

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HUM INDUSTRIAL TECHNOLOGY, INC.
Petitioner

v.

AMSTED RAIL COMPANY, INC.
Patent Owner.

IPR2023-00540
Patent 10,137,915

Record of Oral Hearing
Held: June 10, 2024

Before JAMES P. CALVE, KEVIN W. CHERRY, and
MICHAEL L. WOODS, *Administrative Patent Judges*.

IPR2023-00540
Patent 10,137,915

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The above-entitled matter came on for hearing on Monday, June 10, 2024, commencing at 1:00 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

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

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3 JUDGE CHERRY: All right. Good afternoon. This is Judge Cherry
4 and with me are Judges Calve and Judge Woods. This is IPR 2023-00540
5 between Hum Industrial and Amsted Rail Company involving U.S. Patent
6 10,137,915. Will the parties please make their appearances.

7 MS. MANNING: Good afternoon, Your Honors. I'm Daisy Manning
8 with the law firm Husch Blackwell on behalf of Petitioner Hum Industrial
9 Technology. With me today is Eric Rakestraw, who you heard from this
10 morning.

11 JUDGE CHERRY: Great. Thank you, Ms. Manning. Patent Owner?

12 MR. MILLER: Yes, good afternoon, Your Honor. Ryan Miller from
13 Fox Rothschild, representing Patent Owner. With me, as well, as before, is
14 Lead Counsel Jeff Schwartz and Gary Hecht.

15 JUDGE CHERRY: Great. Thank you, Mr. Miller. So, the parties
16 have one hour to present, each have one hour to present their cases. The
17 parties can reserve rebuttal and sur-rebuttal time not to exceed half the time.
18 And the Petitioner has the burden of persuasion in this proceeding. So, they
19 will go first, followed by the Patent Owner. There will be rebuttal, if any,
20 from the Petitioner and then sur-rebuttal from the Patent Owner. Petitioner,
21 how much time would you like to reserve for your rebuttal?

22 MS. MANNING: I'd like to reserve 15 minutes, please.

23 JUDGE CHERRY: Great. Thank you very much. And Patent
24 Owner, how much time do you want to reserve for your sur-rebuttal?

25 MR. MILLER: Ten minutes, as before. Thank you.

1 JUDGE CHERRY: Great. Excellent. All right, Ms. Manning,
2 whenever you're ready, you may begin.

3 MS. MANNING: Great. Thank you, Judge Cherry. This IPR boils
4 down to four primary issues, each of which relate to filtering of data and
5 data analysis. The first issue is whether Armitage, which you heard Mr.
6 Rakestraw discuss at length earlier today, teaches filtering. While this issue
7 is not necessary for the Board to decide whether the claims are obvious, the
8 answer to this question is yes. Armitage does in fact teach the claimed
9 filtering of the independent claims 1, 30, and 36. In that the '915 Patent
10 teaches that filtering can be performed by selecting certain acceleration data
11 from an axis or multiple axes measured by a triaxial accelerometer.

12 Armitage, too, teaches this in paragraph 45 of Armitage discusses how
13 acceleration along the X-, or Y-, or Z-axes could be ignored or selected for
14 analysis. This meets the claim filtering limitation of the independent claims.

15 The second issue is whether our second primary reference, LeFebvre,
16 also at issue in the '223 and '673 IPRs, teaches the claim filtering. This is,
17 LeFebvre is introduced in our second set of grounds 4 through 6. And
18 LeFebvre, too, discloses the claimed filtering based on an embodiment in the
19 '915 Patent that discusses filtering acceleration data on the vertical axis that
20 reflects certain known frequencies that are indicative of a fault condition,
21 LeFebvre, too, teaches them.

22 Now the third issue is whether it would have been obvious to modify
23 either Armitage or Barone or, excuse me, Armitage or LeFebvre with the
24 reference Barone. The Board correctly found in its Institution Decision that
25 Barone does teach data filtering as required by the independent claims, and
26 that it would have been obvious to modify Armitage, at least Armitage, with

1 the filtering of Barone. Nothing that the Patent Owner has argued since
2 institution should alter that decision. And based on that alone, even if the
3 Board found that Armitage or LeFebvre does not disclose the claim filtering,
4 which we respectfully would disagree with, it would still be obvious,
5 nonetheless, to combine the filtering of Barone with these two primary
6 references.

7 And then the last issue only is relevant to two dependent claims.
8 Dependent claims 25 and 28. Dependent claim 25 requires a software filter
9 for filtering accelerations. Block (phonetic) claim 28 requires that filter is a
10 digital filter. And again, the answer is Barone teaches both the software and
11 digital filtering of dependent claims 25 and 28. And like its combination
12 with Armitage and LeFebvre for the independent claims, it would have been
13 obvious to combine this filtering of Barone, which is based on frequency, in
14 contrast to direction of acceleration data, that it would have been obvious to
15 combine that the digital or software filtering of Barone.

16 And one last point I want to make high-level before we get into more
17 detail, is that ultimately, when it comes to these two dependent claims, we
18 are talking about the interchangeability of electronic versus digital or
19 software filtering. Whether we are filtering an analog signal before it is
20 converted to digital, or whether we are filtering after it has gone through the
21 AV converter and before or during data analysis.

22 So, I am going to give you a brief overview of the '915. Lauren, if
23 you could turn slide 3, please. Now, the '915 Patent, like the '223 and '673
24 Patent that were discussed earlier today, is directed to railcar monitoring
25 systems for detecting operational anomalies on a railcar, selection of
26 railcars, or an entire train concept. Oh, sorry, we just lost the feed for a

1 second. And to provide data events or alerts to a locomotive, a railcar
2 operator or other remote location.

3 Now, because all of the issues in this IPR that are in dispute by the
4 parties relate to the claim filtering, unless the Board would like to hear an
5 overview of the '915 Patent, I'm going to jump into the filtering disclosures
6 of the '915 Patent before we discuss the prior art.

7 JUDGE CHERRY: No, that works for us.

8 MS. MANNING: Okay, great. So, if we could flip to slide 6, please.
9 So, as part of the data processing in the '915 Patent, the patent teaches
10 filtering of the collected data by mechanical or digital or software filters. It
11 also, additionally, claims filtering in claim 27 by electronic filters, although
12 that is not expressly described in the specification. All four types of filters
13 are either described and/or claimed, so we've got mechanical, electronic,
14 digital, and software.

15 The specification of the '915 Patent explains that mechanical filters
16 filter high and low frequencies of accelerations that are considered noise
17 generally speaking, and that's at column 5, lines 23 to 32 of the '915 Patent.
18 This is a standard mechanical filter that was well-known in the art as
19 described by Petitioner's expert, Mr. Ricca, at paragraph 78 and 158.
20 However, because mechanical filters do not appear should be contested by
21 Patent Owner, we will not discuss that too much going forward or the prior
22 art reference Winfree introduced to meet those limitations of the dependent
23 claims.

24 Importantly, the '915 Patent discusses digital and in particular a
25 software filter used, or the software filter is a type of digital filter that is used
26 in the specification of the '915 Patent and it is described as decreasing noise

1 from unwanted acceleration frequencies and increasing signals from
2 acceleration frequencies of interest. If we can flip to slide 7, please.

3 That is not all the data our digital filters do in the '915 Patent,
4 however. As depicted in figure 12, which you will find column 13 of the
5 patent, starting around line 11, the digital data filters 1204, 1210, and 1216
6 are described as selecting data based on an axis. Generally speaking, it can
7 be based on direction, which axis, vertical, longitudinal or lateral, of the
8 acceleration data. These digital data filters can also filter based on
9 frequency; and, it can also filter based on a combination of the variations of
10 the collected data, as we will see in figure 13, which is a specific
11 embodiment. If we can flip a slide 8 please.

12 Figure 13 describes a specific embodiment that filters data based on
13 the axis of acceleration data. As we can see, Longitudinal Section 1304
14 selects or extracts data from the longitudinal axis measured by the
15 accelerometer and that filter data is then sent to a detector to detect impacts
16 based on that longitudinal data. Similarly, as you'll see, Lateral Section
17 1310 filters or selects or extracts, which is how filtering is described in the
18 '915 Patent, from the lateral axis measured by the accelerometer and detect
19 vehicle dynamics based on the lateral acceleration. And finally, we've got
20 Vertical Section Filter 1316 which extracts/reflects data along the vertical
21 axis to detect vehicle dynamics. This is very similar as we'll get to in just
22 a moment to what Armitage described.

23 And then finally we've got figure 14, which is yet another
24 implementation of the embodiment I did in figure 12. These filters are a
25 little different. These filters, as you can see, select data from the vertical
26 axis measured by the accelerometer only. So, we've got Vertical Derailment

1 Filter 1404, Vertical Wheel Damage Filter 1410, and Vertical Impact Filter
2 1416. And each of these filters extract vertical acceleration data that is
3 indicative of a fault condition. And here we've got three different fault
4 conditions that these filters are designed to isolate data. We've got
5 Derailment that's protected by the first detector, 1406, Wheel Damage in
6 1412, and Vertical Impact, 1418. So, these are the two specific types of
7 filtering that's described with specificity in the '915 Patent. One based on
8 correction, and one based on frequencies that are indicative of particular
9 fault conditions on a railcar. And that is very similar to what's described in
10 LeFebvre and Barone as well.

11 If we can go to slide 10, please. So, with that, we've got three
12 independent claims that are challenged in this IPR. Patent Owner does not
13 contest that the primary references, Armitage and LeFebvre, teach
14 limitations 1(a), (b) -- and it looks like we're missing the rest of this claim.
15 Actually, the last limitation. But in essence, the only disputed limitation of
16 independent claim 1 is a limitation 1(c), one or more, well, it's actually,
17 1(d), I believe, in the claim listing, so there is some confusion there. I will
18 be referring to it as 1(d). And this requires one or more filters configured to
19 filter at least a portion of the acceleration.

