

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS AMERICA, INC., SAMSUNG
ELECTRONICS CO., LTD.,
Petitioner,

v.

COBBLESTONE WIRELESS LLC,
Patent Owner.

IPR2024-00315
Patent 9,094,888

PATENT OWNER'S PRELIMINARY RESPONSE

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PATENT OWNER’S EXHIBIT LIST

No.	Description
Ex. 2001	<i>Cobblestone Wireless, LLC v. T-Mobile USA, Inc.</i> , No. 2:22-cv-00477 (lead case) (E.D. Tex., docket entry dated Feb. 14, 2024)
Ex. 2002	<i>T-Mobile USA, Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00137, Paper 1 (IPR Petition) (PTAB Nov. 22, 2023)
Ex. 2003	Federal Court Management Statistics for the Eastern District of Texas through December 2023, <i>available at</i> https://www.uscourts.gov/statistics-reports/federal-court-management-statistics-december-2023
Ex. 2004	<i>Cobblestone Wireless, LLC v. T-Mobile USA, Inc.</i> , No. 2:22-cv-00477, Dkt. No. 1 (Complaint for Patent Infringement) (E.D. Tex. Dec. 16, 2022)
Ex. 2005	<i>Cobblestone Wireless, LLC v. AT&T Servs. Inc. et al.</i> , No. 2:22-cv-00474, Dkt. No. 1 (Complaint for Patent Infringement) (E.D. Tex. Dec. 15, 2022)
Ex. 2006	<i>Cobblestone Wireless, LLC v. Cellco P’ship d/b/a Verizon Wireless</i> , No. 2:22-cv-00478, Dkt. No. 1 (Complaint for Patent Infringement) (E.D. Tex. Dec. 16, 2022)
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Ex. 2008	<i>Cobblestone Wireless, LLC v. AT&T Servs. Inc. et al.</i> , No. 2:22-cv-00474, Dkt. No. 12 (Proof of Service of Summons to AT&T Mobility LLC) (E.D. Tex. Dec. 23, 2022)
Ex. 2009	<i>Cobblestone Wireless, LLC v. AT&T Servs. Inc. et al.</i> , No. 2:22-cv-00474, Dkt. No. 13 (Proof of Service of Summons to AT&T Services Inc.) (E.D. Tex. Dec. 23, 2022)
Ex. 2010	<i>Cobblestone Wireless, LLC v. AT&T Servs. Inc. et al.</i> , No. 2:22-cv-00474, Plaintiff Cobblestone Wireless, LLC’s Preliminary Disclosure of Asserted Claims and Infringement Contentions (E.D. Tex., served Mar. 13, 2023)

No.	Description
Ex. 2011	<i>Cobblestone Wireless, LLC v. Cellco P'Ship d/b/a Verizon Wireless</i> , No. 2:22-cv-00478, Plaintiff Cobblestone Wireless, LLC's Preliminary Disclosure of Asserted Claims and Infringement Contentions (E.D. Tex., served Mar. 13, 2023)
Ex. 2012	<i>Cobblestone Wireless, LLC v. T-Mobile USA, Inc.</i> , No. 2:22-cv-00477, Plaintiff Cobblestone Wireless, LLC's Preliminary Disclosure of Asserted Claims and Infringement Contentions (E.D. Tex., served Mar. 13, 2023)
Ex. 2013	<i>Cobblestone Wireless, LLC v. T-Mobile USA, Inc.</i> , No. 2:22-cv-00477 (lead case), Defendants' and Intervenor's Preliminary Invalidity Contentions for U.S. Patent No. 9,094,888 (E.D. Tex., served May 12, 2023)
Ex. 2014	<i>Cobblestone Wireless, LLC v. T-Mobile USA, Inc.</i> , No. 2:22-cv-00477, Dkt. No. 11 (Unopposed Application for Extension of Time to Answer Complaint) (E.D. Tex. Dec. 22, 2022)
Ex. 2015	<i>T-Mobile USA, Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00135, Paper 1 (IPR Petition) (PTAB Nov. 22, 2023)
Ex. 2016	<i>T-Mobile USA, Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00136, Paper 1 (IPR Petition) (PTAB Dec. 4, 2023)
Ex. 2017	<i>T-Mobile USA, Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00138, Paper 1 (IPR Petition) (PTAB Nov. 30, 2023)
Ex. 2018	<i>Cobblestone Wireless, LLC v. Samsung Electronics Co. et al.</i> , No. 2:23-cv-00285, Dkt. No. 30 (Docket Control Order) (E.D. Tex. Oct. 17, 2023)
Ex. 2019	<i>Cobblestone Wireless, LLC v. Samsung Electronics Co. et al.</i> , No. 2:23-cv-00285, Dkt. No. 39 (Order Granting Motion to Amend Docket Control Order) (E.D. Tex. Dec. 29, 2023)
Ex. 2020	<i>T-Mobile USA, Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00137, Paper 11 (POPR) (PTAB Feb. 29, 2024)
Ex. 2021	<i>Cobblestone Wireless, LLC v. Samsung Electronics Co. et al.</i> , No. 2:23-cv-00285, Dkt. No. 1 (Complaint for Patent Infringement) (E.D. Tex. June 16, 2023)

No.	Description
Ex. 2022	<i>Cobblestone Wireless, LLC v. Samsung Electronics Co. et al.</i> , No. 2:23-cv-00285, Dkt. No. 6 (Proof of Service) (E.D. Tex. June 16, 2023)
Ex. 2023	<i>Samsung Elecs. Am., Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00319, Paper 3 (IPR Petition) (PTAB Dec. 18, 2023)
Ex. 2024	<i>Samsung Elecs. Am., Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00316, Paper 3 (IPR Petition) (PTAB Dec. 18, 2023)
Ex. 2025	<i>Samsung Elecs. Am., Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00317, Paper 3 (IPR Petition) (PTAB Dec. 18, 2023)
Ex. 2026	<i>Samsung Elecs. Am., Inc. et al. v. Cobblestone Wireless, LLC</i> , IPR2024-00318, Paper 3 (IPR Petition) (PTAB Dec. 18, 2023)
Ex. 2027	<i>Cobblestone Wireless, LLC v. Samsung Electronics Co. et al.</i> , No. 2:23-cv-00285, Plaintiff Cobblestone Wireless, LLC’s Preliminary Disclosure of Asserted Claims and Infringement Contentions (E.D. Tex., served Sept. 23, 2023)
Ex. 2028	<i>Cobblestone Wireless, LLC v. Samsung Electronics Co. et al.</i> , No. 2:23-cv-00285, Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc.’s P.R. 3-3 and 3-4 Invalidity Contentions (E.D. Tex., served Dec. 27, 2023)

I. INTRODUCTION

The Board should deny institution of *inter partes* review (“IPR”) of U.S. Patent No. 9,094,888 (“the ’888 Patent”) for two independent reasons.

First, the Petition should be denied on the merits.¹ The Petition challenges two independent claims, claims 9 and 20. For claim 9, the Petition does not show that its proposed combination discloses or renders obvious a “handoff request based, at least in part, on a **determination** by the second wireless network **that the wireless device is not currently covered** by the first wireless network,” as required by claim limitation [9.a]. At most, the Petition shows that its lead reference Chitrapu discloses that it is possible for a wireless device that is not currently covered by a given wireless network prior to being handed off to that network. But the Petition fails to show that the prior art discloses (or to even allege that the prior art renders obvious)

¹ Because “the grounds of challenge in this Petition are a ‘copycat’ of the Petition filed in *T-Mobile USA, Inc. et al. v. Cobblestone Wireless, LLC*, IPR2024-0013[7]” (Pet. at 1), the merits arguments that Patent Owner presents in this preliminary response are likewise a “copycat” of the merits arguments Patent Owner presented in its preliminary response in IPR2024-00137. *See generally* Ex. 2020. Petitioner refers to “IPR2024-00135” in the Petition; Patent Owner assumes this was a typographical error since IPR2024-00135 challenges a different patent.

any “*determination*” that the wireless device is “not currently covered” by that network.

For claim 20, the claim recites an “adaption manager” configured to “receive a handoff request” and to “transmit a confirmation ... to indicate acceptance of the handoff request.” The Petition explicitly maps the claimed “adaption manager” to Chitrapu’s “beam former” and “geolocation processor,” but Chitrapu does not have any disclosure that its beam former and/or geolocation processor would be configured to receive a handoff request or to transmit a confirmation. Indeed, the Petition does not even allege that either the beam former or geolocation processor are so configured in Chitrapu (or would have been modified to be so configured), and in fact does not even *mention* the claimed “adaption manager” or Chitrapu’s “beam former” or “geolocation processor” in its discussion of the relevant limitations. The Petition thus fails to show that claim 20 is disclosed or rendered obvious by its proposed combination.

