

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

IPA TECHNOLOGIES INC.,
Patent Owner.

IPR2019-00728
Patent 6,851,115 B1

Before KEN B. BARRETT, TREVOR M. JEFFERSON, and
BART A. GERSTENBLITH, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
Denying and Dismissing Patent Owner's Motion to Exclude
35 U.S.C. § 318(a)

I. INTRODUCTION

In this *inter partes* review, Google LLC (“Petitioner”) challenges claims 61–70 of U.S. Patent No. 6,851,115 B1 (“the ’115 Patent,” Ex. 1001), which is assigned to IPA Technologies Inc. (“Patent Owner”). Paper 1 (“Petition” or “Pet.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a), addresses issues and arguments raised during the trial in this *inter partes* review. For the reasons discussed below, we determine that Petitioner has not demonstrated the unpatentability of claims 61–70.

A. Procedural History

Petitioner filed a Petition challenging claims 61–70 of the ’115 Patent (Pet. 4–5), and Patent Owner filed a Preliminary Response (Paper 6). We instituted trial on all grounds of unpatentability. Paper 11 (“Dec. on Inst.”), 22. Patent Owner filed a Request for Rehearing of our decision granting institution (Paper 14) that was denied by our Decision Denying Patent Owner’s Request (Paper 40). Patent Owner’s request for Precedential Opinion Panel (POP) review was also denied (Paper 26).

During trial, Patent Owner filed a Response (Paper 41, “PO Resp.”), Petitioner filed a Reply (Paper 59, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 66, “PO Sur-reply”). Patent Owner filed a Motion to Exclude (Paper 67), Petitioner filed an opposition (Paper 70) to which Patent Owner replied (Paper 72). A combined oral hearing for this *inter partes* review and related cases (IPR2019-00730, IPR2019-00731, IPR2019-00733, and IPR2019-00734) was held on June 4, 2020, a transcript of which appears in the record in each case. Paper 73 (“Tr.”).

B. Instituted Grounds of Unpatentability

We instituted *inter partes* review of claims 61–70 of the ’115 patent on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
61, 63–70	103(a) ¹	Martin, ² Kohn
62	103(a)	Martin, Kohn, ³ Pollock ⁴

Dec. on Inst. 7–8, 36; *see* Pet. 4–5.

Petitioner relies on the Declaration of Dr. Dan R. Olsen Jr. (Ex. 1002) and the Declaration from Dr. Douglas B. Moran (Ex. 1007).

C. Related Proceedings

According to the parties, the ’115 Patent is the subject of the following district court litigation: *IPA Techs. Inc. v. Google LLC*, No. 1:18-cv-00318 (D. Del.); *IPA Techs. Inc. v. Microsoft Corp.*, No. 1:18-cv-00001 (D. Del.); and *IPA Techs. Inc. v. Amazon.com, Inc.*, No. 1:16-cv-01266

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102 and 103. Because the ’115 Patent has an effective filing date prior to the effective date of the applicable AIA amendments, we refer to the pre-AIA versions of §§ 102 and 103.

² David L. Martin, Adam J. Cheyer, Douglas B. Moran, *Building Distributed Software Systems with the Open Agent Architecture*, PROCEEDINGS OF THE THIRD INTERNATIONAL CONFERENCE ON THE PRACTICAL APPLICATION OF INTELLIGENT AGENTS AND MULTI-AGENT TECHNOLOGY 355 (1998) (Ex. 1011, “Martin,” ”the Martin reference”).

³ U.S. Patent No. 6,088,689 to Kohn issued July 11, 2000, filed Nov. 29, 1995 (Ex. 1012, “Kohn”).

⁴ U.S. Patent No. 5,706,406 to Pollock issued Jan. 6, 1998, filed May 22, 1995 (Ex. 1013, “Pollock”).

(D. Del.). Pet. 2; Paper 5, 2. The '115 Patent was also the subject of a petition for *inter partes* review filed by Petitioner in IPR2019-00729. Pet. 3; Paper 5, 2. Institution of an *inter partes* review was denied in that case.

D. The '115 Patent and Illustrative Claim

The '115 Patent describes “software-based architectures for communication and cooperation among distributed electronic agents.” Ex. 1001, 1:27–29. Figure 4 of the '115 Patent is reproduced below.

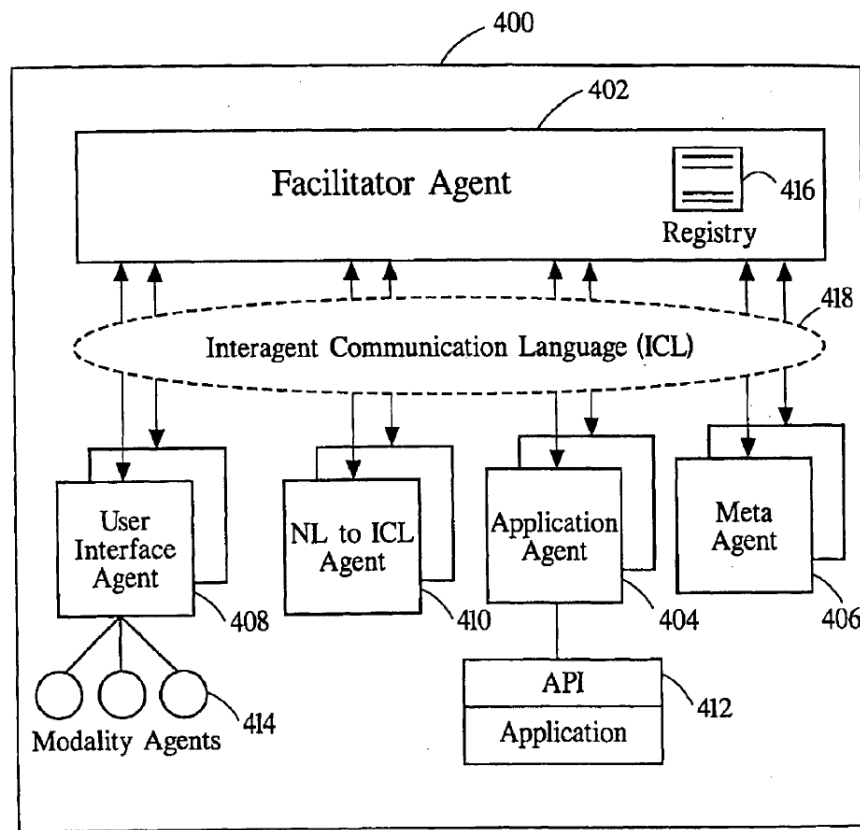


Fig. 4

Figure 4 depicts the structure of an exemplary distributed agent system of the '115 Patent. *Id.* at 6:25–32. As shown in Figure 4, system 400 includes facilitator agent 402, user interface agents 408, application agents 404, and meta-agents 406. *Id.* at 6:25–28. The '115 Patent describes that system 400 is organized “as a community of peers by their common relationship” to

facilitator agent 402 (*id.* at 6:28–30), which is “a specialized server agent that is responsible for coordinating agent communications and cooperative problem-solving” (*id.* at 6:32–35).