20 If we could also go to the next slide, I believe that's slide, yeah, so
21 slide 11. We also have independent claims 30 and 36. Similarly, only the
22 filtering limitations are in dispute. Neither party contests that there is, you
23 know, or asserts there's any difference between these particular limitations
24 of the independent claims.

25 Okay, so I am going to jump. Unless the Board would like to hear an
26 overview of the primary art references used. I think you're very familiar

1 with Armitage and LeFebvre. So, I'm going to jump straight into the
2 grounds based on Armitage. Those are grounds 1 through 3, although only
3 ground 1 is in dispute. No arguments particular to ground 2 and 3 have been
4 raised by Patent Owner. So, if we could skip to slide 24, please.

5 Okay, actually, let's get to slide 36. My apologies. Okay, so I'm
6 going to give a little bit of background provided by our expert, Mr. Ricca, on
7 the different types of electronic or different types of filtering. So, as Mr.
8 Ricca explained in his declaration at paragraph 78 to 79, that's Exhibit 1003.
9 He explains, filtering is simply excluding some portion of a data set and/or
10 identifying and amplifying relevant data within that data set. This can be
11 accomplished by the choice of sensor. It can be accomplished by physical
12 methods like a mechanical filter, or by electronic, digital, or software
13 filtering. Mr. Ricca further explained in paragraph 79 of Exhibit 1003 that
14 in any data analysis, a person with skill in the art would understand that data
15 is almost always filtered in some manner and may include multiple filters of
16 the same or different height throughout the data processing system in order
17 to achieve the most accurate and or targeted data analysis. This is especially
18 important in something like a railcar monitoring system, where accurate
19 fault detection can mean the difference between a train derailment or other
20 serious event versus, you know, a healthy wheel bearing and operation. Mr.
21 Ricca further testified that a person with skill in the art would understand
22 how each of these filters operate and how they can be used, their benefits,
23 and where you would use them in the system.

24 Okay, Mr. Ricca, I'd also like to point out, I know there was a lot of
25 discussion in the Patent Owner's response about Mr. Ricca's testimony being
26 unsupported and therefore to be given little weight, notwithstanding the fact

1 that expert testimony is just like any other evidence and should be weighed
2 accordingly. Mr. Ricca did in fact cite probating evidence at Exhibit 1009,
3 which is a 2003 article illustrating exactly what he opined about regarding
4 the interchangeability of these different filtering methods. As this exhibit
5 explains, analog and digital filtering was well-known, and digital filters can
6 duplicate the frequency response of any analog filter in the digital
7 (inaudible). So, I just like to point that out before we discuss Armitage in
8 detail, that this notion of filtering data as being the point of novelty of these
9 claims was well-known in every occasion that is described in the '915
10 Patent. The '915 Patent also does not discuss why one method might be
11 better than the other does. Judge Cherry, you look like you might have
12 something --

13 JUDGE CHERRY: If we accept that, what Armitage, I think it calls it
14 sampling. But if we accept that that kind of selection of a single axis is a
15 type of filtering, what disclosure does Armitage have about how it does that?
16 Is there anything about whether it's digital or software/ Or what does
17 Armitage say about that?

18 MS. MANNING: So, Armitage, all of the data filtering in Armitage
19 can be found within paragraph 45. And let me see if I can find exactly. That
20 would be slide 35, please. Now, Armitage does not specify whether it filters
21 acceleration data with an analog or digital filter or electronic or digital filter.
22 It does not specify that at all. What it does specify is that it utilizes a three-
23 dimensional accelerometer and that it isolates accelerations along the X-, Y-
24 and Z-axis in order to detect -- it gives one particular example of what kind
25 of fault conditions that it can detect using this method, and that is by
26 isolating axial vibration on the X-, Z-axis to detect wheel flat conditions.

1 Now, a person with skill in the art would understand that this is one
2 example. As paragraph 45 specifically says, in some examples, axial
3 vibration is monitored along the Z-axis. Person with skill in the art would
4 understand that other railcar conditions would be detected by monitoring the
5 X- and Y-axes as well. But the entire disclosure of filtering, which is fairly
6 high-level and Armitage is found within paragraph 45. But as Mr. Ricca
7 testified, data filter infiltration was so well-known, no greater detail would
8 be necessary than this.

9 JUDGE CHERRY: Now, does -- for claims 25 and 28, are you
10 relying on Armitage? I mean, I know that the combination of Armitage and
11 Barone, but did you, did Mr. Ricca talk about implementing this, which is
12 found in paragraph 45, using a digital or software filter? Or did he just say
13 that in the combination with Barone that you would implement the filter?

14 MS. MANNING: In answer --

15 JUDGE CHERRY: Earlier -- okay.

16 MS. MANNING: Yeah, so in paragraph -- oh, excuse me.

17 JUDGE CHERRY: No, no. That's fine. Go ahead, go ahead. I'm
18 sorry.

19 MS. MANNING: Okay, so after Mr. Ricca discusses the filtering of
20 Armitage in paragraph 78 to 79 of Exhibit 1003, he immediately explains the
21 interchangeability of these different types of filters. However, with respect
22 to 25 and 28, he does rely on the more robust disclosure of Barone for
23 software and visual filtering. Although in hindsight, you know, it could
24 have been argued that based on the interchangeability of electronic and
25 digital filtering, that PHOSITA would have known that Armitage, you could

1 have done either. But I think more of a belt and suspenders, we brought in
2 Barone, since it more clearly discusses these different types of filtering.

3 JUDGE CHERRY: That's good. Go ahead. I think we understand
4 Armitage and we can talk about --

5 MS. MANNING: Okay.

6 JUDGE CHERRY: -- Barone.

7 MS. MANNING: Okay, happy to do so. Okay, so if we could go to
8 slide 40, please. Okay, so for the independent claims, at least, independent
9 claims 1, 30, and 36, Barone was brought in as an alternative obviousness
10 base. And that is because Armitage does, you know, have a fairly brief
11 disclosure of the filtering, and it does not give any specific special type of
12 filter. And it also does not describe the filter as located necessarily within
13 the sensor node, which is required by some of the other claims in the patent.
14 So, we brought in Barone as an alternative ground, and it also, because it
15 dissects different types of filtering. So, you have Armitage discussing
16 filtering based on the direction of the acceleration data, and then you have
17 Barone teaching filtering based on frequencies, more conventional, perhaps,
18 way of filtering data with low, high, and bandpass filters.

19 So, let me see. Let's go to slide 41. So, as the Board noted in its
20 Institution Decision, there is no dispute that Barone teaches filtering data
21 generally and specifically electronically. Patent Owner's primary argument
22 against claims 25 and 28, or the obviousness of those claims, is that Barone
23 allegedly only teaches electronic filtering. However, the independent claims
24 do not limit the filtering to any type of filtering. So, Barone teaching
25 electronic filtering specifically is found in these paragraphs here, in
26 particular, paragraph 176, which discusses your conventional low, high, and

1 bandpass filters. Now, again, we believe that the Board was also correct that
2 a person with skill in the art would have been motivated to combine this
3 conventional filtering described explicitly in Barone with Armitage. So, you
4 would have two types of filtering within Armitage. You have your filtering
5 based on acceleration data to target your analysis to specific railcar
6 conditions, and then you would have your low, high, and bandpass filters to
7 get a more accurate set of data to analyze.

8 JUDGE CHERRY: How do you respond to their argument that the
9 combination would render arbitrage inoperative? Their inoperative device
10 argument. Could you talk a little bit about that?

11 MS. MANNING: Yes, absolutely. So, let's go to slide 45, please.
12 Okay, so, as you know, Patent Owner argues that Barone's filtering would
13 frustrate Armitage's purpose of detecting outlier sensor nodes by eliminating
14 outlier data points. This argument is wrong for a number of reasons. Now,
15 at a very high-level, now, it's been quite some time since I took college
16 statistics, but I do recall it was a fairly standard methodology and statistics to
17 remove outright liars within three standard deviations of your means when
18 doing data analysis. So, I think, just as you know, going back to the
19 resources of my brain, statistics was not my favorite, but I do recall that. We
20 certainly did not want to analyze every data point collected. A lot of that
21 reflects noise.

22 Actually, if you could flip back to slide 44 for me, please. You know,
23 all of the references, Armitage, Barone, Winfree, which we're not going to
24 discuss in detail, that only pertains to grounds 3 and 6, and even the '915
25 Patent discusses that noise affects sensor signals. And as Mr. Ricca explains
26 and paragraphs 14, 15 of Exhibit 1025, that was his declaration in support of

1 Petitioner's reply that outliers and data sets are frequently noise caused by
2 things like sporadic electrical or mechanical anomalies caused by things like
3 measurement errors, AM, FM, CB, radio transmissions, and even sunspot
4 activity. You're always going to have some noise in your data that's
5 collected by the sensors.

6 Barone also explicitly discusses the advantages of filtering and
7 processing data to enhance the of the data and to actually target that analysis
8 to frequencies that are known to be indicative of fault conditions. So, the
9 notion that removing outlier data points amongst the enormous amount of
10 data collected by these sensors, that would ultimately skew the data analysis.
11 It also raises issues of cost and efficiency of data collection, transmission,
12 storage, and analysis.

13 I would also like to point out that Armitage itself explicitly states that
14 when it is detecting deviations, for instance, as Oster (phonetic) did in figure
15 4 of Armitage, that it is not looking for. It says the deviations are not
16 deviations from a single data reading. They are deviations of an entire
17 sensor node from data collected over a period of time.

