

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.
Petitioner,

v.

WIPQTUS INC.
Patent Owner.

Case No. IPR2024-00023
Patent No. 10,038,339

PATENT OWNER WIPQTUS INC.'S SUR-REPLY

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I. INTRODUCTION

The parties agree on one point. If limitation [1.e] means what WiPQTUS says it means, the Petition must be denied. Under WiPQTUS' proper construction, the impedance of the "impedance network" must be capable of being changed while in the receiving power mode. Samsung has admitted that "neither Chatterjee nor Corbridge," the only ground raised, "expressly disclose changing impedance of the impedance network while the inductive signal interface is configured to receive power." *Petitioner's Opposition to ... [MTA]*, Paper 14, p. 10 (the "Response to MTA"). Because Patent Owner's construction of limitation [1.e] is correct, the Petition must be denied in view of Samsung's admission.

Samsung criticizes WiPQTUS' proposed constructions while not offering any of its own except to say that nothing needs to be construed. Samsung continues to rely heavily on Claim 3. The phrase - the tail wagging the dog - is apropos. Claims 1 and 2 must be construed using the '312 Provisional Application or, alternatively, the application for the '929 Patent. Claim 3 is directed to new matter added years later to the CIP application for the '339 Patent. Claim 3, having a later priority date, should not be used to construe the term "impedance network." This is but a natural consequence of the rule that each claim must be construed as of its effective filing date.

Samsung does not understand the meaning of the word “rebuttal” in its misleading statement – “Dr. Phinney’s testimony remains unrebutted.” Reply, p.

1. “Rebuttal” means to offer evidence that defeats, contradicts, refutes, disproves, or counter’s the opposing party’s evidence. See Black’s Law Dictionary, p. 1139 (under “rebut” and “rebuttal evidence”) (West Publ. Co. 1979). WiPQTUS **did** rebut Phinney’s testimony through **two** declarations: (1) the *Declaration of [Dr. Direen] in Support of ... Preliminary Response*, Exhibit 2001 (the “Direen Preliminary Declaration”), and (2) the *Declaration of [Dr. Direen] in Support of ... Response*, Exhibit 2003 (the “Direen Declaration”).

Petitioner had the obligation to submit a declaration with its Petition that would prove unpatentability by a preponderance of the evidence. The Phinney Declaration (Exhibit 1002) has many deficiencies as explained in the Response. Petitioner has not met its burden of proof.

Samsung misrepresents Dr. Direen’s testimony in stating that “Dr. Direen contradicted Patent Owner’s arguments.” Reply, pp. 1 – 2. The alleged “contradictions” are entirely consistent with his prior testimony and Patent Owner’s prior proposed constructions and arguments. Dr. Direen did provide several clarifications in his deposition discussed below.

Samsung in the Reply (p. 8) suggested a clarification to Patent Owner's original proposed construction. Patent Owner below proposes an alternative construction of "impedance network" that emphasizes Patent Owner's consistent position in these proceedings – a single passive element or indeed multiple passive components alone do not constitute an "impedance network." Either an active component or switch is also required.

Samsung misrepresents the Response in stating: "Patent Owner offers no new basis or evidence for the Board to divert from its initial decision." Reply, p. 1. This is not true. Patent Owner cited Federal Circuit precedent in explaining why the different priority dates for Claim 1 and Claim 3 matters, yet Samsung has not distinguished those authorities. Response, pp. 23 - 27. Claim 1 must be construed on using the '312 Provisional or, alternatively, the '929 Patent. The construction of Claim 1 should not be influenced by Claim 3.

II. ARGUMENT

A. **Limitation [1.e] Requires that the Impedance of the "Impedance Network" Be Capable of Being Changed During the Charging Mode**

The '312 Provisional states in the "Summary of the Invention" section:

In the charging mode, dual mode wireless charging receiver configures the first circuitry **to receive the power** from a wireless power transmitter. The first circuitry, based on input from the control

logic circuit is configured to change the impedance of the impedance network and topology of the switch network **to obtain a modified form of the received power**, and apply the modified form of the power to the load device, for example, a battery.

Exhibit 2004, p. 2, [0004] (emphasis added). The '929 Patent (Exhibit 2002) contains the same language. See Exhibit 2002, 3:38 - 46; see also Exhibit 1001, 2:39 - 41.

