

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AFFORDABLE WIRE MANAGEMENT, LLC,
Petitioner,

v.

CAMBRIA COUNTY ASSOCIATION FOR THE BLIND AND
HANDICAPPED, INC.,
Patent Owner.

IPR2024-00139
Patent 10,177,551 B1

Record of Oral Hearing
Held: February 11, 2025

Before JAMES P. CALVE, FRANCES L. IPPOLITO, and
NATHAN A. ENGELS, *Administrative Patent Judges*.

APPEARANCES:

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The above-entitled matter came on for hearing on Tuesday, February 11, 2025, commencing at 10:59 a.m. CST, at the U.S. Patent and Trademark Office, 207 South Houston Street, Suite 159, Dallas, Texas.

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

10:59 a.m.

JUDGE ENGELS: Good morning, welcome to the U.S. Patent Trial and Appeal Board. We are here for oral arguments for IPR2024-00139. The Petitioner is Affordable Wire Management, LLC. The Patent Owner is Cambria County Association for the Blind and Handicapped, Incorporated. I'm Judge Nathan Engels and with me on the panel are Judge Calve and Judge Ippolito. The challenged patent is United States Patent Number 10,177,551 B1.

Each side will have 60 minutes to present arguments today. We'll begin with the Petitioner followed by Patent Owner and each side can reserve time for a rebuttal.

Let's begin with appearances for each party. Who is here on behalf of the Petitioner?

MR. GALICA: Good morning, Your Honors. This is Matthew Galica on behalf of Petitioner, Affordable Wire Management.

JUDGE ENGELS: Do you intend to reserve any time for rebuttal?

MR. GALICA: I'll plan to reserve 10 minutes.

JUDGE ENGELS: Okay and who is here on behalf of Patent Owner?

MR. FLYNN: Good morning, Your Honor. Edward Flynn on behalf of Patent Owner and I will reserve seven minutes.

JUDGE ENGELS: I understand there will not be confidential information discussed in the hearing today. Is that correct?

MR. FLYNN: That's correct.

MR. GALICA: Correct.

1 JUDGE ENGELS: This hearing is open to the public. If there are any
2 other questions, now is the time or we are ready to begin.

3 MR. GALICA: Nothing from Petitioner.

4 MR. FLYNN: Nothing from us, sir.

5 JUDGE ENGELS: You may begin when you're ready.

6 MR. GALICA: All right, good morning, Your Honors. I'll start with
7 a quick agenda and slide deck. I'll reference the slides that I'm on as I move
8 forward through them so everybody is on the same page here.

9 So starting with slide 2 and the items that I'd like to cover today.
10 First, a quick overview of the invalidity grounds that were instituted as part
11 of this proceeding and the ones that I'll be focusing on during this
12 presentation. I'll then talk through or give a quick overview of the patent
13 that's challenged in this proceeding. I'll spend a little time talking about the
14 technology background and the state of the art leading up to the time of the
15 patent. I'll walk through the prior art references that I'd like to focus on and
16 the grounds that they're relevant to.

17 I'll spend some time on the construction of the term multifunction line
18 and then I will address specifically Petitioner's invalidity ground 2, I'll focus
19 on primarily today. As Petitioner currently stands, we believe the papers as
20 to all other grounds speak for themselves in the way we articulated them in
21 both the Petition and the reply. So, for purposes of this hearing, I plan to
22 focus on ground 2. I'm happy to answer any other questions, but that will be
23 the primary focus of my presentation. And then I'll conclude by addressing
24 some of the secondary consideration arguments that Patent Owner has
25 brought forward as part of this proceeding.

1 Jumping to slide 4, as part of the institution decision this Board
2 instituted five grounds, as I had mentioned previously, the one that I'll focus
3 on today is ground 2. It's a combination of a CAB website reference and a
4 CAB white paper in view of the knowledge of a POSITA. Throughout the
5 day, I will refer to those references as CAB website and CAB white paper to
6 avoid any confusion, but if there are questions at any time, please feel free to
7 interject.

8 So I'll jump to slide 6 and give a quick overview of the patent, it's
9 patent 10,177,551, titled as Grounding System. It has a priority date of
10 October 5, 2017. And at a high level what's disclosed is a grounding
11 system. That grounding system is comprised of three components or outlets.

12 There's a multifunction line, there's a conductive mounting assembly,
13 and there's a conductive pile. The patent tells us, in the specification and the
14 claims, which I will get to in a moment, that these three components are
15 electrically coupled or in electrical communication with one other. And as a
16 result of that, it creates a grounding system.

17 Moving to slide 7, and what I just alluded to, the grounding system,
18 and its components, the multifunction line, the conductive pile and the
19 conducting mounting assembly, those are visually depicted in the patent
20 specification. At figure 1, we see item 35 corresponds to the multifunction
21 line. We see item 30 in figure 1 corresponds to the conductive pile and then,
22 we see in figure 8B, the conductive mounting assembly item 60.

23 It's important to note here what the patent tells us the word conductive
24 means. It gives two examples of what constitutes a component being
25 conductive. It can be highly conductive or it can be partially conductive.

1 The patent goes on, and this is in column 8, lines 8 through 11, and also tells
2 us that a partially conductive component can be made of steel. That's
3 column 8, lines 23 through 28. It also goes on to tell us that specifically the
4 multifunction line disclosed in this configuration can be partially conductive,
5 which means it can be just steel, that's the specification column 8, lines 44
6 through 45.

7 So the upshot of this is that the configuration depicted here, the
8 grounding system with the three components that have coupled together, all
9 of those components can be steel and that's what the patent tells us.

10 Going to slide 8, what we see here is claim 1 and this recites in effect
11 what I just walked through. You have a grounding system alluded to in the
12 preamble. You have a multifunction line. You have a conductive mounting
13 assembly and you have a conductive pile and those are in electrical
14 communication or being electrically coupled to each other. Those are the
15 three components that constitute the grounding system. They're coupled to
16 each other. They can be made of steel and they can be partially conductive.

17 Jumping to slide 10, I'll walk through a little of the technology
18 background in this industry and talk a little bit about the state of the art and
19 some of the standards and regulations that govern this industry. So aerial
20 support systems for cable management have been around for almost a
21 century. If you've driven or walked outside and you've seen cable poles
22 with wires, you've seen an Aerial Cable Management System. Now, these
23 above ground systems were used in part to protect the cables themselves
24 from damage and it was a way to remove or create distance between them

1 and humans that might interact with them, which could be a potential safety
2 concern, so doing that was an attempt to mitigate that.

3 The configuration that's been known for almost a century would use
4 things like piles, tension members and mounting structures to couple the
5 configuration. Specifically, the use of metal piles has been something that
6 has been known since the 1930s; the image on the right of this slide depicts
7 that.

8 Going to slide 11 and I'll talk about the concept of grounding. What
9 grounding or grounded means is that there's a path to ground for stray
10 electricity or current to flow. That's how, in the top right of the slide, the
11 2008 version of the NEC defines it, grounded and grounding coterminous
12 and it means connecting something or being connected to ground. This is
13 something and I've alluded to it before, the presence of cable management
14 systems, current carrying wires in the presence of humans presents a safety
15 risk. If there were ever faults in the cable management system or events like
16 lightning strikes, which would cause an overflow or an uncontrolled
17 discharge of electricity, that would present a potentially catastrophic
18 circumstance for humans. Because of that, people in this industry, in the
19 cable management industry, are very, very concerned in grounding electrical
20 systems. This is something that has been done since the 19th century and it
21 provides a safe way of containing cable management systems when they're
22 above ground and in the presence of humans.

23 Going to slide 12. Because of the safety risk that it presents and the
24 importance that grounding has to prevent that, it's become a standardized
25 methodology and there have been codes and regulations that have been

1 authored and implemented that guide the effective grounding of cable
2 management systems. Principally, the NEC, it's been around for over a
3 century and the 2008 version in particular is one that both sides, Petitioner,
4 Patent Owner and the experts agree would guide one of ordinary skill in the
5 art when analyzing different electrical cable management systems and it
6 would inform them how one should conduct effective and safe grounding of
7 the systems.

8 Going to slide 13 now, and what I was just alluding to with the 2008
9 version of the NEC, there are two sections depicted here that provide a
10 person of ordinary skill in the art or somebody in the cable management and
11 grounding system industry guidelines and regulations that are meant to be
12 complied with for the effective and safe grounding of systems. On the left,
13 we see that when a messenger wire is used as a grounding conductor, the
14 NEC tells you what different sections it should comply with. So, the NEC
15 as of 2008 has told us you can use a messenger wire for the purpose of
16 grounding. It can be a grounding conductor and here's the different sections
17 that it should comply with if you choose to do that. On the right, we see that
18 a conductive pile on its own can be used to ground a system and another
19 section alluded to throughout the brief, and it's Exhibit 1007, the 2008
20 version of the NEC page 98, section 250.4(A)(2), makes clear that
21 noncurrent carrying conductive materials enclosing electrical conductors or
22 equipment or forming part of such equipment shall be connected to earth so
23 as to limit the voltage to ground on these materials.

24 So what we know from reading the NEC as of 2008, one, all of your
25 electrical cable management systems need to be grounded, that's section

1 250. And you can do that by looking at two other sections, the grounded
2 messenger wire, which is section 396.30 and you can use conductive piles to
3 create a path to ground as well.

4 Moving to slide 15, I'll now talk about the two references that are the
5 subject of ground 2. The first one, the CAB website, it's Exhibit 1005, this
6 is a --

7 JUDGE ENGELS: Just briefly, counsel, before we move on, do we
8 have any evidence of the NEC regulations from the critical date of the 551
9 patent?

10 MR. GALICA: If I may, I'll go back to the slide 13. The 2008
11 version of the NEC is still in effect as of the critical date of the patent 551.

12 JUDGE ENGELS: Thank you.

13 MR. GALICA: Jumping back to slide 15. What the CAB website
14 depicts is a photovoltaic installation that includes a tension member upon
15 which cable hangers are hung, in this case rings and saddles. We have
16 conductive piles driven into the earth and we have conductive metal
17 mounting assemblies. Then, significant in this disclosure is the website's
18 direction to look at a white paper. That brings me to slide 16, the CAB
19 white paper.

