UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VMware, Inc.

Petitioner,

v.

Cirba Inc.

Patent Owner.

Case PGR2021-00098
U.S. Patent 10,951,459

PATENT OWNER'S NOTICE OF APPEAL

Via Hand Delivery
United States Patent and Trademark Office
c/o Office of the General Counsel, 10B20
Madison Building East
600 Dulany Street
Alexandria, VA 22314

Via P-TACTS
Patent Trial and Appeal Board

Via CM/ECF
United States Court of Appeals for the Federal Circuit

Pursuant to 35 U.S.C. §§ 141(c), 142, and 319, and 37 C.F.R. §§ 90.2(a) and 90.3(a), Patent Owner Cirba Inc. ("Patent Owner") provides notice that it appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision of the Patent Trial and Appeal Board dated December 7, 2022 ("Final Written Decision"), and from all underlying and related orders, decisions, rulings, and opinions regarding U.S. Patent No. 10,951,459 ("the '459 patent") in Post Grant Review PGR2021-00098.

In accordance with 37 C.F.R. 90.2(a)(3)(ii), the expected issues on appeal include, but are not limited to, the Patent Trial and Appeal Board's determination in its Final Written Decision that Petitioner VMware, Inc. ("Petitioner") proved by a preponderance of the evidence that claims 1-63 of the '459 patent are unpatentable, and any other finding or determination supporting or related to that determination, as well as all other issues decided adversely to Patent Owner in any orders, decisions, rulings, or opinions.

A copy of the decision being appealed is attached to this Notice.

Pursuant to 35 U.S.C. § 142 and 37 C.F.R. § 90.2(a), this Notice is being filed with the Director of the United States Patent and Trademark Office, and a copy of this Notice is being filed concurrently with the Patent Trial and Appeal Board. In addition, a copy of this Notice and the required docketing fees are being filed with

the Clerk's Office for the United States Court of Appeals for the Federal Circuit via CM/ECF.

Dated: January 31, 2023

By: /*Khue V. Hoang*/
Khue V. Hoang
PTO Reg. No. 44,767
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing **PATENT OWNER'S NOTICE OF APPEAL** was served on January 31, 2023, via electronic mail to VMware-Cirba-IPR@mofo.com, as agreed to by counsel, upon the following counsel for Petitioner:

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In accordance with 37 C.F.R. §§ 90.2(a)(1) and 104.2(b), the undersigned hereby certifies that, in addition to being filed electronically through the Board's P-TACTS System, the foregoing **PATENT OWNER'S NOTICE OF APPEAL** was

filed and served by hand delivery on January 31, 2023, with the Director of the United States Patent and Trademark Office, at the following address:

United States Patent and Trademark Office
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Madison Building East, Room 10B20
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In accordance with 37 C.F.R. § 90.2(a)(2), the undersigned hereby certifies that on January 31, 2023, a true and correct copy of the foregoing **PATENT OWNER'S NOTICE OF APPEAL** was filed electronically with the Clerk's Office of the United States Court of Appeals for the Federal Circuit via CM/ECF.

Dated: January 31, 2023

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Paper 38
Entered: December 7, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VMWARE, INC.,
Petitioner,

v.

CIRBA INC.,
Patent Owner.

PGR2021-00098
Patent 10,951,459 B2

Before DAVID C. MCKONE, STACY B. MARGOLIES, and RUSSELL E. CASS, *Administrative Patent Judges.*

CASS, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 328(a)

I. INTRODUCTION

A. Background

In this post-grant review, VMware, Inc. ("Petitioner") challenges the patentability of claims 1–63 (the "challenged claims") of U.S. Patent No. 10,951,459 B2 (Ex. 1001, "the '459 patent"), which is assigned to Cirba Inc. ("Patent Owner").

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision, issued pursuant to 35 U.S.C. § 328(a), addresses issues and arguments raised during the trial in this post grant review. For the reasons discussed below, Petitioner has proven by a preponderance of the evidence that claims 1–63 are unpatentable.

B. Procedural History

In this proceeding, Petitioner submitted its Petition on July 6, 2001 (Paper 2 ("Pet.")), challenging claims 1–63 based on the following ground:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–63	112(a)[1]	Written Description

[1] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), included revisions to 35 U.S.C. § 112 that became effective as of March 16, 2013. The application for the '459 patent was filed after March 16, 2013, but includes a priority claim to an application filed before this date. Ex. 1001, codes (22), (63). Petitioner contends that the challenged claims are not entitled to an effective filing date earlier than March 16, 2013, because the pre-AIA priority applications lack written description for the challenged claims. Pet. 20–53. Because, as discussed below, the record shows that the pre-AIA priority applications lack sufficient written description for the challenged claims, we apply the post-AIA version of § 112.

Pet. 20–54. With its Petition, Petitioner submitted the Declaration of Dr. Erik Zadok. Ex. 1006. Patent Owner elected to waive its Preliminary Response. Paper 11. We instituted trial on all grounds of unpatentability. (Paper 12 ("Inst. Dec.")).

During the trial, Patent Owner filed a Response (Paper 14, "PO Resp."), Petitioner filed a Reply (Paper 22, "Pet. Reply"), and Patent Owner filed a Sur-reply (Paper 23, "PO Sur-reply").

An oral hearing was held on September 15, 2022, a transcript of which appears in the record. Paper 37 ("Tr.").

C. Real Parties in Interest

Petitioner states that "VMware, Inc." is the real party in interest, and "is the sole party who has funded this Petition and has full and exclusive control over this proceeding." Pet. 54. Petitioner also states that, "[o]ut of an abundance of caution, VMware discloses that it is a majority-owned subsidiary of EMC Corporation, which is a wholly-owned subsidiary of Dell Technologies, Inc." *Id.* Petitioner further states that "VMware does not believe that either EMC Corporation or Dell Technologies, Inc. are real-parties-in-interest and, as far as VMware is aware, neither EMC Corporation nor Dell Technologies, Inc. has ever been served with a complaint accusing them of infringing the '459 patent." *Id.*

In its initial Mandatory Notices, Patent Owner stated that "[t]he real parties-in-interest are Cirba IP, Inc. and Cirba Inc. (d/b/a Densify)." Paper 4, 2. On August 17, 2022, Patent Owner filed Updated Mandatory Notices stating that, on April 20, 2022, "Cirba IP, Inc. was amalgamated (the Canadian version of merged) into Cirba Inc." Paper 29, 1. According to Patent Owner, "Cirba Inc. (the amalgamated company), which now includes

both what was formerly Cirba Inc. and what was Cirba IP, Inc., succeeds to all rights and interests of Cirba Inc. and Cirba IP, Inc. (both of which survive the amalgamation)." *Id.* "As a result," Patent Owner represents, "Cirba Inc. (the amalgamated company) is the owner of U.S. Patent No. 10,951,459 and is the real party-in-interest in this proceeding." *Id.*

D. Related Proceedings

The parties identify the following consolidated district court cases involving the '459 patent, and its parent, U.S. Patent No. 10,523,492 (the "'492 patent"): *Cirba Inc. et al. v. VMware, Inc.*, No. 1:19-cv-00742-LPS (D. Del.) and *VMware, Inc. v. Cirba Inc.*, No. 1:20-cv-00272-LPS (D. Del.) (the "District Court Litigation"). Pet. 55; Paper 4, 2.

The parties identify IPR2021-01210 and IPR2021-01211 as involving the '459 patent.[2] Paper 4, 2. The parties also identify IPR2021-00008 as involving the parent '492 patent. *Id.*

E. The '459 Patent (Ex. 1001)

The '459 patent relates to systems and methods for analyzing a collection of computers for consolidation based on various constraints, including compatibility. Ex. 1001, code (57). According to the '459 patent specification, challenges have arisen in managing distributed computing systems due to the sprawl that can occur over time as applications and servers proliferate, resulting in more processing capacity than is required by an organization. *Id.* at 1:47–58. Removing some of the servers from a large computing environment, the specification explains, can significantly reduce costs. *Id.* at 2:1–4.

[2] IPR2021-01210 and IPR2021-01211 were terminated on December 28, 2021. IPR2021-01210, Paper 16; IPR2021-01211, Paper 16.

To address this concern, the '459 patent discloses an analysis program for determining compatibilities in a computing environment and identifying consolidation solutions, as shown, for example, in Figure 1 reproduced below.

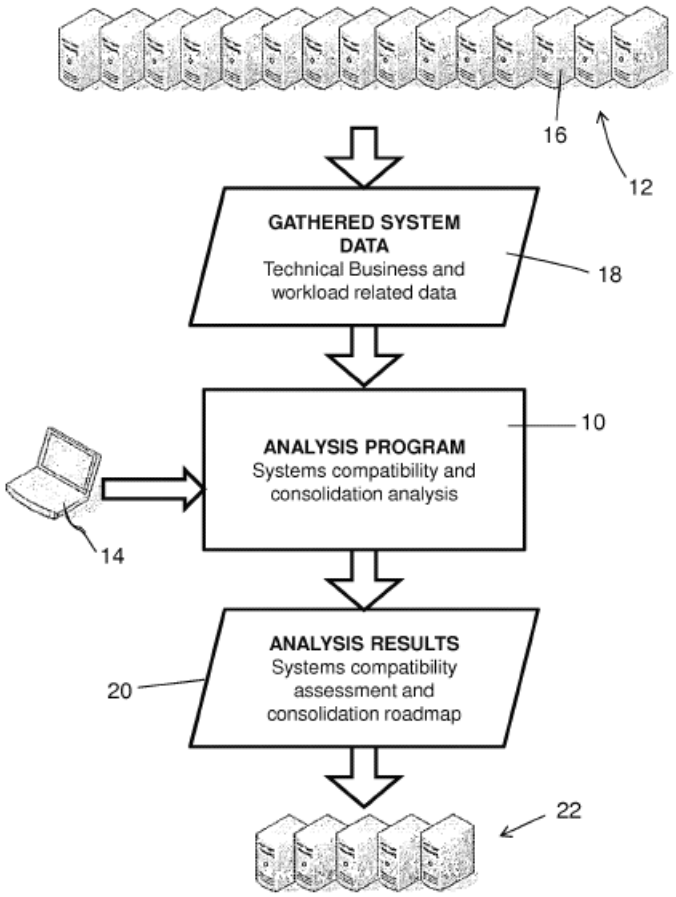


Figure 1

Figure 1 is a block diagram of an analysis program for evaluating the compatibility of computer systems to identify consolidation solutions. Ex. 1001, 3:42–44, Fig. 1.

