

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CRUSOE ENERGY SYSTEMS, LLC,
Petitioner,

v.

UPSTREAM DATA, INC.,
Patent Owner.

PGR2023-00039
Patent 11,574,372 B2

Record of Oral Hearing
Held: October 25, 2024

Before HYUN J. JUNG, JAMES J. MAYBERRY, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

APPEARANCES:

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The above-entitled matter came on for hearing on Friday, October 25, 2024, commencing at 12:00 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

P R O C E E D I N G S

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JUDGE MEYERS: Good afternoon. We are convened for all arguments in PGR2023-00039, which pertains to the patentability challenges of claims in US Patent number 11,574,372 B2. I am Judge Meyers, and also appearing is Judge Jung and Judge Mayberry. Let's get started with appearances for both parties. For those who will be arguing today, including any leap practitioners. If anyone else is attending remotely with you today but will not be speaking, please identify them as well. For example, please state if your client is attending. Following the hearing, please confirm with the court reporter to ensure that there are no questions regarding the spelling of names or terms. Let's begin with Petitioner.

MR. ZHU: Your Honor, this is Jai Zhu from Fish and Richardson, representing the Crusoe Energy, and joined by the leap counsel, John Phillips, also from Fish and Richardson. And we're also joined by a client's representative, Kyle Zeller, in the public line.

JUDGE MEYERS: Patent Owner, go ahead.

MR. THOMPSON: Good morning. Your Honors, my name is Clayton Thompson. I can see that my colleague, Mr. Zolotorev, is having little audio problems. Good morning. I'm from DLA Piper, and we represent Upstream Data. I am lead counsel, and Mr. Zolotorev has been admitted pro hac vice. He will be leading our argument this morning/afternoon. Thank you.

JUDGE MEYERS: All right.

MR. ZOLOTOREV: And with that, good afternoon, Your Honors. I was double muted, but now it's problem solved.

1 JUDGE MEYERS: All right. We reviewed the briefs and the
2 evidence, and we're prepared today with some questions. These questions
3 and their answers will help us to decide the issues in this case. But in the
4 fairness and due process, we must limit our considerations to the arguments
5 and evidence already presented in the record. We have the briefs and
6 evidence available to us on our computer, so if you see us looking away
7 from the camera during the hearing, we're probably looking at the
8 documents or taking notes. We are paying close attention to your arguments
9 and carefully considering the case.

10 If we interrupt you, I do apologize, but we're doing that to ask
11 essential questions that can help the resolution of the issues of the case or to
12 keep the hearing on track with time. All right. According to the revised
13 hearing order, both sides will have 60 minutes to present arguments. We did
14 receive a request from Petitioners to participate in the LEAP program, so
15 Petitioner will receive an additional 15 minutes of argument time. Bringing
16 their total argument time is 75 minutes. I'd like to remind Petitioner the
17 LEAP practitioner must have a meaningful and opportunity to argue today
18 during the hearing. That said, there's no set time requirement for that
19 argument. It may be longer or shorter than 15 minutes.

20 One other item before we begin is that we will have a public audio
21 line open during this proceeding. There doesn't appear to be any
22 confidential matter on the record, so we don't anticipate this being an issue.
23 Is that correct?

24 MR. ZOLOTOROV: That's correct.

25 MR. ZHU: That is correct, Your Honor.

1 JUDGE MEYERS: Good. All right. Petitioner will open the
2 argument and may reserve rebuttal time, which may not exceed more than
3 half of the Petitioner's total argument time. Patent Owner will then respond
4 to Petitioner's arguments and may reserve sur rebuttal time also to not
5 exceed more than half of Patent Owner's total argument time. Please
6 remember that your arguments should be limited to only those arguments
7 previously presented in the briefs. Please make it clear which challenges
8 and plans you are addressing at all times. We ask the parties to hold any
9 objections until it's their time to speak. We will maintain a clock and
10 endeavor to give each party time warnings as you near the end of your
11 allotted time. But we ask that it would be helpful for you to also track your
12 time. With that said, Petitioner, do you wish to reserve any rebuttal time?

13 MR. ZHUY: Thank you, Your Honor. I would like to reserve 20
14 minutes for rebuttal.

15 JUDGE MEYERS: 20 minutes, okay. Very good. I will begin the
16 clock and you may begin when you're ready.

17 MR. ZHU: Thank you, Your Honor. May it please court. Before I
18 begin, I'd like to address a misrepresentation in Patent Owners reply back.
19 Let me share my screen. Your Honor, can you see my screen?

20 JUDGE MEYERS: We can.

21 MR. ZHU: Okay. Thank you. Your Honor, what's showing here is
22 slide 29 in Patent Owners slide deck. Here they show you a snip out of the
23 transcripts of Petitioner's expert, Mr. Kasdorf. And then they use that to say
24 Petitioner's expert agreed that claim one does not cover sales gas or electro
25 grid. That is simply not true. What they did not show you is immediately
26 before they ask our expert this question, they asked Mr. Kasdorf whether

1 Claim 1 covers sales gas lines or electro grid. Mr. Kasdorf said, quote,
2 Claim 1 is very broad, so it could cover. Your Honor, that is Exhibit 2024.
3 111, 16, 225 immediately before the quarter part. In fact, it has always been
4 Mr. Kasdorf's position that Claim 1 is so broad. It covers everything
5 including byproduct gas from oil wells, primary product gas from gas wells,
6 and by extension sales line gas and the electric grid.

7 He repeatedly said that it has declaration that is Exhibit number 1036,
8 paragraph numbers 29, 30, 60. And of course that is also in our reply brief
9 at pages 18 to 19 and page 26. Your Honor, they repeated the same thing in
10 their slide number 39. Again they show you exactly the same quote out of
11 context to try to misrepresent Petitioner's experts position. Again, it has
12 always been our position that the claim 1 includes things like electro grid
13 versus byproduct gas. What they're showing here is actually Mr. Kasdorf
14 explaining why according to Upstream's, narrow claim construction given
15 their own products do not meet the claims. Your Honor, do you have any
16 questions on that?

17 JUDGE JUNG: Mr. Zhu, this is Judge Jung. Are you trying to make
18 a speaking objection to these slides or are you just trying to make a rebuttal
19 argument to these slides?

20 MR. ZHU: Your Honor, we're not trying to make a speaking
21 objection. We're just trying to reflect their position. I was just trying to
22 point out the incorrectness in this slide.

23 JUDGE JUNG: Okay, I just want to clarify because you know, the
24 deadline for making objections to the slides have already passed. So it's
25 kind of like you're trying to object to these slides off the bat before you got
26 into your arguments.

1 MR. ZHU: I understand. Thank you. Okay, let's move on to our own
2 slide deck. Let me share my screen. Okay, can you see my screen here?

3 JUDGE MEYERS: We can.

4 MR. ZHU: Thank you. For today's product, I'd like to first discuss
5 the first entity patent and then discuss construction and then go into
6 secondary considerations. If you look at their exhibits, most of Patent
7 Owner's new exhibits are about secondary considerations. And then I'll
8 discuss their argument regarding the mining processor limitation. And then
9 I'll address the other remaining disputes. First of all, real quick, the first
10 empty patent. This is about a combination of two existing systems. One, a
11 container box blockchain miner such as the one shown here in Figure 6.
12 One is a gas generator. In the background section, they try to characterize
13 the problem they're trying to solve as a fire gas problem. And that's how
14 they got the patent. They got the patent by convincing the examiner that
15 somehow they solved the flare gas problem. But if you look at claim one of
16 the patents, nothing mentions flare gas or bipartite gas in this claim.
17 Similarly, in claim 2 or claim 3. Again, nothing talks about flare gas or
18 byproduct gas. Claim 1 requires three bigger components, a source of
19 conductive gas, a generator and a plurality of blockchain mining devices.

20 Again, if you look at the claim language, there's no limitation on what
21 the generator might look like or the documented devices must look like. It's
22 just generic conditional generator and generic conventional blockchain mine
23 devices. During prosecution they did add this clause at the very end to add
24 more particularity to blockchain mining devices. But if you read the
25 language they added, these are just common features of every blockchain
26 mining devices out there and this is not surprising post institutional evidence

1 showed that Upstream's own products, i.e., the hash generator uses nothing
2 more than commercially available off the shelf as gas line miners you can
3 buy from off of eBay or Amazon.

4 With that I'd like to move on to claim construction in this case,
5 Petitioner proposed to construe four terms. Patent Owner disputed the
6 proposed claim construction for the first three. They did not dispute the last
7 one. However, Patent Owner refuses to offer their own bank construction.
8 Instead they point to the plain and ordinary meaning of these terms. Patent
9 Owner in a little bit you will see Patent Owner trying to wave away current
10 construction as a main issue in this case saying it's not relevant to any of the
11 obvious plans. Your Honor, we think claim construction is at the heart of
12 the case. They proposed two major new arguments. One is somehow the
13 buyer is missing the mining processor limitation and two they offered a lot
14 of evidence on standard consideration including commercial success and
15 unmet need.

16 First, they tried to narrowly construe blockchain mining device and
17 mining processor in a way that the clients only read on their own products
18 but do not read all the prior product. However, if you look at the prior
19 combination for example in one the prior combination is difference in
20 fidelity. That combination is exactly the same thing as Upstream's own
21 product, the gas generator. They're just a combination of a gas generator
22 with a container box blockchain mining device. Your Honor, they are again
23 trying to narrowly construe these two terms in an effort to distinguish
24 validity. When we argued motivation to come up, they say somehow
25 Fallaby's quote generic or traditional data center cannot be used in mind.

1 That is simply not true. During deposition, Patent Owner's expert, Dr. You
2 admitted that even kinnari or traditional data center can be used to mine.

3 And then they move on to dispute the third term, a continuous flow of
4 combustible gas. Again, the offered claim construction is consistent with if
5 not today, the meaning of this term is just a flow of combustible gas is
6 continuous. They're the one who's reading in limitations from the
7 specification to ascribe a special meaning to this term. They want to read
8 this term to require that the source of combustible gas is a byproduct gas or
9 in other words a flare gas. Your Honor, the plain and ordinary meaning does
10 not require that. And during deposition their own inventor admitted that
11 actual claim one covers connections to primary product gas, to sales gas and
12 events with electric grid. Okay, let me show you some of the deposition
13 testimony. First of all for quantum mine advisors. First they want to read
14 this term narrowly to require specific components within such as the
15 blockchain, the mining processors, controllers or network interface.

16 However, during the deposition, after much back and forth, Dr. You
17 finally admitted that the network interface may or may not be located within
18 the blockchain mining devices. And naturally the only required component
19 is miner processor. And it is undisputed that any POSITA would understand
20 a blockchain mining device in our domain has to have has to contain a
21 mining processor. So, the proposed claim construction is just that any
22 computing device that can mine. Same thing goes for a mining processor.
23 The proposed claim construction is just any processor that can perform
24 mining. Here for mining processor, again under the disguise of plain and
25 ordinary meaning, they try to read in limitations from the spec to require the
26 mine processor to contain a specialized mining circuitry.