20 This is Exhibit 1006. The CAB white paper specifically addresses
21 NEC grounding which I had spoken about in the previous slides and its
22 significance, importance and the fact that people of ordinary skill in the art
23 are motivated and guided by the NEC to ensure that each cable management
24 system is effectively grounded. What the CAB white paper tells us is that in
25 this circumstance, you have a grounded steel messenger wire.

1 Significantly, at the bottom right of this slide, there are two passages
2 that we have excerpted. The first reads, “The electrical industry including
3 code enforcement personnel are heavily focused on grounding and bonding
4 of metallic parts.” That’s exactly what I just walked through in the previous
5 slides. It confirms that people operating in this industry, dealing with cable
6 management systems, Aerial Cable Management Systems, are guided by the
7 NEC, motivated to comply with it for the important reason of ensuring that
8 each system is grounded.

9 The excerpt just beneath that, this is Exhibit 1006, at pages 8 to 9,
10 discloses that the way the CAB white paper achieves that is by using a
11 grounded steel messenger wire.

12 We will move ahead to slide 18 now and spend a little time on the
13 claim term multifunction line. There have been three different constructions
14 at issue throughout this proceeding. On the left of the slide, we have the
15 proposed construction from Petitioner. In the middle, we have the proposed
16 construction from Patent Owner and on the right, we have the preliminary
17 construction from this Board as part of its institution decision.

18 Now, the color coding is relevant in that the green aspects of
19 Petitioner’s proposed construction and Patent Owner’s proposed
20 construction aren’t really at issue as part of this proceeding. There doesn’t
21 seem to be a dispute as to a significant difference between the phraseology
22 and Patent Owner has never made an argument that under either construction
23 any reference fails to disclose the limitations. So the green text for all
24 intents and purposes is agreed upon and not at issue as part of this
25 proceeding.

1 The red text or the red highlighted text, I should say, is where the
2 dispute lies. And as a preview of what I'm about to talk about, I'll focus
3 first on Petitioner's construction and the term conductive. It's important for
4 the reasons I previously talked about conductive --

5 JUDGE ENGELS: Briefly before we get to conductive, is there a
6 dispute regarding messenger wire? I see you have messenger wire in red as
7 well.

8 MR. GALICA: No and I apologize if that's confusing. The
9 messenger wire, the red depicts differences between the proposed
10 constructions --

11 JUDGE ENGELS: Okay.

12 MR. GALICA: -- as I understand it, there isn't a dispute as to the
13 messenger wire aspect of Patent Owner's proposed construction and Patent
14 Owner hasn't made any arguments that prior art references failed to disclose
15 that element.

16 Back to conductive and it's a term I'll focus on just for one moment
17 and reiterate something I've said before, the patent tells us what is meant by
18 conductive. It can be highly conductive or partially conductive. The
19 significance of the issues in this proceeding, partially conductive, examples
20 of that include just steel. So, a component that is just steel is conductive
21 within the description and disclosures of the 551 patent. Before I jump
22 ahead again, the green highlighted text, Patent Owner hasn't made any
23 argument that references failed to disclose those limitations. In fact, Patent
24 Owner has not made any arguments that the references failed to disclose the
25 multifunction line under Petitioner's proposed construction.

1 Jumping ahead now to slide 19, and I'll focus on Petitioner's proposed
2 construction. As I'm sure you've deduced from the papers and as I imagine
3 what Patent Owner's counsel is about to tell you, people of ordinary skill in
4 the art follow the NEC. They know about the NEC and they understand the
5 NEC. That is the reason they will argue why multifunction line should be
6 construed to mean specifically an equipment grounding conductor, not just
7 grounding conductor broadly, but an equipment grounding conductor as
8 defined by the NEC.

9 Now, the problem with that, and why Petitioner's proposed
10 construction should be adopted, is that when the Patent Owner provides a
11 definition for a term that conflicts or is at odds with what a person of
12 ordinary skill in the art might traditionally understand the term to mean, the
13 lexicography governs. So, where Patent Owner says everybody would
14 understand that multifunction line, the conductive, the grounding conductor
15 portion of that construction, everybody knows that it means specifically
16 equipment grounding conductor from the NEC. If the patent says something
17 different, that lexicography is what should govern and that's exactly what
18 happened here. We have the passage right in the patent, Exhibit 1001,
19 column 2, 37 to 40.

20 The Patent Owner explicitly says as used herein, a multifunction line
21 means a tension member that supports current wires and/or cable hangers
22 and which is conducted and that's the proposed construction from Petitioner.
23 We think that aligns with the legal precept of Philips, which is that when the
24 specification reveals a special definition that differs from the meaning it
25 would otherwise possess, the inventor's lexicography governs.

1 JUDGE ENGELS: So, column 2, lines 40 through 43, also says, a
2 messenger wire is not a multifunction line. Weren't messenger wires of the
3 prior art made of steel?

4 MR. GALICA: Apologies. If you could recite or repeat the portion
5 that you --

6 JUDGE ENGELS: Column 2, beginning at line 40, the sentence
7 immediately after the sentence you contend is the definition.

8 MR. GALICA: Yes.

9 JUDGE ENGELS: In addition to what you cite as lexicography, the
10 patent also says a messenger wire is not a multifunction line. So, help me
11 understand a messenger wire, I understand they're made of steel, why is that
12 not a multifunction line? And it says it's not, so we need to find some sort of
13 differentiation here.

14 MR. GALICA: Yeah, I think I'd first point to earlier sections within
15 that paragraph which are reciting what, in this instance the multifunction line
16 needs to do and specifically it is lines 29 through 33. What its describing is -
17 - so, we know that the multifunction line needs to be conductive, that's what
18 the passage says right here and then if you go a few lines up, it says that the
19 reason it is conductive is so that it provides a path to ground and operates as
20 a grounding conductor as well. So Petitioner's argument would be that all
21 the multifunction line needs to do is, as the patent says, be conductive and
22 the reason it needs to do that is so that it provides a path to ground.

23 JUDGE ENGELS: So, providing a path to ground is part of the
24 definition of a multifunction line?

1 MR. GALICA: And I think that it's important to, if you drop
2 Petitioner's proposed construction as an exercise into the claims, if you
3 replace the word multifunction line in the claims with Petitioner's proposed
4 construction, that it's conductive, what's revealed by its relationship to the
5 conductive mounting assembly, by its relationship to the conductive
6 mounting pile, is that those components are all in electrical communication.
7 They're all electrically coupled and as a result of that, the metal-to-metal
8 contact, a path to ground is created.

9 JUDGE ENGELS: Okay.

10 MR. GALICA: I'll jump to slide 20.

11 JUDGE CALVE: Counsel, Judge Calve.

12 MR. GALICA: Yes.

13 JUDGE CALVE: I recall you saying that the messenger wire would
14 be partially conductive within the meaning of this 551 patent.

15 MR. GALICA: Yes.

16 JUDGE CALVE: And you also said that the multifunction line, in its
17 conductive aspect, encompasses partially conductive materials. Is that a
18 correct understanding?

19 MR. GALICA: For example, it can be galvanized steel alone, yes.

20 JUDGE CALVE: So, then again, the meaning of this sentence of line
21 40 to 41 of column 2, why then does the patent seem to say that a messenger
22 wire is not a multifunction line?

23 MR. GALICA: I think in a vacuum it wouldn't be. When operating
24 simply to provide as a support member or a tension member without
25 providing a path to ground, either through its interrelatedness to other

1 components and the materials of which it's comprised, a messenger wire
2 wouldn't be a multifunction line.

3 JUDGE CALVE: Thank you.

4 JUDGE ENGELS: Is there a difference between a grounding
5 conductor and providing a path to ground?

6 MR. GALICA: I think the phraseology may be a distinction without a
7 difference. I think the grounding conductor as the patent discloses, describes
8 and contemplates is a component made of highly conductive or partially
9 conductive material that provides a path to ground.

10 JUDGE ENGELS: So looking back at slide 18, for example, looking
11 at CAB's proposed construction, what here do you have a problem with? I
12 understand there's a dispute regarding what a grounding conductor may
13 require, but based on your last answer, do you dispute the term grounding
14 conductor in general in the definition?

15 MR. GALICA: Not in general or as contemplated or described by the
16 patent, but I think where the issue arises is Patent Owner's disguised
17 construction and application of the term grounding conductor. It's clear
18 from all their arguments and all their papers that what they actually mean
19 when they say grounding conductor generally is equipment grounding
20 conductor defined by the NEC specifically and we don't agree with that.

21 JUDGE ENGELS: Okay.

22 MR. GALICA: Back to slide 20, and this may be reiterating some of
23 the answers I've just provided, but when taking a look at Patent Owner's
24 proposed construction and the differences between Petitioner's proposed
25 construction, they've eliminated the phrase conductive which, as I pointed to

1 before, is what the patent says a multifunction line is. To your previous
2 question, Your Honor, they do recite grounding conductor but at least paper
3 29, their Patent Owner response, at 25 and numerous other instances, page 3,
4 page 40 to 41, it's clear that they are actually proposing grounding conductor
5 means specifically the equipment grounding conductor defined by the NEC.

6 JUDGE ENGELS: Counsel?

7 MR. GALICA: Yes.

8 JUDGE ENGELS: You referenced earlier partially conductive; would
9 a partially conductive line be considered as providing a path to ground?

10 MR. GALICA: Yes.

11 JUDGE ENGELS: Okay.

12 MR. GALICA: Maybe that's a good segue to the point I'll make on
13 this slide. I think that's the issue that Patent Owner runs into. The patent
14 defines the phrase conductive so broadly in that it can be highly conductive
15 or partially conductive and then gives examples of what constitutes
16 components that are highly conductive and partially conductive.

17 With respect to partially conductive, it can be galvanized steel alone.
18 The art that Petitioner is relying on inarguably discloses that, so what Patent
19 Owner is forced to do is propose grounding conductor but actually apply or
20 narrow it to mean equipment grounding conductor as defined by the NEC.

