UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD., and
SAMSUNG ELECTRONICS, AMERICA, INC.,
Petitioners,

v.

FOUR BATONS WIRELESS, LLC,
Patent Owner.

Case IPR2025-00493
Patent 7,502,348

PATENT OWNER'S PRELIMINARY RESPONSE UNDER
37 C.F.R. § 42.107 TO PETITION FOR INTER PARTES REVIEW

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EXHIBIT LIST

Exhibit	Description
EX2001	*Reserved*
EX2002	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, Complaint for Patent Infringement, Case No. 2:24-cv-284, Dkt. No. 1 (E.D. Tex. Filed April 26, 2024)
EX2003	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, Defendants Samsung Electronics Co., Ltd.'s and Samsung Electronics America, Inc.'s Motion To Stay Proceedings Pending *Inter Partes* Review, Case No. 2:24-cv-284, Dkt. No. 62 (E.D. Tex. Filed Feb. 7, 2025)
EX2004	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, Plaintiff's Opposition to Samsung's Motion To Stay Proceedings Pending *Inter Partes* Review, Case No. 2:24-cv-284, Dkt. No. 63 (E.D. Tex. Filed Feb. 21, 2025)
EX2005	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, First Amended Docket Control Order, Case No. 2:24-cv-284, Dkt. No. 69 (E.D. Tex. Filed April 30, 2025)
EX2006	United States District Courts — National Judicial Caseload Profile, available from https://www.uscourts.gov/sites/default/files/2025-02/fcms_na_distprofile1231.2024.pdf (accessed May 12, 2025)
EX2007	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, Plaintiff's Infringement Contentions, Case No. 2:24-cv-284 (E.D. Tex. served July 25, 2024)
EX2008	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, Defendants' Invalidity Contentions, Case No. 2:24-cv-284 (E.D. Tex. served Nov. 18, 2024)
EX2009	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, Samsung's Preliminary Claim Constructions And Extrinsic Evidence Pursuant To Patent Local Rule 4-2, Case No. 2:24-cv-284 (E.D. Tex. served May 5, 2025)
EX2010	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, Plaintiff Four Batons Wireless, LLC's Initial Proposed Constructions, Case No. 2:24-cv-284 (E.D. Tex. served May 5, 2025)
EX2011	Correspondence between Samsung and Four Batons

EX2012	*Four Batons Wireless, LLC v. Samsung Electronics Co., Ltd. et al.*, The Parties' P.R. 4-3 Joint Claim Construction and Pre-Hearing Statement, Case No. 2:24-cv-284 (E.D. Tex. filed May 30, 2025)
EX2013	Definition for "proactive", The American Century Dictionary, Oxford University Press, 1995

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I. Introduction

Patent Owner Four Batons Wireless, LLC ("Four Batons" or "Patent Owner") respectfully requests that the Board deny Samsung Electronics Co., Ltd. and Samsung Electronics, America, Inc.'s (collectively, "Samsung" or "Petitioner") Petition to institute *inter partes* review of U.S. Patent No. 7,502,348 ("the '348 Patent") because Samsung has not shown a reasonable likelihood of prevailing on its challenge to any of claims 1-8, 10, 11, and 13-21 (the "Challenged Claims").

In the absence of any compelling prior art, Petitioner has asserted grounds that (1) fail to address the '348 Patent specification's guidance on the interpretation of terms (at best relying on implicit constructions instead), (2) fail to address certain claim elements at all, and (3) overwhelmingly rely on Petitioner's declarant in an attempt to conceal the glaring deficiencies in the grounds. As discussed below, the Petition fails to present a reasonable likelihood of success on any ground and should be denied.

First, Petitioner fails to address the '348 Patent's guidance on what it means to connect to a target network as recited in Claim 1, and as a result even the analysis from Petitioner's declarant confirms that the Petition grounds fail to teach or render obvious "temporarily connect[ing] to at least one target network." EX1001 ('348 Patent) Claim 1 at 16:28-29.

Second, the Petition fails to address all elements of Claim 20, including "a silence predictor component configured to predict the actionable silence period **of an application**." *Id*. Claim 20 at 18:22-23 (emphasis added). Instead, Petitioner at best purports to have identified "an actionable silent period of [a] terminal." *See* Pet. at 47.

Third, the Petition grounds ignore the '348 Patent specification and the plain language of the claims in asserting that its grounds teach or render obvious a **mobile device proactively** performing a silent **proactive** handoff. As discussed below, in Hsu the mobile device is instructed to handoff to a WLAN by the cellular network to which it is connected, and Petitioner has not shown how its grounds based on Hsu demonstrate the mobile device acting proactively.