1 However, if you read the specification language, the term language
2 only says a may contain a mine's circuitry. And undisputed evidence in the
3 record confirms even a home computer can still be used to mine
4 cryptocurrency even at the date of the petition and their expert admitted as
5 much. They are trying to again read in another limitation from the spec
6 regarding processor speed of power, pointing to a disorder in the spec that
7 Bitcoin mining is somehow computational intensive. There is no such
8 requirement in the plain and ordinary meaning of this term. Again, you can
9 still mine cryptocurrency with a home computer. While they say that it's not
10 profitable anymore this day and age to use a CPU miner to mine. But
11 nothing in the claim says the mining has to be profitable. All the clients
12 require is a mining device and the mining processor.

13 COURT REPORTER: Mr. Zhu, I'm having a hard time making out
14 what you're saying. Can you pull your screen closer or come closer to your
15 screen, please? Thank you.

16 MR. ZHU: Okay. Sorry about that. Is that better now?

17 COURT REPORTER: Yes, sir. Thank you. Thank you.

18 MR. ZHU: Perfect. Thank you. Okay.

19 JUDGE JUNG: This is Judge Jung again. All right. For you to
20 prevail in this case, are you asking us to adopt your proposed interpretations
21 and therefore reject Patent Owner's position? Or are you just asking us to
22 reject under whatever the meaning of these terms are, they can include --
23 they cannot be viewed in the same way as Patent Owner's proposed
24 interpretations?

1 MR. ZHU: Your Honor, we think our proposed claim construction is
2 correct and consistent with the binary meaning of the term. And we ask you
3 to adapt our proposed claim construction.

4 JUDGE JUNG: Okay, so for us to adopt these claim constructions,
5 just run. Just summarize for me the support you have for your proposed
6 interpretation. Do they come from the claim language? Does it have
7 support in the specification? Do you have support from your declarant? Do
8 you have support from other extrinsic evidence?

9 MR. ZHU: Your Honor, the support comes from the version of our
10 expert, Dr. Kasdorf, and also it comes from the background reference
11 chemical which explains minimum cryptocurrency mining.

12 JUDGE JUNG: Do you have any intrinsic evidence for your
13 proposed interpretations? Is there anything in the spec we can look into?

14 MR. ZHU: No, Your Honor, we're not pointing to anything in the
15 spec. We don't think the spec speaks to the terms can go away.

16 JUDGE JUNG: Okay. All right. Thank you, Mr. Zhu.

17 MR. ZHU: Thank you. Okay, moving on to the third term in this
18 group. A continuous flow of compressible gas. Like I said earlier, they're
19 trying to ascribe somehow a special meaning to this terms require a
20 byproduct of hydrocarbon production, storage or processing. We look at the
21 dictionary definition. A byproduct means something in addition to the
22 principal product. It is understandable, if the source of gas is the oil well,
23 then the gas may be a byproduct because the primary product is oil.
24 However, if the well is a gas well, natural gas production facility, it just
25 doesn't make sense for the gas coming out of it to be a byproduct. And
26 during deposition, Dr. You, after much back and forth, admitted that claim

1 one not only cover a biproduct gas from a gas well, but also a primer product
2 out of a gas well. And Mr. Barber also admitted that it even cover
3 commercial sales gas line. Because where does the commercial sales gas
4 come from? It comes from a natural gas production facility. When in fact
5 regarding their evidence of commercial success, they said that he counted
6 any application that was pretty clear was any oil and gas application. He
7 generally included those application as covered by the claims.

8 Your Honor, if you read the claim language, nowhere does the claim
9 language require the continuous flow of combustible gas to come from an oil
10 well or to be a byproduct. Actually, to read the claim one, instead of
11 hydrocarbon used as oil, they amended the claim to say hydrocarbon. And
12 same thing for claim three. It used to say a remote oil well, they amended
13 the clients to say remote all oil or gas well. So it's clear that claim one
14 covers both hydrogas and primary product gas and by extension sales gas
15 and even electro carbons. And this issue is very relevant to the case as well.

16 First of all, it's relevant to their secondary consideration arguments
17 regarding need, industry skepticism or price. All of those evidence they
18 presented are about fire gas problems and their claims are simply not tied to
19 fire gas problem. Second of all, this is related to their 101 argument saying
20 somehow their claims it's narrower than it looks and it excludes sales gas
21 and the electric grid. In fact, their position is contradicted by the current
22 example of the patent himself. If you look at page 22 you can see when I
23 asked Mr. Barbour who's an inventor and owner of the patent whether the
24 claims cover commercial sales gas line he said they might. And when I
25 asked him whether claim one is a single device sorry, claim one covers a

1 single device deployment meaning one generator connected to one
2 blockchain mining device, he said yes.

3 Okay, with that I'd like to move on to secondary considerations for
4 commercial success. Sorry, trying to -- so for commercial success. First of
5 all, they failed to show a nexus between their product and the alleged
6 evidence commercial success. If you look at their logging materials they
7 listed 8 deference quote wide load data centers? Why are load centers
8 outperform the competition? And none of these features are related to the
9 '372 Patent much less the claims of the '372 Patent. And for example the
10 second Vista picture capacity research for cold climates as submitted by Mr.
11 Barbour during the position is actually covered by another patent called the
12 '029 Patent which is also in the record. In the sur reply they try to whip this
13 off as a nine point features that only applicable to cold climate. However, if
14 you look at their sales numbers, all of their early sales up until 2020 are
15 almost always in Canada. And in 2020 they made their first US sale. But
16 the remaining nine sales are only in Canada. So this feature is clearly
17 critical to their commercial success.

18 And in fact if they think many futures of patent are crucial to their
19 commercial success because they would have said that in their marketing
20 materials and they would have produced that evidence. The only evidence
21 they can point to is a YouTube video, a snippet of which is shown here
22 which is a pour of the hash generator product by Mr. Barbour. In this video
23 they said they mentioned features of the '372 Patent. In a nutshell, it's just a
24 broad overview of what the system looks like and even in this feature they
25 spend more than a minute talking about their heat recirculating feature

1 bragging it off as their proprietary technology. So it is clear their
2 commercial success is not tied to any of the features in the claims.

3 And in addition to that, like I mentioned before, in order to win they
4 need to construe the claims in the ROA those include things such as electric
5 grid or sales gas deployment. By defending that position, they have to
6 exclude their own products from the scope of the claim. And similarly, by
7 construing their claims including the claim terms, mining processor and
8 mining devices narrowly to only read their own product and not read all the
9 prior art, they interpreted for example the term blockchain mounted devices
10 narrowly to require it to be the entire container box mining data center. And
11 in doing that, because claim one requires multiple mining devices, they
12 excluded the very hash generator they talked about in this video which is one
13 container box connected to one generator.

14 And in the sur reply they say when they counted the 284 systems as
15 evidence of commercial success, they somehow excluded connections to
16 either electric grid or those gas line. They cited to the portion of Mr.
17 Robert's deposition testimony shown here, Your Honor, that is simply not
18 the case. Mr. Barbour said everything but he excluded electric grid or sales
19 line connection. For example here when I asked him whether he excluded
20 connections to electric grid, he could have said yes, I did. He said when I
21 revealed the sales documentation, anything that I knew for sure or anything
22 that was unlikely from the record, we had to be practicing this patent, I
23 excluded. Again these exclusion criteria is whether something passes the
24 patent. And as I've shown before in his mind, fails to mention patent and in
25 his mind -- sorry I'm jumping ahead.

1 The point I'm trying to make is in his mind the claims are so broad it
2 covers everything including sales gas connections and electric rate
3 connections. And if you look at the right hand column on this page here he
4 explicitly says that saying a product applied to the grid with an upstream
5 external generator as well as gas. Not really commenting on that, again
6 highlighting he's not excluding electro grid connection he thinks Upstream
7 gas generator in the electric grid does cover the claims. And finally he
8 admitted he doesn't need to have completed the right information on heavy
9 scale is counting out the 284 systems are based on personal knowledge
10 which is incomplete and that is understandable because one of their hash
11 generator is the generator connected to a blockchain mining device do a hash
12 cloud system is nothing but a container box blockchain mining device. You
13 sell it to a customer, you don't know what the customer use it for.

14 And here again as Mr. Barbour saying he counted any oil and gas
15 application and here he's saying they may have enacted 400 sales, that they
16 have a 400 over 400 sales. That 400 number including other products such
17 as the black box, etc. Which is not relevant to the claims. At least they
18 didn't allege that's relevant to the claims.

19 Okay, with that said, I like to the final point regarding commercial
20 success, which is they haven't included other reasons that may be driving
21 their alleged commercial success. If you look at their produced sales
22 number in the POR, from 2017 to 2020 they sold about 40 something units.
23 But from 2021 to 2024 they sell 284. And this correlates very well with the
24 big Bitcoin price surge in 2021. It's a little hard to read, but this is 2021 and
25 there's another spike in 2018 and that currently spread out very well to the
26 drop in sales numbers too.

1 And also Dr. You admitted during the position that Bitcoin is getting
2 harder and harder to mine. So to mine a unit of bitcoin it will need more and
3 more electricity over the years. At some point it's natural that conventional
4 grid power will become too expensive and people will start to look for kind
5 of cheaper energy sources. Your Honor, do you have any questions on
6 commercial success? Okay, hearing none regarding --

7 JUDGE MEYERS: Mr. Zhu, if I could remind you though to the
8 benefit of the record to identify the slide number you're referring to for your
9 presentation.

10 MR. ZHU: Okay, thank you. I will go. I'll do that going forward.

11 JUDGE MEYERS: Thank you.

12 MR. ZHU: Okay, next I want to discuss unmet need. I'm talking
13 about slide 25 here. First of all is our position that there was no unmet need.
14 There were multiple power solutions to the alleged problem of flare gas. For
15 one thing, Mr. Robert admitted that it has been a common practice for oil
16 companies to use onsite oil gas generators to power onsite drilling operation.
17 And Dr. You also admitted that there were multiple power systems in the
18 record at least partially addressed the problem of flare gas such as the Mags,
19 which is shown here in the bottom left. And these systems include circuit
20 and validity. And in fact what the recently patent invented is nothing but a
21 specific use of these data center. Your Honor, I'm pretty sure you're familiar
22 with what Belady is valid is just connecting a gas generator to a data center
23 to power the data center with flare gas.

24 They try to go out at this distinction again relying on their incorrect
25 infrastructure and to require the blockchain mining devices to have a specific
26 mining circuitry. And they say the traditional data center cannot be used in

1 mine. But as submitted by You, even a traditional designer can be used to
2 mine Bitcoin. Again, Bitcoin do not require profitability. So here is again
3 some deposition steps you've seen that their claims are so broad it covers
4 everything. And there's no connection between the ledge problem or the
5 ledge MME and the claims. And here slide 28 is where Mr. Barbour said
6 unless the electric grid is comprised of a generator with a source of
7 conductive gas, then perhaps today's admitting claim one is so broad it may
8 even cover electric grid. As long answer is a gas generator. When calling
9 this skepticism and search price, it's exactly the same argument. There is no
10 nexus. The alleged skepticism and price are all about gas problems. There
11 is no connection to the claims.