According to the ’115 Patent, cooperation among agents is structured around a three-part approach as follows: (1) providers of services register their capabilities specifications with a facilitator; (2) requesters of services construct goals and relay them to the facilitator; and (3) the facilitator coordinates the efforts of the appropriate service providers in satisfying these goals. *Id.* at 10:42–47. The ’115 Patent describes that cooperation among agents is achieved via messages expressed in a common language, called the Interagent Communication Language (“ICL”). *Id.* at 10:40–48.

Referencing Figure 3 (not reproduced herein) and Figure 4, the ’115 Patent describes the operation of a distributed agent system in a preferred embodiment. *Id.* at 7:13–39. The ’115 Patent describes that, when invoked, a client agent makes a connection to a facilitator, e.g., facilitator agent 402, and registers with the facilitator a specification of the capabilities and services it can provide. *Id.* at 7:15–21. For example, a natural language agent may register the characteristics of its available natural language vocabulary. *Id.* at 7:21–23. When facilitator agent 402 receives a service request and determines that registered services 416 of one of its client agents will help satisfy a goal of the request, the facilitator sends that client a request expressed in ICL 418. *Id.* at 7:25–29. The client agent parses this request, processes it, and returns answers or status reports to the facilitator. *Id.* at 7:30–32.

Referencing Figures 5 and 6 (not reproduced herein), the ’115 Patent describes an exemplary embodiment where user interface agent 408 runs on

a user's laptop, accepting user input, sending requests to facilitator agent 402 for delegation to appropriate agents, and displaying the results of the distributed computation. *Id.* at 7:53–63. As illustration, the '115 Patent describes that, when the question “What is my schedule?” is entered on user interface (UI) 408, UI 408 sends the request to facilitator agent 402, which in turn asks natural language (NL) agent 426 to translate the query into ICL. *Id.* at 8:4–8. The translated ICL expression is then routed by facilitator agent 402 to appropriate agents, e.g., calendar agent 434, to execute the request. *Id.* at 8:13–15. Finally, results are sent back to UI agent 408 for display. *Id.* at 8:15–16.

Of the challenged claims, only claim 61 is independent. Claim 61 is illustrative of the challenged claims and is reproduced below.

61. A facilitator agent arranged to coordinate cooperative task completion within a distributed computing environment having a plurality of autonomous service-providing electronic agents, the facilitator agent comprising:

an agent registry that declares capabilities of service-providing electronic agents currently active within the distributed computing environment; and

a facilitating engine operable to parse a service requesting order to interpret a compound goal set forth therein, the compound goal including both local and global constraints and control parameters, the service request formed according to an Interagent Communication Language (ICL), wherein the ICL includes:

a layer of conversational protocol defined by event types and parameter lists associated with one or more of the events, wherein the parameter lists further refine the one or more events; and

a content layer comprising one or more of goals, triggers and data elements associated with the events; and

the facilitating engine further operable to construct a goal satisfaction plan by using reasoning that includes one or more of domain-independent coordination strategies, domain-specific reasoning, and application-specific reasoning comprising rules and learning algorithms.

Ex. 1001, 35:4–29.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner’s declarant, Dr. Olsen, opines that a person of ordinary skill in the art at the time of the invention of the ’115 Patent would have had at least a Bachelor’s degree in computer science, electrical engineering, or a similar discipline, and one to two years of work experience in networked computer systems or a related area. Ex. 1002 ¶ 14. Patent Owner does not dispute Dr. Olsen’s assessment of the level of ordinary skill in the art. *See generally* PO Resp.

Based on the current record, we find Petitioner’s proposal consistent with the level of ordinary skill in the art reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Therefore, we adopt Petitioner’s unopposed position as to the level of ordinary skill in the art.

B. Overview of Martin (Ex. 1011)

Martin relates to the Open Agent Architecture (OAA), which “makes it possible for software services to be provided through the cooperative efforts of distributed collections of autonomous agents.” Ex. 1011, 10⁵

⁵ The page numbers for the Martin reference refer to the Petitioner-inserted page numbers in the bottom, left-hand corner of each page.

(Abstract). According to Martin, “[c]ommunication and cooperation between agents are brokered by one or more facilitators, which are responsible for matching requests, from users and agents, with descriptions of the capabilities of other agents.” *Id.*

Figure 1 of Martin is reproduced below.

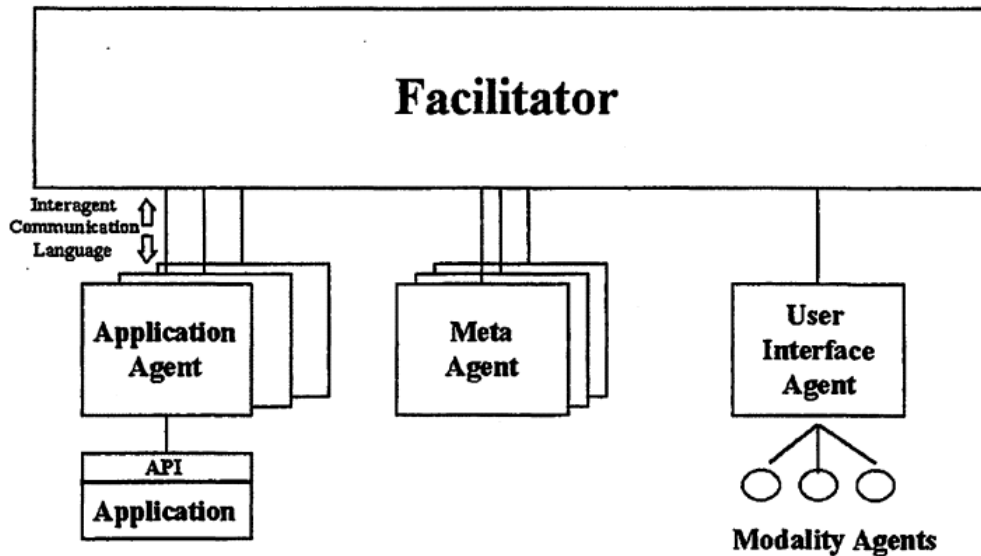


Figure 1: OAA System Structure.