The Petition therefore fails to demonstrate a reasonable likelihood of prevailing for any of the challenged claims.

Second, the Board should exercise its discretion to deny the Petition in light of parallel district court litigations involving the same patent, the same parties (both Petitioners as well as their co-RPIs), the same claims, and the same art as in the Petition’s sole ground. The Petition also fails to offer any stipulation to mitigate

concerns of overlap here. In addition, because Petitioners waited until *one day* before the statutory deadline to file the Petition, the district court cases involving Petitioners and their co-RPIs will be at advanced stages at the time the Board renders its institution decision. And both district court trials are also set to take place months before the deadline for any final written decision in this proceeding. All six *Fintiv* factors favor a discretionary denial.

For either or both of these independent reasons, institution should be denied.

II. BACKGROUND

A. Overview of the '888 Patent

At a high level, the '888 Patent is generally directed to certain methods and systems for handing off a wireless device from one wireless network to another. Ex. 1001 at 1:38-2:26. As the specification explains, “beamforming or beam shaping may cause handoff challenges for a wireless device to possibly be handed off to the wireless network.” *Id.* at 3:36-39. This is because “constantly changing sectors of coverage may result in a wireless device being able to detect a wireless network at a location at a given period of time. However, as sectors of coverage change, the wireless device may no longer detect the wireless network at the same location at another given period of time.” *Id.* at 3:31-36. The claimed inventions aim to address this challenge by having handoff requests be based, at least in part, on “a determination by the second wireless network that the wireless device is not

currently covered by the first wireless network” and/or “a determination by the second wireless network that the wireless device is capable of being covered by the first wireless network.” *See, e.g., id.* at 1:52-57, 2:14-19.

For example, in this proceeding, two independent claims are challenged, claims 9 and 20. Claim 9 is a method claim that reads as follows:

[9.pre] A method implemented at a first wireless network for a mobile wireless device handoff between a second wireless network and the first wireless network, the method comprising:

[9.a] receiving a handoff request from the second wireless network, the handoff request based, at least in part, on a *determination by the second wireless network that the wireless device is not currently covered by the first wireless network but is capable of being covered by the first wireless network*;

[9.b] based, at least in part, on the handoff request, adapting one or more beams of an antenna array to facilitate coverage of the wireless device by the first wireless network; and

[9.c] transmitting a confirmation from the first wireless network to the second wireless network to indicate acceptance of the handoff request, wherein the wireless device is handed off from the second wireless network to the first wireless network.

Id. at claim 9 (emphases added). Claim 20 is a system claim with some similar concepts as claim 9:

[20.pre] A system for a wireless device handoff between a first wireless network and a second wireless network, the system comprising:

[20.a] an antenna array configured to generate one or more adaptable beams to modify a coverage area for the first wireless network; and

[20.b] an *adaption manager* having logic, the logic configured to:

[20.c] *receive a handoff request* from the second wireless network, the handoff request based, at least in part, on a *determination by the second wireless network that the wireless device is capable of being covered by the first wireless network,*

[20.d] cause a beam from among the one or more adaptable beams to be adapted in order to enable the wireless device to be covered by the first wireless network, and

[20.e] *transmit a confirmation* to the second wireless network *to indicate acceptance of the handoff request,* wherein the wireless device is handed off from the second wireless network to the first wireless network.

Id. at claim 20 (emphases added). For claim 20, it is the “adaption manager” of the claimed system that “receive[s] a handoff request,” “cause[s] a beam ... to be adapted,” and “transmit[s] a confirmation.” *Id.*

B. Summary of the Prosecution of the '888 Patent

Consistent with the description of the problem addressed in the specification, during prosecution, the Applicant emphasized the importance of the claimed “determinations,” distinguishing prior art because it does not disclose them:

Applicant submits that ... paragraph [0047] of Siomina describes making a decision to send the handover command by “the first and second radio stations 12, 13.” However, Siomina fails to teach or suggest “*receiving a handoff request from the second wireless network, the handoff request based, at least in part, on a determination by the second wireless network that the wireless device is not currently covered by the first wireless network but is capable of being covered by the first wireless network,*” as recited in [issued claim 9, prosecution claim 10], and “*receive a handoff request from the second wireless network, the handoff request based, at least in part, on a determination by the second wireless network that the wireless device is capable of being covered by the first wireless network,*” as recited in [issued claim 20, prosecution claim 22].

Ex. 1002 at 194-95 (emphases in original). Claims 9 and 20, among certain other claims, were then allowed by the Examiner. *Id.* at 204, 212, 227, 246-47. The Applicant then amended other pending claims to add similar limitations in order to likewise gain allowance of those claims. *Id.* at 259, 262, 265-66, 268-71, 442.

III. LEVEL OF ORDINARY SKILL IN THE ART

The Petition proposes that a person of ordinary skill in the art (“POSITA”) in

the field of the '888 Patent “would have had at least a bachelor’s degree in electrical engineering, computer engineering, computer science, physics, or the equivalent, and at least two years of experience working in the field. Relevant working experience would include experience with telecommunications and networking, radio-access network architectures, protocols and signal propagation, and including handovers in wireless networks. More education can supplement practical experience and vice versa.” Pet. at 3-4 (citing Ex. 1005 ¶41) (citations omitted). For purposes of this preliminary response, Patent Owner does not challenge that definition.

IV. CLAIM CONSTRUCTION

The Petition states that “[u]nless otherwise indicated in the discussion of the limitations below, Petitioners believe that the terms of the '888 Patent, for purposes of this proceeding, should be given their plain and ordinary meaning under the *Phillips* standard.” *Id.* at 9. In Patent Owner’s view, there does not appear to be any express claim constructions set out anywhere in the Petition. For purposes of this preliminary response only, Patent Owner agrees that no formal claim construction is necessary and the plain and ordinary meaning under the *Phillips* standard should apply to all claim terms and phrases.

V. THE PETITION FAILS TO SHOW A REASONABLE LIKELIHOOD OF PREVAILING FOR ANY CHALLENGED CLAIM.

The Petition challenges two independent claims, claims 9 and 20, and all other

challenged claims depend from one of those claims. For claim 9, the Petition does not show that its proposed combination discloses or renders obvious a “handoff request based, at least in part, on a determination by the second wireless network that the wireless device is not currently covered by the first wireless network.” For claim 20, the Petition maps the claimed “adaption manager” to Chitrapu’s “beam former” and “geolocation processor,” but Chitrapu does not disclose that these elements are configured to “receive a handoff request” and “transmit a confirmation ... to indicate acceptance of the handoff request” as required (and the Petition does not even allege as much). The Petition therefore fails to demonstrate a reasonable likelihood of prevailing for any of the challenged claims.

A. The Petition does not demonstrate that its proposed combination discloses or renders obvious claim limitation [9.a].

Claim limitation [9.a] reads, in relevant part, as follows: “the handoff request based, at least in part, on a determination by the second wireless network that the wireless device is not currently covered by the first wireless network but is capable of being covered by the first wireless network.” Ex. 1001 at 18:35-40 (emphases added). Chitrapu² does not disclose or suggest this portion of claim limitation [9.a].

² The Petition alleges that “Chitrapu in combination with TS 36.300 renders obvious” this sub-limitation of claim 9. Pet. at 37. But the Petition does not rely on

It is helpful to take a step back and understand how the Petition attempts to map Chitrapu to various elements of claim 9. The Petition maps Chitrapu’s “source” or “serving” base station (e.g., “BS1”) to the “second wireless network,” and Chitrapu’s “target” base station (e.g., “BS3”) to the “first wireless network.” Pet. at 31, 34-35, 37, 42-43. The Petition also maps the claimed “wireless device” to a “user equipment” or “UE” (e.g., a mobile phone or other mobile device). *Id.* at 8, 37-43. To succeed, the Petition must therefore show that Chitrapu’s target base station “receiv[es] a handoff request” from the source base station that is “based, at least in part, on a **determination** by the [source base station] that the [UE] is **not currently covered by the [target base station]**,” or that the receipt of such a request would have been obvious in view of the cited art. *See* Ex. 1001 at 18:35-40 (emphases added). The Petition does not do so, and cannot do so, because Chitrapu does not disclose or suggest any such determination.

TS 36.300 for this sub-limitation, except as an alternative to Chitrapu, and only for the notion that “the source base station is responsible for the handover determination.” *Id.* at 43-44. Because this issue is not relevant to the arguments presented here, this preliminary response only addresses Chitrapu in relation to the “handoff request based, at least in part, on a determination ... that the wireless device is not currently covered” claim language.

