

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMCAST CABLE COMMUNICATIONS, LLC,
Petitioner

v.

ENTROPIC COMMUNICATIONS, LLC,
Patent Owner.

IPR2024-00441
Patent 8,792,008 B2

Record of Oral Hearing
Held: June 6, 2025

Before JON M. JURGOVAN, SCOTT B. HOWARD, and AARON W.
MOORE, *Administrative Patent Judges*.

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The above-entitled matter came on for hearing Friday, June 6, 2025, commencing at 9:00 a.m. CDT, at the U.S. Patent and Trademark Office, 207 S. Houston Street, Dallas, TX.

P-R-O-C-E-E-D-I-N-G-S

(8:58 a.m.)

JUDGE JURGOVAN: Good morning, again.

MR. MEEKER: Morning.

JUDGE JURGOVAN: Good to see everybody today. Please take a seat. Judge Moore will be running this hearing. Judge Moore, when you're ready.

JUDGE MOORE: I'm ready. Good morning everyone. Welcome back. We're here for a hearing in our matter IPR2024-00441, captioned Comcast Cable Communications versus Entropic Communications.

At issue here is US Patent 8,792,008. I'm Judge Moore present by video. Judge Jurgovan is present in our Dallas hearing room, and Judge Howard is also present by video. Can we have appearances for the Petitioner, please.

MR. MEEKER: Thank you, Your Honor. Fred Meeker with the law firm of Banner & Witcoff representing Petitioner Comcast Cable Communication, LLC. With me is Mr. Paul Qualey and Steve Chang, also Banner & Witcoff. And on the line is Heather Faltin who is vice president and senior deputy general counsel of intellectual property, and Kevin Chung, assistant deputy general counsel; both of Comcast Cable Communications, LLC.

JUDGE MOORE: Okay. Thank you. And for Patent Owner.

MR. ENGEL: Good morning, Your Honor. Jason Engel, lead counsel for Patent Owner Entropic Communications, LLC from the firm of K&L Gates. With me seated at the counsel's table is Nathan Fuller who will

1 be our lead practitioner today. And seated behind me is Vincent Galluzzo
2 who is also counsel. Thank you.

3 JUDGE MOORE: Thank you. Okay. So just a couple of things. I
4 just want to make sure that everybody identifies themselves when they're
5 speaking and also any documents that they're referencing when they're
6 speaking.

7 I'll also note that the hearing's open to the public. Our hearing order
8 granted 45 minutes per side, and then we've had some LEAP requests, so
9 that's up to 60. Judge Jurgovan will keep the time, and Petitioner, you may
10 begin when ready.

11 MR. MEEKER: Okay.

12 JUDGE MOORE: Also, please let me know, and what time you wish
13 to reserve for rebuttal.

14 MR. MEEKER: We reserve seven minutes for rebuttal, Your Honor.

15 JUDGE MOORE: Thank you.

16 MR. MEEKER: Okay. So if we turn to Slide 2 of Petitioner's
17 Demonstratives, Slide 2 shows the grounds for the various reference
18 combinations. So ground A and B, Patent Owner improperly limits the
19 obviousness ground to a physical substitution as opposed to the teachings of
20 one applied to the teachings of the other.

21 Also Patent Owner argues lack of motivation to combine. So Patent
22 Owner argues only monitoring analog channels as opposed to analog and
23 digital, and Patent Owner argues the combination lacks concurrent output.

24 For the Ground C, Patent Owner argues a customer-premises gateway
25 is not shown. And for Grounds D and E, the two questions are whether
26 Renken is prior art and the concurrently output.

1 Turning now to Slide 3. Slide 3 shows an overview of Claim 1 of the
2 ‘008 Patent, with Figure 1b from the Patent. The analog to digital converter
3 is shown in red. It digitizes the received signal and the result of the digitized
4 signal, D. The channelizer green selects different portions or channels of the
5 digitized signal, and concurrently outputs the first portion to the monitor,
6 and that’s CJ plus 1, and a second portion to the data processor. The signal
7 monitor is blue and analyzes a channel to record a characteristic to a source
8 of the received signal, and the data processor purple processes a TV channel
9 to recover its content.

10 In the ‘008 Patent, there is basically little to no description or
11 [inaudible] of what the monitor is, and the monitor’s in a parallel path to the
12 data processor. The ‘008 Patent assumes one skilled in the art would know
13 what the monitor is.

14 Turning now to Slide 4. Slide 4 shows Fig. 1 of Kamieniecki. Figure
15 1 shows a headend 102 sending downstream signals to the set-top box.
16 Inside the set-top box there is an in-band tuner 112 for receiving TV
17 channels. That in-band tuner has both, we know from the spec, [inaudible]
18 which is for digital, and an analog component which is for analog channels.
19 The out-of-band tuner, which is Tuner 114, is for digital data.

20 These in-band and out-of-band tuners are single-channel tuners; that
21 means they can only tune to one channel band of frequencies at a time.
22 Kamieniecki Paragraph 16 top, shows the monitor collects statistics and
23 reports this information back to the headend.

24 Kamieniecki’s Paragraph 14 bottom, shows that this information can
25 include channel presence, absence, error count, and signal level estimations.

1 Turning now to Slide 5. And I'm going to go over this quickly
2 because much of this is similar to what we had in the May 15th hearing for
3 the 826.

4 Slide 5 shows that Kamieniecki broadly teaches monitoring.
5 Kamieniecki Exhibit 1009, Paragraph 13 at the top states that subscribers
6 can be tuned to a channel receiving audio and video content while at the
7 same time the set-top box 110 is receiving instructions in the out-of-band
8 channel.

9 Kamieniecki Paragraph 17 expresses a desire to monitor while not
10 disturbing users who watch television. Because it only has a single in-band
11 tuner, it's Figure 2 algorithm, waits until the set-top box is idle before tuning
12 to the monitor IB channels one at a time.

13 So basically, it steps through each channel in a monitoring sense when
14 they're not being used, and effectively, covers the whole spectrum. So I
15 think, Judge Jurgovan, you had asked a question in an earlier hearing about
16 is there a scatter clock between frequency and end result. And as it steps
17 through each of these channel ranges, it would, in fact, generate a
18 measurement at each different frequency range.

19 So Kamieniecki Paragraph 27 teaches monitoring the out-of-band
20 channels which does not require an idle state since it has a separate out-of-
21 band tuner. In fact, it discloses you could monitor one channel such as out-
22 of-band channel without tuning through the channel map.

23 Turning to Slide 7, Slide 7 shows Konstantinos' Paragraph 1 stating
24 that evolving market for data and programming service will demand that
25 receivers have the capability for multi-channel tuning. Konstantinos'
26 Paragraph 11 states that the new version of DOCSIS, a standard for

1 receiving data over cable networks, is basically your cable modem standard
2 done by CableLabs, was going to require simultaneous reception of at least
3 four channels. The same paragraph complains that there is no freedom from
4 a user perspective to select any channels freely out of the full cable band.
5 Konstantinos explicitly provides a motivation for the combination.

6 Turning to Slide 8, Slide 8 shows that Konstantinos says that a
7 conventional approach to multi-channel tuning might be to just have many
8 single-channel tuners in parallel, but this becomes completely impractical if
9 the number of simultaneous-required channels goes beyond two, e.g., as
10 with the new DOCSIS requirement.

11 So what Konstantinos teaches is is once you get beyond two tuners, it
12 becomes completely impractical, and then you should go to with whole-band
13 tuner. Recall that Kamieniecki's set-top box had just two tuners: an in-band
14 tuner and out-of-band tuner. Konstantinos at Paragraph 16 sums it up when
15 it states that what was needed was a single integrated circuit receiver that
16 could provide unrestricted multi-channel functionality as further explained
17 in the petitions at Page 32 to 35. There are numerous additional motivations
18 to combine.

19 Turning to Slide 9. Slide 9 shows Konstantinos' multi-channel
20 receiver at the top. The yellow shows the RF input. The red shows the
21 analog to digital converter that converts the RF input to the digitized version.
22 The green shows the multi-channel selector which can select all desired
23 channels from the digitized signal.

24 In Paragraph 43 on the left, Konstantinos states that the ADC digitizes
25 the entire receive signal. And in Paragraph 106 on the right, Konstantinos
26 gives an example in which 16 channels are simultaneously selected.

1 Turning to Slide 10. Slide 10 shows Claim 1 elements are taught by
2 the combined teaching of Kamieniecki and Konstantinos. The analog to
3 digital converter is shown by the ADC 204 red and Konstantinos' multi-
4 channel receiver. The channelizer is shown by the Konstantinos' multi-
5 channel selector 205 in green in which channel selectors 207 A to N select
6 desired channels. The signal monitor is shown in 116 blue in the
7 Kamieniecki, and the data processor is included in the Kamieniecki set-top
8 box purple, which processes MPEG-2 transport streams to recover
9 audio/video. MPEG is a digital transport stream. The combination is
10 merely using known techniques, Konstantinos' receiver, to approve similar
11 devices, Kamieniecki's set-top box to yield predictable results.

12 There's no -- and in the combination, there would, of course, be both
13 channels received and DOCSIS received. The entire purpose of
14 Kamieniecki is to handle the additional DOCSIS which requires four, 6
15 megahertz-band DOCSIS tuners in order to handle the digital data.

16 And so the suggestion that somehow we lose the out-of-band, which is
17 the entire control band for a cable modem, and a set-top box is simply not
18 correct with respect to adding Konstantinos to Kamieniecki.

19 Turning now to Slide 11. Slide 11 shows that the additional -- in
20 addition to meeting the evolving market discussed in Konstantinos, the
21 Konstantinos' improvement would help Kamieniecki's set-top box perform
22 better.

23 The set-top box can receive many channels at once so there's no
24 longer a need to limit its monitoring to idle periods. You could watch one,
25 record another. You could watch one channel, have another channel in a
26 picture in picture. You could record multiple channels, and watch channels.

1 In fact, errors that occur at any time of day, can be monitored, and a
2 POSITA would have wanted to monitor performance even during heavy
3 usage. It also leads to faster channel changing. You can basically pre-tune
4 those tuners, and you don't have the delays when you're switching between
5 digital channels.

6 Turning now to Slide 12. Slide 12 shows that one --

7 JUDGE MOORE: Counsel?

8 MR. MEEKER: Yes.

9 JUDGE MOORE: This is Judge Moore. So Patent Owner focuses on
10 a figure in the petition where -- I'm not sure what page it's on -- but it
11 illustrates the in-band/out-of-band channels being completely replaced by
12 Kamieniecki's ADC channel selector set up. Is that what's happening in
13 your combination?

14 MR. MEEKER: We -- you know, our combination, if you look at the
15 paragraph that lays out that combination which is on the screen now. It's
16 Slide 12 if you have that in front of you. You can turn to Slide 12 of your
17 demonstrative. Okay.

18 Slide 12 talks about combining Konstantinos with Kamieniecki. Also,
19 would be merely using known techniques, a single-chip multi-channel
20 digital receiver, to improve similar devices Kamieniecki's set-top box
21 having multiple tuners, to yield predictable results converting the RF signals
22 into multiple digital outputs.