Figure 1 depicts the structure typical of a small OAA system, showing a user interface agent, several application agents, and meta-agents, organized as a community of peers by their common relationship to a facilitator agent. *Id.* at 14. Figure 1 also shows an Interagent Communication Language (“ICL”). *Id.* at 16, Fig. 1.

According to Martin, cooperation among the agents of an OAA system is achieved via messages expressed in a common language, Interagent Communication Language (ICL). *Id.* at 17. Martin describes “Mechanisms of Cooperation” as follows.

Cooperation among the agents of an OAA system is achieved via messages expressed in a common language, ICL, and is normally structured around a 3-part approach: providers of services

register capabilities specifications with a facilitator; requesters of services construct goals and relay them to a facilitator, and facilitators coordinate the efforts of the appropriate service providers in satisfying these goals.

Id.

According to Martin, all agents that are not facilitators are called client agents. *Id.* at 16. Martin describes that when invoked, a client agent makes a connection to a facilitator. *Id.* at 16–17. Upon connection, an agent informs the facilitator of the services it can provide. *Id.* at 17. When the agent is needed, the facilitator sends it a request expressed in ICL. *Id.* The agent parses this request, processes it, and returns answers or status reports to the facilitator. *Id.*

C. Martin as Prior Art Under 35 U.S.C. § 102(a)

We instituted *inter partes* review on each of the grounds presented in the Petition, all of which rely on Martin (Ex. 1011), a 1998 proceeding article listing David L. Martin, Adam J. Cheyer, and Douglas B. Moran as authors. *See* Pet. 11–16; Dec. on Inst. 8–23, 36. Petitioner asserts that Martin is prior art under 35 U.S.C. § 102(a) because (1) it is a printed publication that was accessible to the public by November 1998 (Pet. 7–8) and (2) describes “the work of a different inventive entity than the inventive entity of the ’115 patent” (*id.* at 11). The parties do not dispute the printed publication status of Martin. Patent Owner argues that Martin does not qualify as prior art because Petitioner has failed to provide evidence and argument under the proper inquiry to show that the portions of the Martin reference relied on as prior art represent the work by another; namely Douglas Moran. PO Resp. 8–10.

As each of the grounds rely on Martin, our decision turns on whether Martin qualifies as prior art under 35 U.S.C. § 102(a). Because we determine below that Petitioner has not shown by a preponderance of the evidence that there is *not* a common inventive entity between Martin and the '115 Patent, we find that Petitioner has failed to show that Martin qualifies as prior art under 35 U.S.C. § 102(a).

1. Martin Reference Background

Martin discussed above is a conference paper titled “Building Distributed Software Systems with the Open Agent Architecture,” and was published in 1998. Ex. 1011, 1, 10. Martin was “authored by three SRI employees—the two inventors of the '115 Patent (Cheyer and Martin) and their [SRI] co-worker (Moran).” PO Resp. 1; Ex. 1011. “Both the '115 Patent and *Martin* relate to work done on the Open Agent Architecture (“OAA”) project at SRI, and large portions of the '115 application and the *Martin* reference are identical or almost identical.” PO Resp. 1; *compare* Ex. 1001, *with* Ex. 1011, 10–29.

Martin was considered during prosecution of the '115 Patent. The Examiner initially rejected claims of the '198 application (which issued as the '115 Patent) under § 102(a) based on Martin. Ex. 1004, 453, 454–68. Patent Owner overcame the rejection by submitting Rule 1.132 affidavits from the named inventors, Messrs. Cheyer and Martin, attesting that they alone invented the subject matter disclosed and claimed in the '115 Patent application. Pet. 12; Ex. 1004, 221–24 (37 C.F.R. § 1.132 affidavits), 212–13. Cheyer and Martin also attested that Dr. Moran was not an inventor of the subject matter disclosed and claimed in the '115 Patent. Ex. 1004, 221–

24. The Examiner withdrew the rejections based on Martin in the next Office Action. *Id.* at 187–202.

In support of Petitioner’s contention that Martin is the work of another and lacks a common inventive entity with the ’115 Patent, Petitioner relies on a Declaration from Dr. Moran (Ex. 1007) describing his contributions to the Martin reference. Pet. 11–15. Dr. Moran’s declaration states that he worked on the Open Agent Architecture (OAA) project at SRI in 1994, becoming the project leader in August 1994. Ex. 1007 ¶¶ 23, 27. Dr. Moran testified that he co-authored the Martin reference with his colleagues David Martin and Adam Cheyer. *Id.* ¶ 35. Regarding the authorship, Dr. Moran testified that “[m]uch of the writing in the OAA paper [the Martin reference] is mine, either directly borrowed from or derived from papers, presentations and proposals that I wrote.” *Id.* ¶ 37. Dr. Moran also states that based on his experiences he “contributed to the conception of distributed technologies that are at the core of the OAA paper [the Martin reference],” including “various networking-related concepts described in the [Martin reference],” the “distributed technologies that are at the core of the [Martin reference] . . . , as described at Sections 2.5 and 3,” and “the distributed agent-based approach, and in particular using a facilitator, as described in the [Martin reference] at Section[s] 4 and 4.1–4.5.” *Id.* ¶ 39.

Following institution, Patent Owner cross-examined Dr. Moran (Ex. 1153). Patent Owner deposed and Petitioner cross-examined Mr. Cheyer (Ex. 2037) and Mr. Martin (Ex. 2038).