In regard to this sub-limitation, the Petition first alleges that “Chitrapu states ‘the serving base station determines which base stations are to be involved and proceeds with the negotiation process to select[] a preferred beam allocation pattern for all of the involved base stations.’” Pet. at 37 (quoting Ex. 1003 ¶[0109]; citing *id.* at Fig. 11) (emphases removed, alteration in original). The cited portion of Chitrapu further explains that “[w]here a handover is to occur, the new serving base station [i.e., the target base station] will first implement the selected beams determined for it and acquire the UE communication, before the original serving base station [i.e., source base station] implements its new beam pattern.” Ex. 1003 ¶[0109]. Nothing in paragraph 109 or Figure 11 of Chitrapu discloses or suggests that the source base station determines whether or not the UE is “currently covered” by the target base station before initiating a handoff, and neither the Petition nor the cited expert declaration from Mr. James Proctor alleges that either does. *See* Pet. at 37 (citing Ex. 1005 ¶¶145-146).

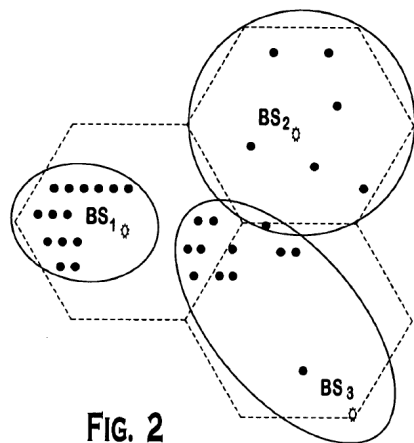
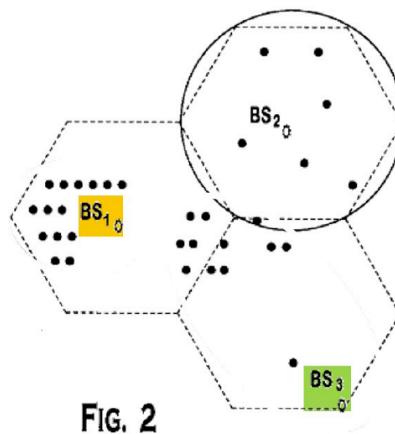
The Petition next points to Chitrapu’s Figure 6 embodiment. *Id.* at 37-39; *see* Ex. 1003 ¶[0065] (“FIG. 6 is a flow chart for implementing geolocation based beam forming.”). As the Petition recognizes, “Chitrapu states: ‘The negotiation process, after being initiated by a triggering event preferably entails [i] evaluating all of the UE location data for UEs communicating with the particular base stations and [ii] matching them with a set of beam patterns available to the particular base stations

which provide a more even service distribution of the UEs with the same or lower signal to noise ratio (SNR).” Pet. at 38 (quoting Ex. 1003 ¶[0079]) (alterations in original); *see also id.* at 38-39 (further describing the steps illustrated in Figure 6) (citing Ex. 1003 ¶¶[0082]-[0083]). As the Petition also recognizes, “[o]nce the negotiation process is completed the base stations refocus their transmitted RF signals to provide the beams for the UEs which are determined during the negotiation process.” *Id.* at 39 (quoting Ex. 1003 ¶[0083]).

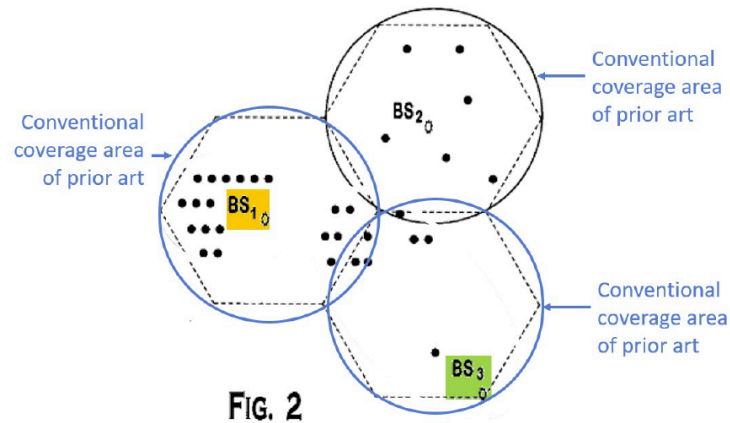
The Petition then alleges that, as a result of the above-described process, “the target base station will adjust its beams to *cover UEs that were not previously covered* but selected by the source base station to be covered after the handover.” *Id.* (emphasis added). But the Petition points to no **determination** by the source base station that a given UE is not covered by the target base station prior to the handover, let alone that any handover request is based on such a determination, as required by claim limitation [9.a]. At most, the Petition demonstrates that it is possible that a UE might not be within the coverage area of the target base station prior to handover of that UE to the target base station, but presents no evidence that any handoff request in Chitrapu would be based on a “determination” that the UE is not covered by the target base station prior to handoff.

The Petition’s (and Mr. Proctor’s) “illustrat[ion]” using altered versions of Chitrapu’s Figure 2 suffers from the same issue. *See id.* at 39-43. The Petition begins

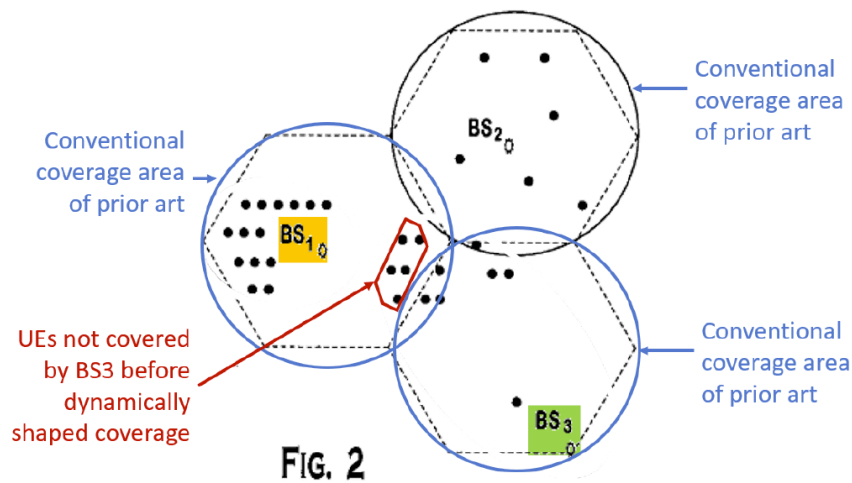
this analysis by removing what it calls “dynamically shaped coverage area[s]” from Figure 2. *Id.* at 39. Unmodified Figure 2 is shown on the left below, while the Petition’s first modification of this figure is shown on the right:



Ex. 1003 at Fig. 2; Pet. at 40 (quoting Ex. 1003 at Fig 2, highlighting added, two black ovals removed by the Petition). The black dots in the figures represent UEs; the ovals represent the current coverage areas of each respective base station. The Petition then adds two blue circles to its already-modified version of Figure 2, with these two blue circles allegedly representing “the conventional coverage area of the prior art for BS1 and BS2”:

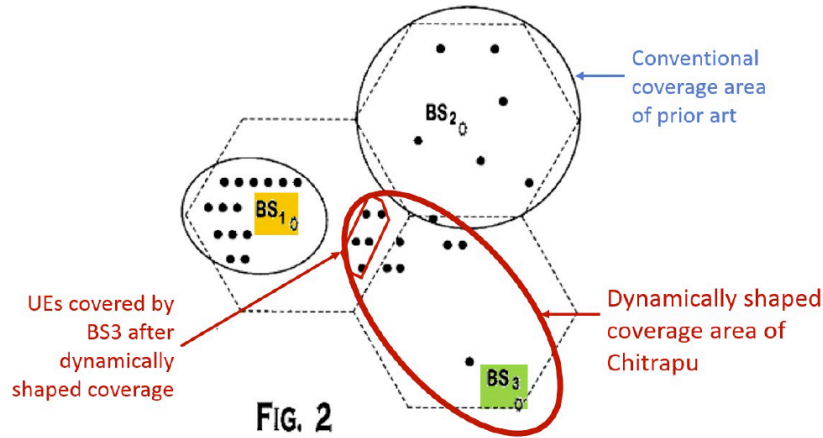


Pet. at 40-41 (quoting Ex. 1003 at Fig. 2; highlighting, annotations, and blue circles added, two black ovals removed by the Petition). The Petition then takes the above modified version of Figure 2, and modifies it further, drawing a red shape around five UEs that it claims were “not covered by BS3 before the dynamically shaped coverage process is deployed”:



Id. at 41-42 (quoting Ex. 1003 at Fig. 2; highlighting, annotations, blue circles, and red shape added, two black ovals removed by the Petition). The Petition then removes the blue circles that it added, and re-inserts the two ovals that it removed

from the original figure, so as to include what it terms the “[d]ynamically shaped coverage area of Chitrapu”:



Id. at 43 (quoting Ex. 1003 at Fig. 2; highlighting, annotations, and red box added by the Petition).