12 With that, I'd like to move on to the mining processor limitation.
13 Okay, if you look at claim one, they're trying to use the text shown in the red
14 box to show we don't have a mining processor that meets this claim
15 language. Your Honor, that is not true. First of all, the physician
16 sufficiently alleged that the mining processor is a subpart of the Spondoolies
17 in CryptoKube. And it is undisputed that it is any placebo understanding
18 that the Spondoolie necessarily has a mining processor. Because in order to
19 mine you need a mining processor. And it is also undisputed that a POSITA
20 would understand that to mine with your currency the miners needs to be
21 connected to network interface. They cited the Microsoft case to say we
22 didn't allege within a particularity. The Microsoft case is very different.
23 The Microsoft case Petitioner tries to introduce a obviousness ground
24 regarding claim 18 when there is only a anticipation round in the petition.

25 There's no new route here and there's no new theory here. It's always
26 been our position that the mining processor is a subpart of the Spondoolies.

1 And here is Mr. Kasdorf explaining why you necessarily meet the red box
2 limitation here. The very definition of mining based on chemical is the
3 operations of verifying and reporting transactions. This is slide 52. You can
4 verify the transactions or do the hashing in a vacuum without connection to
5 the blockchain database. In order to record the transactions and to receive a
6 reward from the blockchain database, you just have to communicate with the
7 blockchain database.

8 And here is testimony on slide 53 from their expert, Dr. You. He
9 admitted that the claim term to communicate requires nothing more than
10 data exchange. And he admitted that on the top right, I asked him, does the
11 ASIC itself need to exchange data with the blockchain database when it
12 performed the mining function? He admitted that the whole term of
13 blockchain mining would require both connection and communication with
14 the blockchain database. Or he did talk about you can run the hashing
15 algorithms in the ASIC chips without a network connection. He doesn't
16 explain, he cannot explain why someone would ever do that. Because these
17 basic chips are built for a single purpose and that is to mine Bitcoin and is
18 undeniable to my main point. This ASIC chips has to be connected to and
19 has to be adapted to communicate with blockchain database.

20 Importantly, the claim language does not require a direct connection
21 or a direct communication between the ACIC chip and the blockchain
22 database. So even indirect connection meets the claims. Here on the bottom
23 right on slide 53, asked Dr. You, does an ASIC chip need to exchange data
24 with the blockchain database? Not in my Bitcoin, he said again, exchanging
25 it with the blockchain database will be necessary. And here on 54 is Mr.
26 Barbour again saying basically the same thing in order to mine Bitcoin on

1 the top right, ask him, for the ASIC chip to mine transactions, does it need
2 Internet access? He said, and as such needs to be controlled and have access
3 to update information on the network. Your Honor, I would like to think of
4 the ASIC chips as calculators, they do that hashing. But you need to input
5 the questions into a calculator, an output and answer out of the calculator,
6 and both of these are in the exchange that meet the communication
7 limitation.

8 So here the sur reply on the last side of this slide, the sur reply decided
9 to A quote from Mr. Roberts deposition to try to say what's connecting with
10 what's communicating with the blockchain database is the controller, not the
11 ASIC chips. However, this composition testimony shows the opposite. You
12 actually set the controller backing as the interface between the ASIC chips
13 and the blockchain database. So if the ASIC chips do not need to
14 communicate with the blockchain database, why would you need the
15 interface? And these are some additional evidence cited in the sur reply.
16 They cited Szmigielski to say ASIC chips are built for a single purpose.
17 And that is exactly right. They're built to mine Bitcoin and it's undeniably
18 not mine Bitcoin. You need those connection to the network interface and
19 communication with the blockchain database.

20 And finally, it is our position, even according to their narrow read of
21 the red boxed limitation output 56 will require the mining processors
22 themselves to perform both the mining functions and all the communication
23 functions as some part of Spondoolie would still need the mining processor
24 orientation. So here on slide 57 is a show a deposition of Dr. You on the
25 line to the bottom saying those subparts, if they meet older claim language,
26 will be considered mining processor. So here he's talking about regarding

1 commercial success, there are S9 miners. Even without the container box or
2 the fans, a subpart of the S9 miners will still meet the limitation of a mining
3 processor. And by the --

4 JUDGE MEYERS: Let me interrupt you for a second. So are you
5 saying that the mining processor is doing the communicating or is it the
6 blockchain mining devices that are communicating?

7 MR. ZHU: I'm saying even under their incorrect narrow read of this
8 claim language to require the mining processors themselves to perform both
9 the mining and the communication. A subpart of the Spondoolies would
10 still need that.

11 JUDGE MEYERS: Thank you.

12 MR. ZHU: Thank you, Your Honor. And in the sur reply on slide 58
13 they cited some cases to say you cannot use leading questions to extract
14 testimony to justify a new theory in the reply. Your Honor, there is no new
15 theory here. And there's always been our position that a subpart of the
16 Spondoolies meet this mining processor limitation. And in fact, if you look
17 at the Corephotonics case that actually supports our position in that case, the
18 Federal Circuit found that in the reply the alleged new argument about
19 analogous order was actually a proper response to the POR. So it was not.

20 And finally, show on slide 59 is submit out of Dr. You's deposition
21 testimony admitting that a subpart of the S9 miners would still meet the
22 claim language of the mining processor. So by the same logic, assess that as
23 Spondoolies, which is very similar to the S9 miner will also be considered to
24 meet the mining processor or limitation. Okay with that, do you have any
25 questions on that?

26 JUDGE MEYERS: None here.

1 MR. ZHU: Okay. With that I'd like to briefly go over the next round
2 and address the remaining disputes.

3 JUDGE MEYERS: First of all, Mr. Zhu?

4 MR. ZHU: Yes.

5 JUDGE MEYERS: I think the Panel would appreciate if you could go
6 over claim one of the context of ground two. I understand if you would need
7 to use some of your slides to introduce the references for ground one that are
8 also ground two, but I think it would be helpful to focus on ground two.

9 MR. ZHU: Okay, that sounds good. Let me just jump to ground two.
10 So, ground two is just improving the Dickerson and CryptoKube
11 combination using Belady's gas shock absorber. And the motivation to
12 combine is Dickerson said you need auxiliary means for providing
13 electricity in the case that there may be fluctuations in the supply of natural
14 gas. And Belady does exactly that the gas storage tank. So when the gas
15 flow is high you store extra gas and when the gas flow is low, you take the
16 stored gas to power your generator. In this way you can ensure a reliable
17 and air consistent power supply to power the data center in Belady. And
18 astrain doesn't challenge the motivation to use the gas trap absorber, but they
19 say a bunch of things.

20 First of all, the modification involves systematic changes and they say
21 that motivated to shut up all mining servers considering the mining servers
22 big damage you do shut off the for example, you can shut off the cooling
23 mechanism first. And finally they say CryptoKube is different from
24 Belady's data center because CryptoKube cannot offload processing to other
25 data centers. I'm going to address these one by one. First of all, I'm sorry,
26 there's a last -- there's some other additional arguments. They say

1 cryptocurrency PCIM software cannot control individual ASIC chips. And
2 finally they say no, POSITA is not involved in both fields. First of all,
3 CryptoKube is highly customizable. As Mr. Kasdorf testified, that you can
4 program the DBIM software in CryptoKube to selectively shut off a subset
5 of the Spondoolies based on temperature and power supply. And also you
6 can program in a way to ensure the cooling system is prioritized over the
7 Spondoolies. So there's no concern regarding overheating when you shut off
8 a subset of the Spondoolies.

9 And also comparing to a traditional data center such as the 911 call
10 center, actually advantage of bitcoin mining is even positive zoom at will.
11 You don't need to offload your processing to some other data centers
12 because the processing automatically offloaded to other miners in the
13 blockchain network when you shut off a miner in the network. And actually,
14 if you look at the load control claims, they're written so broad that it doesn't
15 require selectively shutting off individual ASIC chips. If you read claim
16 terms, it only requires adjusting the load by increasing or decreasing the
17 mining activity of the mining processor. If you shut off the entire
18 Spondoolies, it necessarily increases the mining activity of the mining
19 processor down to zero. And claim 11 there is no better. It merely requires
20 increasing or decreasing the maximum number of mining processors that are
21 engaged in mining transactions. When you shut off a sub part of the
22 Spondoolies, you necessarily decrease maximum number of the mining
23 processors, which in our case can be the individual ASIC that are engaged in
24 minor transactions.

1 In fact, this claims overall even covers shutting off all of those
2 Spondoolies at once, because that will reduce the maximum number down to
3 zero. And this is confirmed -- sorry, go ahead.

4 JUDGE MEYERS: Go ahead.

5 MR. ZHU: And this is confirmed by deposition testimony by Mr.
6 Barbour. He admitted that cutting power can meet the claim language of
7 phrasing the mine activity. And similarly, Dr. You also admitted you'll be
8 able to consider them as part of the control functions when you shut off a
9 subset of the active servers. And finally, the grounds of POSITA argument.
10 There's no requirement for one casita to be knowledgeable in both discipline
11 or both disciplines. Okay, Your Honor, did you have any questions on
12 ground two?

13 JUDGE MEYERS: Not at this moment.

14 MR. ZHU: Okay, thank you.

15 JUDGE MEYERS: We want to remind you about the additional 15
16 minutes that you're receiving for the LEAP practitioner also. Keep that in
17 mind.

18 MR. ZHU: Okay, thank you, Your Honor. All right, let me briefly go
19 over ground one real quick because there are a bunch of other disputes in
20 ground one. Ground one, as I'm sure you're familiar with this Dickerson is
21 just a generator powered by flare gas to provide electricity to either power
22 downside operation or to export it to electro grid. And CryptoKube is very
23 similar to their hash path product. It's a container box data blockchain
24 mining data center. It contains off the shelf Spondoolie mining servers in
25 the container box. Importantly, while the maximum capacity is 17
26 Spondoolies, you can add in how many servers as you want.

1 So again, this is slide 37 and the bush floor of CryptoKube says all
2 you need to do is just add power. And that is exactly what Dickerson
3 provides. And Szmigielski was cited as a background art to show that they
4 understand POSITA. One of the biggest costs for blockchain for bitcoin
5 miners is the cost of electricity. And this is confirmed again on page 39 by
6 brochure of CryptoKube. If you look at the bottom of the page, it says
7 CryptoKube can run inside a large warehouse, outside parking lot or in the
8 server platform where the power is cheapest. So it's clear that a POSITA
9 will be motivated to look for cheap power to run CryptoKube. And if you
10 look at the disclosure of Dickerson up top on this slide, this is paragraph 39
11 of Dickerson. It says for example, the amount of gas going to flare may
12 produce about 3 megawatt of power with only about 250 kilowatt if needed
13 to run the site. Therefore the system can provide power for both local
14 consumption and also for export to the grid at the same time. So it is clear
15 that Dickerson has the capacity to produce access for cheap or free
16 electricity.