2. Analysis

An inventor’s own work is not prior art under 35 U.S.C. § 102(a). *See Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 968 (Fed. Cir. 2014); *In re*

IPR2019-00728

Patent 6,851,115 B1

Katz, 687 F.2d 450, 454 (CCPA 1982). The Federal Circuit has stated that “[t]he question of whether a reference is a work of others for the purposes of § 102(a) is, like that of inventorship, a question of law based on underlying facts.” *Allergan*, 754 F.3d at 969 (citing *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460 (Fed. Cir. 1998)). In determining whether a reference is the work of the challenged patent’s named inventor(s), the inquiry focuses on whether the relevant content of the reference—“which includes the design, trial, and analysis of results”—was solely the work of the inventor(s). See *Allergan*, 754 F.3d at 969. In the context of 35 U.S.C. § 102(e) addressing whether an invention described in a patent granted on an application for patent was “by another,” the Federal Circuit has further explained that “[w]hat is significant [in this inquiry] is not merely the differences in the listed inventors, but *whether the portions of the reference relied on as prior art, and the subject matter of the claims in question, represent the work of a common inventive entity.*” *Riverwood Int’l Corp. v. R.A. Jones & Co.*, 324 F.3d 1346, 1356 (Fed. Cir. 2003) (citing *In re DeBaun*, 687 F.2d 459, 462 (CCPA 1982)) (emphasis added); cf. *EmeraChem Holdings, LLC v. Volkswagen Grp. of Am., Inc.*, 859 F.3d 1341, 1345–47 (Fed. Cir. 2017) (discussing *Katz* and *DeBaun* as informing the determination whether a published patent application describes the work of “another” under § 102(e)). In *Riverwood*, the Federal Circuit noted that the inquiry in *DeBaun*, which was an appeal from the PTO in which a patent reference was asserted as prior art regarding patentability, “applies to the use of a reference in a post-issuance validity challenge.” *Riverwood*, 324 F.3d at 1356 (citing *de Graffenried v. United States*, 20 Cl. Ct. 458, 467 (1990)).

Thus, the relevant question for determining whether Martin qualifies as prior art under § 102(a) is *who invented* the subject matter disclosed in *the Martin reference* relied upon by Petitioner. *See DeBaun*, 687 F.2d at 462 (when reviewing the Examiner’s rejection based on a patent issued to the applicant and another person, “[t]he proper subject of inquiry was . . . *who invented the subject matter disclosed by (the reference)* which was relied on to support the rejection” (emphasis added) (citation omitted)).

Petitioner bears the burden to demonstrate, by a preponderance of the evidence, that the challenged claims are unpatentable. 35 U.S.C. § 316(e) (2018). In an IPR proceeding based on prior art, this burden necessarily includes the burden to establish that the references relied upon qualify as prior art.

Patent Owner argues that Petitioner fails to produce sufficient evidence that Moran conceived of the subject matter in the Martin reference and that such subject matter supports the obviousness of the challenged claims. PO Resp. 7–8, 16–17. Patent Owner also argues that Petitioner failed to produce the required corroborating evidence necessary to establish that Dr. Moran invented and conceived of anything in the ’115 Patent and Dr. Moran’s declaration is vague as to the subject matter invented in the Martin reference. *Id.* at 35–39.

Petitioner replies that Dr. Moran’s contribution is “sufficient to render [the Martin reference] prior art.” Pet. Reply 3–4. Specifically with respect to the Moran Declaration, Petitioner states:

Dr. Moran described his background experience that put him in a position to contribute to *Martin* (Ex. 1007 at ¶¶ 5–22), his deep involvement in the OAA project from which *Martin* originated (*id.* at ¶¶ 23–34), and his particular contributions to and involvement with the publication of *Martin* (*id.* at ¶¶ 35–39). He

stepped through *Martin* and outlined the sections he knew he contributed to the conception of, which included Sections 2.5, 3, 4, and 4.1–4.5. (*Id.* at ¶ 39.) These are not sections that are irrelevant to Google’s analysis, as IPA has suggested. (Response at 9–10.) The petition repeatedly cited and relied upon these sections throughout its analysis of the claims. (*See, e.g.*, Pet. at 21–45 (citing pages of *Martin* corresponding to these sections).)

Pet. Reply 3–4. In sum, Petitioner states that Dr. Moran made a technical contribution to the *Martin* reference that “contributed to the conception” of *Martin* and identified the sections to which he contributed.

As we stated in the Institution Decision:

[T]he relevant question here for determining whether *Martin* qualifies as prior art under § 102(a) is who invented the subject matter disclosed in the *Martin* reference relied upon by Petitioner. *See DeBaun*, 687 F.2d at 462 If the subject matter disclosed in the *Martin* reference was invented by Adam J. Cheyer and David L. Martin, and no other—that is, Douglas B. Moran is *not* a co-inventor of the subject matter described in the *Martin* reference, despite the fact that he is listed as a co-author on the face of the reference—then the *Martin* reference and the ’115 patent would represent the work of a common inventive entity, namely, Adam J. Cheyer and David L. Martin. If, on the other hand, Douglas B. Moran *is* a co-inventor of the subject matter described in the *Martin* reference relied upon by Petitioner, there is no commonality of inventorship . . . and the *Martin* reference would qualify as prior art under § 102(a) as the work of “another.”

Dec. on Inst. 11–12. We address the parties’ contentions below.

Although the named authors of the article are indicative of a contribution to *Martin*, the Federal Circuit instructs us that authorship of an article alone does not establish inventorship of the *pertinent subject matter* disclosed in the article. *See Katz*, 687 F.2d at 455; *see also DeBaun*, 687 F.2d at 463 (noting that for co-inventors of a prior art reference joint or solo

inventorship is not presumed). Although Dr. Moran provides testimony that authors to SRI papers made significant contributions and that the Martin reference was derived from his writings and presentations, authorship in this case is not conclusive of inventorship. *See* Ex. 1007 ¶ 37 (“Much of the writing in the OAA paper is mine, either directly borrowed from or derived from papers, presentations and proposals that I wrote.”). Authorship is instructive here but does not resolve what portions of the invention Dr. Moran contributed to the Martin reference sufficient to establish invention of the relied-upon subject matter in the reference. Accordingly, we turn to the evidence produced during trial to support the Moran Declaration statements that Dr. Moran contributed to the Martin reference.