In addition, the '929 Patent further supports Patent Owner's construction of limitation [1.e]:

On receiving sufficient level of power from the wireless power transmitter, the dual mode wireless power receiver powers up and starts communicating with the wireless power transmitter. ***The dual mode wireless power receiver adjusts the impedance of its impedance network***. The dual mode wireless power receiver ***also adjusts the topology of the switch network***, for example ***from the default non-synchronous rectifier to fully synchronous rectifier***.

Exhibit 2002, 3:62 - 4:3 (emphasis added); *also* Exhibit 1001, 3:66 – 4:7. The first sentence sets the context in stating that the DMWPR is in the receiving power mode as shown by the phrase “[o]n receiving sufficient level of power.” After receiving the sufficient level of power, the DMWPR adjusts both “the impedance” and “topology of the switch network.” That the topology is adjusted from a non-synchronous rectifier to a fully synchronous rectifier makes clear that the changes to impedance and topology are performed by the DMWPR in the receiving power

mode, which is the mode in which a rectifier is used (an inverter is used to transmit power).

From Figure 2B in the '312 Provisional and '929 Patent, it is clear that the impedance network of the DMWPR must be capable of being changed during the receiving power mode as required in limitation [1.e]. Figure 2B of the '312 Provisional Application is as follows is as follows:

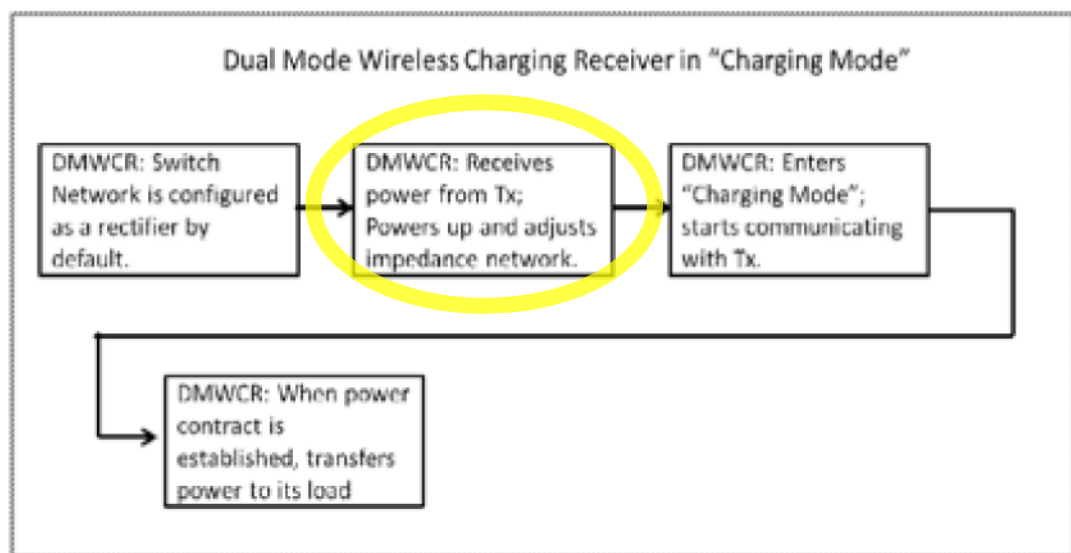


FIG. 2B

WIPQTUS Exhibit 2004

Exhibit 2004, '312 Provisional.

A similar but more detailed Figure 2B appears in the '929 Patent:

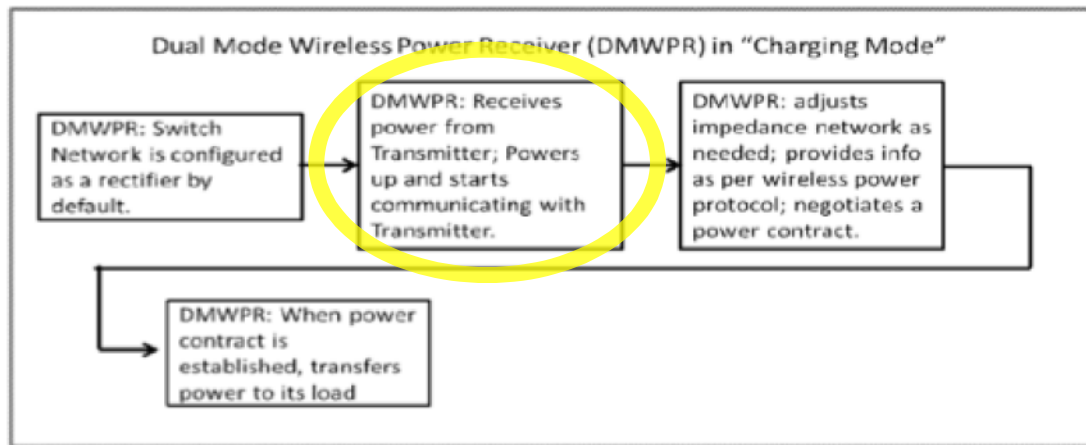


FIG. 2B

Exhibit 2002, '929 Patent. As shown in both, the switch network of the DMWPR is configured as a rectifier. Then, the receiver receives power from a transmitter. Subsequently, while still in the receiving power mode, the impedance of the impedance network is adjusted.

The '312 Provisional describes Figure 2B:

In the charging mode, switch S2 is closed and switch S1 is open to direct the rectified power to the load device. Based on an input from the control logic circuit 105, the dual mode wireless charging receiver 100 changes impedance of the impedance network 101... on receiving power from the wireless transmitter 200. The dual mode wireless charging receiver 100 powers up and adjusts the impedance network 101 of the first circuitry.

Exhibit 2004, [0029], pp. 11 - 12 (also Response, p. 38). Similarly, the '929

Patent describes Figure 2B under the "Detailed Description":

Fig. 2B exemplary illustrates a flow diagram showing the operation of the dual mode wireless power receiver 100 exemplary illustrated in Fig. 2A, ***in the charging mode***. ... On receiving sufficient level of power from the wireless power transmitter 200, the dual mode wireless power receiver 100 powers up and starts communicating with the wireless power transmitter 200. Depending on the type of wireless power transmitter 200, ***the control logic circuit 105 adjusts the impedance*** of the impedance network 101 of the first circuitry.

'929 Patent, 8:40 – 58 (emphasis added); *see also* Preliminary Response, p. 34 (quoting 10:63 – 65; *see also* 10:49 – 65).

As explained in the Response (pp. 37 - 38), Claim 1 is written from a particular viewpoint, it is configured to receive power by default. *See* limitations [1.p] and [1.d]. Limitation [1.f] concerns the changing between the receiving power mode to the communicating/transmitting power mode. In light of the surrounding claim language, limitation [1.e] concerns changing the impedance of the impedance network while the impedance network is in the charging mode.

Hence, based on the surrounding claim language, Fig. 2B, and the specification, under the correct construction of limitation [1.e], the “impedance network” must be capable of having its impedance changed while in the receiving power mode.

B. Samsung's Admission Requires that the Petition be Denied

Samsung and Phinney admit:

neither Chatterjee nor Corbridge expressly disclose changing impedance of the impedance network while the inductive signal interface is configured to receive power.

Response to MTA, p. 10; *Supp. Expert Decl. of [Phinney]*, in *Support of Petitioner's Opposition to [MTA]*, Exhibit 1015, ¶ 52 (identical statement) (the "Phinney Supp. Decl.").

Much of the argument in this matter has centered around what components must be included in the "impedance network." But, regardless of *what* components must be included, the *functionality* required by limitation [1.e] - that the impedance network have the capability of controllably changing its impedance during the receiving power mode -- must be met. Therefore, Samsung's admission is fatal to its Petition because by its own admission the combination of Chatterjee and Corbridge does not meet limitation [1.e].

C. WiPQTUS and Dr. Direen Have Always Stated that Limitation [1.e] Required the "Impedance Network" to have the Capability of Controllably Varying the Impedance

Samsung has cherry-picked from Dr. Direen's deposition to manufacture a "contradiction" in Dr. Direen's prior testimony regarding limitation [1.e]. Reply, pp. 10 - 11. There is no contradiction. Dr. Direen has consistently made it

abundantly clear that the “impedance network” must have the capability of controllably varying its impedance during the receiving power mode.

In his Preliminary Declaration, Dr. Direen stated:

From this section of the specification [referring to '339, 9:4-14], a POSITA would understand that the “impedance network” is an entity consisting of two or more components, one or more of which must be passive components, and additional components used for the purpose of varying impedance.

Exhibit 2001, ¶ 87.

