

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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AUTOSTORE SYSTEM INC.,  
Petitioner,

v.

OCADO INNOVATION LIMITED,  
Patent Owner.

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IPR2021-00798  
Patent 9,796,080

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Before BART A. GERSTENBLITH, JON B. TORNQUIST, and  
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

TORNQUIST, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
35 U.S.C. § 314

## I. INTRODUCTION

### A. *Background and Summary*

AutoStore System Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–23 of U.S. Patent No. 9,796,080 (Ex. 1001, “the ’080 patent”). Ocado Innovation Limited (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 10 (“Prelim. Resp.”). With prior authorization, Petitioner subsequently filed a Reply (Paper 12, “Reply”) and Patent Owner filed a Sur-Reply (Paper 13, “Sur-Reply”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

After considering the parties’ arguments and evidence, for the reasons set forth below, we are not persuaded that Petitioner demonstrates a reasonable likelihood of prevailing with respect to at least one of the challenged claims. Accordingly, we do not institute an *inter partes* review.

### B. *Real Parties-in-Interest*

Petitioner identifies itself, AutoStore Technology AS, and AutoStore AS as the real parties-in-interest. Pet. 1. Patent Owner identifies itself and Ocado Solutions Ltd. as the real parties-in-interest. Paper 4, 1.

### C. *Related Matters*

The ’080 patent is asserted in *Ocado Innovation Ltd. v. AutoStore AS*, No. 1:21-cv-00041 (D.N.H.). Pet. 1; Paper 4, 1.

*D. The '080 Patent*

The '080 patent was filed as a PCT application on June 12, 2014, and claims the benefit of GB patent 1310784.2, filed June 17, 2013. Ex. 1001, codes (22), (30).

The '080 patent is titled “Systems and Methods for Order Processing” and is directed to “improvements in the storage and retrieval of storage and delivery containers in order processing systems.” *Id.* at codes (54), (57). The goods storage and retrieval system of the '080 patent may have “a grid, racking, or other ordered disposition of containers,” as well as distinct containers for storing and delivering items. *Id.* at 2:31–39. According to the '080 patent, “[b]y storing both types of containers within the grid or racking, significant efficiencies can be realized in a number of ways, including for example more efficient use of floor space, more rapid and efficient handling, or manipulation, of containers by robotic load handlers, and fewer moving parts . . . .” *Id.* at 2:39–44.

Figure 5 of the '080 patent is reproduced below:

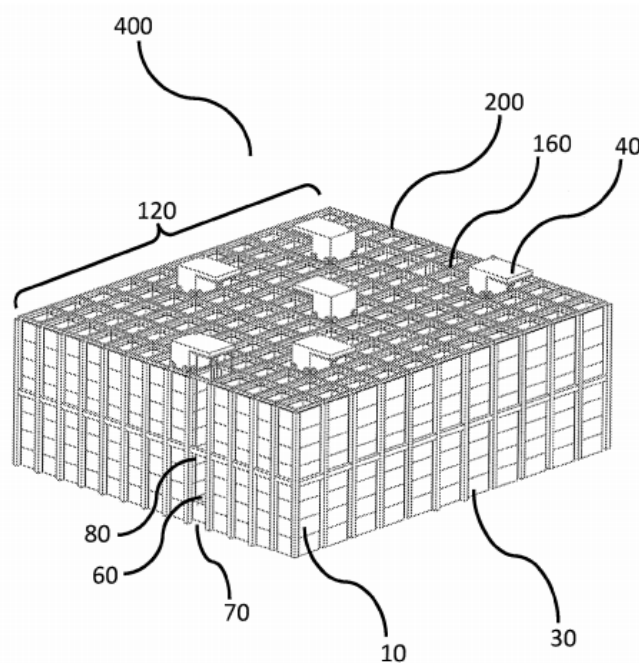


Figure 5 depicts grid-based automated storage and retrieval system 400, having storage containers 10, 70 and delivery containers 10, 80. *Id.* at 8:6–10. As shown in Figure 5, containers 10 may be stored as stacks 30 within rows 100 and columns 120 of grid 200. *Id.* at 6:35–38. Robotic overhead load handlers 40, operating on rails 160, are configured to access containers 10. *Id.* at 6:38–44. The '080 patent explains that rails 160 both support containers 10 and serve to “define the grid 200.” *Id.* at 6:40–42.