The evidence introduced at trial has not sufficiently or persuasively addressed Dr. Moran’s testimony regarding his contribution to the Martin reference. We note that Dr. Moran did not review the challenged patent in preparation of his testimony. Ex. 1153, 28:7–29:7. Thus, Dr. Moran’s declaration statements solely address his recollection and the contents of the Martin reference. *Id.*⁶

⁶ Patent Owner asserts that Dr. Moran has memory gaps, lacks details, and was paid for his participation (PO Resp. 31–34, 48), unlike Messrs. Martin and Cheyer who have no financial stake in IPR proceeding, were not paid, and have no bias (*id.* at 48). Petitioner responds that Cheyer and Martin may be biased by pressure from SRI and are under obligation to help enforce SRI’s patents. Pet. Reply 15. We find the testimony of Dr. Moran, Mr. Martin, and Mr. Cheyer to be credible with respect to the facts cited herein. In addition, both parties cited evidence regarding SRI employment agreements regarding invention disclosures and the lack of such disclosures for the ’115 Patent. PO Resp. 42–43; Pet. Reply 18. We do not find the lack of such disclosures germane to our inquiry.

Dr. Moran’s testimony provides detail regarding his background contribution to the OAA project in general, but neither his declaration nor his deposition testimony explains how this foundation is reflected in his contribution to the inventorship of the Martin reference beyond supporting foundational concepts. *See* Ex. 1007 ¶¶ 23–34 (OAA project), 35–39 (OAA paper); Ex. 1153, 27:21–28:6. Dr. Moran’s contributions to the Martin reference are described as stemming from his “experience operating a computer facility at SRI and working in computer security” that yielded his “substantial experience in distributed systems.” Ex. 1007 ¶ 39. Petitioner cites Dr. Moran’s testimony in arguing that such experience allowed Dr. Moran to “contribute[] to the *conception of distributed technologies that are at the core* of [the Martin reference]” but Petitioner does not connect Dr. Moran’s experiences and contentions to the substance of the Martin reference or connect those “technologies at the core” beyond broad categories. *Id.* (emphasis added); Pet. Reply 3–4. Specifically, neither the Petition nor the Petitioner’s Reply identifies how the “distributed technologies that are at the core of the [Martin reference]” equate to conception or inventorship with respect to the 14 pages of material identified in Martin. *See* Pet. Reply 3–4; Ex. 1007 ¶ 39 (identifying Ex. 1011, 13–17, 17–24 as sections to which Dr. Moran contributed). We agree that evidence supports that Dr. Moran worked on and contributed to systems incorporated into OAA (Ex. 1007 ¶¶ 23–34; Ex. 2038, 90:10–18:16, 94:24–95:17 (Martin testimony)). Although Patent Owner admits that “large portions of the ’115 application and the *Martin* reference are identical or almost identical” (PO Resp. 1), similarity and authorship is not sufficient to presume inventorship by a preponderance of the evidence. In other words,

Dr. Moran's testimony that he contributed to background work of the OAA project is not inconsistent with the assertion that the specific disclosure in Martin that is relied on in Petitioner's challenge is the sole work of the two named-inventors of the '115 Patent.

The parties vigorously contest whether Dr. Moran's claims are sufficiently corroborated. PO Resp. 26–30; Pet. Reply 4–10; PO Sur-reply 9–10. Patent Owner contends that the Moran declaration, dated twenty years after the prosecution of the '115 Patent, lacks necessary corroboration needed to invalidate a patent. PO Resp. 8, 26–31 (citing *Finnigan Corp. v. Int'l Trade Comm'n*, 180 F.3d 1354, 1366, 1369 (Fed. Cir. 1999) (stating that “[t]he law has long looked with disfavor upon invalidating patents on the basis of mere testimonial evidence absent other evidence that corroborates that testimony” and “corroboration is required of any witness whose testimony alone is asserted to invalidate a patent, regardless of his or her level of interest”)). “Generally, ‘[c]orroboration is required of any witness whose testimony alone is asserted to invalidate a patent.’ This requirement stems from the suspect nature of oral testimony concerning invalidating events.” *Lazare Kaplan Int'l, Inc. v. Photocscribe Techs., Inc.*, 628 F.3d 1359, 1374 (Fed. Cir. 2010) (quoting *TypeRight Keyboard Corp. v. Microsoft Corp.*, 374 F.3d 1151, 1159 (Fed. Cir. 2004) (citation omitted)). The cases Patent Owner cites are those where documents such as the Martin reference are *not* at issue and testimony provides the sole basis for the invalidating prior use or disclosure. *Lazare Kaplan*, 628 F.3d at 1374; *Finnigan Corp.*, 180 F.3d at 1369. Although contemporary corroboration is not required in every case, it remains a well-

established principle in Federal Circuit case law that claims of inventorship require support. *See EmeraChem*, 859 F.3d at 1345–46.

Petitioner argues that Dr. Moran’s technical contributions to OAA are corroborated by Moran’s co-authorship of the Martin reference, contemporaneously authored OAA papers (Pet. Reply 5–7 (citing Ex. 1170, 1; Ex. 1174, 1); Pet. Reply 8 (citing Ex. 2020, 3 (Moran CV))); his listing as an inventor on a related OAA patent (Pet. Reply 7–8 (citing Ex. 2002, code (75) (listing Dr. Moran as co-inventor))); and the testimony of Messrs. Cheyer and Martin (Ex. 1153, 78:22–79:10, 79:16–81:13 (Martin deposition testimony); Pet. Reply 12–13 (citing Cheyer and Martin testimony)). We credit this evidence to the extent it shows that Dr. Moran made technical contributions to OAA. Pet. Reply 5–8. Thus, we agree with Petitioner that sufficient evidence supports the technical contributions of Dr. Moran to OAA, including admission by Mr. Martin that Dr. Moran made such contributions (*see* Ex. 2038, 116:2–116:8, 117:7–119:10; *see also id.* at 73:3–73:15); contemporaneous papers (*see, e.g.*, Exs. 1170, 1174), and U.S. Patent No. 6,859,931 (“the ’931 Patent”) (Ex. 2002). *See* Pet. Reply 5–7, 8, 12–13. The level of such contribution and whether it is significant such that it evidences invention of subject matter of Martin is what is lacking from that evidence introduced at trial. *See, e.g.*, Ex. 2038, 115:14–119:10 (deposition of Mr. Martin regarding Dr. Moran’s contribution); Ex. 2037, 94:11–13, 111:3–10 (Mr. Cheyer acknowledging that Dr. Moran contributed technical ideas).