17 And further, the combination is also obvious and actually one would
18 argue that also adds to the visible expectation of success. Both systems are
19 container boxed system that's mobile. So it is easy to combine these two by
20 just shipping them to the same location and connecting those them with a
21 power cable. So they challenge ground one, based on one, hindsight, two,
22 secondary considerations and some technicality reasons such as equipment
23 cost and reliable electricity. And as alleged the petition did not address
24 reasonable expectation of success. And finally they say that the mining
25 processor or limitation is missing.

1 First of all, regarding hindsight, there's no hindsight. People have
2 proposed such a combination before they recently depend. For example, in
3 this Reddit post that is the 1016 show on slide 42 people in the industry were
4 asking around about mining with free natural gas. So it's clearly a
5 combination of a gas generator and a blockchain miner. And on the bottom
6 right, Mr. Kasdorf also testified during his deposition that he spoke with
7 multiple clients who asked him about placing cryptocurrency bitcoin miner
8 on a natural gas generator that was attached with clear gas. And while Mr.
9 Barbour in his declaration that the industry only considered power sources
10 such as federal, he admitted that did not consider these evidence in the
11 record when he said that. Sorry.

12 JUDGE MEYERS: Please continue. I'm sorry.

13 MR. ZHU: Oh, sorry. Okay. On slide 43 this is a quote from the
14 petition. We contrary to what Patent Owner said, we addressed principal
15 expectation of success. We said approach a POSITA would have done so
16 with a reasonable expectation of success. And specifically regarding
17 CryptoKube, we explained in the petition that both systems are containerized
18 to confer mobility. So it is easy to combine the two by just connecting the
19 two systems or placing the respective equipment into a single container.
20 Your Honor, so the binding authority says evidence of reasonable
21 expectation may flow from the prior references or the knowledge of the
22 POSITA. So defining authority does not require, as Patent Owner suggests
23 to raise form over substance. And it is undisputed that it is within the
24 knowledge of POSITA that they're to connect us to. And they would have
25 connected these two with a reasonable expectation of success because the

1 combination requires no more than plugging appliances to a power source.
2 And that is shown on slide 44. Again, the brochure says just that power.

3 And regarding their challenge regarding equipment cost it is our
4 position, there's no additional equipment cost needed. Dickerson explicitly
5 said the system can provide power proposed local consumption and also
6 export to the grid at the same time. So instead of exporting it to the grid, it
7 is easy to just use that access power that access power to power the bitcoin
8 miner to generate profit. And Mr. Kasdorf also explained that. Sorry, that's
9 shown on the lower part of this page. To the extent that more power is
10 needed, a POSITA would have been motivated to modify the percent as
11 needed to increase the generation capacity. This is because Dickerson
12 discloses as showing the bolded text here design flexibility and generation
13 capacity can be increased. And further, as explained by Mr. Kasdorf, gas
14 generators provide reliable energy.

15 First of all, as admitted by Mr. Barbour, oil companies have being
16 using onsite gas generators for a long time, there is no indication those
17 generators are unreliable. And second of all, Dickerson Belady all provide
18 other mechanisms such as Dickerson's backup generator and Belady's gas
19 duct absorber to ensure reliability. In fact, comparing to the prior, the 372
20 Patent offers no inventive measures to make the gas generators more
21 reliable. They brag about their optional load controller that can adjust load
22 based on power supply. But they admitted that only a small percentage of
23 their customers opted into that feature because they were just taking a small
24 chunk of the gas supply.

25 And it is undisputed that at the time intervention a POSITA would
26 have known set up the system to only use a small chunk of the gas supply to

1 ensure reliability. Here for example, if the gas supply can vary between 100
2 percent and 50 percent, if you're just taking 5 percent of the total flow,
3 there's no concerns regarding reliability.

4 JUDGE MEYERS: And you still got five minutes left in your
5 primary argument.

6 MR. ZHU: Thank you, Your Honor. And on slide 48 it's just some
7 additional results of indication talking about high up time and extended
8 service intervals. And on slide 49 Dr. You admitted that any power source
9 can be adapted to be reliable. That's just more motivation to add Belady's
10 gas shock absorber.

11 And sorry, I think I already addressed the mining processor limitation.
12 So, with that I'd like to quickly move on to round number three, which is the
13 Boot reference. The Boot reference is very similar to Dickerson. It is
14 powering the onsite oil operation with fire gas. And Dickerson Booth also
15 disposes a load bank to absorb excess electricity generated. The Patent
16 Owner challenges Boot for this ground for not identifying which hand was
17 used. Your Honor it is our position that in the position in the combination
18 section would make clear the only modification to the ground 2 combination
19 is further having Boot's teachings regarding load bank and gathering oil
20 from multiple wells on a pad.

21 So we're using diverse engines or implementation 1B. We did talk
22 about Boot's engine. Your Honor, that's an obvious argument. We're saying
23 the engine limitation is so obvious even based on Boot. Boot also disposes a
24 similar engine and similar to Vincent, Boot is also a full facility generator.
25 For example, it can power multiple equipment. And finally, because this
26 chiller does not eliminate the need for load bank because there's no

1 guarantee the chiller can absorb all access gas all access to electricity. And
2 real quick for ground four, the MAGS publica combination is very similar.
3 MAGS similar to Dickerson, similar because it is similar to CryptoKube.
4 And if you look at their challenges, first of all MAGS does produce cheap or
5 free access to electricity because similar to Dickerson, Boot is also talking
6 about this is at the bottom of page 80, electricity may be transmitted to the
7 grid for sale.

8 And on slide A1 on the bottom right now this goes with flexible
9 capacitive scaling with multiple deployment on a single site so one would
10 know how to adjust the power capacity. And finally on slide 82 Boot clearly
11 said at least there can be 50 kilowatts of access power and that is enough to
12 at least power a part of the system. Even though the maximum capacity is
13 100 kilowatt. A POSITA would have known to only buy the amount of
14 binary servers that they can power. For example, we sold two units of
15 CryptoKube. One was sold without any servers, just a container. One was
16 sold with 12 servers in it while the capacitor is 17. So a POSITA would
17 know how to buy a subset. And finally on ground five, regarding Belady,
18 they say Belady's pressurizing valve would shut off the entire flow and
19 would destroy the mining operation. In this then disputed Belady's pressure
20 regulating valves just a safety feature and under normal conditions it should
21 never be triggered. And finally, for one, it is undisputed, their claims are so
22 broad they're not tied to the problem they allege they're solving. And they
23 may potentially even cover every single blockchain mining system in the
24 country as long as there is Upstream gas generator into that grid. Your
25 Honor, with that I'd like to reserve the rest of my time for rebuttal.

1 JUDGE MEYERS: All right, Mr. Zhu, thank you. You have your
2 entire rebuttal time, the 20 minutes.

3 MR. ZHU: Thank you.

4 JUDGE MEYERS: All right, Patent Owner, you're up. You wish to
5 reserve a rebuttal time?

6 MR. ZOLOTOREV: Great. Yes. Your Honor, if I may reserve 10
7 minutes of rebuttal time.

8 JUDGE MEYERS: Ten minutes. All right, let me get that set up.

9 MR. ZOLOTOREV: And in the meantime, I'll see if I can boot up my
10 presentation here.

11 JUDGE MEYERS: All right, begin when you're ready. One thing I
12 would like to let you know is if you could focus when you're talking about
13 the obviousness grounds, if you could focus on them in the context of
14 ground two, that would be great.

15 MR. ZOLOTOREV: Yes, sir.

16 JUDGE MEYERS: As opposed to just focusing on ground one.

17 MR. ZOLOTOREV: Of course, sir. I will focus on both grounds one
18 and two which -- and I do plan to cover specific arguments for the load
19 variance claims that are the subject of ground two.

20 JUDGE MEYERS: All right, I'll begin your time now.

21 MR. ZOLOTOREV: Okay, great. Your Honor, without further ado, I
22 plan to very briefly cover issues and then jump right into the mining
23 processor issues and the other issues that were covered by Petitioner. With
24 regard to the claim construction issues, I think the bottom line there are these
25 claim constructions are not really relevant to any issue in this obvious
26 grounds. And that is clear, even looking at the very first one. What Crusoe

1 is doing is essentially adding a limitation without regard to processor speed
2 or power to effectively the plain meaning of the term. The term is well
3 defined in the claim language. It doesn't need any extra verbiage. And
4 certainly we haven't heard anything from the Patent Owner to justify this
5 additional without regard to process or speed of power. Now, of course, the
6 reason that these constructions exist is not the obviousness grounds, despite
7 what the Patent Owner alleged. It's the 101. And there, their only role is to
8 effectively abstract the meaning of the invention, to take it from something
9 that's concrete to something that's abstract. And we don't think that that's
10 proper. And we don't think it's necessary to grasp any additional limitations
11 to the plain meaning of the language.

12 JUDGE MEYERS: So, counselor, can you tell me what a blockchain
13 mining device is?

14 MR. ZOLOTOREV: Your Honor, it's exactly what is defined in the
15 specification or in the claim language. It's a blockchain mining device which
16 is connected to generators, as we see in claim one, and has a mining
17 processor and it has a connection to a network interface. And then the
18 network interface is specialized for connection to a blockchain database. So
19 it's got a specialized network interface connection. And then the mining
20 processors are also required by the client to do certain things. So it's
21 effectively a superstructure that goes around the mining process processors
22 in the claim language. And we see that also in the specification. The
23 specification is consistent. There are figures showing embodiments with an
24 enclosure, for example, an embodiment of a blockchain mining device. And
25 it has some number of these mining processors in it. It also has a network
26 interface. And so it's a very concrete structure. And there's certainly w

1 Crusoe's construction doesn't really change its meaning as it's defined in the
2 claims and the specifications, just merely graphs on an unnecessary
3 requirement. Does that answer your question, Your Honor?

4 JUDGE MEYERS: Thank you.

5 MR. ZOLOTOREV: And then moving on again to the mining
6 processor, it's the same story here. Why is there this additional limitation
7 without regard to processor speed of power? Well, it's because the
8 Petitioner likes to talk about, you know, doing blockchain mining on a
9 laptop. But let's look at the actual grounds in this petition. These are not
10 laptops. These are not the desktops or any kind of a regular computer. The
11 actual grounds in this petition, the thing that's doing the blockchain mining
12 is either a CryptoKube with some number of basic miners, or it's a Polivka
13 with some number of basic miners. And these are certainly not lacking in
14 process of speed and power. And so, again, with regard to the actual issues
15 that are presented in the petition, there's absolutely no reason to graft on this
16 additional language, and there's no reason for further construction.

17 JUDGE MEYERS: But by asking us to look at the mining processor
18 as an ASIC processor, are you asking us to read a preferred embodiment
19 into the Specification?