23 A POSITA would have had the skill to implement Konstantinos'
24 teachings in the system of Kamieniecki because Kamieniecki's in-band and
25 out-of-band tuners use the same input, RF signal, and same outputs, digital
26 signal, of the desired channel as those of Konstantinos' multi-channel

1 receiver chip, and the POSITA would be familiar with the design of RF
2 receivers.

3 So in this case, the combination is much broader than what the Patent
4 Owner has portrayed it to be. But even if you took what Patent Owner --

5 JUDGE HOWARD: This is Judge Howard. But isn't it true -- I'm
6 looking at Page 32 of your petition -- you pretty much describe just doing a
7 physical substitution. You say the Kamieniecki/Konstantinos combination
8 replaces the IB and OOB tuners of Kamieniecki's STB with Konstantinos'
9 multi-channel receiver. And it seems to me that's just describing, you know,
10 take one black box and substitute it in for a different black box.

11 MR. MEEKER: We have both allegations in our petition. We talk
12 about using the teachings in the Konstantinos. We also talk about
13 substituting the single chip broad spectrum tuners. Both work in our
14 combination. If you look at Konstantinos, the broadband tuner is designed
15 to accommodate the DOCSIS channels. So we think both meet their claim
16 limitations.

17 So whether you have a broadband tuner that tunes across all
18 spectrums, it still has to have a data channel. It's still -- the entire reason for
19 having that broadband tuner is to accommodate DOCSIS.

20 So Konstantinos' DOCSIS teachings, those six megahertz DOCSIS
21 channels, the four, required by the new DOCSIS channels, are the out-of-
22 band channels. That is the data channels that are provided in the DOCSIS
23 modem, also enables you to hook a computer up.

24 So either way you approach it, whether it's as we show on Petition
25 Pages 34 to 35 where you take Konstantinos' teachings and apply it to
26 Kamieniecki, or whether you do a replacement, you're going to end up in the

1 same place with a broadband full spectrum tuner that allows a, basically, a
2 spectrum analyzer across the entire band and monitoring multiple channels
3 simultaneously while it's also in operation, you're going to end up in the
4 same place. It's a difference without a distinction. That's our position.

5 JUDGE MOORE: This is Judge Moore again. So the idea is that the
6 information was being conveyed on the out-of-band channels in
7 Kamieniecki would just be on a different channel of the channels on
8 Konstantinos?

9 MR. MEEKER: Yes. It would just be -- it's part of the spectrum. So
10 the way digital cable was aligned, and you can see this in the expert
11 testimony, 30 to 108 megahertz originally was reserved for channels.
12 Everything above 108 megahertz up to multiple gigahertz is reserved for
13 data.

14 So Konstantinos -- and they're all divided into six megahertz bands or
15 in the really old days, if you go back to the start of cable systems, the control
16 channel was only like one or two megahertz, but as soon as DOCSIS came
17 in, they all went on six megahertz chunks.

18 And so the lower part of the spectrum, below 108 megahertz, is
19 typically reserved for TV channels, and the upper part of the spectrum is
20 typically reserved for data or digital channels. And they're interchangeable.
21 You can have digital channels or you can have it for data or television.

22 And Konstantinos' just says we're going to have a broadband tuner,
23 and we're going to tune the entire range, and then you can select it out and
24 use it for whatever you want to use it for.

1 So it's a distinction, but it both gets us to the same place. We're
2 going to have a broadband tuner in front of a monitor and outputting
3 television channels.

4 Okay. Is there are any other questions on that, or?

5 JUDGE MOORE: No. Please proceed.

6 MR. MEEKER: Okay. Turning to Slide 13. Patent Owner pursued
7 its physical substitution argument even though the '008 Patent claims no
8 relationship between the monitor and the data processor or decoder.

9 During the questioning of Petitioner's expert, Patent Owner's counsel
10 demanded physical substitution details about where the decoder, the data
11 processor, would be in relation to the monitor.

12 So turning to Slide 14. If you look at their own patent, the data
13 processor has no relation to the monitor. They both receive channels. So
14 he's trying to get the expert to say is the monitor in front of the data
15 processor or behind the data processor? And they're completely separate.
16 Like, the question, it's a trick question.

17 The monitor in the claims and in the '008 Patent, doesn't go in front
18 or behind of the data processor, the monitor is separate. And also, even in
19 where it's monitoring separately, it still has to have a data processor as part
20 of the monitoring. So in that monitoring channel, none of the details are
21 shown.

22 But within that monitoring channel, if you're going to get modulation
23 error rate, MER, typical one of the components that you would get, the
24 monitoring would come in front of the data processor which is actually in
25 the middle of the monitor.

1 And if you're going to get bit-error rate, the data processor -- the
2 monitor would come after the data processor. So like, there's not the details
3 shown here because everybody knows how to do monitoring of modems and
4 cable modems, and has for decades before this. But within that monitoring
5 box, there's a lot of details not shown.

6 And if you're going to monitor all these other channels, it basically
7 has links into those channels, into the processor, into the digital demodulator
8 so that it can collect data like MER and VER. But none of that stuff is
9 shown in the '008 Patent. They assume one skilled in the art knows how to
10 do it. And so all this questioning of the expert doesn't come before or after.

11 If you look at David Lett's testimony, Mr. Lett, like, go to Slide 15.
12 Fifteen shows that despite the fact no structural relationship was recited in
13 the claim, Mr. Lett explained that the decoder could be in the monitor pad,
14 but it needn't be; it depends what is being measured. So typically, the
15 monitor's going to measure before the decoder in order to get MER, and it's
16 going to measure after the decoder to get VER.

17 So either the monitoring path has to include a decoder, or it's going to
18 tap into the decoders used in each of the other demodulation pass. But none
19 of that detail is shown in the '008. They just assumed. It's known to one
20 skilled in the art how to build this. But Mr. Lett said this is what needs to
21 happen. He explained how it operated. And none of those details are shown
22 in the Patent of the '008.

23 Turning to Slide 16. Slide 16 addresses Patent Owner's argument that
24 power and interference issues would have prevented a combination, but this
25 is the same problem they have in their own patent. And Konstantinos'
26 Paragraph 61 describes how it's interleaved ADCs avoid pushing extremes

1 of speed and power consumption addressing the power concern, and
2 Konstantinos' Paragraph 104 discusses how in this approach provides
3 benefit in power consumption and reduced interference.

4 At the bottom of the '008 Patent, states that the ADC also uses
5 interleaved ADCs incorporating it by reference from another application.
6 The '008 Patent itself does not address the power and interference issues.

7 And finally, as addressed at Page 2 to 3 of the Reply in Paragraphs 8
8 to 9 of Mr. Lett's Reply Declaration, Exhibit 1032, power was easily
9 addressed with commercially available power supplies and interference was
10 easily addressed with added shielding. These were not difficult issues for a
11 POSITA.

12 And as you'll see later in the presentation, Patent Owner introduced
13 their own evidence that showed that Broadcom had a broadband full
14 spectrum combined tuner and gateway three months before their alleged
15 conception date. It was announced as a product before they filed their
16 provisionals.

17 So these problems were already well solved in the industry and
18 Konstantinos tells you how to do it.

19 Turning to Slide 17.

20 JUDGE MOORE: Counselor?

21 MR. MEEKER: Yes.

22 JUDGE MOORE: Judge Moore again. So it seems to be that the
23 POSITA that Petitioner identifies, which is a person with a bachelor's
24 degree, I think, and two years of experience would not be able to do this?
25 [inaudible]

1 MR. MEEKER: I absolutely disagree with that, Your Honor. It was
2 already commercially available from Broadcom at this time. Like these
3 broadband tuners, it wasn't a technical problem to build them, it was really
4 when it made cost sense.

5 Like, if you only needed two tuners, it was more cost-effective to buy
6 two off-the-shelf tuners. If you needed, like, more than two tuners, it
7 became more cost-effective to buy like a single chip, what they call full
8 broad spectrum tuner or full-band tuner is what the industry term at the time
9 was.

10 And Broadcom announced their product three months before this.
11 And that's in the Patent Owner's own evidence they submitted. If I would
12 have had that evidence prior to filing my petition, I would have included it,
13 but they included it for us. And Broadcom had a full-band spectrum
14 analyzer, full-band tuner that was a product three months before their
15 earliest provisional filings and their earliest alleged conception date. So this
16 problem was well solved.

17 JUDGE MOORE: And then this person with three years' experience
18 would be able to build that?

19 MR. MEEKER: Yes. At the time, they were, you know, I think
20 Judge Laney (phonetic) asked a similar question earlier this week. But these
21 are custom ASICs that you could go buy whether it's from MIPS or ARM
22 and they're basically macro blocks. You could get full spectrum tuners as
23 part of those. That was well known in the art.

24 So if you've got two or three years' experience, you're basically just
25 going into a VHDL library in a custom ASICs shop and you're dragging and
26 dropping macros. If you need a tuner or a full- band tuner, you can drop a

1 macro. This is not that complicated. So it's basically, at this time, these
2 were very high-level description language. VHDL programming chunks.
3 So like, if you need a macro for one function or the other, you can drag and
4 drop it in your chip, and it'll build it out for you.

5 So the answer is yes, you can do this with somebody with ordinary
6 skill in the art. And our expert at the time was designing this, and he had --
7 most of the people on his team were engineers with a few years' experience.
8 He had a couple of people, like, Patent Owner's expert, that did have more
9 experience, but for the most part, their team was comprised, on average, of
10 younger engineers. This was a cool, neat area that a lot of folks were
11 working in.

12 JUDGE JURGOVAN: Counsel, I'm unclear. Where is this evidence
13 in the record of the Broadcom device?

14 MR. MEEKER: The Broadcom device. Can you jump to that, Steve?

15 MR. CHANG: Yes. This one, we have it in Slide 49.

16 MR. MEEKER: So if we turn to Slide 49. This is evidence submitted
17 by the Patent Owner, but it's very telling. And if you look when the Patent
18 Owner said when they introduced this evidence, and they have a slide in this
19 proceeding where they said, the Broadcom device was released close in time
20 to our device.

21 But if you look, the Broadcom device was released. Like, their public
22 announcement of their broad spectrum digital tuner was June 2011. And
23 they -- then MaxLinear or the Patent Owner's predecessor in interest, ran off
24 and filed a bunch of provisionals in September, three months after their
25 competitor introduced a full spectrum tuner.

1 So Broadcom's device was, you know, released as a product in June
2 2011. They didn't get around to filing their provisional applications until
3 September 2011, a full three months after the Broadcom device was released
4 publicly.

5 JUDGE JURGOVAN: Thank you.

6 MR. MEEKER: Okay. Turning to Slide 18. Slide 18 shows that
7 even if DOCSIS and the out-of-band channels are fundamentally different as
8 Patent Owner alleges, the combination would still not have been too difficult
9 for a POSITA. Set-top boxes had already figured out how to receive
10 DOCSIS in 2002; years before the 2011 priority date of the '008 Patent.

11 Patent Owner's own expert admits that the Explorer 4200; this is a
12 Scientific-Atlanta explorer, both Patent Owner's expert and Petitioner's
13 expert worked for Scientific-Atlanta at the time, and so there was a lot of
14 questions about Scientific-Atlanta's set-top boxes.