Petitioner asserts that “the Board should disregard the inventor declarations in the prosecution history of the ’115 Patent and should treat Martin as a prior art reference under § 102(a).” Pet. 16. In this case,

Petitioner asserts that Rule 1.132 affidavits should be disregarded in light of Dr. Moran's testimony regarding his technical contribution to the Martin reference. Pet. Reply 3–4; Pet. 11–16; Ex. 1007 ¶¶ 37–39. Although Dr. Moran (Ex. 1007 ¶ 39) and Messrs. Martin and Cheyer assert that Dr. Moran made technical contributions, such evidence does not provide sufficient foundation to find those contributions were inventive by a preponderance of the evidence.

With respect to the '931 Patent (a continuation-in-part from the '115 Patent), which names Dr. Moran along with Messrs. Martin and Cheyer and Mr. William Mark as co-inventors, the parties dispute the importance of this fact to Dr. Moran's testimony regarding the Martin reference. *See* Ex. 2002, codes (63), (75); PO Resp. 20–23, 45–46; Pet. Reply 2–3, 7–8. Patent Owner argues that the '931 Patent undermines the Moran declaration, which fails to mention the patent as an inventive contribution (PO Resp. 45–46), and indicates that the Examiner's awareness of Moran as a named inventor that bolsters the reliability of the Rule 1.132 affidavits (*id.* at 21–22). We agree with Petitioner (Pet. Reply 7–8) that the '931 Patent supports that Dr. Moran made *inventive* contributions to the '931 Patent and that patent relates to the OAA project (Ex. 2038, 111:2–12), but Petitioner offers insufficient evidence showing what those inventive contributions were in the '931 Patent or how they relate to Dr. Moran's contributions to the Martin reference. Petitioner argues that the '931 Patent corroborates Dr. Moran's testimony that he was actively involved in developing the system described in the Martin reference and that both the '931 Patent and the Martin reference are “directed to distributed objects and an agent registry in the Interagent Communication Language context.” Pet. 7–8 (citing Ex. 2002,

28:60–29:38, 29:50–29:53, 30:1–30:9). We disagree with Petitioner’s contention that Dr. Moran’s inventive contribution to the continuation-in-part patent (the ’931 Patent) substantiates the inventive contribution to the matter disclosed and relied on in the Martin reference. We do not presume that Dr. Moran’s unidentified contributions in the ’931 Patent indicate that Dr. Moran made a *pertinent* contribution to the Martin reference. *See DeBaun*, 687 F.2d at 462. Petitioner’s evidence of record provides neither persuasive support identifying Dr. Moran’s inventive contribution to the ’931 Patent, nor how that contribution is related to the asserted significant involvement in the Martin reference at issue. *See* PO Resp. 45–46.

Even assuming *arguendo* that Petitioner has supported Dr. Moran’s contribution to the conception of the Martin in general, Petitioner has not persuasively connected Dr. Moran’s technical contributions as being inventive with respect to the Martin reference. In the background on the OAA system, Dr. Moran testifies that he “conceived of [the specific database agent of the OAA system] likely being a subsidiary facilitator with multiple agents.” Ex. 1007 ¶ 25. Petitioner’s argument and evidence produced on the full record fails to explain how Dr. Moran’s lessons learned from databases and conception in the OAA project support inventorship with respect to the Martin reference or its application to the invention of the challenged claims. Pet. 14 (citing Ex. 1007 ¶¶ 23–38, 39 (stating generally that Martin relates to various aspects of the Open Architecture Project led by Dr. Moran and covers many of his contributions)); PO Resp. 46–47. We find that the Petition and Petitioner’s Reply discuss Dr. Moran’s general contributions to OAA without connecting them specifically to the Martin reference disclosure and identifying his role in conception. Pet. 1, 9, 14–16

(citing Ex. 1007), Pet. Reply 3–4, 14, 16, 18 (citing Ex. 1007). Indeed, Dr. Moran’s testimony that he “played a *significant role* regarding the distributed agent-based approach, and in particular using a facilitator, as described in the OAA paper at Section 4 and 4.1–4.5” and “also played a *significant role* in the approach of using recursion to decompose base goals into subgoals that were then dispatched to agents, e.g., as described in the OAA paper at Sections 2.5 and 4.1–4.2” combined with his technological contributions to OAA does not persuasively support that those *significant* contributions include conception with respect to the relied upon aspects of the Martin reference. Ex. 1007 ¶ 39 (emphasis added). We agree with Patent Owner that Dr. Moran’s “significant role” of “contribut[ing] to the conception” of technologies at the core of the Martin reference or alleged conception of the facilitator agent (Ex. 1007 ¶¶ 25, 39) is not supported by additional evidence at trial and does not specify that such contribution is inventive with respect to the pertinent portions of the Martin reference. See PO Resp. 36–37.

Our finding that Petitioner has failed to establish Dr. Moran’s pertinent contribution to Martin is supported by case law. In *Duncan Parking Technologies, Inc. v. IPS Group, Inc.*, 914 F.3d 1347, 1359 (2019), the Federal Circuit overruled the Board’s decision that the prior art patent had a common inventive entity based on an inventor’s affidavit filed. The court found that a co-inventor’s contribution to a prior art patent was sufficient “in light of the invention as a whole” based on the technical details of his work and the work of his co-inventors produced during trial. *Id.* (discussing conception details of the asserted inventors). Thus, the Federal Circuit’s determination was based on the record developed at trial

establishing what each co-inventor executed and conceived and the significance of those contributions to the invention as claimed in the prior art and challenged patent. *Id.*; see also *Trans Ova Genetics, LC v. XY, LLC*, IPR2018-00250 Paper 35 at 46–21 (PTAB June 26, 2019) (“*Trans Ova Genetics*”). In the present case, our record lacks sufficient supporting evidence to establish the contributions of Dr. Moran and Messrs. Cheyer and Martin, beyond the Rule 1.132 declarations.⁷ Although evidence shows Dr. Moran’s contribution was technical and in the case of the ’931 Patent inventive, the nature of those contributions in the Martin reference, on the full record before us, are not shown by a preponderance of the evidence.