89. I also note the limitation of “said first circuitry, based on an input from said control logic circuit, configured to change impedance of said impedance network and topology ... to obtain a modified form of said received power [...] .” Thus, from the structure of Claim 1, it is clear that ***the impedance network must be capable of being varied during at least the receiving power mode of operation.***

Id., ¶ 89 (emphasis added).

97. Therefore, the term “impedance network” should be construed; further, based upon the above analysis, I conclude that a POSITA taking the phrase “impedance network” in the context of the Claims read in light of the specification would understand it to mean: “a collection of two or more electrical components (from the list (1) one or more passive components; (2) active components; and (3) switches), excluding the induction coil used to transmit and receive power (as is evident from Figures 1, 3, and 5), and wherein **the impedance of the network can be controllably varied during at least the receiving power mode.**”

Id., ¶ 97 (emphasis added). “Can be” refers to a capability.

“Impedance network” means “a collection of two or more electrical components (from the list (1) one or more passive components; (2) active components; and (3) switches), excluding the induction coil used to transmit and receive power (as is evident from Figures 1, 3, and 5), and wherein the impedance of the network **can be controllably varied** during at least the receiving power mode”; ...

Id., ¶ 108. Again, “can be” refers to a capability.

Dr. Direen was also consistent in his Declaration:

118. Read in the light of surrounding claim language, it would be clear to the POSITA that limitation [1.e] requires that the “impedance of the impedance network” be **capable of changing** while in the receiving power mode.

...

120. In addition, the specification states in connection with the description of “impedance network” that its **impedance must be capable of being varied or adjusted**.

Exhibit 2003, ¶¶ 118, 120. In paragraph 121, Dr. Direen stated his conclusion:

121. In view of the surrounding claim language and the specification, a POSITA would understand that limitation [1.e] requires that the “impedance network” **be** “controllably varied during at least the receiving power mode.”

Exhibit 2003, ¶ 21. In the context Paragraph 120 and his prior testimony, it should be clear that the “be” in the above statement refers to a capability. In hindsight, it would have been clearer if Paragraph 121 had said “can be” as it appears in Paragraph 108 of his Preliminary Declaration. Nevertheless, Dr.

Direen's position - limitation [1.e] refers to a capability of the "impedance network" -- is clear taking his Declaration and Preliminary Declaration as a whole.

Dr. Direen clarified his statement in Paragraph 121 when given an opportunity in his deposition:

Q. My question is in reading paragraph 121 of your declaration, you say that limitation 1.e requires that the impedance network be controllably varied during at least the receiving power mode. Does that require that the impedance of the impedance network change while the device is receiving power?

A. I think it merely needs to be configured to be changed.

Q. And what's the difference between?

A. Well, I think it needs to be configurable for if you're in the receive mode as the claim states. It says it's configured to change impedance of said impedance network and topology of said switch network. So it needs to at least be configurable to change.

Q. So in your opinion, Claim 1.e does not require realtime modification to the impedance of the impedance network during receiving power mode?

A. And my paragraph 120 says: (As read) In addition, the specification states in connection with the description of "impedance network," **that its impedance must be capable of being varied or adjusted.**

So there could be a case where under that situation when you're in receive mode, you – **it's configurable but you don't necessarily vary it is how I interpret "configured to change."**

Q. How do you marry that with your statement in paragraph 121 that it be controllably varied during at least the receiving power mode? It doesn't say "configured to be controllably varied." It says "controllably varied during receiving power mode -- the impedance of the impedance network; correct?

A. **I think this is more accurate to say that it's -- like I said up here, that the impedance must be capable of being adjusted.**

Q. **So do you believe that your statement in paragraph 121 needs to be corrected to say "capable of being controllably varied"?**

A. **I think it needs to be configurable to be controllably varied at least in receiving power mode.**

Exhibit 1019, p. 115 of 187, l. 8 - p. 117, l. 8 (emphasis added). Samsung attempts to cast this clarification as a contradiction in testimony. It is not. Dr. Direen has been consistent - limitation [1.e] refers to a capability that the claimed "impedance network" must possess.

Likewise, in the Response WiPQTUS was clear in its position:

Read in light of surrounding claim language, it is clear that limitation [1.e] requires that the "impedance of the impedance

network” ***be capable of*** changing while in the receiving power mode. Exhibit 2003, ¶ 118.

Response, pp. 37 - 38 (emphasis added); *see also* p. 42 (the impedance of the ***impedance network be capable of being changed ...***) (emphasis added).