15 Well, in 2002, they had DOCSIS tuners and DOCSIS modems in the
16 set-top boxes which are years before their 2011 priority date. And if you
17 look, Patent Owner's own expert admits that the Explorer 4200 set-top box
18 released in 2002, he characterized it as a basic set-top box, but it already
19 included a DOCSIS modem and DOCSIS tuner that was capable of
20 receiving out-of-band channels. So this was already known in the art years
21 before these applications were filed.

22 Turning now to Slide 20, or I'm sorry, Slide 19. Slide 19 addresses
23 Patent Owner's argument that in the combination there simply would be no
24 out-of-band functionality anymore, and that this would make the set-top box
25 unable to report measurements.

1 Well, it would make the set-top box completely unusable. So this is
2 not a combination that Petitioner put forth. The Patent
3 Owner -- this is a straw man argument that the Patent Owner said. Patent
4 Owner is saying that in their combinations that they made up, there would be
5 no out-of-band functionality. The Petitioner never proposed stripping all
6 out-of-band control channels from the cable set-top box. There would be no
7 way to buy programs, there would be no way to purchase VOD. There
8 would be no control channel upstream to acknowledge packets. Like, there
9 is no way that a set-top box can work without out-of-band functionality, but
10 that's the straw man that the Patent Owner has set up. They're saying that in
11 the combination we're proposing, there would be no out-of-band channels.
12 That is entirely not what we'd propose and it's just something that's a
13 litigation made up.

14 I mean, just because you have a full-band tuner, doesn't mean you're
15 going to get rid of your out-of-band channels. That just -- it's not something
16 we ever proposed; it's a complete straw man.

17 So Patent Owner has misstated the combination, the out-of-band
18 functionality remains in the combination. The out-of-band channels would
19 simply be one more channel received by the Konstantinos' multi-channels
20 receiver. Patent Owner's surreply incorrectly states that this was unrebutted.
21 Mr. Lett explained this is his Declaration, Exhibit 1002, Paragraph 116 and
22 his Reply Declaration, Exhibit 1032, Paragraph 10, and Petitioner addressed
23 this in his Reply at Pages 5, 6, and 11.

24 Turning to Slide 20.

25 JUDGE MOORE: Counsel?

26 MR. MEEKER: Yes.

1 JUDGE MOORE: Did that -- Judge Moore, again. Is there something
2 in the Petition that explicitly says that in the combination, the out-of-band
3 functionality would be retained?

4 MR. MEEKER: There is. In fact, if we go back to Slide 19. If you
5 look at Slide 19, we have excerpted Petitions 34 to 36. And in particular, it
6 says Petition at 38.

7 In the Kamieniecki-Konstantinos combination, the in-band and out-of-
8 band channels of Kamieniecki would be the RF input that is received by the
9 Konstantinos' multi-channel receiver 200.

10 So in our Petition, we say that the Kamieniecki-Konstantinos
11 combination still includes in-band and out-of-band channels. And that's
12 Petition at Page 38 on Slide 19 of our demonstratives.

13 Turning to Slide 20. Slide 20 addresses Patent Owner's argument that
14 Kamieniecki's set-top box could only monitor analog signals. Patent Owner
15 initially based this assertion that Kamieniecki does not disclose analog to
16 digital converter or anything like it. But Kamieniecki receives digital
17 transmissions like MPEG-2 and digital video referenced in Paragraph 4
18 shown on the left of Slide 20.

19 Patent Owner's own expert admitted that in order to receive such
20 digital transmissions, there would have to be an analog to digital converter in
21 there somewhere. This digital functionality shows that when Kamieniecki
22 refers to monitoring all channels, it was monitoring both digital MPEG
23 channels and analog channels.

24 Turning to Slide 21. Kamieniecki broadly teaches monitoring. Slide
25 21 includes digital characteristics. So Kamieniecki's Paragraph 19 to 20
26 monitor errors and dropouts of the digital out-of-band control channel, and

1 from forward downstream transport channels which include MPEG
2 channels. Kamieniecki Paragraph 1 monitors digital acknowledgement, AC,
3 and negative acknowledgement, NAC, or pinged messages also digital in the
4 set-top box to the headend and back.

5 So you can't get from the headend and back unless there's a digital
6 out-of-band control channel, and those tuners tune to digital. You can't have
7 MPEG unless Kamieniecki tunes to digital.

8 Turning to Slide 22. Slide 22, Patent Owner retreats from its original
9 position that Kamieniecki lacked an analog to digital converter. And newly
10 argues in its surreply, so this is a new argument in the surreply, that if
11 Kamieniecki had an AD to DC, an analog to digital converter, then the
12 combination would resolve in having two analog to digital converters. One
13 on the left from Konstantinos and another on the right for Kamieniecki.

14 Well, this is just a made-up argument, like, no one would put two
15 analog to digital converters in. It's a relatively expensive component, and so
16 you would not put two back to back. I suppose if you put two back to back,
17 you're still going to get digital out, but in any event, it's not the combination
18 we proposed. It is basically a made up, another straw man argument of how
19 you wouldn't do it, not how we propose doing it. And, again, this
20 argument's only made in the surreply, so it's waived. So it's a new straw
21 man argument. A POSITA would easily understand that Konstantinos'
22 ADC would perform the analog to digital conversion, and that Patent
23 Owner's expert would have to be there somewhere in Kamieniecki. No
24 POSITA would include two in-line, back to back analog converters.

25 Turning to Slide 25. Slide 25, Patent Owner argues that the
26 combination would alter a 1:1 ratio of Konstantinos saying that

1 Konstantinos, every selected channel must go to a decoder, and the decoder
2 would need to be removed if a selected channel was monitored.

3 But if you look at what Konstantinos says, it says in its -- this is at the
4 bottom at Exhibit 1032, Paragraph 43, it says in an embodiment, each of the
5 outputs represents a channel that may be further processed by a decoder.

6 So you might have each six megahertz channel might carry 12
7 channels so you would have, you know, a hundred megahertz of channels
8 which has some larger number of channels. And then, like, you don't need
9 to have a hundred decoders, because you have a hundred channels or a
10 hundred frequency bands, you could have ten decoders or some smaller
11 number. You don't have to have one to one. So even in Konstantinos they
12 have two, but they have a lot more channels than two decoders. Go ahead.

13 JUDGE MOORE: In other words, you would switch the channels to
14 the decoder?

15 MR. MEEKER: You do. You have a selector, Your Honor. So the
16 decoder sits there. Most cable people -- like, if you're watching television,
17 you're not going to watch ten channels. You might record two, you might
18 watch one, you might have a picture in picture, and then you might have
19 four out-of-band for your laptop, but you're not going to need 20 decoders
20 or 200 decoders. So nobody puts 200 decoders in a box. You basically have
21 a selector.

22 And once you demodulate, you know, 200 channels worth of data,
23 you're going to select some smaller number of decoders. And that's just,
24 you know, everybody has a channelizer built in.

1 So we never argued that there's a 1:1 ratio. Konstantinos nor
2 Kamieniecki show a 1:1 ratio. There's more channels than there are
3 decoders. And so this is just another straw man that we didn't propose.

4 So turning to Slide 26. Slide 26 shows Patent Owner's argument that
5 Kamieniecki already had a multi-channel tuning in-band and out-of-band,
6 and yet still waited for idle to monitor. So it must have liked waiting for
7 idle. This is the Patent Owner's argument. But Patent Owner's argument is
8 an admission that Kamieniecki teaches monitoring out-of-band while tuning
9 to an in-band channel, and that's all that's required in Claim 1.

10 So it says -- so if you look at Patent Owner's expert, at 84, he admits
11 to everything in the claim. Based on Konstantinos' disclosing only a single
12 in-band tuner and a single out-of-band tuner, Kamieniecki's set-top box
13 could select and monitor only a single channel and a single out-of-band
14 tuner at a time.

15 So basically, the claim only requires a first and second portion. So in
16 Paragraph 84, their own expert admits to as much as the claim requires, that
17 Kamieniecki has an out-of-band tuner for monitoring one channel, and an in-
18 band tuner for tuning to a channel.

19 So Slide 26 shows Patent Owner's argument that Kamieniecki already
20 had multi-channel tuning in-band/out-of-band. Patent Owner's goal -- or
21 Kamieniecki's goal is to monitor all channels. It only waited for idle
22 because it only had a single in-band tuner as shown as Figure 1, and a single
23 out-of-band tuner.

24 The multi-channel in-band functionality is taught by Konstantinos.
25 There is no reason to wait. And the set-top box can still monitor channels
26 without disturbing users. The motivation for the combination is that the

1 evolving market, DOCSIS, required set-top box with multi-channel
2 functionality.

3 Now turning to channel 27 -- a slide. Let's see here. Yes, turning to
4 Slide 27. This is the Independent Claim 3 and Independent Claim 1. Patent
5 Owners don't argue these separately, and they're essentially the same
6 limitations.

7 So turning to Slide 28. Slide 28 looks at Ground C for Claims 9 and
8 17. And Claim 9 and 17 state wherein one or more circuits resides in a
9 customer premises gateway.

10 Kamieniecki Paragraph 2 recognizes that set-top boxes have cable
11 modems in them in Kamieniecki, and hence, are gateways. A POSITA
12 would recognize the Kamieniecki set-top box with his cable modem is an
13 example of a customer premises gateway.

14 Turning to Slide 29. In Slide 29, we see that the '008 Patent uses
15 gateway and set-top box interchangeably in column 5, lines 36 to 37, it talks
16 about gateway/set-top box.

17 So at this time, and for many, many years preceding this as testified
18 by both experts, set-top boxes typically included a cable modem within
19 them. So accordingly, and the '008 Patent uses gateway/set-top box
20 interchangeably. Accordingly, the claim customer-premised gateway reads
21 on Kamieniecki's set-top box. And this point was not addressed in the
22 rebuttal.

23 Okay. So turning to Slide 30. Slide 30, the secondary reference
24 Cholas shows that when a set-top box and cable modem are integrated, that
25 was known as a premises gateway. It would have been obvious to use

1 Kamieniecki gateway. If I could jump ahead to Slide 34 and just touch
2 briefly on Renken.

3 Thirty-four shows Renken's provisional. Renken's provisional shows
4 the cable modem and on the bottom shows the downstream receiver.

5 So if we could turn to Slide 35. Patent Owner suggests that Renken
6 chose to concurrently monitor the output, the first portion of said digital
7 signal and said monitor a second portion of said digital signal, but the
8 monitor in -- all right. Let's go to 36, Steve. I just need to jump ahead. I'm
9 almost out of time here.

10 So 36 -- the monitoring into the processor and the measurement data,
11 so the monitoring does go into the processor, but it also collects
12 measurement data from every channel tuned and demodulated.

13 The measurement data at the bottom, in fact, flows back into the
14 processor. So the blue at the bottom, there's measurement data coming out
15 of the wideband tuner, ADC, DDC, QAM and MPEG, all of that is fed back
16 into the processor.

17 So go to 37. So the monitor is typically referred to as the processor
18 even though it collects data from the decoder and from the QAM
19 demodulator.

20 So if you look at our petition, Pages 18 to 19, even though we said the
21 processor is the quote claimed signal monitor, if read in context, this signal
22 monitor collects data. The bit error rate has to come out after the decoder,
23 and the modulation error rate comes out after the demodulator.

24 So the signal monitor includes these components that are in the
25 decoder and in the digital demodulator that produced the MER and the BER,
26 and then feed it back to the processor. The processor runs a program where

1 it checks all of these demodulators and all of these decoders, and then feeds
2 the data back into the signal measurement.

