

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

MASSIVELY BROADBAND LLC,
Patent Owner.

IPR2026-00103
Patent 8,224,794

PATENT OWNER'S PRELIMINARY RESPONSE

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2003	Texas A&M Hagler Institute for Advanced Study, Dr. Theodore (Ted) S. Rappaport, Class of 2024-25, hias.tamu.edu/fellow/dr-theodore-ted-s-rappaport/ (retrieved Oct. 22, 2025)
2004	Transcript of Pioneer Award Presentation, 2022 Brooklyn 6G Wireless Summit, April 27, 2022, available at ieeetv.ieee.org/channels/communications/pioneer-award-tom-wheeler-2022-b6gs-virtual
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2022	RESERVED
2023	Excerpts from T. Rappaport et al., <u>Millimeter Wave Wireless Communications</u> , Pearson Education, Inc., 2015
2024	U.S. Patent No. 11,863,340
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2026	<i>MASSIVELY BROADBAND LLC v. Samsung Elecs. Co.</i> , No. 2:25-cv-00608-JRG, Dkt. 7 (E.D. Tex. June 25, 2025)
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2057	Samsung's Notice of Subpoena <i>Duces Tecum</i> and <i>Ad Testificandum</i> to Omnisia, LLC, Nov. 12, 2025, <i>MASSIVELY BROADBAND LLC v. Samsung Elecs. Co.</i> , No. 2:25-cv-00608-JRG (E.D. Tex.) (without Ex. C, Protective Order)
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2070	Samsung's Notice of Subpoena <i>Duces Tecum</i> and <i>Ad Testificandum</i> to Microsoft Corp., Dec. 11, 2025, <i>MASSIVELY BROADBAND LLC v. Samsung Elecs. Co.</i> , No. 2:25-cv-00608-JRG (E.D. Tex.) (without Ex. C, Protective Order)
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2073	Ex. 794-B (Obviousness Claim Chart for the '794 Patent) to Samsung's P.R. 3-3 and 3-4 Invalidity Contentions (Ex. 2029)
2074	<i>In the Matter of Spectrum Horizons</i> , First Report and Order, ET Docket No. 18-21, Mar. 21, 2019, Federal Communications Commission.
2075	U.S. District Court Time-to-Trial Statistics for EDTX (Sept. 2025)
2076	Samsung's Objections and Responses to Plaintiff's Second Set of Common Interrogatories (No. 18), Dec. 12, 2025, <i>MASSIVELY BROADBAND LLC v. Samsung Elecs. Co.</i> , No. 2:25-cv-00608-JRG (E.D. Tex.)

I. INTRODUCTION

MASSIVELY BROADBAND LLC (“Patent Owner”) submits this Patent Owner Preliminary Response (“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 (together, “Petitioner”) for all thirty-two (32) claims (the “Challenged Claims”) of Patent 8,224,794 (“’794 Patent”). The Board should deny institution because Petitioner fails to demonstrate a reasonable likelihood that Petitioner will prevail as to any challenged claim.

The Board should deny institution for several reasons. *First*, the Petition fails—at a threshold level—to identify where the asserted prior art teaches the limitation of each Challenged Claim. As set forth below, the Petition does not carry its burden to demonstrate on an element-by-element basis that the asserted references teach the key limitations of the challenged independent claims. For example, for claim 1, the Petition never persuasively identifies “records ... which identify infrastructure needs” as required by limitation 1[a][i], instead relying on attorney argument and repurposing Dawson’s “roof rights” disclosure. Additionally, Petitioner’s treatment of limitations 20[a][i]–[iii] and 20[b] repeatedly substitutes inferences and cross-references for actual disclosures, including theories that conflate roaming data or access-point datasets with “infrastructure,” “end-user

assets,” or “public records,” and that never clearly identifies the claimed “electronic interfaces” for updating performance/QoS information. For Claim 27, the Petition largely piggybacks on its Claim 20 analysis without establishing the additional, performance/QoS-focused requirements of claim 27, leaving the independent claim limitations unmet. The analytical gaps of the Petition are not mere claim-construction or fact disputes reserved for trial; they are failures of proof at the institution stage.

Second, independent of these substantive deficiencies, the Petition fails the particularity requirement of 35 U.S.C. § 312(a)(3). The Petition presents an overinclusive, shifting “kitchen sink” of grounds and alternative combinations—most notably “alternatively Dawson”—without specifying where or how those alternatives apply to particular claim elements, leaving the Board to reconstruct unarticulated theories. The Petition also relies heavily on shorthand limitation identifiers and cross-references (*e.g.*, importing analysis of limitation 1[a] or Claim 2 into Claim 20, and Claim 20 into Claim 27) rather than anchoring the analyses to the express claim language, thereby obscuring what exactly is being asserted for each element. Petitioner’s lack of particularity both burdens the Board and explains why Petitioner’s element-by-element showings repeatedly collapse distinct limitations or omit required features.

Accordingly, for each of these independent reasons—substantive elemental

gaps and failure to plead with particularity—none of Grounds 1-6 demonstrate a reasonable likelihood of success, and institution 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 1–32) and all asserted grounds.

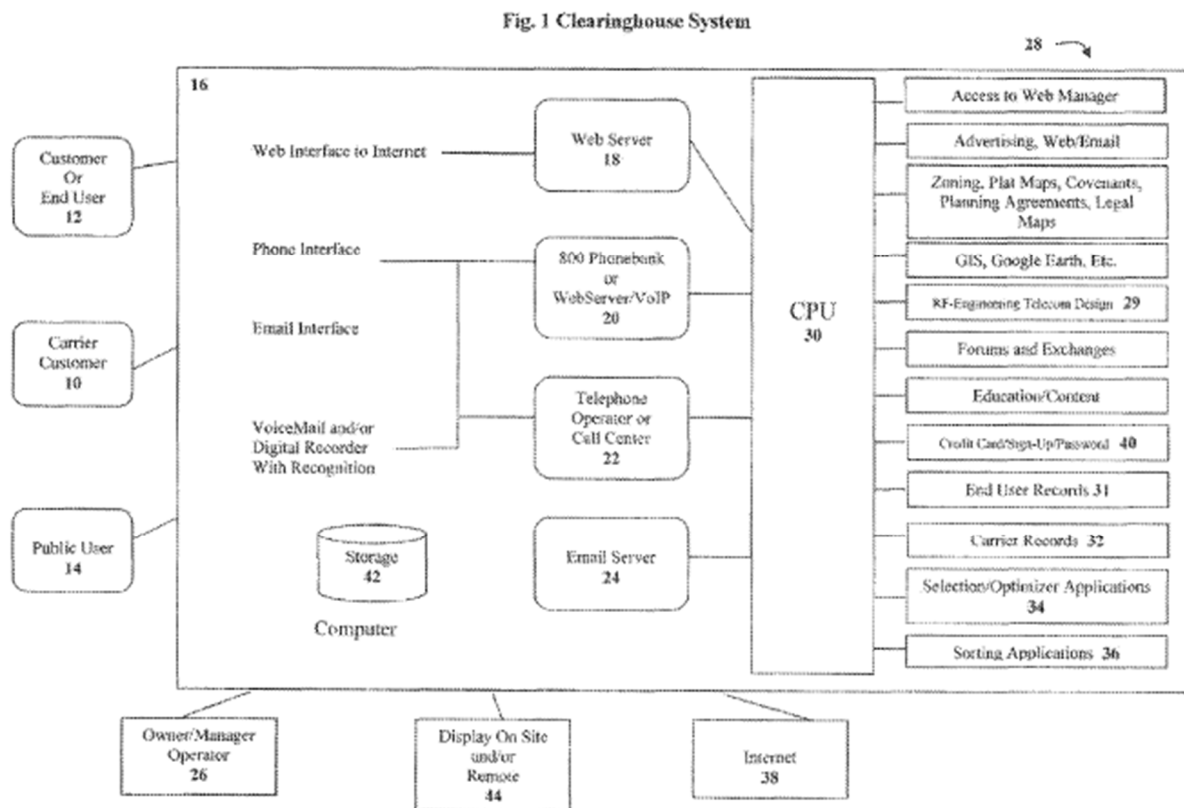
III. BACKGROUND

A. Summary of the '794 Patent

The '794 Patent is directed to computer-implemented systems and methods that provide a centralized clearinghouse for telecommunications infrastructure planning, enabling telecommunications carriers to identify, evaluate, and select locations for network deployment, expansion, or optimization using structured records derived from public records and end-user-provided location inventories. *See* Ex. 1001, 17:54-67. The clearinghouse of the '794 Patent is expressly framed around decision making, for example, allowing carriers to quickly and efficiently determine what locations are viable for provisioning telecommunications services and to improve infrastructure placement and capital expenditures. *Id.*, 11:27-32.

