owner Response, and
24 you responded to it. So that's a legitimate argument for us to address, right?

25 MR. MASON: Yes, the Claim 3, yes.

1 JUDGE LEE: Yeah.

2 MR. MASON: And I think, to that point, but even -- so we submit
3 that as a matter of claim differentiation, as I explained, Claim 4 provides
4 further gloss as to what's happening; namely, the resource manager receives
5 this information such that it then carries out this process, so, as a matter of
6 claim differentiation, does not support Patent Owner's position.

7 And also, even under Patent Owner's position, the claims are
8 obvious, and we explain why, and they don't meaningfully address that in
9 surreply.

10 JUDGE LEE: Thank you.

11 MR. MASON: I see I've reached my time. Are there any
12 remaining questions?

13 JUDGE WEATHERLY: Nothing from me.

14 MR. MASON: Thank you, Your Honors.

15 MR. HEIM: Ready when you are, Your Honors. So, just returning
16 back to Claim 3, we walked through Claim 3, explained why their reliance
17 on Lippert was improper relative to the limitations of Claim 3. I just want to
18 note for the record that that same argument applies to Claim 9.

19 If I could have Slide 72, and in their briefing they just refer back to
20 their arguments on Claim 3 for this limitation. But again, it requires
21 assigning a portion of the plurality of booster nodes and at least a portion of
22 the plurality of computation nodes to each other. That's the recitation in
23 Claim 4, but then it's --

24 JUDGE SHAPIRO: Counsel, can you talk into the mic a little
25 more? I'm sorry.

1 MR. HEIM: Yes. I'm sorry.

2 JUDGE SHAPIRO: I'm having a hard time hearing you.

3 MR. HEIM: Can you hear me better? Can you hear me better?

4 JUDGE SHAPIRO: Not that much better. I don't know if the mic
5 is on.

6 JUDGE WEATHERLY: Yeah, make sure the mic is still on.

7 JUDGE LEE: I actually have the same problem, too. It's --

8 MR. HEIM: It's on now. It's on. It must have gotten pushed off. I
9 apologize.

10 JUDGE SHAPIRO: Okay. Now I can hear you.

11 MR. HEIM: So, relative to Claim 9, the same issue that applies to
12 Claim 3 also applies to Claim 9. Claim 9 actually requires the assigning at
13 least a portion of the booster nodes to at least a portion of the computation
14 nodes to each other. And then it further requires updating a distribution of
15 the multiple subtasks between the plurality of computation nodes and
16 booster nodes. In their briefing, in their petition, all they say, if you looked
17 at pages 71 in --

18 JUDGE LEE: Can I stop you for a second?

19 MR. HEIM: Yes.

20 JUDGE LEE: It sounds like you're just making a new argument
21 here. I didn't read anything about this for Claim 9, and suddenly you're
22 saying, oh, whatever you're arguing for Claim 3, it actually has application
23 for Claim 9 because, and you were about to explain that. Where is this
24 argument about Claim 9 in the Patent Owner Response?

25 MR. HEIM: My point is, the petition, it makes the same argument

1 in Claim 9 that it makes for Claim 3. They literally, on pages, the pages I
2 recited -- that I was citing, their point is that 9 rises or falls with 3 on this
3 particular issue.

4 JUDGE LEE: But still, we should have been informed about this
5 argument that you're about to make, isn't that -- otherwise, I'm completely
6 caught by surprise. When I prepared for the hearing, it didn't occur to me
7 that this is something that, also, you've argued for Claim 9.

8 MR. HEIM: As Counsel said, the parties have both in the petition
9 and in the response, said they rise or fall together. So, that's what I'm
10 pointing out is that they are literally citing to the argument

11 JUDGE LEE: Which claims rise and fall together?

12 MR. HEIM: Nine and Claim 1 rise and fall together, but relative
13 to the update, the distribution, and the assignment, that issue, the distinction
14 between the two also applies to Claim 9.

15 JUDGE LEE: Yeah, you'll have to run that by me again. I didn't
16 get it.

17 MR. HEIM: The point is that what they said relative to the
18 resource manager and the application manager in Claim 9, all they did is
19 refer back to the -- if you look at pages 71 and 72 of their petition, they don't
20 provide a separate argument. It's all the same argument. That was my point.

21 JUDGE LEE: So, that means 9 and 1 are commonly treated.
22 That's all. What does that have to do with Claim 3?

23 MR. HEIM: Because they refer to Claim 3 for some of the
24 limitations, as well.

25 JUDGE LEE: For some of the limitations of Claim 9?

1 MR. HEIM: Yes. So I want to return to the generating argument
2 if we could have Exhibit 1005, please. Yes, right there. So, if we could
3 have the upper figure, again, this is what happens offline. And what we see
4 over and over again is that in Budenske -- this is the Budenske reference,
5 Figure 2, page 389, it is referring throughout this figure to generating
6 operations that occur offline. So, to make -- to re-emphasize the point about
7 generating, everything that Budenske discloses about generating is
8 happening offline. It's not happening in response to the processing.