3 And I'm going to reserve the rest of my rebuttal time. Thank you,
4 Your Honors.

5 JUDGE MOORE: Thank you. And when you're ready.

6 MR. ENGEL: Thank you. Good morning, Your Honors. Jason
7 Engel on behalf of the Patent Owner.

8 I'm going to try to keep things brief today and on topic. As
9 Mr. Meeker mentioned, in IPR2024-442 which is the '826 Patent which is
10 related. We had a lot of argument about motivation to combine and
11 expectation of success, that's for Grounds A to C. That's all addressed in
12 our briefs. We're largely going to rest on our briefs today.

13 I do want to mention that it really is also expectation of success in the
14 combination, not the references by themselves. And we heard a lot of new
15 argument today from Patent Owner's Counsel, and I don't think they're
16 planning on briefs. Mr. Meeker is definitely knowledgeable about the cable
17 industry, but a lot of this should have been in the briefs that was going to be
18 considered today.

19 Petitioner's expert in this case, Mr. Lett, relies on -- supplies
20 testimony for what we believe are three missing limitations. Two of those
21 limitations go hand in hand, and one of them will stand on its own. I'll get
22 into that in a minute.

23 But part of the reason we want to step back and talk about this is Mr.
24 Lett's testimony is improper under the Board's precedential guidance.

1 This is a case cited in our Patent Owner's response. It's the Xerox
2 versus Bytemark case. It's IPR2022-624, Paper Number 9, Designated
3 precedential on February 10th, 2023.

4 And at Page 16 of the Opinion, one of the conclusions of the Board is
5 talking about conclusory expert testimony that supplies in the single
6 limitation. This is particularly problematic in cases like here, where like
7 here, expert testimony is offered not simply to provide a motivation to
8 combine the prior teachings, but rather to supply a limitation missing from
9 the prior argument. I think that's what we'll see today and as we go through
10 our argument.

11 The Xerox case, taken in conjunction with Federal Circuit precedent,
12 you know, says you can't supply limitations from an expert, but I think that
13 takes on a new meaning in light of the recent Qualcomm versus Apple
14 Federal Circuit case; this came in after the briefing that was done April 23rd,
15 2025. And in that case, which is 134 Fed.4th 1355. I'm going to go to a
16 pincite of 1364.

17 So Section 311(b) states that a petitioner may request to cancel as
18 unpatentable -- claims -- only on the basis of prior art consisting of patents
19 or printed publications.

20 This means that the basis of an IPR ground asserting unpatentability,
21 can only include prior art consisting of patents or printed publications. And
22 I understand Qualcomm, too, was not in the context that the applicant
23 admitted prior art, but on a positive, you can't keep pulling things in that
24 aren't in the references. You know, you have to base it on patents and
25 printed publications, and here we'll show that Mr. Lett is a ground that is a
26 basis that the Petitioner is using in this case.

1 Let's go to Slide 9, please, Mr. Fuller. For Grounds A to C, the
2 combination that Petitioner proposes is what's shown on Slide 9. It is a
3 substitution of the one chip, or the single-chip implementation of
4 Konstantinos into the Kamieniecki architecture.

5 Now, we heard a lot of argument at the last hearing about whether it's
6 a physical substitution. You know our feelings on that. We think it is, we
7 relayed that --

8 JUDGE HOWARD: Counsel, this is Judge Howard. Concerning the
9 recent Qualcomm case, why didn't you ask for permission to brief it so that
10 we could have heard from both parties in briefs, if you want us to consider
11 it?

12 MR. ENGEL: I think that's a good point, Your Honor. It really
13 didn't come to fruition as we were preparing for the hearing, and we were
14 looking through the case law and noticed that that case has applicability
15 here.

16 MR. HOWARD: Okay. But if [inaudible] and still make clear of the
17 earlier Federal Circuit precedent about the use of expert testimony was still
18 allowable in finding missing elements?

19 MR. ENGEL: I don't know that it can supply the missing element in
20 an IPR. I think it could be used for motivation to combine if used for
21 context, but I don't think if the element's missing from the prior are that the
22 expert can supply it. I think that's what's clear from Bytemark. And I don't
23 think that's not been overruled by the Federal Circuit.

24 MR. HOWARD: But it's not what Bytemark was talking about
25 though. Bytemark was talking about when you just had the expert parroting
26 a petition without any support making conclusory opinions, and that's not

1 what we have in this case. We have an expert who cites extensively to the
2 prior art in support of his opinion.

3 MR. ENGEL: I think we do have sections where his supply of the
4 missing limitation is a conclusory citation that doesn't have underlying
5 evidence.

6 But more importantly, I think this case does mirror Bytemark in a
7 certain sense because I think they are the prior reference that you would do it
8 one way, and then the expert says oh, you can actually do it this way. And
9 that's similar to what we have here where, you know, for example,
10 Kamieniecki says idle and they rely on their expert to say well, you don't
11 have to do that; you could do it this way. All right. Move on, Judge
12 Howard, if that's okay?

13 JUDGE HOWARD: Okay. Yes. I just started looking at the
14 Qualcomm case, but I was looking for it. But go on. I'll get back to you.

15 MR. ENGEL: Okay. Going back to the combination. Whether this is
16 a physical combination or not, this is what Petitioner's proposed.
17 Konstantinos is one chip, stick it into Kamieniecki.

18 We heard today that there were two combinations. I don't know what
19 the second combination is, but I'm pretty clear that it was one combination
20 and there was no additional hardware or software from Konstantinos that
21 was being imported in. And we have admissions from their expert to that
22 point.

23 One thing to keep in mind is, they haven't proposed to change the
24 head end at all of Kamieniecki. They haven't proposed a change to the RF
25 input signal of Kamieniecki. In fact, in the Petition at Page 38, it says, in the
26 Kamieniecki-Konstantinos' combination, the in-bound and out-of-bound

1 channels of Kamieniecki would be the RF input that is received by the
2 Konstantinos' multi-receiver 200.

3 Well, that creates a problem because in Kamieniecki you had in-
4 bound and out-of-bound channels, and there's expert testimony that those
5 are different sizes.

6 In Kamieniecki, the in-bound was typically six megahertz and the out-
7 of-band, or -- yes, and the in-band was six megahertz and the out-of-band it
8 was one to two megahertz. And so if you're not changing the head end,
9 you're not changing the RF signal, how else does Konstantinos' single chip
10 that's a DOCSIS chip going to work in that implementation?

11 Moving on to Slide 10. We see from the Petition at 33 and 34 another
12 example of using Konstantinos' multi-channel receiver in place of
13 Kamieniecki's in-band and out-of-band tuners.

14 Moving on to Slide 12. This is expert testimony from Mr. Lett. And I
15 think there's a couple things to just keep in mind here. He used the word
16 replace quite a bit throughout his testimony.

17 If we could focus on the middle quote at the top. There's a question
18 about you're not opining that additional hardware is necessary between the
19 multi-channel receiver of Konstantinos and the monitor of Kamieniecki,
20 correct? Correct. So this is an affirmation that all he's importing from
21 Konstantinos is that single chip implementation into Kamieniecki. And that
22 will become important later when we get into other -- the other -- the actual
23 limitations.

24 So I would like to highlight one more answer that just kind of frames
25 where we are, that's the question and answer on the right. And in the answer
26 Mr. Lett says we're taking the single chip implementation, disclosed by

1 Konstantinos, and using that for the channel selector functionality. And
2 we're in the architecture of Kamieniecki. So single chip from Konstantinos
3 in the Kamieniecki architecture.

4 Now, if you could turn to Slide 16, please. So on Slide 16, we have
5 the claim elements on the left, and the petition support on the right, and the -
6 - I want to talk about first two claim limitations that kind of go hand in hand
7 in my mind.

8 The first one is the third on the left down. The data processor
9 operable to process a television channel to recover content carried on with
10 the television channel. And really here, the combination proposed by
11 Petitioner adequately disclosed that and where it's located. I'm going to call
12 that the data processor limitation.

13 The second limitation is the concurrently outputs at first portion of
14 said digitized signal to said signal monitor and said -- second portion of said
15 digitized signal to said data processor. I'm going to call that the
16 concurrently output limitation again. Those two go hand in hand.

17 The third limitation I'm going to talk about is the single monitor
18 operable to analyze the digitized signal, and I'm going to call that the signal
19 monitor limitation.

20 Starting with the data processor limitation. The support that is relied
21 upon on the right is first, that Kamieniecki's set-top box would obviously
22 have an encoder to decode the MPEG-2 stream, and they cite Mr. Lett for
23 that. Notably, the decoder's not explicitly laid out in Kamieniecki. And the
24 reason it's not explicitly laid out is in Kamieniecki, which is Exhibit 1009, at
25 Page 4 of the exhibit, Page 2 of the text of the patent application, it's
26 Paragraph 14 at the end. It says the transmitter, e.g., modem and other

1 details of the set-top box which are well known to those skilled in the art are
2 admitted for illustrative clarity.

3 So if there's a decoder in Kamieniecki, it's something that is omitted
4 for illustrative clarity and it's known to those in the art, but the issue
5 becomes where is the decoder in Kamienicki? And that becomes important
6 in how the combination is laid out.

7 Now, there is --

8 JUDGE MOORE: Counselor, Judge Moore. I mean we're talking
9 about cable boxes right? So you're not arguing that --

10 JUDGE JURGOVAN: We'll pause until Judge Moore comes back.

11 JUDGE MOORE: I apologize. I'm back, I think? Am I back?

12 MR. ENGEL: Yes.

13 JUDGE MOORE: Yes. So we're talking about cable boxes, right?
14 So definitely, a person skilled in the art is going to understand that your --
15 you know, the processor that's processing your channel to recover the
16 content, right?

17 MR. ENGEL: I think that that would be known to those skilled in the
18 art. I think the point here is that there is no explicit disclosure of where that
19 decoder is located, and that becomes important in
20 what -- what is the combination at the end of the day and what are were
21 relying on for the combination.

22 And it comes into when we talk about testimony from Mr. Lett, and
23 we'll get to that in the next few pages.

24 So there is mention of --

25 JUDGE HOWARD: Counsel, this is Judge Howard. I want to get
26 back to the point I had earlier --

1 MR. ENGEL: Sure.

2 JUDGE HOWARD: -- now that I've had a chance to look back over
3 Qualcomm and what it cited. It cited approvingly that Koninklijke Philips
4 case. That is 948 F.3d 1330, where the Federal Circuit affirmed a Board's
5 finding of unpatentability where this is a single reference, and they relied on
6 the expert testifying about the knowledge of one of ordinary skill in the art
7 to find the missing limitations. How is your argument consistent with that
8 case?

9 MR. ENGEL: Do you know where that's discussed at? What part of
10 the Qualcomm Decision that is?

11 JUDGE HOWARD: Well, it's discussed on -- I'm looking at the slip
12 op, it's on Page 17 to Page 18 going into it. We've also discussed the lock
13 in the Qualcomm 1 Decision on what could be relied on.

14 MR. ENGEL: Could I circle back to this, Judge Howard?

15 JUDGE HOWARD: Sure. But this is the problem when making new
16 arguments during an oral hearing which is why, as a general matter, we
17 don't consider it now. So yes, you can get back to me.