The '794 Patent depicts a representative clearinghouse system in Figure 1, reproduced below. The '794 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 telecom design data 29,

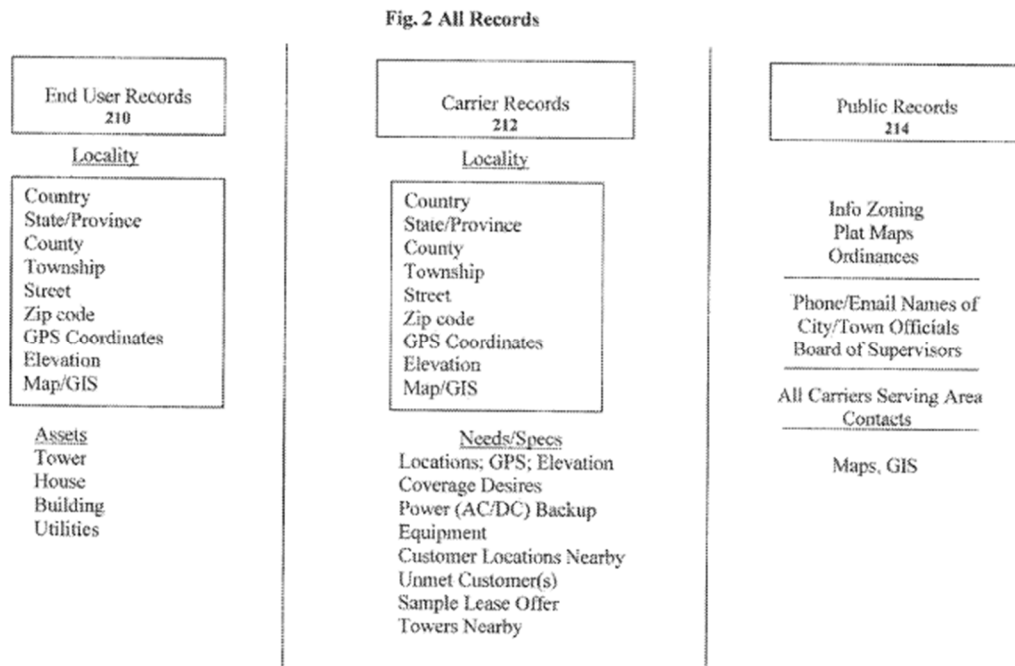
and location data, enabling the system to associate network performance and infrastructure information with geographic locations. *Id.*, 16:29-46; 24:58-25:9. The selection/optimizer applications 34 and sorting applications 36 use the stored records and the clearinghouse system analyzes, ranks, and outputs 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.*, 19:6-23; 24:6-42.



Ex. 1001, Figure 1

According to the '794 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.*, 27:14-67. Figure 2, reproduced below, illustrates the sources and nature of the data used by the clearinghouse system. However, the '794 Patent further describes the use of location-specific performance (*id.*, 6:6-22), performance/quality of service metrics (*id.*, 6:23-49), and telecommunication carrier records. *Id.*, 17:54-67.



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.*, 27:50-67. The '794 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.*, 16:16-29; 6:34-46; 25:7-26; 20:21-31:6; Figures 5 and 8-11. The clearinghouse system processes this dataset via the selection/optimizer applications and sorting applications (*id.*, 19:23-25; 24:6-42) and generates outputs that assess network integrity, compare service offerings, and identify infrastructure- or location-specific performance issues. *Id.*, 19:45-51; 10:22-36; 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.

The claims of the '794 Patent reflect this clearinghouse-centric architecture. Independent claims recite maintaining records for one or more telecommunications carriers that identify infrastructure needs, maintaining records of end users that identify telecommunications or property assets and associated business preferences, and providing electronic interfaces through which carriers and end users may selectively view or catalog such information. *Id.*, claims 1, 20, and 27. The claims further require providing notifications when suitable telecommunications assets or properties are identified for infrastructure needs of a carrier, reinforcing that the invention is directed to systematic infrastructure planning and deployment, not transient device events or device-level identifiers.

Thus, while the '794 Patent contemplates the use of public records and end-user-provided information, its focus is on carrier-side infrastructure planning, including identifying where network equipment should be placed or expanded and coordinating those decisions through a centralized clearinghouse. The invention operates at a planning and provisioning level for telecommunications networks, rather than merely collecting device diagnostics, roaming events, or access-point identifiers. Further, the '794 Patent enables structured, location-based infrastructure decisions that improve network performance, coverage, and cost efficiency.

B. Priority Date

U.S. Patent Application No. 12/208,007 ("'007 Application") was filed on September 10, 2008 and issued as the '794 Patent on July 17, 2012. Ex. 1001, field codes (21), (22), (45). 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 code (60). As the priority date for the '794 Patent is prior to March 16, 2013, the pre-AIA provisions of 35 U.S.C. §§ 102, 103 apply. Pub. L. No. 112-29, § 3(n)(1), 125 Stat. 284, 293 (2011).

C. Parallel Proceedings

The '794 Patent, along with other patents owned by Patent Owner, is involved

in parallel district court proceedings between Petitioner and Patent Owner. *See* Paper 10 (Patent Owner updated mandatory notice); Paper 9 (Patent Owner request for discretionary denial).

In related *inter partes* review proceedings involving various patents (the “Asserted Patents”) asserted in the parallel district court litigation, Petitioner claims 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); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2026-00035, Paper 10, 4-5 (PTAB Jan. 16, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2026-00032, Paper 11, 3 (PTAB Jan. 16, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01563, Paper 10, 6-7 (PTAB Jan. 16, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01605, Paper 11, 5 (PTAB Jan. 22, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01587, Paper 11, 6 (PTAB Jan. 26, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2026-00033, Paper 11, 5 (PTAB

Jan. 22, 2026); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2026-00086, Paper 11, 3 (PTAB Jan. 29, 2026).¹ Without substantiation, Petitioner attempts to imply that it has rights to the Asserted Patents, and further attempts to imply that Petitioner, through NYU Wireless, invested in the work that led to Prof. Rappaport's Asserted Patents. *Id.* Petitioner, however, ***does not, and cannot, provide any support for those erroneous suggestions.*** Specifically, Petitioner claims that it made "investments in the accused technology," *i.e.* its own products, citing to an interview with Prof. Rappaport regarding industry involvement in NYU Wireless. Fatal to Petitioner's argument, however, is the fact that the '794 Patent does not arise from any work at NYU Wireless, and further, the specification of the

¹ The Director denied institution of *inter partes* review in eight of these IPRs based on discretionary considerations. *See, e.g., Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01594, Paper 12 (Director Jan. 27, 2026) (denying institution for IPR2025-01564, IPR2025-01565, IPR2025-01594 and IPR2025-01595); *Samsung Elecs. Co. v. MASSIVELY BROADBAND LLC*, IPR2025-01605, Paper 12 (Director Feb. 3, 2026) (denying institution for IPR2025-01563, IPR2025-01605, IPR2026-00032 and IPR2026-00035). The Director has not yet decided whether to institute review in the other listed IPRs, *i.e.*, IPR2025-01587, IPR2026-00033, and IPR2026-00086.

'794 Patent predates the creation of that research center entirely. Petitioner did not become involved at NYU Wireless until 2012 and therefore Petitioner's involvement could not form the basis for any implied rights to Prof. Rappaport's prior work. To the best of Patent Owner's knowledge, Petitioner has produced *no such evidence* to support its position in its Petition and in the parallel district court proceedings, and has no intellectual property rights to the '794 Patent or any other Asserted Patent involved in these IPRs or the parallel litigation.

Relatedly, Petitioner contends that the inventor's published research constituted "prior art that was available for use," such that the Petitioner "did not infringe" the inventor's patents and Patent Owner would not enforce the patents. *See, e.g., Samsung Elecs.*, IPR2026-00032, Paper 11, 4; *Samsung Elecs.*, IPR2026-00035, Paper 10, 5; *Samsung Elecs.*, IPR2025-01563, Paper 10, 7; *Samsung Elecs.*, IPR2025-01605, Paper 11, 6; *Samsung Elecs.*, IPR2025-01587, Paper 11, 7; *Samsung Elecs.*, IPR2026-00033, Paper 10, 6; *Samsung Elecs.*, IPR2026-00086, Paper 11, 4. Petitioner, however, has not shown that it practices any such prior art. Nor does Petitioner rely upon any of the inventor's publications to support any asserted ground of unpatentability in Petitioner's IPR Petitions. Absent any showing that Petitioner actually implemented the alleged prior art, Petitioner's assertions regarding non-infringement or non-enforcement are unsupported. Also fatal to Petitioner's assertions, Petitioner has not identified any course of dealing,

agreement, or customer-supplier relationship between the parties that could plausibly support any understanding or perception that Patent Owner would refrain from enforcing Patent Owner's patents.