21 JUDGE CALVE: Counsel?

22 MR. GALICA: Yes.

23 JUDGE CALVE: What is that NEC definition that Patent Owner
24 asserts and with which you disagree? What is the additional feature that you
25 do not want to include in this definition multifunction line?

1 MR. GALICA: Slide 21, which I just jumped to will answer your
2 question, I think. It's less about what it includes and more about what it
3 excludes. What Patent Owner's expert has said is that EGCs, per the NEC,
4 cannot be made of steel. What it's done is, it carves out the meaning of
5 partially conductive that the patent explicitly and specifically discloses and
6 says, can constitute a multifunction line.

7 The problem there is that when the extrinsic evidence, the NEC in this
8 circumstance, conflicts with the intrinsic evidence which says a
9 multifunction line can be made of steel, the extrinsic evidence should not be
10 relied on and you rely on the intrinsic evidence. That was a long-winded
11 way of attempting to answer your question, but what they're trying to do
12 with narrowing the construction of grounding conductor to the EGC and the
13 NEC is to say that it can't -- the multifunction line can't be made of steel.
14 The patent explicitly says that it can be.

15 As further evidence of that, there's claim 12 in the patent which
16 depends from claim 1 and says that the multifunction line, among other
17 things, can be, for example, conductive alloy strands, partially conductive
18 alloy strands or composite strands. Again, their proposed construction
19 would vitiate the meaning of this claim.

20 JUDGE ENGELS: Claim 12 though is talking about individual
21 strands. It's not clear from claim 12, is it, that the multifunction line could
22 be entirely any one of those, right?

23 MR. GALICA: I think a fair reading of that would say that the
24 strands that comprise or which the multifunction line is comprised of are

1 selected from the group of and it's disjunctive. It lists a number of different
2 types of strands of which the multifunction line is comprised.

3 JUDGE ENGELS: So, column 8, beginning at line 58 through
4 column 9, describes the multifunction line being made of multiple different
5 strands. Column 9, line 6, says the partially conductive body 50 is a cable
6 that includes conductive strands and nonconductive strands.

7 MR. GALICA: That's one embodiment disclosed, so we know that
8 we don't limit the claims to a singular embodiment described in the patent. I
9 referred to elsewhere in column 8, specifically lines 47 through 48, stating
10 that the multifunction line includes highly conductive elements or partially
11 conductive elements and then further up in column 8, where partially
12 conductive is defined, it's lines 23 through 26, where it says a partially
13 conductive element is one that conducts electricity, but with some resistance.
14 An example is then given, for example, galvanized steel or steel wire with
15 copper cladding are examples of partially conductive elements.

16 JUDGE ENGELS: Okay.

17 MR. GALICA: So that brings me to the motivations --

18 JUDGE ENGELS: Briefly --

19 MR. GALICA: Sure.

20 JUDGE ENGELS: Before we move on, my computer is frozen, I
21 believe it's claim 9, refers to the multifunction line assembly does not
22 include any grounding splices and is it reasonable to say that because 9
23 narrows claim 1 by excluding the use of grounding splices, that claim 1 can
24 include the use of grounding splices?

1 MR. GALICA: Yeah, I think just reasonable reading of claim 9
2 would suggest that, yes.

3 JUDGE ENGELS: Does that affect claim interpretation here in terms
4 of conductive or path to ground or grounding conductor?

5 MR. GALICA: I don't believe it does.

6 JUDGE CALVE: Counsel?

7 MR. GALICA: Yes?

8 JUDGE CALVE: On a similar line of claim differentiation style
9 analysis, then with regard to claim 12 which you just repeated to us, is it
10 your position that claim 1 then does not necessarily have to include a
11 multifunction line assembly, a line, that has strands?

12 MR. GALICA: I think just an understanding of patent law and how
13 claims depend from one another, claim 1 is broad enough to include that, but
14 isn't limited to that.

15 JUDGE CALVE: So, you might interpret claim 1 in light of claim 12
16 to read a multifunction line on a steel messenger wire. Is that what we're to
17 understand part of your constructions or interpretations encompass?

18 MR. GALICA: Yes.

19 JUDGE CALVE: Okay.

20 MR. GALICA: Slide 23 and I'll try to touch upon briefly the
21 motivation to combine with respect to grounds 2 and I'll focus on ground 2,
22 the CAB website and the CAB white paper and the knowledge of POSITA.
23 The first example here is regulation compliance and as all parties have
24 agreed and all experts on both sides have agreed, POSITAs are compelled,
25 motivated to follow the teachings and regulations of the NEC.

1 The white paper which is explicitly called out in the website, talks
2 about NEC compliance and grounded steel messenger wires to effectively
3 ground cable management, Aerial Cable Management Systems. So, the
4 NEC, I discussed it before, section 250.4(A)(4), talks about effectively
5 grounding systems and this alone in view of -- it's a Fed Circuit decision,
6 it's *Metso Minerals, Inc. v Powerscreen International Distribution*, 526 F.
7 App'x 988 at 997, it's a 2013 Fed Circuit decision, stands for the proposition
8 that regulation compliance or desire to comply with regulation serves as a
9 motivation to combine and that's what we have here.

10 We also have, going to slide 24, an express instruction from the CAB
11 website to read the CAB white paper. This is another reason why a person
12 of ordinary skill in the art would be motivated to combine the teachings of
13 the two and specifically, let me make sure I get the case cite right,
14 *Alacritech, Inc. v Intel Corp.*, 817 F App'x 995 at 998. It's a 2020 Federal
15 Circuit decision and it stands for the proposition that where one reference
16 directs a person to read another reference, it would have been obvious to do
17 so and one would have been motivated to do so. And that's exactly what we
18 have here at the CAB website, explicitly references and instructs a reader to
19 go to the CAB white paper.

20 Slide 25, we have the white paper addressing specifically industry
21 concerns. I've talked about it previously. The effective grounding of Aerial
22 Cable Management Systems was a universal problem and concern in the
23 industry and that's why the NEC exists and people of ordinary skill in the art
24 are motivated to follow it. When this is the case, it is *Intel Corp. v PACT*
25 *XPP Schweiz, AG*, 61 F.4 at 1373, it's a 2023 Fed Circuit decision.

1 Universal problems, concerns or motivations in a particular field provide a
2 motivation to combine prior art references and that's exactly what we have
3 here. The industry is always concerned with grounding and always
4 motivated to comply with the NEC. The CAB white paper explicitly
5 referenced in the CAB website discloses how the configuration in the CAB
6 website is able to be effectively grounded.

7 I'll jump ahead to slide 27 here. This is an issue stemming from
8 Patent Owner's proposed construction and the rationale they rely on for
9 proposing it full throatedly saying that the NEC is everything that the
10 POSITA knows and follows. So, for the reasons I just described, the
11 universal concern that POSITAs have with respect to grounding and the
12 universal motivation to comply with regulations where a POSITA
13 understands that a grounded steel messenger wire is used in conjunction with
14 the conductive mounting assembly and pile in the CAB website, for the
15 same reason Patent Owner argues that everybody follows the NEC, a person
16 of ordinary skill in the art would have been motivated to comply with the
17 specific messenger wire used as a grounding conductor section of the NEC
18 and that is section 396.30, referenced here on the top of this slide. You can
19 see both experts agree that that's what a person of ordinary skill in the art
20 would have understood.

21 Moving to slide 29, I mentioned before, Patent Owner doesn't argue
22 that under Petitioner's proposed construction, that any limitation is failed to
23 be disclosed by the combination of references in ground 2. In looking
24 specifically at Patent Owner's construction. and I alluded to before, there's
25 really no dispute with respect to the tension member aspect of the claim and

1 the only dispute would be whether a POSITA would understand that
2 grounding conductor means equipment grounding conductor and then
3 whether or not a POSITA would find that obvious to implement when
4 complying with that NEC. For the reasons I just described, if you're to
5 accept Patent Owner's logic that a POSITA would understand grounding
6 conductor to specifically mean the EGC and the NEC, which we don't agree
7 with, it would have been obvious when every POSITA is trying to follow the
8 NEC and its guidance, it would have been obvious to implement the
9 messenger wire when it serves as a grounding conductor as described by the
10 NEC.

11 Slide 30 reiterates what I just described. We already know from the
12 combination of the website and the white paper that you have a grounded
13 steel messenger wire. You have it in electrical communication with a
14 conductive mounting assembly and a conductive pile. That demonstrates
15 every aspect of the claims to the extent grounding conductor means the
16 specific EGC defined in the NEC for the reasons I had already articulated, a
17 POSITA would have found it obvious to comply with the section of the
18 NEC which governs when messenger wires are used as grounding
19 conductors.

20 I'll spend a brief moment on some of the additional arguments that
21 CAB had brought up. One is an attempt to draw a distinction between the
22 terms grounded and grounding. I think it's a red herring. I think it's a non
23 sequitur. The NEC in the bottom right defines the terms as being
24 coterminous, so there isn't a distinction that any POSITA would understand
25 between grounded and grounding.

1 Next, is an attempt by CAB to specifically define structured to, to in
2 effect incorporate a mens rea or subjective intent element, for numerous
3 reasons and numerous cases that is legally impermissible. Ultimately, the
4 relevant enquiry with respect to prior art is whether it's capable of the
5 claimed function, that's In re Schreiber 128 F.3d 1473 at 1477, Fed Circuit
6 1997. In this circumstance, what the claim covers is a system so what's
7 contemplated is what the system is, not necessarily what the system does,
8 and that is Hewlett-Packard v. Bausch & Lomb, 909 F.2d 1464 at 1468, Fed
9 Circuit 1990 case.