18 And last, I'd like to point out that the '915 Patent does not explain
19 why you would want every data point, or why filtering out noise or, I mean,
20 outliers would frustrate its purpose of detecting the same railcar fault
21 conditions. And as the Federal Circuit has made abundantly clear in
22 Lockwood versus American Airlines, a Patent Owner cannot expect more
23 from the prior art than its own patent teaches. And here, it does not explain
24 how removing this noise, this outlier data, would impact the data analysis of
25 Armitage.

26 If that answers your question?

1 JUDGE CHERRY: Yes. And I think, I think it would be also helpful
2 if you, I guess, move on to claims 25 and 28.

3 MS. MANNING: Yeah.

4 JUDGE CHERRY: That's --

5 MS. MANNING: Okay. So, there's a lot of attention sent to these
6 dependent claims, as you know, and they do warrant discussion. Now, I
7 again want to come back to this idea that really what we're talking about is
8 interchangeability. Electronic and digital filtering. Do we filter the analog
9 signal from an analog sensor before it is converted to a digital signal, which
10 is ubiquitous? I mean, an ADC converter is ubiquitous, pretty much any
11 electronic device nowadays. Or do we filter that data after it's converted, or
12 do we do both? And here the answer is both. In any targeted data analysis,
13 especially dealing with such a great, you know, enormous amount of data,
14 all of these different types of filtering would be employed. And the '915
15 Patent, again, does not discuss any benefits of using one method over
16 another, does not warn against any problems that might ensue if you use one
17 filter over another, can use multiple types of filters.

18 So, let's jump to slide 47, please. Okay. Well, actually. All right.
19 Okay. So, the dependent claims in the '915 Patent don't just claim digital
20 and software filters. I also want to note the claim 26 specifically claims the
21 mechanical filter, and claim 27 specifically claims an electronic filter. So,
22 the '915 Patent does also, by virtue of claiming these specific kinds of
23 filters, implicitly acknowledges interchangeability of these filters; and that a
24 PHOSITA would understand how and why to use each one of them.

25 Let's go to slide 36, please.

26 JUDGE CHERRY: I just --

1 MS. MANNING: Actually, we're going to skip that.

2 JUDGE CHERRY: -- have a super quick question. Is the alleged
3 error in claim 26 that only is related to this main filtering argument, right? It
4 doesn't affect these ones?

5 MS. MANNING: Yeah, I assume you're referring to the antecedent
6 basis and drafting error of claim 26 that Patent Owner raised?

7 JUDGE CHERRY: The alleged error that they said. I just wanted to
8 clarify that.

9 MS. MANNING: Yeah.

10 JUDGE CHERRY: So, again, I don't want to talk about that. I just --

11 MS. MANNING: Okay.

12 JUDGE CHERRY: You mentioned, and basically, I just want to
13 make sure I was right about that. So, yeah, go ahead to claims 25 and 28.
14 Sorry.

15 MS. MANNING: Oh yeah. So, well, to specify the claim 26
16 argument that refers to, that's pertinent to the independent claim, not these
17 two claims. And I raise claims 25 through 28 because they're all dependent
18 claims from claim 1. And they each went and claimed one of the four
19 different filters. To generally illustrate, you know, our position is that that
20 illustrates exactly what Mr. Ricca says here in paragraph 78, that a person
21 with skill and art would know how and why to use each of these different
22 types of filters. If we could go to slide, oh, actually, let's stay on the slide.

23 Now, first and foremost, with regards to claims 25 and 28, Mr. Ricca
24 explains in his declaration in support of the petition, Exhibit 1003, at again,
25 paragraph 78 to 79, that, or no, I want to go to paragraph 80, my apologies.
26 Sorry, 81. He discusses that a PHOSITA would understand that a low, high,

1 or bandpass filter of Barone could be electronic or digital, that you can do
2 either one. And again, I bring your attention to Exhibit 1009 that Mr. Ricca
3 does rely on in paragraph 79 of his declaration, that explicitly discusses this,
4 that explicitly discusses in 2003, well before the priority date of the '915
5 Patent, that digital filters can be designed to filter out the same frequencies
6 that analog filters do, and that they both have a place in data filtration and
7 analysis system.

8 So, at a high-level, that is essentially the primary argument is that you
9 could do it in either way. A person of skill in the art would know. I think
10 that Patent Owner is treating this argument as if it is an anticipation
11 argument, when in fact it is an obviousness argument. What a person of
12 skill in art, in view of the prior art, in view of the problems at issue in the
13 prior art, and in view of his own knowledge of what he would believe the
14 prior art suggested. And here we think it is very clear that Barone explicitly
15 teaches, or at the very least suggests that this data filtration can occur in the
16 analog domain for the digital domain.

17 If we could flip to slide 50, please. Okay, so I think I actually covered
18 that.

19 JUDGE CHERRY: As I'm looking at the petition, can I maybe get a
20 clarification? The way it looks is that you're just relying on Barone for its
21 teaching of filtering, but you're kind of putting the filtering for claim 25 into
22 the firmware of Armitage. So, it's kind of modified Armitage's firmware to
23 add this digital filtering, is that fair to say?

24 MS. MANNING: I'm not --

25 JUDGE CHERRY: Go ahead.

1 MS. MANNING: So, I don't know if the firmware would be implied
2 here.

3 JUDGE CHERRY: I'm looking at page 37 of the petition.

4 MS. MANNING: Okay. Okay, so, yeah, so Armitage does disclose
5 software that controls firmware. You know, whether the digital filtering is
6 implemented on the firmware or it is done in a processor, we don't know if
7 that is very relevant to the obviousness of the claims. It could occur at either
8 place. I would assume that the analog filtering would occur more with the
9 firmware and then visual filtering would occur on the data processing side.

10 JUDGE CHERRY: I mean, I guess my question was that you're not
11 saying that we take that whole. I think you had to. I think you had to figure,
12 Patent Owner relies a lot on it, the figure from Barone, which is like the
13 block diagram showing the structure of Barone. You're not saying --

14 MS. MANNING: Yeah, so I'm not --

15 JUDGE CHERRY: -- that whole thing and plop it onto Armitage.
16 Right?

17 You're saying --

18 MS. MANNING: Yeah.

19 JUDGE CHERRY: Maybe you could explain that to me. Just point
20 to the petition where you talked about that.

21 MS. MANNING: Yeah. So, I believe in the petition, you're going to
22 find it back in independent claim 1(d). That is where we discussed all of
23 these concepts at once. So, to streamline the petition, obviously, in view of
24 our word limits and whatnot, we tried to account for later dependent
25 limitations within some of the limitations of the independent claims so we
26 could refer back. We are not saying that we are going to use that

1 microprocessor 177 of Barone and plop it into Armitage. That is not the
2 argument.

3 The argument is that a person skilled in the art would have understood
4 that filtering for frequencies using low, high, or bandpass filters, as
5 discussed in Barone, could occur on analog or digital, and would have been
6 useful for the exact same reasons in Armitage as it is in Barone. Okay.

7 JUDGE CHERRY: Thank you.

8 MS. MANNING: I'd also like to go to slide 53, please. Now, this
9 was something raised in the reply. I first want to note that Patent Owner, I
10 think, I don't know if it was intentional or inadvertent, but in its motion to
11 exclude, it did not actually discuss this particular portion of Barone, but it is
12 seeking to exclude paragraph 26 of Mr. Ricca's second declaration that
13 Exhibit 1025, but provides no explanation of why that should be excluded.
14 And in fact, after Patent Owner contested that Barone suggested in any way
15 a digital filter, we brought in this disclosure of Barone at paragraphs 221 and
16 222. And Mr. Ricca testified that this in fact illustrated a type of digital
17 bandpass filter as that would be understood to a person of skill in the art.
18 And specifically, Barone discusses detecting 16 frequency data values
19 reflecting certain defects in a railcar. These frequency values would be
20 understood to indicate a fault condition.

21 It then, so right there -- oh? Excuse me, Judge Cherry.

22 JUDGE CHERRY: So, am I to understand, are we to understand that
23 there is one argument that you're making in the reply about this Texas
24 Instruments MSP430FG4618 processor having built-in filters, right? And
25 then there's a second. I don't want to put words like a different argument

1 that Barone itself teaches where he talks about the Fourier transform and
2 what it's doing with the Fourier transform. Is that fair?

3 MS. MANNING: Yes. That's exactly right, Judge Cherry. Those are
4 two separate arguments. The TI microcontroller was brought in to simply
5 illustrate and rebut Patent Owner's argument that Barone could possibly
6 contemplate a digital filter. The explicit disclosure in paragraph 221-222 of
7 Barone is within the four corners of Barone. And that is a second argument.

8 JUDGE CHERRY: And so, you're contending that by talking about
9 isolating particular frequencies, that it's going to do the Fourier transform on
10 that that's a type of band pass filtering?

11 MS. MANNING: Yeah. So, in essence, what Barone discusses is that
12 it's going to establish these 16 frequency data values that reflect different
13 fault conditions and that its microprocessor or microcontroller 177 will filter
14 for those, not only those known defect frequencies, but also it will filter for,
15 it says here in paragraph 221, the presence in the data samples of 20 lines of
16 frequencies in steps of 0.5 to 1 Hertz above and below the above defined
17 defect frequencies and the harmonic overtones. And this is to allow analysis
18 of the defect frequency plus or minus the real rotation frequency. You go
19 down to paragraph 222. It discusses that this microcontroller performs this
20 on software implemented algorithms for each of the above 16 frequencies
21 and for each of the 10 frequencies above and below. As Mr. Ricca explains
22 the paragraph 26 of his declaration, a person with skill in the art would
23 understand this is in effect, a digital bandpass filter. It is only passing
24 through the defect frequencies plus or minus 10 frequencies.