Petitioner also references its own involvement in "relevant" standard-setting efforts, without explaining which efforts are "relevant" or why that participation matters here. By citation to that same interview with Prof. Rappaport, Petitioner erroneously attempts to imply Prof. Rappaport was a member of the same standard-setting organizations as Petitioner. Petitioner's claim is not supported by Petitioner's citation, which says only that Prof. Rappaport's work writ large "influenced" standards bodies—not that Prof. Rappaport was a member, contributed any intellectual property, or had any obligation to do so. Indeed, Petitioner *offered no evidence* (i) describing a relationship between any of the patents and any applicable technical standard; (ii) that Prof. Rappaport or Patent Owner participated in any development of any applicable technical standard for the Asserted Patents (they did not); or (iii) that Prof. Rappaport or Patent Owner had any obligation to disclose the Asserted Patents to any standard-setting body or to Petitioner. *Id.* Nothing in the Petition for the '794 Patent relies on any technical standard as a basis for invalidity of any Challenged Claim, and nothing that transpires in this proceeding will determine if the '794 Patent or the other eleven Asserted Patents are subject to some technical standard. Thus, denial of institution is warranted, as instituting this

proceeding would add substantial, unnecessary work for the Board (*e.g.*, analyzing the validity of claims not asserted in the litigation) while failing to resolve any of Petitioner's unsubstantiated issues that are unrelated to validity and most appropriately adjudicated in the district court proceeding.

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 a "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., 5. Patent Owner reserves the right to address or to 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 '794 Patent

and its prosecution history, except for the terms specifically addressed below. *See* Pet., 6.

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 23, the “means for sending rank order” of dependent claim 24, the “means for identifying” of dependent claim 30, and the “means for determining” of dependent claim 31. 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 independent claims 1, 20, and 27 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. Summary 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	Dawson, Geranio	1-10, 12, 17-19
2	§ 103	Dawson, Geranio, Aaron	11, 13, 20, 22, 25, 26

Ground	Basis	Reference(s)	Claims
3	§ 103	Dawson, Geranio, Aaron, Chmaytelli	14-16, 27-32
4	§ 103	Daley, Aaron, and Scherzer (and alternatively Dawson)	20-26
5	§ 103	Daley, Aaron, Scherzer, and Chmaytelli (and alternatively Dawson)	27-32
6	§ 102	Scherzer (alternately § 103 with Dawson)	20-25

The Petition sets forth one ground for claims 1-10, 12, and 17-19 (Ground 1), claims 11 and 13 (Ground 2), and claims 14-16 (Ground 3); two grounds each for claims 21, 23, and 24 (Grounds 4 and 6), claim 26 (Grounds 2 and 4), and claims 27-32 (Grounds 3 and 5); and three grounds each for claims 20, 22, and 25 (Grounds 2, 4, and 6).

2. Summary of the Prior Art of the Asserted Grounds

a. 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 runtime network performance measurement or device-reported service quality. Dawson teaches a database of “roof rights,” held by a wireless service provider or which can be obtained by a wireless service provider. Ex. 1013, ¶[0019]. However, Dawson makes no mention of infrastructure needs or measured

performance or quality of service information. To the extent Dawson discusses “signal strength” of a coverage area for a network, the signal strength is predicted using commercially available tools, such as deciBel Planner. *Id.*, ¶¶[0026]-[0027], Figure 3. Dawson assesses the “real estate friendliness” of a potential network expansion site and uses commercially available tools to predict network performance. *Id.*, ¶¶[0009], [0026]-[0027]. However, Dawson predicts the network performance without consideration of specific infrastructure needs or actual, measured performance data from deployed mobile devices. *Id.*, ¶¶[0009], [0025]–[0026].

For example, Dawson classifies potential network expansion sites based on real estate friendliness (e.g., legal and contractual feasibility of installing infrastructure) and serviceability (e.g., predicted signal coverage based on RF propagation modeling). *Id.*, ¶[0028]. Dawson’s determinations are used to categorize sites as priority sites, rejected sites, or candidates for coverage optimization, guiding sales activity, infrastructure expansion planning, and internal workflow for the service provider. *Id.* Dawson is limited to pre-infrastructure deployment network planning, which includes signal strength modeling and predictions. *Id.*, ¶¶[0019], [0026]-[0028]. Dawson fails to teach the identification and/or remediation of specific infrastructure needs or the use of measured performance or quality-of-service information for network performance

improvements. Ex. 1001, 7:33–34; 17:29–30.

b. Geranio (Ex. 1038) – Pub. 2004/0002871 A1

As an initial matter, Gernio makes no mention of a telecommunications network at all. Rather, Geranio is directed to “integrated property database and search engine for matching properties with buyers,” not telecommunications network planning, infrastructure deployment, or carrier performance. Ex. 1038, Title, Abstract. The system of Geranio maintains a database of property listings containing descriptive attributes and transaction-related information to enable access to enable access to the descriptive attributes and transaction-related information for the property listings for the negotiation of real estate purchases by buyers, sellers, and intermediaries. *Id.*, ¶¶[0018]–[0024].

Geranio organizes listings using property definition fields in a database covering property characteristics and negotiated transaction terms, such as financial and contractual conditions (e.g., escrow terms, cost allocations, deposits, and fees). *Id.*, ¶[0029]. The database fields of Geranio facilitate real estate transactions by presenting business information relevant to property sales, and include no technical or operational data whatsoever relating to telecommunications networks. *Id.*, ¶¶[0027]–[0032].

Geranio is transaction-centric and market-facing, emphasizing listing, marketing, and negotiation of property sales through a database-driven platform. *Id.*,

¶¶[0018], [0029]; Figure 1. Geranio does not disclose radio networks, let alone carrier-side records identifying telecommunications infrastructure needs, infrastructure types, performance or quality-of-service information, or infrastructure locations. *Id.*, ¶¶[0018]-[0032].

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

Aaron is directed to measuring and reporting wireless service quality as experienced by mobile handsets to construct and update quality-of-service maps. Ex. 1010, Title, Abstract. Aaron uses “wireless terminals,” defined as cell phones (*id.*, ¶[0027]), to collect measured service quality data (*e.g.*, signal-to-noise ratio) and geographic location data (*e.g.*, GPS), which are transmitted to a central processor. *Id.*, ¶¶[0041]-[0042]. Based on this handset-reported information, the central processor updates coverage and quality-of-service maps to identify service problems before user complaints arise. *Id.*, ¶¶[0052], [0054].

Aaron expressly limits data inputs to information “received from wireless terminals,” including measured service quality parameters, location data, and optional user feedback. *Id.*, ¶¶[0031]-[0036]. Although Aaron seeks to improve problem identification accuracy, Aaron discloses no mechanism for resolving identified problems or being able to implement network-level enhancements. *Id.*, ¶[0035]. Aaron further does not disclose aggregating public records or carrier infrastructure data from multiple sources, nor does Aaron modify previously stored

records. Aaron's system explicitly stores newly detected information for later transmission. *Id.*, ¶¶[0034], [0043].

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. Chmaytelli discloses a Carrier Announcement Manager (“CAM”) that must be installed on a mobile device to receive advertisements pushed from a server (e.g., via directed SMS or network callbacks), whereby the CAM also controls message presentation. *Id.*, ¶[0041].

According to Chmaytelli, the CAM may determine whether the mobile device falls within a geographic area in which an advertisement is intended to be displayed. *Id.*, ¶[0081]. Chmaytelli does not disclose using multi-source data, including carrier records and public records, to generate or select localized content based on network performance, infrastructure availability, geographic constraints, or other contextual factors. Localization is taught as a delivery condition, not as the result of network-level processing of multi-source data. Chmaytelli further teaches a conditional delivery mechanism rather than a data-maintenance system. *Id.*, ¶¶[0082]-[0089].

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

Scherzer is directed to facilitating peer-to-peer sharing of Wi-Fi access points within a trusted social network, where access credentials are shared only among

known users. Ex. 1011, ¶[0147]. Scherzer explains that access-point owners are generally unwilling to share connectivity with unknown users, but are more willing to do so where prior contact exists through a social network. *Id.*

Scherzer analyzes “radio resources in reach” using connectivity data crowdsourced from client devices, including network name, MAC address, received signal strength, encryption status, access protocol response times, location, and passwords. *Id.*, ¶¶[0027], [0028], [0057]. Client devices actively probe nearby access points and report results to a server, confirming that the system operates at a peer-to-peer, access-point level rather than through carrier records or public-record data sources. *Id.*, ¶¶[0027], [0057], [0072].

Scherzer is expressly premised on restricted sharing controlled by access-point owners within a trusted network. *Id.*, ¶¶[0147]-[0148]. Consistent with this design, Scherzer neither consults nor maintains public records (*e.g.*, zoning, mapping, or governmental data), nor stores or analyzes records relating to telecommunications carriers or carrier infrastructure. Scherzer is therefore incompatible with a clearinghouse system that aggregates multi-sourced information from property owners, public records, and carriers. *Id.*, ¶[0147].

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

Daley teaches a system for providing customer care through device-specific diagnostics and troubleshooting. Ex. 1009, ¶[0033]. Diagnostic data is collected

from an electronic device and provided to a customer service representative to resolve device-level issues without requiring user-supplied information. *Id.* The system of Daley addresses individual device troubleshooting (e.g., problems experienced by a particular device of a particular customer) rather than network-level assessment or enhancement of the performance of a network. *Id.*, ¶[0007].