20 MR. ZOLOTOREV: No, Your Honor. With regard to the mining
21 processor dispute, we're merely focusing on the plain language of limitation
22 1(c)iii. We're not construing the term mining processor in itself. What we're
23 saying is that the mining processor must do certain things that are expressly
24 stated in limitation 1(c)iii. For example --

25 JUDGE MEYERS: The language in 1(c)iii is adapted to mine
26 transactions and to communicate with the blockchain database.

1 MR. ZOLOTOREV: Yes, Your Honor.

2 JUDGE MEYERS: Your identification goes on to describe, you
3 know, an ASIC circuit as being an example of mining circuitry, but also to
4 include a CPU, a GPU, an FPGA. So why do we have to limit. Why do we
5 have to close our eyes to the disclosure specification?

6 MR. ZOLOTOREV: Your Honor, I don't think we're proposing that
7 the board close its eyes to the various embodiments that are possible for the
8 mining processor at all. Again, our proposed construction, and frankly,
9 Your Honor, we would be perfectly happy with this term as a plain meaning
10 without any further construction. And the construction we're proposing is
11 not limited to an ASIC, and I believe we actually discussed that in the POR
12 that, look, this mining circuitry, it may be software, it may be different
13 things. It's certainly not limited to an ASIC. But again, from the perspective
14 of what is actually disputed in this case, the dispute is not over this claim
15 construction and again, we would be perfectly happy with just plain
16 meaning. The dispute is over the precise requirements of 1(c)iii and the
17 similar limitation in claim 17.

18 JUDGE MEYERS: All right, thank you.

19 MR. ZOLOTOREV: And then moving on to the third construction, a
20 flow of combustible gas. Again, we don't feel that there is any construction
21 here that is necessary for the board to decide on plain and ordering meaning
22 is perfectly sufficient. The problem with Crusoe's construction is it takes
23 continuous and makes it effectively non continuous because it says, or at
24 least the time period, well, what is that time period? Is one second
25 sufficient? So we feel that Crusoe is taking something that has a plain
26 meaning that's usually understandable and actually is making it more

1 difficult to understand. And there's again, no reason for it. There's no
2 dispute in the obviousness grounds and the five obviousness grounds that
3 truly turns on this construction puddle.

4 And very quickly for the fourth construction, we did not dispute this
5 construction. Again, our point is this is simply unnecessary. This is a
6 dependent claim. There is a discussion, and you will hear it from me, you've
7 heard it from the Petitioner over whether or not the claims are limited or
8 somehow exclude a sales gas line. But that's not a dispute over this claim
9 term which doesn't even appear in claim one. That's a dispute over the first
10 limitation of claim one, which is directed to a source of combustible gas
11 that's produced from facilities selected from a group consistent of
12 hydrocarbon production, storage or processing facility. And that term is not
13 being construed by the parties. And so again, this is just an unnecessary
14 dispute.

15 Now, moving on, if I may, Your Honors, to the mining processor
16 issue. This cuts across all five of the obviousness grounds. And I'm mindful
17 that I should be reading the slide numbers into the record. This is slide 7.
18 The first issue is that the Petitioner did not adequately identify how this
19 limitation is met in its petition. And we can see that right here. All it said,
20 and this was in connection with limitation, 1(c)i as opposed to 1(c)iii. All it
21 said is that SP35 servers are blockchain mining devices. Okay, so far so
22 good. And then all it says is, well, each necessarily has a mining processor.
23 There is no indication here as to what it is or what it could be. And today
24 we've heard Petitioner use that very ambiguity, use that very lack of
25 disclosure to say, well, it's always been our position that some part of these
26 servers is a mining processor.

1 Well, of course, that's not even what they're -- you know, that doesn't
2 make any clearer to anyone. And so we've heard these new theories today
3 about, well, it could be an ASIC plus the controller, it could be some other
4 unidentified subpart. These are all new theories. And essentially what
5 Petitioner is doing is trying to take that particularity requirement and flip it
6 on its head, using a very generic and non-particular nature of a statement in a
7 petition to say, well, it could be anything and it's all within the scope of the
8 grounds disclosed in the petition. And that simply is not the case. You
9 know, we say the psi, it's in the POR. I don't need to dwell on it. But there's
10 no evidence for what it is or what it could be, or certainly no evidence for
11 how, how whatever the mining processor is, is connected to the network
12 interface or is adapted to communicate with the blockchain database as
13 recited in 1(c)iii. There's simply none of that disclosure in the petition.
14 Again, if we go back to slide 7, all we have for limitation 1(c)iii is
15 effectively this statement about a procedure understanding something about
16 an unidentified mining processor and its need to connect and communicate.
17 That's it. No specificity whatsoever, no disclosure what this part is, how it
18 performs, any of these limitations, even though they allege that very specific
19 SP35 Spondoolie stack server is the blockchain mining device.

20 JUDGE MEYERS: Now a question for you. The level of skill. Do
21 any of these arguments turn on either definition?

22 MR. ZOLOTOREV: Your Honor, I recognize that there's a somewhat
23 other nuanced difference between the levels of skill and art. I do not
24 believe, Your Honor, that any of these questions turn on any difference in
25 the level of skill between the parties.

26 JUDGE MEYERS: Thank you.

1 MR. ZOLOTOREV: Now moving on to slide nine. What did we
2 hear at the deposition of their expert? Well, at the deposition, finally we got
3 an actual identification of what the mining processor is. It's the ASIC chip
4 in that Spondoolie stack, SP35 or SP31. No doubt about it. Finally, we got
5 specificity. Not in the petition. But here in the deposition we got a theory,
6 finally. And so --

7 JUDGE MAYBERRY: Excuse me, counsel, this is Judge Mayberry.
8 May I ask a question?

9 MR. ZOLOTOREV: Yes, Your Honor.

10 JUDGE MAYBERRY: And it ties this slide with the one that you had
11 on up earlier. In the statement of the petition, where the Spondoolie server
12 necessarily has a mining processor. Do you or your expert or anywhere in
13 the papers dispute that they have some type of -- that the servers have some
14 type of computer processor that does some type of blockchain mining
15 activity? So just on the high level.

16 MR. ZOLOTOREV: Your Honor, we have not disputed that the
17 server itself, the server itself, like a Spondoolie stack SP35 does mining and
18 we --

19 JUDGE MAYBERRY: So, but have a computer processor that does.

20 MR. ZOLOTOREV: And certain and we have not disputed that the
21 ASIC chip in this bin, e.g. Spondoolie stack SP35 is adapted to mine
22 transactions as required by the claim language in 1(c)iii. The dispute is not
23 over that part of the limitation. It's over the part of the limitation having to
24 do with network connection and also even more importantly with the
25 requirement that the whatever is the mining processor is adapted to with the
26 blockchain database. That's the part that doesn't happen.

1 JUDGE MAYBERRY: Well, thank you counsel for clearing that up.
2 I guess I have a follow-on question then. Wouldn't the fact that there's
3 undisputedly a processor in this Spondoolie servers and here's indisputably
4 an ASIC processor, since it's doing the crunching, doesn't it have to
5 somehow be in communication with the database and the network adapter
6 that has to stand in between the database and the processor?

7 MR. ZOLOTOREV: This gets to the crux of the dispute. We say
8 look, the basic chip itself, if that is your mining processor, it in itself, all it
9 does is crunch numbers. It is not adapted to communicate with the
10 blockchain database. There's a whole other computer which is called the
11 controller, but in fact it's an actual computer. It's a whole separate computer.
12 It's role is it is adapted to communicate with the blockchain database, the
13 ASIC chip itself, the only thing it is adapted to do is to crunch numbers.
14 That's it. And so, then we get into this theory, Your Honor, of well, if A is
15 connected to B and B is connected to C, then somehow A is adapted to
16 connect to C. But that's really not, you know, there's really, first of all,
17 there's nothing in the record to make these connections other than attorney
18 argument. And frankly there would be no need for this controller for this
19 whole other separate computer that's part of the Spondoolie stack. If the
20 chips themselves were adapted to communicate with the blockchain
21 database, if the ASIC chips were adapted, they're not adapted to
22 communicate with the blockchain database. They need a whole separate
23 component to handle all of that for them.

24 JUDGE MAYBERRY: All right, thank you, Counselor.

25 JUDGE MEYERS: Counselor, if I could follow through that. So
26 you're saying limitation 1(c)iii requires mining processors are connected

1 only to the network interfaces. There cannot be any intermediary there.

2 Correct?

3 MR. ZOLOTOREV: Your Honor. You know I think your question
4 gets to whether or not they need direct connection or there's some level of
5 indirection that could be possible. This is -- we're not saying that no level of
6 indirection is the -- absolutely no level of indirection is required by the claim
7 language that specific limitations of connected to the network interface. But
8 here the chips themselves are not connected to the network connectors.
9 They're merely connected to some other component that may or may not be
10 in itself connected to the network. But again, Your Honor, the crux of the
11 dispute is not the connected to the network interface limitation. In my mind,
12 the crux of the dispute is the limitation that says the mining processors
13 themselves are adapted to communicate with the blockchain database. This
14 is not some connection to some other component that's adapted to
15 communicate with the database if they are themselves adapted to do this.
16 And in the prior art in Spondoolie Stack, there's a controller that does all of
17 that. And the only reason that controller exists is because the chips are not
18 adapted to do anything other than crunch numbers.

19 JUDGE MEYERS: Can you direct us anywhere in the specification
20 that would help support your position?

21 MR. ZOLOTOREV: Yes, Your Honor, in the specification. And if I
22 may actually jump to that.

23 JUDGE MEYERS: Sure.

24 MR. ZOLOTOREV: This is slide 11, and we're citing to a portion of
25 the specification that sort of describes a prior art ASIC miner. Now, the
26 specification calls it an ASIC mining processor. It would more typically be

1 called a mining server. And so, here this is citing to exhibit 1001, column
2 17:51 -- 17, and I think it's a typo. It's lines 15 through 21. The, there's a
3 description of what the processor has, what the server has and it has and the
4 hash boards have numerous chips that are doing the hashing. And so, those
5 are the ASIC chips, the numerous chips that are doing the hashing. And it
6 also has a controller, a whole separate component, a controller. And it's the
7 controller that communicates with the network and optimizes the mining
8 processors. And so --

9 JUDGE MEYERS: And the fans, though. So, it's the chip itself, the
10 ASIC chip, that's controlling the fans?

11 MR. ZOLOTOREV: Actually, no, it's the controller that's also
12 controlling the fans for cooling. So, again, the ASIC chip here is the
13 parenthetical, which says each board has numerous chips that is doing the
14 hashing. That's actually what is referring to the ASIC chips. And the chips
15 are just doing the hashing, and that's consistent. Again, on the slide, we
16 have Szhmigielski. It says the same thing. They're just doing hashing.
17 They're not communicating. And they're certainly not adapted themselves to
18 do the communication with the blockchain database. There's a whole
19 separate component that exists for that purpose.