25 JUDGE CHERRY: And was there any discussion of paragraph 221 in
26 the in the petition or is that only in your reply?

1 MS. MANNING: There was no discussion at 221 or 222 in the
2 petition. However, Mr. Ricca did discuss that a person of skill in the art
3 would understand why bandpass calculations in paragraphs 114 and 115 of
4 Armitage, too, involve digital filtering. When Patent Owner disputed that in
5 its response, we brought in and Mr. Ricca, used paragraphs 221 and 222 to
6 provide a specific illustration of how those wide bandpass calculations do in
7 fact involve digital filtering.

8 JUDGE CHERRY: Okay.

9 MS. MANNING: We laid that in direct rebuttal.

10 JUDGE CHERRY: Okay, thank you.

11 MS. MANNING: Mm-hmm. Okay, I see I am getting a little short on
12 time. If there's anything that you want me to specifically address instead of
13 jumping in somewhere in the middle, I'm happy to address whatever you
14 might be concerned about.

15 JUDGE CHERRY: I think maybe now just do some motion
16 amendment. I think you have, I have you as having seven minutes, so --

17 MS. MANNING: Okay.

18 JUDGE CHERRY: -- maybe talk about the motion to amend a little
19 bit.

20 MS. MANNING: Absolutely. Okay, so --

21 JUDGE WOODS: Excuse me. One more question before we move
22 on to the motion to amend regarding the filtering. And so, as I read the
23 briefing, I have one question and I don't know if this is something that you
24 thought about or have an answer to. But let's assume that if we have a
25 sensor that can, I'm just hypothetically speaking, we have a sensor that can
26 measure frequencies between 10 and 100 Hertz, but it's only passing through

1 40 to 60 Hertz. I think we can both agree that it's a filter and it's only
2 passing that relatively narrow frequency range. But what if the sensor is
3 only designed to measure a frequency range between 40 and 60 Hertz? In
4 your opinion, is that filtering?

5 MS. MANNING: Yes, Judge Woods, that is filtering, in my opinion.
6 The '915 Patent, neither the specification nor the claims require the filtering
7 to occur at any point in the system. In other words, before it is collected or
8 sensed or after. A mechanical filter which is encompassed by the
9 independent claims would filter out accelerations before they're sensed by
10 the sensor. Mr. Ricca also explains in paragraph 78 of Exhibit 1003 that a
11 person of skill in art would understand that you could also filter data based
12 on the type of sensor used, which I think would be quite analogous to your
13 hypothetical there, you know, a sensor that is only designed to detect
14 frequencies in a certain range.

15 JUDGE WOODS: All right. Thank you.

16 MS. MANNING: Thank you. All right. If there's no more questions
17 about the grounds, I'm going to discuss the revised motion to amend. Okay.

18 Okay, so, if we can go to slide 79, please. So, in substitute claim 38,
19 which is substitute for claim 1, we have three additions to the claim. Two of
20 them, the Board already found in its preliminary guidance, are taught, or
21 would be obvious in view of Armitage, LeFebvre, Barone, and a new
22 reference, Leitel. The first, [1]38(b), simply adds what a triaxial
23 accelerometer -- it adds a triaxial accelerometer and then explicitly claims
24 what a person with skill in the art would understand a triaxial accelerometer
25 does. It measures accelerations along three orthogonal axes.

1 The second addition to the claim is in 38(c), and that involves the
2 plurality of filters, each configured to filter out a portion of acceleration
3 based on the axis of those accelerations. The Board found in its preliminary
4 guidance at pages 6 to 7 that this, too, was taught by the prior art. So,
5 the -- in the revised motion to amend the only limitation that is material
6 patentability that was added is limitation 38(c)(ii), which requires a plurality
7 of detectors respectively coupled to the plurality of filters, each one of the
8 detectors being configured to detect a respective one of the plurality of
9 different railcar conditions based on the ones of the accelerations that are
10 associated with only the respective axis of the plurality of axes.

11 Now, notwithstanding the fact that we contend that there's quite a few
12 indefinite limitations here, before I get to that, I do want to note that this new
13 limitation 38(c)(ii) merely states what a processor would do in detecting a
14 fault condition. A detector, you know, there's no description in the '915
15 Patent of exactly what it means by detector. I think a PHOSITA would
16 understand that that's likely just an algorithm that detects a fault condition.

17 If we can go to slide 83. Now, there are two indefinite limitations in
18 these claims. The first one is ones of the acceleration. Now, I understand
19 the Patent Owner claims that this simply means one of the accelerations
20 along one axis. That is not, however, what the claim says. The claim does
21 not say one, singular, of the accelerations. It says ones of the accelerations,
22 in the plural. And we're not quite clear what that means. Does ones of the
23 acceleration mean there has to be more than one data point, or does that
24 mean it has to be more than one axis of acceleration that are analyzed? It's
25 quite unclear. And Patent Owner's --

26 JUDGE CHERRY: I'm sorry to interrupt --

1 MS. MANNING: -- (inaudible) is --

2 JUDGE CHERRY: Ms. Manning, is it, or is it the plurality of filters
3 collectively?

4 MS. MANNING: So, we've got two different arguments regarding
5 indefiniteness.

6 JUDGE CHERRY: All right, so --

7 MS. MANNING: That is the second one. Yeah, no, that, no, no,
8 absolutely, because ones of the accelerations is within these claims, it's
9 repeated several times. So, I just want to direct your attention that in a
10 Patent Owner's, I guess, reply they argue that one of the accelerations is
11 perfectly clear. That is not what the claim requires. Ones of the
12 accelerations, I believe, does something entirely different, and I don't know
13 what that means, in contrast to one of the accelerations. And I would also
14 like to note that Patent Owner did move to correct typographical errors in the
15 claim listings, the amended claim listings, and this was not one of the
16 typographical errors.

17 The second indefiniteness argument is with respect to limitation
18 38(c)(i), which also does include the ones with the accelerations at term.
19 But our argument regarding indefiniteness of this limitation is different.
20 And our argument here is that we cannot reasonably discern from the plain
21 language of this limitation, (c)(ii), whether each detector is coupled only to
22 one filter and only detects railcar conditions sensed based only on one axis
23 of acceleration, or can a detector consider multiple axes of accelerations, or
24 can it detect more than one railcar condition? We don't believe that this
25 limitation can be interpreted with any reasonable certainty, just like ones of
26 the accelerations.

1 If we can move this slide 84, unless I'm out of time. Okay.

2 JUDGE CHERRY: You're right at. Why don't you, unless you want
3 to cover this. But you're at one -- you're at 45 minutes right now.

4 MS. MANNING: Unless the Board has any questions, I would like to
5 reserve my remaining time for rebuttal.

6 JUDGE CHERRY: Sure.

7 MS. MANNING: But I'm happy to discuss anything else.

8 JUDGE CHERRY: I don't have any questions. Does anyone have
9 any questions?

10 JUDGE WOODS: No questions.

11 JUDGE CHERRY: All right. Thank you. Thank you, Ms. Manning.
12 Mr. Miller?

13 MR. MILLER: Yes. Good afternoon.

14 JUDGE CHERRY: Good afternoon.

15 MR. MILLER: So, I will start just really briefly going over the
16 indefiniteness. I'm going to go backwards again, if you don't mind, because
17 that was just mentioned. There are two indefiniteness arguments that were
18 just raised. With regard to one of the accelerations. I just want to refer to
19 the full claim language that in an earlier element it is recited wherein one or
20 more operational parameters comprise one or more accelerations. And then
21 the filtering element, this is in reference to claim 46 specifically, but I think
22 this applies to all of the claims that are part of this ground. Filtering at least
23 a portion of the accelerations by receiving an output signal directly from the
24 tri-axis sensor and selecting ones of the accelerations in the output signal
25 that are measured in a dimension represented by respective axes of the
26 plurality of axes. So, in our view, ones of the accelerations, when looked at

1 in context of the claim, is fairly clear. It is the accelerations that you select
2 through the filter. So, unless you have any questions on that, I'd be happy to
3 address them.

4 With regards to the second argument, plurality of detectors. The
5 claim does use the word respective and respectively, I think pointedly. So,
6 the plurality of filters are each configured to filter at least a portion of the
7 acceleration. That should be fairly clear. Plurality of the detectors
8 respectively coupled to a plurality of filters. Hindsight is always 2020.
9 Perhaps this could be more clear, but I think respectively there does some
10 work in saying you have plurality detectors. Perhaps it would have been
11 better to say each respectively coupled to one of the plurality of filters. That
12 is clearly what was intended here. I think that is a reasonable interpretation
13 of this claim. Each of the detectors being configured to detect irrespective
14 one of the plurality of different conditions. That actually is directly shown
15 in some of the diagrams of the '915 Patent that my colleague showed Your
16 Honors earlier today.

17 So, in our view, there's not much that's unclear. I think every single
18 patent claim could probably be written better than has ever existed on the
19 planet, but in our view that there certainly is enough there for a person of
20 ordinary skill to arrive with reasonable certainty with what falls within the
21 scope of the claim. If there aren't any questions on that, I'll just move on to
22 my main argument.

23 So, in terms of I just want to make one brief comment on claim
24 construction now. I think as a general matter, I don't think either side really
25 gave a specific construction for anything, but we did have a section in our
26 response dealing with claim construction, but it was really to essentially

1 agree with statements by a Petitioner's expert, for example, that digital filters
2 filter digital signals and not analog signals. But that's a very important
3 distinction between the two. And secondly, that a software filter is a
4 software program that performs filtering.

5 So, with regard to Armitage, Armitage does not disclose filtering or a
6 filter. What Armitage discloses is declining to acquire certain data, in some
7 cases through sampling, in other cases through just simply not reading a
8 sensor. But that's not the same thing as filtering. You have to have the data
9 in order to filter it. And not declining to acquire the data is different than
10 filtering data that you've acquired. Or -- well, in any case. Even if ignoring
11 data is a type of filtering, what is not disclosed in Armitage is any filter that
12 accomplishes that function, which is at least a specific claim element in
13 independent claim 1.