Daley discloses a diagnostic agent stored on an electronic device that logs device capability and diagnostic information for use by a customer service representative. *Id.*, ¶¶[0038]–[0039]. Any network performance data collected is used solely to troubleshoot issues experienced by a specific device. *Id.*, ¶[0039].

Daley does not disclose multi-source data aggregation, carrier-related records, or public records, because the system is directed to one-off, device-level support rather than network-level analysis or planning. *Id.*, ¶[0033]. The architecture retrieves and analyzes diagnostic data from a single device in response to a support interaction and eliminates any need for travel-triggered updates of stored location records. *Id.*, ¶[0067].

IV. THE PETITION FAILS TO ESTABLISH A REASONABLE LIKELIHOOD OF SUCCESS ON A SINGLE CLAIM

The Petition fails to demonstrate a reasonable likelihood of prevailing with respect to any Challenged Claim. As described below, Petitioner does not show, within the Petition itself, that the cited prior art teaches all limitations of the

Challenged Claims, as required by 37 C.F.R. § 42.104(b)(4). In addition, the Petition does not identify its evidence and reasoning with the particularity required by 35 U.S.C. § 312(a)(3). For each asserted ground, Petitioner has not shown that the cited prior art teaches all limitations of independent claims 1, 20, and 27, and Petitioner's failure to articulate a particularized mapping of claim limitations further precludes institution. The deficiencies of the Petition with respect to the independent Challenged Claims necessarily apply to the dependent Challenged Claims. Accordingly, the Board should deny institution.

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). “In an [*inter partes* review], 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) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *see also* 37 C.F.R. § 42.104(b) (requiring a petition for *inter partes* review to identify where each element of the claim is found in the prior art patents or printed publications relied upon).

The Board has repeatedly denied institution where a petition fails to

demonstrate where each claim element is found in the prior art relied upon. *See MediaTek, Inc. v. MOSAID Techs. Inc.*, IPR2024-00718, Paper 10, 2–5 (PTAB Oct. 9, 2024) (denying institution where a petition “has not adequately shown, for purposes of institution, that [the reference] teaches [a] limitation”); *Apple Inc. v. Allani*, IPR2025-00856, Paper 15, 14 (PTAB Nov. 4, 2025) (denying institution where a petition “has not sufficiently shown that [the reference] discloses [the challenged limitations], even for institution purposes”); *Samsung Elecs. Am., Inc. v. Cobblestone Wireless, LLC*, IPR2024-00319, Paper 16, 25 (PTAB June 24, 2024) (denying institution where a petition “has not sufficiently shown that [the limitation], as required by the challenged claims, is disclosed by or would have been obvious over [the reference]”).

B. The Petition Fails to Specify Where Each Claim Element Is Found in the Prior Art

The Board should deny institution because, as evidenced below, the Petition does not identify where each claim element is found in the prior art relied upon under any of Grounds 1-6. Because the Petition does not articulate an element-by-element showing within the Petition itself, none of Grounds 1–6 demonstrate a reasonable likelihood of success, and institution should therefore be denied.

1. The Petition Fails to Establish that Each and Every Feature of Claim 1 Would Have Been Obvious Over the Cited References

The Petition does not identify with particularity or adequately explain where

at least limitation 1[a] is taught or suggested in the cited prior art for Ground 1 (the only asserted ground applicable to claim 1). Accordingly, the Petition does not demonstrate a reasonable likelihood of success on its challenge to claim 1.

a. Ground 1 Fails to Establish that Each and Every Feature
of Claim 1 Would Have Been Obvious Over the Cited
References

Under Ground 1, the Petition argues that claim 1 would have been obvious over Dawson and Geranio. Pet., 20. The Petition, however, does not identify with particularity where the cited references teach or suggest at least limitation 1[a][i], which requires “records for one or more telecommunications carriers which identify infrastructure needs for one or more telecommunications carriers.” Ex. 1001, 35:64-66. Because Ground 1 is the only challenge to claim 1, Petitioner’s failure to articulate how this limitation is met precludes a showing of a reasonable likelihood of success on claim 1.

The Petition relies primarily on Dawson’s disclosure of “roof rights,” asserting that Dawson teaches an integrated database organizing information including such rights. Pet., 20. According to the Petition, “roof rights” refer to “a legal right to install a wireless infrastructure, which is typically, but not necessarily, installed on the roof a building.” *Id.* (citing Ex. 1013, ¶[0019]). The Petition contends that Dawson’s “roof rights” constitute the claimed “records for one or more telecommunications carriers which identify infrastructure needs” of limitation

1[a][i]. *Id.* There are two reasons, however, that the Petition fails to sufficiently explain how the “roof rights” of Dawson constitute the infrastructure needs of limitation 1[a][i].

First, the Petition fails to explain how the “roof rights” of Dawson, described as legal rights to install infrastructure, correspond to carrier records identifying infrastructure needs. The Petition effectively equates the existence of potential installation rights with infrastructure needs of a carrier, without explaining that connection. Yet limitation 1[a][i] expressly requires records identifying such needs. The Petition does not articulate how Dawson’s disclosure meets that requirement, nor does it explain how the cited disclosure reflects carrier needs rather than potential opportunities. A petition must identify with particularity where each claim limitation is found in the prior art and must articulate the reasoning supporting that mapping. The Petition does not do so for limitation 1[a][i].

The specification of the ’794 Patent further illustrates the distinction between infrastructure opportunities and infrastructure needs, describing, for example, carriers specifying particular infrastructure “wants and needs” within a clearinghouse database. Ex. 1001, 7:33-34; 17:29-30 (explaining “a carrier 10 specifying its particular infrastructure needs.”). Whether or not Dawson’s “roof rights” could relate to opportunities that might eventually satisfy needs of a carrier, the Petition does not explain how Dawson teaches records identifying such

needs as required by the claim.

Second, the Petition appears to rely on the same “roof rights” disclosure of Dawson to satisfy two separately recited and distinct claim elements of claim 1—limitations 1[a][i] and 1[a][ii]. Limitation 1[a][ii] requires the claimed database store “records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property assets owned or controlled by said end users including geographic location, and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets.” Ex. 1001, 36:5-13. The Petition also relies on the roof rights of Dawson as the alleged equivalent of the “telecommunications assets owned or controlled by said end users,” as recited by limitation 1[a][ii](i), and the “property assets owned or controlled by said end users,” as recited by limitation 1[a][ii](ii). Pet. 21-22. Petitioner’s reliance on the “roof rights” of Dawson for two separate and discretely claimed features is improper because each distinct claim element should be given its full effect.

Where claims recite distinct limitations, a petitioner must explain with particularity how the prior art satisfies each limitation and cannot simply assert that a single disclosure corresponds to multiple elements without articulating how each is met. *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1563 (Fed. Cir. 1991) (two

distinct claim elements should each be given full effect); *see also In re Robertson*, 169 F.3d 743, 745–46 (Fed. Cir. 1999) (holding that a reference disclosing two fastening elements that could perform the same function as three fastening elements neither taught nor suggested a separate third fastening element, either expressly or inherently). In that connection, the Board has denied institution where a petition mapped multiple distinct claim limitations to a single prior-art feature without adequately identifying separate disclosures or explaining how each limitation was satisfied. *See DISH Network v. Customedia Techs., LLC*, IPR2017-00936, Paper 13 at 10 (PTAB Aug. 24, 2017).

Similar to the petition in *Dish Network*, the Petition here impermissibly maps the “roof rights” of Dawson to two distinct claim terms: 1) the “infrastructure needs” of limitation 1[a][i]; and 2) the “telecommunications assets owned or controlled by said end users” and “property assets owned or controlled by said end users” of limitation 1[a][ii]. Pet., 20-22. The Petition, therefore, fails to give each distinct claim element its full effect, let alone analyze each element with sufficient particularity as required by § 312(a)(3).

Because the Petition does not identify with particularity where limitation 1[a][i] is taught or suggested under Ground 1, it does not demonstrate a reasonable likelihood of success for claim 1.

In addition to claim 1, the Petition also asserts Ground 1 against claims 2-10,

12, and 17-19, which depend either directly or indirectly from claim 1. Claims 10, 12, and 17-19, therefore, require all the limitations recited by claim 1, including limitation 1[a][i]. As evidenced above, the Petition fails to establish that Dawson and Geranio teach, at least, the “records” of limitation 1[a][i]. Accordingly, the Petition lacks a reasonable likelihood of success on its challenge to claims 2-10, 12, and 17-19 for at least the above reasons.

b. Dependent Claims of Claim 1 Challenged Under
Grounds 2 and 3

The Petitioner asserts Ground 2 against, in part, claims 11 and 13, which depend either directly or indirectly from claim 1 and, therefore, require all the limitations recited by claim 1, including limitation 1[a][i]. As explained in the prior section, the Petition fails to establish that Dawson and Geranio teach, at least, the “records” of limitation 1[a][i]. Under Ground 2, the Petition does not argue that Aaron remedies the aforementioned deficiencies of Dawson and Geranio. Accordingly, the Petition lacks a reasonable likelihood of success on its challenge to claims 11 and 13 for at least the above reasons.