9 JUDGE WEATHERLY: What about the online alternative that
10 Counsel addressed in their rebuttal?

11 MR. HEIM: So there is a statement in passing that you could do
12 this online. And yet, they give examples of the massive amount of
13 processing that would be -- that is required to even do this offline. So, when
14 we talk about enablement, to the extent that they're now pressing that
15 argument that the online heuristics is sufficient to carry the day here, the
16 enablement is --

17 JUDGE WEATHERLY: That's essentially the type of disclosure
18 that exists in the '442 Patent, though, right?

19 MR. HEIM: No, absolutely not. We went through earlier today,
20 where I explained and I showed the interrupt processing. You look at
21 interrupts, for example, in that column 4 passage, and you make decisions on
22 whether or not to move from one node to another. So there is disclosure in
23 there that does it.

24 The difference is, is Budenske is focused on a very specific
25 operation. It's trying to minimize X execution time among all the different

1 combinations, which is like to the 50th power in that one example they
2 provide. So this is a massive computing operation that can take months
3 offline to calculate.

4 That's not what the patent is focused on. The patent isn't focused
5 on trying to minimize the execution time across a lot of different options.
6 What the patent says is go in and look at the processing and see if you have
7 situations where you've indicated scalability parameters that this task might
8 be better for a booster node. It's going to be better at doing graphics
9 processing. It can do it in parallel. You can add more booster nodes, and
10 now you can do a whole screen all at the same time.

11 And then it gives another example. It says, well, and another way
12 we could do this is we look at the processing, and we see if there's an
13 interrupt. In other words, a different -- and I have to wait for data from
14 another node. So, there's completely different disclosures about how to do
15 this between these two patents.

16 Is the '442 short? Absolutely. It gets right to the point that this is
17 what it's trying to do. It is solving a different problem from Budenske,
18 because Budenske is doing this crazy mathematical operation to try to figure
19 out every possible mapping and then determine every single -- the execution
20 time. And it's so complicated that that's why it said I have to use the same
21 processor. I could never even solve this problem. Because if the processors
22 are different, then the communication time is different. I mean, that's what
23 Budenske is disclosing.

24 So when you're talking about the difference in the length in the
25 discussion, the reason is the problem they're solving is completely different.

1 One is trying to minimize execution time. The other one is looking at
2 processing and saying, hey, we can put this at a better node where it's going
3 to do better for these reasons. So that's the difference. And so, is there
4 enablement of that issue? I believe there is enablement of that issue in the
5 '442 Patent.

6 So, now, did it solve Budenske's problem? No way. I'm not sure
7 anybody has solved Budenske's problem, and I think they've given up trying
8 to solve it. You know, it was an interesting academic paper about, hey, let's
9 look at every possible combination and figure out how to do it. And oh, you
10 know what? I have a way where we can kind of do it. By only having an
11 index to it, then maybe we can do this in quasi-real-time. But the generating
12 is not going to be done in real-time. It's going to be done offline.

13 So when we get to Figure 3, we can see you have to -- if you just
14 go down on this page, please, this is the online. So what happens here? The
15 ATR Kernel, it loads this index, you know, one to whatever, 50, or one to
16 200, I think 120. I think in their so, what happens is the application
17 developer says these are the parameters that are going to cause the biggest
18 execution delays, and we're going to monitor what the results are for that,
19 and then based on that, we're going to assign an index.

20 You know, so we got these possibilities, very limited. It could be
21 one -- zero objects, one object, two objects, four objects, eight objects. And
22 then, based on that, you have an index to those different solutions. And then
23 the kernel will pick one of those, right? So you select. That's the selecting.
24 And then you load it. You load that parameter. That's it. That's not
25 generating. And they admitted that's all they have is that.

1 And so, with that, I see I'm out of time. So, unless there is any
2 questions, I will sit down, and I thank you very, very much for your attention
3 today.

4 JUDGE LEE: We really appreciate your answering all of our
5 questions. And your co-counsel, were you going to provide me something
6 the second time up? I don't think you gave me something.

7 MR. HEIM: Oh, the cite? I'm sorry.

8 JUDGE LEE: There was a cite you were going to go look for.

9 MR. HEIM: That was my mistake. Sorry.

10 MR. LIMBACHER: Yes, Your Honor. Chris Limbacher for the
11 Patent Owner. The cite I was thinking of was In re: Morsa, M O R S A, 713
12 F.3d 104, Federal Circuit 2013. And I would note, in the context of
13 examination, this is also discussed in MPEP Section 2121.

14 JUDGE LEE: Okay. Thank you very much. And we appreciate
15 your patience in answering our questions, but it was very helpful. And if
16 you could stay a little bit for -- see if the court reporter has anything to ask.
17 We are adjourned.

18 (Whereupon, the above-entitled matter went off the record at 12:17
19 p.m.)

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