20 JUDGE MEYERS: Okay.

21 MR. ZOLOTOREV: Thank you.

22 JUDGE MEYERS: Thank you for your support.

23 MR. ZOLOTOREV: Now, again, in the reply, when we get to the
24 reply, while the Petitioner is now embracing that basic chip theory that first
25 came out at its expert's deposition, and it's saying, well, okay, the ASIC chip
26 necessarily has to be doing all of these things, and that simply doesn't have

1 any support. As we just saw, the ASIC chip is just doing one thing and one
2 thing only. And so in some sense, if the ASIC chip is the mining processor,
3 which is what Petitioner chose to do, then it in effect performs a part of
4 limitation 1(c)iii. It certainly is adapted to mine transactions, but the chip
5 itself doesn't do these other things, and certainly not the communication with
6 the blockchain database. It's not adapted to do that. And so, they've cited
7 testimony from Mr. Barbour, the inventor and also the CEO of Upstream
8 Data, as well as Dr. You. But if we look at that testimony closely, none of
9 that testimony says, Your Honors, that the ASIC chip itself is adapted to
10 communicate with a blockchain database.

11 So here Mr. Barbour was asked, well, for ASIC chips, online
12 transaction, does it need Internet access? Well, all he says is, look, in one
13 way or the other, it needs to be controlled and have access. And then he
14 refers to Dr. You's opinion. He's not saying that the ASIC chip itself is
15 adapted to communicate with the blockchain database. He's just saying,
16 well, yeah, somehow it needs to get information. But that's not to say it
17 itself is adapted for this purpose. Moving on to slide 14, he then explains,
18 it's actually the controller. And yes, of course, the controller is connected to
19 the ASIC chip, but it's a controller that's really adaptive to communicate
20 with blockchain database and not the chip itself.

21 It's the same with Dr. You's testimony. Petitioner keeps saying that
22 there were admissions here. Well, if we look at this testimony, there is no,
23 there is never an admission that the ASIC chip itself is adapted to
24 communicate with a blockchain database. Dr. You here in this testimony
25 that's on slide 15, which is also cited in Petitioner slides 6, says, if we're
26 talking about running the algorithms on the chip itself, the chip could run

1 algorithms without network connection. So she says, yeah, blockchain
2 mining requires a network connection, but the chip itself, no, it doesn't. And
3 in fact, that's consistent with what we see in the prior art where there is a
4 whole separate component that's dedicated to those blockchain database
5 communication functions and it's the same here. There is no admission here
6 that on slide 16 again Dr. You's testimony he's not admitting that the ASIC
7 chip itself is adapted to communicate to the blockchain database it's just
8 saying yeah well in general communication with the blockchain database is
9 necessary that's not disputed. What's disputed is what element of the miner
10 is adapted to communication.

11 Moving on to the next slide. These are Excerpts paragraphs slide 17
12 paragraphs 109 and 110 from Dr. You's declaration where he explains that
13 the ASIC chip just has a single purpose with the crunch numbers and
14 everything else is handled by all the components. Then we get to these new
15 theories. So first all we have in the petition is well there's some unidentified
16 process mining processor. Then at the deposition we got the ASIC. Now in
17 the reply we get oh it could be a combination of an ASIC chip and a
18 controller or it could be some portion of the mining server. And of course
19 what's the support? The only support here that they cite is Dr. You's
20 testimony which was about products with practice the claims they're not
21 about the prior art. Dr. You never testified that this Spondoolie server is the
22 same as S9 and Petitioners expert didn't testify about that. And so, we heard
23 Petitioners counsel today say well the S9 and Spondoolie stack are very
24 similar. Well that's attorney argument there is no evidence for that.

25 And another issue that's very important in his analysis of Patent
26 Owner's products Dr. You considered the entire server to be the mining

1 processor and so the server, the S9 is the mining processor and in that case
2 no problem, it meets all the limitations but that's not the choice that
3 Petitioner made in its petition. It chose not to say that the server is the
4 mining processor. The server and Petitioners grounds is a different
5 limitation. It's a blockchain mining device. With that, Your Honor, if I may
6 move on to commercial success.

7 JUDGE JUNG: Counsel, this is Judge Jung. Before you move on, a
8 question about your argument. So you agree that a blockchain processor
9 needs to crunch numbers and send it somewhere but the claim requires it to
10 be adapted to a blockchain database. It seems that your argument requires
11 us to read and adapt it to directly communicate with a blockchain database.
12 Not just communicate, how would you address that?

13 MR. ZOLOTOREV: Yes, You Honor, I don't believe that our
14 argument requires a direct versus indirect connection. What we're focusing
15 on is the term, the express requirement in 1(c)iii that the mining processor
16 itself is the thing that is adapted to communicate with the blockchain
17 database. We're focusing on the term adopted. It itself is the thing that is
18 adaptable.

19 JUDGE JUNG: Okay, I follow you. Now to apply this to the ASIC
20 that Petitioner seems to be relying on. Once that ASIC crunches its numbers
21 and sends it somewhere else, that act of sending it to somewhere else
22 downstream, doesn't that mean that ASIC is also in a sense adapted to
23 communicate with the database? The blockchain database?

24 MR. ZOLOTOREV: Actually, Your Honor, first of all, I apologize
25 ahead of time because there will be some attorney argument in my answer,
26 and that is because there's simply no -- there is no evidence in the record.

1 Certainly Petitioner hasn't put any in as to how the ASIC operates at that
2 nitty gritty level. But typically, the ASIC chip itself is not even sending data
3 anywhere. It puts data in a register, and then typically, effectively, the
4 controller comes and gets it. And so, there's no adaptation in the ASIC for
5 any function other than essentially collection numbers. It knows nothing
6 about any blockchain database. It sends nothing indirectly or directly to the
7 blockchain database. It just presents an output, and it's up to the controller
8 to come and get that output. And what the controller does with it is actually
9 up to the controller, as Szhmigielski describes, that there's software in the
10 controller that allows you to have sort of different modes of operation. But
11 the chip itself, it doesn't even send data. It just puts, you know, puts an
12 output in a register. And I, again, I apologize, because a lot of this is based
13 on --

14 JUDGE JUNG: So it's not communicating because in the Petitioner's
15 point of view, it's just storing the result for it to be later picked up
16 somewhere downstream by, for example, a controller. Is that what you're
17 trying to say, it's not communicating, it's just storing?

18 MR. ZOLOTOREV: Yes. Your Honor, this is again, based on my
19 knowledge of how these things operate. All it is, is a little ASIC. It doesn't
20 have any communication capability. It just has, you know, a wire bus
21 connecting it, probably a PCIE connecting it to something else. But all it
22 can do is present data in a register, and it's up to the PCIE master to then
23 come and grab that data.

24 JUDGE JUNG: All right, thank you. That clears it up for me.

25 MR. ZOLOTOREV: Thank you. So moving on then, to commercial
26 success. What I think is getting lost in Petitioner's presentation and papers is

1 that the Petitioner and its expert don't identify any missing limitations.
2 None. And so basically what they're saying is, look, there's these single
3 device deployment that Upstream says don't practice. And then the
4 deployments powered by electric grid or commercial sales gas lines. Well,
5 we didn't count deployments powered by electric grid or commercial sales
6 gas lines in the commercial success at all. These are sort of minor
7 applications of these devices and we did not count them. Now I'll address
8 the single device deployments separately, but before I do so, there are some
9 presentation today by Petitioner about improper opinion testimony by Mr.
10 Barbour.

11 Mr. Barbour did not provide any opinion testimony. What he did is
12 describe his understanding of how the products operate. And then Dr. You
13 took that understanding and produced his own opinions and applied his own
14 reasoning to arrive at those opinions. So that's actually what happened.
15 There was no improper opinion testimony. Just to get that out of the way
16 before I move on.

17 So first of all, Petitioner does not dispute that multi device
18 deployments practice claims 1 and 24. Remember, the dispute is over single
19 device deployments. Second, petition doesn't actually dispute that 219 sales
20 over the relevant period of time is commercial success. Now with regard to
21 the single device deployment, Dr. You provided an alternative theory, an
22 alternative opinion that look, if you think that the ASIC chip is a mining
23 processor, then a single hash or hash generated deployment leads the claims
24 because then the ASIC chips are the mining processors and the servers are
25 the plural, the multiple blockchain mining devices. He provided that
26 opinion. That opinion is not even addressed by petition. So if you accept

1 their theory, then all of the sales, I believe of 284 relevant sales, they would
2 constitute commercial success. Now I would like to pause on this last bullet
3 here.

4 We did not count non flared gas deployments towards commercial
5 success, nor did Upstream and assert they practiced the claims. And so, in
6 that regard, I believe that Petitioner was shown slides with citation slides. I
7 believe it was slides 20 and 21 in Petitioner's presentation that includes
8 citations to Mr. Barbour's deposition. Well, first those citations were not
9 even cited by Petitioner. But setting that aside, none of the citations actually
10 show that Mr. Barbour counted systems connected to the grid or to a gas
11 sales line. And as far as what Mr. Barbour counted, I think it's very clear
12 from his declaration. If we look at his declaration, he says at paragraph 24,
13 says, well LQ's declaration, he says there were 219 multi-unit installations
14 practiced in the claims. And what does he say? Practice the claims. Well,
15 we can again look at his declaration, paragraph 11 of Exhibit 2011. That's
16 his declaration. Or multi-unit installations. What does he show in his
17 declaration as practice in the claims? He shows a figure which petition also
18 included on his slides with multiple hash generator or hash height units
19 connected to flare gas. That's what Mr. Barbour was counting and not any
20 of these other things.

21 JUDGE MAYBERRY: Excuse me, counsel, this is Judge Mayberry.
22 May I ask a question?

23 MR. ZOLOTOROV: Yes, Your Honor.

24 JUDGE MAYBERRY: A few times in your statements here you use
25 the phrase practice the claims. And in looking at your Patent Owner
26 response on it, page 13, you use the phrase embodying claims 1 and 24. Is

1 there someplace that demonstrates that the claims, that what's being sold as a
2 commercial product, it's coextensive with claims. That's really where we're
3 going to get our nexus.

4 MR. ZOLOTOREV: Yes, Your Honor. And that is in both Dr. You's
5 declaration, which was discussed in the POR, which is basically mapping
6 claims one. I think it was claims one and 24, but it's mapping the claims
7 limitation by limitation to the claim elements. And it's also in our sur replay
8 where we go over all of these arguments made by Petitioner that the claims
9 are not coextensive or that they are critical unclaimed features, and so on
10 and so forth. We show that none of that is really the case, that there are no
11 critical unclaimed features, for example, and that the product effectively,
12 directly and fully is co-extensive with the claims.

13 JUDGE MAYBERRY: All right, thank you.

14 MR. ZOLOTOREV: If I may jump right into that issue and go back
15 to presenter mode. So here we get into this issue that the Petitioner brought
16 up with regard to nexus. But as we just discussed. Your Honor, there are no
17 critical unclaimed features. The Petitioner was citing the spots factory
18 Federal Circuit case. But that case is all about these critical unclaimed
19 features. There's really no such thing here. So, one thing that the Petitioner
20 brought up is this 029 patent. Well, that was filed on May 15th, 2019.
21 That's over two years after the 372 Patent. And the features that it claimed
22 were not introduced until the 2019-2020 season. Now, we've shown that the
23 product already achieved commercial success before these features, these
24 optional features in the '029 Patent even hit the market. And that's because
25 the sales going into 2020 were expanding exponentially as Upstream was
26 effectively creating this new market.

