

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

MASSIVELY BROADBAND LLC,
Patent Owner.

IPR2026-00032
Patent 8,515,925

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

MASSIVELY BROADBAND LLC (“Patent Owner”) submits this Patent Owner Preliminary Response pursuant to 37 C.F.R. § 42.107(a) to the *Inter Partes* Review petition (“Petition” or “Pet.”) filed by Samsung Electronics Co., Ltd. and Samsung Electronics America, LLC (“Petitioner”) for all twenty-five (25) claims (the “Challenged Claims”) of Patent 8,515,925 (“’925 Patent”).

The Board should deny institution because the Petition fails—at a threshold level—to identify with particularity the evidence and reasoning supporting unpatentability of any independent claim, as required by 35 U.S.C. § 312(a)(3). Rather than presenting a coherent, claim-anchored theory of unpatentability, the Petition advances fragmented, internally inconsistent, and, in critical respects, unintelligible arguments that do not map the teachings of the cited references to the express language of the challenged claims. The deficiencies of the Petition are most apparent with respect to the three independent claims—claims 1, 8, and 12—each of which fails for distinct but independently sufficient reasons.

First, as to *independent claim 1*, the Petition never articulates a coherent theory for a particular claim limitation—denoted “1[a][i]” in the Petition—which requires “records pertaining to one or more telecommunications carriers which identify infrastructure type and/or location information for one or more locations.” Instead, the Petition advances at least three mutually inconsistent theories—relying

variously on alleged “roaming transitions,” on undisclosed IMSI/MCC/MNC identifiers, and on “quality-of-service maps”—without explaining how any of these theories, individually or collectively, satisfy the express language of the limitation. These theories are unsupported by the cited prior art, depend heavily on expert declaration material and external textbooks, and are never reconciled within the Petition itself. The result is an incoherent presentation that leaves the Board to guess which theory Petitioner actually relies upon—an impermissible burden under § 312(a)(3).

Second, as to *independent claims 8 and 12*, the Petition fails for a fundamental reason: the invalidity analysis in the Petition expressly relies on claim-limitation identifiers that do not exist in the Petition’s own “list of challenged claims.” For example, the Petition refers to “limitation 1[a][iii]” and “limitation 2[a]” in analyzing claims 8 and 12, even though these limitations are not defined, mapped, or analyzed anywhere in the Petition. By grounding its unpatentability theories for claims 8 and 12 in non-existent claim elements, the Petition fails to present an intelligible theory of invalidity at all. Such internal inconsistency is not a matter of form—it reflects a failure to satisfy the statutory requirement that the Petition itself clearly identify where each claim limitation is found in the prior art, and how the cited evidence renders the claim unpatentable.

Because the Petition fails to establish a reasonable likelihood of success as to

any independent claim, it necessarily fails as to all dependent claims, which incorporate the same defective limitations and are not supported by any independent unpatentability analysis. The Board should not—and cannot—reconstruct Petitioner’s theories or supply missing claim mappings to cure these defects.

Accordingly, the Petition does not meet the statutory prerequisites for institution, and *inter partes* review should be denied.

II. STATEMENT OF THE PRECISE RELIEF REQUESTED

Patent Owner requests that the Board deny institution of the Petition with respect to all of the Challenged Claims (claims 1-25) and all asserted grounds.

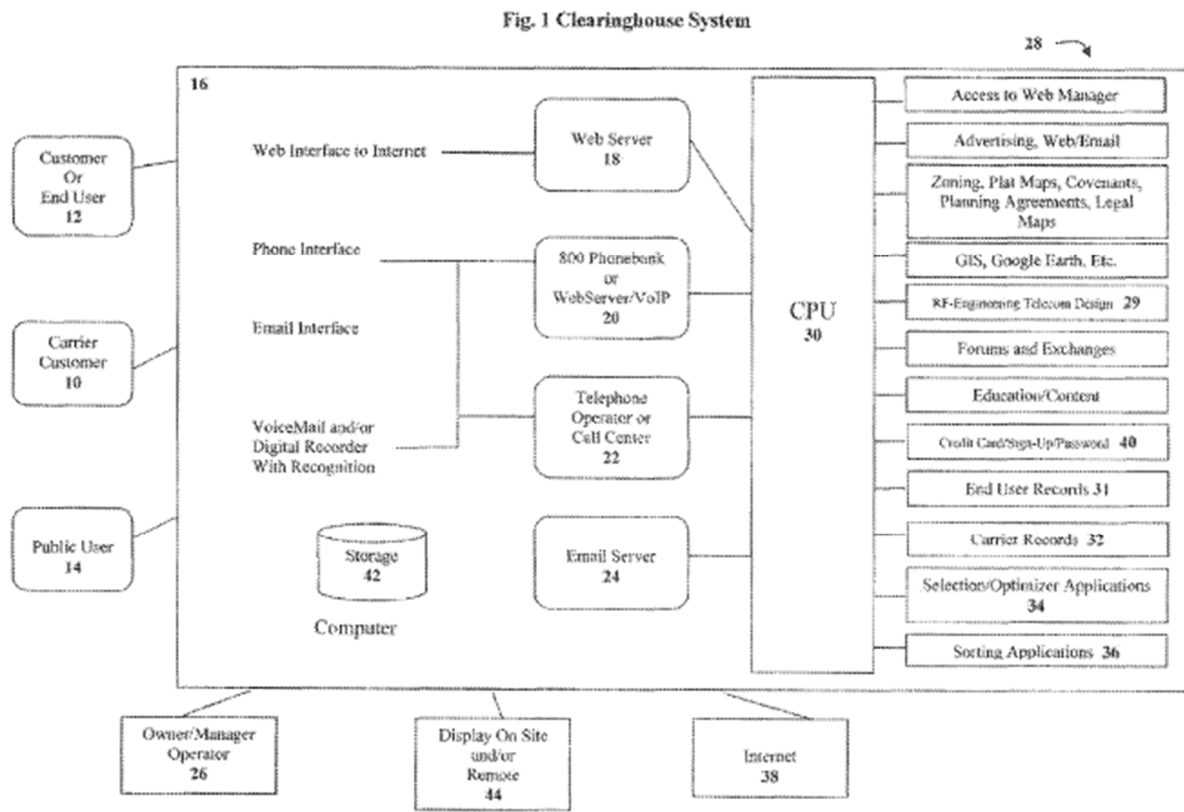
III. BACKGROUND

A. Overview of the ’925 Patent

The ’925 Patent concerns techniques for assessing and enhancing the integrity and performance of communications networks using structured records associated with telecommunications carriers, network infrastructure, and geographic locations. *See e.g.* Ex. 1001, 5:66-6:9, 16:8-18. Specifically, the ’925 Patent discloses and claims a clearinghouse that provides “the ability to monitor...the performance or quality experienced by various end users and to provide rank ordering of various carrier services for end users in, various locations throughout the earth.” *Id.* 6:38-43. According to the ’925 Patent, such monitoring can be performed in real-time and through automatic processes. *Id.*, 6:39-40.