14 LeFebvre, similarly, does not disclose filtering. And Petitioner itself
15 says LeFebvre does not explicitly require a filter. Merely sending essential,
16 indicative information is not a disclosure of filtering as it is described in the
17 '915 Patent. And just really briefly, on the subject of mechanical filters, this
18 is a very, this is kind of a special circumstance. Mechanical filters occur at a
19 different time than all the other filters we're talking about, primarily because
20 mechanical filters filter out the vibrations before the accelerometer detects
21 them. That's the whole purpose of a mechanical filter, is that those
22 particular filters prevent certain accelerations from even being detected. So,
23 they have to occur prior to the acquisition of the data. In our view, the claim
24 written as -- when looked at as a whole, is clearly talking about analyzing
25 data that has been acquired. And so, notwithstanding claim 26, it seems

1 clear to us that the import of that is that you acquire the data, then you filter
2 it.

3 JUDGE CHERRY: But this is a -- independent claim 1 is a system
4 claim, right? It's positive structures?

5 MR. MILLER: That is correct, Your Honor. That is correct, Your
6 Honor.

7 JUDGE CHERRY: It's not a method claim. Right? We're not -- we
8 don't have to perform the -- I mean, it doesn't say how it's connected, right?
9 It just kind of claims a function. So, it just has to be capable of doing that.
10 It has to have that structure that's capable of this function, right?

11 MR. MILLER: Yeah, I don't disagree with that, Your Honor.

12 JUDGE CHERRY: Okay.

13 JUDGE WOODS: I just want --

14 JUDGE CHERRY: I'm sorry, go ahead.

15 JUDGE WOODS: I'm sorry to interrupt. If I could ask a question, I
16 would appreciate that, Mr. Miller. So, I'd love to focus on paragraph 45 of
17 Armitage.

18 MR. MILLER: Sure.

19 JUDGE WOODS: And I don't mean to be argumentative, but I
20 struggle to understand the distinction that you're making. It seems to be one
21 of form over substance. And so, I'm going to give you that same
22 hypothetical I gave to Ms. Manning. And so, could we both agree that if
23 you have a filter that measures a frequency range between 10 and 100 Hertz,
24 it only passes through the frequencies measured between 40 and 60 Hertz,
25 would that be a filter or with filtering code?

1 MR. MILLER: You know, again, in reference to what I was just
2 saying about sort of the temporal aspect of this, the import of the claims in
3 our view is that you acquire data and then you filter it. So, if you're not
4 acquiring the data, you're not filtering it. Now I understand your point
5 about, you know, the form of this, but again, it's, you know, looking at claim
6 1, the limitation is one or more filters configured to filter at least a portion of
7 the acceleration. If you're not acquiring data, you don't have a filter that is
8 filtering one or more of the accelerations. You have just something that's
9 not acquiring data.

10 JUDGE WOODS: I mean, that's a fair point. Okay. But as I look at
11 paragraph 45 of Armitage, it discloses a three-dimensional accelerometer,
12 and so it measures accelerations in the X-, Y- and Z-axes and it ignores the
13 vibrations in the X- and Y-axes and only measures accelerations in one of
14 the axes. And so, why is that not filtering, because it's accepting, measuring
15 the data from three different axes, but it's only passing through the vibrations
16 from one?

17 MR. MILLER: Well, one thing I'll note in 45, it actually is
18 referencing the sampling rates of the accelerometer, which is one reason
19 why it ignores the radial acceleration, because it only occurs, the sampling
20 only occurs for a portion of the wheel rotation. So, that's, I mean, that's one
21 reason it's not related to data filtering as to why it's not, looking at that, it's
22 not complete data. And so, I think in terms of the sampling question, which
23 in our view sampling is not filtering, sampling is just deciding when you're
24 going to acquire data. If the sampling rates are set at a particular point
25 where the data you're getting is not going to give you the information you
26 need, is that filtering? I mean, I guess, you know, I'll leave that to you to

1 decide. But I mean, in our view that is an artifact of the sampling as
2 opposed to an intentional decision to filter data.

3 JUDGE WOODS: Great, thank you.

4 JUDGE CHERRY: Now, I just wanted to make sure I was clear about
5 something you said. So, you agree that the mechanical filter, that has to
6 happen before the data is acquired, right?

7 MR. MILLER: Yes, that's what I said. Yes.

8 JUDGE CHERRY: And do you also agree that dependent claim 26
9 claims that one of the filters is -- provides a mechanical filter?

10 MR. MILLER: Yes, Your Honor. And to your point that you were
11 raising before claim 1 is a system claim that our argument regarding the
12 drafting there of claim 26 is that there's nothing that -- there's no issue if it
13 also includes a mechanical filter. The question is whether it's one of the
14 filters that has configured the filter at least a portion of the accelerations as is
15 claimed. And again, that comes to the point I was making that the
16 mechanical filters function prior to any acquisition of data. And so, you
17 know, you're not going to be performing any data analysis of data you don't
18 acquire.

19 JUDGE CHERRY: But doesn't that, but doesn't claim 26 suggest
20 you're reading that it has to be filtering after acquisition? Does that suggest
21 it's wrong because it can include the mechanical filter which would be
22 before data acquisition?

23 MR. MILLER: Well, Your Honor, so again, you know, the
24 fundamental question here that you know, you'll either agree with or not is
25 whether or not there's an error in claim 26. And if there's an error in claim
26 26 that needs to be corrected, then the correction will be that it would just

1 include comprising one or more mechanical filters as opposed to the one or
2 more filters that's in limitation 1(b), being one of the, being a mechanical
3 filter. Again, the filtering, in our view, the filtering in claim 1, again, it's a
4 system claim. Right. The filter, a claim 1 --

5 JUDGE CHERRY: It --

6 MR. MILLER: I'm sorry?

7 JUDGE CHERRY: So, if you want us to take, let me, I just want to
8 get, be clear about what you want us to do here for claim 26. So, you want
9 me to take out my, you want us to take out our red pencil and what do you
10 want us to scratch out?

11 MR. MILLER: So, you know, again, I don't want to belabor this, I'm
12 sorry. Yeah, go ahead.

13 JUDGE CHERRY: One second, let me read it in the record so that
14 way we have the language.

15 MR. MILLER: Sure.

16 JUDGE CHERRY: Claim 26 recites, the system of claim 1, wherein
17 the one or more filters comprise one or more mechanical filters. So, where,
18 what are we? Where are we? What's our pencil doing?

19 MR. MILLER: So, it would be essentially the system of claim 1,
20 Your Honor, which is the system of claim 1, further comprising one or more
21 mechanical filters.

22 JUDGE CHERRY: Then why couldn't -- I don't understand how that
23 would really totally solve your problem. I mean, maybe --

24 MR. MILLER: Okay.

25 JUDGE CHERRY: -- maybe more vague.

26 MR. MILLER: Well, also --

1 JUDGE CHERRY: (Inaudible) what is going to be?

2 MR. MILLER: Yes, I understand your point. I mean, I guess I'll go
3 back to, in that case, the mechanical filter would not be, it would be a filter
4 in addition to the one or more filters that are claimed in claim 1. So, it
5 would not be one of them, in other words, but the filters in claim 1 are
6 filtering data after it's acquired, after the data is acquired. Again, I don't
7 want to belabor this point. It's not a primary focus. And so, if you have any
8 questions, more questions on it, I'd be happy to answer them.

9 JUDGE CHERRY: No, I mean, it seems like regardless of whether, I
10 mean, I think your arguments, originally, we accepted them, but I wasn't
11 quite, we weren't quite aware of figure 13, which shows and then that
12 discussion of where filtering can include isolating longitudinal or lateral or
13 vertical components of the acceleration, which seems like exactly what
14 Armitage is doing. So, I think that's where you're kind of running into
15 problem with this Armitage argument. And we haven't even gotten to the
16 Barone argument, which, I mean, I think we all agree Barone teaches
17 filtering. And so, we're down to the motivation to combine, which, I mean,
18 it seems like a very compelling case to add filtering to data because you
19 have the digital signal, you have noise. I mean, I guess we're kind of
20 running into a lot of problems with, I mean, even if we agree with you on
21 Armitage, we still have Barone. So, maybe we'll talk, maybe we should talk
22 about Barone now, because I'm not sure how even if this is accepted, even if
23 we accepted what you're saying about Armitage, I mean, I guess, how do
24 you get over Barone?

25 MR. MILLER: Well, I just want to reiterate really briefly that our
26 argument about Armitage is that it doesn't, well, it certainly doesn't use the

1 word filter anywhere to describe what it's doing. So, you have to take
2 whatever it's doing and graft onto it the meaning of filter.

3 JUDGE CHERRY: I mean, it's like Black-letter patent law, it doesn't
4 have to say exactly the same words. Whenever I hear those arguments, it's
5 kind of like, you know, so what.

6 MR. MILLER: Okay, no, I hear you. I mean, again, in our view, and
7 whether you buy it or not, is that --

8 JUDGE CHERRY: That's what I'm saying. Let's set aside Armitage.
9 I mean, there are some points there. But I think that you're running into this
10 problem of figure 13, which seems a lot like Armitage. So, you know, we'll
11 set that aside. But now, I mean, so even if Armitage is sampling, or
12 whatever you want to call it, in paragraph, was it 54 or 45. If that's not
13 filtering, we have this combination where we're adding the filtering from
14 Barone, which, I mean, it does say filtering, right? So, why does that not
15 render the claims obvious?