10 JUDGE ENGELS: Counsel, do we need to construe structured to?

11 MR. GALICA: I don't believe so, no. Slide 33 focusing on CAB's
12 argument that the disclosures in the CAB website are a mock up, that the
13 messenger runs parallel to the panels and that the POSITA would have no
14 reason to assume that the messenger wire was acting as a grounding
15 conductor in turn. For the same reasons that I just alluded to with respect to
16 the precedent set by In re Schreiber and Hewlett-Packard, the enquiry isn't
17 whether it was a mock up or how it operates or whether or not it's plugged
18 in, it's a system claim. It's what the system is and what it's capable of doing
19 and that's what is disclosed by the CAB website reference and the CAB
20 white paper reference.

21 To the messenger wire running parallel to the panels, there's nothing
22 in the NEC that precludes them from running parallel to the solar panels.

23 The last item, the contention that a POSITA would have had no
24 reason to assume the messenger wire was acting as a grounding conductor.

1 Since 2008, there's been a section in the NEC that governs how messenger
2 wires act as grounding conductors.

3 Seeing as how I've passed my 50-minute time allotment, I'll pause
4 now and reserve 10 minutes for rebuttal.

5 JUDGE ENGELS: Okay.

6 MR. GALICA: Or the remainder of my time.

7 MR. FLYNN: Excuse me, one minute, Your Honor. I'm trying to
8 figure out how to get this into the presentation mode. It seems as though
9 I've frozen up. Got it.

10 JUDGE ENGELS: When you're ready.

11 MR. FLYNN: Good morning, Your Honors. I'd like to start by
12 pointing out what the parties do not dispute and that is that nobody disagrees
13 that a POSITA would understand that the grounding system of the 551
14 patent would need to comply with the NEC. Dr. Phinney has set forth in
15 detail in his testimony, both his declaration and his deposition, what those
16 NEC requirements are and how they would be applied to the grounding
17 system of the 551 patent. Neither AWM nor Dr. Beik, their expert, ever
18 disagreed with anything that Dr. Phinney said about the NEC provisions, its
19 requirements and how it would be applied to the grounding system.

20 I'm on slide 5. What would be understood by a POSITA pursuant to
21 the requirements of the NEC is that there are metal equipment components
22 as part of the system, a wiring system, that would not be intended to carry a
23 current, but that there are instances where it will carry a current because of
24 current imposed on it or on those metal components, such as in the event of
25 a lightning strike or a ground fault.

1 It's understood that the NEC would require that all of those metal
2 components be bonded together to minimize the voltage difference across
3 the various components. It would also be understood by a POSITA that
4 under the NEC, that those metal equipment components, normally non-
5 current carrying components, would need to be installed in a manner that
6 provides an effective ground fault current path. That that effective ground
7 fault current path is an intentionally created low impedance path that returns
8 the fault to the supply source as quickly as it can in order to operate the
9 overcurrent protection device to open the circuit and to clear the fault.

10 It's not only that the metal components need to be properly bonded,
11 the bonding is in conjunction with a grounding conductor that establishes
12 that effective ground fault current path. The metal components themselves
13 simply connected together does not establish the effective ground fault
14 current path. The grounding conductor, a separate grounding conductor, is
15 necessary to do that.

16 Dr. Phinney has made clear that the NEC only defines two kinds of
17 grounding conductor -- and by the way Your Honor asked earlier whether or
18 not we have anything that is from a more recent NEC other than 2008. I
19 believe my colleague responded that the 2008 was still in effect as of the
20 priority date of the 551 patent, that's not correct. After the 2008 NEC, there
21 was a 2014 NEC. The 2014 NEC was not relied upon by AWM. In fact,
22 there's also a 2020 NEC, but the one that would most recently precede the
23 551 patent priority date was the 2014. One of the differences between the
24 2008 and the 2014 NEC is that the 2014 NEC does not define grounding
25 conductor, equipment grounding conductor and grounding electrode

1 conductor separately. In the 2014 NEC, there is no definition for grounding
2 conductor. It only defines equipment grounding conductor and grounding
3 electrode conductor.

4 Fortunately, it doesn't make all that much of a difference because the
5 only two types of grounding conductor that the 2008 NEC defines are the
6 equipment grounding conductor and the grounding electrode conductor. Dr.
7 Phinney has testified very clearly and again has never been refuted that it is
8 the equipment bonding conductor that connects or bonds those normally
9 non-current carrying metal components to each other and that provides the
10 effective ground fault current path. It ensures that that effective ground fault
11 current path gets the fault back to the supply source to facilitate the
12 operation of that overcurrent protection device.

13 Dr. Phinney also explained, and Dr. Beik agreed, it's not enough for
14 metal components to be connected to each other and to the earth. The NEC
15 makes it plain that the earth cannot act as the effective ground fault current
16 path. The effective ground fault current path required by the NEC for any
17 type of grounding system, such as the one claimed in the 551 patent, must
18 have a separate grounding conductor that doesn't just connect or bond the
19 metal components connected to the earth, but that it provides -- it bonds
20 those components and provides that effective ground fault current path to
21 facilitate the operation of the overcurrent protection device.

22 JUDGE CALVE: Counsel, one question just to get myself oriented.
23 What limitation or limitations in claim 1 embrace or encompass this
24 equipment grounding conducting element that you seem to be saying is part

1 of this claim? Is it the conductive mounting assemblies or is it some other
2 element?

3 MR. FLYNN: It's the multifunction line and when we get to the
4 claim construction issue, I can talk more in depth about how the patent
5 describes or defines what the multifunction line is. It defines it as being a
6 grounding conductor and it further defines grounding conductor in a way
7 that a POSITA would understand that it is an equipment grounding
8 conductor.

9 JUDGE CALVE: Let me ask a follow up question then. How does
10 this multifunction line provide an effective ground fault current path that I
11 understand you to say is running this intended current into the ground in a
12 way to open the circuit. How does the multifunction line do that? By itself
13 or with other components?

14 MR. FLYNN: I have up on the monitor now slide 10, which is a
15 photograph of the CAB's standard system that is excerpted from its
16 installation guide. As you can see, it is labeled there that separate copper
17 conductor that is disposed adjacent to that metallic galvanized steel
18 messenger wire. That separate conductor is labeled as the equipment
19 grounding conductor and it also shows the grounding splices going from the
20 equipment grounding conductor to the metal pile.

21 So the way that the equipment grounding conductor provides that
22 effective ground fault current path is that it bonds all of those metal
23 components together, that's the purpose of the grounding splice that goes
24 from the equipment grounding conductor to the pile. That bonds all of those
25 metal components: the messenger wire, the bracket, the clamp, the pile; it

1 bonds all of those things together. And then, bonded together, that bonding,
2 in conjunction with the equipment grounding conductor, provides that
3 effective ground fault current path, that wherever the lightning or the fault
4 may appear in the system, if the messenger wire gets struck by the lightning
5 or there's a ground fault that somehow energizes the messenger wire,
6 because that equipment grounding conductor is bonded with the messenger
7 wire and all of the other metal components, that equipment grounding
8 conductor will carry that fault to the overcurrent protection device. It will
9 open the circuit, and it will clear the fault. That's how the equipment
10 grounding conductor divides the effective ground fault current path.

11 JUDGE CALVE: Well how is this equipment grounding conductor in
12 a circuit or bond or connected to this messenger wire, which seems to be
13 spaced apart from it, and the messenger wire doesn't seem to be contacting
14 the grounding splice? So how does this connection occur?

15 MR. FLYNN: Because, as you can see in the photo, the messenger
16 wire is clamped. It's connected to that metal bracket. It is clamped by that
17 metal clamp. The metal bracket is in turn connected and bonded to the
18 conductive pile. So now, when you have the grounding splice that goes
19 from the equipment grounding conductor to the pile, that bonds all of those
20 metal components together. The grounding splice doesn't have to go to each
21 metal component. It just has to go to one of those metal components in that
22 connection, if you will, that connection of components, and the pile is the
23 one that the grounding splice is going to, in this photograph, because, of
24 course, it has the most metal. That will even more so ensure that there is
25 proper bonding among all of those metal components.

1 Again, the messenger wire, the clamp, the bracket, the pile, they are
2 metal components that are not intended to carry a current under normal
3 conditions. The equipment grounding conductor is not intended to carry a
4 current under normal conditions. It's only intended to carry a current in the
5 event of a fault. That's the whole purpose. That's its whole job, is in the
6 event of a fault, the equipment grounding conductor provides that effective
7 ground fault current path to clear the fault.

8 JUDGE CALVE: So, if lightning struck this pile somewhere at the
9 top of this picture, it might travel down the pile through a mounting
10 assembly, but eventually you're suggesting it would go through the
11 grounding splice to the grounding conductor and then that would be the path
12 of least resistance to take it somewhere that it's going to ground effectively
13 the way you're saying it should?

14 MR. FLYNN: That's right. If the lightning strike would strike that
15 conductive pile, because all of those metal components are bonded and
16 bonded to the equipment grounding conductor, again it's not enough for
17 some path to simply go to the earth. The earth cannot be that effective
18 ground fault current path, but that's the purpose of bonding all of those
19 metal components together.

20 So, to take that strike, that surge, that current surge, if you will, and it
21 will make sure that it gets to the equipment grounding conductor, and the
22 equipment grounding conductor is what carries the fault current to the
23 overprotection device -- the overcurrent protection device.

24 JUDGE CALVE: So the overprotection current device, though, that's
25 not part of the claim, is it?

1 MR. FLYNN: The overprotection device is not claimed, if that's
2 what you're asking, but it's the definition of the multifunction line that
3 makes clear that that's where it goes. That's where the fault current goes to,
4 is that overcurrent protection device, but no, the claim doesn't claim an
5 overcurrent protection device.

6 JUDGE CALVE: So, Petitioner would say, I'm not suggesting you
7 agree with this, you want us to read into or you want us to understand this
8 copper grounding conducting wire to include or to end at some other
9 location that's going to provide this grounding feature, which you've been
10 describing?

11 MR. FLYNN: If I understand your question, I think you're asking me
12 if we would understand Petitioner's argument to be that this ground fault
13 current path doesn't have to go to the overcurrent protection device, it can
14 go to the ground. It can go to the earth through the pile. I think, if I
15 understand your question, I think that's what you're asking me. They may --

16 JUDGE CALVE: Yeah, I apologize, that was a little confusing. The
17 claim itself just requires multifunction line in the piles, and then, you know,
18 the wherein clause, as the multifunction line coupled to these conductor
19 mountings someplace, and we see all that there. You seem to be suggesting
20 that there's something else that's encompassed by the claims that we don't
21 see, for example, in this picture.