As shown in Figure 1, analysis program 10, accessed through computer station 14, gathers data 18 pertaining to a collection of systems to be consolidated 16. *Id.* at 5:18–20. The data is obtained for each system and includes one or more parameters that preferably relate to technical, business,

and workload characteristics or features of the respective system. *Id.* at 5:29–33. Analysis program 10 uses gathered data 18 to evaluate the compatibility of the computer systems and provides roadmap 20 specifying how the original set of systems can be consolidated to a smaller number of systems 22. *Id.* at 5:20–24. The systems include source systems from which applications and/or data are to be moved, and target servers or systems to which such applications and/or data are to be moved. *Id.* at 5:57–60.

The compatibility analysis is performed using differential rule sets to evaluate and quantify the compatibility of systems and produce an overall compatibility score. Ex. 1001, 6:66–7:7. A 1-to-1 compatibility analysis may be used to evaluate the compatibility of every possible source-target pair combination on a 1-to-1 basis. *Id.* at 7:19–21. This analysis is useful in assessing single transfer consolidation candidates. *Id.* at 7:21–23.

A multi-dimensional compatibility analysis can evaluate the compatibility of transfer sets where multiple sources are to be transferred to a common target. Ex. 1001, 7:26–28. To assess the compatibility of transferring multiple source entities (N) to a target, a rule-based analysis can compute a compatibility score based on a combination of N-to-1 and N-by-N compatibility analyses. *Id.* at 30:46–49. An N-to-1 intercompatibility analysis "assesses each source system against the target" to generate a score that "reflect[s] the compatibility between N source entities and a single target." *Id.* at 30:49–51, 31:25–26. An N-by-N intracompatibility analysis "evaluates each source system against each of the other source systems" to generate a score that "reflect[s] the compatibility amongst N source entities with respect to a given rule set." *Id.* at 30:51–52, 32:17–19. Based on this analysis, a consolidation solution (or roadmap) is generated containing one

or more transfer sets based on a common pool of source and target entities. *Id.* at 6:46–48.

F. Illustrative Claim

The '459 patent includes challenged claims 1–63, of which claims 1, 32, and 63 are independent. Claim 1 is illustrative and is reproduced below.

> 1. A system for determining placement of source computer systems on target computer systems, the system configured to execute operations causing the system to:
>
> collect data for a collection of computer systems, the collection of computer systems comprising a plurality of source systems and a plurality of target systems;
>
> determine a placement of at least one source system from the collection of computer systems on at least one target system from the collection of computer systems by employing the following operations:
>
> evaluate compatibility between a specific source system from the plurality of source systems and a specific target system from the plurality of target systems by evaluating one or more rules that operate against attributes or data relating to the source and target systems being evaluated;
>
> evaluate compatibility between the specific source system from the plurality of source systems and one or more other source systems either already placed on the specific target system, or being evaluated for placement onto the specific target system, to determine if the specific source system can be placed with those other source systems on the specific target system, by evaluating one or more rules that operate against attributes or data relating to the source systems;
>
> evaluate compatibility between the specific source system and the specific any one of the plurality of target system by evaluating the impact on resource utilization of the specific target system of placing the specific source system on the specific target system, in combination

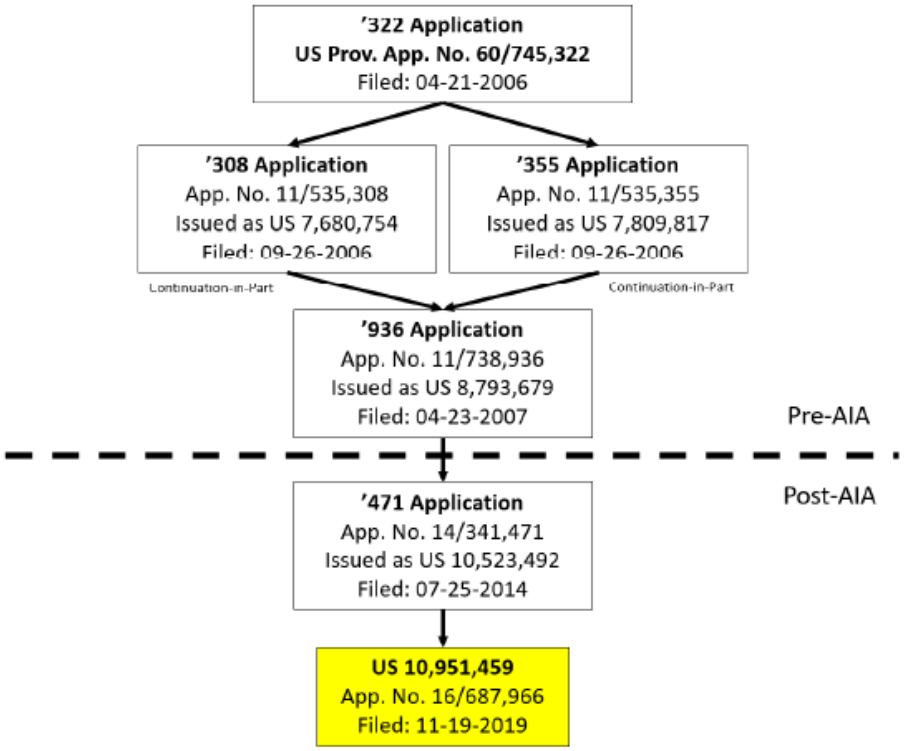
> with the one or more other source systems, either already placed on the specific target system, or being evaluated for placement onto the specific target system; and
>
> issue instructions to place the at least one source system on the at least one target system in accordance with the determined placement.

Ex. 1001, 40:2–39.

G. Priority Claims and Prosecution History of the '459 Patent

The '459 patent states that it is a continuation of Application No. 14/341,471 (the "'471 application"), filed on July 25, 2014 (now U.S. Patent No. 10,523,492 (the "'492 patent")), which is a continuation of Application No. 11/738,936 (the "'936 application"), filed on April 23, 2007 (now U.S. Patent No. 8,793,679). Ex. 1001, code (63). The '936 application is a continuation-in-part of Application No. 11/535,355 (the "'355 application"), now U.S. Patent No. 7,809,817, and Application No. 11/535,308 (the "'308 application"), now U.S. Patent No. 7,680,754, both filed on September 26, 2006. *Id.* The '459 patent also claims priority to Provisional Application No. 60/745,322 (the "'322 application"), filed on April 21, 2006. *Id.* at code (60). The '936 application states that it incorporates by reference the '355, '308, and '322 applications. Ex. 1009 ¶ 1.

Petitioner includes the following graphic to illustrate the priority chain for the '459 patent.



Petitioner's graphic illustrating the chain of applications upon which the '459 patent claims priority, and indicating which ones are pre-AIA and which are post-AIA. Pet. 21.

Aspects of the prosecution history that are relevant to this Decision are summarized below.

On October 30, 2018, the applicant in the '471 application filed a Request for Continued Examination (RCE), which included the following claim:

> 1. A computer-implemented method for determining compatibility of computer systems for combining source systems on target systems, the method comprising:
>
> analyzing compatibility parameters for the computer systems to determine whether a source system is compatible with at least one of: i) a target system, and ii) another source system, wherein the compatibility parameters correspond to features or characteristics of the respective computer systems that can be evaluated, quantified, measured, or compared between systems;

analyzing source system workload data to determine which of the computer systems is operable with another system on the target system; and

generating an output comprising a workload placement solution based on which of the computer systems is operable and compatible with other systems, to enable one or more placements of source systems onto target systems to be implemented.

Ex. 1024, 140 (accounting for amendments to the claim).

On January 2, 2019, the examiner rejected claim 1 under 35 U.S.C. § 101 on the basis that the claimed combination "do[es] not amount to significantly more than an abstract idea." Ex. 1024, 75. The examiner found that claim limitations that were "considered to be part of the abstract idea," included "generating an output . . . ," among others. *Id.* at 75.

On July 2, 2019, the applicant responded to the examiner's rejection by amending claim 1 as follows:

1. A computer-implemented method for ~~determining compatibility of computer systems for combining~~ placing source systems on target systems, the method comprising:

~~analyzing compatibility parameters for the computer systems to determine whether a source system is compatible with at least one of: i) a target system, and ii) another source system, wherein the compatibility parameters correspond to features or characteristics of the respective computer systems that can be evaluated, quantified, measured, or compared between systems;~~

~~analyzing source system workload data to determine which of the computer systems is operable with another system on the target system; and~~

evaluating one or more source systems against other source systems and against one or more target systems using at least one rule set that evaluates parameters of the systems to determine whether the systems can or can not be placed together on a specific target system, wherein the

evaluating comprises one or more of: a 1-to-1 compatibility analysis, an N-to-1 compatibility analysis, or an N-by-N compatibility analysis; and

~~generating an output comprising a workload placement solution based on which of the computer systems is operable and compatible with other systems, to enable one or more placements of source systems onto target systems to be implemented.~~

placing the source systems onto the target systems in accordance with technical, business, and workload constraints determined in the compatibility analysis.

Ex. 1024, 47.

The applicant explained that, in response to the Section 101 rejection, it "has amended claim 1[,] as indicated above, to specify a practical application of the previously recited 'output,' namely: 'placing the source systems onto the target systems in accordance with technical, business, and workload constraints determined in the compatibility analysis.'" *Id.* at 53. The applicant argued that this newly-added element "integrate[s] the abstract idea into a practical application" because it "clearly recites applying the result of the compatibility analysis by placing source systems onto target systems — a practical application of any alleged abstract idea." *Id.* at 54.

Following this amendment, on October 18, 2019, the examiner issued a Notice of Allowance allowing the pending claims, including claim 1. Ex. 1024, 11, 15.

The application for the '459 patent was filed on November 19, 2019, with a single claim. Ex. 1002; Ex. 1001, code (63). In a preliminary amendment filed on July 2, 2020, Patent Owner canceled the originally filed claim and added 57 new claims. Ex. 1003, 2–9. New claim 2 recited as follows:

> 2. A system for determining placement of a source system on a target system, the system configured to execute operations causing the system to:
>
> collect data for a collection of systems, the collection of systems comprising a plurality of source systems and a plurality of target systems;
>
> evaluate compatibility between any one of the plurality of source systems and any one of the plurality of target systems by evaluating one or more rules that operate against attributes or data relating to the source and target systems being evaluated;
>
> evaluate compatibility between any two or more of the plurality of source systems by evaluating one or more rules that operate against attributes or data relating to the two or more source systems;
>
> evaluate compatibility between any one of the plurality of source systems and any one of the plurality of target systems by evaluating the impact on resource utilization of the target system of placing that source system on that target system, in combination with any other source systems, either already placed on that target system, or being evaluated for placement onto that target system;
>
> determine a placement of at least one source system of the collection of systems on at least one target system of the collection of systems by employing the evaluating operations on any one or more of the systems of the collection of systems; and
>
> issue instructions to place the at least one source system on the at least one target systems in accordance with the determining.