16 MR. MILLER: So --

17 JUDGE CHERRY: For at least claim 1. We can talk about 25, 28.

18 MR. MILLER: Yeah.

19 JUDGE CHERRY: Let's focus on, you know --

20 MR. MILLER: Yeah, so, you know, our main argument with regards
21 to the obviousness combination is primarily motivation to combine,
22 motivation to modify. So, the, you know, our basic argument there is that
23 there's not, there hasn't been a sufficient explanation for why you would
24 necessarily combine the filtering that is described in Barone, which I'll note
25 is preconditioning filtering; it's specifically filtering to an analog signal for
26 the purpose of converting it into a digital signal where the whole goal is to

1 not lose any data. There's really no indication anywhere in Armitage that
2 that would be something that would be useful in terms of what, you know,
3 what Armitage is trying to accomplish.

4 JUDGE CHERRY: That was one thing I wanted to bring up with you.
5 That Dow case and those cases you're citing from 2004 before KSR. I mean,
6 you agree that KSR said there's no need for a teaching suggestion or
7 motivation in the reference, right?

8 MR. MILLER: I --

9 JUDGE CHERRY: I mean, I don't understand why you're making
10 that argument. I mean, there doesn't need to be a suggestion in Armitage to
11 do this. Right?

12 MR. MILLER: Well, there has to be a suggestion somewhere. There
13 has to be some reason why a person of ordinary skill would take these two
14 references and combine them together to make the claim. And that's what I
15 would argue is missing is what, you know -- and again, in our view, a lot
16 of -- I'm sorry?

17 JUDGE CHERRY: Barone tells us why filtering is advantageous.
18 Right? Do you agree that Barone talks about the advantages of filtering?

19 MR. MILLER: Yes. In terms of, I believe, the portion that was
20 quoted said enhancing data.

21 JUDGE CHERRY: Okay. And so, why isn't that a reason to -- why
22 does that supply a reason to combine? I mean, even if they -- I'm not going
23 to even concede that there needs to be a reason in either of the references.
24 Because if you look at Dystar, which is pre-KSR from 2006, the Federal
25 Circuit said that the motivation to combine can come from any reason, from
26 market forces, design needs. You know, they give a long list. I can't quote

1 the whole thing off the top of my head, so I'm not going to give that. And
2 also, KSR tells us that a known method used to improve another similar
3 device in a known way with predictable results is most likely obvious.

4 I mean, this seems like exactly that kind of situation. And, you know,
5 there is a benefit that Barone articulates, that it enhances the quality of the
6 data that's coming in. So, I guess, when you're pointing that there needs to
7 be a teaching suggestion or motivation in Armitage to make this
8 combination, that's not the law. And I think that's, frankly, not helpful to
9 you. And so, I want to give you a chance. Like, what, so you, you contend
10 that that's insufficient. Why is this benefit insufficient under the KSR
11 framework?

12 MR. MILLER: Sure. What I'll focus on then is in terms of the
13 combination, what we've been arguing from the beginning is one of the, sort
14 of, features of Armitage has to do with passing all or most of the
15 accelerometer data. It performs an average on an entire population of sensor
16 nodes, and then it does various comparisons. The point is that it's not clear,
17 in our view, it's not clear where that filtering would necessarily improve
18 Armitage. And in fact, you would have potential removal of certain data
19 that you might want to have if you're doing the, you know, performing the
20 techniques that are listed in Armitage.

21 JUDGE CHERRY: But that doesn't necessarily render something
22 inoperative. Right? I mean, Urbanski, In re Urbanski tells us that they're
23 tradeoffs. They've identified that, and your patent admits, that noise is a
24 problem with these sensors. And, you know, I guess I'm just struggling, you
25 know, you kind of said, would it render it inoperative? But I guess it seems
26 like selecting that width of the filter, and that's kind of just, I mean, that's

1 kind of ordinary engineering there. You'd still get -- you would still see the
2 population of data and you would see outliers within what you allowed to
3 pass, which would still provide you information. I guess I'm just, I mean,
4 inoperability seems like a pretty high requirement.

5 MR. MILLER: I'm sorry. Interoperability?

6 JUDGE CHERRY: Inoperability.

7 MR. MILLER: I'm sorry, I must have misheard you. I apologize.

8 JUDGE CHERRY: The In re Ratti argument.

9 MR. MILLER: Okay, sorry.

10 JUDGE CHERRY: Inoperative device. Right?

11 MR. MILLER: Got it.

12 JUDGE CHERRY: Render Armitage inoperative. Is that, is that fair?
13 Is that what -- I don't want to misstate your argument, but that's the way I
14 understood it was that you're saying they would render the -- the
15 combination wouldn't work. It would be not --

16 MR. MILLER: Yeah. Yes, Your Honor, it comes down to, you
17 know, the argument basically boils down to why a person of ordinary skill
18 would combine these two things together. And we were making arguments
19 that there were, you know, there were reasons why they wouldn't. Again, if
20 that's, you know, those are the arguments we have. You know, I'd be happy
21 to turn to claims 25 and 28 at this point.

22 JUDGE CHERRY: Okay.

23 JUDGE CALVE: Mr. Miller, Judge Calve.

24 MR. MILLER: Yes.

25 JUDGE CALVE: Let me just ask you something. Is it possible that
26 the teachings are at least complementary? So, if you have 10 sensors, my

1 understanding of your understanding of Armitage is it would remove maybe
2 two of the outlier sensors. So, it reduces the universe of sensors with data to
3 be processed from 10 to 8 or whatever in a stage one filtering. And isn't that
4 complimentary then to further processing with Barone, which teaches well-
5 known technique that would enhance Armitage similarly, in the same way so
6 that remaining sensors that are processed, then you further process them
7 with this other filtering. I don't know that -- they're certainly not mutually
8 exclusive. I don't see that they harm one another. They seem to work quite
9 nicely in the two-step process. But maybe, or am I misunderstanding the
10 technology?

11 MR. MILLER: Well, no, I don't think so. But the other thing I guess
12 I would like to do is kind of take a step back and look at what the, you know,
13 what the claim actually requires right here. So, the, again, I mentioned it
14 before about Barone. Barone is filtering for purposes of signal conditioning.
15 That's pretty explicit. That's actually what the component is called. That is
16 performing this filtering is the signal conditioning unit. The claim talks
17 about filtering a portion of the accelerations.

18 JUDGE CALVE: Let me interrupt. So, you're saying even a Barone
19 filter is, you're saying it's not the filtering that's covered by the claims.

20 MR. MILLER: It --

21 JUDGE CALVE: As Judge Cherry was trying to ask, doesn't Barone
22 cover the claim language, and then it's just, would it be obvious to combine
23 that teaching with Armitage's system?

24 MR. MILLER: So, the short answer is yes. I mean, that was, one of
25 our arguments that we made was that the filtering that is disclosed in Barone
26 is specifically tied to conditioning analog signals for conversion to a digital

1 signal. That, at least as far as what, I will say at least as far as how it's
2 described in the patent, that's not what the patent is describing. The patent is
3 describing filtering the actual data as opposed to conditioning the data. The
4 other thing I'll just note briefly --

5 JUDGE CHERRY: How is that any different? I mean, I've got, you
6 can't see my radio, but it's right behind me. But my radio has a filter in it
7 that filters the incoming signal from my antenna. And it, I mean, that is
8 like -- I think we better move on to claims 25 and 28. I was going to say I
9 didn't see that in your Patent Owner response. You might have made that, I
10 think you made that like a preliminary response, but I don't think you that
11 argument in your Patent Owner response. So, we're not going to raise new
12 arguments that you've kind of not raised in the Patent Owner response.

13 MR. MILLER: Understood, Your Honor, it wasn't my intention.
14 Understood.

15 JUDGE CHERRY: Let's focus on 25 and 28, which I'm sure --

16 MR. MILLER: Of course.

17 JUDGE CHERRY: -- is a better argument.

18 MR. MILLER: So, yeah, 25 and 28, 25 covers a software filter.
19 Software filter, at least as described by our expert in Exhibit 2006, paragraph
20 62. A filter that utilizes a processor capable of executing computer program
21 that is capable of processing and passing selected data. This involves
22 user -- computer executable code that acts on digital data. That is, the data
23 that is representative of the accelerations that are measured on the railcar.
24 We note Petitioners, as I mentioned earlier, Petitioner's expert essentially
25 agrees with this in Exhibit 2007 at paragraph 124. None of the filtering
26 steps that are disclosed in Barone, or at least that are cited to in the petition,

1 are performed by software or in the digital domain. And there's no such
2 hardware that corresponds to a digital filter in the portions that are cited in
3 the petition. And again, just to reiterate, this is all signal conditioning. The
4 whole point of signal conditioning is that you're conditioning an analog
5 signal for conversion into a digital signal.

6 So, the very nature of what is disclosed in Barone, it is all analog
7 filtering. None of it's done by software. None of it's done by a digital filter.
8 Petitioner brings up in its reply, these two data sheets, these microcontroller
9 data sheets. We have a motion to exclude on those as untimely filed.
10 They're not incorporated by reference into Barone. They're not even
11 mentioned, the data sheets themselves are not even mentioned in Barone.
12 It's only the microcontrollers. So, whatever is in those data sheets is not
13 disclosure of Barone. And I mean, even if they are considered, that figure 7
14 of Barone, which is shown in our demonstrative Exhibit 3, clearly shows
15 that the accelerometer data goes into what's referred to as the quad op amp.
16 And the output of the quad op amp only goes to the analog digital converter,
17 as I was just describing. Only the microphone and temperature sensor go
18 into the comparator, which is what Petitioner points to from the disclosure of
19 these data sheets.

20 So, in short, there is no disclosure of digital filtering, at least as to
21 what's presented in the petition. We have already briefed a motion to
22 exclude, which includes the paragraph that my colleague mentioned. And
23 I'll just note she also admitted that paragraph 221 of Barone was not cited in
24 the petition. That is not what they relied on in their grounds. It is too late to
25 bring that up and to reply. And it's pretty clear that in terms of the filtering

1 that is disclosed in Barone, it is all analog filtering and not digital. So,
2 claims 25 and 28 are patentable over that combination.