22 MR. FLYNN: Well, it is encompassed in the claims. It's
23 encompassed in the definition of what a multifunction line is. And so, it all
24 stems from the proper construction of a multifunction line. A multifunction
25 line is a coined term. It does not have a general understanding among

1 POSITAs in the art. It's a coined term, and so you look to the specification
2 for what that multifunction line is. And the specification doesn't just give
3 some description; it defines what the multifunction line is.

4 I want to make sure, Your Honor, that I was able to include all of the
5 points I needed to make and wanted to make about what a POSITA would
6 understand about the grounding systems, generally, and I think I can just
7 sum it up in this last statement before I will actually move to our claim
8 construction argument. I don't think you need to know more about the 551
9 patent, although actually I do want to clarify a couple of misstatements that
10 my colleague made about what the 551 patent claims.

11 But I want to make clear that what is not disputed in this case is that a
12 POSITA would understand that the grounding system of the 551 patent must
13 comply with the NEC, and the NEC requires that there be an equipment
14 grounding conductor that provides an effective ground fault current path.
15 Only two types of conductors defined by the -- even the 2008 -- NEC: the
16 equipment grounding conductor, grounding electrode conductor. The
17 grounding electrode conductor is a sort of splice, if you will, that splices
18 from the end of the equipment grounding conductor to a grounding
19 electrode. So that grounding electrode conductor is a, sort of, splice at the
20 end. That's obviously not what this conductor, this separate copper
21 conductor shown in the photo, that's obviously not what this is. This is the
22 other kind of grounding conductor that the NEC defines. It is the equipment
23 grounding conductor.

1 So, at the end of the day, there is no reading into the claims anything
2 other than construing the claim terms by the definitional language of the
3 specification.

4 JUDGE CALVE: Thank you. That was very helpful. What in the
5 slide 10 picture precludes then the messenger wire from being the
6 multifunction line because it is of a metal material that Petitioner, of course,
7 argues would conduct electricity, and it would move electricity away,
8 perhaps. Why does that not suffice?

9 MR. FLYNN: Because a galvanized steel messenger wire without
10 more cannot be an equipment grounding conductor.

11 JUDGE CALVE: Is it because you're saying it's less conductive than
12 the copper, or you're saying it's because it doesn't have this additional
13 capability to channel current to some other location, or something else?

14 MR. FLYNN: It's -- a metal -- a steel messenger wire is conductive,
15 but it doesn't have the sufficient conductivity that the equipment grounding
16 conductor requires to carry that current quickly to the overcurrent protection
17 device. A steel messenger wire can't do that. And notwithstanding the
18 language that my colleague pointed to in the specification, I believe, Judge
19 Engels, you pointed to the appropriate language in column 8, also in column
20 9, that makes clear that this partially conductive body that Petitioner relies
21 on to say that a messenger wire can be made of steel, when you look at
22 column 8 and column 9, it makes clear that that partially conductive body 50
23 is not just steel. It includes conductive copper strands. The only column in
24 their petition or in their papers that they cited to was column 8, and they

1 cited from lines 58 through 64. And that's shown on I believe it's their slide
2 21. That's correct, 58 to 64. But they stop there, and you can't stop there.

3 You've got to look at the rest of what column 8 says. It says, thus --
4 when it refers to the partially conductive body 50. If you look at line 65, it
5 says, "the multifunction line 35 includes a partially conductive body 50. For
6 example, a partially conductive body 50 includes both copper and steel
7 elements." They omitted that language. It goes on, "As shown in figure 7 in
8 an exemplary embodiment, the partially conductive body 50 is a cable 52
9 that includes conductive strands."

10 So, whenever the specification is referring to a partially conductive
11 body, it makes clear that it is a cable that includes conductive strands. It is
12 not just steel, and that is why, Your Honor, that you pointed out the language
13 in column 2 of the patent that says, "messenger wires are not a multifunction
14 line." It couldn't be any clearer, and I'm not sure if my colleague had any
15 real response to that as to why that is not dispositive of their argument that
16 steel messenger wire can be an equipment grounding conductor or the
17 claimed grounding conductor. The patent tells you it is not.

18 JUDGE CALVE: Just to help my understanding a little more, and this
19 may be beyond the papers, but if in this slide 10, we didn't have the copper
20 wire in the grounding splice, that was not present, which seems to be what
21 Petitioner is relying on from CAB website. If lightning struck the top of that
22 pile again, what's your position? Would it then go through this steel
23 messenger wire somehow or in grounding in effect or what would happen?

24 MR. FLYNN: Because the steel messenger wire is one of the
25 normally noncurrent carrying components that is bonded with the other

1 noncurrent carrying metal components and bonded with the equipment
2 grounding conductor, that current, if you will, some of it will go to the earth,
3 but again, it's undisputed that the earth cannot be an effective ground fault
4 current path.

5 But where that fault current is really going to go, it's going to go to
6 that equipment grounding conductor, that highly conductive copper
7 equipment grounding conductor. Again, that effective ground fault current
8 path is an intentionally created low impedance path. There's a reason for it
9 being intentionally low impedance. It has to get that fault current as fast
10 possible to the overcurrent protection device. So it's not the messenger wire
11 that carries that current in a way that establishes the effective ground fault
12 current path, it's the equipment grounding conductor.

13 The messenger wire is just simply one of those normally noncurrent-
14 carrying metal components. It's not providing any grounding function. It's
15 the equipment grounding conductor that is providing the bonding and
16 grounding function.

17 JUDGE CALVE: Right. As I understand the principles that if you
18 have this copper grounding splice and the EDGC, it would provide a path of
19 least resistance, a path that would be much more favorable to an electric
20 current in relation to this perhaps galvanized steel messenger wire. So my
21 question was, though, if we remove this less resistant path of copper
22 grounding splice and conductor and we just have the steel messenger wire,
23 hangers and cable, what would happen to a lightning strike that hit that pile?

24 MR. FLYNN: I see.

25 JUDGE CALVE: Where would it go?

1 MR. FLYNN: I see. Now I understand your question.

2 (Simultaneous speaking.)

3 MR. FLYNN: It would not be an effectively grounded system. It
4 could go anywhere. It could go to the earth. The metal components could
5 all remain energized. There may be some, because they are connected
6 together, there may be some natural attempt, if you will, to even out the
7 current over those metal components, but it's not ever going to be in an
8 effective ground fault current path, and therefore, it's not going to be
9 properly grounded, as is required by the NEC.

10 There would be no system like this actual system, grounding system
11 like this, that would only rely on the messenger wire and a POSITA would
12 understand you would never just look at something that shows nothing more
13 than a steel messenger wire and assume that that steel messenger wire is
14 properly grounding the system.

15 So, if I get in to the claim construction, I do want to say a couple of
16 things about the patent. My colleague indicated that the 551 patent claims
17 conductive piles. The 551 patent does not claim conductive piles, and that is
18 simply a misstatement of what the patent claims, what the patent recites.

19 Claim 1 recites, in the second element, a number of conductive
20 mounting assemblies. Each of those mounting assemblies is structured to be
21 coupled to a multifunction line and to a conductive pile. It's claiming the
22 mounting assemblies and saying that the mounting assemblies are structured
23 to be coupled to a conductive pile. It is not claiming a conductive pile.

24 I think, in the interest of time, I'm going to skip through any
25 description, our description of 551 patent except for the part that's relevant

1 for claim construction. I think the Board understands that the purpose, the
2 advantages, of the 551 patent, was to be able to create this equipment
3 grounding conductor that does away with the need for a separate grounding
4 conductor and for grounding splices at each pile. That's what the purpose
5 and the objective of the 551 patent is.

6 I will go to slide 22. Our proposed claim construction. At least I can
7 agree with my colleague that they got this right, about what our proposed
8 claim construction is, is that in light of the specification, a multifunction line
9 means a tension member that supports current wires and/or cable hangers as
10 a messenger wire and which provides a current path as a grounding
11 conductor. That is definitional language that comes from the specification,
12 slide 23.

13 That is, a single multifunction line supports the cable hangers as a
14 messenger wire and provides a current path as a grounding conductor. They
15 skip over that language in their claim construction and they only want to
16 focus on the single sentence that follows, ignoring the word "accordingly,"
17 which brings what immediately preceded it, and they just want to have a
18 multifunction line defined as a tension member that supports current wires
19 and/or cable hangers and which is conductive. Because if you have that kind
20 of a construction, that's such a broad construction, metal components that
21 supports their argument, that metal components connected together that are
22 conductive, that's all you need for a multifunction line. The definitional
23 language in the patent makes clear that that's not true, and the Board has
24 also agreed in its institution decision, at least preliminarily, that the Patent

1 Owner's proposed construction was much more in line with the specification
2 than Petitioner's proposed construction.

3 So the specification's definitional language does not stop there. On
4 slide 24, from the specification, it's referring to, again when the messenger
5 wire is not structured to carry a current, sometimes it does, for the lightning
6 strike. This is why a conductor or grounding wire is disposed adjacent the
7 messenger wires, hereinafter such a wire is identified as a grounding
8 conductor.

9 So, again, in slide 25, from the photo of the standard system, that
10 separate equipment grounding conductor that is shown there, that is what the
11 specification defines as a grounding conductor. Of the two grounding
12 conductors defined in the NEC, a POSITA would understand that the
13 defined grounding conductor disposed adjacent the messenger wire is the
14 grounding conductor that is the equipment grounding conductor that
15 provides the effective ground fault current path. There is no reading
16 anything into the claims. This is based on definitional language from the
17 specification.