⁷ Patent Owner and Petitioner dispute the import of the Rule 1.132 declarations from Mr. Cheyer and Mr. Martin (Ex. 1004, 221–24). Pet. 13; PO Resp. 13–24; Pet. Reply 9–10. Petitioner argues that they address only the conception and invention of the ’115 Patent and not the Martin reference. Pet. Reply 9–10. Patent Owner asserts that the Examiner properly disqualified Martin during prosecution based on the affidavits (PO Resp. 15–16) and that regardless of interpretation Cheyer and Martin reaffirmed their declarations of inventorship under oath (PO Sur-reply 10–11). Petitioner does not challenge the sufficiency of the Rule 1.132 affidavits, but asserts that Dr. Moran made a technical contribution to the Martin reference that was inventive, making it 102(a) prior art. We do not understand Petitioner to assert that Dr. Moran is claiming to be an inventor of the ’115 Patent. *Cf.* Tr. at 14:21–23 (Petitioner counsel stating “and to be clear . . . , Dr. Moran is not claiming he is the sole inventor, contributor of the OAA project. All he’s saying is he was one of the key contributors”); *id.* at 14:8–15:6. Accordingly, we look to whether Mr. Cheyer’s and Mr. Martin’s declarations preclude Dr. Moran from making an inventive contribution to the Martin reference. We consider the Rule 1.132 affidavits as evidence supporting Patent Owner’s arguments that Cheyer and Martin invented the relied upon disclosures in the Martin reference. PO Resp. 46–47; PO Sur-reply 10–11; *but see also* Pet. Reply 9–10 (declarations reiterate Dr. Moran co-authored the Martin reference).

Our decision is also informed by *EmeraChem Holdings, LLC v. Volkswagen Group of America, Inc.*, 859 F.3d 1341, 1345–46 (Fed. Cir. 2017). In *EmeraChem*, the Federal Circuit rejected that an inventor’s affidavit alone was sufficient to establish that a reference had a common inventive entity such that it was therefore removed as prior art. Although the court addressed the holdings of *In re Katz* and *In re DeBaun* and emphasized that contemporaneous corroboration was not required in all cases, it found the inventor’s declaration insufficient as it contained naked assertions insufficient to demonstrate the cited portions of the prior art relied on were not by another. *Id.* In the present case, Petitioner’s Moran declaration contains assertions that are not sufficient alone and not supported persuasively by the details necessary to demonstrate that the cited sections of the Martin reference were conceived by Dr. Moran, alone or in some combination with Messrs. Martin and Cheyer. *See Ex. 1007 ¶ 39.*

Petitioner argues that “[i]n balancing the evidence presented, the question of whether it is more likely than not that Dr. Moran contributed to the [the Martin reference] that bears his name—and which describes the OAA technology developed by a team he led—is not a close one.” Pet. Reply 3. The record before us may not be close on whether Dr. Moran *contributed* to OAA technology. Yet, the issue before us, however, is *who invented* the subject matter disclosed by and relied on in the reference, and not merely who made a technical contribution to the reference. Dr. Moran characterizes his contribution as a significant role regarding the core concepts, including recursion and the distributed agent-based approach (Ex. 1007 ¶ 39), but Petitioner fails to support his testimony with supporting evidence and argument to describe how that role was significant to the relied

on material and how that technical contribution includes inventorship. Pet. Reply 2. Our cases have required evidence regarding the content of the contributions to establish inventorship in a prior art reference.⁸ See *Trans Ova Genetics*, Paper 35 at 14–17; see also *Duncan Parking*, 914 F.3d at 1359, overruling *Duncan Parking Techs., Inc. v. IPS Grp., Inc.*, IPR2016-00067, Paper 9 at 9–10 (PTAB Mar. 30, 2016).

Petitioner argues that Dr. Moran’s declaration “stepped through Martin and outlined the sections he knew he contributed to the conception of, which included Sections 2.5, 3, 4, and 4.1–4.5.” Pet. Reply 4 (citing Ex. 1007 ¶ 39). Similarly, Petitioner’s counsel framed the question before us as “determining whether a [prior art] reference is the work of the named inventors, [as] the inquiry focuses on whether the relevant content of the reference was solely the work of the inventors.” Tr. at 35:15–17. Petitioner asserts that they “met that . . . [by] showing that [Martin] is clearly not the work of the inventors” because “Dr. Moran contributed to . . . key concepts in the OAA architecture that formed the basis of the Martin paper . . . linked those contributions to the claims in our petition” and how that evidence supports unpatentability. *Id.* at 345:12–18. As we stated above, the question is not merely one of technical contribution to concepts but whether that contribution demonstrates that Dr. Moran is an inventive entity with respect

⁸ Petitioner submits Mr. Cheyer’s videotaped presentation that lists Dr. Moran among others on a slide as a contributor to the OAA project. Pet. Reply 10–11. As Patent Owner notes, this presentation “celebrates all of the people involved” in OAA. Ex. 2037, 116:9–14; PO Sur-reply 14. We do not find Petitioner’s evidence availing on whether Dr. Moran made an inventive contribution to the Martin reference.

to the Martin reference. *Riverwood*, 324 F.3d at 1356; *EmeraChem*, 859 F.3d at 1345–47; *DeBaun*, 687 F.2d at 462.

Based on the full record, we find that Petitioner has not provided sufficient support to explain how Dr. Moran’s contribution is sufficient to establish he is an inventive entity with respect to the Martin reference by a preponderance of the evidence. Accordingly, we do not find that Petitioner has established that Martin was prior art under § 102(a) to the ’115 Patent. Because each of Petitioner’s grounds rely on the Martin reference, Petitioner has not established that any of the challenged claims are unpatentable under any of those grounds.

III. MOTION TO EXCLUDE

Exhibit 1153

Patent Owner moves to exclude portions of Exhibit 1153, Petitioner’s redirect of Dr. Moran, as being outside the scope of Patent Owner’s cross-examination. Paper 67, 1–2 (moving to exclude Ex. 1153, 72:10–17, 73:13–74:1; 75:21–77:9; 77:16–24; 79:16–21; 80:17–24; 81:14–23, 83:10–20; 84:4–7, 85:5–8; 85:17–21). Petitioner argues that the redirect was related to Patent Owner’s repeated questions about corroboration and not beyond. Paper 70, 13–14. Patent Owner asserts that Petitioner fails to show that the redirect was “directly related” to Patent Owner’s questions. Paper 72, 5. We do not agree that Petitioner must show such a narrow relationship. Based on the record in this instance, Petitioner’s redirect examination was not beyond the scope of Patent Owner’s cross examination sufficient to warrant excluding portions of Exhibit 1153. We deny Patent Owner’s request regarding Exhibit 1153.