3 JUDGE CHERRY: I think your argument's interesting but then, like,
4 looking at the discussion and the petition and, if you look at Barone in
5 isolation, that's true, but that's not quite what the petition talks about. I
6 mean, the petition talks about modifying the firmware of -- sorry, one
7 second, I think it's on page 27 to 28 of the petition where they talk about
8 filtering to take place any place in the system. You know, they -- yes, they
9 have something about we would modify the firmware, the software in
10 Armitage to incorporate filtering as taught in Barone, why isn't that
11 sufficient?

12 MR. MILLER: So, again, and I thank you for bringing that up
13 because it brings up a point that I wanted to touch on. This is talking about
14 firmware. Firmware is a type of software. And so, this would require it to
15 be a digital filter. At this point, their argument was that Barone discloses a
16 digital filter and they pointed to disclosure that, as I noted, does not actually
17 disclose a digital filter. So, that's one way to understand the context of what
18 they're talking about here is that it's dependent on the fact on their argument
19 which was incorrect that the portions of Barone they cited to disclosed a
20 digital filter.

21 Now they're arguing interchangeability, which I note, I did not see any
22 argument in the petition or frankly in the reply about the interchangeability
23 of analog and digital filters. But they're not. Digital filters require certain
24 types of hardware that's not required for analog filters and vice versa. It is
25 not something you can just simply swap out. And there's no description in
26 Barone that explains that. And they haven't explained it either. I note the

1 portion of Mr. Ricca's declaration that they pointed to, I believe it was
2 paragraph 78, 79 does not say that there interchangeable. It just says they
3 were both known. That's not sufficient.

4 JUDGE CHERRY: But when I look at, I mean, I guess I'm not sure
5 that that's totally true because it seems to say the filtering of Barone occurs
6 at the sensor, a PHOSITA would have understood the filtering and the data
7 can take place anywhere in the system including either in the CMU or the
8 sensor. Further, a PHOSITA would have understood the various
9 considerations impact where filtering takes place in a data processing
10 system. For example, Barone emphasized the importance of a load power
11 system so PHOSITA would understand power consumption can impact
12 where filtering takes place.

13 Why isn't that -- I mean, I think, I mean, I guess I'm kind of struggling
14 because it seems like you're kind of arguing a bodily incorporation. And
15 yes, if we just look at Barone's structure, if they were just incorporating that,
16 it wouldn't meet the limitation. But it seems like their petition, kind of,
17 articulates a more complicated theory, at least on pages 27 to 28. Have you
18 addressed that?

19 MR. MILLER: I'm sorry, 27 and 28 in the petition?

20 JUDGE CHERRY: Yeah, where it says, the bottom paragraph where
21 it says, to the extent Armitage does not disclose, does not exclusively
22 disclose a filter, Barone shows filtering acceleration data was well-known in
23 the art conventionally used at the time of the invention. Specifically, Barone
24 teaches output of an accelerometer being transmitted to signal conditioning
25 178 where analog signals are amplified and/or filtered as appropriate

1 electronic filter and then routed to analog to digital converters for wide
2 bandwidth calculations and data manipulations to digital filter.

3 So, I mean, do you agree that the data manipulations can be a digital
4 filter?

5 MR. MILLER: I don't think that's what's disclosed in those sections
6 of Barone and I don't know, it's certainly not -- well, that's actually referring
7 to Armitage not Barone. But the short answer is no. I mean, in terms of
8 what they cited into Barone in the petition, which is all we could go on in
9 our response is that it was the signal conditioning part, which, as I said, is
10 not digital filtering. And the two are different. I mean, it's not, you can't just
11 say, oh well, we know how to filter something analogy. So, now let's just do
12 it digital. There has to be something more there, especially when the only
13 disclosure is of analog filtering.

14 JUDGE CHERRY: But we do have the testimony. I mean, are you
15 disputing that digital filtering wasn't well-known in, what is the priority date
16 of this application, two thousand --

17 MR. MILLER: No, no, Your Honor, that's not. That's not the
18 argument.

19 JUDGE CHERRY: So, I mean, Mr. Ricca has testified that a
20 PHOSITA would have understood that filtering can take place anywhere in
21 the system. Did you --

22 MR. MILLER: Yes. What he did not say was that a person of
23 ordinary skill would understand that it would be obvious to interchange
24 digital filtering with analog filtering. That statement or a similar statement,
25 and I'm sure that my colleagues will correct me if I'm wrong, but I do not

1 recall seeing that, does not appear anywhere in his testimony, nor does it
2 appear anywhere in the petition.

3 JUDGE CHERRY: I thought that Ms. Manning was talking about
4 paragraph, I mean, it was paragraph 78.

5 MR. MILLER: Yeah, he says that they were known, but that's not,
6 just having information that's known is not sufficient to show that the
7 combination would be obvious.

8 JUDGE CHERRY: Well, he does say that in this field, filtering can
9 be accomplished by choice of the sensor that has a specific range of
10 resolution through physical methods, i.e., mechanical filtering, electronic
11 filtering, or digital filtering. And then he describes each one. And then in
12 paragraph 80, he says one type of filtering firmware can execute, identifying
13 isolating types of data. It does seem like, in the end, an electrical filter,
14 again, I have a ham radio, so it's a circuit that can be modeled
15 mathematically, right? I mean, there's mathematical functions that represent
16 different kinds of filters. That's kind of freshmen, or sophomore
17 engineering, you can put into MATLAB mathematical representations of
18 these filters. I'm not understanding what a digital filter is that different. It's
19 just a mathematical representation of an electronic filter acting on samples,
20 on the A to D, the output of the A to D to converter. Right? So, what is the
21 difference? Why? Did Dr. Shamos testify that this implementation was
22 beyond the level of skill in the art in 2010?

23 MR. MILLER: I can tell you what his argument was in a second, but
24 I mean, in terms of the difference, I mean, there's a notable difference in
25 terms of what -- so, the filtering of an electrical signal, that's typically what
26 we're referring to with like, you know, high, you know, bandpass filters,

1 things like that. That is where you're cutting off higher frequencies or higher
2 amplitudes, right. Can you do that with a digital filter? Yes, but how you do
3 it in a digital filter with discrete values, ones and zeros, is different than how
4 you would do it with an electrical circuit. So, I mean, you know, again, all
5 we're going on is what the disclosure was that they referred to in the petition.
6 And the disclosure they referred to was not digital filtering. And so --

7 JUDGE CHERRY: He said that these were all known and could be
8 selected. Did you say that? I mean, I guess where I'm struggling, if you
9 give the example of a bandpass filter, I mean, where does your patent
10 describe how digital filtering takes place? Just as digital filtering.

11 MR. MILLER: That is, let me get to that. Sorry, I have too many
12 documents open already. So, I guess one difference I would note is that, you
13 know, again, the '915 Patent, at least as opposed to, you know, Armitage
14 and LeFebvre, and at least in terms of the, what was cited in the petition
15 actually does disclose a digital filter and software filter. So, you know, I
16 believe it actually discloses a digital, a specific digital accelerometer. But in
17 any case, the -- in our view, the disclosures of signal conditioning is just, it's
18 not a -- I guess I'll just rest on saying that's not digital filtering. It can't be
19 digital filtering because the whole point is to condition the signal into a
20 signal for digital conversion. You know, in terms of what, you know, I
21 mean, one thing I'll note is that they have to make the arguments. They have
22 to, they have the burden to prove that they have made this argument and
23 proved, proven the argument. I didn't see that.

24 JUDGE CHERRY: Well --

25 MR. MILLER: I'm sorry?

1 JUDGE CHERRY: I mean, I'm just quoting from pages 27 and 28.
2 Sorry, I've got all my documents open, too. I'm just talking about what they
3 put here on 27 to 28. And it does talk about -- it doesn't -- it does talk about
4 Barone's filtering and it says that it can be, it can be implemented using both
5 digital and electronic and that you would, that you could locate this filtering
6 anywhere in the system. Did you respond to that argument? I know you
7 responded to this, that Barone doesn't teach it, but did you respond to this as
8 it's articulated, as the combination is articulated in the petition?

9 MR. MILLER: Well, I certainly thought we did. And by the way, the
10 discussion in our expert declaration is in paragraphs 43 to 45, it looks like.

11 JUDGE CHERRY: Okay. I'll take a look at it.

12 MR. MILLER: Also, 50. With regard to claim 25, it's 61 through 74.

13 JUDGE CHERRY: You have about seven or eight minutes left. Why
14 don't we talk about the motion to amend, the revised motion to amend, now?

15 MR. MILLER: Yes.

16 JUDGE CALVE: Just one question, please, Judge Cherry. Yeah, just
17 from my understanding, are you arguing, if you neglect mechanical filtering,
18 that the patent itself distinguishes between the other three types of filtering,
19 that it discloses? Are you contending that there are different types of
20 filtering better suited for filtering different types of signals? Or are you
21 suggesting that you can't have digital filtering at this day that completely
22 mimics analog filtering or vice versa? Is there some reason that they're not
23 equivalent? That's what they're saying. Or is there a reason you're choosing
24 these? Or did you just claim them all so, someone doesn't design around
25 you by using digital filtering when you claim electronic? What's the purpose

1 for these different types of filtering that it wouldn't be obvious to use one
2 instead of the other?