II. Background

A. The '348 Patent Invention

The '348 Patent is titled "Silent Proactive Handoff." EX1001 ('348 Patent) at (54). The Patent "relates to wireless networking and, in some preferred embodiments, to methods of improving handoff of a mobile device between neighboring networks and/or the like." *Id.* at 1:6-9. "In the context of, for example, a mobile device with an IP-based wireless network interface (such as, e.g., an IEEE 802.11 or an 802.16 interface), the mobile device needs to perform roaming or handoffs when it moves from one network into another network. With existing

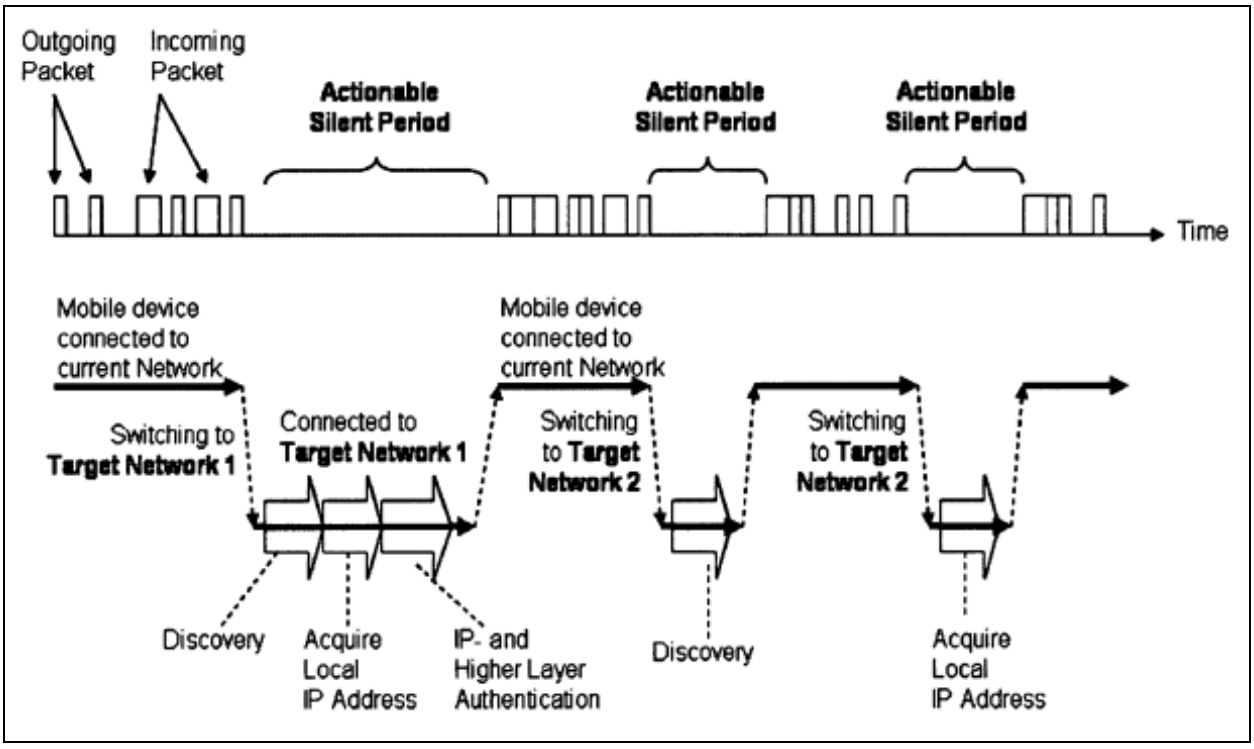
handoff methodologies, handoff is typically accomplished by performing [a] sequence of protocol layer specific handoffs." *Id*. at 4:15-22. The '348 Patent discusses these layers in the context of the 7 layer OSI model, with Layers 1 (physical layer) and 2 (data-link layer) being the lower layers, and layers higher than Layer 2—such as Layer 3 (the network or IP Layer) through Layer 7 (the application layer) "referred to as the higher-layers." *Id*. at 1:55-2:22.

The '348 Patent notes that with existing methodologies the handoff occurred at the lowest (physical) layer first, followed by layer-2, then layer-3 (the IP-layer), and then the application layer. *Id*. at 4:15-61. The '348 Patent inventors recognized that this full handoff methodology was particularly inefficient in certain situations, such as "a geographical region where there are many wireless local area networks (WLANs) such as in cities, inside building complexes or residential homes, or in other public places where multiple wireless LANs exist," because even though the "mobile device may receive strong radio signals from multiple radio networks at the same time" it "may not be authorized to use some of these radio networks." *Id*. at 4:62-5:6. "Accordingly, with existing systems, a handoff can take a long time that can be intolerable and can delay sensitive applications such as, as some examples, live voice and/or video applications." *Id*. at 5:18-21.

To avoid such delays, the '348 Patent teaches techniques "for performing silent proactive handoff of a mobile device to a target network while the mobile

device is using a current network." *Id*. at 5:41-44. The Patent teaches the use of "silent periods" to perform these handoffs. *Id*. at 5:51-53. The Patent teaches a preferred "silent period" embodiment in which the IP or higher layers (such as the application layer) have substantially no traffic to send or receive. *Id*. at 8:2-8:13. The '348 Patent recognizes that "[i]n some instances, the mobile device may send traffic at protocol layers below the IP layer during a silent period." *Id*. at 8:5-7.

Rather than attempt a handoff to a new network that the mobile device is unlikely to successfully use (thus disrupting operation of the application or the transfer of data), the '348 Patent utilizes these silent periods to perform handoff actions to evaluate whether a handoff is possible without disruption, and to reduce delays (and the chance of disruption) when the mobile device needs to complete the handoff. *See id.* at 12:56-60, Abstract. An example of this is shown in Figure 3:



Id. Figure 3.