The same clarification is needed in the chart in the Response (page 48) similar to that made by Dr. Direen with respect to Paragraph 121:

to change impedance of said impedance network ... to obtain a modified form of said received power” requires that the “impedance network” (as construed) **must can** be “controllably varied during at least the receiving power mode.”

Response, p. 48; *see also* p. 39 (the sentence at the top is missing the “can” as well). The “must” should have been a “can” to more accurately reflect WiPQTUS’ position that the “impedance network” must have the capability of changing the impedance of the impedance network during the receiving power mode.

The Board understood that the Patent Owner’s position: “[a]ccording to Patent Owner, limitation [1.e] ‘captures the controllably variable aspect of the impedance network,’ *i.e.*, that it ‘must be capable of changing its impedance in response to input from the control logic’ during at least the receiving power mode (charging mode).” Institution Decision, p. 23. WiPQTUS’ position has not

changed. A prior art device that does not have the claimed capability does not meet limitation [1.e].

D. Regarding Construction of “Impedance Network”

Samsung's admission -- “neither Chatterjee nor Corbridge expressly disclose changing impedance of the impedance network while the inductive signal interface is configured to receive power” -- is enough to deny the Petition. To the extent the Board is inclined to conduct additional analysis, WiPQTUS' proposed construction of “impedance network,” with one clarification (explained below) should be adopted. In view of a proper construction, as stated in the Response, Chatterjee's capacitor circuit does not constitute an “impedance network.” Response, pp. 44, 53, 55. For this additional reason, the Petition should be denied.

1. The earlier '312 Provisional or, Alternatively, the Application for '929 Patent Controls the Construction of Claim 1

In the Response, WiPQTUS explained that it relies on the '312 Provisional for the priority date of Claim 1 (Response, pp. 8 – 15). The '312 Provisional as well as the application for the '929 Patent (at Col. 3, l 63 – Col. 4, l. 3) supports Patent Owner's construction of limitation [1.e] – the “impedance network” must be capable of changing the impedance of the impedance network while in the receiving mode.

WiPQTUS also explained, citing numerous authorities that Samsung has not distinguished, why the different priority dates for Claim 1 and Claim 3 matter. Response, pp. 23 - 27. Claim 1 must be construed using the '312 Provisional and/or the application for the '929 Patent. The correct construction of Claim 1 should not be influenced by Claim 3, which is directed to new matter introduced in the application for the '339 Patent, and, hence, a later effective filing date. *Id.*; *see, e.g., Phillips*, 415 F.3d at 1313 (stating that a claim must be construed as of its effective filing date).

WIPQTUS cited *PowerOasis* for the proposition that there is no presumption that claims in a CIP are entitled to the effective filing date of an earlier filed application. *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1304 (Fed. Cir. 2008); Response, p. 23. Samsung claims that *PowerOasis* “provides instructions as to how to construe terms used in both the original disclosure and a continuation-in-part application.” Reply, p. 7. It does not.

PowerOasis concerned two nearly identical claims in two patents that claimed priority to the same CIP application (referred to court as “the 2000 CIP Application”), which claimed priority to an “Original Application.” 522 F.3d at 1301. The issue was whether the asserted claims were entitled to the priority date of the earliest “Original Application” or the later “2000 CIP Application,” which

contained “substantial new matter” as compared to the first application. *Id.* The patent owner asserted that the “district court erred in concluding that the Original Application did not provide a written description adequate to support the asserted claims... .” *Id.* at 1303. The Federal Circuit applied the well-known law that “the prior application must indicate to a [POSA] that the inventor was ‘in possession’ of the invention as later claimed.” *Id.* at 1306. “Possession” is the test. Response, *e.g.*, p. 9.

PowerOasis is easily distinguished. All of the asserted claims had the same priority date as they were materially of the same scope. *See* 522 F.3d at 1302 (noting that “[e]xcept for minor variations ... the language of the asserted claims is identical”). In contrast, here, independent Claim 1 and dependent Claim 3 are of different scope and have different priority dates. *PowerOasis* does not address the situation here – an independent and dependent claim with different priority dates -- while the cases cited by WiPQTUS do. *See* Response, pp. 23 - 26.