1 So moreover, this patent, the '029 Patent, as was testified to by Mr.
2 Barbour. It covers an optional feature and it's only relevant to cold climates.
3 So, there's really no evidence that this option is critical or even significant.
4 And there's no evidence that this feature ever drove the sales, and certainly
5 not in the period before the features were introduced. This other patent that
6 the Petitioner mentioned, '682 Patent that claims priority to 2020, again, it's
7 over two years later, and the products were already commercially successful
8 by then, showing that that patent didn't drive the success. And moreover,
9 just like with the '029 patent, the testimony Mr. Barbour testified, he said,
10 we're not even using this patent and it was only used in a few units sold in
11 Canada out of the hundreds of sales. So again, that's not something that is in
12 the product. That is an unplanned feature that's driving commercial success.

13 Then we saw this screen capture and it's being meant to suggest that,
14 well, there's all these features that are unclaimed and perhaps they're driving
15 commercial success. Well, that's purely speculation. Mr. Barbour didn't
16 attest to that. Nobody attested to that. And the only feature that they've
17 highlighted here that's in that red oval is the heat recirculation feature.
18 That's the '029 Patent feature. The other problem with this, the other
19 problem with this printout is it's from the current website. This doesn't go to
20 the historical commercial success of the product. And there's no evidence,
21 for example, that other than this passive heat recirculation feature, which we
22 talked about already in the context of the '029 Patent, that any of these
23 features were even present during the historical commercial success of these
24 products from 2018 and up through, for example, 2020 or '21 or '22.

25 Moving on, then quickly to unmet need. You know, we've heard
26 argument about, well, there's no unmet need because you have Dickerson,

1 you have MAGS, and so on and so forth. Well, this is pure hindsight.
2 Petitioner itself filed a patent apparently with, well, I don't know. But
3 perhaps without realizing that Mr. Barbour got there first. And in that patent
4 in 2018, when they filed a provisional, and certainly when they filed the
5 application in 2019, they were saying there remains a need for systems and
6 methods for generating electricity from natural gas produced from oil wells,
7 and what is that for? It's to mine cryptocurrency. So they themselves were
8 recognizing the unmet need.

9 Then we get to another argument that they make and they say, well,
10 the claims cover for unmet need. They say, well they're not. The claims are
11 not coexisted because they cover systems drawing power from primary from
12 gas wells and even gas from sales gas lines and electric grid. That reply
13 pages 17, 18 and we're looking at our slide 27 now. Again that actually
14 they're contradicting themselves. Earlier in their own brief they said that
15 well, Upstream says the claims don't cover such things. And so, for certain
16 of their arguments they say the claims cover. And for other of their
17 arguments they say well no, the claims don't cover them. And so, if you
18 look at their own reply page 15 they say according to Upstream and this is at
19 the bottom, I've highlighted this. Electric grid and sales gas line based
20 deployments do not embody claim one. Well that's true, they don't. And
21 actually there is no real evidence that, you know, the claims extend to electro
22 grid and sales gas line deployments. There's also no evidence that we
23 counted any such deployments towards commercial success.

24 And so, there was at the very beginning there was some argument by
25 Petitioner that what we're showing here is somehow incorrect or is not
26 properly attributing what their expert agreed to. As far as the coverage of

1 claim one, well, I think the record speaks for itself. He was asked whether
2 or not Upstream's product meet claim 1 when they're connected to if they're
3 connected to electrical grid or commercial sales gas lines. And he said they
4 don't meet the claim.

5 JUDGE MEYERS: Counsel, you've got about four minutes left on
6 your primary time.

7 MR. ZOLOTOROV: The argument for ground two and the I will
8 reference slide 66 in Petitioner's presentation. And this was an argument
9 about the dependent claims and ground two claims 10 through 12. And the
10 issue there, Your Honor, is again, if Petitioner has chosen the ASIC itself to
11 be the mining processor, then there's no evidence that you could modulate
12 the power load by turning on and off ASIC's individually. No software
13 could do that. The software that they cite could at best turn on or off the
14 entire Spondoolie server. And Dr. You at paragraph 127 of his declaration
15 he said well, that turning on or off all of the processors doesn't meet these
16 limitations. And the testimony they cited from Dr. You is actually
17 consistent with that. He didn't say that turning on or off all of all of the
18 processors meets the modulating limitations. He was saying if you're
19 ramping up or down then, but not turning all of them off, then that could be
20 immediate limitation. And that makes sense, Your Honors, in the context of
21 these claims. Look at claim 10. Claim 10 saying modulating a power level
22 by increasing or decreasing the mining activity of the mining processor,
23 turning everything off as is now the suggestion, is not modulating, and it's
24 certainly not increasing or decreasing the mining activity. It's shutting down
25 the mining activity. So the suggestion that that's disclosed with the software
26 that they've cited for CryptoKube, that could essentially turn off a mining

1 server, that simply does not meet the claim. Your Honors. And with that, if
2 I'm out of time, I will reserve time for rebuttal.

3 JUDGE MEYERS: All right, you've got about one minute left.

4 MR. ZOLOTOREV: I think I will add. Yeah, we'll add that to my
5 rebuttal. Thank you.

6 JUDGE MEYERS: All right, you'll have 11 minutes left. All right,
7 Petitioner. You may begin when you're ready. You've got about 20 minutes
8 left.

9 MR. ZHU: Thank you, Your Honor.

10 Real quick regarding claim construction again, they try to waive it off
11 as something that's irrelevant to the case. That's simply not true. The claim
12 construction issue is critical to the case. As I explained before, the
13 underlying disguise of plain line meaning they try to read the claims
14 narrowly by construing those terms. Just as, sorry, as the Patent Owner's
15 counsel said a minute ago they try to read the blockchain miners device as
16 requiring concrete structure. Your Honor, there's no requirement for
17 concrete structure as shown in three or four of the specifications just one
18 exemplary embodiment. Again, they're improper reading exemplary
19 embodiment into the meaning of the claim. And regarding processors be of
20 power --

21 JUDGE MEYERS: Mr. Zhu, if I could stop you there for a second. A
22 portion of the specification I believe it's column 17 where it describes the
23 mining processor column 7 line 9 through 12, each mining processor 92 may
24 have a variety of configurations but generally may include at least a power
25 supply, the controller board and mining circuitry such as an ASIC circuit.

1 So is that controller the same controller that mining device 12 would have?
2 Is the power supply similar or different? Can you explain those differences?

3 MR. ZHU: Let me read that. Your Honor, again, it is our position the
4 cited portion of this spec is just one exemplary embodiment of mining
5 processor 92. Your Honor, this spec is written so confusingly as you are
6 pretty -- I'm sure you are aware we filed a second petition challenging the
7 indefiniteness of these claim terms. For example, in one part of the
8 specification it talks about the mining processors comprise mining
9 processors so they use these terms mining devices and mining processors
10 interchangeably and sometimes in really indefinite ways. That second
11 petition was not instituted but we still stand by our argument in that second
12 petition and here there's no concrete structure required by the specification.
13 It always uses the word may have a variety of configurations and generally
14 may include a prior supply controller. There's no requirement that such a
15 concrete structure be required by the claims and thank you, Your Honor.

16 And regarding Patent Owner's accusation that we're adding a claim
17 limitation regarding processor speed or power or not person play precluding
18 handle their problems producing effective limitation. In fact that's exactly
19 what they're trying to do. They're trying to distinguish Belady's traditional
20 data center based on processor speed or power and there's such there's just
21 no such limitation if you can read the claim by plain and ordinary meaning
22 and regarding continuous they say we read out the term continuous. We
23 don't think that limitation is meaningfully limiting the claims. The POSITA
24 would understand that power generator the gas supply has to be continuous
25 at least for a moment and during deposition, Dr. You refused to put a time
26 limit on how long the gas supply has to be continuous for because there is no

1 such limitation in the stack or in the claims. All evidence require is that the
2 gas generator be powered by a flow of gas.

3 And regarding sales gas line, they say there's no dispute regarding that
4 term. That is not correct. Their expert Dr. You repeatedly reclaim one to
5 exclude sales gas line and that is an incorrect narrow read of the claims. If
6 you just look at claim 2, claim 2 excludes sales gas line. If claim one
7 already excludes sales gas line why would they need to add claim 2? And
8 regarding their allegation of the missing mining processor limitations they're
9 accusing us for being not clear in our position. Well, the reason we did that
10 is not because we're trying to game the system to hide something. It's
11 because our expert thought that limitation is so obvious. Every single
12 POSITA would understand there's a mining device in our mind either have a
13 mining processor and the mining processor not a mine by the definition of
14 mining needs to verify and record transactions to the blockchain database.
15 So that's why we set each necessarily as a mining processor. And here
16 regarding the controller they're pointing to that is not a separate computer,
17 it's just a chip on the motherboard. It's similar to a motherboard in a home
18 computer. A CPU in order to communicate with the network interface has
19 to go through the chips on a motherboard too. And the claims as submitted
20 by Patent Owner's counsel do not read out indirect communication or
21 indirect connection. That is just not the plain ordinary meaning of the claim
22 term.

23 And they're trying to again without proposing any claim construction
24 trying to ascribe a special meaning to the claim term adapted to
25 communicate. However, the plain ordinary meaning of the word adapted to
26 communicate as submitted by Dr. You requires nothing more than

1 exchanging data. So here when asked the question whether the ASIC chip
2 sends data to the controller Patent Owner use a word they put the output in a
3 register but that is just another way to say they send the output to the register
4 which is in our extend to controller. And in fact we asked whether allowed
5 intermediaries they cannot answer that question. Again, this just shows you
6 a data here the Patent Owner is repeatedly trying to import not existing
7 clinical data from the stack. And recording the allegations regarding new
8 theory. So again their own cited the case cited by the Patent Owner itself
9 said that the arguments are proper as long as they're indirect response to the
10 POR. And here that's exactly what we did, indirect reply to the POR. We
11 explained that the ASIC chip is the mining processor and we don't think
12 there's need to explain that.

13 However, at any POSITA if you just Google the term Spondoolie's it
14 will show you that mine processors are ASIC chips in the Spondoolie's and
15 they try to characterize their expert's deposition testimony as not admitting
16 that the chip, ASIC chip is itself connected to the network interface. That is
17 not true. As shown on slide 53 of Petitioner's deck. He was specifically
18 asked about whether the ASIC chip itself needs to communicate with the
19 blockchain database. And his answer is in affirmative. The mine bitcoin
20 exchanging with the blockchain database will be necessary.

21 JUDGE MAYBERRY: Counsel, this is Judge Mayberry. I'm sorry to
22 interrupt you on your rebuttal. I did want a little bit of a clarification.