Based on these illustrations, the Petition reaches the conclusions that (1) “[t]he UEs in the red box are camped on BS1 (source) and will be handed over to BS3 (target) by dynamically changing the coverage area for BS3” and (2) “[g]iven that the source base station (BS1) makes the beamforming determination by acquiring UE location information and beamforming capabilities of BS3, *BS1 determines that those UEs are not currently covered by BS3 but are capable of being covered by BS3.*” *Id.* at 42 (emphasis added). Even assuming that the first conclusion is sound (that the UEs in the red box are handed over from BS1 to BS3), the second conclusion is not because there is no **determination** that the UEs in the red box are not within BS3’s coverage area prior to handover. Again, as with the Petition’s

reliance on the Figure 6 embodiment, at most, these illustrations based on Figure 2 show that the UEs in the red box were not covered by BS3 prior to a change in the coverage area, not that there was a *determination* that the UEs in the red shape were not covered by BS3 prior to a change in the coverage area.

That Chitrapu does not determine whether or not a given UE is currently covered by the target base station (prior to any handover) is consistent with Chitrapu's overall disclosure and the problems Chitrapu aims to solve—"to more readily meet service demand and thus, better avoid attempted communications being met with a busy signal" and "to avoid communication degradation when a UE moved from one cell to another." Ex. 1003 ¶[0011]; *see also id.* ¶¶[0004]-[0005], [0010]. To accomplish these goals, "two or more neighboring cells can negotiate and redefine the area covered by each base station in a manner that is more optimal to all of the cells taken together. A base station may initiate a negotiation process with one or more of its neighbors in adjacent cells as a result of excessive demand from users in area presented covered by it or as a result of surplus resources rendered by low traffic volume." *Id.* ¶[0074]; *see id.* ¶[0075] (describing same concept in the context of Figure 2); *see also id.* ¶¶[0077]-[0078], [0080], [0108]. Chitrapu also describes taking into account "the speed and direction of the UE(s)" to "determine if the network is likely to reach full capacity in the (near) future." *Id.* ¶[0077].

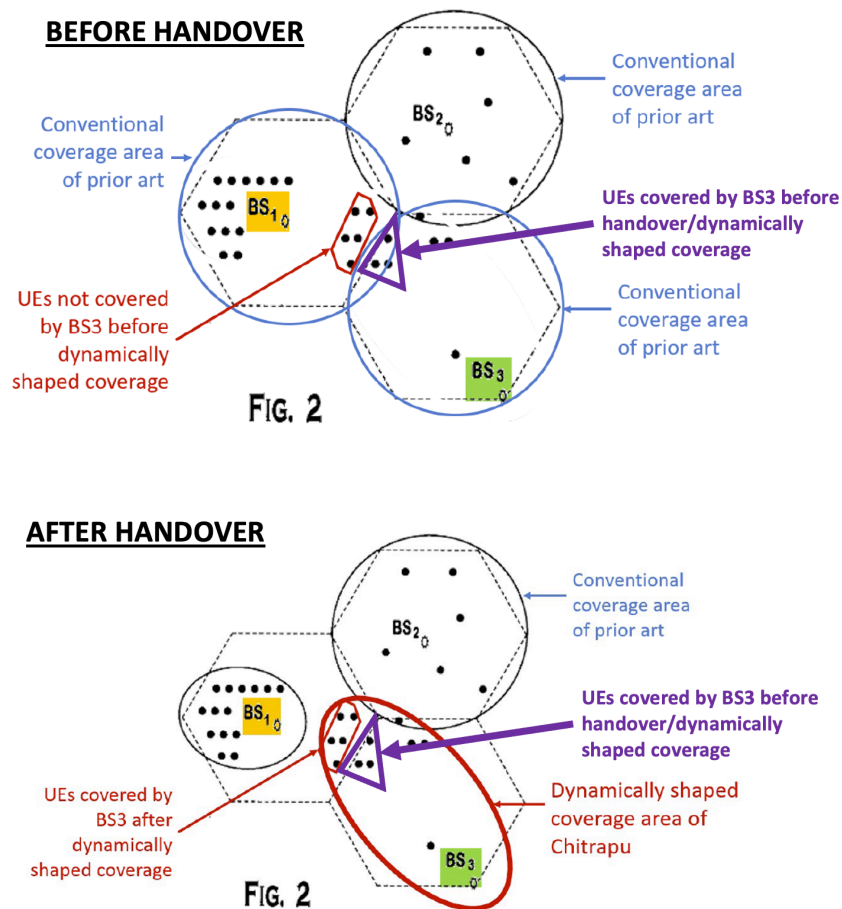
Applying these concepts, Chitrapu explains that as part of its "smart handover

method ... [a]n estimated location of a mobile UE which is receiving RF communication signals from a base station ... is determined,” and “[e]ach base station that has a transmission range which encompasses the estimated UE location is identified.” *Id.* ¶[0043]; *see also id.* ¶¶[0030], [0036]-[0039], [0049]-[0052]. Chitrapu thus focuses on determining UE location and identifying *all* base stations that could possibly connect to the UE based on the base station’s possible transmission range, *regardless of whether the UE is within the current coverage area of a given base station or not*. Then, each “UE is assigned to one of the identified base stations” based on the UE’s location and the other factors described above such as UE’s “speed and direction.” *Id.* ¶¶[0043], [0077]; *see id.* ¶[0053] (“select a base station based in part on both the geolocation data corresponding to the estimated location and relative velocity data of the selected UE”); *see also id.* ¶[106].

An argument that Patent Owner considered (but the Petition does not present) is whether Chitrapu’s handover of UEs to a target base station not covered by that target base station prior to handover can be viewed as inherently disclosing the “determination ... that the [UE] is not currently covered” sub-limitation. It cannot for the simple reason that Chitrapu discloses handover not only in scenarios where the UE is *not covered* by the target base station prior to handover, but also in scenarios where the UE *is in fact covered* by the target base station prior to handover. In other words, in Chitrapu, that a UE is not covered by the target base station prior

to handover is not a necessary condition for a handover request to be sent or for handover to ultimately occur.

The Petition's Figure 2-based illustrations themselves demonstrate this concept well—there are three UEs in those figures that are in BS3's original coverage area before any handover or dynamic beam shaping occurred, as shown in the purple triangle below:



Pet. at 42-43 (quoting Ex. 1003 at Fig. 2; purple annotations and headings added by Patent Owner; other annotations and highlighting added by the Petition). As

Chitrapu explains, “FIG. 2 illustrates a concentration of users in the base station BS₁ region and the region between base station BS₁ and base station BS₃. Upon determining the high concentration of users in these regions, the antenna arrays at base station BS₁ and base station BS₃ are used to transmit a selectively shaped and directed beam to provide the needed radio resources to the user concentrations.” Ex. 1003 ¶[0075]. As shown in Figure 2, the UEs concentrated on the left portion of the transmission range of BS₁ continue to be assigned to BS₁, and all of the UEs in the region between BS₁ and BS₃ are now assigned to BS₃, *including those in the purple triangle that were in BS₃’s coverage area prior to handover*. *Id.* at Fig. 2.

Figure 2 and its accompanying description (*id.* ¶[0075]) do not indicate whether the UEs in the purple triangle are originally assigned to BS₁ or BS₃. But Chitrapu’s disclosures makes clear that they could be originally assigned to either. As detailed above, there are a number of factors that influence UE base station assignment, such as the unused network capacity of a given base station and the speed and orientation of a given UE. *See supra* at 15-16. In addition, Chitrapu explains that “in practice ... the transmission beams ... from base station antennas of adjacent cells do overlap [as they do in the Figure 2 illustrations]. This overlap of beam coverage enables ‘handover’ of a communication being conducted by a mobile UE from one base station to another as the mobile UE travels from one cell to another.” *Id.* ¶[0008]. Thus, as an example, if any of the UEs in the purple triangle

had been moving towards BS1 and away from BS3, particularly at a rapid clip, those UEs would likely have originally been assigned to BS1 to avoid a future coverage loss due to the movement of the UE. For UEs in the purple triangle that were originally assigned to BS1, the “handoff request” could not be “based, at least in part, on a determination ... that the [UE] is not currently covered by [BS3]” because even if Chitrapu disclosed making a determination in this regard (it does not), the opposite would have been true—UEs in the purple triangle originally assigned to BS1 are in fact within BS3’s coverage area prior to handover. Chitrapu therefore cannot inherently disclose this claim limitation.