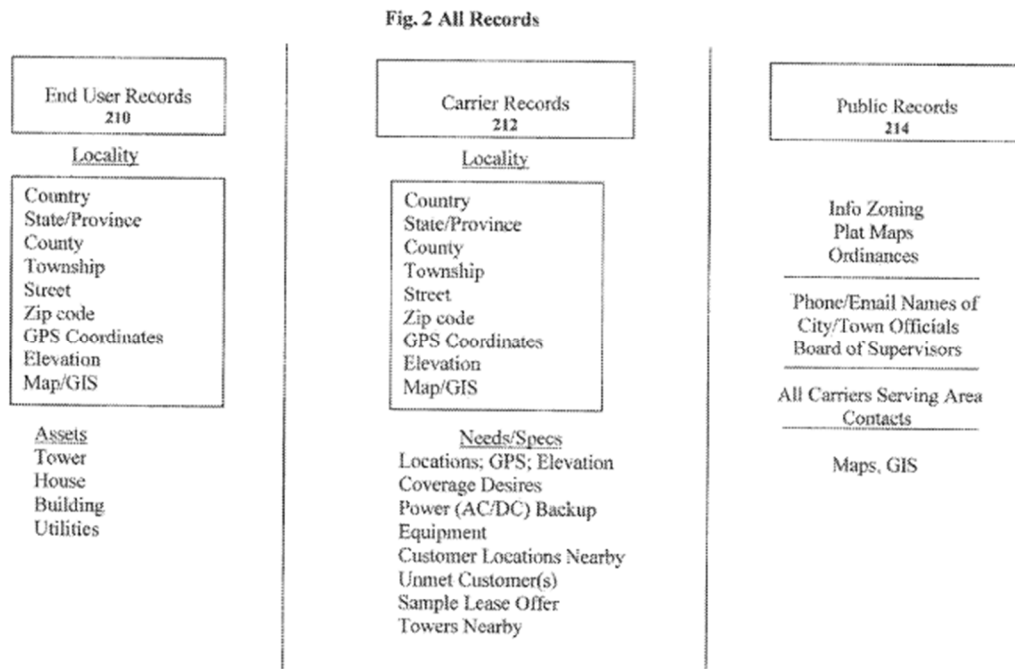
The ’925 Patent depicts a representative clearinghouse system in Figure 1,

reproduced below. The '925 Patent explains how CPU 30 is coupled to storage 42 that maintains one or more databases forming a clearinghouse repository, including carrier records 32, end-user records 31, and RF-engineering and location data 29, enabling the system to associate network performance and infrastructure information with geographic locations. *Id.*, 13:28-35; 5:16-30. The selection/optimizer applications 34 and sorting applications 36 use the stored records and the clearinghouse system analyzes, ranks, and outputs information supporting network deployment, optimization, and service-selection decisions, reflecting a technological system that aggregates, updates, and processes multi-source data to enhance network performance. *Id.*, 19:9-20-29; 24:8-44.



Ex. 1001, Figure 1

According to the '925 Patent, the clearinghouse system aggregates and processes multi-source data to determine optimal frequencies, carriers, modulation types, data rates, and bandwidths for mobile devices connected to a network. *Id.*, 27:42-50. Figure 2, reproduced below, illustrates the sources and nature of the data used by the clearinghouse system. However, the '925 Patent further describes the use of location-specific performance (*id.*, 6:18-25), performance/quality of service metrics (*id.*, 6:37-52) and telecommunication carrier records. *Id.*, 17:49-54.

**Ex. 1001, Figure 2**

Based on multi-source data, the clearinghouse system can achieve user-programmed, device-specific objectives (e.g., “highest download speed,” “cheapest cost,” “always pick Verizon if it can give me better than 10Mbps,” etc.). *Id.*, 27:50-56. The ’925 Patent describes updating and refreshing this integrated dataset through electronic interfaces—either automatically or manually—by incorporating newly obtained performance or quality-of-service information from devices located in particular geographic areas, while preserving and weighting historical data. *Id.*, 8:13-17; 25:12-31; 20:31-31:11; Figures 5 and 8-11. The clearinghouse system processes this dataset via the selection/optimizer applications and sorting applications (*id.*, 19:9-20-29; 24:8-44) and generates outputs that assess network

integrity, compare service offerings, and identify infrastructure- or location-specific performance issues. *Id.*, 12:31-15:10; 27:42-56; Figure 5. In other words, the records enable continual collection, evaluation, and processing of network integrity and service quality at a carrier- and infrastructure-level, rather than merely capturing transient device diagnostics.

In addition to the core clearinghouse functionality, the '925 Patent discloses other embodiments in which the system supports network planning and optimization by enabling carriers to analyze aggregated infrastructure availability, geographic constraints, and performance information when determining where and how to deploy network resources. For example, the '925 Patent further describes embodiments in which the clearinghouse enables comparison and ranking of communications services and carriers based on stored performance and location-specific information, allowing users and carriers to make informed service-selection decisions. *Id.*, 28:4-27. Additional embodiments apply the clearinghouse to the delivery of localized content and services, using geographic and network-related information maintained by the system to tailor content to particular locations or users. *Id.*, 33:58-34:17. The '925 Patent further describes how, based on the multi-source data, instructions can be sent to devices that cause them “to be automatically tuned to appropriate frequencies, air interfaces, and other operating parameters to provide enhanced operation for the particular wireless device, or the entire network.”

Id., 12:56-63; Figure 12.

The Challenged Claims recite elements directed to the network-level assessment and enhancement techniques disclosed by the '925 Patent. For example, independent claims 1, 8, and 12 recite providing one or more computers interfacing with a database that stores performance, quality-of-service, or perceived communications service quality/value information associated with devices or users at specific geographic locations, includes records pertaining to telecommunications carriers that identify carrier infrastructure type and/or location information for those locations, updates the stored performance or quality-of-service information in the database using electronic interfaces as new data is obtained from devices located in the relevant geographic areas, and permits carriers, end users, or other parties to review, catalog, store, view, use, or sort the updated information to evaluate network integrity and service quality across carriers, bands, and locations.

Thus, while the '925 Patent discusses obtaining performance information from “one or more mobile or fixed devices,” the focus of the '925 Patent is on network-level integrity assessment and enhancement using carrier, infrastructure, and location-based records, rather than on single-device diagnostics or peer-driven reporting of individual Wi-Fi access points. The claimed techniques operate at a broader and substantial analytical level, integrating multiple structured record types to support informed evaluation and improvement of communications networks.