Ex. 1003, 2. In the remarks accompanying the Preliminary Amendment, Patent Owner stated that "[s]upport for these amendments can be found throughout the application as filed," but did not identify any specific portions of the application. *Id.* at 11.

The Examiner allowed the claims on October 5, 2020, without issuing any rejections. Ex. 1004, 1. In the Notice of Allowance, the examiner stated that claim 2 "contain[s] similar limitations/inventive concepts to the allowable limitations of at least Claim 1" of the '471 application "along with further narrowing limitations," and that claim 2 was "considered allowable for analogous reasons as highlighted in [the] related prior" '471 application. *Id.* at 2–3.

On December 10, 2020, Patent Owner filed a Request for Continued Examination and made further amendments, including requiring that the "evaluat[ing] compatibility" between source systems include "one or more other source systems, either already placed on the specific target system, or being evaluated for placement onto the specific target system." Ex. 1005, 2–3. Patent Owner did not identify support for the amendments in the application. *Id.* at 14. The Examiner then allowed the amended claims on January 11, 2021.

II. DISCUSSION

A. Claim Construction

A claim "shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b)." 37 C.F.R. § 42.200(b) (2020).

1. "Source System" and "Target System"

Petitioner argues that the specification expressly defines a "source system" as "a system from which applications and/or data are to be moved," and a "target system" as "a system to which [a source system's] applications and/or data are to be moved." Pet. 19 (citing Ex. 1001, 5:57–60) (alteration in original). In the section of the Petition arguing lack of written description,

Petitioner also argues that these definitions imply that "a system's applications and data are distinct from the system itself." Pet. 33.

Patent Owner proposes that "the Board adopt the constructions of 'source system' and 'target system'" adopted in the District Court Litigation. PO Resp. 11. Patent Owner asserts that, in the District Court litigation, "the district court adopted Patent Owner's proposed construction for 'source system' ('a physical, virtual, or hypothetical system from which applications and/or data are moved or are to be moved') and 'target system' ('a physical, virtual, or hypothetical system to which applications and/or data are moved or are to be moved')." *Id.* (citing Ex. 2004, 1). According to Patent Owner, in adopting these constructions, the district court "rejected the very same proposed constructions and arguments that Petitioner raises in this proceeding." *Id.* (citing Ex. 2005, 9–12).

Petitioner responds that Patent Owner seeks to expand the definition of "source system" in the specification "to include systems from which applications or data 'have been moved to target systems,'" but "[n]o evidence supports this." Pet. Reply 26. According to Petitioner, "[t]he specification refers only to source and target systems as part of analyses, and those analyses are exclusively 'forward-looking.'" *Id.* Petitioner argues that Patent Owner's arguments cite "only to transfers that have yet to happen," or "to excerpts where the phrase 'source system' is missing entirely." *Id.* (citing PO Resp. 12–13 (citing Ex. 1001, 6:35–41, 39:43–48)). In any event, Petitioner contends, "the Board need not decide what 'source system' and 'target system' mean" because "[t]he '936 application's lack of support for 'already placed' and 'issuing instructions' does not depend on the precise meaning of these terms." *Id.*

Based on the full trial record, we agree with Petitioner that we need not provide an express construction for "source system" and "target system" in order to resolve the issues presented in this proceeding. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co*., 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.").

2. "Place," "Placed," "Placing," and "Placement"

The terms "place," "placed," "placing," and/or "placement" appear in all of the independent claims (claims 1, 32, and 63). Patent Owner argues that, "[b]ased on the plain meaning of the claim terms and the context provided by the surrounding claim language and the '459 patent's specification, the 'place' and 'placement' terms would be understood by a [person of ordinary skill in the art] to mean putting or arranging, *i.e.*, placing or placement of systems includes moving, transferring, stacking or otherwise arranging systems." PO Resp. 16 (citing Ex. 2001 ¶¶ 85–87). Citing the Merriam-Webster Dictionary, Patent Owner argues that its construction "is consistent with commonly understood definitions of those terms—'to put in or as if in a particular place,' 'to put in a particular state,' or 'to distribute in an orderly manner.'" *Id.* at 19 (citing Ex. 2007; Ex. 2008, 549; Ex. 2001 ¶ 89). Patent Owner also asserts that the court in the District Court Litigation agreed with this construction, relying on the district court's statement that "the specification does not limit the scope of the 'place' terms to exclude all other actions aside from 'moving,' as it additionally includes references to, for example, 'consolidating,' 'stacking,' and 'transferring.'" *Id.* at 16–17 (citing Ex. 2005, 13); *see also* PO Sur-reply 5, 15.

Additionally, Patent Owner argues that one of ordinary skill "would have understood the plain meaning of 'place' and 'placement' as used in [the] '459 patent to be consistent with the full panoply of consolidation and transfer analyses disclosed in the '459 patent." PO Resp. 17. According to Patent Owner, "[t]he '459 patent specification describes numerous examples of what the claim terms 'place' and 'placement' mean in the context of the patent, including 'consolidating,' 'stacking,' 'moving,' 'forward consolidating,' 'transferring,' 'combining,' 'migrating,' 'arranging,' 'packing,' 'fitting,' etc." *Id.* at 20–21. Patent Owner argues that one of ordinary skill would have understood the mapping of sources onto targets "as a 'placement' (which may involve 'consolidating,' 'stacking,' 'moving,' 'transferring,' etc.)" *Id.* at 26 (citation omitted).

Petitioner responds that Patent Owner "incorrectly assume[s] that mapping sources to targets when defining transfer sets (which comprise potential, not actual, transfers) qualifies as 'placement.'" Pet. Reply 2. Petitioner asserts that "mapping" is not "placement" because "'[m]apping' occurs when ***defining*** a transfer set" and "is done purely for analytical purposes, to provide candidates for inclusion—after evaluation—in the consolidation solution." *Id.* According to Petitioner, "[t]he '459 claims reinforce that 'placement' occurs after and separately from the analytical evaluation process" because they "require 'determining placement of source computer systems on target computer systems' which includes the 'evaluate compatibility' steps." *Id.* at 3 (citing Ex. 1001, 40:2–4, 40:8–36). "When the evaluations are complete," Petitioner contends, "the claimed system will have determined a placement, but not executed it." *Id.* (citing Ex. 1023, 28:13–18).

"Actual placement," Petitioner contends, "occurs only through a separate claimed step for 'issu[ing] instructions ***to place***' according to the 'determined placement.'" *Id.* (citing (Ex. 1001, 40:37–39). Thus, according to Petitioner, "placement occurs after evaluation and uses its results," in contrast to "mapping of sources onto targets," which "is part of the analytical evaluation process, and therefore cannot be 'placement' within the meaning of the '459 patent's claims." *Id.*

Petitioner further argues that the prosecution history of the '459 patent's parent, the '492 patent, "confirms that placement must be more than just part of an analysis, which is all that mapping is." Pet. Reply 3–4. Petitioner asserts that, "[t]o avoid a rejection under 35 U.S.C. § 101," Patent Owner amended its claims to "specify a practical application of the previously recited 'output,' namely: 'placing the source systems onto the target systems in accordance with technical, business, and workload constraints determined in the compatibility analysis.'" *Id.* at 4 (citing Ex. 1024, 53–54, 47–49). According to Petitioner, because "the concept of 'placing' was added specifically to give the '492 patent's claims a non-analytical component," the term "placing" cannot "be merely analytical." *Id.*

Additionally, Petitioner argues that Patent Owner "presents a handful of quotations out of context to imply that placement occurs during the consolidation analysis," but "the analysis only simulates placement." Pet. Reply 4. For example, Petitioner asserts, "Patent Owner emphasizes the word 'transferred' when discussing the '459 patent's description of 'multi-dimensional compatibility scores (multiple sources ***transferred*** to a single target),'" but "this reference to 'transfer' merely clarifies what a 'multi-

dimensional compatibility score' measures." *Id.* at 4–5 (citing PO Resp. 21 (quoting Ex. 1001, 13:36–38)). "Elsewhere," according to Petitioner, "the patent explains that in a multi-dimensional compatibility analysis, 'a transfer set can include multiple sources (N) ***to be transferred*** to the target," which "clarifies that the sources are not transferred during the analysis," but instead "are only considered for transfer as part of potential scenarios that the analysis evaluates and scores." *Id.* at 5 (citing Ex. 1001, 30:36–39).

Petitioner also argues that "Patent Owner's alleged support for 'already placed'" in the '936 application "confirms that 'place' cannot mean anything beyond 'transfer,' which requires movement." *Id.* at 24–25 (citing Ex. 1009 ¶¶ 86 (describing "transfer" as "the movement of a single source entity onto a target"), 87–89, 95–97, 313–321, 342–347 (analyses revolve around "transfer sets")). Finally, Petitioner argues that Patent Owner "overstates the district court's construction," because "[t]he district court merely clarified that 'place' could include different forms of transfer, whose nuances might not be captured by 'movement' alone," but "did not construe 'place' to include mapping." *Id.* at 25 (citing Ex. 2005, 12–14).

Patent Owner responds by characterizing the dispute between the parties as "whether 'theoretical' placing can be considered placing, such that a 'theoretically' placed source is an 'already placed' source." PO Sur-reply 2 n.1. Patent Owner presents an analogy in which a couple planning a wedding creates a seating plan by "plac[ing] guests (sources) at tables (targets), after evaluating the guests' compatibilities with other guests and possible tables, using one or more rules (e.g., seat children together, the elderly at tables closer to the front of the room, quarrelsome relatives apart, etc.)." *Id.* at 4. Patent Owner explains that, "[b]ecause the wedding hasn't

happened yet, these placements are purely theoretical." *Id.* Nonetheless, according to Patent Owner, the plan "places" guests at tables, even though the guests are not "actually, physically placed at their assigned tables" until dinner time. *Id.* at 4–5.