Exhibits 1158 and 1159

Patent Owner moves to exclude Exhibit 1158, a transcript of Mr. Cheyer’s videotaped presentation from 2014, as hearsay (Federal Rule of Evidence 802), lack of authentication (Federal Rules of Evidence 901, 1002), and beyond the scope of the direct examination. Paper 67, 2–7. Similarly, Patent Owner moves to exclude Exhibit 1159, a still image from the Cheyer presentation “on the grounds of hearsay, lack of authentication, misleading, undue prejudice, lack of relevance, and scope. *See* FRE 401–03, 602, 801–02, 901–02, 1002; 37 C.F.R. § 42.53(d)(5)(ii).” Paper 67, 8–9.

Similar to a district court bench trial, the Board, sitting as a non-jury tribunal with administrative expertise, is well positioned to determine and assign appropriate weight to evidence presented, including not relying on it or giving it no weight. *See, e.g., Donnelly Garment Co. v. NLRB*, 123 F.2d 215, 224 (8th Cir. 1941) (“One who is capable of ruling accurately upon the admissibility of evidence is equally capable of sifting it accurately after it has been received . . .”). Because the targeted exhibits were not relied upon, Patent Owner’s Motion to Exclude Exhibits 1158 and 1159 is dismissed as moot.

Exhibits 1170, 1171, and 1172

Exhibits 1170, 1171, and 1172 are published research papers listing Dr. Moran among the authors. Exs. 1170–1172. Patent Owner moves to exclude these exhibits for “lack of relevance, prejudice, and because the exhibits are outside the scope of IPA’s direct examination.” Paper 67, 9–10 (citing Fed R. Evid. 401–403, 602, 901–902). We disagree with Patent Owner’s contentions. These exhibits introduced at Mr. Martin’s cross-examination, are responsive to direct examination topics (Ex. 2038, 38:8–

39:16) and not improperly beyond the scope. Paper 70, 8–9. Thus, we find them relevant to the subjects explored in Mr. Martin’s testimony regarding Dr. Moran and OAA. Ex. 2038, 38:8–39:16. With respect to their prejudicial value, the Board affords such testimony due weight. We deny Patent Owner’s request to exclude Exhibits 1170, 1171, and 1172.

Exhibit 1174

Patent Owner moves to exclude Exhibit 1174, a paper authored by Dr. Moran, based on “hearsay, lack of relevance, lack of foundation, and because Exhibit 1174 is outside the scope of IPA’s direct examination. *See* FRE 401–03, 602, 801–02, 901–02.” Paper 67, 11–12. Having reviewed the parties’ contentions (Paper 67, 11–12; Paper 70, 9–10; Paper 72, 3–4), we find that Petitioner has provided sufficient support for the relevancy of Exhibit 1174. In addition, we agree with Petitioner that under Federal Rules of Evidence 807 and 901, Mr. Cheyer was presented with an article he appeared to have co-authored and addressed its authenticity, which does not fall within hearsay. Paper 70, 9–10. In addition, Patent Owner used Exhibit 1174 at Mr. Cheyer’s deposition. *See* Ex. 2037, 78:23–79:4; Pet. Reply 6 n.2. Finally, Mr. Martin’s testimony sufficiently authenticates the exhibit. Ex. 2038, 107:25–109:8. We deny Patent Owner’s motion to exclude Exhibit 1174.

Exhibits 1175, 1176, and 1181

Patent Owner moves to exclude Exhibit 1175 based on lack of relevance and lack of authenticity, Exhibit 1176 based on hearsay, lack of relevance, and lack of authenticity, and Exhibit 1181 based on hearsay and lack of authenticity. Paper 67, 12–14

As stated above, as in a district court bench trial, the Board, sitting as a non-jury tribunal with administrative expertise, is well positioned to determine and assign appropriate weight to evidence presented, including not relying on it or giving it no weight. *See, e.g., Donnelly Garment*, 123 F.2d at 224 (“One who is capable of ruling accurately upon the admissibility of evidence is equally capable of sifting it accurately after it has been received . . .”). Because the targeted exhibits were not relied upon, Patent Owner’s Motion to Exclude Exhibits 1175, 1176, and 1181 is dismissed as moot.

Portions of Cross-Examination in Exhibits 2037 and 2038

Patent Owner moves to exclude portions of Petitioner’s cross examination of Mr. Cheyer and Mr. Martin as beyond the scope of direct testimony. Paper 67, 14–15 (Ex. 2037, 78:17–79:12); *id.* at 15 (Ex. 2038, 71:1–6, 90:10–91:6; 94:24–95:17, 117:20–118:2).

Petitioner argues that Mr. Cheyer’s cross-examination was within the scope of the direct testimony “because it relates to the nature and scope of Dr. Moran’s contributions to OAA—a topic on which Mr. Cheyer testified repeatedly in his direct examination.” Paper 70, 14 (citing Ex. 2037, 27:8–28:9, 31:16–24, 32:5–13, 33:1–34:25, 37:12–38:7). Similarly, Mr. Martin testified during direct examination regarding Dr. Moran and OAA. Paper 70, 15 (citing Ex. 2038, 36:17–21, 45:22–46:2, 43:3–7, 43:24–44:3). Having reviewed the parties’ contentions, we do not agree that Petitioner’s inquiries to Mr. Cheyer and Martin were beyond the scope of direct testimony. We deny Patent Owner’s request to exclude portions of Exhibits 2037 and 2038.

IV. CONCLUSION

For the reasons discussed above, we conclude that Petitioner has not demonstrated by a preponderance of the evidence that claims 61–70 of the '115 Patent are unpatentable.

The table below summarizes our conclusions:

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
61, 63–70	103(a)	Martin, Kohn		61, 63–70
62	103(a)	Martin, Kohn, Pollock		62
Overall Outcome				61–70

V. ORDER

In consideration of the foregoing, it is:

ORDERED that claims 61–70 of the '115 Patent have not been shown to be unpatentable;

FURTHER ORDERED that, Patent Owner's Motion to Exclude is denied in part, and dismissed in part; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2019-00728
Patent 6,851,115 B1

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