"As shown in FIG. 3, if during one [Actionable Silent Period ("ASP")], the mobile device was only able to perform one or a subset of the handoff actions, the mobile device can use subsequent ASPs to perform the remaining handoff actions needed for the target network. In this manner, multiple ASPs can be utilized that are not concurrent in time in some embodiments." *Id*. at 12:20-26. "[I]f the mobile device becomes ready for an actual handoff into the target network (such as, e.g., when the radio signal strength of the old network has degraded below a threshold), the mobile device can proceed to perform the rest of the handoff steps needed to finish the actual handoff." *Id*. at 12:34-38.

B. Petitioner's References

1. Hsu [EX1005]

Hsu is a U.S Patent Application Publication titled "Wireless Local Access Network System Detection and Selection." EX1005 (Hsu) at (54). Hsu explains that at the time of its 2003 filing, Wireless Local Access Networks (WLANs) were being "considered by many cellular carriers to alleviate loading of a cellular system, so as to increase capacity." *Id*. [0007].

Corresponding to that purpose, Hsu teaches that "if the [mobile] system 50 is currently communicating via the cellular network, such as a cdma2000 network, the system 50 is **instructed** to continue such communication but to continue **to try to detect the availability of WLAN**." *Id.* [0027] (emphasis added). Thus, Hsu teaches the cellular network directing the mobile device to try to detect and connect to available WLANs in order to try to offload that mobile device's data onto the WLAN rather than the cellular network which had limited capacity. This is a stark contrast to the '348 Patent, in which it is the mobile device that is proactively trying to manage handoffs in a manner that benefits the mobile device (rather than being instructed to do so by a cellular network in a manner that benefits the cellular network).

Notably, Hsu does not envision any sort of procedure where the mobile station temporarily connects to a target network during a silent period to perform handoff

actions. At best, Hsu refers to scanning various frequencies to determine if a nearby WLAN network exists. However, scanning for WLAN networks that may or may not exist does not mean that any connection to a WLAN has actually occurred.

2. Hutchison [EX1006]

Hutchison is a U.S. Patent Application Publication titled "Timer-Based Sleep for Terminals in Wireless Communication Systems." EX1006 (Hutchison) at (54). Hutchison relates to "[t]echniques for performing timer-based sleep to extend sleep time and thus battery life for a terminal in a wireless communication system." *Id*. at Abstract. It teaches that "[a] terminal in a typical wireless communication system may only be active sporadically." *Id*. [0005]. "While the terminal is in the idle state, it continues to consume power to sustain circuitry necessary to monitor the signals from the system." *Id*. [0006]. However, "[i]n the sleep state, the terminal powers down as much circuitry as possible to conserve power." *Id*. [0007], [0031], [0070]. Thus, to maximize power conservation, Hutchison teaches techniques "for performing timer-based sleep to extend sleep time and thus battery life for terminals in wireless communication systems." *Id*. [0039].

Hutchison's approach to conserving power is to shut down circuitry altogether—an approach that does not distinguish between different types of traffic at different OSI levels (such as application layer vs lower layers). *Id*. [0031]. If the circuitry is off, then the mobile device can neither send nor receive any type of traffic

that the relevant circuit might handle. *Id*. ("In Sleep state 226, the terminal does not monitor the Control Channel and the access point does not transmit unicast packets to it. The terminal may shut down as much circuitry as possible to conserve power while in Sleep state.").

III. Legal Standards

An IPR should not be instituted unless Petitioner has shown a likelihood of success on the invalidity grounds *presented in the petition*. *See In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) ("[T]he Board must base its decision on arguments that were advanced by a party, and to which the opposing party was given a chance to respond.").

"In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech.*, Inc., 815 F.3d 1356, 1363 (Fed. Cir. 2016) (petitions must identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim"); 35 U.S.C. § 312(a)(3). This burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

"To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of

obviousness." *In re Magnum Oil Tools Int'l*, 829 F.3d at 1380. The obviousness inquiry requires considering whether one of skill in the art "would have been motivated to combine the prior art to achieve the claimed invention." *In re NuVasive, Inc.*, 842 F.3d 1376, 1381 (Fed. Cir. 2016) (quoting *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016)). "[T]he factual inquiry whether to combine references must be thorough and searching…" *Id.*

IV. Level of Ordinary Skill in the Art

Petitioner asserts a POSITA "would have had a bachelor's degree in electrical engineering, computer science, or a similar field and two years of experience in the design of wireless communication technology." Pet. at 7. For purposes of this Preliminary Response,[1] Patent Owner has applied the same definition, because even under Petitioner's proposed POSITA definition the Petition fails to present a reasonable likelihood of invalidating any Challenged Claim.