B. Priority of the '925 Patent

U.S. Patent Application No. 13/490,133 (“the ’133 Application”) was filed on June 6, 2012 and issued as the ’925 Patent on August 20, 2013. Ex. 1001, field codes (22), (45). The ’133 Application claims priority as a continuation of U.S. Patent Application No. 12/208,007 (“the ’007 Application”), which was filed on September 10, 2008. *Id.*, field code (63). The ’007 Application claims priority to three provisional applications: 1) U.S. Provisional Application No. 60/971,175, filed on September 10, 2007; 2) U.S. Provisional Application No. 60/977,582, filed on October 4, 2007; and 3) and U.S. Provisional Application No. 61/028,261, filed on February 13, 2008. *Id.*, field codes (60). Accordingly, for purposes of this proceeding, the earliest filing date to which the Challenged Claims are entitled is September 10, 2007. The pre-AIA provisions of §§ 102, 103 apply. Pub. L. No. 112-29, § 3(n)(1), 125 Stat. 284, 293 (2011).

C. Parallel Proceedings

The ’925 Patent, along with other patents owned by Patent Owner, is involved in parallel district court proceedings between Petitioner and Patent Owner. *See* Paper 9 (Patent Owner updated mandatory notice); Paper 10 (Patent Owner request for discretionary denial).

In related *inter partes* reviews involving other patents of Patent Owner asserted in the parallel district court litigation, Petitioner asserts that Petitioner has

“full access” to the inventor’s “research ... in return” for the parties’ “multi-decade collaboration.” *See Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01595, Paper 10, 5 (PTAB Jan. 6, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01564, Paper 12, 5 (PTAB Jan. 6, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01565, Paper 11, 4 (PTAB Jan. 7, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01594, Paper 10, 5 (PTAB Jan. 8, 2026). Petitioner’s unsubstantiated implication is that it has rights to the patents. Contrary to Petitioner’s assertion, however, Petitioner cites no evidence that Petitioner has any intellectual property rights to the ’925 Patent or any other patent involved in the parallel litigation. *Id.* In fact, to the best of Patent Owner’s knowledge, Petitioner has no intellectual property rights to the ’925 Patent or any other patent involved in the parallel litigation, nor has Petitioner produced any written documentation evidencing such rights.

In these same filings, Petitioner asserts that the inventor did not advise standard-setting bodies about the patents, yet Petitioner offered no evidence that either (i) any of the patents read on some applicable technical standard; (ii) the inventor or Patent Owner participated in any development of any applicable technical standard for the patents (they did not); or (iii) the inventor or Patent Owner had an obligation to disclose the patents to any standard-setting body. *Id.* Nothing in the Petition for the ’925 Patent relies on any technical standard for a basis for

invalidity of any Challenged Claim. Whether the '925 Patent is subject to some technical standard would not be resolved by instituting this IPR.

D. Level of Ordinary Skill

For purposes of this Preliminary Response, Patent Owner accepts the skill level proposed by Petitioner for a person of ordinary skill in the art ("POSITA"). Petitioner's proposed POSITA is a person having "at least a Bachelor's degree in computer science, electrical engineering, or a related field, and at least two years (cumulative) of work or research experience in the fields of database design or administration, online marketplaces or e-commerce, and wireless network or mobile device management, or equivalents," where "[a]dditional work or research experience could substitute for education, and further education could substitute for work or research experience." Pet., 7. However, Patent Owner reserves the right to address or refine the level of ordinary skill at a later stage of this proceeding or in any parallel litigation, should the POSITA's skill level become relevant.

E. Claim Construction

Patent Owner agrees with Petitioner that, for purposes of this Preliminary Response, all claim terms should be given their plain and ordinary meaning as understood by a person of ordinary skill in the art in the context of the '925 Patent and its prosecution history, except for the terms specifically addressed below. *See* Pet., 7.

At this stage of the proceeding, however, Patent Owner reserves its opinion on Petitioner’s proposed constructions of the “means for sending instructions” of dependent claim 14, the “means for sending rank order” of dependent claim 15, and the “means for determining” of dependent claim 22. A specific construction of these terms is unnecessary at this stage of the proceeding because the Petition fails to establish a reasonable likelihood of success of invalidating any of claims 14, 15, and 22 under any reasonable construction. To the extent any dispute exists regarding the meaning of a claim term, such dispute does not provide a basis for institution. The Petition fails under the claim terms’ plain and ordinary meanings, and Patent Owner reserves the right to address claim construction post-institution if necessary.

F. The Asserted Grounds of the Petition

1. Grounds Asserted in the Petition

Petitioner asserts that the Challenged Claims are unpatentable under the following asserted grounds:

Ground	Basis	Reference(s)	Claims
1	§ 103	Daley, Aaron, and Scherzer (and alternatively Dawson)	1-7, 12-18, and 22-25
2	§ 102	Scherzer (alternately § 103 with Dawson)	1-7, 12-18, and 22-25
3	§ 103	Daley, Aaron, Scherzer, and Chmaytelli (and alternatively Dawson)	8-11 and 19-21

There are two grounds for claims 1-7, 12-18, and 22-25 (Grounds 1 and 2) and one ground for claims 8-11 and 19-21 (Ground 3).

2. Prior Art Relied Upon for the Asserted Grounds

a. Daley (Ex. 1009) – Pub. 2007/0207800 A1

Daley teaches a system for providing customer care for users of electronic devices. Ex. 1009, ¶[0033]. Daley’s system provides diagnostic data collected from an electronic device 107 for diagnostic use and troubleshooting via a customer service representative, such that it may become “unnecessary for a customer to provide such information him/herself.” *Id.* Accordingly, Daley is about device-specific troubleshooting, not network-level assessments and enhancements.

For example, Daley explains how an electronic device may store a diagnostic agent, which provides device-specific information to a log file (*id.*, ¶[0039]) such that “a customer service representative (CSR) may provide a service to the customer using the electronic device 107, after determining the device capability information retrieved from the electronic device 107.” *Id.*, ¶[0038]. To the extent that the log file collects network performance data, Daley exclusively teaches the use of such data to troubleshoot issues experienced by a specific electronic device. *Id.*, ¶[0039].