Finally, it is worth noting that the prosecution history of the ’888 Patent illustrates the importance of claim limitation [9.a], as the Applicant distinguished prior art on the basis of it. For example, although the Applicant recognized that the Siomina reference “describes making a decision to send the handover command” to “radio stations,” the Applicant argued that “Siomina fails to teach or suggest *‘receiving a handoff request from the second wireless network, the handoff request based, at least in part, on a determination by the second wireless network that the wireless device is not currently covered by the first wireless network.’*” Ex. 1002 at 194. Prosecution claim 10 (issued claim 9) was then allowed by the Examiner. *Id.* at 204, 212, 227, 246-47; *see also id.* at 259, 262, 265-66, 268-71, 442 (addition of this same limitation to other claims to gain allowance). The same is true

here of Chitrapu as with the Siomina reference cited during prosecution—although Chitrapu may disclose handover from one network to another, Chitrapu does not disclose any handoff request that is based on this claimed “determination.”

Because the Petition fails to demonstrate that Chitrapu (or its proposed combination) discloses or renders obvious a “handoff request based, at least in part, on a determination by the second wireless network that the wireless device is not currently covered by the first wireless network,” the Petition cannot succeed as to claim 9 or any of its challenged dependent claims (claims 10 and 12).

B. The Petition does not show that its combination discloses or renders obvious the “adaption manager” of claim 20.

Claim 20 (the only other challenged independent claim) is a system claim that requires, in part: “[20.b] an *adaption manager* having logic, the logic configured to: [20.c] *receive a handoff request* from the second wireless network ..., and [20.e] *transmit a confirmation* to the second wireless network to indicate acceptance of the handoff request.” Ex. 1001 at 19:65-20:3, 20:7-10 (emphases and numbering added). The Petition maps the “adaption manager” of [20.b] to a combination Chitrapu’s “beam former” and “geolocation processor.” Pet. at 57 (quoting Ex. 1003 ¶[0041]). The Petition must therefore show that Chitrapu’s “beam former”/“geolocation processor” has logic configured to “receive a handoff request” and “transmit a confirmation ... to indicate acceptance of the handoff request.” It does not.

This is unsurprising, as Chitrapu makes clear that the function of its “beam former” is “to form a desired beam within a range of beams of which the antenna array system is capable.” Ex. 2003 ¶[0022]; *see also id.* ¶¶[0024]-[0026], [0036], [0041]-[0042], [0049], [0054], [0056]-[0058], [0085], [0088] (similar disclosures). Similarly, Chitrapu explains that its “geolocation processor ... is configured to process UE geolocation data relative to data of a location of the base station’s antenna array system and output selected parameters to the beam former.” *Id.* ¶[0022]; *see also id.* ¶¶[0023]-[0029], [0041]-[0042], [0054]-[0056], [0058], [0085], [0087]-[0088], [0101] (similar disclosures). Chitrapu does not disclose that its beam former or its geolocation processor are at all involved with receiving handoff requests or transmitting handoff confirmations.

The Petition (and corresponding expert declaration) conclusorily alleges that “[a] POSITA would have understood these components to be an adaption manager having logic” (Pet. at 57 (citing Ex. 1005 ¶203)), but fails to even allege that Chitrapu’s “beam former”/“geolocation processor” has logic configured to “receive a handoff request from the second wireless network [the source base station],” as required by claim limitation [20.c], or to “transmit a confirmation to the [source base station] to indicate acceptance of the handoff request,” as required by claim limitation [20.e].

In its analysis of claim limitation [20.c] (“receive a handoff request from the

second wireless network ...”), the Petition does not mention the claimed “adaption manager” or Chitrapu’s “beam former”/“geolocation processor” at all. Rather, the Petition’s analysis is cabined to TS 36.300’s “handover request message” and purporting to establish that Chitrapu in combination with TS 36.300 “disclose[s] that the source network (the ‘second wireless network’) is responsible for handover determination.” *Id.* at 57-58. Of course, none of that analysis is relevant to whether Chitrapu’s “beam former”/“geolocation processor” has logic configured to “receive a handoff request.”

Similarly, in its analysis of claim limitation [20.e] (“transmit a confirmation to the second wireless network to indicate acceptance of the handoff request ...”), the Petition likewise does not even mention the claimed “adaption manager” or Chitrapu’s “beam former”/“geolocation processor.” Here, the Petition only discusses “standardized handover messaging in TS 36.300” and alleges that “[i]t would have been obvious to a POSITA to consider [this] when implementing the system in Chitrapu.” *Id.* at 58-59. Again, whether or not that is the case bears no relevance to whether Chitrapu’s “beam former”/“geolocation processor” has logic configured to “transmit a confirmation to the second wireless network to indicate acceptance of the handoff request.”

The discussion contained within the Petition’s section concerning claim limitation [20.b] (“an adaption manager having logic, the logic configured to”) does

not cure these deficiencies. In that section, the Petition alleges that “Chitrapu discloses how the ‘beam former controls the RF module to transmit or receive communication data for a selected UE in a shaped beam that encompasses an estimated location of the selected UE where geolocation data which corresponds to the estimated location of the selected UE is processed by the geolocation processor.’” *Id.* at 57 (quoting Ex. 1003 ¶[0022]). At most, this passage discloses that Chitrapu’s “beam former” controls a different component of the base station to receive and transmit “communication data for a selected UE,” not to “receive a handoff request from the [source base station]” or to “transmit a confirmation to the [source base station] to indicate acceptance of the handoff request.” *See* Ex. 1003 ¶[0022].

Because the Petition fails to demonstrate that Chitrapu’s “beam former” and/or “geolocation processor” (what the Petition maps to the claimed “adaption manager”) has logic configured to “receive a handoff request” or to “transmit a confirmation ... to indicate acceptance of the handoff request,” the Petition cannot succeed as to claim 20 or any of its challenged dependent claims (claims 21 and 23).

VI. DISCRETIONARY DENIAL OF INSTITUTION IS WARRANTED.

35 U.S.C. § 314(a) gives the Board discretion to deny institution of IPR due to the advanced state of parallel district court litigation regarding the same issues. *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 19-21

(PTAB Sept. 12, 2018) (precedential) (“*NHK*”). The Board has set forth six factors for determining whether discretionary denial in light of such parallel litigation is appropriate, and in analyzing them, “takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5-6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv I*”); *see also Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 7-17 (PTAB May 13, 2020) (informative) (“*Fintiv II*”); Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (dated June 21, 2022) (“Interim Discretionary Denial Memo,” Ex. 1013).

Each of these six *Fintiv* factors weigh in favor of the Board exercising its discretion to deny institution here. For Factor 1, no stay of either parallel district court litigation has been granted, and a stay of either is unlikely. For Factor 2, two district court trials (one involving Petitioners and the other involving their co-RPIs) will occur before the deadline for a final written decision in this proceeding. For Factor 3, largely due to Petitioners’ delay in filing the Petition, there will be much investment by the parties and the district court in both cases. For Factor 4, there is perfect overlap in both the claims and art at issue in this proceeding and in both district court cases, and Petitioners do not offer any stipulation in an effort to reduce this overlap. For Factor 5, Petitioners and their co-RPIs are the defendants in the parallel litigations. And for Factor 6, not only did Petitioners unduly delay in filing

their Petition, filing just a day before the statutory deadline, but the Petition also fails to present a compelling challenge on the merits. Each of these factors is addressed in more detail below.

A. *Fintiv* Factor 1: The district court has not granted a stay, nor is there any evidence that a stay will be granted.

In the parallel district court proceeding involving the same challenged claims of the '888 Patent and Petitioners ("Samsung Litigation"), the district court has not granted a stay pending IPR. Further, Petitioners have not requested such a stay, there is no indication they will request a stay, and there is no evidence that a stay will be granted.

Moreover, Petitioners list five other entities in addition to themselves as RPIs in this proceeding. Pet. at 58 (identifying "T-Mobile USA, Inc., AT&T Services Inc., AT&T Corp., AT&T Mobility LLC, and Cellco Partnership d/b/a Verizon Wireless" as RPIs (collectively, "the Carriers")). In the consolidated district court case involving the Carriers ("Carrier Litigation"), and even though the Carriers initiated IPR2024-00137 challenging the '888 Patent (Ex. 2002), the Carriers have likewise not requested a stay, and there is no evidence that a stay will be granted.