For example, *Turbocare Div. of Demag Delaval Turbomachinery Corp. v. General Electric Company*, 264 F.3d 1111, 1118 (Fed. Cir. 2001) demonstrates that (1) a dependent claim may have a different priority date than its independent claim and (2) that the independent claim may be valid whereas the dependent is not. *See* Response, p. 25. Another case not addressed by Samsung is *iLife*, which

stated: “[d]isclosures constituting new matter should not be used to construe claim terms appearing in the parent application, even if the claim terms are common.”

iLife Techs. Inc. v. Body Media, Inc., 90 F. Supp.3d 415, 427 (W.D. Penn. 2015);

see also Goldenberg v. Cytogen, Inc., 373 F.3d 1158, 1167-68 (Fed. Cir. 2004);

Lightforce USA, Inc. v. Leupold & Stevens, Inc., 2019 WL 2146245, *5-6 (D. Ore.

May 15, 2019). This proposition is simply the natural consequence of the

application of the rule that each claim must be interpreted as of its effective filing

date. *Phillips*, 415 F.3d at 1313. The Board should not allow the tail, Dependent

Claim 3, to wag the dog, Independent Claim 1, in construing the terms of Claim 1.

2. Patent Owner has Been Consistent that Passive Elements Standing Alone Do Not Constitute an “Impedance Network”

Samsung cited to two statements in the Response that WiPQTUS would like to clarify. Reply, p. 14 (referring to Response, pp. 63 and 54). Taken in context of the discussion of Figs. 6A - 6D of Chatterjee and Dr. Phinney's testimony regarding same, the following statement is correct:

The Petitioner and Dr. Phinney did not explain the circuits shown in Figures 6A – 6D [of Chatterjee]. As will be shown below, the multiple capacitors are not part of the circuit when the device is in the receiving power mode. Hence, there are not “two or more passive components” while the device is in the receiving power mode.

Response, p. 54. The reference to “two or more passive components” refers back to the Board’s statement beginning “even if the claimed ‘impedance network’ requires ‘two or more electrical components’ as Patent Owner contends, Chatterjee teaches the claimed impedance network.” Response, pp.53 - 54 (quoting Decision, p. 60). The Board had seemed willing to accept two capacitors as an impedance network. Inst. Dec., p. 60. The Patent Owner’s simple point was that in the Figures that follow (Response, pp. 57 - 60), putting aside the coils used to receive power, the circuit having only a single capacitor did not even have “two or more” components of any kind. As explained by Dr. Direen (referenced in Response, p. 54), a POSA would know that a single passive element or even two or more alone cannot constitute an impedance network that can be controllably varied.

The second statement reiterated the point that Figures 6A - 6D show a single capacitor and do not show a circuit in the receiving power mode that have “two or more” components of any type:

In conclusion, the circuits of Figs. 6A – 6D when in the receiving power mode do not meet the limitation “impedance network” because the “two or more *passive elements*” required under a proper construction is not met.

Response, p. 63. The highlighted portion – “passive elements” - more accurately should have said “electronic components.”

There can be no doubt of WiPQTUS' position as to the construction of "impedance network" and whether a single or multiple capacitors without an active element or switch can constitute an "impedance network." WiPQTUS has been entirely consistent throughout these proceedings that one or more passive electronic components alone do not constitute an "impedance network" because it takes an active component or switch in combination with one or more passive components to allow the impedance to be changed in the receiving power mode as required by limitation [1.e]. See Preliminary Response, pp. 34 - 35; p. 37 ("Capacitor (C1 or C2) being a single passive device, does not constitute a 'network' much less the 'impedance network' as construed above."); p. 50 ("excluding the coils L1 and L2 (Fig. 6A) or L3 (in Fig. 6B) , the single capacitor C1 does not constitute an 'impedance network,' which requires two or more components... ." Direen Decl., ¶ 126.).

3. Patent Owner Agrees to the Clarification to Its Proposed Construction of Impedance Network Suggested by Samsung

In district court, claim construction is an iterative process with multiple rounds of disclosures. See, e.g., E.D. Texas P.R. 4-1 – 4-6. Samsung filed its Petition before the deadlines for the parties' claim construction disclosures. Courts may change constructions up until the jury is instructed. See *O2 Micro Intern. v.*

Beyond Innovation Technology Co. Ltd., 521 F.3d 1351, 1362 (Fed. Cir. 2008);

J.G. Peta, Inc. v. Club Protector, Inc., 65 Fed. Appx. 724, n. 2 (Fed. Cir. 2003).