The Petitioner asserts Ground 2 against, in part, claims 14-16, which depend either directly or indirectly from claim 1 and, therefore, require all the limitations recited by claim 1, including limitation 1[a][i]. As evidenced in the prior section, the Petition fails to establish that Dawson and Geranio teach, at least, the “records”

of limitation 1[a][i]. Under Ground 3, the Petition does not argue that Chmaytelli remedies the aforementioned deficiencies of Dawson and Geranio. Accordingly, the Petition lacks a reasonable likelihood of success on its challenge to claims 14-16.

2. The Petition Fails to Establish that Each and Every Feature of Claim 20 Would Have Been Obvious Over the Cited References

The Petition fails to establish that, at least, limitations 20[a][i]-[iii] and limitation 20[b] of independent claim 20 are disclosed, taught or suggested by the cited references under any of Grounds 2, 4, or 6. Accordingly the Petition lacks a reasonable likelihood of success on any of its challenges to claim 20.

a. Ground 2 Fails to Establish that Each and Every Feature of Claim 20 Would Have Been Obvious Over the Cited References

Under Ground 2, the Petition argues that claim 20 would have been obvious over Dawson, Geranio, and Aaron. However, the Petition does not identify, with particularity, how Dawson, Geranio, and Aaron teach or suggest the “records” of limitations 20[a][i]-[iii] and the “electronic interfaces” of limitation 20[b]. Accordingly, the Petition does not demonstrate a reasonable likelihood of success on Ground 2 with respect to claim 20.

i. *The Petition Fails to Particularly Explain how Dawson, Geranio, and Aaron Teach the “Records” of Limitations 20[a][i]-[iii]*

Limitation 20[a][i] recites “records for one or more telecommunications carriers which identify infrastructure and location information for one or more

specific locations.” Ex. 1001, 37:62-64. Limitation 20[a][ii] recites “records for one or more end users which identify telecommunications assets or property assets owned or controlled by said one or more end users.” Ex. 1001, 37:65-67. Limitation 20[a][iii] recites “public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations.” Ex. 1001, 38:1-8.

The Petition fails to establish that the cited references of Ground 2 teach or suggest any of the records of limitations 20[a][i]-[iii] for at least four related reasons: 1) the Petition lacks a specific analysis of limitations 20[a][i]-[iii] and, instead, refers to its analysis of claim limitations 1[a][i], 1[a][ii], and claim 2, which are not coextensive with limitations 20[a][i]-[iii]; 2) the Petition fails to sufficiently explain how the “roof rights” constitute the “records...which identify infrastructure and location information for one or more specific locations” of limitation 20[a][i]; 3) the Petition impermissibly relies on the same “roof rights” of Dawson to satisfy both limitation 20[a][i] and 20[a][ii]; and 4) the Petition fails to sufficiently explain how Dawson teaches the “public records” of limitation 20[a][iii].

First, the Petition lacks specific analysis of limitations 20[a][i]-[iii]. Instead,

the Petition refers to “limitation 1[a][i]” of Ground 1 to establish that Dawson, Geranio, and Aaron teach limitation 20[a][i]:

(iii) 20[a][i]

See Ground 1, limitation 1[a][i]. The records identifying infrastructure needs for one or more telecommunications carriers in 1[a][i] (e.g., roof rights) also *identify infrastructure and location information for one or more specific locations*. EX1002, ¶180.

Pet., 38

Similarly, the Petition refers to “limitation 1[a][ii]” of Ground 1 to establish that Dawson, Geranio, and Aaron teach limitation 20[a][ii]:

(iv) 20[a][ii]

See Ground 1, limitation 1[a][ii]. EX1002, ¶181.

Pet., 38

The Petition finally refers to “claim 2” of Ground 1 to establish that Dawson, Geranio, and Aaron teach limitation 20[a][iii]:

(v) 20[a][iii]

See Ground 1, claim 2. EX1002, ¶182.

Pet., 39

However, limitations 20[a][i]-[iii] are not coextensive with limitations 1[a][i], 1[a][ii], and claim 2, respectively. For example, limitation 20[a][i] recites “records...which identify *infrastructure*,” whereas limitation 1[a][i] recites

“records...which identify *infrastructure needs*.” The Petition fails to even acknowledge the differences between limitation 20[a][i] and limitation 1[a][i]—let alone explain how the “roof rights” of Dawson can simultaneously constitute infrastructure *needed by* a telecommunications carrier, as recited by limitation 1[a][i], and infrastructure *of* a telecommunications carrier, as recited by 20[a][i].

The Petition is similarly deficient in addressing the differences between limitation 20[a][ii] and limitations 1[a][ii]. For example, limitation 1[a][ii] requires records aggregating multiple end users and identifying detailed asset characteristics and business preferences, whereas limitation 20[a][ii] recites records identifying that one or more end users own or control telecommunications or property assets, without regard to asset type, location, or business terms. Petitioner’s wholesale incorporation of its analysis of limitation 1[a][ii] under Ground 1 into its analysis of limitation 20[a][ii] under Ground 2 fails to address the distinct features of each limitation. At a minimum, Petitioner’s referential “analysis” under Ground 2 illustrates how the Petition lacks the particularity required by 35 U.S.C. § 312(a)(3). For the sake of argument, even if Dawson plausibly disclosed the different claim features—which it does *not*—the Petition fails to articulate with sufficient particularity how the distinct disclosure of Dawson corresponds to each feature. *See DISH Network*, IPR2017-00936 at 10 (denying institution and explaining that, even where a reference might plausibly contain separate subcomponents, a petition must

articulate with sufficient particularity how the disclosure corresponds to each limitation).

Second, the Petition fails to sufficiently explain how the “roof rights” of Dawson are “records for one or more telecommunications carriers which identify infrastructure and location information for one or more specific locations,” as recited by limitation 20[a][i]. As explained above in Section IV.B.1.a in reference to Ground 1, the Petition fails to sufficiently explain how a legal right to build infrastructure in a location constitutes an infrastructure need of limitation 1[a][i], let alone the infrastructure itself of limitation 20[a][i]. Moreover, limitation 20[a][i] recites “records...which identify infrastructure and location information.” Are the “roof rights” of Dawson the claimed “infrastructure” or “location information” of limitation 20[a][i]? Or are the “roof rights” of Dawson the “infrastructure needs” of limitation 1[a][i]? The Petition offers no explanation on these threshold questions and, therefore, if institution is granted, the Board will have to impermissibly “weave together Petitioner’s evidence into a cohesive case.” *See Nearmap US, Inc. v. Eagle View Technologies, Inc.*, IPR2024-00716, Paper 9, 13 (PTAB Oct. 9, 2024).

Third, Petitioner’s reference to its analysis of limitations 1[a][i] and 1[a][ii] for limitations 20[a][i] and 20[a][ii] imports its impermissible reliance on the same “roof rights” of Dawson to satisfy two discretely claimed features of the claim to Ground 2. As explained in Section IV.B.1.a, where claims recite distinct limitations,

the Board has denied institution in circumstances where a petition mapped multiple claim limitations to a single prior-art feature without adequately identifying separate disclosures or explaining how each limitation was satisfied. *See DISH Network*, IPR2017-00936 at 10 (denying institution because a petition impermissibly mapped two distinct claim limitations to the same prior-art feature).

Petitioner’s reliance, for claim 20 under Ground 2, on its analysis of limitations 1[a][i] and 1[a][ii] under Ground 1 causes Petitioner to once again impermissibly map the “roof rights” of Dawson to two distinct claim terms: 1) the “records for one or more telecommunications carriers which identify infrastructure and location information for one or more specific locations” of limitation 20[a][i]; and 2) the “records for one or more end users which identify telecommunications assets or property assets owned or controlled by said one or more end users” of limitation 20[a][ii]. The Petition, therefore, fails to give each distinct claim element its full effect, let alone with the particularity required by 35 U.S.C. § 312(a)(3).

Fourth, the Petition fails to sufficiently explain how Dawson teaches the “public records” of limitation 20[a][iii]. Limitation 20[a][iii] is similar to claim 2. Under Ground 1, for the analysis of claim 2, the Petition relies on the “site identification field 204,” the “site address field 206,” the “MapInfo spatially-enabled terrain database,” and the “screen output 300” of Dawson, to argue that Dawson teaches “public records.” Pet., 26. However, the Petition fails to explain how any

features of Dawson constitute **public** information, as recited by claim 2 and limitation 20[a][iii]. In fact, Dawson teaches the use of “commercially available programs,” which need to be purchased, and restricts access to the information used by its system via password. Ex. 1013, ¶[0023].

For example, Dawson explains that “screen output 300 [is] from the deciBel Planner program” and explicitly defines both deciBel Planner and MapInfo as “commercially available programs” provided by Marconi Corporation and MapInfo Corporation, respectively. Ex. 1013, ¶[0026]. Dawson further explains how access must be granted to its system (*id.*, ¶[0034]) and requires a password prior to providing access to its system. *Id.*, ¶[0023]. The Petition fails to reconcile Dawson’s disclosure with the express language of claim 20 of the ’794 Patent. Accordingly the Petition does not sufficiently establish that Dawson teaches the “public records” of limitation 20[a][iii].