And the facts here indicate that it is unlikely that the district court would grant a stay of either litigation. In the Carrier Litigation, Patent Owner and Petitioners' co-RPIs have already exchanged infringement contentions, invalidity contentions, and claim construction disclosures; fact discovery is also well underway. Ex. 1012 at 4-

5. And by the time the Board's institution decision is due in this proceeding (June 28, 2024), the Court will have held its *Markman* hearing, fact and expert discovery will be complete, summary judgment and *Daubert* motions will have been filed, and trial will be just over three months away. *See id.* at 1, 3-4; Ex. 2001.

Thus, even if Petitioners' co-RPIs were to file a motion for a stay pending this proceeding, it is highly unlikely Judge Gilstrap would grant a stay at this late juncture in the case. *See, e.g., TQ Delta, LLC v. CommScope Holding Co.*, No. 2:21-cv-00310-JRG, 2022 WL 16720195, at *3 (E.D. Tex. Nov. 4, 2022) (Gilstrap, J.) (denying motion to stay pending IPR where claim construction and fact discovery were completed, and expert discovery was set to soon close); *Solas OLED Ltd. v. Samsung Display Co.*, No. 2:19-cv-00152-JRG, 2020 WL 4040716, at *2 (E.D. Tex. July 17, 2020) (Gilstrap J.) (denying motion to stay pending IPR where claim construction and discovery were complete).

And any stay of the Samsung Litigation is, at best, speculative and unlikely. The '888 Patent is only one of five patents asserted in that litigation. Even if this IPR were instituted, it is unlikely that Judge Gilstrap would, for example, sever and stay the allegations concerning the '888 Patent, as "it is often most efficient to resolve the diverse allegations together in the same action instead of creating numerous distinct cases for every different accused technology, patent, or party." *Polaris PowerLED Techs., LLC v. Samsung Elecs. Am., Inc.*, No. 2:22-cv-00469-JRG, 2024

WL 1149223, at *2-3, 6 (E.D. Tex. Mar. 15, 2024) (Gilstrap, J.) (denying motion to sever allegations concerning a patent on which IPR had been instituted and stay that portion of the case, even though the case was at an “early stage”). This is particularly true here, where the infringement allegations as to all five patents involve cellular base stations and/or user equipment that supports 3GPP 5G NR communications. Ex. 2027 at 2. “If the Court severed the claims related to the ’[888] Patent, the parties would have to engage in duplicative damages and technical discovery for the overlapping accused products. Moreover, the Court and the parties would be burdened with the inefficiencies that result from doubling the necessary claim construction, pre-trial, and trial proceedings.” *Polaris*, 2024 WL 1149223, at *6.

Where neither district court litigation has been stayed and any stay is speculative and unlikely, allowing this IPR to proceed in parallel would be wasteful and inefficient. Factor 1 weighs against institution.

B. *Fintiv* Factor 2: Two district court trials will occur months before the deadline for a final written decision in this proceeding.

“If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.” *Fintiv I* at 9.

Here, the deadline for a final written decision in this IPR is June 28, 2025. Meanwhile, the Samsung Litigation is set for trial on May 5, 2025. *See* Ex. 2018 at 1; Pet. at 56. The timeframe set by the district court is consistent with the Federal

Court Management Statistics for the Eastern District of Texas. *See* Interim Discretionary Denial Memo (Ex. 1013) at 3 & n.4 (encouraging use of these statistics in evaluating this factor). Those statistics indicate that, over the past six years, a civil case in the district was brought to trial 19.6 months after filing. Ex. 2003 (indicating median times to trial for civil cases for the twelve-month period ending in December for 2018-2023 as 19.0, 17.8, 17.5, 23.0, 19.0, and 21.4). Here, the trial involving Petitioners is set approximately over 22 months after the case was filed. *See* Ex. 2018 at 1 (trial set for June 5, 2025); Ex. 2021 (parallel case filed June 16, 2023).

Moreover, trial in the Carrier Litigation is set approximately 21 months after the cases were filed. *See* Ex. 1012 at 1 (trial set for September 23, 2024); Exs. 2004-2006 (parallel cases filed December 15-16, 2022). And in the Carriers' petition, they "identify Samsung Electronics Co. Ltd. [as an RPI] because its products are accused of infringement in the AT&T, T-Mobile, and Verizon actions, and Samsung Electronics Co., Ltd. has been named as a defendant in the [Samsung Litigation]." Ex. 2002 at 3.

Thus, the trial in the Carrier Litigation, in which the Samsung Petitioners products are undisputedly accused of infringement, is set to occur *over nine months*

before the deadline for a final written decision in this proceeding.³ “A trial date about *eight or nine months* before [the Board’s] statutory due date *weighs heavily in favor of discretionary denial*.” *Zhuhai Cosmx Battery Co. v. Ningde Amperex Tech. Ltd.*, IPR2023-00585, Paper 12 at 11-13 (PTAB Oct. 24, 2023) (emphases added) (“*Zhuhai*”); *see also, e.g., Samsung Elecs. Co. v. Mojo Mobility Inc.*, IPR2023-01094, Paper 11 at 8-9 (PTAB Feb. 9, 2024) (“*Mojo*”) (denying institution when trial was set *six months* before the final written decision would issue); *BOE Tech. Grp. Co. v. Element Capital Com. Co.*, IPR2023-00808, Paper 9 at 21-22 (PTAB Nov. 15, 2023) (“*BOE*”) (same); *Vector Flow, Inc. v. HID Global Corp.*, IPR2023-00353, Paper 8 at 19-20 (PTAB July 17, 2023) (“*Vector Flow*”) (same); *Roku, Inc. v. IOEngine, LLC*, IPR2022-01551, Paper 11 and 10-11 (PTAB May 5, 2023) (“*Roku*”) (same); *Int’l Bus. Machs. Corp. v. Digital Doors, Inc.*, IPR2023-00970, Paper 8 at 10-11 (PTAB Jan. 12, 2024) (denying institution where

³ In the event that there is joinder of this proceeding with IPR2024-00137, and even if both proceedings follow the expected schedule for the earlier-filed IPR2024-00137 without change, the final written decision would be expected on approximately May 29, 2025, which is still *over eight months* after the trial date in the Carrier Litigation. *See* Ex. 2020 at 26-30. In addition, the May 29, 2025 date is also nearly a month after the trial date in the Samsung Litigation.

“trial would occur about *five months* before the statutory deadline”) (emphasis added).

Indeed, the Board has denied institution on account of even substantially smaller gaps between the final written decision and trial, including gaps analogous to the approximate two-month gap between the final written decision in this proceeding and the trial in the Samsung Litigation. *See, e.g., EClinicalWorks, LLC v. Decapolis LLC*, IPR2022-00229, Paper 10 at 9 (PTAB Apr. 13, 2022) (“*EClinicalWorks*”) (finding this factor weighed in favor of discretionary denial and denying institution where “the beginning of the jury trial in the WDTX Cases is roughly *one or two months* before any final decision would have been due had *inter partes* review been instituted”) (emphasis added); *Fintiv II* at 13 (finding this factor weighed in favor of discretionary denial and denying institution where the district court trial was scheduled to occur *two months* before the deadline for the Board to reach a final written decision); *NXP USA, Inc. v. Impinj, Inc.*, PGR2022-00005, Paper 17 at 9 (PTAB May 2, 2022) (“*NXP*”) (same), *reh’g denied*, Paper 20 (PTAB Aug. 25, 2022).

The Petition presents no evidence that the trials will not proceed on the set dates, which, as noted above, are consistent with the most current time-to-trial statistics for the Eastern District of Texas. Thus, “based on the evidence of record, there is no evidence to suggest that trial will be delayed.” *Nine Energy Serv. Inc. v.*

NCS Multistage Inc., IPR2020-01615, Paper 18 at 9 (PTAB Mar. 24, 2011); *see also NXP* at 9 (“We generally take courts’ trial schedules at face value absent some strong evidence to the contrary.”) (quoting *Fintiv II* at 13).

Because the trial in the Carrier Litigation (in which the Samsung Petitioners’ products are accused) is currently set to occur over nine months before, and the trial in the Samsung Litigation is currently set to occur approximately two months before, the deadline for a final written decision in this IPR, these trial dates are consistent with current time-to-trial statistics, and there is no evidence that these dates may change, this factor weighs against institution. *Fintiv II* at 13.

C. *Fintiv* Factor 3: By the time an institution decision is reached, there will have been extensive investment in the parallel district court litigations.

Factor 3 relates to the “amount and type of work already completed in the parallel litigation by the court and the parties *at the time of the institution decision.*” *Fintiv I* at 9 (emphasis added). For example, “if, at the time of the institution decision, the district court has issued substantive orders related to the patent at issue in the petition,” this factor favors denial. *Id.* at 9-10. “Likewise, district court claim construction orders may indicate that the court and parties have invested sufficient time in the parallel proceeding to favor denial.” *Id.* at 10.