Patent Owner also argues that Petitioner's reliance on the prosecution history of the '492 patent "is improper and incorrect." PO Sur-reply 10. Patent Owner contends that Petitioner's prosecution history argument was not made in the Petition, and that the prosecution history was not submitted with the Petition. *Id.* Patent Owner also disagrees that the amendment of the claims during prosecution to add the step of "placing the source systems onto the target systems" "confirms that placement must be more than just part of an analysis" because it was added to provide a "practical application" to the claim. *Id.* To the contrary, Patent Owner argues that "[a]n invention that determines a consolidation solution by conducting compatibility evaluations is 'practical' even if the solution isn't executed, much like a seating chart is 'practical' even if the wedding is cancelled." *Id.* at 11.

We agree with Petitioner that, based on the intrinsic evidence, the term "placing" requires more than a theoretical placing or planning to place as part of an analytical solution. Turning first to the claim language, we agree with Petitioner that the language of the independent claims is consistent with "placement" occurring after and separately from the analytical evaluation process. *See* Pet. Reply 3. For example, claim 1 is directed to a system for "determining placement of source computer systems on target systems," the system configured to "determine a placement" by employing operations to "evaluate compatibility." Ex. 1001, 40:2–4, 40:8–36. The second "evaluate compatibility" operation is "to determine if the

specific source system ***can be placed*** with those other source systems on the specific target system," which suggests that what is being evaluated is whether the source system can be actually placed (*e.g.*, moved or transferred) to the target system. *Id.* at 40:18–27 (emphasis added). Similarly, the third "evaluate compatibility" operation involves "evaluating the impact on resource utilization of the specific target system of ***placing*** the specific source system on the specific target system," which suggests that what is being evaluated is the impact on resource utilization once the source system is actually moved or transferred to the target. *Id.* at 40:28–32 (emphasis added). Additionally, the claim states that, based on the "evaluate" operations, the claimed system "determine[s]" a placement, not that it executes the placement. *Id.* at 40:8–11. The actual placement seemingly occurs after the final claimed operation of "issu[ing] instructions to place" the source system(s) on to the target system "in accordance with the determined placement." *Id.* at 40:37–39. Independent claims 32 and 63 include similar language. *Id.* at 42:36–43:3, 45:1–46:19. Had the patent applicant wanted to cover systems that were merely "hypothetically placed," language to that effect could have been added to the claim.

Turning to the '459 patent specification, we note that, as Patent Owner acknowledges, the specification does not use the word "place" (or any variant such as "placing," "placed," or "placement"). PO Resp. 19 ("The terms 'place' and 'placement' appear only in the claims"); Ex. 2001 ¶ 85 ("The terms 'place' and 'placement' are used only in the claims of the '459 patent, and not otherwise used or defined in the specification."); Tr. 48:7–10 (agreeing that there is no "use or definition of the word 'place' or 'placing' in the specification itself"). As Patent Owner points out, the

'459 patent specification includes many other terms describing aspects of the consolidation process, such as "consolidating," "stacking," "moving," "transferring," "combining," "migrating," "arranging," "packing," and "fitting" PO Resp. 20–21), but does not equate any of these terms to "placing." *See* Ex. 1001, 2:5–7, 2:20–22, 6:6–10, 6:35–45, 13:36–38, 17:56–60, 24:65–67, 27:9–12, 34:64–35:6, Fig. 3, Fig. 27. Thus, we find the '459 specification does not resolve the parties' dispute as to the meaning of the "place" terms.

Next we turn to the prosecution history of the '492 patent (the '459 patent's parent). As noted in Section I.G above, the examiner rejected under Section 101 a claim reciting a method for "determining compatibility of computer systems" by analyzing compatibility parameters and source system workload data and "generating an output comprising a workload placement solution . . . to enable one or more placements of source systems onto target systems to be implemented." Ex. 1024, 74–76, 140. Specifically, the examiner found that claim 1 was directed to an abstract idea because the claim recited "concepts relating to 'analyzing compatibility parameters,' 'analyzing source system workload data . . . operable together on target system' and 'generating an output . . . ,'" which was "an un-instantiated concept, plan or scheme." *Id.* at 75.

In response, the applicant amended claim 1 to recite that the computer implemented method was for "placing" source systems on target systems, rather than merely for "determining compatibility of computer systems" for combining source systems on target systems. Ex. 1024, 47. The applicant also replaced the final step of "generating an output comprising a workload placement solution . . ." with a new final step of "placing the source systems

onto the target systems in accordance with technical, business, and workload constraints determined in the compatibility analysis." *Id.* The applicant explained that it had overcome the Section 101 rejection because claim 1 had been amended "to specify a practical application of the previously recited 'output,' namely: 'placing the source systems onto the target systems in accordance with technical, business, and workload constraints determined in the compatibility analysis.'" *Id.* at 53. The applicant argued that this element "integrate[s] the abstract idea into a practical application" because it "clearly recites applying the result of the compatibility analysis by placing source systems onto target systems — a practical application of any alleged abstract idea." *Id.* at 54.

Based on this prosecution history, we find that the applicant distinguished "placing" the source systems onto the target systems from "generating an output comprising a workload placement solution." More specifically, the applicant made clear that "placing" the systems includes more than simply performing a compatibility analysis or generating an output based on that analysis. Rather, "placing" involved ***applying*** the results of the analysis, *e.g.*, by actually moving or transferring a source system to a target system in accordance with the solution derived from the compatibility analysis. The applicant further argued that the claimed "placing" integrated the abstract analysis into a "practical application" that overcame the Section 101 rejection, which the examiner appeared to accept by withdrawing the 101 rejection. *See* Ex. 1024 11, 15. We find that this prosecution history is consistent with how we read the claim language, which is that "placing" requires more than merely a hypothetical or

theoretical transfer or movement of a system as part of an analytical solution.

During the oral hearing, Patent Owner's counsel argued that the above amendment "was just to clarify the practical application for the benefit of the examiner," and was "essentially rewording a similar process" as "a clarification for the benefit of the examiner." Tr. 65:11–16. In other words, according to Patent Owner's counsel, "the original language was just fine" and "didn't have a 101 problem," but "[t]he examiner got that wrong" and the applicant "rephrased the language to say, essentially, the same thing in different terms and the examiner accepted it." *Id.* at 65:17–23. We do not agree with this interpretation of the file history. To the contrary, the file history clearly reflects a change in the claim scope to move beyond merely "generating an output comprising a workload placement solution" and add a requirement for "placing the source systems onto the target systems" in accordance with the analysis. Ex. 1024, 47. The applicant also specifically told the examiner that it "has amended claim 1 as indicated above, ***to specify a practical application of the previously recited 'output,' namely: 'placing the source systems onto the target systems'***" based on the compatibility analysis. *Id.* (emphasis added). Thus, contrary to the argument made by Patent Owner at the hearing, the applicant represented during prosecution that the "practical application" relied on to overcome the Section 101 rejection, was not the "previously recited 'output,'" but rather was the "placing" of source systems onto target systems in accordance with that output.

We also do not agree with Patent Owner's contention that Petitioner's prosecution history argument is improper because it was not made in the

Petition. In the Patent Owner Response, Patent Owner argued that mapping of sources onto targets as part of the consolidation analysis qualifies as a "placement," even if the analysis is not implemented and no sources are actually moved or transferred. PO Resp 26. Petitioner's citation and reference to the file history in order to respond to that argument was not improper. Indeed, Patent Owner was on notice of the file history and aware of its potential significance as intrinsic evidence. And, Patent Owner had an opportunity to respond to this argument in its sur-reply and at the hearing, which it took full advantage of. We also note that in the Institution Decision, we notified both parties that they "may address the proper construction of" the terms "placed" or "placement" during the trial. Inst. Dec. 22. Petitioner's decision to act on this suggestion and further address construction of this term, including the prosecution history relating to it, was not improper.

Additionally, we do not find that Patent Owner's dictionary definitions undermine our construction. The Merriam-Webster definitions of "place" as meaning "to put in or as if in a particular place," "to put in a particular state," or "to distribute in an orderly manner," do not clearly indicate that "placing" of a source system would necessarily include planning to place, or theoretical placing, of the source system, as part of an analysis. We also do not find Dr. Madisetti's testimony about these definitions to be particularly helpful because he merely states that they are "the common understanding of the meaning of those terms" that are "[f]urther relevant to the meaning of 'place' and 'placement,'" without explaining why these definitions indicate that "placing" includes planning to place or theoretical placing. Ex. 2001 ¶ 89. Dr. Madisetti further states that

"the common use within the virtualization and information technology infrastructure industry of these terms" is "consistent with the guidance of the '459 patent," but again never explains or provides evidence of what the common use of these terms is within the virtualization and information technology infrastructure industry, much less why that usage is consistent with Patent Owner's interpretation of the disclosures in the '459 patent specification. *Id.* ¶ 88. Moreover, as discussed above, we find that the intrinsic evidence in this case, particularly the claim language and file history, indicate here that "placing" of source systems onto target system requires more than merely planning to place or theoretical placing during an analysis.

We also do not agree with Patent Owner that the claim construction order in the District Court Litigation supports Patent Owner's construction. PO Resp. 16–17; PO Sur-reply 5, 15. In its claim construction order, the District Court determined that the term "placement" should be given its ordinary meaning and not limited to "movement" because "the specification does not limit the scope of the 'place' terms to exclude all other actions aside from 'moving,' as it additionally includes references to, for example, 'consolidating,' stacking,' and transferring.'" Ex. 2005, 12–14. However, it does not appear that the District Court considered the specific issue before us, which is whether "placing" a system can include mere hypothetical placing or planning to place the system. In this regard, the other actions referred to by the District Court, including "consolidating," "stacking," and "transferring," could also be interpreted as requiring more than merely planning or analysis. Moreover, there is no indication that the District Court considered the prosecution history adding a "placing" requirement in order

to overcome the examiner's Section 101 rejection. Therefore, the District Court's claim construction order does not compel a contrary conclusion from the one we reach here.

We also do not agree with Patent Owner's argument that the specification's definition of systems as being "physical systems, virtual systems, or hypothetical systems" is inconsistent with our conclusion that "placing" cannot be merely analytical or theoretical. PO Sur-reply 7–8. The specification explains that "[h]ypothetical systems can be defined and included in the analysis to evaluate various types of 'what if' consolidation scenarios." Ex. 1001, 6:1–3. For example, hypothetical systems "can be used to ***simulate*** a case where the proposed consolidation target systems do not exist in the environment" or "to ***simulate*** the case where a new application is to be introduced into the environment and 'forward consolidated' onto existing target systems." Ex. 1001, 6:3–10 (emphasis added). Thus, the specification discloses that hypothetical systems can be considered as part of an analytical simulation. However, we do not see anything in the claim language, specification, or prosecution history that refers to "placing" or "placement" of hypothetical systems. Thus, given the understanding of "placing" that comes from the claim language and prosecution history (as discussed above), the intrinsic evidence shows that hypothetical systems can be analyzed as part of a simulation, but cannot actually be "placed" onto a target system.