18 MR. ENGEL: I'll get back to you on that. And I will, you know, I
19 will circle back to that. I think that we do think Bytemark applies here, and
20 I'll get into that when I get into the arguments.

21 So the second part, there's a mention with the data processor that
22 Konstantinos also has decoders. Again, Konstantinos doesn't illustrate
23 whether its decoders or add it says it's not illustrated. We think they're also
24 not part of the single chip, and as Mr. Lett confirmed, he's not pulling any
25 additional hardware in, so we don't think he's relying on the decoders of
26 Konstantinos for his combination.

1 And turning to Slide 32, please. Slide 32 is a deposition exhibit of
2 Mr. Lett. And this was where we were trying to understand how he was
3 drawing the combination, and how there would be data processors present in
4 the combination, as well as, you know, how the concurrent output would be
5 shown. And at the end of the day, he refused to, you know, draw the
6 combination at all.

7 And if we go to Slide 20, we see from his deposition testimony, the
8 answer, it says the witness, in the middle there, he says I believe it would be
9 a new opinion for me to draw this block diagram.

10 So we as we sit here today, we don't know where the data processors
11 that he is relying on for the data processor limitation are located in the
12 combination where he substituted in that single chip into Kamieniecki
13 architecture. And we don't know from Kamieniecki or Konstantinos where
14 those would be as well.

15 JUDGE MOORE: Counsel, this is Judge Moore. Do the claims
16 require that that be in a particular place?

17 MR. ENGEL: They do, but a concurrently output limitation because
18 you have to have the ability to concurrently output to a data processor and to
19 the monitor.

20 JUDGE MOORE: Aren't the multiple outputs streams concurrent?

21 MR. ENGEL: They're concurrent but they all go to decoders in
22 Konstantinos as far as we understand. But in the combination he hasn't even
23 pulled over the decoders from Konstantinos, so you know, where is the
24 decoder located in the Kamieniecki reference?

25 You know, it's testimony that, again, this is a missing limitation, he
26 didn't even supply what the combination looked like at the end of the day.

1 And he did -- I will note he put it in a reply declaration; did not draw the box
2 then. And we still don't know today what the combination looks like.

3 So moving onto -- and I said the data processors go hand in hand with
4 the concurrently output limitation. And, you know, if it was just a data
5 processor, maybe that's met by the prior art, you know, there's not explicit
6 disclosure, but, you know, one of skill in the art would know, you know,
7 Kamieniecki likely has a decoder and Konstantinos mentions decoders but,
8 again, Mr. Lett's not pulling those decoders into his combination.

9 Let's go to Slide 16 again. And for the concurrently output limitation,
10 Patent Owner largely relies on Paragraphs 145 and 146 of Mr. Lett's
11 testimony. And this becomes important for a number of reasons, and we'll
12 get into the testimony in a minute.

13 Go to Slide 47, please. Both experts agree that Kamieniecki waits for
14 the set-top box to be idle before monitoring. We heard today that Patent
15 Owner's expert admitted that they could be monitored at the same time;
16 that's not true. I think that paragraph that was cited was saying both of them
17 do monitor channels one at a time, not that they could be monitored at the
18 same time.

19 So there was an admission trying to be read in, and if they wanted to
20 get that from Dr. Russ, they should have asked that question at his
21 deposition and gotten an actual admission, but that's not an admission.

22 I also heard for the first time today that the out-of-band can be
23 monitored while it's not idle while the in-band's in use. First off, that's a
24 new opinion that's waived. It's also not what's in Kamieniecki.

25 So if we go to Kamieniecki, in Figure 2, which is also shown on the
26 cover page which I'm showing here on the screen. You see in the flowchart

1 here, it says start. Is set-top box off/idle state? And if it's no, it goes back.
2 It's only if the set-top box is off or idle it does the monitoring.

3 And this becomes important because contrary to what counsel was
4 saying today, that wasn't a description of the in-band monitoring, that's a
5 description of monitoring in Kamieniecki. And, in fact, Paragraphs 17 to 19
6 which are under the Figure 2 description, talk about how out-of-band
7 monitoring is part of that flowchart.

8 So in Kamieniecki, there is no discussion or a sub position at all that
9 you can monitor concurrently even though it had two tuners.

10 JUDGE MOORE: All right. But, again, the Petitioner wouldn't
11 disagree with that, right? I mean, they're pointing to the other reference? A
12 --

13 MR. ENGEL: Well, they --

14 JUDGE MOORE: -- Konstantinos not allowing you to do
15 that --

16 MR. ENGEL: Sure.

17 JUDGE MOORE: -- if you have multiple channels?

18 MR. ENGEL: Sure. I guess I was addressing the argument -- the new
19 argument today that Kamieniecki itself could do monitoring out of idle, and
20 I was just pointing out that's not the case in Kamieniecki.

21 And I think the point is, and we'll get to it here, but the point with the
22 concurrent monitoring is that's not in the reference. That's supplied by their
23 expert. And Kamieniecki waits for idle. Konstantinos doesn't mention
24 monitoring, doesn't mention monitoring --

25 JUDGE MOORE: Wait, wait. Doesn't Konstantinos talk about
26 monitoring in a way that doesn't disturb the user?

1 MR. ENGEL: I don't think the Petitioner has pointed to anything that
2 says that. That's from their expert, Dr. Lett.

3 There was a discussion about Full Band Capture and capturing the
4 entire band, digitizing the entire band. That's not the invention of the '008,
5 we never said it was. And I think that Broadcom document that they showed
6 doesn't mention monitoring at all. So that's not part of the Broadcom Paper.

7 And notably, there was some indication that MaxLinear, the original
8 patentee, somehow stole this technology from Broadcom and rushed to file a
9 provisional application. Well, first off, there's no evidence of that in the
10 record.

11 But more importantly, we will be arguing to at least some of this panel
12 on IPRs 2024-432, 435, and 438 which is the '362 Patent family; those are
13 MaxLinear's full spectrum capture heads. So they filed those in 2009 well
14 before Broadcom did, so there's no -- MaxLinear wasn't stealing Broadcom
15 technology and rushing out for the Patent Office; it's two different concepts.

16 The '362 Patent family is capturing the full spectrum. Later on in the
17 years for MaxLinear figured out hey, we can actually do something else now
18 that we have all this digitized. We can create a full spectrum monitoring
19 patent, and that's what the '008 Patent is.

20 All right. Moving onto concurrently output, Slide 17, please. And we
21 have a couple of -- these are the portions of the Petition that cite to
22 Paragraphs 145 and 146 which were the concurrently output support from
23 Mr. Lett's declaration. We have excerpted some of these and we're going to
24 put them side by side with his declaration.

25 So if you go to Page 18, we've taken the first cite from Petition 43 and
26 Paragraph 145 of Mr. Lett's Declaration. And you'll see on the left-hand

1 side, it says once Kamieniecki is updated with Konstantinos' multi-channel
2 receiver, a POSITA would have recognized that Kamieniecki's
3 measurements can be made without waiting for an idle time and can be done
4 in parallel without disturbing the users.

5 And if you look on the right-hand side, that's almost a verbatim
6 recitation of the expert Declaration for the assertion its supporting.
7 Supporting -- that's not proper under Xerox versus Bytemark. And for this
8 sentence, there's no additional evidence cited. And, again, I would say the
9 standard is would, not could. You know, he's saying that you have this
10 architecture, you can do it but he's not finding the motivation in the
11 references that we can find.

12 On Slide 19 there's another similar one where the Petition, 44 it cites
13 to Paragraphs 145 and 146, and if you go to the citation at 146 it's a very
14 similar recitation, and, again, Mr. Lett's opinion.

15 And this becomes an issue as we go to Slide 28, and we're circling
16 back to -- we asked them to draw what this combination would look like --

17 JUDGE HOWARD: But, but -- this is Judge Howard. But going onto
18 that paragraph that you just cited, 146, it's more than just that one sentence.
19 If you then go and look at the next sentence, he's giving the reason for it,
20 and he's citing to specific points in Konstantinos, which is different than
21 what you had in the Bytemark case where the opinion just sort of -- where
22 the expert just gave an opinion of what a person skilled in the art would
23 understand, and didn't give any citation or any reasoning for that opinion.
24 This strikes me as being different.

25 MR. ENGEL: Were you in Paragraph 146, Judge Howard?

26 JUDGE HOWARD: I'm in 146.

1 MR. ENGEL: Okay. Yes. I think that there is -- I agree that there is
2 a citation to Konstantinos, but I don't know if that adequately explain the
3 rationale in what the combination looks like.

4 And I think when we try to say what does this combination look like,
5 he refused to answer our question, so we were left not having the ability to
6 attack what the combination was because we didn't know what it was, and
7 he couldn't draw it, so.

8 JUDGE HOWARD: Are there Federal Circuit cases that require the
9 expert to actually say exactly what the combination would look like?

10 MR. ENGEL: Well, I think when it's a physical substitution --

11 JUDGE HOWARD: I think it involved the amount of cases and it's
12 more, you know, it's always been experts, and the testimony is they're
13 talking about combining the references, and there's no evidence or
14 requirement that you actually have to show what the design of the combined
15 devices would look like.

16 MR. ENGEL: Yes. I think the focus here is concurrently output.
17 You know, that limitation. This, you know, Paragraphs 145 and 146 are his
18 entire support. We tried to see what that combination would look like. How
19 would that come together. And part of the issue we run into is the data
20 processor's a claimed limitation. He's not proposing you take the data
21 processors from Konstantinos. And if he is, he hasn't explained how that
22 would work.

23 He's relying on the, you know, the undescribed decoder in
24 Kamieniecki, and when we asked him what would that look like in the
25 combination, he refused to draw it.

1 And in Reply, Patent Owner also refused to, you know, set forth what
2 it would like, and I think that, to me, is actually pretty telling. Because if
3 this wasn't a new opinion, if it was already clear from the Petition what the
4 combination would look like, Petitioner could have drawn the combination
5 in the Reply. It didn't --

6 JUDGE HOWARD: Is there a requirement that if there is a need to
7 draw what the combination looks like, especially -- wouldn't you agree with
8 me that this is a generally predictable art, you know, as used in the Federal
9 Circuit cases? It's not like chemistry or drug development which tend to be
10 far more unpredictable, but generally -- electrical arts are generally
11 considered predictable, correct?

12 MR. ENGEL: I don't know that I would agree with that. I think this
13 is semiconductor design at a level, and I don't think it's just something that's
14 -- we had expert testimony saying it would be -- take a lot of redesign and a
15 redesign's not accounted for by the Petitioner.

16 You know, we don't know what the design is at all. And I think in, in
17 Reply, you know, rather than respond to our argument that, you know, that
18 they haven't adequately laid out the combination, for this concurrently
19 output limitation on Pages 14 to 15 of the Reply, it's about a page and a half
20 of a response. And --

21 MR. HOWARD: [inaudible] describe the details of the chip design in
22 the level that you're asking the expert to draw?

23 MR. ENGEL: No. Well, what it does do is it discusses the
24 concurrently output limitation which is absent from the prior article.

1 MR. HOWARD: But it strikes me, your end requires far more design
2 work than the inventors have given. And there are cases that says, you
3 know, that's not appropriate.