Containers 10 may be delivered to order picking stations where items are picked therefrom for placement in delivery containers 10, 80. *Id.* at 4:63–67. After being filled with items, delivery containers may be sent either to an independent order container handling and sortation system or returned to storage and retrieval system 400 for subsequent delivery to customers. *Id.* at 5:7–17, 5:32–45.

The '080 patent discloses that further efficiencies can be achieved in the storage system “by storing one or more delivery containers within storage containers” and by using delivery containers with holes or other apertures that enable automated container-handling devices to rapidly lift or otherwise remove filled or empty delivery containers from storage containers. *Id.* at 2:47–53, 2:62–3:2.

#### *E. Illustrative Claims*

Petitioner challenges claims 1–23 (all claims) of the '080 patent. Pet. 3. Claims 1, 13, and 23 are independent. Independent claims 1 and 13 are illustrative of the challenged claims and are reproduced below:

1. A system for managing shipment containers, the system comprising:  
a storage-and-retrieval system comprising:

a structural framework defining a grid of storage locations configured for receiving a plurality of shipment containers including storage containers and delivery containers;  
a plurality of robotic load handlers for retrieving shipment containers from any one of the storage locations; and  
at least one rail arranged about the grid to enable access to each of the storage locations by at least one of the plurality of robotic load handlers; and

at least one processor configured to:

generate signals for instructing or controlling at least one of the plurality of robotic load handlers to store, in the storage and retrieval system, the storage containers containing stored items;  
generate signals for instructing or controlling at least one of the plurality of robotic load handlers to retrieve from the storage and retrieval system at least one storage container containing stored items for delivering the retrieved at least one storage container to an order picking station; and

generate signals for instructing or controlling at least one of the plurality of robotic load handlers to store at least one delivery container in the storage and retrieval system, the at least one delivery container containing at least one picked item from the retrieved at least one storage container,

wherein the storage containers are of a first size and gauge for transport by at least one of the robotic handlers exclusively within the storage and retrieval system and the delivery containers are of a second size and gauge for transport outside of the storage and retrieval system for delivery and within the storage and retrieval system by at least one of the robotic handlers for storage prior to delivery.

Ex. 1001, 14:2–40.

13. A method of operating an order processing system including a goods storage and retrieval system, the method comprising:  
storing, via at least one robotic load handler, in at least one of a plurality of storage locations in the storage and retrieval system a plurality of storage containers containing stored items;  
storing, via the at least one robotic load handler, in at least one of the plurality of adjacent stacks a plurality of delivery containers;  
retrieving, via the at least one robotic load handler, from at least one of a plurality of storage locations a plurality of storage

containers containing at least one of the delivery containers, and delivering the retrieved containers to an order picking station; transporting the plurality of storage containers exclusively within storage and retrieval system via the at least one robotic load handler; and transporting the plurality of delivery containers outside of the storage and retrieval system for delivery and within the storage and retrieval system by at least one of the robotic handlers for storage prior to delivery.

*Id.* at 15:19–41.

*F. Prior Art and Asserted Grounds*

Petitioner asserts that claims 1–23 are unpatentable on the following grounds (Pet. 3):

<b>Claims Challenged</b>	<b>35 U.S.C. §<sup>1</sup></b>	<b>Reference(s)/Basis</b>
1–8, 13–20, 23	102(a)	Lert <sup>2</sup>
1–8, 13–20, 23	103	Lert
9–12, 21, 22	103	Lert, Winkler <sup>3</sup>

In support of the Petition, Petitioner relies upon the testimony of Dr. Stephen Derby. Ex. 1003.

II. ANALYSIS

*A. Claim Construction*

In this proceeding, the claims of the '080 patent are 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. § 42.100(b).

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<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103, effective March 16, 2013. Because the earliest possible effective filing date of the challenged claims of the '080 patent is after this date, the AIA version of these statutes apply. *See* 35 U.S.C. § 100(i)(2); Ex. 1001, codes (22), (30).

<sup>2</sup> US 9,139,363 B2, issued September 22, 2015. Ex. 1005.