We further are not persuaded by Patent Owner's argument that one of ordinary skill "would have understood the plain meaning of 'place' and 'placement' as used in [the] '459 patent to be consistent with the full panoply of consolidation and transfer analyses disclosed in the '459 patent."

PO Resp. 17. As noted above, the '459 patent specification does not use the words "place" or "placement," and therefore does not suggest that those terms cover the "full panoply of consolidation and transfer analyses disclosed in the '459 patent." Patent Owner also argues that the '459 patent specification discloses examples of "placement" that include "consolidating," "stacking," "moving," "forward consolidating," "transferring," "combining," "migrating," "arranging," "packing," and "fitting," and Dr. Madisetti similarly states in cursory fashion that "actions contemplated with respect to 'place' and 'placement'" in the '459 patent specification include these terms. *Id.* at 20– 21; Ex. 2001 ¶ 87. Again however, the specification does not even use the term "placement," much less describe these other terms as examples of "placement." While some of these other terms might suggest "placement" if they involve actually moving or transferring a source to a target, the '459 patent specification does not indicate that its various uses of these terms, particularly when merely describing evaluation or analysis, fall within the meaning of "placement," and neither Patent Owner nor Dr. Madisetti points to anything in the specification that would suggest that to be the case. PO Resp. 20–22; Ex. 2005 ¶¶ 87, 90.

Finally, we are not persuaded by Patent Owner's "wedding seating plan" analogy. PO Sur-reply 4–5. Although one might colloquially refer to "placing" guests in seats as part of a seating plan, the guests are not actually "placed" in their seats until they are seated. When creating the seating plan, what one does is "planning to place" the guests in seats, for example by correlating an indication of the guest (such as the guest's name) with a location on the seating chart. And, in any event, the claim language and

prosecution history, as discussed above, indicates that a narrower meaning would apply here.

Consequently, we construe the "place" terms as applied to source systems to require an actual placement (such as a movement or transfer) of the system. These terms do not cover "planning to place," or a theoretical or hypothetical "placement" that only takes place as part of an analysis or evaluation.

3. Other Terms

Based on the full trial record, no other claim terms require express construction to resolve the issues presented in this proceeding. *See Nidec*, 868 F.3d at 1017.

B. Principles of Law

1. Post-Grant Review Eligibility

The post-grant review provisions set forth in section 6(d) of the Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (September 16, 2011) ("AIA"), apply only to patents subject to the first-inventor-to-file provisions of the AIA. *See* AIA § 6(f)(2)(A) (stating that the provisions of section 6(d) "shall apply only to patents described in section 3(n)(1)"). Petitioner has the burden of establishing eligibility for post-grant review. *See Commonwealth Sci. & Indus. Res. Org. v. BASF Plant Sci. GmbH*, PGR2020-00033, Paper 11, 7 (PTAB Sept. 10, 2020); *Mylan Pharms. Inc. v. Yeda Res. & Dev. Co.*, PGR2016-00010, Paper 9, 10 (PTAB Aug. 15, 2016); *US Endodontics, LLC v. Gold Standard Instruments, LLC*, PGR2015-00019, Paper 17, 9–12 (PTAB Jan. 29, 2016).

Patents subject to the first-inventor-to-file provisions are those that issue from applications that contain or contained at any time—

> (A) a claim to a claimed invention that has an effective filing date as defined in section 100(i) of title 35, United States Code, that is on or after [March 16, 2013]; or
>
> (B) a specific reference under section 120, 121, or 365(c) of title 35, United States Code, to any patent or application that contains or contained at any time such a claim.

AIA § 3(n)(1).

Determining whether a patent is subject to the first-inventor-to-file provisions of the AIA, and therefore eligible for post-grant review, is straightforward when the patentee filed the application from which the patent issued before March 16, 2013, or when the patentee filed the application on or after March 16, 2013, without any priority claim. The determination is more complex, however, for a patent that issues from a "transition application," that is, an application filed on or after March 16, 2013, that claims the benefit of an earlier filing date. *See* MPEP § 2159.04 (9th ed. Rev. 10.2019, June 2020). Entitlement to the benefit of an earlier date under 35 U.S.C. §§ 119, 120, 121, or 365 is premised on disclosure of the claimed invention "in the manner provided by section 112(a) (other than the requirement to disclose the best mode)" in the earlier application. *See* 35 U.S.C. §§ 119(e)(1), 120.

Thus, for a patent issuing from a transition application, eligibility for post-grant review depends on whether the Petition shows that the patent contains or contained at any time a claim that lacks written description and enabling support in a priority application filed before March 16, 2013. If the Petition makes such a showing, the patent may be eligible for post-grant review even if it is a continuation of a priority application filed before March 16, 2013. *Commonwealth Sci.*, Paper 11 at 8–9 ("It is well-established by prior Board decisions that a patent claiming the benefit of a priority

application filed before March 16, 2013 must have written description support in, and be enabled by, the earlier-filed application to avoid PGR-eligibility."); *see* Pet. 15–16 (collecting cases).

2. Written Description

To satisfy the written description requirement under 35 U.S.C. § 112(a), the specification must "reasonably convey[] to those skilled in the art that the inventor had possession" of the claimed invention as of the filing date. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). An adequate description does not require any particular form of disclosure or that the specification recite the claimed invention *in haec verba*, but must do more than render the claimed invention obvious. *Id*. at 1352. In evaluating the adequacy of the disclosure, a court may consider "the existing knowledge in the particular field, the extent and content of the prior art, the maturity of the science or technology, [and] the predictability of the aspect at issue." *Capon v. Eshhar*, 418 F.3d 1349, 1359 (Fed. Cir. 2005) (cited with approval in *Ariad*, 598 F.3d at 1352).

C. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art at the time of the alleged invention "would have had at least a bachelor's degree in computer science, computer engineering, electrical engineering, or a related degree and 2–3 years of experience with administering remote computing environments." Pet. 18–19 (citing Ex. 1006 ¶ 59). Petitioner further asserts that "[m]ore education would be acceptable in place of work experience and vice versa." *Id.* at 19 (citing Ex. 1006 ¶ 59). We preliminarily adopted Petitioner's definition of a person of ordinary skill in the art in our Institution Decision. Inst. Dec. 14.

In the Patent Owner Response, Patent Owner states that it "does not concede that Petitioner's definition of a person of ordinary skill" is correct, but "does not offer a competing definition for purposes of this proceeding." PO Resp. 8.

Based on the full trial record, we continue to adopt Petitioner's assessment of the level of skill in the art, which is consistent with the '459 patent and the evidence of record.

D. Eligibility of the '459 Patent for Post-Grant Review

Petitioner contends that '459 patent is eligible for post-grant review because its pre-AIA priority applications lack written description for the claims. Pet. 20–53. These pre-AIA applications include the '936 application, and the '355, '308, and '322 applications incorporated by reference into the '936 application (collectively, the "pre-AIA applications"). *Id.* We will discuss the written description arguments for each of these applications below.

1. Written Description Support in the '936 Application (Ex. 1009)

Petitioner argues that the '936 application fails to provide adequate written description support for two aspects of claim 1: (1) evaluating a source system with "other source systems . . . already placed on the specific target system," and (2) "issuing instructions to place the at least one source system on the at least one target system in accordance with the determined placement." Pet. 23–42; Pet. Reply 2–23. Patent Owner disagrees. PO Resp. 23–46; PO Sur-reply 12–24. We discuss these arguments below.

a) Evaluating a source system with "other source systems . . . already placed on the specific target system"

Claim 1 requires evaluating compatibility between a specific source system and one or more other source systems "either ***already placed on the specific target system***, or being evaluated for placement onto the specific target system," to determine if that source system can be placed with the other source systems on the specific target system.[3] Ex. 1001, 40:18–25 (emphasis added). Independent claims 32 and 63 include similar language. *Id.* at 42:51–67, 45:17–46:16.

Petitioner persuasively shows that the '936 application (Exhibit 1009), which was filed on April 23, 2007, does not provide written description support for this limitation that was added on July 2, 2020. *See* Pet. 25–35 (citing, e.g., Ex. 1006 ¶¶ 67–72). Although the '936 application describes three types of compatibility analyses (1-to-1, N-to-1, and N-by-N) and a consolidation analysis, the '936 application does not describe evaluating compatibility between a specific source system and one or more other source systems already placed on the target system. *See id.*

Patent Owner argues that a number of different disclosures of the '936 application provide support for the "already placed" limitation of the

[3] Petitioner asserts that "[a]lthough this limitation and the subsequent limitation recite an 'already placed' source system as one of two optional alternatives, the specification must provide written description support for both the 'already placed' limitations and the alternatives." Pet. 22 n.2. Patent Owner does not specifically address this point. *See* PO Response. We agree with Petitioner that the specification must support both alternatives set forth in the claim in order to show possession of the scope of the claimed invention. *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005) (the written description must "demonstrate that the patentee possessed the full scope of the invention recited in" the claim).

independent claims. PO Resp. 25–39. For the reasons explained below, we do not agree.

(1) Forward Consolidation of a Hypothetical System

Patent Owner argues that the '936 application discloses the "already placed" limitation in its discussion of "forward consolidation" which, according to Patent Owner, "disclos[es] simulation (or evaluation) of a case where a 'new application' is introduced into the environment (i.e., an existing environment) and then placed onto existing target systems (along with existing applications/source systems)." PO Resp. 29 (citing Ex. 1009 ¶ 82). Patent Owner asserts that one of ordinary skill "would have understood that 'forward consolidation' in this context discloses the placement of a new system onto a target system on which other pre-existing source systems have already been placed." *Id.* (citing Ex. 2001 ¶ 100).

Petitioner responds that "[t]he '936 application describes forward consolidation exclusively in Paragraph 82," which "never describes compatibility evaluations that compare hypothetical source systems to any other source system, let alone one that is 'already placed' on the contemplated target." Pet. Reply 6 (citing Ex. 1009 ¶ 82). According to Petitioner, paragraph 82 does not "indicate that the contemplated target even has 'pre-existing source systems' already running on it, as Patent Owner alleges." *Id.* (citing PO Resp. 29). Petitioner also argues that "Patent Owner offers only its expert's conclusory opinion to support its contention." *Id* (citing PO Resp. 29 (citing Ex. 2001 ¶ 100)).