For these reasons, the Petition fails to establish that the cited references of Ground 2 teach or suggest any of the records of limitations 20[a][i]-[iii].

*ii. The Petition Fails to Particularly Explain how
Dawson, Geranio, and Aaron Teach the
“Interface” of Limitation 20[b]*

Limitation 20[b] recites “one or more electronic interfaces to said one or more computers which permit performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one or more

specific locations to be automatically or manually updated into said database ...”

Ex. 1001, 38:9-14. Under Ground 2, the Petition offers no specific analysis and instead refers to its analysis of limitation 1[b] and claims 3 and 11 under Ground 1:

(vi) 20[b] See Ground 1, limitation 1[b] and claims 3, 11. EX1002, ¶183.
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Pet., 39

However, limitation 1[b] is not coextensive with limitations 20[b]. For example, limitation 1[b] recites “one or more electronic interfaces...which permit one or more telecommunications carriers and one or more end users to selectively view or catalog information about (a) *available telecommunications assets or properties* and locations thereof, (b) the *owners or tenants* of said available telecommunications assets or properties, (c) *infrastructure needs* of one or more telecommunications carriers, and (d) *proposed business terms* for fulfilling said infrastructure needs with said telecommunications assets or said property assets.” Ex. 1001, 36:14-24. Limitation 20[b] recites “one or more electronic interfaces to said one or more computers which permit *performance or quality of service information* obtained from one or more mobile or fixed devices...to be automatically or manually updated into said database.” *Id.*, 38:9-13. The interface of limitation 1[b] allows certain types of information (available assets or properties, owners or tenants, infrastructure needs, business terms) to be selectively viewed or catalogued and the interface of

limitation 20[b] enables different types of information (performance or quality of service) to be updated into a database.

Petitioner's analysis of limitation 1[b] does not explain with particularity how any of Dawson, Geranio, or Aaron teach an interface for "updating" information into a database. Pet., 22-25. Likewise, Petitioner's analysis of limitation 1[b] omits any reference to "performance or quality of service information." *Id.* Because limitation 1[b] recites updating "performance or quality of service information" in a database, and because Petitioner addresses neither limitation, Petitioner's analysis of limitation 1[b] is deficient.

The Petition further references its analysis of claim 3 to establish that the "interface" of limitation 20[b] would have been obvious over Dawson, Geranio, and Aaron. Pet., 39. Claim 3 specifies that "said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, to selectively view or catalog information about said available telecommunications assets or properties and locations thereof, and said infrastructure needs of one or more telecommunications carriers for one or more locations." Ex. 1001, 36:43-49. However, similar to limitation 1[b] where Petitioner failed to show the claimed "interfaces," Petitioner's analysis of claim 3 also does not identify an "interface" in any of Dawson, Geranio, or Aaron for "updating" information, such as "performance or quality of service information." Accordingly,

Petitioner’s analysis of claim 3 is also deficient for limitation 20[b].

Finally, the Petition also references its analysis of claim 11 under Ground 1 to establish that the “interface” of limitation 20[b] would have been obvious over Dawson, Geranio, and Aaron. Pet., 39. Claim 11, however, is not challenged under Ground 1. It is not the Board’s responsibility to “weave together Petitioner’s evidence into a cohesive case.” *See Nearmap US, Inc. v. Eagle View Technologies, Inc.*, IPR2024-00716, Paper 9, 13 (PTAB Oct. 9, 2024). Accordingly, Petitioner’s reference to a purported analysis of claim 11 under Ground 1 does not cure the failure of the Petition to explain with particularity how the cited references satisfy limitation 20[b].

Under Ground 2, the Petition does not provide a specific analysis of the “interface” of limitation 20[b]. Instead, the Petition refers to analyses of limitation 1[b] and claims 3 and 11 under Ground 1. Pet., 39. As shown in Section IV.B.2.a.ii above, Petitioner’s analyses of limitation 1[b] and claims 3 do not explain how any of Dawson, Geranio, or Aaron teach an interface for “updating” information, where the updated information is “performance or quality of service information.” The Petition presents no analysis of claim 11 under Ground 1, even though as part of the Petition’s Ground 2 analysis, the Petition incorporates by reference an analysis of claim 11 in Ground 1. Pet., 39. In other words, the Petition references a non-existent analysis. Accordingly, the Petition does not demonstrate with particularity where

any of the cited references teach limitation 20[b]. Therefore, the Petition does not establish a reasonable likelihood of success on Ground 2 as to claim 20.

b. Ground 4 Fails to Establish that Each and Every Feature of Claim 20 Would Have Been Obvious Over the Cited References

Under Ground 4, for limitation 20[a][i], the Petition relies primarily on Daley, asserting that Daley discloses collecting and storing information related to network transitions, including transitions between a native network of a device and a roaming network. Pet., 60. In its analysis of limitation 20[a][ii], the Petition again relies on Daley, asserting that Daley discloses records associated with end users through the collection of device identifiers and usage-related data. Pet., 61-62. Finally, for limitation 20[a][iii], the Petition relies primarily on Scherzer, asserting that Scherzer discloses databases that store public records, such as access-point information, geographic coordinates, and mapping data organized by geographic region. Pet. at 62–64.

Petitioner’s theories for limitations 20[a][i]-[iii] fail for several reasons: 1) the Petition fails to sufficiently explain how the “roaming transitions” of Daley constitute records that identify infrastructure or infrastructure locations, as required by limitation 20[a][i]; 2) the Petition fails to sufficiently explain how Daley’s device identifiers and usage data constitute records identifying telecommunications or property assets owned or controlled by end users, as required by limitation 20[a][ii];

and 3) the Petition labels Scherzer’s access-point and mapping databases as “public records,” but provides no disclosure that those records are public in nature, as required by limitation 20[a][iii].

- i. The Petition fails to sufficiently explain how the “roaming transitions” of Daley constitute records that identify infrastructure or infrastructure locations, as required by limitation 20[a][i].

Limitation 20[a][i] recites “records for one or more telecommunications carriers which identify infrastructure and location information for one or more specific locations.” Ex. 1001, 37:62-64. The Petition argues that “Daley discloses capturing and storing information about transitions from a native network to a roaming network.” Pet., 60. The Petition proceeds 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 or remediation.” *Id.*

As an initial matter, most of the paragraphs of Daley cited by the Petition—¶¶[0270], [0271], and [0291]—do not concern roaming at all, let alone records identifying carrier infrastructure type or location. Pet., 60. 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.

Additionally, 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. *Id.* The Petition does not explain how Daley discloses carriers, 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 for one or more telecommunications carriers which identify infrastructure and location information for one or more specific locations* (e.g., the type of cellular network, the bands it supports, whether a tower is affiliated with a carrier providing a native network, MSC, HLR, VLR), to correlate with the roaming events.” Pet., 60 (emphasis in original). Petitioner’s high-level, conclusory analysis lacks particularity and, more importantly, fails to sufficiently explain how Daley teaches “records...which identify infrastructure,” as recited by limitation 20[a][i].

To the extent that the Petition references the “quality of service maps” of

Aaron, the Petition exclusively relies on Aaron for the “location information” of limitation 20[a][i]. Pet., 60-61. The Petition does not argue that Aaron teaches “records...which identify infrastructure,” as recited in limitation 20[a][i].

Finally, in lieu of a particular 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., 60. Petitioner cites the expert declaration (Ex. 1002) at ¶¶273-277 (which paragraphs span a two full pages of the expert declaration) in support of three sentences in the Petition. Pet., 60. 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 disfavored 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 Nat’l Info. Svs., Inc. v. DataTreasury Corp.*, IPR2014-00491, Paper 9, 9 (PTAB Aug. 13, 2014) (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 Tech. Co. v. Synaptics Inc.*, IPR2015-01739, Paper 8, 20 (PTAB Feb. 16, 2016) (explaining that “[p]arties who violate these [page limit] rules risk having their arguments not

considered by the Board”).

To the extent Petitioner relies on incorporation by reference through its expert declaration, the Petition itself does not identify with particularity how the cited prior art satisfies limitation 20[a][i].