In the Samsung Litigation, the parties have already served both infringement and invalidity contentions, and at the time of the institution decision, fact discovery

will be well underway. Ex. 2018 at 4. Indeed, fact discovery is already well underway at the time of this response, as the Petitioners and Patent Owner have already responded to 24 and 18 interrogatories, respectively. In addition, Petitioners have already produced over 13,000 documents, totaling over 675,000 pages, and Patent Owner has already produced over 1,000 documents, totaling 12,000 pages. Petitions have also already served seven third-party subpoenas.

And in the Carrier Litigation (in which the Samsung Petitioners' products are accused of infringing the '888 Patent), one of the Samsung Petitioners has already produced nearly 1,000 documents in response to a subpoena to it, totaling over 30,000 pages. Moreover, in the Carrier Litigation, which is in the same district and before the same district and magistrate judges as the Samsung Litigation, an order resulting from the May 2, 2024 *Markman* hearing (Ex. 2001) will likely issue prior to the June 28, 2024 deadline for the institution decision; the *Markman* decision would clearly qualify as a "substantive order." *See* Fintiv at 9-10. But even if the *Markman* order does not issue prior to the institution decision, the district court's docket control order includes all deadlines, including the trial date; by the time the institution decision issues, both fact and expert discovery will be complete. Ex. 1012 at 3-4.

Notably, by the time of the institution decision, the Carriers will have completed their opening invalidity report, which is expected to overlap with the

invalidity grounds presented in this IPR. *See infra* § VI.D. Further, under the Court’s schedule, at the deadline for the institution decision (June 28, 2024), Patent Owner will also have served its rebuttal and expert discovery will have closed. *See* Ex. 1012 at 3. In addition, opening summary judgment and *Daubert* motions will have been filed, with the deadline for responsive briefs days away (July 1, 2024). *Id.* Realistically, the parties will have to begin work on those responsive briefs before receiving the institution decision, further adding to the parties’ investments under Factor 3. Those investments weigh strongly against institution because they ensure that this IPR cannot be an efficient alternative to district court litigation.

In *Samsung Electronics Co. v. California Institute of Technology*, the Board denied institution where a parallel case was even less advanced, and for Factor 3, found that “the advanced stage of expert discovery is the most significant fact for our analysis.” IPR2023-00137, Paper 10 at 12 (PTAB May 4, 2023). “In particular, the scheduling order in the underlying litigation indicates that Petitioner should have already served its opening expert report on validity [at the time of the institution decision]. Given that the deadline for rebuttal expert reports is only days away, we can also safely assume that work pertaining to a rebuttal expert report on validity is well underway. We consider this work significant because it related to the merits of the parties’ invalidity positions.” *Id.* (citations omitted); *see also Zhuhai* at 13 (denying institution in part because opening expert reports were served before the

institution decision issued); *Vector Flow* at 21 (same); *Duplo USA Corp. v. MGI Digital Tech. SA*, IPR2023-00936, Paper 8 at 17-18 (PTAB Dec. 5, 2023). The district court case will be at an even more advanced stage here, as not only will opening reports have been served, but expert discovery be complete and summary judgment and *Daubert* motions will have been filed. And even though the Samsung Petitioners are not parties to the Carrier Litigation, their products are undisputedly accused in that litigation and they are participating in that litigation as a third-party.

Thus, the parties (the Samsung Petitioners, the Carriers, and Patent Owner) as well as the district court will have invested significant time and resources in the district court litigations by the time the Board reaches an institution decision in this matter. This favors discretionary denial, and various panels have found this factor to favor denial even when the parallel litigation was at less advanced stage. *Fintiv I* at 10; *Fintiv II* at 13-14 (finding that “the level of investment and effort already expended on claim construction and invalidity contentions” favored denial where the parties had exchanged final contentions, a *Markman* hearing was held, the court had entered a claim construction order, and discovery had begun); *BOE* at 23-24 (denying institution in part because claim construction was complete and fact discovery was nearly completed); *Roku* at 12 (same); *Mojo* at 9 (same).

Of course, the reason that the district court litigations will be so far along at the time of institution is because petitioners unduly delayed in filing their petitions.

The Samsung Petitioners allege that they were “diligent in filing this Petition less than six months after [they] w[ere] served with the complaint.” Pet. at 57. While the timing aspect of that statement may be technically true in regard to the Samsung Litigation (*compare id.* at 60-62 (dated December 18, 2023) *with* Ex. 2022 (Samsung defendants served June 21, 2023)), that is not the relevant inquiry here. Rather, service of one or more of the Carriers is what governs the Samsung Petitioners’ time to file an IPR petition because the Samsung Petitioners identify the Carriers as RPIs. Pet. at 58 (identifying “T-Mobile USA, Inc., AT&T Services Inc., AT&T Corp., AT&T Mobility LLC, and Cellco Partnership d/b/a Verizon Wireless” as RPIs); 35 U.S.C. § 315(b) (“An inter partes review may not be instituted if the petition requesting the proceeding is filed *more than 1 year after the date on which the petitioner, **real party in interest**, or privy of the petitioner **is served with a complaint** alleging infringement of the patent.*”) (emphases added). Here, the first of these RPIs was served on December 19, 2022 (Ex. 2009 (proof of service of AT&T Services Inc. dated December 19, 2022); Ex. 2005 (corresponding complaint alleging AT&T Services Inc. infringes the ’888 Patent))), making the deadline for Petitioners to file the instant petition December 19, 2023. And the instant Petition was filed December 18, 2023 (Pet. at 60-62), just **one day** before the statutory deadline. The Samsung Petitioners therefore waited until nearly the last possible minute to file their Petition.

And the Carriers likewise delayed in filing a petition challenging the same

patent at issue here, filing just a month before their statutory deadlines. *Compare* Ex. 2002 at 56 (dated November 22, 2023) *with* Exs. 2007-2009, 2014 (Carriers served December 19-21, 2022). The Samsung Petitioners offer no explanation for why they did not file the Petition at least as early as the Carriers' dilatory petition, and why they did not file their Petition even sooner, given the Carriers' long delay in doing so.

The same is true for petitions that the Carriers filed on the other three patents asserted in the parallel litigation. Ex. 2015 at 3, 49; Ex. 2016 at 2-3, 72-73; Ex. 2017 at 3, 76-77 (three other petitions filed November 22, 2023 through December 4, 2023, each also naming Petitioner Samsung Electronics Co., Ltd. as an RPI). And the Samsung Petitioners likewise exhibited the same delay in filing their petitions on these same three patents. Ex. 2023 at 75-78; Ex. 2024 at 75-78; Ex. 2025 at 45-48; Ex. 2026 at 73-76; (four petitions from Samsung on the same three other patents challenged by the Carriers, all filed December 18, 2023, one day before the statutory deadline).

In addition, in the Carrier Litigation, Patent Owner served its preliminary infringement contentions on five of the RPIs to this proceeding *over seven months before* the Petition was filed (Exs. 2010-2012), and the Carriers served their *preliminary invalidity contentions over five months before* the Petition was filed (Ex. 2013). The Board has found lack of diligence in similar circumstances. For

example, in *Ericsson Inc. v. Collision Communications, Inc.*, the Board “d[id] not agree with Petitioner’s view that filing the Petition less than *nine months* after receiving infringement contentions constitutes filing the Petition promptly.” IPR2022-01233, Paper 12 at 15 (PTAB Jan. 19, 2023) (emphasis added, quotation marks omitted). The Board denied institution, and also noted that, “Petitioner waited almost a year from inception of the [parallel] district court proceeding” to file the Petition. *Id.* Here, although the Samsung Petitioners are not parties to the Carrier Litigation, Petitioners’ co-RPIs had both infringement and invalidity contentions many months before the Petition was filed, and it is undisputed that Samsung products are at issue in the Carrier Litigation. The Samsung Petitioners offer no explanation for their delay in challenging the ’888 Patent in this forum once they knew their products were accused of infringement in litigation involving their co-RPIs.

Because there has been substantial investment in the parallel proceedings by both the parties and the district court, and Petitioners unduly delayed in filing the Petition, filing only one day before the statutory deadline, Factor 3 weighs heavily against institution.

D. *Fintiv* Factor 4: There is perfect overlap between this IPR and both district court proceedings.

This factor looks at “whether all or some of the claims challenged in the petition are also at issue in district court” and whether the “petition includes the same

or substantially the same claims, grounds, arguments, and evidence” as the parallel district court case. *Fintiv I* at 12-13. Here, there is complete overlap of the challenged and asserted claims, and the same art applied in the Petition is also relied upon at the district court.