18 JUDGE ENGELS: Counsel, is there any intrinsic evidence that uses
19 the phrase "equipment grounding conductor"?

20 MR. FLYNN: Other than what a POSITA would understand, that
21 separate conductor disposed adjacent the messenger wires that the
22 specification defines as a grounding conductor, other than what a POSITA
23 would understand that that separate conductor disposed adjacent the
24 messenger wires is an equipment grounding conductor. There's nothing in

1 the patent that specifically says that word, but in light of what the
2 specification does explicitly state, a POSITA would understand that.

3 JUDGE ENGELS: In your view, is there a difference between
4 grounding conductor and equipment grounding conductor?

5 MR. FLYNN: In this instance, no. Again, there are only two types of
6 grounding conductor that are defined by the NEC that everybody agrees that
7 this grounding system would have to comply with. This is clearly not the
8 grounding electrode conductor, which is the only kind of grounding
9 conductor defined by the NEC. When the patent refers to this separate
10 grounding conductor disposed adjacent the messenger wire, it can only be
11 the equipment grounding conductor.

12 So, in the context of the definitional language, there is no distinction
13 between grounding conductor and equipment grounding conductor.

14 JUDGE ENGELS: Is there a difference between, as it's used in
15 column 2, line 33, a path to ground and an equipment grounding conductor?

16 MR. FLYNN: Did you say column 2, line 33?

17 JUDGE ENGELS: Yes.

18 MR. FLYNN: No. That path to ground, again, in the context of the
19 entirety of the specification and definition of what a grounding conductor is,
20 a POSITA understands that that path to ground is the path that's provided by
21 the effective ground fault current path to the overcurrent protection device.
22 It's also, as I mentioned before, the equipment grounding conductor is at the
23 ends. It is also connected to a grounding electrode conductor that connects it
24 to a grounding electrode which also takes it to ground in that fashion, but
25 that's specifically because it's using a ground splice to take it to a grounding

1 electrode that is specifically created for the purpose of taking it to the earth,
2 if you will. The only real way to get it through the earth, but it's not an
3 effective ground fault current path that that separate conductor is providing.

4 So, there is no difference between -- what that's referring to in column
5 2 that you pointed out, it is referring to the effective ground fault current
6 path as the specification defines the ground conductor.

7 JUDGE ENGELS: So, in your view, if we were to interpret
8 multifunction line to be a tension member that supports current wires and/or
9 cable hangers as a messenger wire and which provides a current path as a
10 path to ground for a current, would that satisfactory your construction?

11 MR. FLYNN: I think it would open the door to further ambiguity as
12 to what's meant by a path to ground for current. I would still say that a path
13 to ground for current isn't just any path, for example, through the conductive
14 pile, the metal pile, to the earth. That would not be the conductive path for
15 the current. As defined, as the grounding conductor is defined, I would say
16 to you that it would still be understood to be the effective ground fault
17 current path that the equipment grounding conductor provides, but by
18 changing the language of the construction in the way that you suggest, I
19 respectfully submit that that would lend ambiguity to what's otherwise a
20 very clear disclosure of the specification.

21 JUDGE ENGELS: It strikes me the problem here is we have no
22 intrinsic evidence that uses the phrase "equipment ground conductor" --

23 MR. FLYNN: Grounding conductor.

24 JUDGE ENGELS: And you're trying to have us read grounding
25 conductor to require equipment grounding conductor. Is that fair to say?

1 MR. FLYNN: Well, yes, but I'm not just trying to get you to read it,
2 I'm trying also to support that reading with the definitional language of the
3 patent that defines grounding conductor. So when the specification, back on
4 slide 24, when the specification refers to the grounding wire conductor or
5 grounding wire disposed adjacent to the messenger wires, hereinafter such a
6 wire is identified as a grounding conductor, that language is defining the
7 grounding conductor.

8 JUDGE ENGELS: Well, it's defining it as a wire disposed adjacent
9 to messenger wires. That clearly cannot be part of the claim, correct?

10 MR. FLYNN: I'm sorry, say that again, please?

11 JUDGE ENGELS: I mean, it is defining it as a wire that is disposed
12 adjacent to the messenger wire, that's what it's defining grounding
13 conductor to be and --

14 MR. FLYNN: Yes.

15 JUDGE ENGELS: -- that's not what's in the claim, right? I mean,
16 that's not a multifunction line.

17 MR. FLYNN: Well, that is a multifunction line because if the
18 multifunction line is defined as providing a current path as a grounding
19 conductor, and then the specification defines what it means by grounding
20 conductor, then that is defining that effective ground fault current path in the
21 claim.

22 JUDGE ENGELS: Well, so, for example, that definition of grounding
23 conductor, as I understand it, would be represented by the standard system
24 shown on your slide 20. Grounding conductor disposed adjacent to the
25 messenger wire, is that correct?

1 MR. FLYNN: Yes.

2 JUDGE ENGELS: That's not part of the claim, correct? I mean, you
3 don't content the standard system depicts a multifunction line, do you?

4 MR. FLYNN: No. No, no, no. I misunderstood your question. No;
5 of course not. That separate grounding conductor is not the multifunction
6 line because you have a separate messenger wire and a separate grounding
7 conductor. That's not the multifunction line. The multifunction line is what
8 combines the messenger wire that provides a mechanical support function
9 with the grounding conductor that provides a grounding function, in one.
10 That's what the multifunction line is, but what the specification makes clear
11 is that when it defines the multifunction line as acting as a grounding
12 conductor and then you understand from the specification that the grounding
13 conductor is defined as something that is providing the effective ground fault
14 current path.

15 So the definitional language of multifunction line is saying it supports
16 cable hangers and current wires as a messenger wire, that's the galvanized
17 steel messenger wire in this photograph, and provides a current path as a
18 grounding conductor, that's the separate grounding conductor in this photo.
19 But now, what the patent does is say, that multifunction line is both of those
20 things. Now we're putting it into the same thing. And I believe I have --
21 here, this is slide 20. Now you can see the difference between the standard
22 system that relies on the separate grounding conductor, separate from the
23 messenger wire and the grounding splices to the messenger wire and the
24 integrated grounding system, which is in the commercial embodiment of the
25 551 patent that combines that messenger wire EGC into one structure.

1 And the conductive mounting assemblies, which are also a key
2 component of this claim, the conductive mounting assemblies, the clamp
3 that bonds it to the bracket, to the pile, that takes the place of those separate
4 grounding splices at each pile. And that clamp, that conductive mounting
5 assembly, that also, it's not just any kind of steel or metal, it also has to be
6 sufficiently conductive that when bonded with that specially custom-made
7 messenger wire that is both strong enough to support the cable hangers and
8 current wires and conductive enough to provide the effective ground fault
9 current path. Those conductive mounting assemblies must also be
10 sufficiently conductive to facilitate that effective ground fault current path.
11 So that separate grounding conductor, as you said, that is not part of the
12 claim, no, it is only part of the multifunction line; it is one of the
13 multifunctions of the multifunction line.

14 I'd like to, if I could, move to the CAB website and CAB white paper.
15 Petitioner's argument as to this combination has been somewhat of a moving
16 target. In their petition, they argued that there was a motivation to combine
17 the CAB website and the CAB white paper because they both involved the
18 same subject matter and the same company's products, and the website
19 includes a link to the white paper, and to ensure that CAB products are NEC
20 compliant. But when they go through the grounds, Petitioner relying on Dr.
21 Beik's declaration, for each limitation of the grounds, they rely on each of
22 the CAB website and the CAB white paper to disclose the limitation.

23 So, for the multifunction line limitation, Dr. Beik's -- this is based on,
24 again, on their proposed claim construction, that the multifunction line
25 needed simply to be a tension member that supports cable hangers and

1 current wires and is conductive. And so all Dr. Beik was talking about is
2 that each of the website and the white paper discloses this steel messenger
3 wire. In the case of the white paper, a grounded steel messenger wire. And
4 therefore, that's one of the metal components that the website white paper
5 references show being connected with other metal components to a
6 conductive pile in the earth.

7 And so, they were relying on that construction, and Dr. Beik's
8 testimony was only supporting that construction. Dr. Beik never said that
9 you need to combine the website with the white paper because there's a
10 limitation missing from the website that the white paper provides. There is
11 no kind of argument throughout -- he argued for every element of this claim;
12 he argued that the website and the white paper both disclosed the claim
13 limitation.

14 The only time he referred separately to the grounded steel messenger
15 wire disclosed by the white paper was with respect to claim element 1(c) that
16 requires the metallic components to be in electrical communication with
17 each other. He said, well, being a grounded steel messenger wire would tell
18 you that it's in electrical communication with those other metal components.
19 That's the only thing he cited to for the website, the grounded steel
20 messenger wire in the white paper, and as we'll get to in a couple of
21 minutes, that's also the only thing he cited to, not in the grounds, but in
22 background. That's the only reason he cited the NEC article 396.30 that my
23 colleague referenced, only to support this metal-to-metal contact theory.

24 But the entire basis of the petition and Dr. Beik's declaration
25 testimony to support this purported motivation to combine was that each of

1 the references disclosed the limitation. After the institution decision, when
2 the Board noted that it was questionable whether they had properly argued a
3 motivation to combine, then they came back for the first time in reply. And
4 they argued for the first time that a POSITA would modify the CAB website
5 system with the grounded steel messenger wire of the white paper.

6 Apparently, now, by offering this new argument about a motivation to
7 modify that they had never made before, it's apparently admitting that that
8 modification was necessary to disclose the claimed invention because the
9 website itself does not do that.

10 They did not come back with any declaration from Dr. Beik at all to
11 support anything and certainly not to support this proposition of a
12 motivation to modify. And again, Dr. Beik never referred to this in any way
13 to support a modification, it was only to support the metal-to-metal contact
14 theory that he set forth in his declaration. The word "modify" or
15 "modification" with respect to these claim limitations never appears in either
16 the petition or Dr. Beik's declaration. This is the first time in reply that they
17 raise this brand-new argument.

18 Even after the institution decision, and at deposition, Dr. Beik
19 maintained that each of the website and white paper disclosed the
20 limitations. He never identified, in response to all of the questions that we
21 asked him at deposition, he never identified anything that was missing from
22 the website that was provided by the white paper. He never said anything
23 about combining the website and white paper to disclose missing limitations
24 from one of the other references.