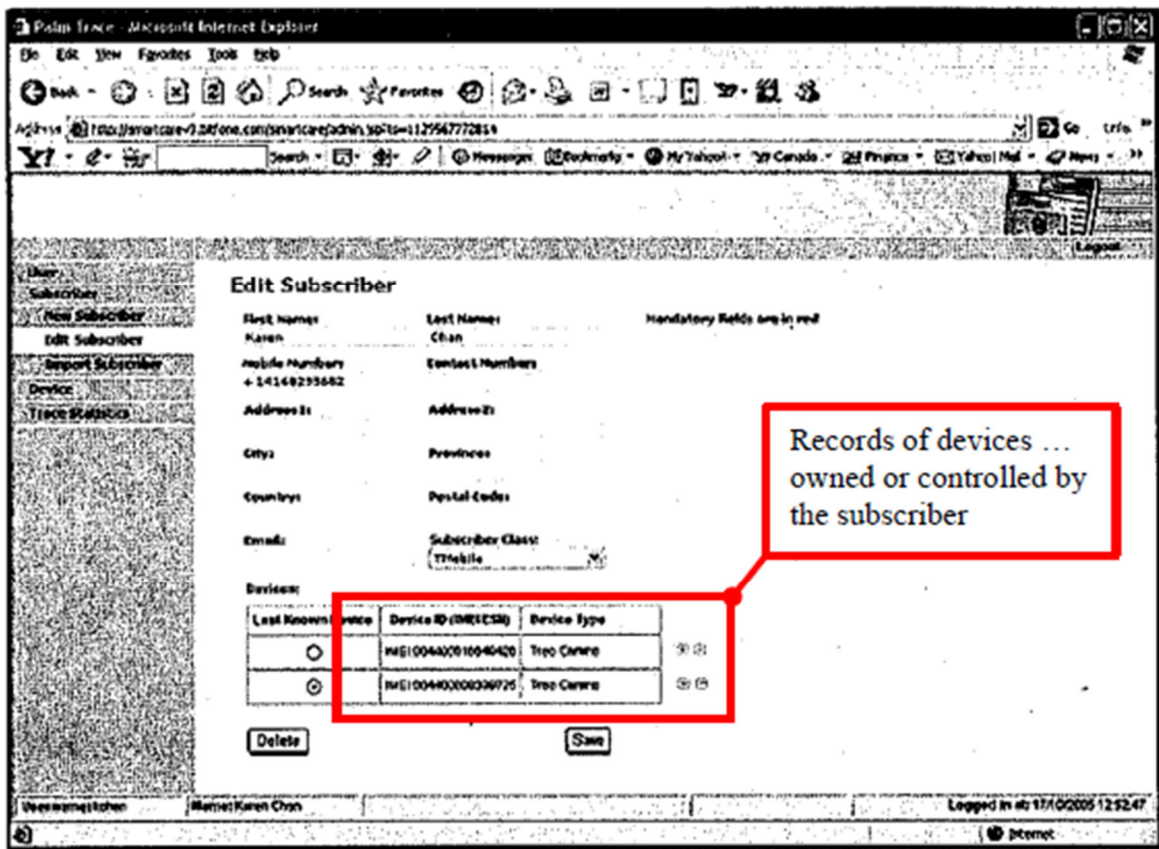
- ii. The Petition fails to sufficiently explain how Daley’s device identifiers and usage data constitute records identifying telecommunications or property assets owned or controlled by end users, as required by limitation 20[a][ii].

Limitation 20[a][ii] recites “records for one or more end users which identify telecommunications assets or property assets owned or controlled by said one or more end users.” Ex. 1001, 37:65-67. According to the Petition, “Daley’s database includes records (e.g., names and contact information) for subscribers to the wireless carrier network (*records for one or more end users*).” Pet., 61.

Petitioner’s theory for limitation 20[a][ii] based on Daley’s database with records for subscribers to the wireless carrier network fails. To the extent that names and contact information constitute “records for one or more end users” the Petition fails to explain how Daley’s information “identif[ies] telecommunications assets or property assets owned or controlled by” end users associated with the names and contact information. Additionally, the Petition further cites ¶¶[0217] and [0223] of Daley but fails to explain how these paragraphs teach “an association between a subscriber and ‘one or more electronic devices.’” Pet., 61. Contrarily, ¶[0217] of

Daley discloses device identifiers (*e.g.*, IMEI/ESN) and ¶[0223] of Daley separately discloses ***subscriber*** properties (*e.g.*, Subscriber Class, First Name, Last Name, MSISDN, Email, Home Phone Number, and Address). The Petition fails to sufficiently explain how either ¶[0217] or ¶[0223] teach “records for one or more end users which identify telecommunications assets or property assets owned or controlled by said one or more end users.”

Finally, the Petition annotates Figure 9 of Daley, reproduced below, in an attempt to identify the records of limitation 20[a][ii]. As an initial matter, annotated Figure 9 of Daley is barely legible and Daley offers a mere sentence to explain what Figure 9 is intended to represent. Regardless, Daley expressly frames Figure 9 as an “Edit Subscriber” screen to manage a subscriber so a customer care representative can analyze device behavior and diagnostics of end users. The end users that own or control the mobile devices ***are never intended*** to see the interface of Figure 9. Accordingly, the Petition fails to sufficiently establish that Figure 9 of Daley constitutes a “record[] for one or more end users which identify telecommunications assets or property assets owned or controlled by said one or more end users,” as recited by limitation 20[a][ii].



Pet., 62 (annotations in original)

- iii. The Petition Provides No Disclosure that Scherzer's Access-point and Mapping Database are Public.

Petitioner labels Scherzer's access-point and mapping databases as "public records," but provides no disclosure that those records are public in nature, as required by limitation 20[a][iii]. Limitation 20[a][iii] recites "public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said

geographic locations.” Ex. 1001, 38:1-8. The Petition relies primarily on Scherzer for limitation 20[a][iii], asserting that Scherzer’s databases of access-point information, geographic coordinates, and mapping layers constitute the claimed public records. Pet. at 62–64.

The Petition, however, fails to identify any disclosure in Scherzer indicating that the cited records are public in nature. Contrarily, Scherzer teaches a closed system of peer-to-peer sharing of access-point information. Ex. 1011, ¶¶[0027], [0057]. Scherzer does not teach the use of public records and is actually premised expressly on the reluctance of access-point owners to openly share connectivity information. *Id.*, ¶[0147] (“[O]wners of radio access points are averse to sharing the AP resource with people they don’t know.”). 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].

Additionally, the Petition fails to demonstrate that Scherzer’s records include the categories enumerated in the claim as public records—such as zoning information, local ordinances, or contact information for government officials. Rather, the Petition relies on Scherzer’s technical network data (*e.g.*, access-point identifiers and coordinates) and asserts, without support, that a POSITA would have understood such data to qualify as public records and to include information about

carriers serving particular locations. Pet., 63-64. Limitation 20[a][iii], however, requires public records of specified types, not private or proprietary network datasets repurposed by inference.

Neither Daley nor Aaron remedies the aforementioned deficiencies of Scherzer and the Petition does not argue otherwise. Because the Petition fails to show that any cited reference discloses public records—as opposed to privately compiled or proprietary network datasets—Ground 4 also fails to establish that limitation 20[a][iii] would have been obvious over Daley, Aaron, and Scherzer.

c. Ground 6 Fails to Establish that Claim 20 is Anticipated by Scherzer

According to the Petition, limitation 20[b] recites “*one or more electronic interfaces* to said one or more computers which permit performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one or more specific locations to be automatically or manually updated into said database, and which permits at least one of said one or more telecommunications carriers or said one or more end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.” Pet., 7.

Even though anticipation requires disclosure of every claim element in a single reference (*see Verdegaal Bros. v. Union Oil Co. of Calif.*, 814 F.2d 628, 631

(Fed. Cir. 1987)), the Petition does not identify where Scherzer discloses an electronic interface as recited in limitation 20[b], nor does it cite any passage of Scherzer that corresponds to that element. Instead, the Petition focuses almost exclusively on server-side functionality, asserting that Scherzer's server continuously receives access-point connection quality data from mobile devices and automatically updates a database. *Id.*, 78-79. The Petition exclusively argues that Scherzer continuously collects and updates information, without identifying an electronic interface in Scherzer by which information is continually collected and updated. The Petition merely identifies the server under limitation 20[b], which it also asserts as the "one or more computers" of limitation 20[a]. *Id.*, 75. However, the Petition does not explain with particularity how Scherzer's server simultaneously satisfies both limitations, nor does it identify any disclosure showing a distinct electronic interface separate from the alleged computer. *See Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1563 (Fed. Cir. 1991) (two distinct claim elements should each be given full effect).

The Petition similarly points to Scherzer's disclosure that a client program may provide an updated radio-resources geographic map "displayed on a laptop, PDA, cell-phone, etc." and that users may review or sort rankings of nearby access points. Pet., 79 (citing Ex. 1011, ¶¶[0078], [0149]-[0150]). The Petition, however, also fails to identify an interface that permits selective viewing or cataloging of the

specific record categories required by limitation 20[b]—namely, carrier infrastructure records, end-user asset records, or public records—nor does the Petition explain how any identified interface distinguishes among those categories.

At no point does the Petition identify where Scherzer discloses an interface satisfying limitation 20[b]. Petitioner has, therefore, failed to demonstrate a reasonable likelihood of prevailing as to claim 20 under Ground 6.