Accordingly, Daley does not disclose or rely on multi-source data aggregation, records pertaining to telecommunications carriers, or public records because Daley’s system is directed to device-specific diagnostics and

troubleshooting, not network-level analysis or planning. Daley’s system operates by retrieving and analyzing diagnostic data from a specific electronic device in response to a support interaction. *Id.*, ¶[0033]. There is no need for Daley to aggregate data from multiple sources, maintain records pertaining to carriers or infrastructure, or consult public records such as zoning, mapping, or geographic information. Daley, therefore, omits such data not by oversight, but because its disclosed system is designed for one-off, device-level support, rather than network-level analysis based on multi-source records.

b. Aaron (Ex. 1010) – Pub. 2008/0305747 A1

Aaron is directed to measuring and reporting wireless service quality as experienced by mobile handsets, in order to construct and update quality-of-service maps for a wireless communications system. Ex. 1010, Title, Abstract. Aaron discloses the use of “wireless terminals,” a term Aaron uses to describe cell phones (*id.*, ¶ [0027]), to provide service quality and geographic information location, and store the measured service quality information (e.g., Signal-to-Noise ratio) and location information (e.g., GPS data) to a central processor. *Id.*, ¶¶[0041]-[0042]. Based on the information provided via the cell phones, the central processor “updates one or more coverage maps and/or one or more quality-of-service maps” to identify problems prior to user complaints. *Id.*, ¶¶[0052], [0054].

The data used by Aaron’s central processor is expressly limited to information

“received from wireless terminals,” including measured service quality parameters, location data, and optional user feedback. *Id.*, ¶¶[0031]-[0036]. Additionally, although Aaron intends to “improve accuracy of problem identification,” Aaron teaches no means by which identified problems can be resolved. *Id.*, ¶[0035]. Accordingly, while Aaron contemplates that quality-of-service maps may inform network operators about where service problems exist, Aaron does not disclose network-level enhancements or improvements carried out by the system, nor does Aaron disclose aggregating public records or carrier infrastructure data from multiple sources to perform such enhancements.

c. Scherzer (Ex. 1011) – Pub. 2008/0186882 A1

Scherzer is directed to facilitating peer-to-peer sharing of Wi-Fi access points, in which members of Scherzer’s “social network” share access credentials to various WiFi hot spots. Ex. 1011, ¶[0147]. Specifically, Scherzer explains how “owners of radio access points are averse to sharing the AP resource with people they don’t know” but proceeds to explain that “if there has been certain a priory contact, owners are much more likely to share the resource.” *Id.* Scherzer proceeds to explain how “[s]uch an a priory contact may be made in the form of a social network.” *Id.*

Scherzer describes the use of connectivity data to “analyze radio resources in reach” available to a user. *Id.*, ¶[0028]. The connectivity data includes network name, MAC address, received signal strength and variance over time, encryption

status, access protocol response times, location, password, etc. *Id.* Connectivity data is crowdsourced from client devices themselves, based on their connection attempts to nearby access points, reinforcing that the system operates at the peer-to-peer, access-point level—not through carrier or public-record data sources. *Id.*, ¶¶[0027], [0057]. Scherzer specifically explains that client devices “check connectivity to other access points in the vicinity, and report the findings to the server.” *Id.*, ¶¶[0027], [0057], [0072].

Scherzer expressly explains that its system is premised on the reluctance of access-point owners to share connectivity broadly, stating that “owners of radio access points are averse to sharing the AP resource with people they don’t know.” *Id.*, ¶[0147]. Consistent with this premise, Scherzer discloses a trusted peer-to-peer framework in which access to radio access points is controlled by the access-point owner and limited to users within the trusted network. *Id.*, ¶¶[0147]-[0148]. Because Scherzer’s system is designed around privately controlled access points and user-level permission, there is no need for Scherzer to consult or maintain public records, such as zoning, mapping, or governmental data, nor any need to store or analyze records pertaining to telecommunications carriers or carrier infrastructure. Scherzer, therefore, is fundamentally incompatible with systems that rely on public records or carrier-level information.

d. Chmaytelli (Ex. 1012) – Pub. 2006/0253453 A1

Chmaytelli is directed to time- and location-based delivery of non-intrusive advertisements and informational messages to wireless client devices. Ex. 1012, Title, Abstract. Specifically, Chmaytelli discloses a Carrier Announcement Manager (CAM) installed on a mobile device, which receives advertisements pushed from a server (e.g., via directed SMS or network callbacks) and manages how, when, and whether those messages are presented to the user. *Id.*, ¶[0041].

The advertisements of Chmaytelli can include location data defining a geographic area. *Id.*, ¶[0081]. Chmaytelli also teaches the use of a client device location to determine if the client device is within a geographic area defined by the location data in the advertisement. *Id.* However, Chmaytelli does not teach the use of multi-source data including carrier records and public records to generate and select localized content based on network performance, infrastructure availability, geographic constraints, and other contextual factors. Otherwise put, Chmaytelli teaches localization as a simple delivery condition and not the output of network-level processing of multi-source data.

e. Dawson (Ex. 1013) – Pub. 2003/0216953 A1

Dawson is directed to an information management system for a fixed wireless service provider enterprise, focused on site-centric business and deployment planning, rather than on runtime network performance measurement or device-reported service quality. Ex. 1013, Title, Abstract. The system organizes and manages information relating to potential customer sites, including whether legal rights can be obtained to install wireless infrastructure at a site and whether the network of the provider can deliver an acceptable signal to that site. *Id.*, ¶¶[0025]-[0026].

Dawson classifies sites based on two primary determinations: real estate friendliness (e.g., legal and contractual feasibility of installing infrastructure such as antennas) and serviceability (e.g., predicted signal coverage based on RF propagation modeling). *Id.*, ¶[0028]. These determinations are used to categorize sites as priority sites, rejected sites, or candidates for coverage optimization, thereby guiding sales activity, infrastructure expansion planning, and internal workflow for the service provider. *Id.*

Dawson's invention is enterprise- and planning-oriented, emphasizing site qualification, legal rights management, sales prioritization, and coverage prediction for a single wireless service provider. *Id.*, ¶¶[0028], [0032]; Figure 3. However, Dawson does not disclose collecting performance, quality-of-service, or perceived

service quality information from mobile or fixed user devices, nor does it maintain a clearinghouse-style database for comparing carrier performance across multiple carriers, bands, or geographic regions. The system is concerned with where and whether to deploy infrastructure, not with assessing network integrity based on device-experienced service quality. *Id.*, ¶¶[0021], [0029].

IV. THE PETITION LACKS A REASONABLE LIKELIHOOD OF SUCCESS ON A SINGLE CLAIM

The Petition lacks a reasonable likelihood of success on a single claim because the Petition fails to identify with particularity the evidence and reasoning supporting each asserted ground of unpatentability.

A. Legal Standard

To institute *inter partes* review, a petition must identify with particularity the evidence and reasoning supporting each asserted ground of unpatentability. 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104(b)(4). Conclusory assertions, general design goals, or labels such as “modular” components do not suffice. *See e.g., TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1359-60 (Fed. Cir. 2019). Rather, a petitioner bears the burden of clearly explaining how the asserted prior art references are combined to render the challenged claims unpatentable. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016).