First, the Petition challenges the same claims that are currently asserted in the Samsung Litigation. *Compare* Pet. at 3 (challenging claims 9, 10, 12, 20, 21, and 23) *with* Ex. 2027 at 1; Ex. 2028 at 2 (identifying asserted claims 9, 10, 12, 20, 21, and 23). The same is true of the Carrier Litigation. *Compare* Ex. 2002 at 6 (challenging claims 9, 10, 12, 20, 21, and 23) *with* Ex. 2010 at 1; Ex. 2011 at 1; Ex. 2012 at 1; Ex. 2013 at 2 (identifying asserted claims 9, 10, 12, 20, 21, and 23); *see also Vector Flow* at 22 (denying institution in part because the same claims were challenged at the PTAB and asserted in litigation); *EClinicalWorks* at 12 (same).

Second, the sole ground in the Petition is based on a combination of Chitrapu and TS 36.300. *See* Pet. at 6 (“US 2006/0111149 (‘Chitrapu’) in combination with 3GPP Technical Specification 36.300 v 10.3.0 (TS 36.300)” for claims 9, 10, 12, 20, 21, and 23). Petitioners rely on this same combination as an alleged obviousness combination in the Samsung Litigation. Ex. 2028 at 42 (“3GPP Standards in combination with U.S. Patent Publication No. 2006/0111149A1 (‘Chitrapu-149’)”); *id.* (listing “3GPP TS 36.300 v10.3.0” as part of the referenced “3GPP Standards”). There is thus perfect overlap in the prior art invalidity theories presented to the

PTAB and to the district court in the Samsung Litigation. There is also the same perfect overlap in the Carrier Litigation. *Compare* Ex. 2002 at 6 (Chitrapu (U.S. Patent Publication No. 2006/0111149A1) in combination with TS 36.300 v 10.3.0 for claims 9, 10, 12, 20, 21, and 23) *with* Ex. 2013 at 2, 17 (“3GPP Standards” including “TS 36.300 v 10.3.0” “in combination with U.S. Patent Publication No. 2006/0111149A1(‘Chitrapu-149’)” for the same claims).

Further, the Samsung Petitioners fail to offer any stipulation concerning what prior art they will rely upon in the district court litigation, let alone a *Sotera* stipulation. It is hard to imagine how this proceeding could be an efficient option to the district court litigation when Petitioners intend to assert the ***exact same combination*** in the district court, as well as the same art in other purported invalidity grounds, even if this Petition is instituted. *See, e.g., Code200, UAB v. Luminati Networks Ltd.*, IPR2020-01506, Paper 10 at 11-12 (PTAB Feb. 16, 2021) (denying institution, and finding that Factor 4 weighs in favor of doing so where “the overlap in issues between the two proceedings is substantial” and there were not “any stipulations filed or actions taken by Petitioner to reduce overlap between the proceedings”); *Apcon, Inc. v. Gigamon Inc.*, IPR2020-01579, Paper 9 at 26 (PTAB Mar. 16, 2021) (denying institution where “the art appears substantially the same, and no stipulation has been filed by Petitioner agreeing not to assert the same art”).

The Carrier’s petition in IPR2024-00137 likewise does not provide an

efficient alternative to litigation. The Carriers’ limited *Sand Revolution* stipulation that, “if instituted, Petitioners stipulate that they will not pursue invalidity against the asserted claims in the district court using the specific combination of prior art references set forth in the grounds presented in this Petition” (Ex. 2002 at 62) does not alleviate inefficiency concerns. *See* Interim Discretionary Denial Memo (Ex. 1013) at 3; *see also, e.g., 3Shape Trios A/S v. Densys Ltd.*, IPR2021-00236, Paper 12 at 11-12 (PTAB May 20, 2021) (denying institution, rejecting a similar stipulation because it “is too narrow to clarify that it will not pursue any ground that could have reasonably been raised in an IPR,” and noting that “a broader stipulation might better address concerns regarding duplicative efforts and potentially conflicting decisions”). With this *Sand Revolution* stipulation, as opposed to a *Sotera* stipulation, the Carriers are agreeing to far less than what would be the natural consequences of the case proceeding to a final written decision. *See, e.g., Cal. Inst. of Tech. v. Broadcom Ltd.*, 25 F.4th 976, 991 (Fed. Cir. 2022) (“overrul[ing] *Shaw* and clarify[ing] that estoppel applies not just to claims and grounds asserted in the petition and instituted for consideration by the Board, but to all grounds not stated in the petition but which reasonably could have been asserted against the claims included in the petition”).

And this stipulation is especially meaningless, where the Carriers intend to rely on (1) the issued version (U.S. Patent No. 7,657,288) of the Chitrapu application

on which they rely in the Petition (U.S. Patent No. 2006/0111149) (Ex. 2013 at 9, 15; Ex. 2002 at 6); and (2) other versions of the TS 36.300 3GPP document (Ex. 2013 at 11, 15; Ex. 2002 at 6). *See Vector Flow* at 22 (finding a substantial overlap in grounds where, in the parallel litigation, petitioner relied on the issued version of the application it relied on in the IPR as well as other references with similar disclosures). And similar to the Samsung Litigation, half of the invalidity contentions' purported obviousness grounds in the Carrier Litigation utilize the Chitrapu and/or the TS 36.300 references. *See* Ex. 2013 at 17-19 (12 out of 24 purported obviousness grounds containing Chitrapu, TS 36.300, or both)); *see also NXP* at 12 (finding the fact that the same art was asserted in both proceedings weighed in favor of discretionary denial).

Thus, even if the Samsung Petitioners would offer a similar stipulation, that stipulation would fail to resolve efficiency concerns for the same reasons discussed above in relation to the Carriers' stipulation. Indeed, of the 27 explicit exemplary combinations in the Samsung Petitioners' invalidity contentions, 13 of them involve one or both of the references relied upon in the Petition's sole ground. *See* Ex. 2028 at 39-44. The invalidity contentions also identify both Chitrapu and TS 36.300 as allegedly anticipatory references. *Id.* at 33-35. And the Samsung Petitioners are likewise relying on the issued version of Chitrapu (*id.* at 14 ("U.S. Patent No. 7,657,288 ('Chitrapu')")) and other versions of the TS 36.300 v 10.3.0 standard (*id.*

at 20, 21 (“3GPP TS 36.300 v10.4.0”); *id.* at 21 (“3GPP TS 36.300 v10.2.0”); *id.* at 23 (“3GPP TS 36.300 v12.1.0”); *id.* at 23 (“3GPP TS 36.300 v12.2.0”).

In short, the Petition challenges the same claims asserted in the parallel litigation, and uses the same art as relied upon in the district court. The Samsung Petitioners also fail to offer any stipulation limiting the prior art or invalidity grounds on which they will rely in district court litigation. This raises substantial “concerns of inefficiency and the possibility of conflicting decisions,” weighing against institution. *See Fintiv I* at 12.

E. *Fintiv* Factor 5: Petitioners and their co-RPIs are the defendants in the district court litigations.

Petitioners are the defendants in the Samsung Litigation, and Petitioners’ co-RPIs are defendants in the Carrier Litigation. “Because the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary denial.” *Fintiv II* at 15.

F. *Fintiv* Factor 6: Other circumstances weigh strongly against institution, including the weakness of the Petition and Petitioners’ delay.

This factor looks at “other circumstances that impact the Board’s exercise of discretion, including the merits.” *Fintiv I* at 9. This factor weighs heavily against institution for two reasons. First, contrary to Petitioners’ assertion, the merits of the Petition suffer from significant weaknesses and gaps in proof, as discussed above. The Petition fails to show that its sole proposed obviousness combination discloses

or renders obvious any of the challenged claims. *See supra* § V. Thus, the Petition fails to present a “compelling unpatentability challenge” (*see* Interim Discretionary Denial Memo (Ex. 1013) at 2-5) and fails to establish a reasonable likelihood of success. Second, there is evidence that Petitioners unduly delayed in filing the Petition, filing just *one day* before the statutory deadline, as discussed above for Factor 3, and Petitioners offer no explanation for their delay. *See supra* § VI.C.

* * *

Each of the six *Fintiv* factors weigh in favor of the Board exercising its discretion to deny institution.

VII. CONCLUSION

Patent Owner respectfully requests that the Board deny institution for either or both of two independent reasons. First, each of the Petition’s grounds fails on the merits. Second, the Board should exercise its discretion under Section 314(a) to deny institution because of the status of the co-pending lawsuit in light of Petitioners’ delay in filing the Petition.

Date: March 28, 2024

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CERTIFICATION REGARDING WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), Patent Owner certifies that there are 10,031 words in the paper excluding the portions exempted under 37 C.F.R. §42.24(a)(1).

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document was served on March 28, 2024, by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioners:

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