23 MR. ZHU: Yes.

24 JUDGE MAYBERRY: This seems to be directly in response to what
25 Patent Owner's counsel argued. So in the petition. It seems to be that
26 petitioner contend that we have these Spondoolie servers and they

1 necessarily had a processor and then as a trial progressed. Am I correct to
2 say that petitioner now says it is the ASIC chips that are within the
3 Spondoolie server that map to the mining processors limitation in claim one?

4 MR. ZHU: Your Honor, that is one of ours. The other alternative
5 theory is a subpart of Spondoolies and constitute the mining processor.

6 JUDGE MAYBERRY: So, the first one is the ASIC chips. The
7 second one is that a box can be drawn around a portion of the server contents
8 and that constitutes the mining processor?

9 MR. ZHU: Your Honor, that's exactly correct.

10 JUDGE MAYBERRY: And is the alternative theory, is it that it
11 necessarily must meet the requirements that it be connected to the network
12 interface and adapted to mine transactions and communicate with the
13 blockchain database? Because that's what it -- that's what the server
14 ultimately does? So it's an inherency argument?

15 MR. ZHU: It is an inherency argument, Your Honor. Go on.

16 JUDGE MAYBERRY: I'm sorry, I'll let you expand if you feel
17 necessary. I did want to have a final question though. These alternative
18 possibilities, are they within the petition itself or it's the petition, in addition
19 to further explanation in the reply that we get to where we have these two
20 possibilities for the mining processor?

21 MR. ZHU: Your Honor, I think both theories are consistent with the
22 petition itself which pointed to a subpart of the Spondoolies as a mining
23 processor. And in response to a Patent Owner's argument in the POR, we
24 further clarified our position based on expert position.

25 JUDGE MAYBERRY: Thank you, counsel.

1 MR. ZHU: Thank you. And sorry, let me just explain a little bit.
2 This is because it's undisputed that Spondoolies itself perform all of the
3 identified missing limitation in claim one. And as a part of that, for example
4 excluding the container box or excluding the fans necessarily also does that.
5 And that is based on Dr. You's deposition testimony. They try to draw a
6 distinction between the miners and the Spondoolies personal meaningful
7 distinction between the two. And let me just move on quickly to
8 commercial success. So here Patent Owner argues again despite showing
9 contrary evidence that excluded connections to sales gas line and electric
10 grid. When we counted the 284 system and the only citation they can point
11 to is exactly the same citation we just showed you. And looking all over that
12 deposition testimony from Mr. Barbour, he said everything, but he excluded
13 connections to electro grid water, sales gas. And in fact he explicitly said in
14 his field claim one covers and sorry claim one covers sales gap line
15 connection and may even cover grid connection.

16 And in fact regarding Dr. You's deposition testimony, there's
17 inconsistency between Dr. You and Mr. Barbour regarding their
18 understanding of what the claims cover. So when I asked Dr. You whether
19 claim one covers sales line gas, he said no. When I asked the question to
20 Barbour, he said yes they might and same thing for a single device
21 deployment. When I asked Dr. You he said no it doesn't cover. And Mr.
22 Barbour said yes. It likely practiced claim one that just shows you how
23 reliable Mr.-- sorry, Dr. You's claim construction is directly contradicted not
24 only by the claim meaning of these claim terms but also by the testimony of
25 himself. And this is not surprising. We have to read it narrowly in order to
26 exclude the prior system while at the same time read out their own products.

1 And that was shown on slide 22 in its Petitioner's deck. Sorry, let me
2 go to slide 17 real quick. Slide 17 shows you the same market material from
3 Upstream. And they say two things. One, this was the current version of the
4 website, not the old version. We unfortunately we cannot find an old
5 version of the website on the way back machine. But this represent the
6 current state of the mind Upstream when they listed these features as why
7 our load centers outperform the competition. It is our position that is clear
8 evidence of critical and claim feature. If this is not evidence of criticality, I
9 don't know what is.

10 Your honor, the marginal materials do not say the magic word critical
11 in there. And then regarding this feature specifically they argue that this
12 feature was introduced somewhere in the 2019-2020 range based on
13 evolution testimony from Mr. Barbour. First of all Mr. Barbour is based on
14 his memory that was interviews around that time. Even it was true they only
15 sold three units before 2019. In 2019, the sales jumped from 2 to 10 in
16 2019. And that may as well be attributed to the heat feature. Again, even in
17 the same YouTube video, they showed the only feature they bragged about
18 regarding their system, if not the presentation patent, but the peak research.

19 JUDGE MEYERS: You've got about four minutes left.

20 MR. ZHU: Thank you. Real quick. Regarding Crusoe's own patent,
21 they quoted Crusoe's own patent to say that they identified MNE that
22 supports their argument regarding MNE. Not so. We identified MNE in
23 regard to flare gas. And if you look at the claims of the '307 Patent by
24 Crusoe, we specifically say a flare gas mitigation system in the claims.
25 That's in stark contrast to claim one of the '372 Patent, which that gas is

1 nowhere to be found. So that does not support their argument regarding
2 MNE.

3 And regarding their argument that we contradicted ourselves in the
4 reply on page 15 of the reply when we said claim one does not embody sales
5 gas like connections. Your Honor, we do not contradict ourselves. It has
6 always been our position and our expert's position. The claim was so broad
7 it covers everything including private product gas byproduct gas sales, gas
8 line and power grid. And we on page 15 we only cited declaration
9 testimonies -- I'm sorry, declaration and declaration testimonies from
10 Upstream to explain why according to Upstream's position the claims to be
11 dealing their own products. And our position, they say our claim
12 interpretation is not supported by evidence that's factual. Our position is
13 supported by testimony of Mr. Barbour himself that the claims are broad
14 enough to cover both sales gas and electric power grid and is also supported
15 by the plan according to the declaration of our expert, Mr. Kasdorf.

16 Finally, regarding the DCM software, they say it doesn't allow
17 selectively shutting down a subset of the Spondoolies. That is just not true.
18 It's clearly supported by Mr. Kasdorf's declaration test funding that is
19 exhibit 1036, paragraph 35. So Mr. Kasdorf sells these products and he's
20 verifying with the DCM software so he understands the capabilities of these
21 DCM software's. And they try to again, without opposing a claim
22 construction, read nonexistent claim limitations into the load control claims
23 somehow to exclude, shut it down, a subset of the Spondoolies or shutting
24 down all of the Spondoolies. Your Honor, the plain meaning of these local
25 claims, specifically claims 10 and 11 just do not require that level of control
26 at the basic trip level. Your Honor, do you have any questions?

1 JUDGE MEYERS: Let me see if the panel has any. No, all right.
2 Well, thank you.

3 MR. ZHU: Thank you, Your Honors.

4 JUDGE MEYERS: All right. Patent Owner, you will have 11
5 minutes.

6 MR. ZOLOTOREV: Thank you, Your Honors, if I may share my
7 screen. Hopefully you'll be able to see. You should be looking at page 17 of
8 the POR. This is an image of the S9 miner which is used in some of
9 Upstream's own products. And here it's labeled. These are not labels that
10 came from us. They came from the document that we cited. You can
11 actually see the controller that we've been discussing. The controller is not
12 some little chip somewhere. It's a whole separate box that sits on top of the
13 miner. You can see it right here. I've zoomed in. Hopefully you can see the
14 zoom in and you can clearly see it's got the communication ports and it's got
15 all of the communication gear and it is the thing that's configured to do the
16 communications, not something else.

17 Now a couple of comments about the claim construction. We
18 basically heard counsel admit that they're reading out the continuous
19 limitation from continuous gas flow. I believe counsel said that while
20 continuous can be any period of time and again that simply effectively is
21 trivializing that plain language into non existence. And we don't think that
22 that's appropriate versus a plain and ordinary meaning construction. There
23 was also discussion of claim 2 versus claim 1. Claim 2 is requiring an
24 isolation from a sales gas line. That does not mean that claim one includes a
25 generator connected to a sales gas line. That just means you can have a
26 system of claim one that effectively coexists with a sale gas line. It doesn't

1 mean that it is that being connected to the sales gas line is within the claim
2 language of claim one.

3 And again, our expert said it's not their expert agreed. Mr. Barbour,
4 despite petitioners attempts to point to various sort of discombobulated bits
5 of testimony, he did not say that sales gas lines included in claim one. And
6 of course Mr. Barbour is also not providing opinion testimony in this case.
7 In any case there is the distinction between claim 2 and claim 1 does not
8 support petitioner's argument there.

9 In Petitioner slide 53 there was again a discussion by Petitioner with
10 regard to whether Dr. You somehow admitted that the data chips is adapted
11 to communicate with a blockchain database. I think any fair reading of that
12 there shows that he did not make any such admission. He said yes,
13 communication with the network is something that you have to do to mine
14 Bitcoin. Well that's a very different proposition than saying the ASIC
15 mining chip itself is doing the communication. Now there is discussion
16 from counsel with regards to whether petition adequately disclosed this
17 theory that a some subpartt of mining server meets the mining processor
18 limitation. And I believe counsel said that, well, the subpart theory is
19 consistent with the petition. That's an interesting choice of words consistent.
20 Doesn't. It's not the same thing as. Yes, the petition adequately disclose that
21 as a ground. Petition did not do so.

22 Petition merely said that the Spondoolie stack, SP35 or SP32
23 necessarily has a mining processor. That's it. That's all it said. That's all the
24 disclosure gave us. All of these new theories that are being propounded by
25 Petitioner, they were simply not there and they could have been. The
26 Petitioner could have done their homework. And now their excuse is, well,

1 our expert thought it was so obvious that they didn't need to do that
2 homework. That's not a good excuse to not explain that ground in the
3 petition.

4 And very quickly, since I have a few minutes, I'll address ground
5 three. If I may, you, Honor, this is not something that counsel brought up on
6 rebuttal, but this is in counsel's main presentation. If that's okay. And if not,
7 then, if that's not okay with Your Honors, then I can skip that point.

8 JUDGE MEYERS: No, I think we'll need to skip that.

9 MR. ZOLOTOREV: Okay, that's fine. I think with that, then my
10 presentation is complete. And if there's any rebuttal from Petitioners
11 counsel, I'll reserve my five or six minutes that I have left to respond to that.
12 But if not, then there's nothing further from the Patent Owner or yes, the
13 Patent Owner.

14 JUDGE MEYERS: All right, does anyone have any questions? No.
15 All right, thank you. That will conclude our arguments with respect to the
16 challenge claims. But let's if the court reporter has any questions and doesn't
17 appear like it.

18 COURT REPORTER: Actually, I'm sorry, your Honor, took a second
19 to unmute. If you don't mind, if I could just flip through my notes with you,
20 counsel, please. If you just hold the line. You know, I don't want to hold
21 the Judges up. Just, just stay on the line, please.

22 JUDGE MEYERS: Well, with that the case is submitted and we are
23 off the record. I want to thank the parties for doing an excellent job. We
24 appreciate your time, and this has been helpful. Thank you.

25 MR. ZHU: Thank you, Your Honors.

26 MR. ZOLOTOREV: Thank you, Your Honors.

1 (Whereupon, the proceedings at 2:18 p.m. were concluded.)

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