3 MR. MILLER: Sure. You know, I think it's less about -- so, again,
4 it's about how you would do that. The disclosure of Barone is what is, what
5 should control here in terms of what's disclosed and what they're trying to
6 combine. There's no explanation as to how a person of ordinary skill would
7 do that, would combine those two together. I mean, that's the crux of our
8 argument. And again, you know, if you're going to take their word that all
9 this is known and that's it, then there's not much we can do. But, you know,
10 there needs to be something more to explain why signal conditioning is
11 going to render obvious the kind of digital filtering that is, at least, you
12 know, described in the patent. But in our view, the patent, the claim does
13 require. Again, this is our interpretation of the claim. The claim requires
14 filtering after it's acquired. The claim requires filtering of the accelerations.
15 That's the detected accelerations. So, there is data that is removed from the
16 signal by the filter. Signal conditioning doesn't do that. And so, you
17 know --

18 JUDGE CALVE: That's fine. I don't want to be taking up your time.
19 I've taken up enough time. I've got your position.

20 JUDGE CHERRY: I appreciate it.

21 JUDGE CALVE: Okay. You got it? Okay.

22 MR. MILLER: So, onto the motion to amend. One thing I'll just note
23 because it was mentioned in, I believe their sur-reply is this issue of the
24 burden. I'm just stating this to state Patent Owner's position on the record is
25 that Patent Owner's burden with regard to a motion to amend is, at least
26 from the perspective of the statute and Federal Circuit law, a burden of

1 production to show that no new matter is added. Repeatedly, it feels to us
2 like there was a burden placed on us to show that the claims are patentable
3 under 112. And this is true of both cases. And that just can't be the case in
4 view of section 316(e). That being said with regard to written description of
5 claim 43, the section that is cited in the motion to amend, which is column
6 10, 55 to 60, refers to, it's a method that's described. This is of a, the
7 description is of a flowchart where the system is initialized and is in a wait
8 state. This is again in column 10, lines 55 to 60. The system is waiting in a
9 wait state where events are disabled as the critical speed required for the
10 event enablement has not yet been reached. That critical speed could be any
11 speed. There's no limitation in that disclosure as to what speed the critical
12 speed is. That could be zero. That could be any other one.

13 Other sections that we cited to discuss multiple sensors.

14 JUDGE CHERRY: You know, I just want to kind of say one thing.
15 Like, when you didn't find it there, I thought we didn't, for this one, we
16 found there was no new matter. So, I understand your position on the other
17 cases, but I just want to be clear when you're talking about we shifted the
18 burden on you for 112, in the preliminary guidance we said that on the
19 preliminary record that there was no new matter.

20 MR. MILLER: I apologize, Your Honor. I don't think I was clear.
21 This is in reference to the argument that Petitioner is making in its
22 opposition to the revised motion to amend. So, that wasn't the subject of the
23 preliminary guidance. They did not challenge written description support
24 for the original claims in the motion to amend. This is in reference to the
25 revised motion to amend. And I'm only referring to an argument the
26 Petitioner is making.

1 JUDGE CHERRY: Okay. Thank you.

2 MR. MILLER: So, I believe I already talked about definiteness. You
3 know, again, it kind of is along the same lines as our other arguments in
4 terms of the obviousness. You know, we don't believe that they have made
5 their case with regard to the combination of elements. And in our view, as
6 with the challenge claims, the substitute claims should be patentable over the
7 prior art, as well.

8 I will, I guess, reserve any balance that I have. I don't think I have
9 much for --

10 JUDGE CHERRY: You still have one more minute. Yeah. We'll
11 give it to you so you have 11 minutes for sur-rebuttal.

12 MR. MILLER: Thank you.

13 JUDGE CHERRY: No problem. All right, Ms. Manning, do you
14 want to do rebuttal or?

15 MS. MANNING: Yes. There are two points I'd like to address. The
16 first is with regard to substitute claim 43. First of all, that was not amended
17 in the original motion to amend as it is found in the revised motion to
18 amend. That is why written description support was not raised in opposition
19 to the original motion to amend and only in the revised.

20 If we can go, actually, to slide 84, please. With regard to the burden
21 here, and I'm not going to belabor this unless Board has questions, but I do
22 want to point out that on page believe it is pages 1 to 2 of the Petitioner's
23 opposition to the revised motion to amend, we explain that it is in fact the
24 Patent Owner's burden to prove that the substitute claims do not introduce
25 any new matter, which is commensurate with the written description
26 requirement. Here, the Patent Owner did not assert that the temperature

1 sensors provided written description support to the substitute claim 43.
2 They introduced new matter in its Patent Owner reply in support of its
3 revised motion to amend regarding a temperature sensor that is only
4 activated when the railcar is in motion. This does not provide written
5 description support for this dependent claim. First, because dependent claim
6 43 depends from independent claim 38, which claims that the detectors
7 detect railcar conditions based on acceleration data, not temperature data.

8 Second, there is no single embodiment that includes both a
9 temperature sensor that is only activated when the railcar is in motion and an
10 accelerometer that is only activated when the railcar has reached a certain
11 speed. And as the Federal Circuit has held in Payette (phonetic) v. Dudas,
12 the original application must support each claim as an integrated whole
13 rather than as a collection of independent limitations.

14 Unless there's any questions about that I'm going to make, I just want
15 to address one issue from the IPR, not the motion to amend. So, as I believe
16 I mentioned in my opening, Patent Owner is treating Petitioner's arguments
17 as if they are anticipation arguments. These are obviousness grounds what a
18 person of skill in the art would have found obvious in view of the prior art
19 problems to be solved and the general knowledge of a person skilled in the
20 art. In paragraph 78 of Mr. Ricca's declaration at Exhibit 1003, he states,
21 quote, a PHOSITA would have understood the meaning of filtering as
22 excluding some portion of a dataset, and it is desirable to include a filter in
23 any data collection and processing system to get rid of unwanted data and/or
24 to identify and amplify particularly relevant data. In paragraph 79, Mr.
25 Ricca states that in any data collection analysis, data is almost always
26 filtered in some manner and the system can utilize the various types of

1 filters. These are the various filters he describes in the preceding paragraph
2 78, would utilize the various filter types of filters alone or in combination to
3 achieve the most effective filtering of data to achieve more accurate and/or
4 targeted data analysis for detection of fault conditions. Three, in paragraph
5 80 of Mr. Ricca's declaration, he states a PHOSITA would have understood
6 filtering of data can take place anywhere in the system. In paragraph 81, Mr.
7 Ricca states that Barone further teaches the use of high pass, low pass,
8 and/or bandpass filters, all of which can utilize both electronic and digital
9 filters. And finally, Mr. Ricca relies on and I believe that is in paragraph 79,
10 exhibit 1009 which states that digital filters can duplicate the frequency
11 response of any analog filter in the digital domain and if the Board does not
12 have any further questions I'll speed the rest of my time.

13 JUDGE CHERRY: Now Judge woods or Judge Calve, do you have
14 any questions? No questions. No questions either. Thank you very much.

15 MS. MANNING: Thank you very much.

16 JUDGE CHERRY: Mr. Miller, you have 11 minutes for sur-rebuttal.

17 MR. MILLER: Sure. And I doubt I'll take all of it. I'll just close by
18 noting that, you know, the obviousness inquiry does, is one that does require
19 a searching review for a motivation to combine. Otherwise, you know, any
20 disclosure of any element would always render a combination claim obvious
21 which is obviously not what patent law stands for. Just simply reading off
22 conclusory statements by the expert we don't think is sufficient. There is not
23 a documentary support for some of what they're saying. And in our view,
24 you know, just going back to the combination discussion that you had
25 before, our view is that there has to be something more than simply all this

1 stuff was known. That's not sufficient. And so, unless there are any specific
2 questions I think that is where I'll end.

3 JUDGE CHERRY: I do want to say though, that it isn't enough that
4 they all are known but when you have a related reference in the same field
5 using the same method to improve a similar device, that is a strong case of,
6 as KSR says, we need to take a close look at that. And so, we have Barone
7 that discloses the use of filtering of similar data and it could be a way and
8 suggests that it would be a way to improve another system. So, I don't
9 know, I kind of balk a little bit that we're just kind of, raiding the parts bin
10 here, and so, I think there are some arguments with claims 25 and 28 and
11 we'll take a close look at those. But, I do kind of blanch a little bit that your
12 suggestion that we're just kind of, you know, we're Rube Goldberging it
13 here. You know, I think this one's a little different than the other cases. I
14 think the other cases have other, -- you raise some compelling arguments in
15 them, and so we'll take a close look at them. And, I still am reviewing them.
16 So, I don't know.

17 I just want to take a moment to say I think throughout this argument,
18 you've done a very good job, but you have had kind of this edge to your
19 statements that you're angry with us. And I want to say, for the record, that
20 we take our jobs here very seriously, and we're not Frankenstein monstering
21 it here, as some people accuse us of. And we're trying to do what the law
22 says, so we're taking a close look at these cases. So, I don't want you to
23 think that, I don't know, that we're biased or something. I just, I wanted to
24 set the record clear about that.

25 I don't know if Judge Calve or Judge woods have anything to say.

26 JUDGE WOODS: No questions.

1 JUDGE CALVE: Nothing to add.

2 MR. MILLER: Well, Your Honor, if I may just really briefly,
3 that -- our arguments regarding any kind of Frankenstein's monster are
4 directed at the Petitioner, which is raising the argument. We're certainly not
5 making those arguments toward you. One thing I'll just note, though, is that,
6 you know, I mean, I'll rest on the briefing for this, but I'm not 100 percent
7 sure I would agree that the techniques are the same between, for example,
8 Armitage and Barone. I think that is something that does indicate a
9 difference that, in our view, requires something more than just the
10 disclosures. And so, again, that's from what was presented to us in the
11 petition. But in any case, I appreciate your input, and I certainly will take it
12 into consideration for any future interactions I have.

13 JUDGE CHERRY: Thank you very much, and thanks to both
14 Counsel for the thoughtful and helpful presentations. With that, the case is
15 submitted. And just stay on the line in case the court reporter needs any
16 spellings.

17 (Whereupon, the proceedings at 2:52 p.m. were concluded.)

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