4 MR. ENGEL: Well, I think, in a minimum, you're required to explain
5 how the combination meets the concurrently output limitation. The only
6 reference that -- prior reference that discloses, digitizing the entire band and
7 concurrently offputting to a monitor and a signal, or a monitor and a data
8 processor and not waiting for idle, that I've seen is the '008 Patent. And
9 they're in hindsight, trying to reconstruct this, and our point is they haven't
10 even reconstructed it.

11 If you go to the Pages 14 and 15 of the Reply, the page and a half,
12 they say the outputs can go anywhere they are desired. And they cite -- I
13 believe they cite their petition, and I know that's something their expert said.

14 You know, and that's just -- that's not the standard. They can go
15 anywhere they desire. You know, show us what the concurrent output looks
16 like; they haven't done that, and provide us with the motivation to go to
17 concurrent output.

18 Let's move on to Slide 16. All right. Go down to the signal monitor
19 limitation. So here they have support from Mr. Lett and citation to -- yes,
20 citation to Mr. Lett -- in the proposed combination, the monitor 116 would
21 receive a selected in-band or out-of-band channel as a digital output stream
22 from Konstantinos' receiver to home.

23 And so this is Mr. Lett saying that you could just swap it in there and
24 the monitor would be able to monitor a digital output stream. We don't
25 think, based on the references in the expert testimony, that that is the case at
26 all.

1 So if we go to Slide 23.

2 JUDGE MOORE: Counsel, I -- before you get there, can I ask you a
3 question about the claim? It looks to me like it requires concurrently
4 outputting the portions of the signal --

5 MR. ENGEL: Correct.

6 JUDGE MOORE: -- but concurrently monitoring and, you know,
7 displaying the TV station. Is that right?

8 MR. ENGEL: Yes. I don't know that it requires the monitor to
9 concurrently operate on the data. I think in reality that's how it would work
10 because you're -- if someone's watching TV and you're, you know, you're
11 sending the information to the monitor to be monitored.

12 But you do have to send it to the monitor concurrently. So the output
13 has to be concurrent. So you have to have the ability in the reference to
14 output while someone's watching TV to the monitor and not interrupt that.

15 JUDGE MOORE: Does that all have to happen at the same time
16 though? I'm not clear why that has to happen at the same time.

17 MR. ENGEL: The concurrent output has to happen at the same time.
18 That's definitely a requirement.

19 JUDGE MOORE: All right. But I think you have that in
20 Konstantinos, right?

21 MR. ENGEL: Not for the signal monitor. In Konstantinos --

22 JUDGE MOORE: You're concurrently outputting streams or
23 channels?

24 MR. ENGEL: You're concurrently outputting television channels,
25 and in Konstantinos, not in the combination they would be going to decoders
26 for consumption by television or other resources.

1 And when you pull it in the combination, they need concurrent output
2 to the signal monitor and the data processor, and in Kamieniecki it waits for
3 idle.

4 With Konstantinos, you potentially could have the ability to do that,
5 but they haven't adequately explained how that would be done because they
6 haven't shown what the combination would look like at the end of the day.

7 JUDGE MOORE: Yes. I guess I'm wondering, does the claim
8 require that you have to concurrently process a TV channel and analyze the
9 signal?

10 MR. ENGEL: I think that I can say what is required is concurrent
11 outputs to each of those locations. So if you're not outputting to a signal
12 monitor you're not infringing the claim. So you would have to be
13 concurrently outputting to both of those.

14 JUDGE MOORE: Okay.

15 MR. ENGEL: All right. Moving onto Slide 23. We have testimony
16 from Dr. Lett, or excuse me, Mr. Lett, on the left-hand side, bottom, that's
17 highlighted, the signal itself, the carrier signal received by the set-top box is
18 analog. Do you agree? Yes. Mr. Russ, on the right-hand side, it says the
19 same thing that it's digital data that's been modulated upon to an analog
20 carrier, and we know that because coax is always analog.

21 Moving onto Slide 24. This really gets to an expectation of success
22 and whether it's disclosed in the references. So the downstream, on Slide
23 24, that's analog. All the experts agree it's coaxial cable, it's always analog.

24 Going in to the in-band and out-of-band tuner, there's no disclosure in
25 Kamieniecki of an analog digital converter. We've heard, you know,
26 attorney argument today that because there's MPEG stream, there

1 necessarily is an ADC in there somewhere. Well, the reference just didn't
2 say where it is. It doesn't say it has one at all.

3 And the only thing we can draw is that the monitoring is being done
4 of an analog signal. We heard a bunch of new argument today about why,
5 you know, that has to be capable of monitoring digital signals, but the issue
6 that we run into is if it can only monitor analog signals, which is what you
7 see from the reference itself; there's no disclosure in the reference of
8 monitoring digital signals.

9 If that's the case, then the expectation of success, if you incorporate
10 this digital, you know, output stream, is the monitor going to be able to
11 monitor in the digital domain? And, you know, I believe they haven't
12 proven that that's the case; especially when they don't draw what the
13 concurrent output looks like.

14 JUDGE JURGOVAN: Counsel, on the background section, doesn't it
15 say that set-top boxes can receive digital or analog signals?

16 MR. ENGEL: It does say that but coaxial cable is analog. And I
17 think when it's talking about the digital part of it, it's talking about the
18 contents. You have an analog cable, coax, and it has digital content
19 modulated onto that, that doesn't make it a digital signal coming in.

20 JUDGE JURGOVAN: That certainly is digital when the ADC
21 operates on it.

22 MR. ENGEL: What AD --

23 JUDGE JURGOVAN: Output.

24 MR. ENGEL: Yes. But what ADC? There's --

25 JUDGE JURGOVAN: Konstantinos.

1 MR. ENGEL: Yes. It would digitize it then, but then is the monitor
2 of Kamieniecki capable of analyzing digital data which is required by the
3 claim. There's been no disclosure that the Kamieniecki monitor, and they
4 haven't said they're going to change the monitor, there's no disclosure that
5 that monitor of Kamieniecki can operate on digital data.

6 JUDGE JURGOVAN: Thank you.

7 MR. ENGEL: Now, if we go to Page 27. There was some discussion
8 of -- from our expert, Dr. Russ, that's up on the Slide 27's Paragraph 92.

9 We were trying to respond to the argument that, you know, that there
10 is an ADC somewhere in Kamieniecki, and he was saying well, if you're
11 moving that around, you know, you're not accounting for the design, the
12 extensive filtering, you know, all the different things you have to do.

13 He was basically saying that if there's an ADC in Kamieniecki, which
14 it's not disclosed, and if you're replacing that with the ADC of
15 Konstantinos, you haven't accounted for that design. You haven't explained
16 how that design would work. And I think that, you know, it requires, you
17 know, additional circuitry that the Petition really did not account for at the
18 end of the day. Because if you're moving where the ADC is in
19 Kamieniecki, the undisclosed ADC, you know, you're not accounting for
20 where that would be.

21 JUDGE HOWARD: And is that redesigned? Again, something that's
22 beyond the technical skills of a person of ordinary skill in the art? And is
23 there evidence in the record to show that?

24 MR. ENGEL: Yes. There is evidence in the record in our briefing,
25 and from our expert. The person of skill in the art that the Petitioner has
26 selected, it would require extensive design and they haven't accounted for

1 how that would come together at the end of the day. And because they
2 haven't done the concurrent output and explain what the combination is, you
3 know, we're not able to respond to whether that could have been by the
4 ordinary person.

5 JUDGE HOWARD: And since you're saying Bytemark requires that
6 this testimony be corroborated, what corroborate -- could you point to
7 specifically to the testimony so I can look to see if it's corroborated the way
8 that you say it's required?

9 MR. ENGEL: I would do that, Judge Howard. I'm going to turn it
10 over right now to --

11 JUDGE HOWARD: That's fine, because my point is, it seems to me
12 you've just had an expert who's testified that this would be difficult. Did he
13 show it would be difficult? Are there references that say it would be
14 difficult to do? Or is this just a conclusory thing, and that's of the type that
15 you say is improper?

16 MR. ENGEL: Yes. I will find the location for that cite. I want to
17 give my LEAP practitioner an opportunity to argue here. And so I will sit
18 down now, and I will answer your question when I get back, Judge Howard.

19 JUDGE HOWARD: Thank you. That's fine.

20 MR. FULLER: Nathan Fuller for Patent Owner. Slide 62, please.
21 I'm here today to discuss objective indicia of nonobviousness, specifically
22 four points.

23 First, Dr. Russ' testimony regarding objective indicia stands
24 un rebutted on this record by Mr. Lett who offers no contrary opinions on
25 objective indicia.

1 Moreover, during Dr. Russ' cross-examination, counsel for Patent
2 Owner asked no questions that would call into question his opinions. They
3 asked no questions regarding objective indicia despite only being on the
4 record for an hour and 39 minutes. So they had the opportunity to, they had
5 plenty of time to, but chose not to asking questions about his opinions
6 regarding objective indicia.

7 Point Number 2. Mr. Lett actually provided testimony during his
8 cross-examination that provides additional support for Dr. Russ' opinions,
9 and for Patent Owner's objective indicia evidence.

10 Point Number 3, MaxLinear's remote spectrum monitoring
11 technology was the subject of significant industry praise because it helped
12 resolve long standing problems in the industry. Specifically, how to conduct
13 remote signal analysis without interrupting the user service because
14 MaxLinear's remote spectrum monitoring technology could be performed in
15 a quote unobtrusive manner, which will be discussed in more detail.

16 And, finally, Point Number 4, there is a nexus between that industry
17 praise and the claimed invention because as we've discussed here today, the
18 claimed invention specifically claims how to conduct signal analysis in
19 parallel without interrupting service.

20 These four points together show that Petitioner's challenges here were
21 guided by hindsight.

22 Moving to Slide 63. Before proceeding any further with the
23 argument, it's important to clarify terminology because the industry has
24 decided to use one term to mean different things. The term in question,
25 specifically, is Full-Band Capture.

1 There are two uses as Dr. Russ testifies. Again, un rebutted by any
2 testimony from Mr. Lett, that one use of Full-Band Capture is to refer to the
3 whole digitization of the whole downstream spectrum. And my colleague,
4 Mr. Engel, referenced that with respect to Exhibit 2006.

5 And while discussing Exhibit 2006, it's important to clarify that there
6 is no mention of using the digitization of the entire spectrum to monitor the
7 receive spectrum at the customer's premises. There is no mention of using
8 digitization to support monitoring for Broadcom in the June 2011 paper.

9 The second use of Full-Band Capture which is how it's used in
10 Exhibit 2009 which Patent Owner relies on for some of the opinions of
11 industry praise, uses remote -- Full-Band Capture in a way that is, once you
12 digitize the whole spectrum, do you use that digital information to conduct
13 signal analysis?

14 And so these terms can be used interchangeably as testified by Dr.
15 Russ which, again, is un rebutted by Mr. Lett, who worked with Dr. Russ,
16 and who has similar experience. And Dr. Russ, who worked in this industry,
17 is in the best position to understand how these terms can be used
18 interchangeably.

19 Moving onto Slide 64. We see here that Mr. Lett during cross-
20 examination testified that monitoring the signal without interrupting service
21 was a well known problem in the industry because at the priority date of the
22 '008 Patent, you either had a device that had to interrupt the user service
23 such as Kamieniecki, who had to wait for idle as we've discussed here
24 today, or you had to send a technician out, which, again, interrupted the
25 user's service.