Patent Owner responds that "the bulk of the application's disclosures are about evaluating systems," and that these discussions "apply equally to hypothetical as well as physical and virtual systems." PO Sur-reply 13–14

(citing Ex. 1009 ¶¶ 82, 85). Patent Owner also argues that "[t]he '936 application's disclosure of 'pre-existing source-target transfers,' including the option for users to elect to remove pre-existing source-target transfers from an ongoing compatibility analysis, necessarily means there are targets with source systems 'already placed' on them." *Id.* at 14 (citing PO Resp. 27 n.6).

Based on the full trial record, we agree with Petitioner that the '936 application's disclosure of "forward consolidation" does not support the "already placed" claim limitation. For this disclosure Patent Owner relies on paragraph 82 of the '936 application, which states as follows:

> The computer systems 16 may be physical systems, virtual systems or hypothetical models. In contrast to actual physical systems, hypothetical systems do not currently exist in the computing environment 12. Hypothetical systems can be defined and included in the analysis to evaluate various types of "what if" consolidation scenarios. Hypothetical targets can be used to simulate a case where the proposed consolidation target systems do not exist in the environment 12, e.g. for adding a system 16. Similarly, ***hypothetical source systems can be used to simulate the case where a new application is to be introduced into the environment 12 and "forward consolidated" onto existing target systems 16***.

Ex. 1009 ¶ 82 (emphasis added).

As noted above, the claim language requires evaluating compatibility between a specific source system and one or more other source systems "already placed" on the target system. Paragraph 82 does not disclose the evaluation of compatibility of a source system and another source system as part of the "forward consolidation." Additionally, paragraph 82 does not disclose that "existing target systems 16" have source systems "already

placed" on them. Thus, paragraph 82 does not provide the level of detail recited in the limitation under either party's definition of "placed."

In addition, as noted above, we have interpreted "placed" to require an actual placement rather than merely "planning to place" or a theoretical placement. *See* § II.A.2, *supra*. Therefore, even if the "existing target system 16" had theoretical or hypothetical systems added to it as part of the consolidation analysis, those would not be systems that are "already placed" on the target system.

Patent Owner relies on paragraph 100 of Dr. Madisetti's declaration, but we do not find that this portion of the declaration helps Patent Owner. PO Resp. 29 (citing Ex. 2001 ¶ 100). Dr. Madisetti points to paragraph 82 of the '936 application, as well as Figure 12's rule set for "UNIX Forward Consolidation" and the accompanying description identifying it as "[d]etailed analysis rules for forward consolidation of UNIX apps onto existing or new systems." Ex. 2001 ¶ 100 (citing Ex. 1009, Fig. 12, ¶¶ 30, 117, 155). Dr. Madisetti further states that one of ordinary skill would have understood that these disclosures "may involve the creation of hypothetical source systems to determine their compatibility, evaluated against pre-existing, already placed, source systems on existing target systems," but does not explain the reasons why he reaches this conclusion. *Id.* Dr. Madisetti also does not explain how the generic description in the '936 application of forward consolidation discloses the specific compatibility analysis involving "already placed" source systems required by the claim limitation. *Id.*

Consequently, we find that the '936 application's discussion of "forward consolidation" does not support the "already placed" claim limitation.

(2) Evaluating the Incremental Effect of Adding a Source System to a Specified Transfer Set

Patent Owner also relies on the '936 application's disclosure of "incrementally transferring one system after another onto a target system using the 1-to-1 compatibility analyses to assess the impact of each transfer." PO Resp. 30–31 (citing Ex. 1009 ¶ 95). Petitioner contends that one of ordinary skill "would understand that incrementally transferring source systems onto a target system involves placing source systems onto a target system on which other source systems have already been placed." *Id.* at 31 (citing Ex. 2001 ¶ 101).

Patent Owner makes a similar argument for the multi-dimensional rule-based compatibility analyses. PO Resp. 31–32. For example, Patent Owner points to the '936 application's disclosure of evaluating the incremental effect of adding other source systems (such as source systems S5 to S20) to a transfer set T1, which "already includes '[source systems] S1, S2, [and] S3 stacked onto [target system] S4.'" *Id.* (citing Ex. 1009 ¶¶ 316, 319). According to Patent Owner, one of ordinary skill would have understood this disclosure to describe "evaluating the compatibility of source systems against the 'already placed' source systems in" transfer set T1. *Id.* at 32 (citing Ex. 2001 ¶¶ 102–103).

Petitioner responds that Patent Owner "incorrectly assumes that a specified 'transfer set' includes 'already placed' source systems." Pet. Reply 8. To the contrary, Petitioner argues, "[a] transfer set only includes sources mapped to—not placed on—targets to represent candidate transfers

for evaluation." *Id.* According to Petitioner, "[a]t no point in the analysis are the proposed transfers comprising the transfer sets actually executed (*e.g.*, S1, S2, and S3 actually stacked onto S4)." *Id.* at 9. Thus, Petitioner contends, "the source systems involved in a 'specified transfer set' are only mapped to targets, not placed." *Id.* at 10. Petitioner also argues that the specification's language referring to "S1, S2, S3 ***stacked onto*** S4" indicates that S1, S2, and S3 "have only been mapped to S4" because "the phrase 'stacked onto' refers to the potential scenario, submitted for evaluation, in which S1, S2, and S3 would be stacked onto S4." *Id.*

Patent Owner responds that "the '936 application never uses . . . the word 'map' or 'mapping' to talk about sources on targets in transfer sets," but instead "uses the word 'stack.'" PO Sur-reply 15. Patent Owner also relies on its construction of the "place" terms as including "unexecuted transfer sets (i.e., that are analytical or theoretical)." *Id.* at 16.

The parties' dispute with respect to this example is largely based on their differing claim constructions of the "place" terms. Patent Owner argues that, in the examples where sources are "stacked" onto targets as part of a transfer set (such as systems S1–S3 onto S4, or systems S5–S20 onto S1) to which the incremental effect of adding source systems can be evaluated, the systems that have been stacked are "already placed" source systems. The '936 patent specification, however, describes these transfer sets as merely analytical, rather than actual, executed transfers of source systems to a target. *See* Ex. 1009 ¶ 321. For example, paragraph 321 states that, in "the multi-dimensional rule-based compatibility analysis," "a transfer set can include multiple sources (N) ***to be transferred*** to the target," indicating that the sources in the transfer set are systems that can be

transferred to the target in the future, rather than being systems that have already been transferred to the target. *Id.* ¶ 321(emphasis added); Ex. 1006 ¶ 69 (explaining that "because a transfer set is defined in terms of 'multiple sources (N) *to be transferred* to the target' system," a "transfer set (and thus also an N-by-N compatibility analysis) is defined in terms of source systems for *future* transfer to a target system, not *past* transfers that have already occurred"). The '936 application further describes a "transfer set" as "one or more transfers that involve a common target, wherein the set *specifies* one or more source entities, *the target*, and the transfer type," indicating that the source entities are to be transferred in the future, rather than past transfers. *Id.* ¶ 87; Ex. 1006 ¶¶ 46, 69. The '936 application distinguishes a "transfer set," which is "to be transferred," from an "actual transfer," which "describes the movement of a single source entity onto a target." *Id.* ¶ 86.

Additionally, Dr. Madisetti testified at his deposition that a "transfer set" refers to a potential transfer that is evaluated by the system. Ex. 1023, 21:6–14 ("Q. Well, what is done with a transfer set after it's been defined? A. It's evaluated. Q. And then after it's been evaluated, what is done with it? A. That's all. It's evaluated.").) Dr. Madisetti also testified that the example transfer sets T1–T5 "are being analyzed" and "still being evaluated," and are not transfers that have been already executed. *Id.* at 71:4-14.

As discussed in Section II.A.2 above, we construe the term "place" to require an actual placing of a system, not merely an analytical or theoretical transfer. Because the transfer sets in this example of the '936 application involves potential transfers as part of a consolidation analysis, rather than the actual "placing" or transfer of systems, we find that the source systems

that are part of the transfer sets are not "already placed" on a target system, as required by the claim.

(3) Using an Existing Consolidation Solution as an Input to a Compatibility Analysis

Patent Owner argues that the '936 application discloses the "already placed" limitation when it discusses "using an existing consolidation solution as an input, and then 'evaluating the incremental effect of adding other source systems (specified in the analysis input) to the ***specified transfer sets***.'" PO Resp. 26 (citing Ex. 1009 ¶¶ 313, 319). Similarly, Patent Owner points to the '936 application's disclosure that "[compatibility] analysis can be performed on an analysis with *pre-existing source-target transfers*." *Id.* at 26–27 (citing Ex. 1009 ¶ 345). According to Patent Owner, "[t]he 'pre-existing source-target transfers' described in the '936 application are equivalent to 'pre-existing placements,' which contain 'already placed' source systems." *Id.* at 27 (citing Ex. 2001 ¶¶ 103, 105). Patent Owner contends that "[t]he '936 application also describes the issuing of instructions to implement the transfers (placements) of the consolidation solution," after which the compatibility analysis "will continue to contain these executed transfers, and 'the incremental effect of adding other source systems' will then be evaluated against these 'already placed' source systems." *Id.* (citing Ex. 1009 ¶¶ 73, 319, 381, Fig. 52). "Accordingly," Patent Owner asserts, "the described evaluation of each transfer set is an evaluation of source systems against 'already placed' source systems." *Id.* (citing Ex. 1009 ¶¶ 314–321; Ex. 2001 ¶¶ 101–105).

Petitioner argues that this argument "fails for the same reasons" as the previous example involving evaluating the incremental effect of adding a source system to a specified transfer set. Pet. Reply 10. According to

Petitioner, a "consolidation solution" is merely "one or more transfer sets [] based on a common pool of source and target entities," and "[j]ust as transfer sets do not include 'already placed' source systems, . . . neither do consolidation solutions." *Id.* (citing Ex. 1009 ¶ 88).

We agree with Petitioner that this example fails for the same reason as the previous example. The '936 application explains that a "consolidation solution" is merely "one or more transfer sets 23 based on a common pool of source and target entities." Ex. 1009 ¶ 88. Thus, just as a transfer set is merely analytical, so is a "consolidation solution." Neither involves an actual transfer of a source system to a target; therefore, neither includes source systems that have been "already placed" on a target.