V. Claim Construction

Claims are construed according to *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). "Any prior claim construction

[1] Patent Owner reserves the right to propose its own definition of a POSITA if the Petition is instituted.

determination concerning a term of the claim in a civil action…will be considered." *Id.*

Despite having the burden to propose how each "challenged claim is to be construed" in the Petition itself, Petitioner did not propose any express constructions. *See* 37 CFR § 42.104(b)(3); Pet. at 7-8. However, in the District Court litigation Petitioner is asserting that multiple claims are indefinite or require construction, as shown in Exhibit 2012. EX2012 (Joint CC Statement) at PDF page 14-15. Notably, Petitioner did not explain "why [its] inconsistent positions are warranted"—a fact that further supports denial of the Petition here. *See Cambridge Mobile Telematics, Inc., Petitioner, v. Sfara, Inc.,* IPR2024-00952, Paper 12 at 7-9 (P.T.A.B. Dec. 13, 2024) (informative).

Patent Owner addresses the interpretation of certain terms in light of the '348 Patent specification, including "connecting to a target network" below in section VI.A and "proactive" below in section VI.C. Beyond that, Patent Owner does not believe it is necessary to construe any additional claims to dispose of Petitioner's challenge to the '348 Patent.

VI. Argument

Petitioner asserts for Ground 1 that "Claims 1-8 and 13-15 are rendered obvious by *Hsu* under 35 U.S.C. § 103." Pet. at 2. Petitioner asserts for Ground 2 that "Claims 10, 11, 20, and 21 are rendered obvious by Hsu in view of Hutchison

under 35 U.S.C. § 103." Pet. at 2. All other grounds address only dependent claims. These challenges to the dependent claims fail at least because Petitioner's challenges to the independent claims fail to present a reasonable likelihood of success on the merits. Because the challenges to the limitations of the independent claims are deficient, it follows that the challenges to the dependent claims also are deficient for failing to establish that the incorporated portions of the independent claims have been met.

A. [Claim 1] Ground 1 Fails to Present a Reasonable Likelihood of Teaching or Rendering Obvious "Temporarily Connect[ing] To At Least One Target Network To Proactively Perform At Least One Handoff Action"

Ground 1 fails to present a reasonable likelihood of success of rendering unpatentable any Challenged Claim, at least because it fails to teach or render obvious the independent Claim 1 limitation "having the mobile device use at least one silent period of an application to **temporarily connect to at least one target network to proactively perform at least one handoff action** for potential later handoff to the target network." EX1001 ('348 Patent) Claim 1 at 16:26-30 (emphasis added).

The '348 Patent teaches that the mobile device connects to a target network to perform handoff actions. Examples of this can be seen in Figures 1 and 3:

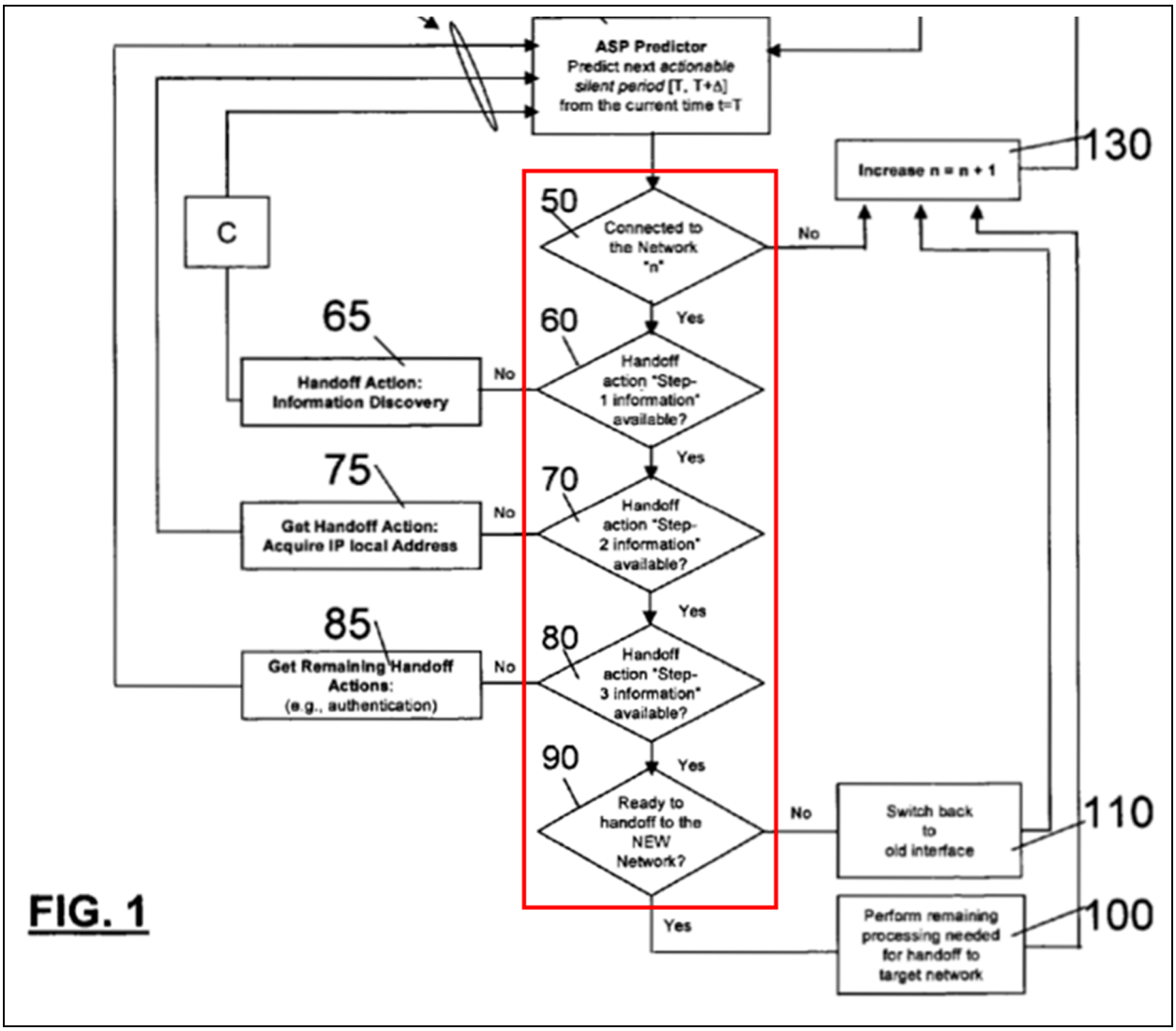
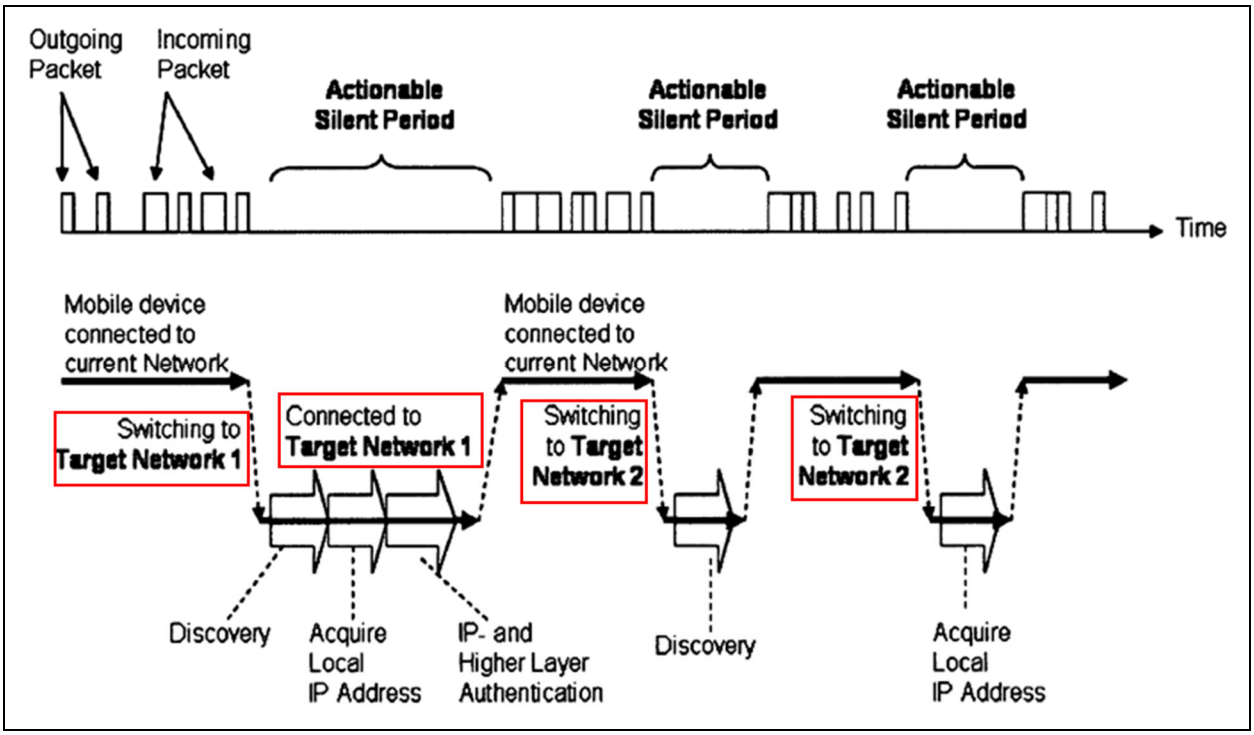


FIG. 1

Id. Figure 1 (cropped and annotated); *see also id.* at 10:42-12:10.



EX1001 ('348 Patent) Figure 3 (annotated); *see also id.* at 12:17-53.

The '348 Patent further explains what it means to connect to a target network:

> In this disclosure, the terminology "connected to a target network" refers to the establishment of the necessary connection or association with a target network to the extent that the mobile can receive IP-layer and/or high layer advertisement messages. Once connected to a target network, the mobile can perform a range of actions during the silent period that need to be done during an actual handoff. In some embodiments,

EX1001 ('348 Patent) at 8:42-48. Thus, "connect[ing] to at least one target network" as claimed would entail establishing a connection which can "receive IP-layer and/or higher layer advertisement messages."

Petitioner relies on Hsu as teaching the "connect to at least one target network to proactively perform at least one handoff action" limitation, splitting its analysis of the limitation across two different sections. Pet. at 12-17. Demonstrating its pattern of relying on its declarant rather than what the references actually teach, Petitioner asserts that "[a] POSITA would also have understood *Hsu*'s mobile station tuning away from the cellular network to scan for WLAN coverage to comprise the mobile station temporarily connecting to the WLAN." Pet. at 13. However, that assertion is unsupported by Hsu and does not comport with the scope of "connect[ing] to at least one target network" in light of the '348 Patent specification.