1 It wasn't until MaxLinear developed its remote spectrum monitoring
2 technology as described in Exhibits 2004 and 2016 that there was a solution
3 in the market that allowed for unobtrusive signal analysis. And that
4 language of unobtrusive, moving to Slide 65 --

5 JUDGE JURGOVAN: Before you move on --

6 MR. FULLER: -- of course.

7 JUDGE JURGOVAN: -- can you explain why simultaneously
8 monitoring, like, let's take Kamieniecki. Why couldn't it simultaneously
9 monitor the channel at the same time it's outputting the data for the channel?

10 MR. FULLER: Well, Kamieniecki specifically says you have to wait
11 for the set-top box to be idle.

12 JUDGE JURGOVAN: It does. But, I mean, supposing you had a
13 switch in there and you were just -- you had the tuner tuned to the same
14 frequency as the output, why wouldn't that work?

15 MR. FULLER: Well, the --

16 JUDGE JURGOVAN: Why was the idle time necessary in
17 Kamieniecki?

18 MR. FULLER: So as both experts have testified, Kamieniecki was
19 limited in the number of tuners. Specifically, it only had one in-band tuner
20 that could select a channel, and that one channel selected had to either go to
21 a visual display on the television, or it had to go to the monitor. It could not
22 go both places as it was just selecting a single six megahertz channel.

23 JUDGE JURGOVAN: So the problem is insufficient number of
24 tuners to monitor the channel at the same time as it's being output to a
25 television set, for example?

26 MR. FULLER: Correct.

1 JUDGE JURGOVAN: I see. Thank you.

2 MR. FULLER: Moving onto Slide 65. We see here that, you know,
3 MaxLinear described its remote spectrum monitoring technology as a
4 paradigm shift and how network operators monitored its spectrum, and the
5 industry agreed.

6 As shown by Exhibit 2007, which is a CableLabs Best Practices
7 Primer discussing, although it uses the term Full-Band Capture, this
8 document is discussing the use through some remote group support for
9 remote monitoring; therefore, it's describing remote spectrum monitoring.

10 It said that implementing remote spectrum monitoring resulted in
11 significant operational savings. And also by being included in a Best
12 Practices, that's praise in and of itself from the industry in that using remote
13 spectrum monitoring is the best practice.

14 And for Exhibit 2009, which was co-authored by a Broadcom
15 employee, it again also describes the benefits of remote spectrum
16 monitoring, and said that it quote instantly resonated across the industry
17 when it was implemented.

18 And, again, the Exhibit 2009 specifically mentions the unobtrusive
19 manner, and so turning to Slide 66. We see here where Dr. Russ went
20 element by element and described what was needed to implement remote
21 spectrum monitoring, and what was the claimed invention, and demonstrated
22 that there's a nexus specifically, that unobtrusive manner has a nexus with
23 the claim element of concurrently outputting; thus, the industry praise --
24 because it could be performed in an unobtrusive manner -- is directly tied to
25 the claimed invention based on the unique characteristics.

1 So contrary to what Petitioner argued in Reply, the unique
2 characteristics of the claimed invention is what resulted in the industry
3 praise that MaxLinear's technology received.

4 So to summarize the key points. Dr. Russ' testimony stands
5 un rebutted. Mr. Lett provided additional support for Patent Owner's
6 objective indicia. The remote spectrum monitoring was the result of
7 significant industry praise because it offered a solution to problems long
8 standing in the art. And finally, there is a clear nexus between the claimed
9 invention and the industry praise that MaxLinear's technology received.

10 I'll turn it back over to my colleague, Mr. Engel, unless there's any
11 questions.

12 MR. ENGEL: First address a point you made, Judge Jurgovan. I
13 don't think the problem is not that there's just enough tuners, there are
14 multiple tuners in the prior art that we've seen -- Konstantinos and multiple
15 tuners doesn't have to concurrent output to a monitor and a data processor.
16 All of the Full-Band Capture stuff from Broadcom and from MaxLinear,
17 those are their patents. They don't have a concurrent output to a monitor or
18 data processor. So it is a little bit more complicated than just not enough
19 tuners. There has to be a disclosure to concurrently output which was
20 missing from the art for a number of years.

21 Judge Howard, I have the Philips case, and I think one thing that I
22 would point out -- and this also holds true in Bytemark as well. They do say
23 only in certain circumstances can common sense or common knowledge
24 apply to this limitation. Those certain circumstances where the missing
25 limitation is unusually simple, and the technology is particularly
26 straightforward. That's citing the Arendi case which is 832 F.3d 1355.

1 And in Bytemark they also say the same thing. They say you can rely
2 on common sense, but that might be permissible and the limitation question
3 is unusually simple and the technology particularly straightforward, and they
4 are the Petitioner. I've not obliged to that to be the case.

5 You asked about whether there was testimony or evidence of the
6 complication, you know, the complex nature of this. And I would say that
7 Dr. Russ' testimony was corroborated by Mr. Lett at deposition. This is
8 discussed at Pages 19, 20, and 21 of the Patent Owner's response.

9 At Page 20 at the bottom are some admissions from Mr. Lett as to the
10 complex nature and the changes that would need to be made. Again, on 21
11 in the second paragraph, there's testimony from Mr. Lett. And this section
12 also includes testimony from Mr. Russ.

13 So I would say to the extent that Mr. Russ needed to corroborate his
14 testimony, it was corroborated with the deposition of Mr. Lett where he
15 admitted that this would be complex, and that it would not have a reasonable
16 expectation of success based on the combination they proposed.

17 I'm going to move onto --

18 JUDGE HOWARD: Thank you for addressing my point.

19 MR. ENGEL: Happy I was able to, Judge Howard. I'm going to
20 move onto my last point which is the Renken reference. And here Patent
21 Owner -- go to Slide 50, please.

22 So in Renken, Grounds D and E, it's not prior art. Petitioner relied on
23 a false interpretation of the law, and right before our surreply brief came in,
24 the Federal Circuit confirmed our understanding of the law which was
25 advanced in our Patent Owner response.

1 So if you go to Slide 51. This is from the Petition. And it says the
2 rank and provisional also states that the results are sent to the CMC, but does
3 not explicitly say that the CMC is located at the headend.

4 So here we have an admission in the Petition that no disclosure of the
5 CMC is at the headend. What does Petitioner say? It would have been
6 obvious that the results are sent to the headend, but obviousness is not the
7 support required for written description under the written description
8 requirement, or under the Dynamic Drinkware test as well.

9 JUDGE MOORE: Well, Counsel, why do they need that on the
10 reference to prior art?

11 MR. ENGEL: Because you need the disclosure in the provisional for
12 what you're relying on in the nonprovisional. So in the nonprovisional, it
13 says that the CMC is at the headend. It doesn't say that in the provisional.
14 And so they needed to be at the headend in the provisional because that's the
15 source of the signal -- the headend. And so to get the --

16 JUDGE MOORE: Has that been relying on the reference for
17 everything else in saying everything else is prior art and it would have been
18 obvious to send it to the headend so that -- that's not -- I think there's a
19 disconnect here. I'm not sure why they need that headend piece to make the
20 reference prior art.

21 MR. ENGEL: Well, they absolutely do because for Renken to be
22 prior art, they're relying on the nonprovisional. They're relying on
23 additional disclosure in the nonprovisional that the CMC is located at the
24 head. And then their Dynamic Drinkware to rely on that in the
25 nonprovisional, they had to show that was in the provisional. And that's
26 their argument. Is that --

1 JUDGE MOORE: Well, they don't need that in the reference because
2 they're saying -- they're actually saying it's not in the reference, but it would
3 have been obvious to modify the reference to do that, right?

4 MR. ENGEL: Well, that's not what they're saying. They're relying
5 on the nonprovisional for that disclosure, and they had to show that it was in
6 the provisional.

7 So if I go to Slide 53, I think we can address partly your point, Judge
8 Moore, and then I'll get to the *In re: Riggs* case later.

9 JUDGE JURGOVAN: Counsel, just so you know, you're in your
10 rebuttal time.

11 MR. ENGEL: Yes. That's fine.

12 Here in the Petitioner's Reply, they say even if the Renken provisional
13 is found to not expressly or inherently disclose the CMC is located at the
14 headend, it is still prior art under Dynamic Drinkware and still, at least,
15 renders this limitation obvious.

16 So under Dynamic Drinkware, they were taking a misinterpretation;
17 they could just show one claim was satisfied. But Dynamic Drinkware, we
18 thought stood for the fact that if you want to rely on for something in the
19 nonprovisional, and to get the date of the provisional, you have to have the
20 same disclosure there.

21 And on March 24th, 2025, just before our surreply went in -- this is
22 the *In re: Riggs* case on Slide 54. *In re: Riggs* said that the provisional
23 application must also provide written descriptions for the specific portions of
24 the patent application identified and relied on as prior art. That's 131 F.4th
25 1377.

1 And Dr. Russ testified that there is not such support. But I think,
2 perhaps to a finer point of what you were saying, Judge Moore, is they don't
3 get the data the provisional at all if they can't show this. And the
4 nonprovisional is not prior art.

5 So they can't just say it's obvious from the provisional because they
6 have to give the priority to the nonprovisional to have this argument here
7 today under the *In re: Riggs* case. And Patent Owner did not ask for an
8 opportunity to respond to that case in our surreply, and I think the record is
9 clear they relied on incorrect law, they interpreted Dynamic Drinkware
10 incorrectly, and Renken is not prior art. Thank you.

11 JUDGE MOORE: Thank you.

12 MR. MEEKER: Thank you, Your Honors. So looking at Slide 17 of
13 Patent Owner's demonstratives. They said the concurrently output element
14 is essentially only supplied by Petitioner's expert. And they're arguing the
15 Bytemark case to support this.

16 If you go to Petition Pages 41 to 44, you'll see it's replete with
17 citations to the record, not to the -- not just to the expert. It's actually replete
18 with citations to the record. It cites Figure 2 and 3 and then it goes through
19 the application; it cites all of this stuff. So additionally, the claim only
20 requires concurrently output which is undisputed Konstantinos concurrently
21 outputs.

22 As for injective addition --

23 JUDGE MOORE: Counsel?

24 MR. MEEKER: Yes.

1 JUDGE MOORE: This is Judge Moore. What is the best evidence
2 that it would have been obvious to monitor one channel at the same time that
3 you're displaying another channel?

4 MR. MEEKER: Well, it's actually in Kamieniecki. It talks about --
5 you don't have to go through the flowchart to monitor out-of-band channels.

6 So Kamieniecki actually says -- and I think we lost our feed here on
7 the right, but -- they did actually say you can monitor the out-of-band
8 channel without going through -- yes, could we go to the -- yes, the
9 presentation -- the concurrently output slide showing the citation, the
10 Kamieniecki.

11 JUDGE MOORE: I think we have it.

12 MR. MEEKER: Okay. So there's actually another slide, Steve, that
13 talks about where, you know, the monitoring one while the other. It's
14 actually monitoring the out-of-band limitation. If you could bring that up,
15 and I'll cover the rest while you bring that up. Slide 5 -- seems -- yes, right
16 here.

17 Moreover -- and so it's Paragraph 27, in Kamieniecki, moreover, the
18 set-top box can monitor only one channel such as out-of-band channel,
19 without tuning through the channel map. This is an alternative embodiment.