Claim construction before the PTAB is similarly iterative. *See Facebook, Inc. et al. v. Uniloc 2017 LLC*, Case IPR2017-01427, FWD, p. 4 (ordering additional claim construction briefing after oral argument).

In the Reply, for the first time Samsung has provided WiPQTUS its remarks regarding WiPQTUS' proposed construction. Samsung persists in its position that no construction is needed yet nevertheless critiqued WiPQTUS' proposed construction alleging a perceived ambiguity. Samsung invited WiPQTUS to adopt a slightly different construction as follows:

it seems Patent Owner's proposed construction is incomplete and, to meet Dr. Direen's stated requirements, it would need to at least require that the two or more electrical components are from different categories.

Reply, p. 8.

As explained by Dr. Direen in his Preliminary Declaration:

Taking the above description in total, a POSITA would understand that it would be absurd to construe "impedance network" as simply a single standalone component like a capacitor. Not only would a single component, like a capacitor, make little sense in context with the word "network," it would also have a fixed impedance, which violates the requirement that the impedance must be variable.

Preliminary Declaration, ¶ 88.

In his Declaration, Dr. Direen explained that two passive elements would not constitute an impedance network:

Figure 6B on which Dr. Phinney relied shows only a single capacitor C1. Hence, the Board appears to believe that the circuits of Figures 6A, 6C, and 6D because they show more than one capacitor. However, Claim 1 via limitations [1.e] and [1.f] requires certain functionality that could not be accomplished using merely two or more capacitors. That is, for the circuit to be operable as claimed, a ***POSITA would know that merely selecting two or more passive elements alone from the list provided above in my definition of “impedance network.” For the circuit to be operable, it would need one of an active component or a switch, separate from any switch of the “switch network.”*** I will address the circuits of Figures 6A – 6D immediately below in discussing limitation [1.e].

Declaration, Exhibit 2003, ¶ 150 (emphasis added).

In his Deposition, Dr. Direen repeated this explanation (shown in Para. 150) and expanded upon it:

Q. Can impedance network 101 be made up of just active components and electronic switches?

A. It would -- not ideal electrical. They would have to have an impedance in there. So you would need to have something that demonstrates impedance like a resistor, capacitor, inductor like the figure shows --Figure 1 shows.

Exhibit 1019, p. 72 of 187¹, ll. 9 - 25.

Q. So the impedance network could not just be passive components, in your opinion?

A. The -- the impedance network -- if we're defining passive components as inductors, capacitors, and inductors and the -- whatever they're adding here, so basically causal linear devices, **you need to have at least one of those. And then you need to have something that makes it possible to vary this from control logic, which could include a transistor an implementation of a switch could be a transistor, so --**

Exhibit 1019, p. 74, ll. 1 – 11 (emphasis added). The reference to “control logic” is to the language “based on an input from said control logic” found in limitation [1.e].

Q. The description column 9, line 4 of the impedance network 101 talks about active electronic components and electronic switches. Do you consider an electric switch to be a type of active electronic component?

A. Switches -- electric switches are generally -- I think you can implement one of them with a single transistor, but usually they're a collection of transistors used to implement the functionality of a switch.

Q. So is it your understanding that impedance network 101 could be implemented with as little as a resistor and an electronic switch?

A. Yes.

¹ Referring to the numbering in the bottom right corner, not the actual deposition page number on top right.

Q. And how would that satisfy the claimed impedance network?

A. How would that be an impedance network? I think it's that one that the -- impedance network is comprised of one or more of an electronic switch --Did we say resistor or capacitor?

Q. Resistor.

A. Okay. -- a resistor, one of those, and to make it variable so that impedance can be modified as it's described in the claim language, you'd need something to make it modifiable. So you could potentially change its impedance by maybe shorting it out or something like that.

Q. So it's the switch would give you the capability to make the modification of the impedance by the resistor; correct?

A. That's correct. And that's also supported, I think, by Figure 1 where in Figure 1 you have a control logic just below the impedance network. ***Control logic cannot be connected directly to a capacitor or an inductor and do anything. You would need it -- you would need the control logic to maybe control like a variable switch or a -- or a full switch, right.*** So you need a passive element and an -- at the very least something that can modify that overall impedance.