1 Ultimately, I would submit to you that it doesn't matter in the end
2 whether it's their original argument that each of the references discloses the
3 limitations or their new argument in reply that a modification of the website
4 discloses the invention or the claim limitations. Because even with the
5 modification, it does not disclose the claim limitations. It discloses only, to
6 the extent, this is the way we interpreted it, to the extent the website doesn't
7 disclose a messenger wire that is explicitly grounded, that it discloses -- or
8 add the grounded steel messenger wire, the white paper, put it into the
9 website, and so now you know that you have a grounded steel messenger
10 wire in the website. But they still rely, as they must, on that grounded steel
11 messenger wire as being the grounding conductor, and it's not. It's entirely
12 distinct from the grounding conductor for the reasons that I've articulated.

13 JUDGE ENGELS: So, I guess a couple of questions. One, we're
14 using the word "disclosed" when we're talking about obviousness. Earlier,
15 with respect to claim interpretation, you emphasized what a person of
16 ordinary skill would understand and, in particular, would understand from
17 the NEC compliance, and the need to ground a system. Why wouldn't that
18 same background knowledge be applied here to a person of ordinary skill
19 looking at either or both of the white paper or website?

20 MR. FLYNN: If I understand your question, I think you're asking
21 why wouldn't a POSITA understand, looking at the website and the white
22 paper, as to whether or not the messenger wire or grounded steel messenger
23 wire, why that wouldn't be sufficient to be a grounding conductor?

24 JUDGE ENGELS: Wouldn't a person of ordinary skill looking at that
25 system, knowing that it needs to comply, if you're going to implement this,

1 it needs to comply with the NEC requirements, knowing that it needs to have
2 an equipment grounding conductor, perhaps. Why wouldn't they understand
3 that to at least suggest, well, I'm going to need -- if I'm going to implement
4 this, I need to include a path to ground or a grounding conductor or an
5 equipment grounding conductor?

6 MR. FLYNN: They would understand that. They would understand
7 that you would need to include, if they don't see a grounding conductor in
8 the website or in the white paper that simply incorporates the photo of the
9 website into the white paper, if they don't see from a disclosure back in
10 2014, if they don't see, there in that photo, that portion of a photo -- if they
11 don't see a separate grounding conductor, they would understand that there
12 would need to be a grounding conductor. That's entirely different than
13 saying that they would assume, if they don't see that separate grounding
14 conductor, that the messenger wire is the grounding conductor.

15 They would understand it has to be there, but they would also
16 understand, and this is throughout the testimony of Dr. Phinney and the
17 other people that submitted declarations, third party witnesses who
18 submitted declarations on behalf of CAB, including Mr. Brooks, the author
19 of the white paper. They would understand there has to be a separate
20 grounding conductor, there has to be a grounding conductor. But looking at
21 that steel messenger wire, they would never just assume from what's shown
22 there that that is the grounding conductor. First of all, as both Dr. Phinney, I
23 believe, and Mr. Brooks testified, that's not even in the area where -- this
24 isn't even -- I'm on slide 38, this isn't even the area where you would expect
25 to see the grounding conductor in an installation back in 2014.

1 There are all kinds of questions that a POSITA would need to ask, that
2 Dr. Beik acknowledged he would need to know, as to whether or not this
3 messenger wire could be the grounding conductor. He has to know all kinds
4 of information from the element component, all the way to the end, what's
5 the strength? What's the conductivity? What's the resistance? None of that
6 is disclosed here in this photograph.

7 The equipment grounding conductor if this, you know, we have
8 testimony in there that clearly establishes that this portion of the messenger
9 wire from which hangers are suspended was part of a mockup that was
10 installed by CAB in order to demonstrate its idea for this above-ground
11 cable management system, it had nothing to do with grounding. They
12 weren't even thinking about grounding at that time. Back in 2014, they were
13 simply trying to promote this idea of an above-ground cable management
14 system that uses hangers from the messenger wire to support the electric
15 currents rather than burying them in the ground. They weren't even
16 referencing grounding here, and the reference to a grounded steel messenger
17 wire in the white paper was not referencing any kind of grounding system or
18 what was grounding that grounded steel messenger. It certainly was not
19 disclosing that the messenger wire was acting as the grounding conductor.

20 And Mr. Brooks, the author of the white paper, clearly disclosed,
21 testified to that in his declaration that had nothing to do with anything. All I
22 was talking about was the question is whether these hangers have to have a
23 separate listing for bonding and grounding and they don't. Because you
24 would assume that this messenger wire is grounded when he refers to the
25 grounded steel messenger wire, and therefore, if the hangers become

1 energized, they will stay at or near ground potential if the messenger wire is
2 grounded. But it was in no way suggesting that the messenger wire was
3 acting as the grounding conductor, and he made that very clear.

4 There is a difference between "grounding" and "grounded." It is not
5 simply a matter of semantics. Grounded, something that is grounded is in
6 that state of being grounded, but the grounding conductor is what creates
7 that state. It's in keeping with the difference between the purpose of a
8 messenger wire and the purpose of the grounding conductor. The messenger
9 wire is just a mechanic support function. It's not part of the grounding
10 system.

11 The grounding conductor is part of the grounding system. The 551
12 patent tells you what the grounding system components are. It's the
13 multifunction line that includes the grounding conductor and messenger wire
14 functionality. It's the conductive mounting assemblies; it's them being all in
15 electrical communication with one and other. The patent tells you that's
16 what the value system is; it's not the messenger wire. The messenger wire is
17 just another one of those metal components that must be grounded by the
18 grounding system and must rely on the equipment grounding conductor to
19 ground it, to provide that effective ground fault current path. There is a
20 meaningful difference between grounded and grounding.

21 I referred a minute ago to, that nobody looking at that messenger wire
22 just because it doesn't show a separate grounding conductor would assume
23 that the messenger wire is a grounding conductor, and that's what they come
24 back in their reply to rely on.

1 JUDGE ENGELS: So, what would they assume is grounding the
2 system then?

3 MR. FLYNN: They would assume that there would be a separate
4 grounding conductor. It's just not shown in that photograph. Back in 2014,
5 remember, in 2014, as you'll recall from the other hearing that we had a few
6 weeks ago, these above-ground cable management systems just started, they
7 were beginning to be promoted by CAB in 2014. Nobody had done this
8 before. So they weren't even, so back in 2014, they weren't even used to
9 seeing this. They were saying, "What is this?" But by 2017, okay, they look
10 back and they see a 2014 reference, they would understand that to the extent
11 that this is depicting a real system, they would understand, the POSITA, that
12 this -- that it would have to include a separate grounding conductor. Just
13 because it's not shown there doesn't mean that the messenger wire is that
14 grounding conductor.

15 If this is truly depicting a messenger wire that supports string cables
16 coming off of the solar panels, the orientation of this depiction, as testified
17 again by Dr. Phinney and Mr. Brooks, the orientation of these string cables
18 coming off the panels, running under the panels, it's going out to the home
19 run where the home run is running not parallel or underneath the panels like
20 this is showing, but perpendicular to the panels. And along the home run,
21 that's where the equipment grounding conductor would be, running with the
22 current wires.

23 And in 2014, just because they show a messenger wire and hangers
24 running under the panels and taking the string cables out to the home run,
25 that doesn't mean that once it gets to the home run that they are all

1 continuing to be supported by a messenger wire and hangers because the
2 most prevalent form of cable management back then was trenching. They
3 would assume that the equipment grounding conductor would be buried in
4 the earth with the electrical conductors.

5 There's nothing simply by looking at this photo and the absence of
6 any separate grounding conductor being shown in this photo. There would
7 be nothing that would inform a POSITA enough to conclude, ah, the
8 messenger wire must be the equipment grounding conductor, especially with
9 the level of skill as defined of a POSITA in this case, out of college for a
10 couple of years with two to three years of experience.

11 No POSITA would ever look at this and at least, if they're wondering
12 where the grounding conductor is, rather than assuming that this is the
13 grounding conductor, they would at least say, "Where is the grounding
14 conductor? Wait, what's going on here? I don't see a grounding
15 conductor." But that's a far cry from assuming that that steel metal
16 messenger wire is acting as a grounding conductor.

17 JUDGE ENGELS: But doesn't the 2008 NEC say that the messenger
18 wire can be, in certain circumstances, can be a grounding conductor?

19 MR. FLYNN: So, a couple of points there. First of all, the 2008 NEC
20 doesn't instruct or provide a receipt of how to use a messenger wire as an
21 equipment grounding conductor. And notably, the 396.30 of the NEC
22 doesn't say anything about using the messenger wire simultaneously as a
23 support structure and an equipment grounding conductor. A messenger wire
24 doesn't have to provide support functionality.

1 We know that from the Peterson reference, one of the other references
2 that I guess we're not going to talk about today. But we know that the
3 neutral messenger cable in the Peterson is not providing support
4 functionality. It's not supporting the hangers and the current wires. It's
5 acting as a neutral conductor, and the NEC at 250.4(A)(4), I believe it is, or
6 (3), it says that the messenger wire can be used as a neutral conductor. So,
7 396.30, that simply permits, if you will, a messenger wire to be an
8 equipment grounding conductor does not mean it's permitting it to act in
9 dual functionality, but more importantly, it doesn't instruct a POSITA to use
10 it. It just says, if you're going to try it, you've got to comply with these
11 limitations, but it sets forth no instructions or directions whatsoever as to
12 how to do that, other than what it can't be.

13 And a steel messenger wire, one of the provisions --

14 JUDGE ENGELS: So, counsel, we're well into your rebuttal time.
15 Do you want to reserve some time for rebuttal?

16 MR. FLYNN: Yes, I will reserve whatever time I have left. If I've
17 satisfactorily answered your question --

18 JUDGE ENGELS: Yes.

19 MR. FLYNN: -- I will reserve my time for rebuttal.

20 JUDGE ENGELS: Whenever you're ready.

21 MR. GALICA: So I'll do my best to streamline a few quick points
22 that I want to make. I don't think I'll need to rely on any of the slides, at
23 least I don't think I'll need to put them up.