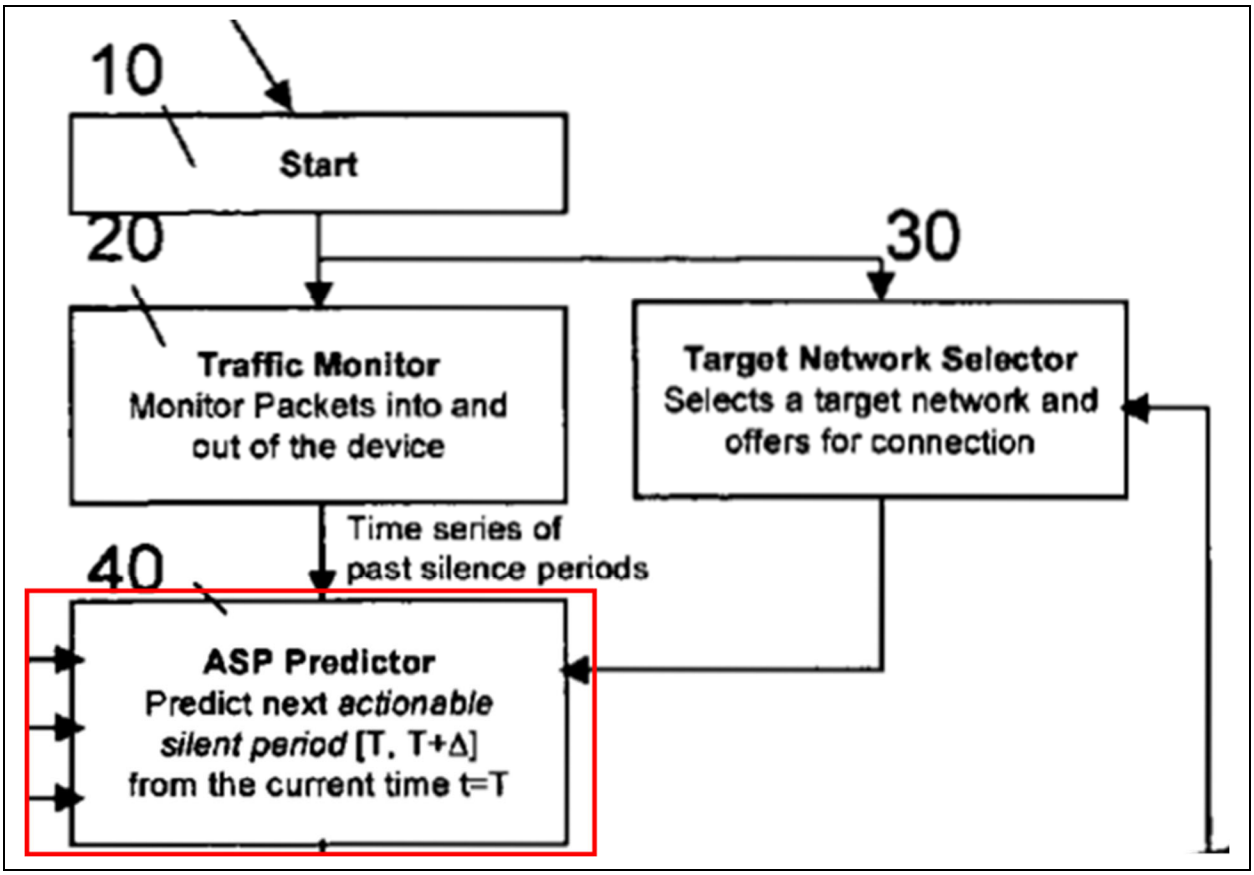
Hsu teaches that scanning is used to detect whether WLAN coverage is even available prior to trying to connect to a WLAN. *See e.g.,* EX1005 (Hsu) [0061] ("Once the MS monitors for cellular page indicator, **the MS then is able to tune to the WLAN frequencies and use passive or active scanning to detect WLAN coverage**." (emphasis added)). Under Petitioner's flawed reasoning that Hsu's scans are temporary connections, a mobile device that scans for WLAN coverage and finds that no WLAN is present has somehow made a temporary connection to a WLAN network that does not exist. Simply scanning to see if there are any networks available as taught by Hsu could not constitute connecting to a network as alleged in the Petition.