We also do not agree with Patent Owner's argument that "[t]he '936 application also describes the issuing of instructions to implement the transfers (placements) of the consolidation solution," after which the compatibility analysis "will continue to contain these executed transfers, and 'the incremental effect of adding other source systems' will then be evaluated against these 'already placed' source systems." PO Resp. 27 (citing Ex. 1009 ¶¶ 73, 319, 381, Fig. 52). None of the portions of the '936 application cited by Patent Owner support this argument. Figure 52 merely shows "the example transfers that comprise the consolidation solution" (as paragraph 73 explains). Ex. 1009 ¶ 73, Fig. 52. Paragraph 319 simply describes evaluating the incremental effect of adding other source systems to specified transfer sets. *Id.* ¶ 319. And, paragraph 381 merely states that "[o]nce specified, the consolidation analysis can be executed" to produce "a consolidation summary" which shows the results "should the proposed transfers be applied." *Id.* ¶ 381. None of these portions of the '936

application describe actually implementing the transfers, and then evaluating the incremental effect of adding other source systems following the actual transfer.

(4) Use of the "Auto Fit Algorithm"

Patent Owner argues that the '936 application discloses the "already placed" limitation when it discusses the use of an "auto fit algorithm" used "to search for a consolidation solution for a compatibility analysis." PO Resp. 34–35. Patent Owner relies on paragraph 366 of the '936 application, which is reproduced below with Patent Owner's emphasis added.

> The candidate transfer sets 23 are then compiled from the source-target candidates. For each target, the candidate sources are sorted in descending order and are ***incrementally*** stacked onto the target. ***The transfer set score is computed as each source is stacked and if the score is above the minimum allowable score, the source is added to the transfer set 23.*** If the score is below the minimum allowable, the source is not included in the set. This process is repeated until all the sources have been attempted or the maximum number of sources per target has been reached.

PO Resp. 35 (citing Ex. 1009 ¶ 366). According to Patent Owner, one of ordinary skill would have understood that this disclosure "describes incrementally evaluating source systems against 'already placed' source systems in existing transfer sets." *Id.* (citing Ex. 2001 ¶¶ 104–105).

Petitioner responds that this argument "confuses mappings in a transfer set with the actual placement necessary for a source to be 'already placed.'" Pet. Reply 11 (citing PO Resp. 35). Petitioner argues that "[t]he '936 application's description of the algorithm never mentions executing any transfer in a transfer set and thus does not involve an 'already placed' source system." *Id.* (citing Ex. 1009 ¶¶ 355–372). Patent Owner criticizes

Petitioner's argument as "rely[ing] on a determination that 'place' be limited to 'actual placement.'" PO Sur-reply 17.

We agree with Petitioner for similar reasons as the previous two examples. As described with respect to those examples, the "transfer sets" described in paragraph 366 only involve potential transfers as part of the consolidation analysis, and do not involve actual transfers of a source system to a target system. They therefore do not involve source systems that have been already "placed" on a target system as we have construed that term.

(5) Analyses That Use Pre-Existing Source-Target Transfers

Patent Owner also appears to rely on paragraph 345 of the '936 application, which states that the compatibility analysis can "be performed on an analysis with pre-existing source-target transfers." PO Resp. 36–37; Ex. 1009 ¶ 345. Patent Owner argues that paragraph 345 discusses "examples where the compatibility analyses start with a partial consolidation solution already in place and then add additional placements using the existing transfers as a constraint." PO Resp. 36 (citing Ex. 1009 ¶ 345; Ex. 2001 ¶¶ 103, 105). According to Patent Owner, "[t]he existing transfers are how the compatibility analysis models 'already placed' systems, which as previously discussed, may be real or virtual systems (*e.g.*, VMs), or hypothetical (not yet provisioned) systems." *Id.* at 36–37 (citing Ex. 1009 ¶ 345; Ex. 2001 ¶¶ 103, 105).

Petitioner responds that Patent Owner concedes that "these so-called 'pre-existing' transfers are part of a 'partial consolidation solution already in place,' not an actual consolidation that has been executed," and that these existing transfers are "how the compatibility analysis ***models*** 'already placed' systems." Pet. Reply 12 (citing PO Resp. 36). According to

Petitioner, Patent Owner recognizes that "these 'transfers' are analytical tools ('models') and not actual placements." *Id.* Thus, Petitioner contends, a "pre-existing source-target transfer" is "a forward-looking mapping of a source to a target, not an actual executed transfer," and "cannot support the claimed evaluations involving 'already placed' source systems." *Id.* at 13.

Patent Owner responds by arguing that Petitioner's arguments "rely on its supposition that 'place' is limited to 'actual placement.'" PO Sur-reply 17.

We find that the "pre-existing source-target transfers" discussed in paragraph 345 refer to analytical models of systems where a source has been transferred to a target, not situations where a source has actually been transferred to a target. The parties appear to agree on this point. Thus, this issue too boils down to the claim construction of "placed." Because we find that analytical model of a transfer is insufficient to meet the "already placed" claim limitation, we find that paragraph 345 does not support that limitation.

(6) Summary as to Witten Description of "Already Placed"

For the foregoing reasons, we find that Petitioner has sufficiently proven by a preponderance of the evidence that the '936 application lacks adequate written description support for the claim language requiring evaluating a source system with "other source systems . . . already placed on the specific target system."

b) The "Issue Instructions" Limitation

Claim 1's final element requires that the system "issue instructions to place the at least one source system on the at least one target system in accordance with the determined placement." Ex. 1001, 40:37–39.

Independent claims 32 and 63 include a similar limitation. *Id.* at 43:1–3, 46:17–19.

Petitioner argues that the '936 application does not provide adequate disclosure for this limitation because it does not "describe any sort of instructions to *transfer* a source to a target in accordance with a consolidation solution," but rather merely "describes an analytical technique that results in recommendations, and is silent as to implementation of those recommendations." Pet. 36. More specifically, Petitioner asserts, the '936 application "discloses a process that generates a 'roadmap' that specifies how to consolidate a set of systems," which "identifies 'chosen transfer sets'" showing "which systems would be affected 'should the proposed transfers be applied.'" *Id.* (citing Ex. 1009 ¶¶ 74, 381). "At no point," Petitioner contends, "does the application describe issuing instructions to actually move applications or data between systems according to a consolidation solution." *Id.* Petitioner also asserts that "[u]nlike visualizing a set of analytical results on a local interface, transferring applications and data to run or reside on a new system would have been an involved process." *Id.* at 41–42.

In response, Patent Owner argues that "the terms 'place' and 'placement' as used in the 'issuing instructions' limitation should be afforded their plain and ordinary meaning—i.e., **not** limited to 'movement' as Petitioner would have it." PO Resp. 41. Patent Owner also argues that "Petitioner attempts to conflate as 'roadmaps' aspects of the '936 application that in fact describe the 'issue instructions'" limitation. *Id.* at 41–42. Patent Owner argues that Figure 50 of the '936 application discloses "an exemplary 'roadmap,'" but that this is not "the end result of the analysis disclosed in the

'936 application." *Id.* at 42–43. Instead, according to Patent Owner, "[t]he '936 application goes on to describe that, once the consolidation analysis is executed, 'a consolidation summary' is provided that includes an overview of the consolidation results." *Id.* at 43 (citing Ex. 1009 ¶ 381). Patent Owner argues that an example of this "consolidation summary" is shown by the "Analysis Summary" in Figure 51, reproduced below.

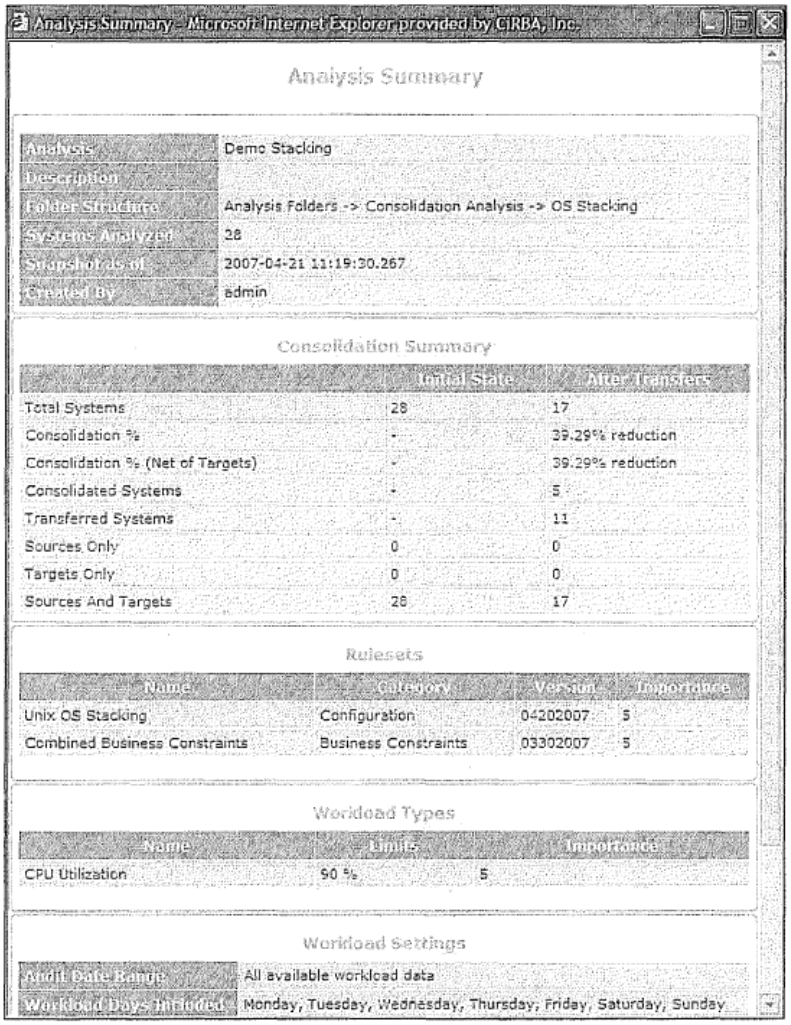
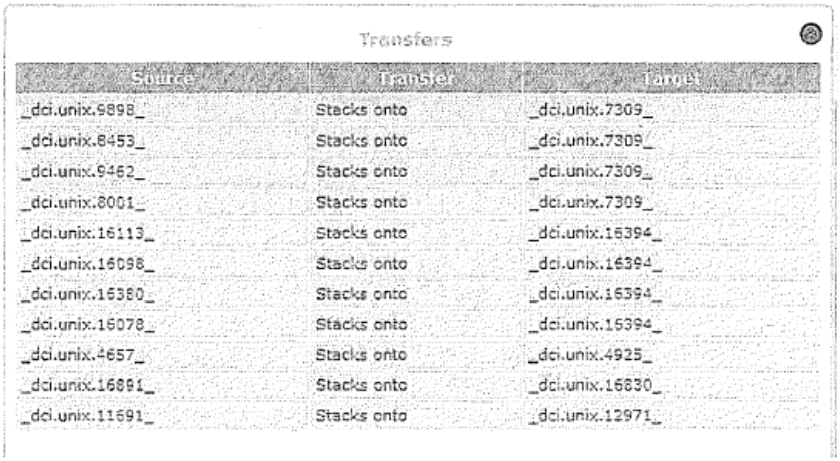


Figure 51

Figure 51 of the '936 application shows an "Analysis Summary" produced as a result of the consolidation analysis. Ex. 1009, Fig. 51, ¶¶ 72, 381.