20 So in Kamieniecki you can monitor the out-of-band channels, and
21 without regard to what's shown in the flowchart, Figure 2, which is what
22 they rely on to say the entire invention's limited to Figure 2, but there's an
23 alternate embodiment in Paragraph 27.

24 And then on their objective indicia of nonobviousness, all of their
25 evidence they're using is to the Broadcom product. All of the articles are

1 about the Broadcom product. The next linear product is only mentioned as a
2 footnote. And it's all with respect to broadband capture.

3 So the broadband capture, you heard an admission right here on the
4 podium, they're not alleging they invented that with respect to this
5 invention. They admitted Full-Band Capture was well known in the art long
6 before this patent was filed. And all of their objective indicia of
7 nonobviousness, which they carry the burden on, relates to Full-Band
8 Capture.

9 And then what got this case allowed, was reporting monitoring to the
10 headend. That was the only feature that got this case allowed. Then
11 whether Renken qualifies as prior art, we think we got Dynamic Drinkware
12 correct. Dynamic Drinkware looks at was -- is there a claim in the issued
13 patent that's supported by the provisional? If it is, then the provisional is
14 prior art for everything that it teaches. They're comparing the claims in the
15 '008 against the provisional. So the one feature that is not shown -- so if you
16 could go to Petitioner's Slide 44, go back to 44.

17 So the one feature is whether the CMC is at the headend. So in the
18 provisional, they're talking about potential things that you could, you know,
19 that they might patent. It says monitoring -- using the CPE, but sending the
20 results somewhere other than the headend. And the inventor says where, I
21 don't know, in Renken's provisional. He doesn't know where else you
22 would possibly send the CMC results but the headend. This is what we're
23 relying on to say it would be obvious. This is the only feature in Renken
24 that they say is missing, and it's taught in the provisional that the inventor
25 says well, we could claim it going somewhere other than headend, but where
26 I would send it I have no idea other than the headend. We think it would be

1 obvious from that statement that the monitoring results go to the headend.
2 In a cable -- in a cable system there's only one place to send your testing
3 results and that's upstream to the headend. There is no other way to do it.
4 We're a star system --

5 JUDGE MOORE: Well --

6 MR. MEEKER: Okay. So then --

7 JUDGE MOORE: You understand, you're over time, so.

8 MR. MEEKER: Okay.

9 JUDGE MOORE: I'll ask you to wrap up.

10 MR. MEEKER: All right. So the one other thing I have is the Full-
11 Band Capture. If we could go to the slide about the spectrum analyzer on
12 the Full-Band Capture. It's their slide, our rebuttal slide. The one that talks
13 about within, immediately obvious. It's the Broadcom Paper.

14 MR. CHANG: The instant?

15 MR. MEEKER: Instant, yes. Yes. Can you go to that slide?

16 MR. CHANG: That's Slide 50.

17 MR. MEEKER: Slide 50.

18 MR. CHANG: Of our --

19 MR. MEEKER: Of our presentation. So here is a Broadcom Paper
20 that I believe the Patent Owner submitted as part of their secondary
21 evidence.

22 And it says that another disrupted technology was Full-Band Capture.
23 With this breakthrough, enabled HFC maintenance groups was essentially
24 tuning properly equipped CPE to remotely accessible downstream spectrum
25 analyzers. This resonated instantly. In other words, you could monitor

1 every single channel there was for errors and problems, and you got a Full-
2 Band spectrum analyzer when you had a Full-Band Capture.

3 They admitted this invention is not about Full-Band Capture, that it
4 was already known in the industry, and it goes on to say this resonated
5 instantly across the industry which had been seeking affordable methods of
6 deploying remotely accessible field probes for the better part of a decade.

7 So here's a problem Full-Band Capture solved, it would resonate it
8 instantly, and it's a paper they submitted which undercuts their arguments
9 made in this case. Thank you, Your Honors.

10 JUDGE MOORE: I know that we haven't -- there's a -- if you need
11 it.

12 MR. ENGEL: I appreciate that. I don't know that I'll need it, but
13 thank you.

14 JUDGE HOWARD: Counsel, before you begin, I just want to follow
15 up with a question from the very last thing that you were talking about,
16 about Renken, just to make sure that I understand what you were saying, and
17 I think we're in agreement. Your point is that whatever is not in the Renken
18 provisional, Petitioner can't rely on that portion of Renken.

19 MR. ENGEL: Correct. And I think the law is, technically, that the
20 Renken provisional doesn't become prior art. It's the publication that
21 becomes prior art, but only to the extent of what's disclosed in the Renken
22 provisional. And that's was *In re: Riggs* stands for.

23 JUDGE HOWARD: And -- but there is nothing that would, for
24 example, prevent Petitioner from arguing that it would have -- looking only
25 at stuff that's in the Renken provisional, it would have been obvious to a
26 person of ordinary skill in the art to make changes to that, and as a result, it

1 becomes with something that's in Renken. This is not saying that Renken is
2 prior art to that point, that it would have been obvious to have made that
3 change.

4 MR. ENGEL: I think that might be what they're saying, but I don't
5 think you're allowed to do that under the law because a provisional doesn't
6 publish. It publishes as a nonprovisional. And to get that priority date, you
7 have to show that the thing you're relying on in the nonprovisional is
8 disclosed in the provisional. And if you don't get that date, then it doesn't
9 become prior art.

10 JUDGE HOWARD: I don't -- I think we're having a slight
11 miscommunication, so I'm going to try and do it differently.

12 MR. ENGEL: Okay.

13 JUDGE HOWARD: Let's go and say that there's a published
14 application that says A plus -- teaches limitations A plus B plus C.

15 MR. ENGEL: Yes.

16 JUDGE HOWARD: And there's a provisional application that
17 teaches limitations A -- or actually discloses limitations A and B, okay? Do
18 you understand so far?

19 MR. ENGEL: Yes. Correct.

20 JUDGE HOWARD: Okay. It would be fair to say that that
21 provisional publication can be prior art for limitations A and B, and that it
22 cannot be used as prior art for limitation C. Are we in agreement about that?

23 MR. ENGEL: We are in agreement.

24 JUDGE HOWARD: Okay. But there's nothing in the law that would
25 prevent a petitioner from arguing that this published application teaches

1 limitations A plus B, and that it would have been obvious to a person of
2 ordinary skill in the art to modify that and have -- and in a limitation C.

3 MR. ENGEL: I don't think you're able to do that because A and B
4 and C are in the nonprovisional. And so you can't -- you can't just say it
5 would have been obvious. You don't get the prior art -- the one you're
6 relying on, and I think here the problem is they weren't relying on it --

7 JUDGE HOWARD: So you could make it a -- for example, I mean, if
8 you were taking Renken and then combining it with a different reference,
9 you could use that different reference to a C, right?

10 MR. ENGEL: You could definitely do that, but I think if you look at
11 their petition and their challenge, they admit that it's not in the provisional.
12 They say it would have been obvious, but what they relied on is the actual
13 putting it at the headend in Renken.

14 And if you go through the briefing, they said to comply with Dynamic
15 Drinkware, they don't have to show it's in the provisional. They don't have
16 to show that support's in the provisional. *In re: Riggs* specifically says to
17 the extent there's any confusion, you do have to show that. So there was a
18 misunderstanding of the law.

19 JUDGE HOWARD: So your argument is focusing on it's improper to
20 use Renken to sort of say what would have been obvious from the Renken
21 provisional because those portions of Renken that aren't in the provisional
22 don't count as prior art.

23 MR. ENGEL: Correct. I think if you look at the briefing, they were
24 doubling down on not that they satisfied Dynamic Drinkware, Riggs said to
25 the extent there's a miscommunication, you have to do this.

1 JUDGE HOWARD: Okay. Just so I -- I do want to make sure that I
2 understand it. So your problem is not the issue that they're saying it would
3 have been obvious to make that modification, your problem is their evidence
4 to show it would have been obvious is they're citing Renken?

5 MR. ENGEL: Correct.

6 JUDGE HOWARD: Thank you.

7 MR. ENGEL: Yes. That's the ground.

8 JUDGE HOWARD: Okay. And I understand your point. Thank you
9 very much.

10 MR. ENGEL: Yes. So one of the arguments for today is that the out-
11 of-band tuner in Kamieniecki is capable of operating while the in-bound
12 tuner is being used. Well, that's not the case. The Figure 2 flowchart
13 indicates that it has to wait for idle.

14 Pointing to Paragraph 27, and nothing in Paragraph 27 says that it
15 could work while the in-bound tuner is -- it could be monitoring while the
16 in-band tuner is being used. It just says that it can monitor only one channel
17 such as the out-of-band channel without tuning through the map. There's
18 nothing in there. And there's an admission from Petitioner's expert that we
19 hit that he admits it has to wait for idle, so. Then the argument should not be
20 considered.

21 One thing I will say that -- since you're pointing back to the Petition
22 where, you know, I guess allegedly cited extensive evidence of how the
23 concurrent limitation would be met in the Petition, but I'll point you again to
24 Pages 14 and 15 in the Reply. It's a page and a half, and it doesn't go into
25 any detail to explain how that, you know, allegedly additional evidence
26 corroborates anything in the invention to show the concurrent output.

1 And I think when their expert refused -- flat out refused to draw it,
2 and Petitioner in Reply refused to clarify and show what that would like, I
3 think if it wasn't a new argument, they would have drawn the diagram. But
4 they knew that their expert failed to include it, failed to answer the questions
5 at his deposition, and failed to clarify it at all in his Reply Declaration.

6 Mr. Fuller says he would like to make two points, so I will give him
7 that opportunity.

8 MR. FULLER: Go to Slide 63, please. Just two points I want to
9 make is Petitioner's counsel seems to not appreciate the interchangeability
10 of the terminology that was discussed extensively during Patent Owner's
11 extensive argument.

12 So with respect to Exhibit 2015. First, this is not prior art to the '008
13 Patent. It was issued after the '008 Patent. It's a technical paper from 2013.
14 And when it's describing Full-Band Capture CPE, it's describing
15 MaxLinear's remote spectrum monitoring technology because these terms
16 again, according to Dr. Russ whose testimony is unrebutted on this record,
17 those terms can be used interchangeably. So by describing and praising
18 Full-Band Capture CPE, Exhibit 2015 which is co-authored by a Broadcom
19 employee, is praising MaxLinear's invention.

20 The second point that Petitioner seems to argue that there is a lack of
21 nexus based on recording the elements not being addressed by Dr. Russ,
22 that's addressed in his Declaration, and also that is not what the case law
23 requires. It requires that the objective indicia be traced to the unique
24 characteristics of the invention.

1 And here, as testified previously by myself, the characteristic that's
2 unique that receives such significant an issue praised, was the ability to
3 monitor remotely which is claimed as the concurrent output. Thank you.

4 JUDGE MOORE: Okay. Thank you all very much. Very
5 informative and, I believe, probably useful presentations. The case is
6 submitted. We suggest counsel hang out for a minute or two to see if the
7 court reporter has any questions. We are adjourned. Thank you.

8 MR. ENGEL: Thank you, Your Honor.

9 MR. MEEKER: Thank you.

10 (Whereupon, the above-entitled matter went off the record at 10:54
11 a.m.)

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