A petitioner’s burden “cannot be met simply by throwing mountains of evidence at the Board” without clearly articulating how that evidence supports the

asserted grounds. *Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1371 (Fed. Cir. 2023). A petitioner must “identify with particularity the evidence that supports the grounds for the challenge” and may not rely on external clarification or supplementation. *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369–70 (Fed. Cir. 2016). Furthermore, a petition must not incorporate arguments by reference from one document into another document. 37 C.F.R. § 42.6(a)(3).

Consistent with the statutory requirement of 35 U.S.C. § 312(a)(3) and decisions of the Federal Circuit, the Board’s rules require a petition to clearly specify where each claim limitation is found in the prior art and provide a concise, well-organized, and easy-to-follow explanation of how the cited evidence supports the asserted unpatentability theory. *See* 37 C.F.R. §§ 42.104(b)(4), 42.22(a)(2); *see also* 77 Fed. Reg. 48,756, 48,763 (Aug. 14, 2012) (parties must “avoid submitting a repository of all the information that a judge could possibly consider, and instead focus on concise, well-organized, easy-to-follow arguments supported by readily identifiable evidence of record.”).

The Board has consistently held that, to satisfy the particularity requirement, a petition itself must present a clear and coherent explanation of the asserted grounds. *See Nearmap US, Inc. v. Eagle View Technologies, Inc.*, IPR2024-00716, Paper 9, 13 (PTAB Oct. 9, 2024) (denying institution because the petition did not

articulate a clear theory of the case); *see also* *TikTok Inc. v. NTECH Properties, Inc.*, IPR2024-01343, Paper 7, 16 (PTAB Mar. 10, 2025) (denying institution because a petition failed to articulate a coherent, discernable case that was readily understandable). “It is not the Board’s responsibility to weave together Petitioner’s evidence into a cohesive case.” *Nearmap, supra*.

B. The Petition Fails to Identify with Particularity the Evidence and Reasoning Supporting Each Asserted Ground of Unpatentability

The Board should deny institution because, as evidenced below, the Petition fails to satisfy the particularity requirement. Grounds 1-3 contain invalidity theories that are voluminous, sprawling, and often incoherent. Institution would impermissibly impose on the Board a responsibility to “weave together Petitioner’s evidence into a cohesive case.” *Nearmap*, IPR2024-00716, Paper 9, 13.

Specifically, the Petition fails to particularly anchor its analysis of each limitation to the express language of the claims. Petitioner omits the express language of the claim limitations from its analysis for each ground. Instead, the Petition provides a “list of challenged claims” prior to its analysis of the claims, where that list maps each claim limitation to a numerical identifier (e.g., 1[a][i], 1[a][ii], 1[b], etc.). *See* Pet., 4-11. The “Grounds” section of the Petition, Section VII thereof, refers to these numerical identifiers in its analysis without quoting the actual claim language. Petitioner’s approach leads to unintelligible results, such as

analysis that is unmoored to the actual claim language, and includes references to claim limitation identifiers that do not exist in Petitioner's list of identifiers.

The Board has denied institution of asserted grounds where a petition similarly relied on claim element identifiers in lieu of actual claim language in the substantive invalidity analysis of the petition. In *Shenzhen Huiding Technology Co., Ltd. v. Synaptics Inc.*, IPR2015-01739, Paper 8, 21 (PTAB Feb. 16, 2016), the Board held that reliance on the claim element identifiers rendered the petition "unintelligible." The petitioner in *Shenzhen Huiding* filed a separate exhibit that broke each of the twenty-five challenged claims into multiple elements and provided a claim element identifier for each element of each claim, whereas the petition, like here, merely referred to the claim element identifiers as opposed to the actual claim language. *Id.*, 20-21. The Board found the petition in *Shenzhen Huiding* "unintelligible" without the separate exhibit, and further found that the petition effectively used "incorporation by reference" to impermissibly extend its arguments beyond the allowed page limit. *Id.* The Board consequently refused to consider portions of the petition and denied institution as to the affected grounds. *Id.*, 20-22; *see also Fidelity National Information Services, Inc. v. DataTreasury Corp.*, IPR2014-00491, Paper 9, 9 (PTAB Aug. 13, 2014) (denying institution for impermissible incorporation by reference to circumvent content limits).

The Petitioner here invoked a practically identical practice as the petitioner in

Shenzhen Huiding. The Petition contains 13,992 words—a mere eight words short of the 14,000 word limit set forth by 37 C.F.R. § 42.24(a)(i). Had Petitioner provided the express language of the claim limitations analyzed under each ground, the Petition would not comply with the word limit set forth by 37 C.F.R. § 42.24(a)(i). As a simple matter of convenience, the Petition effectively forces the Board to continually refer back to the “list of challenged claims” in order to properly assess the grounds, evocative of the “unintelligible” petition considered in *Shenzhen Huiding*. Further, Petitioner’s failure to anchor the express language of each claim limitation to its substantive analysis results in at least two examples of “unintelligible” analysis in the Petition: 1) invalidity analysis that is unmoored to the actual language of the claims (*see e.g.*, Pet., 42-44 for claim limitation 1[a][i]); and 2) reference to claim limitation identifiers that do not exist in the Petitioner’s list of identifiers. Both of these problems with the Petition result in it failing to identify the asserted grounds “with particularity.” 35 U.S.C. § 312(a)(3).

The Board’s institution decision in *Shenzhen Huiding* was prior to *SAS Inst. Inc. v. Iancu*, 584 U.S. 357 (2018) and 37 C.F.R. 42.108(a), which now burdens the Board with the work of having to consider the patentability of all challenged claims on all asserted grounds upon institution of an IPR. Because partial institution is no longer an option, the appropriate action for the Board is to deny institution, as the Board did in *Biodelivery Scis. Int’l, Inc. v. Aquestive Therapeutics, Inc.*, 935 F.3d

1362, 1365-67 (Fed. Cir. 2019), because institution here will be inefficient and unduly burdensome, requiring the Board to weave Petitioner’s analysis into a cohesive case. *See Nearmap*, IPR2024-00716, Paper 9, 13.

1. Grounds 1 and 3 Lack Particular Evidence and Reasoning for Limitation 1[a][i]

The Petition fails to map, with particularity, the asserted evidence to the language of claim limitation 1[a][i]. Under Ground 1, instead of a concise, well-organized, and easy-to-follow explanation of how the cited evidence supports its invalidity theory, the Petition embraces a “kitchen-sink” approach that “is substantially devoid of an explanation why [and how] so many references need to be combined to reach the claims.” *See Adaptics Limited v. Perfect Company*, IPR2018-01596, Paper 20, 15 (PTAB Mar. 6 2019); *see also* 37 C.F.R. §§ 42.104(b)(4), 42.22(a)(2); *see also* 77 Fed. Reg. 48,756, 48,763 (Aug. 14, 2012). Ground 3 relies on “Ground 1’s limitation 1[a][i]” for its analysis of claim limitations 8[a][i]-[iv] and, therefore, also lacks particularity for the following reasons. Pet., 76.

a. The “Roaming Transitions” Theory is Unclear,
Unsupported, and Conclusory

According to the Petitioner’s listing of claim limitations, limitation 1[a][i] is “records pertaining to one or more telecommunications carriers which identify infrastructure type and/or location information for one or more locations.” Pet. 54.