24 But I want to focus first on part of Patent Owner's presentation,
25 towards the beginning, where focusing on the understanding of equipment

1 grounding conductor, effective fault ground path. And a lot of the
2 justification or rationale that Patent Owner offered in support of that
3 understanding and why that understanding should be adopted or embraced,
4 despite what the patent says, was that conductive piles are apparently not
5 part of the claim and cannot provide a path to ground. The patent explicitly
6 states the opposite.

7 It's column 8, lines 31 through 34, that is, "The conductive piles are
8 structured to and do conduct electricity. As the conductive piles are
9 disposed in the ground, the conductive piles are in electrical communication
10 with the ground, i.e., the conductive piles are grounded." So, a path to
11 ground can be accomplished by metal-to-metal contact between the
12 multifunction line, the mounting assembly and the conductive pile, which is
13 driven into the ground.

14 The NEC supports this as well. It's Exhibit 1007, page 109 at section
15 250.52, stating that metal frames are structures that are connected to earth by
16 any of the following methods, and it gives a description of how deep the
17 metal structure needs to go into the ground to provide a path to ground. Dr.
18 Phinney, Patent Owner's expert, corroborates that understanding of the NEC
19 as well as Exhibit 1041, page 70, lines 6 through 19, agreeing that
20 conductive piles can provide and serve as a path to ground.

21 JUDGE CALVE: Counsel?

22 MR. GALICA: Yes.

23 JUDGE CALVE: One quick question. I apologize for interrupting.
24 So you seem to be departing from Patent Owner's concern that whatever this
25 conductive path provides through the multifunction line and/or piles, it

1 doesn't have to go to some particular destination to create a fault and short
2 circuit or to some device. You're saying, it's understood in the art that if
3 you run current into the ground, that grounds it and that's what's required,
4 but they seem to be suggesting, for lack of a better term, to kind of close the
5 loop ground path. What's your position?

6 MR. GALICA: I'll answer as best I can. I believe I agree with how
7 you're characterizing our position and the justification or rationale from our
8 perspective is that the patent explicitly states that in the specification, as well
9 as claims that, so I'll point to column 2, lines 29 through 33. Each
10 conductive mounting assembly is structured to be, and is, coupled to the
11 multifunction line into a conductive pile. This configuration provides a path
12 to ground. There's no other component discussed. There's no other
13 arrangement of components. It's metal-to-metal contact between the
14 multifunction line, the mounting assembly and the conductive pile, and the
15 patent says, this is a path to ground. So I think that was my understanding of
16 how you characterized our position, and if that was, I agree.

17 JUDGE CALVE: Thank you.

18 MR. GALICA: Okay. Then, on a similar note, I'll just address there
19 was a lot of back and forth, but Patent Owner focused a lot on column 1, line
20 60 through column 2, line 3 in conjunction with its slide 16, as providing a
21 justification or rationale in support of their proposed construction. I note
22 two things. One, that portion of the specification relates to the background
23 information to which the patent, what it claims and discloses in the
24 specifications, is attempting to replace, and conspicuously, it relates to the
25 standard system that Patent Owner was relying on in slide 16, which I think,

1 at least Your Honor, maybe more pointed out, that's not really what's being
2 claimed or discussed here.

3 The other obvious problem with that and the reliance on a system that
4 predates and is an arrangement that isn't contemplated by the specification
5 or claim, is that it's, of course, extrinsic evidence and a departure from what
6 the intrinsic evidence recites.

7 A few more items. Patent Owner's counsel made the statement with
8 respect to the references that Petitioner advanced in ground 2, the CAB
9 website and the CAB white paper, and stated with respect to the white paper,
10 they weren't even thinking about grounding. And this is in reference to
11 Petitioner slide 16, in the bottom right of the slide. It's an excerpt from the
12 CAB white paper. I'll just recite it. It's Exhibit 1006 at page 8 to 9, "The
13 electrical industry, including code enforcement personnel, are heavily
14 focused on grounding and bonding of metallic parts." So, contrary to Patent
15 Owner's statement that at the time these references were disclosed and made
16 public, the authors of them weren't thinking about grounding at all. The
17 reference states the exact opposite.

18 Just to round out, I think it's a conversation I've had with Your
19 Honors, a conversation that Patent Owner has had with Your Honors, but it
20 relates to the term "conductive" and how the specification describes it as
21 including and encompassing highly conductive and partially conductive.
22 Patent Owner took issue with Petitioner's focus on certain portions of the
23 specification, while only relying on their own portions of the specification. I
24 just want to recite again column 8, lines 23 through 28, is how the patent

1 describes partially conductive and discloses examples that fall within that
2 definition of partially conductive. One of them being galvanized steel.

3 JUDGE ENGELS: So counsel, we're to understand that that line is
4 galvanized steel by itself or steel wire with copper cladding. You're not
5 reading this to require copper cladding on galvanized steel then, correct?

6 MR. GALICA: No, it's disjunctive and, in fact, you wouldn't --
7 galvanized steel is a coating on the steel, you wouldn't then again coat it
8 with copper.

9 And I think the last point I'll make is with respect to Patent Owner's
10 argument that when viewing the disclosures of the CAB website and the
11 CAB white paper, which explicitly state, "use a ground messenger wire,"
12 and you see in the picture, it's connected to a mounting assembly and a
13 conductive pile. We know from the NEC that the conductive pile can serve
14 as a grounding or path to ground in that configuration, so it's our position
15 that a person of ordinary skill in the art, seeing no other grounding
16 conductor, would understand that that forms the path to ground.

17 I realize I'm out of my time, so I'll pause here.

18 JUDGE ENGELS: Thank you. One last question.

19 MR. GALICA: Yes.

20 JUDGE ENGELS: Just to be sure that I'm clear, you don't have a
21 problem with CAB's proposed construction so long as the phrase "grounding
22 conductor" is not further interpreted to require equipment grounding
23 conductor or other?

1 MR. GALICA: No, I agree. So long as it's not narrowed to
2 specifically only be limited to the EGC, equipment grounding conductor, as
3 defined by the NEC, we agree with that.

4 JUDGE ENGELS: Thank you.

5 MR. GALICA: Thank you.

6 JUDGE ENGELS: Counsel, you have two minutes remaining. We
7 can give a couple more minutes since we had quite a lot of questions for
8 you.

9 MR. FLYNN: I appreciate that, Your Honor. Just picking up on the
10 last point that you asked counsel for Petitioner, whether or not he would
11 agree that the construction must require grounding conductor as long as the
12 grounding conductor is not limited to equipment grounding conductor as
13 defined by the NEC. Yet, again, there has been no dispute throughout that
14 this grounding system, as claimed, must comply with the NEC and if the
15 NEC only defines two types of grounding conductors, equipment grounding
16 conductor and grounding electrode conductor, the definitional language in
17 the specification that says that the separate grounding conductor disposed
18 adjacent to the messenger wire, a POSITA would understand that of those
19 two definitions, the grounding conductor is the equipment grounding
20 conductor.

21 A couple of responses to a couple of points that my colleague
22 mentioned about the conductive pile. When Dr. Phinney was talking about
23 the conductive pile being able to provide a path to ground, he was referring
24 to it in the context if it has sufficient metal, a sufficient quantity of metal,
25 that if there has been a sufficient assessment that it has been properly

1 embedded into the earth, just because it's embedded in the earth doesn't
2 mean that that's going to be sufficiently conductive to get the current into
3 the earth. But he was talking in the context of when the pile can be the
4 grounding electrode itself. He was not talking about the pile, each of the
5 piles along the way, providing the conductive path. Again, because that pile
6 is conductive, there will be some current that will pass through that
7 conductive pile to the earth, that that's not the path to ground, that the
8 defined grounding conductor provides or that a POSITA would understand
9 that the defined grounding conductor provides. It's not through the pile to
10 the earth; it's the effective ground fault current path.

11 With respect to the column 8 disclosures, where my colleague points
12 to portions of column 8 to describe what partially conductive can mean. But
13 that's not referring to any embodiment whatsoever. The only reference to
14 partially conductive body is the partially conductive body can include steel,
15 which ties right into the language earlier in column 8, but also the only
16 reference to partially conductive body says that it includes conductive
17 copper strands. There's nothing in the specification that says that the
18 messenger wire, a steel messenger wire, can be the claimed multifunction
19 line. In fact, as you pointed out earlier in this argument today, the
20 specification specifically states that a messenger wire, which everybody
21 understands to be conductive, that a messenger wire is not a multifunction
22 line. You couldn't state it any more clearly than that.

23 JUDGE ENGELS: Well, to some point that's a matter of semantics.
24 If a messenger wire were made of copper, for example, what's the difference
25 between that and a multifunction line at that point?

1 MR. FLYNN: Oh no, when the specification is talking about the
2 messenger wire, it is not a multifunction line. It's talking about the
3 messenger wire that's only performing the support functionality. It's not
4 talking about something that is also conductive to provide the grounding
5 functionality.
6 For the rest of the portion of this presentation, which I'm not going to get to
7 in 15 seconds through all of the secondary considerations, I would simply
8 ask the Board to refer to the briefing, the papers that we have about that,
9 how there is that evidence of industry praise, industry accolades that those
10 awards specifically tie into the integrated grounding system as well as the
11 commercial success as demonstrated by the doctor's analysis.

12 Thank you. I appreciate your attention today.

13 JUDGE ENGELS: Thank you. Thank you, both. It's been very
14 helpful. Are there any more questions from the panel?

15 JUDGE CALVE: No.

16 JUDGE IPPOLITO: No.

17 JUDGE ENGELS: Are there --

18 JUDGE CALVE: I have no questions.

19 JUDGE ENGELS: Any questions or clarifications from the court
20 reporter?

21 COURT REPORTER: No questions.

22 JUDGE ENGELS: No? Thank you. With that, we are adjourned.
23 Thank you all for coming today.

24 (Whereupon, the above-entitled matter went off the record at 1:13
25 p.m.)