3. The Petition Fails to Establish that of Claim 27 Would Have Been Obvious Over the Cited References

The Petition fails to establish that the cited references for Grounds 3 and 5 teach or suggest limitation 27[a][ii] of independent claim 27. Accordingly, the Petition lacks a reasonable likelihood of success on any of its challenges to claim 27.

a. Petitioner Fails to Show that Claim 27 Would Have Been Obvious under Ground 3

Under Ground 3, the Petition argues that claim 27 is obvious over Dawson, Geranio, Aaron, and Chmaytelli. Pet., 3. According to the Petition, limitation 27[a][ii] recites “one or more electronic interfaces to said one or more computers which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces permitting one or more of performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations to

be automatically or manually updated into said database, and at least one of said one or more telecommunications carriers or said one or more end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.” *Id.*, 9. However, for Ground 3, the Petition offers no specific analysis of limitation 27[a][ii] and instead refers to its analysis of limitation 20[b] under Ground 2:

(viii) 27[a][ii]
See Ground 2, limitation 20[b]. EX1002, ¶208.

Pet., 45

Although, limitation 27[a][ii] is substantially similar to limitation 20[b], neither limitation 27[a][ii] nor limitation 20[b] are coextensive with limitation 1[b]. Nonetheless, the Petition simply refers to its analysis of limitation 1[b] and claims 3 and 11 under Ground 1 to establish that limitation 20[b] is unpatentable over Dawson, Geranio, and Aaron. *Id.*, 39. Section IV.B.2.a.ii of this Preliminary Response explains why Petitioner’s analyses of limitation 1[b] and claims 3 and 11 under Ground 1 are insufficient to render the “electronic interfaces” of limitation 20[b] obvious over Dawson, Geranio, and Aaron. Because the Petition relies on its analysis of limitation 20[b] to address limitation 27[a][ii], and because limitation 27[a][ii] is substantially coextensive with limitation 20[b], the deficiencies identified above in Section IV.B.2.a.ii with respect to limitation 20[b] apply equally here.

Accordingly, the Petition does not establish with particularity that Dawson, Geranio, Aaron, and Chmaytelli teach the “electronic interfaces” recited in limitation 27[a][ii].

b. Petitioner Fails to Show that Claim 27 Would Have Been Obvious under Ground 5

Under Ground 5, the Petition argues that claim 27 is obvious over Daley, Aaron, Scherzer, and Chmaytelli. Pet., 3. However, the Petition fails to sufficiently explain, with particularity, how Daley, Aaron, Scherzer, and Chmaytelli teach or suggest, at least, the computer and database of limitation 27[a][i] and the records of limitations 27[a][i][2]-[4].

i. *The Petition Fails to Particularly Explain how Daley, Aaron, Scherzer, and Chmaytelli Teach the “Computers” of Limitation 27[a][i]*

According to the Petition, limitation 27[a][i] recites “one or more computers which interface with a database.” *Id.*, 9. Under Ground 5, the Petition offers no specific analysis of limitation 27[a][i] and instead refers to its analysis of limitation 20[a][i] under Ground 4:

(iii) 27[a][i] See Ground 4, limitation 20[a][i]. EX1002, ¶344.

Pet., 72

However, according to the Petition, limitation 20[a][i] recites “records for one

or more telecommunications carriers which identify infrastructure and location information for one or more specific locations.” *Id.*, 7. Limitation 20[a][i], therefore, is not coextensive with limitation 27[a][i]. Petitioner’s analysis of limitation 20[a][i] fails to identify a computer that interfaces with a database. Accordingly, Petitioner’s analysis of limitation 20[a][i] is insufficient to render limitation 27[a][i] obvious.

ii. The Petition Fails to Particularly Explain how Daley, Aaron, Scherzer, and Chmaytelli Teach the “Records” of Limitations 27[a][i][2]-[4]

According to the Petition, limitation 27[a][i][2] recites “records for one or more telecommunications carriers which identify infrastructure and location information for one or more specific locations,” limitation 27[a][i][3] recites “records for one or more end users which identify telecommunications assets or property assets owned or controlled by said one or more end users,” and limitation 27[a][i][4] recites “public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations.” Pet., 9.

However, under Ground 5, the Petition offers no specific analysis of

limitations 27[a][i][2]-[4] and instead refers to its analysis of limitations 20[a][i]-[ii] under Ground 4 for each of limitations 27[a][i][2]-[4], respectively:

(v) 27[a][i][2]
<i>See</i> Ground 4, limitation 20[a][i]. EX1002, ¶346.
(vi) 27[a][i][3]
<i>See</i> Ground 4, limitation 20[a][ii]. EX1002, ¶347.
(vii) 27[a][i][4]
<i>See</i> Ground 4, limitation 20[a][iii]. EX1002, ¶348.

Pet., 72

Limitations 27[a][i][2]-[4] are coextensive with limitations 20[a][i]-[iii], respectively. Section IV.B.2.b of this Preliminary Response explains why the analyses of the Petition for limitations 20[a][i]-[iii] under Ground 4 are insufficient to render the “records” of limitations 20[a][i]-[iii] obvious over Daley, Aaron, and Scherzer. Because the Petition relies on its analysis of limitations 20[a][i]-[iii] to address limitations 27[a][i][2]-[4], and because those limitations are substantially coextensive, the deficiencies identified above in Section IV.B.2.b with respect to limitations 20[a][i]-[iii] apply equally here. For at least the reasons discussed in Section IV.B.2.b of this Preliminary Response, the Petition does not identify with particularity where Daley, Aaron, and Scherzer disclose the corresponding records recited in limitations 27[a][i][2]-[4].

4. The Petition Fails to Establish that Claims 2-19, 21-26, and 28-32 Would Have Been Obvious Over the Cited References

Claims 2-19, 21-26, and 28-32 depend either directly or indirectly from claims 1, 20, and 27. Therefore, each of claims 2-19, 21-26, and 28-32 incorporate the elements of their respective independent claims (as well as any intervening claims). 35 U.S.C. § 112(d). As explained above, however, the Petition fails to establish that the asserted prior art references under Grounds 1–6 render independent claims 1, 20, or 27 unpatentable. The Petition likewise does not identify any additional disclosures in its analysis of claims 2–19, 21–26, and 28–32 that remedy the deficiencies identified above with respect to the independent claims. Accordingly, the Petition does not demonstrate a reasonable likelihood of prevailing on any Challenged Claim.

C. The Petition Fails the Particularity Requirement of 35 U.S.C. § 312(a)(3)

Under 35 U.S.C. § 312(a)(3), a petition must articulate theories that, with *particularity*, identify “the evidence that supports the grounds for the challenge to each claim.” The Petition fails that requirement in at least two independent and dispositive ways.

1. The Petition Presents Unbounded Theories

The Petition asserts six overlapping grounds involving shifting combinations of Dawson, Geranio, Aaron, Daley, Scherzer, and Chmaytelli, with multiple grounds invoking references “alternatively”—most notably Dawson—without specifying (i)

whether Dawson is an additional reference under the ground or whether it is a replacement for one or more of the listed references; (ii) where, how, or for which claim limitations Dawson supposedly applies. Pet., 3. For example, for Ground 4, the Petition is unclear whether Dawson is a replacement for the combination of Daley, Aaron, and Scherzer; whether it is an alternative for one or more of Daley, Aaron, and Scherzer; or whether Dawson is an alternative addition to the Daley-Aaron-Scherzer combination. The Petition also never identifies which limitations are allegedly met by Dawson in the alternative, nor how those alternative theories differ from the primary combinations.

The lack of specificity in the Petition creates precisely the type of “kitchen sink” challenge the Board has criticized, where a petitioner takes a “catch all” approach that required the Board and Patent Owner to address an unreasonable number of combinations. *See Adaptics Ltd. v. Perfect Co.*, IPR2018-01596, Paper 20 at 15, 20 (PTAB Mar. 6, 2019) (denying institution where the petition’s overinclusive presentation required the Board to sort through unspecified combinations). The use, by the Petition, of “alternatively Dawson” across multiple grounds, without tethering those alternatives to particular references and/or claim elements, forces the Board to reconstruct innumerable possible theories, such that the Petition fails to satisfy the “particularity” requirement.

2. The Petition Relies on Limitation Identifiers Rather Than the Claim Language, Rendering Its Theories Unintelligible

Independently, the Petition repeatedly substitutes limitation identifiers (e.g., “20[a][i]”) provided in a “List of Challenged Claims” (Pet., 4-10) in lieu of analysis that is anchored to the actual claim language. The reliance of the Petition on limitation identifiers results in arguments that blur or collapse distinct requirements. Rather than explaining how the cited references meet the express language of each limitation, the Petition leaves critical gaps in its elemental showings.

The Board has cautioned that petitions relying on shorthand identifiers without adequately tying those identifiers to the claim language risk becoming “unintelligible.” *See Shenzhen Huiding*, Paper 8 at 20-21.

Here, the failure of the Petition to anchor its analysis to the express language of the claims directly creates unnecessary work and confusion for the Board and Patent Owner and results in the elemental deficiencies, including the inability of the Petition to articulate which references allegedly disclose specific required features. Accordingly, because the Petition fails to articulate its theories with the particularity required by 35 U.S.C. § 312(a)(3)—instead presenting overinclusive, alternative combinations and analysis untethered to the claims’ express language—the Board should deny institution on this ground alone.

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 '794 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, the Board should deny institution.

Dated: February 9, 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 **11,409** 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: Feb. 9, 2026

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CERTIFICATION OF SERVICE

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