Patent Owner argues that "[t]he '936 application further provides that 'the actual transfers proposed by the consolidation analysis' are generated

once the consolidation analysis is executed." PO Resp. 43 (citing Ex. 1009 ¶ 381). Patent Owner asserts that "[a]n exemplary output of actual transfers proposed by the consolidation analysis" (*id.*) is provided in Figure 52, reproduced below.



Transfers

Source	Transfer	Target
dci.unix.9898	Stacks onto	_dci.unix.7309_
dci.unix.8453	Stacks onto	_dci.unix.7309_
dci.unix.9462	Stacks onto	_dci.unix.7309_
dci.unix.8001	Stacks onto	_dci.unix.7309_
dci.unix.16113	Stacks onto	_dci.unix.16394_
dci.unix.16098	Stacks onto	_dci.unix.16394_
dci.unix.16380	Stacks onto	_dci.unix.16394_
dci.unix.16078	Stacks onto	_dci.unix.16394_
dci.unix.4657	Stacks onto	_dci.unix.4925_
dci.unix.16891	Stacks onto	_dci.unix.16830_
dci.unix.11691	Stacks onto	_dci.unix.12971_

Figure 52

Figure 52 of the '936 application "shows the example transfers that comprise the consolidation solution." Ex. 1009, Fig. 52, ¶ 73.

Patent Owner contends that "[t]he '936 application discloses that '[t]he actual transfer describes the movement of a single source entity onto a target, wherein the specification identifies the source, target and transfer type,' and '[t]he transfer type (or consolidation strategy) describes how a source entity is transferred onto a target, *e.g.*, virtualization, OS stacking, etc.'" PO Resp. 44 (citing Ex. 1009 ¶ 86). According to Patent Owner, "[t]he above disclosures describe a consolidation solution, as represented by a 'roadmap,' (*i.e.*, determined placement) and then once the consolidation analysis is executed, a summary of the consolidation results and a list of actual transfers generated by the consolidation solution (*i.e.*, issued instructions), without user intervention." *Id.* Thus, Patent Owner contends,

one of ordinary skill would have agreed that the system-generated list of actual transfers would meet the "issued instructions" claim term. *Id.* at 45.

Petitioner responds that "[t]he '936 application states little about Figure 52, but its limited discussion confirms that the list of transfers shown is substantively identical to the 'roadmap'—and lacks instructions." Pet. Reply 16. According to Petitioner, "[t]he '936 application says two things about Figure 52's simple table: It 'shows the example transfers that comprise the consolidation solution,' and 'lists the actual transfers proposed by the consolidation analysis.'" *Id.* at 17 (citations omitted) (citing Ex. 1009 ¶¶ 73, 381). Thus, Petitioner contends, "Figure 52's list of actual transfers is an analytical result, not a set of instructions." *Id.*

Patent Owner responds that the claims do not require "instructions" of any particular type or detail, and "[n]othing requires the instructions to be of any type or granularity nor that they be implemented." PO Sur-reply 21–22. Patent Owner argues that "Figure 52 is an example of a set of instructions that specify which source is placed on which target, in the same way that the wedding couple's notecards or list of table assignments are instructions on where to sit." *Id.* at 22. (citing Ex. 1001, 39:5–13, 6:35–41). "Whether the sources actually get placed or the guests actually follow the seat assignments," according to Patent Owner, "*doesn't change the fact that instructions were provided*." *Id.*

Based on the full trial record, we agree with Petitioner that the '936 application, which was filed on April 23, 2007, does not support the claim limitation added on July 2, 2020 requiring that the system be configured to "issue instructions to place the at least one source system on the at least one target system in accordance with the determined placement." As discussed

in Section II.A.2 above, we construe "placement" to require an actual transfer or placement of a source system onto a target system, not merely a theoretical transfer or placement as part of an analysis. Therefore, the "issue instructions" limitation requires that those instructions are instructions to actually transfer or place the source system on the target system. Petitioner persuasively shows that the '936 application does not describe a system (or method) that issues instructions to place a source system on a target system in accordance with the determined placement; rather, the application merely describes a consolidation solution without issuing instructions to actually implement that solution. *See* Pet. 35–42; Ex. 1006 ¶¶ 78–83.

Patent Owner relies on Figure 52 to disclose the issued instructions, but we see insufficient disclosure in the '936 application that the listing depicted in Figure 52 actually does any instructing. Figure 52 is a list of "transfers" identifying which sources stack onto which targets. Ex. 1009, Fig. 52. Paragraph 73 of the '936 application describes Figure 52 as "the example transfers that comprise the consolidation solution," and paragraph 381 states that Figure 52 is a "consolidation summary" that "lists the actual transfers proposed by the consolidation analysis." *Id.* ¶¶ 73, 381. Thus, the '936 application describes Figure 52 as a list of proposed transfers rather than "instructions" to carry out the proposed transfers.

We also are not persuaded by Dr. Madisetti testimony on the "issue instructions" limitation, which is cursory and presented in only a single paragraph. Ex. 2001 ¶ 106. Dr. Madisetti states that the '936 application describes "a list of 'the actual transfers proposed by the consolidation analysis'" in paragraph 381, and points to the application's description of an "actual transfer" in paragraph 86 as "the movement of a single source entity

onto a target, wherein the specification identifies the source, target, and transfer type." *Id.* (citing Ex. 1009 ¶¶ 86, 381). Paragraph 381 of the '936 application, however, merely states that "Figure 52 lists the actual transfers proposed by the consolidation analysis," and Dr. Madisetti does not explain how this "list" constitutes instructions to place a source system on a target system as claimed. Paragraph 86 describes an "actual transfer" as "the movement of a single source entity onto a target," but Dr. Madisetti does not explain how this general statement about what an "actual transfer" is discloses instructions to place a source system on a target system. Therefore, we find that Dr. Madisetti's testimony on this issue is entitled to little, if any, weight.

Patent Owner does not point to, and we do not find, any other disclosure in the '936 application of instructions to place a source system on a target system in accordance with the consolidation analysis.

For the reasons discussed above, we do not find sufficient written description support in the '936 application for the "issue instructions" limitation.

c) Incorporation by Reference of the '355, '308, and '322 Applications (Exs. 1010–1012)

The '936 application incorporates by reference the '355, '308, and '322 applications. Ex. 1009 ¶ 1; *see* Pet. 23 n.3. Petitioner asserts that the disclosures of the '355, '308, and '322 applications fail to provide written description support for the "already placed" limitation, relying on very similar arguments as those it advanced for the '936 application. *See* Pet. 42–46, 48–53. Patent Owner does not present separate argument directed to the disclosures of the '355, '308, and '322 applications. PO Resp. 47.

For the reasons discussed above in Section II.D.1, we determine that, based on the full trial record, Petitioner has proven, by a preponderance of the evidence, that the disclosures of the '355, '308, and '322 applications fail to provide adequate written description support for the "already placed" and "issue instructions" limitations of the claims.

d) Conclusion as to Written Description Support in the '936 Application

For the foregoing reasons, we find that Petitioner has proven, by a preponderance of the evidence, that the '936 application lacks written description support for claims 1, 32, and 63. Because the independent claims lack support, we also find a lack of support for claims 2–31 and 33–62, which are dependent on those independent claims.

2. Conclusion as to Post-Grant Eligibility

Because we find that Petitioner has persuasively shown that the '936 application, which was filed on April 23, 2007, does not provide adequate written description for the "already placed" and "issue instructions" limitations of all of the claims of the '459 patent (challenged claims 1–63), we determine that none of the '459 patent claims are entitled to claim priority to any application filed before March 16, 2013. Therefore, based on the full trial record, the '459 patent claims are only entitled to its filing date of November 19, 2019, which makes the '459 patent eligible for post-grant review.

Also, a petition for post-grant review may only be filed not later than the date that is nine months after the date of the grant of the patent or of the issuance of a reissue patent, as the case may be. 35 U.S.C. § 321(c). The Petition was filed on July 6, 2021, within nine months of the grant of the

'459 patent on March 16, 2021. Petitioner certifies that the '459 patent is available for post-grant review and also that Petitioner is not barred or estopped from requesting post-grant review. Pet. 2; *see* 37 C.F.R. § 42.204(a).

E. Written Description of the '459 Patent

Petitioner contends that the '459 patent's specification is identical to that of the '936 application, and that the same is true for the '459 patent's only post-AIA priority application, the '471 application. Pet. 53. Thus, Petitioner argues, the '459 patent fails the written description requirement for the same reasons as the '936 application. *Id.*

Patent Owner states that it "does not dispute Petitioner's contention" that "the '459 patent's specification is identical to that of the '936 application," or "the Board's adoption of that contention" in the Institution Decision. PO Resp. 46.

As noted in Section II.D.1 above, each of independent claims 1, 32, and 63 recites limitations that lack written description support in the '936 application. Patent Owner does not argue that any of the dependent claims remedy the deficiencies of the respective independent claims and we see nothing in the dependent claims that would remedy those deficiencies. Thus, all claims of the '459 patent lack written description support in the '936 application.

Based on the full trial record, we find that Petitioner has proven, by a preponderance of the evidence, that the claims of the '459 patent lack written description for the reasons discussed with respect to the '936 application in Section II.D.1 above.

In sum, because the challenged claims do not find written description support in the specification of the '459 patent, the challenged claims are unpatentable for lack of written description under 35 U.S.C. § 112(a).

III. CONCLUSION[4]

For the reasons discussed above, Petitioner has proven, by a preponderance of the evidence, that all of the challenged claims are unpatentable, as summarized in the following table:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–63	112(a)	Written Description	1–63	
Overall Outcome			1–63	

IV. ORDER

Accordingly, it is

ORDERED that claims 1–63 of the '459 patent have been shown, by a preponderance of the evidence, to be unpatentable; 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.

[4] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

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