Petitioner's flawed interpretation of Hsu, standing alone, is enough to demonstrate its failure to show that Hsu meets this claim limitation. Even setting that aside, Petitioner's decision not to address the '348 Patent specification's teachings regarding "connect[ing] to a target network" despite being aware of them is another reason to deny the Petition. *See, e.g.,* EX1002 ¶105 (Petitioner's declarant stating that Petitioner asked him to consider the cited portion from the specification in his analysis); 37 CFR § 42.104 (requiring the Petition to identify out "[h]ow the challenged claim is to be construed" and [h]ow the **construed** claim is unpatentable" (emphasis added)). This failure speaks volumes—Petitioner did not directly address those elements because it knows that its Ground 1 theories cannot possibly succeed under the proper interpretation. Petitioner's declarant asserts that "a person of ordinary skill in the art would have understood that scanning for WLAN coverage occurs at the medium access control (MAC) layer—*i.e.*, layer-2." EX1002 ¶125. IP layer messages are received at a higher layer than the level 2 data link layer, and therefore the scanning that Petitioner relies on could not teach or render obvious the claimed temporary connection (which involves the ability to "receive IP-layer and/or higher layer advertisement messages."). *See* EX1001 ('348 Patent) at 1:35-2:22 (noting IP-layer is Layer-3).

B. [Claim 20] Ground 2 Fails to Present a Reasonable Likelihood of Teaching or Rendering Obvious "Predict[ing] the Actionable Silence Period of an Application"

Ground 2 fails to present a reasonable likelihood of success of invalidating any Challenged Claim, at least because it fails to teach or render obvious "a silence predictor component configured to predict the actionable silence period **of an application**" as recited in independent Claim 20. EX1001 ('348 Patent) Claim 20 at 18:22-23 (emphasis added).

The '348 Patent teaches the concept of actionable silence periods that are long enough for performing one or more handoff actions. *Id.* at 9:8-10. The '348 Patent discloses an "Actionable Silence Predictor" which can predict the next actionable silent period:



Id. Figure 1 (cropped and annotated); *see also id.* at 9:55-10:28 (describing "an ASP Predictor that uses the output from the Traffic Monitor and a prediction model to detect the next ASP and to predict its length").

As discussed above in section II.A (incorporated here by reference), the '348 Patent teaches embodiments in which, during a silent period, there is substantially no traffic at the IP or higher protocol layers (such as the application layer). Correspondingly, '348 Patent Claim 20 claims "predict[ing] the actionable silence period **of an application**." *Id*. Claim 20 at 18:22-23 (emphasis added). In the District Court Litigation, Petitioner proposed a similar interpretation, asserting that "silent period **of an application**" meant "an interval (time period) during which

applications running on the mobile device do not have packets to send or receive." EX2012 (Joint CC Statement) at PDF page 15 (emphasis added).

Petitioner relies on Hutchison for this limitation, asserting that "a POSITA would have understood Hutchison disclosing determining a final timer value indicative of the duration of a next sleep by the terminal to comprise predicting an actionable silent period of the terminal." Pet. at 47. It is telling that Petitioner referred to it as an "actionable silent period **of the terminal**," which is not what Claim 20 recites. Claim 20 requires not just an "actionable silent period," but an "actionable silent period **of an application**." EX1001 ('348 Patent) Claim 20 at 18:22-23 (emphasis added). Hutchison does not distinguish different types of network traffic, so even under Petitioner's own interpretation Hutchison (at best) teaches predicting an actionable silent period of the mobile terminal generally, rather than predicting the actionable silence period of an application.

Hutchison deals with "[t]echniques [] for performing timer-based sleep to extend sleep-time and thus battery life for terminals in wireless communication systems." EX1006 (Hutchison) [0012]. Hutchison does not distinguish different types of network traffic, and is instead merely concerned with traffic to the mobile terminal as a whole. This is because Hutchison is operating at the hardware level, and its approach to extending battery life involves "power[ing] down as much circuitry as possible to conserve power." *Id.* [0007], [0031], [0070]. Given that

Hutchison teaches turning off the wireless communication circuitry altogether, it would have no reason or ability to predict the actionable silent period **of an application**—if the circuitry is off, then all traffic at all layers would be affected equally. Thus, even under Petitioner's interpretation, Hutchison (at best) teaches predicting an actionable silent period of the **entire mobile terminal**, rather than predicting the actionable silence period **of an application**.

C. [Claims 1 and 20] All Grounds Fail to Present a Reasonable Likelihood of Teaching or Rendering Obvious the Claimed "Silent Proactive Handoff"

The '348 Patent is directed to a mobile device determining whether to perform a "silent proactive handoff" from a current network to a target network. *See, e.g.,* EX1001 ('348 Patent) at Title, Abstract, 5:32-50, 14:31-37, 14:44-46. The '348 Patent teaches several advantages that can be achieved by having the mobile device make the determination whether to proactively perform such a handoff, including avoiding interruptions to applications when a network switch occurs and avoiding connections to a target network that might otherwise fail. *Id*. at 12:11-16, 12:54-13:4. Correspondingly, limitations related to the mobile device making those "proactive" handoff actions are found in every Challenged Claim, as emphasized in independent Claims 1 and 20 below:

> 1. A method for performing **silent proactive handoff of a mobile device** to a target network while the mobile device is using a current network, comprising:

while the mobile device is using the current network to transport application traffic and the current network satisfies the mobile device's requirements, **having the mobile device** use at least one silent period of an application to temporarily connect to at least one target network to **proactively** perform at least one handoff action for potential later handoff to the target network.

Id. Claim 1 at 16:21-30 (emphasis added).