By its plain wording, this limitation refers to “infrastructure types” for telecommunication carriers and not to roaming.

Despite this language, for its analysis of claim limitation 1[a][i], the Petition focuses on device roaming without any mention of infrastructure type of a telecommunication carrier. The Petition argues that “Daley discloses capturing and storing information about transitions from being connected to a native network to a roaming network.” Pet., 42. Petitioner’s roaming theory is unclear for multiple reasons: 1) most of the Petitioner’s cited portions of Daley do not discuss roaming; 2) it is unclear how a single “roaming transition” of Daley constitutes the claimed records of a telecommunications carrier for infrastructure as recited in limitation 1[a][i]; and 3) the theory is overly reliant on the declaration of Dr. Almeroth.

First, most of the paragraphs of Daley cited by Petitioner—¶¶[0270], [0271], and [0291]—do not concern roaming at all, let alone records identifying carrier infrastructure type or location. The Petition offers no explanation as to how ¶¶[0270], [0271], and [0291] of Daley relate to roaming, infrastructure type, or carrier records, leaving the Board to infer relevance where none is shown.

Second, although the Petition refers to ¶[0145] of Daley, which provides Daley’s sole reference to “roaming,” the Petition fails to explain how the “roaming transition” of Daley constitutes the claimed “records pertaining to one or more telecommunications carriers which identify infrastructure type and/or location”

The Petition merely argues that a POSITA would have understood that “this information,” presumably roaming transition information, would include “the identity of [an] old tower and the identity of [a] new tower,” without explaining why or how roaming transition information would necessarily include the identity of an old tower and the identity of a new tower. Pet., 42. Daley is notably silent on carriers and infrastructure types and locations, including the alleged “towers” on which Petitioner relies. The Petition, nonetheless, baselessly concludes that “Daley therefore discloses a database containing *records pertaining to one or more telecommunications carriers which identify infrastructure type* (e.g., the type of a carrier’s cellular network. [sic] the bands it supports, and whether a tower is affiliated with a carrier providing the phone’s native network), to correlate with the roaming events.” Pet., 42 (emphasis in original; bracketed material added). Petitioner’s high-level, conclusory analysis lacks particularity and, therefore, fails to explain sufficiently how Daley teaches records pertaining to telecommunication carriers that identify infrastructure types and/or locations.

Third, in lieu of a particularized explanation, the Petition relies heavily on the declaration of its expert, Dr. Almeroth, to support its assertions regarding the “roaming transitions” of Daley for limitation 1[a][i]. Pet., 42. Petitioner cites the expert declaration (Ex. 1002) at ¶¶151-155 (which paragraphs span a two full pages of the expert declaration) in support of three sentences in the Petition. Pet., 42. In

the cited expert declaration paragraphs, Dr. Almeroth cites fourteen pages of a textbook (Ex. 1032) to support his theory that Daley teaches the claimed records of limitation 1[a][ii]. Ex. 1002, ¶¶151, 154.

Extensive reliance on an expert declaration, as Petitioner has done here, is legally improper, because it “effectively use[s] incorporation by reference” to advance the Petitioner’s theories beyond the 14,000 word limit afforded by 37 C.F.R. § 42.24(a)(i). *See Fidelity*, IPR2014-00491, Paper 9, 9 (denying institution because reliance on citations to an expert declaration in lieu of citations to the references themselves amounts to an incorporation by reference); *see also Shenzhen Huiding*, IPR2015-01739, Paper 8, 20 (explaining that “[p]arties who violate these [page limit] rules risk having their arguments not considered by the Board”).

When the arguments that are impermissibly incorporated into the Petition by reference are properly ignored, it becomes clear that the Petition itself lacks the particularity required for institution.

b. The “MCC” and “MNC” Theory of Grounds 1 and 3 is
Unclear, Unsupported, and Conclusory

Also under its analysis of claim limitation 1[a][i]—and dissociated from its “roaming transitions” theory— the Petition observes that “Daley discloses that it collects and stores a phone’s identity: its IMEI/ESN.” Pet., 42. From there, the Petition concludes that a different identifier—HNI (home network identifier)—

includes yet two other identifiers, mobile country code (MCC) and mobile network code (MNC), that according to the Petition, “together identify the home network (carrier) of the device while the [mobile subscription identification number] uniquely identifies a subscriber on that carrier’s network.” Pet., 42. In other words, according to the Petition, MCC and MNC are the claimed “records pertaining to one or more telecommunication carriers...” of limitation 1[a][i]. Critically, none of these concepts are disclosed by Daley or any other reference cited by Petitioner. Thus, Petitioner’s theory is also unclear for multiple reasons: 1) neither Daley nor any other prior art reference mentions MCC or MNC; and 2) the theory is overly reliant again on the declaration of Dr. Almeroth and evidence external to the Petition and grounds.

First, Daley refers to “IMEI/ESN,” not IMSI. *See e.g.*, Ex. 1009, ¶[0217]. Neither Daley nor any other prior art reference relied upon in the Petition teaches the use of an IMSI, let alone an HNI, MSIN, MCC, or MNC. Nor does the Petition explain how IMEI/ESN relates to IMSI. The Petition explains that “while the IMEI uniquely identifies a phone, it is the IMSI (associated with a phone’s SIM card) that uniquely identified the subscriber” (Pet., 43), but the Petition provides no nexus between Daley’s express disclosure of IMEI to IMSI, which is basis for Petitioner’s theory but which is not disclosed or discussed in Daley, Aaron, Scherzer, or Dawson. Without basis, the Petition introduces the concept of IMSI to initiate a chain of unsupported inferences. *Id.* The Petition, for example, argues that “[i]ncluded in

the IMSI is the HNI (home network identifier) and the MSIN (mobile subscription identification number)” and that “[t]he HNI includes a mobile country code (MCC) and a mobile network code (MNC).” *Id.* The Petition concludes that MCC and MNC “together identify the home network (carrier) of the device while the MSIN uniquely identifies a subscriber on that carrier’s network.” *Id.*

No prior art reference in the Petition, however, mentions IMSI, MSIN, HNI, MCC, or MNC. Daley exclusively refers IMEI and ESN (*see* Ex. 1009, ¶¶[0217], [0226]-[0241])—not IMSI—and the Petition concedes that the IMEI exclusively “identifies a phone,” not a telecommunication carrier, which is the focus of limitation 1[a][i]. Pet., 43. The Petition’s failure to link effectively IMSI to Daley’s disclosed IMEI renders Petitioner’s conclusions about MCC, MNC, or MSIN unconnected to the evidence provided in Daley. The Board should not have to untangle the Petition’s convoluted theory—that the IMEI/ESN of Daley somehow implicate IMSI, which includes an HNI, which in turn includes an MCC and MNC, which somehow identify a carrier.