Exhibit 1019, pp. 75, l. 14 - 76, l. 25 (emphasis added). Samsung's counsel repeated many of these questions, and Dr. Direen remained consistent throughout. In particular, after the above explanation, paragraph 50 of the Declaration was discussed wherein Dr. Direen repeated that to be operable, the "impedance

network” would need at least one passive element and either one active component or switch. Exhibit 1019, p. 78, l. 5 - p. 80, l. 23.

In light of the above testimony, the construction of “impedance network” as “a collection of two or more electrical components chosen from the list (1) one or more passive components; (2) active components; and (3) switches” would suffice since a POSA would understand that one or more passive components alone or an active component or switch alone would not be operable to accomplish the function required in limitation [1.e]. Response, p. 39 (citing Exhibit 2003, ¶ 121). Just because a defendant can conjure possible assemblies that would be inoperable does not render a claim invalid. *See Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750, F.2d 1569, 1576 (Fed. Cir. 1984) (stating “[i]t is not a function of the claims to specifically exclude ... possibly inoperative substances...”, quoting *In re. Dinh-Nguyen*, 492 F.2d 856, 858-59 (CCPA 1974)).

Nevertheless, WiPQTUS also agrees that the proposed construction would be clearer under the alternative construction proposed by Samsung's counsel:

Q. So shouldn't your definition read “two or more electrical components from the list, one or more passive components, and active components or switches”?

A. So, yeah, what it should mean is that we have -- we have to have one of the passive components and, yeah, one of the active -- one of an active component that --and/or a switch, so --

Exhibit 1019, p. 83, ll. 17 - 25. Hence, WiPQTUS proposes the following alternative construction for “impedance network”:

a collection of two or more electrical components, one of which must be a passive component and one of which must be either an active component or switch.

A single passive component as advocated by Phinney or even two passive components do not constitute an impedance network. *E.g.*, Response, pp. 44, 53, 55.

E. Samsung's Reliance on Ill-Defined “Knowledge of One Skilled in the Art” Does Not Make up for the Deficiencies in Chatterjee and Corbridge

In its Preliminary Response, WiPQTUS demonstrated that Samsung was relying on ill-defined “knowledge of a POSA” to fill in for deficiencies in the combination of Chatterjee and Corbridge. Preliminary Response, pp. 13 – 18. In its Decision, the Board understood the Petition differently. Decision, Paper 7, pp. 82 - 83. Given the chance to clarify its position in Reply, Samsung did not. Instead, continues to refer to some ill-defined “knowledge of a POSA.” Reply, *e.g.*, heading III.

Phinney relies on “knowledge of POSA” as to limitations [1.d] (Exhibit 1002, ¶¶ 138 – 139), [1.e] (Exhibit 1002, ¶¶ 145), [1.f] (¶¶ 146 – 151), and [1.i]

(Exhibit 1002, ¶¶ 174 – 177). Chatterjee does not teach limitation [1.e]: “said first circuitry, ... configured to change impedance of said impedance network... .” *E.g.*, Direen Prelim. Decl., ¶ 136. Phinney has not explained *how* the “knowledge of the POSA” would supply the missing disclosure as to this limitation. It appears that Phinney relies on the “knowledge of a POSA” as to portion of limitation [1.e]; ““configured to. . . apply said modified form of said power to said load device.”” Exhibit 1002, ¶ 145. Contrary to Dr. Phinney’s assertion, merely applying the power received “because it is DC and not AC” does not meet the limitation “modified power.” Direen Preliminary Decl., ¶ 136.

As explained in the Preliminary Response (pp. 2, 27 – 31, 55) and Response (pp. 19 – 20; n. 2) (incorporated herein by reference), such vague assertions regarding knowledge of a POSA does not meet the requirements set forth in *Arendi* and *DSS* and does not render the claim invalid. *Id.*

III. CONCLUSION

Because Petitioner has failed to show by a preponderance of the evidence that the Challenged Claims are invalid, the Board should affirm the patentability of the Challenged Claims in view of the only ground raised.

Date: October 9, 2024

Respectfully Submitted,

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CERTIFICATE UNDER 37 C.F.R. § 42.24(d)

This Sur-Reply complies with the type-volume limitation of 5,600 words.
As calculated by the word count feature in Microsoft Word, it contains 5,596
words, excluding the parts exempted by 37 C.F.R. §§ 42.24(a)-(b).

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CERTIFICATE OF SERVICE

I, Brian A. Carpenter, hereby certify that on the 9th day of October 2024, the foregoing PATENT OWNER'S SUR-REPLY was served on the following via electronic mail:

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