20. A **mobile device having silent proactive handoff capability**, comprising:

a) a traffic monitor component configured to monitor time periods between packets transmitted to or from the mobile device over a current access network;

b) a target network selector component configured to select a target network to which the mobile device may potentially switch to when an actionable silence period is detected;

c) a silence predictor component configured to predict the actionable silence period of an application; and

d) a **silent handoff controller configured to control a silent proactive handoff** to a target network during the actionable silent period.

Id. Claim 20 at 18:13-26 (emphasis added).

Petitioner relies on Hsu as teaching each of these limitations. *See* Pet. at 8-10 (1[pre]), 14-17 (1[c]), 43-44 (20[pre]), 47-49 (20[d]). However, Petitioner fails to address the plain language of the claims, which require the **mobile device** to act **proactively** regarding the claimed silent handoff. Petitioner's Grounds fail, at least because Petitioner has failed to show that the mobile device is making the

determination to perform the actions related to Hsu's purported handoff, rather than the actions being performed at the direction of the cellular network.

The '348 Patent teaches that under its silent proactive handoff approach, it is the mobile device that makes the determinations regarding the handoffs. *See, e.g.,* EX1001 at 6:3-20, 6:45-54, 9:11-17, 13:5-26. The mobile device itself makes those determinations **proactively**, rather than simply responding to the network to which it is already connected. *See, e.g., id*. at 15:37-44 (noting the **mobile station** can make the determination to perform handoff actions even though "the **mobile station** is still satisfied by the network"). This is consistent with the plain meaning of "proactive." *See, e.g.,* EX2013 (American Century Dictionary) at 458 (defining "proactive" as "taking the initiative").

Because the '348 Patent teaches that the mobile device itself makes its handoff determinations proactively (rather than being directed to do so by the network it is currently attached to), the mobile device can make the determination not to make the handoff when it determines that the handoff would not provide benefits to the mobile device. *See, e.g.,* EX1001 ('348 Patent) at 12:61-13:14 (giving the example of not following through with the handoff when the mobile device determines it will leave the target network's coverage area too quickly to provide any benefit), Abstract ("[W]ith such a silent proactive handoff approach, e.g., if handoff actions to a target

network fail during silent periods, there can still be essentially no impact on the applications.").

On the other hand, Hsu teaches that the cellular network directs the mobile device to try to connect to other networks. As Hsu explains, at the time of its filing, WLANs were being "considered by many cellular carriers to alleviate loading of a cellular system, so as to increase capacity." EX1005 (Hsu) [0007]. Thus, Hsu was focused on offloading as many mobile devices as feasible from the cellular network to the WLAN to "alleviate loading of [the] cellular system." *Id.*

To that end, Hsu notes that when it comes to network selection, "if the [mobile] system 50 is currently communicating via the cellular network, such as a cdma2000 network, the system 50 **is instructed to** continue such communication but to continue to **try to detect the availability of WLAN**." *Id.* [0027] (emphasis added); *see also id.* [0064], [0073]-[0075]. That is, Hsu teaches the cellular network instructing the mobile device to connect to a different network based on the goal of alleviating the load on the cellular system. Correspondingly, much of the Hsu disclosure is directed towards using the cellular network base station ("BS") to provision the mobile station ("MS") with WLAN information that the cellular network wants the mobile station to use. *See, e.g, id.* [0036]-[0037] (addressing "**provisioning of the WLAN information in the Mobile Station (MS)** and methods implemented at the MS to minimize unnecessary WLAN scanning **based**

on WLAN advertisement from the cellular network via signaling messages." (emphasis added)), [0041]-[0049].

Petitioner never expressly addresses how it is interpreting the term "proactive," but rather lists off activities that it asserts a POSITA "would have understood" satisfy the claim limitation. *See* Pet. at 9 ("a POSITA would have understood Hsu to disclose a 'proactive' handoff technique at least because Hsu discloses performing handoff actions based on factors aside from the connection with the cellular network degrading, and thus requiring handoff."), 14-17, 43-44, 48. Petitioner does this because its Grounds failed to identify how what Hsu teaches would constitute the mobile device being "proactive." As a result, Petitioner's challenge to both independent claims (and therefore all claims) cannot present a reasonable likelihood of success.

D. [Dependent Claims Only] Grounds 3 and 4 Fail to Present a Reasonable Likelihood of Invalidating Any Challenged Claims

Grounds 3 and 4 challenged only dependent claims of the '348 Patent. *See* Pet. at 2 (asserting Grounds 3-4 against Claims 16-19); EX1001 ('348 Patent) at 17:28-18:13. Because Petitioner failed to present a reasonable likelihood of success of invalidating any independent claims, its challenges to the dependent claims necessarily fail as well. Thus, for foregoing reasons, the Petition should be denied.

VII. Conclusion

Patent Owner respectfully requests that the USPTO refuse to institute *inter partes* review for the reasons stated herein.

Dated: June 23, 2025

Respectfully submitted,

By: */ Michael F. Heim /*
Michael F. Heim (Reg. No. 32,702)
Attorney for Patent Owner
Four Batons Wireless, LLC

CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing was served via email to lead and backup counsel of record for Petitioner as follows:

Lead Counsel for Petitioner
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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that this brief complies with the type-volume limitation of 37 C.F.R. § 42.24 because this brief contains 4,458 words.

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