Second, the Petition’s reliance on external evidence does not save its convoluted MCC and MNC theory, and merely evidences that the theory in the Petition is not self-contained. For its MCC/MNC theory, the Petition refers to three paragraphs of Dr. Almeroth’s declaration and six pages from two different textbooks (Exs. 1015, 1025). *See* Pet., 43 (citing Ex. 1002 at ¶¶126-128, Ex. 1015, 102-103,

and 113, Ex. 1010, ¶[0037], Ex. 1025, 10 and 11). None of the cited evidence establishes a nexus between the IMEI/ESN of Daley and IMSI. Moreover, the actual content of the cited evidence is immaterial because the content of the cited evidence would have to be expressly included within the Petition to warrant consideration. *See Fidelity* IPR2014-00491, Paper 9, 9 (denying institution because a petition incorporated arguments in a supporting document by reference). A petitioner's burden "cannot be met simply by throwing mountains of evidence at the Board," *Parus Holdings*, 70 F.4th at 1371, which is Petitioner's tactic for its MCC/MNC theory.

The Petition itself does not even attempt to link the IMEI/ESN of Daley to IMSI. The Petition simply—and inexplicably—introduces IMSI as another "number from a GSM device." Pet., 43. The Petition proceeds to use IMSI—not IMEI—to introduce HNI, MCC, and MNC. *Id.* Neither IMSI, HNI, MCC, nor MNC is supported by the prior art. "Based on the analysis presented in the Petition itself, and [a] review of the portions of references cited in the Petition, it is clear that Petitioner has not met its burden in establishing a reasonable likelihood that the challenged claims are unpatentable." *Fidelity*, IPR2014-00491, Paper 9, 9.

- c. The "Quality of Service Maps" Theory of Grounds 1 and 3 is Unclear, Unsupported, and Conclusory

Separate from its "roaming transition" and "MCC/MNC" theories for

limitation 1[a][i], the Petition also looks to the “quality of service maps” of Aaron to argue that “[a] POSITA would have understood that to facilitate the work of the technicians, it would have been natural to store information about the identity and location of network infrastructure components that might need further assessment of remediation.” Pet., 44. The Petition simply follows this sentence with the claim language of limitation 1[a][i]—“records pertaining to one or more telecommunications carriers which identify infrastructure...location information” in parentheses—as if the mere proximity of the sentences provides reasoning “with particularity.” The Petition, however, omits any explanation as to how the “quality of service maps” correspond to the claimed records or how, exactly, the “quality of service maps” would cause a POSITA to conclude that storage of the claimed records would be “natural.” *Id.* Although the Petition relies on Dr. Almeroth’s declaration to support its bald conclusion, Dr. Almeroth adds little more than the conclusion itself. *See* Ex. 1002, ¶156.

A rational explanation, if possible, would have been beneficial here because, contrary to the Petition’s assertions, Aaron teaches that its central processor “updates one or more coverage maps and/or one or more quality-of-service maps” based on service quality information (e.g., Signal-to-Noise ratio) and location information (e.g., GPS data) provided by cell phones. Ex. 1010, ¶¶[0041]-[0042], [0052], [0054]. In other words, the maps of Aaron are associated with cell phones, *not*

telecommunication carrier infrastructure type and/or location as recited in limitation 1[a][i]. Accordingly, beyond its conclusory statements, the Petition fails to explain why a POSITA would understand that the “quality of service maps” of Aaron pertaining to cell phones are applicable to the “telecommunications carriers which identify infrastructure types and/or locations” as recited by limitation 1[a][i].

d. The Petition Fails to Explain How its Three, Separate Theories Invalidate Limitation 1[a][i]

As explained above, the Petition includes three separate and discrete theories for the “records pertaining to one or more telecommunications carriers which identify infrastructure type and/or location information for one or more locations,” as recited by limitation 1[a][i]. Each theory fails independently because the Petition fails to map the teachings of the prior art to the express language of claim limitation 1[a][i]. The Petition also fails to explain how any of these theories relate to one another or collectively show the claimed records of limitation 1[a][i]. The Petition, therefore, creates unnecessary confusion regarding Petitioner’s actual theory for claim limitation 1[a][i].

Limitation 1[a][i] recites “records pertaining to one or more telecommunications carriers.” According to the claim, the records must “identify infrastructure type and/or location information for one or more locations.” Although the Petition spends many words addressing this limitation (Pet., 42-44), Petitioner’s

theory still remains unclear. Are the “roaming transitions” of Daley the claimed records? Or are the MCC and MNC, neither of which are disclosed by any prior art reference the claimed records? Or perhaps the “quality of service maps” of Aaron are the claimed records, even though they correspond to cell phone data and not “infrastructure type,” as actually recited by the claim? The Petition does not make its theories clear and “[i]t is not the Board’s responsibility to weave together Petitioner’s evidence into a cohesive case.” *Nearmap*, IPR2024-00716, Paper 9, 13. The Petition’s sprawling, unfocussed analysis is indicative of impermissible hindsight bias, which also warrants a denial of institution. *See Solus Advanced Materials Co., Ltd. v. SK Nexilis Co., Ltd.*, IPR2025-00005, Paper 14, 47 (PTAB May 19, 2025) (denying institution because “[p]etitioner’s argument appears to be based upon impermissible hindsight reconstruction.”).

The Petition lacks a concise, well-organized, and easy-to-follow explanation of how the cited evidence supports the asserted unpatentability theory. *See* 37 C.F.R. §§ 42.104(b)(4), 42.22(a)(2); *see also* 77 Fed. Reg. 48,756, 48,763 (Aug. 14, 2012) (parties must “avoid submitting a repository of all the information that a judge could possibly consider, and instead focus on concise, well-organized, easy-to-follow arguments supported by readily identifiable evidence of record.”). Instead, the Petition leverages a “kitchen-sink” approach that “is substantially devoid of an explanation why [and how] so many references need to be combined to reach the

claims.” *See Adaptics*, IPR2018-01596, Paper 20, 15.

Accordingly, Ground 1 lacks particular evidence and reasoning for, at least, limitation 1[a][i]. Ground 3 relies on “Ground 1’s limitation 1[a][i]” for its analysis of claim limitations 8[a][i]-[iv] (Pet., 76), and, therefore, also lacks the particularity required for institution.

2. Ground 2 Lacks Particular Evidence and Reasoning for Limitation 1[a][i] because the “MAC” Address Theory is Unclear, Unsupported, and Conclusory

Under Ground 2, the Petition argues for limitation 1[a][i] that “Scherzer’s records include ‘name and MAC address of the network access point,’ which can be used to identify the service provider.” Pet., 64 (citing Ex. 1011, ¶¶[0029]-[0030], and [0057]). Petitioner’s MAC address theory not tied to the claim language, is conclusory, and unsupported by the evidence.

Neither the Petition nor the declaration explain how a “MAC address of the network access point” can be used to “identify the service provider” as Petitioner and Dr. Almeroth assert. Pet., 64; Ex. 1002, ¶261. The Petition fails to explain what a “service provider” is and how a “service provider” relates to the claimed telecommunication carriers of limitation 1[a][i], instead relying on conclusory assertions. The Petition also implies without evidence that Scherzer’s MAC addresses identify service providers such as “Cloud, Google, and Metrofi” (Pet., 64 (citing Ex. 1011, ¶[0013])), the Petition fails to identify any disclosure in Scherzer

of storing MAC addresses for service providers. Indeed, the Petition also omits any explanation as to *why* Scherzer would store records pertaining to services providers like Cloud, Google, and Metrofi.

Still further, Scherzer actually contradicts Petitioner’s conclusory arguments about MAC addresses. As acknowledged by the Petition, Scherzer expressly attributes the MAC address to an *access point* (Ex. 1011 ¶[0058])—not a service provider like Cloud, Google, and Metrofi, as referenced in Scherzer’s background section. *Id.*, ¶[0013]. At a minimum, the Petition should explain the alleged relationship between Scherzer’s access points and geographical area networks to support its theory. The Petition offers no such explanation.

Instead of explaining the alleged relationship needed to complete Petitioner’s ill-fated theory, the Petition confusingly cites another reference to argue that “[a] POSITA would have understood that telecommunication carriers such as T-Mobile also offered broadband wireless services at the time and their access points would have been included in Scherzer’s database.” Pet., 64 (citing Ex. 1026). Scherzer makes no mention of T-Mobile. Petitioner’s reliance on Ex. 1026 fails to explain how “a name and MAC address of the network *access point*” relates to the “geographical area *networks*” referenced in Scherzer’s background. Moreover, Petitioner’s reference to T-Mobile introduces further confusion into the theory. As noted above, the Petition offers no explanation as to how Scherzer’s MAC addresses

relate to telecommunication carrier records for infrastructure types and locations. Introducing another carrier, i.e., T-Mobile, a carrier that is not discussed by Scherzer, does not resolve the gap in Petitioner’s network access point MAC address theory and casts doubt on Petitioner’s theory that the alleged “service providers” of Scherzer are the claimed “telecommunication carriers.”

Limitation 1[a][i] explicitly recites “records pertaining to one or more telecommunications carriers which identify infrastructure type and/or location information for one or more locations.” Under Ground 2, the Petition does not even attempt to identify or explain how Scherzer teaches “records,” “infrastructure types,” or “location information” pertaining to “telecommunication carriers.” The Petition simply raises its conclusory statements about MAC addresses and “service providers.” Therefore, the Petitioner’s “MAC address” argument lacks particularity.

3. Grounds 2 and 3 Lack Particular Evidence and Reasoning for Limitations 12[a][iii] and 8[a][i]-[iv]

The Petition further lacks particularity because its analysis refers to claim limitation identifiers that do not exist in its list of claim limitation identifiers. For example, under claim limitation 12[a][iii] for Ground 2, the Petition exclusively refers to “limitation 1[a][iii]” of Ground 2:

(v) 12[a][iii] <i>See limitation 1[a][iii], supra; EX1002, ¶303.</i>
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Excerpt from Petition, p. 70

However, there is no “limitation 1[a][iii]” in the Petitioner’s “list of challenged claims” and the Petition does not provide any analysis for “limitation 1[a][iii]” anywhere in the Petition. *See* Pet., 4-11, 42-44, 64-65.

In a similar manner, the Petition later refers to “limitation 1[a][iii]” and “2[a]” in its analysis of limitations 8[a][i]-[iv] under Ground 3.

(iii) 8[a][i]-[iv]

See Ground 1’s limitation 1[a][i], 1[a][ii], 1[a][iii], and 2[a]. EX1002, ¶333.

Excerpt from Petition, p. 76

Similar to limitation 1[a][iii] at page 70 of the Petition, limitation 2[a] is neither defined in Petitioner’s “list of challenged claims” nor analyzed under any ground. *See* Pet., 4-11. Grounds 2 and 3, therefore, possess a lack of particularity that render the Petition unintelligible because Grounds 2 and 3 rely on incoherent references.

Basing an invalidity theory on incorporation of arguments for non-existent claim limitations fails to satisfy the statutory particularity requirement. 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104(b)(4); *MModal LLC v. Nuance Commc'ns, Inc.*, 846 Fed.App’x 900, 906 (Fed. Cir. 2021) (each claim limitation must be addressed with particularity in the petition itself). Further, Petitioner will be prohibited from curing the deficiencies in its Petition post-institution. *See Wasica Fin. GMBH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272, 1286 (Fed. Cir. 2017); *Intelligent Bio-Sys.*, 821 F.3d

at 1369–70. Here, if the Petition is instituted, the Board and the parties will have to weave Petitioner’s incomplete analysis and evidence into a cohesive case, which warrants denial of institution. *Nearmap*, IPR2024-00716, Paper 9, 13 (denying institution).

V. CONCLUSION

For the reasons set forth above, the Petition fails to demonstrate a reasonable likelihood that Petitioner will prevail on any challenged claim. Petitioner has not established that any of the independent claims of the ’925 Patent are anticipated or would have been obvious under any asserted ground.

Because Petitioner has not shown that any independent claim is unpatentable, Petitioner likewise has not shown that any dependent claim is unpatentable. *See e.g.*, *Hartness Int’l Inc. v. Simplimatic Eng’g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987) (if an independent claim is nonobvious, a dependent claim is necessarily nonobvious and novel). Each dependent claim incorporates the limitations of its corresponding independent claim, and the Petition advances no separate unpatentability theory directed specifically to any dependent claim.

Accordingly, institution should be denied.

Dated: January 16, 2026

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**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME
LIMITATION, TYPEFACE REQUIREMENTS, AND TYPE STYLE
REQUIREMENTS**

1. This Patent Owner Preliminary Response complies with the type-volume limitation of 14,000 words, comprising 7,915 words, as counted using the Microsoft Word software that was used to prepare this paper, excluding the parts exempted by 37 C.F.R. § 42.24(a), (b).

2. This Patent Owner Preliminary Response complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft Word 2016 in 14-point Times New Roman.

Date: January 16, 2026

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CERTIFICATION OF SERVICE

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