<sup>3</sup> US 7,097,045 B2, issued August 29, 2006. Ex. 1007.

Under that standard, the words of a claim are generally given their “ordinary and customary meaning,” which is the meaning the term would have had to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner contends all terms of the ’080 patent should be given their ordinary and customary meaning, and does not propose any express constructions for terms of the ’080 patent. Pet. 20. Patent Owner contends the terms “structural framework defining a grid of storage locations,” as used in claims 1 and 23 of the ’080 patent, and “autonomous vehicle,” as used in independent claims 1 and 5 of Lert, require construction. Prelim. Resp. 5–14.

Upon review of the parties’ arguments and supporting evidence, we determine only the claim phrase “structural framework defining a grid of storage locations” requires construction to resolve the present controversy before us. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *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.”)).

*A structural framework defining a grid of storage locations*

*1. The Parties’ Arguments*

Independent claims 1 and 23 require “a structural framework defining a grid of storage locations.” Ex. 1001, 14:5–6, 16:35–36. Petitioner did not expressly address the precise meaning of this claim phrase in the Petition. *See* Pet. 20.

Patent Owner contends the word “grid” means “a grating of crossed bars” and the structure of the claim phrase requires that the “structural framework” itself define the grid of storage locations. Prelim. Resp. 5–6. Patent Owner asserts its proposed construction is consistent with Figure 3 of the ’080 patent, which depicts grid 200 being formed by crossed, structural elements that define a two-dimensional array of storage locations, and with the ’080 patent’s disclosure that robotic overhead load handlers operate “on rails 160” that serve to “*define the grid 200.*” *Id.* at 6–8 (quoting Ex. 1001, 6:38–42, Fig. 3) (emphasis added by Patent Owner).

In Reply, Petitioner argues that the “core dispute” is what the term “grid” refers to, and because “grid” modifies the phrase “storage locations,” the claims require only that the storage locations must be arranged in a grid. Reply 11. Petitioner contends this construction is consistent with dependent claim 7, which recites a “grid of storage locations,” but makes no reference to a “structural framework.” *Id.* Petitioner further contends that its construction is consistent with the ’080 patent’s description of “*bins* stacked on top of each other in a *grid* structure,” and with the prosecution history in which the applicants argued to the Examiner that all claims include a storage retrieval system “having a *grid of stacked containers* stored in rows and columns.” *Id.* at 12 (quoting Ex. 1001, 6:54–57; Ex. 1002, 321–22) (emphasis added by Petitioner). According to Petitioner, in contrast to these broad disclosures, Patent Owner’s proposed definition would improperly limit the claims to the specific embodiment shown in Figure 3. *Id.* at 14 (citing *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004)).

In its Sur-Reply, Patent Owner asserts it is undisputed that the claimed “grid” is a “grid of storage locations,” and the actual dispute is what

performs the act of “defining the grid of storage locations.” Sur-Reply 13. On this point, Patent Owner contends the language of claims 1 and 23 is clear that it is the structural framework that defines the grid of storage locations, not the placement or arrangement of storage containers. *Id.* at 13–14.

## 2. *Analysis*

In interpreting claims, we “look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). “In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term.” *Id.* at 1583.

### a) *Claims*

Independent claims 1 and 23 expressly require not only a grid of storage locations, but that this grid is defined by a structural framework. Ex. 1001, 14:5–6. Thus, we agree with Patent Owner that the language of claims 1 and 23 strongly suggests that the structural framework defines the grid of storage locations, and not merely that the structural framework provides open areas within which storage containers could be arranged in a grid-like pattern.

As noted by Petitioner, dependent claim 7 recites “the grid of storage locations” without referencing the “structural framework.” Reply 11; Ex. 1001, 14:65–67. Claim 7, however, depends from independent claim 1. Thus, when claim 7 recites “*the* grid of storage locations” (emphasis added), it expressly relies upon the previous recitation of “a grid of storage locations” recited in claim 1 for antecedent basis. And, as noted above, the language of claim 1 recites “a structural framework defining a grid of

storage locations.” As such, the language of claim 7 does not modify what defines the grid as recited in claim 1 and, therefore, does not support Petitioner’s broader construction.

*b) Written Description*

Consistent with the structure of the claims, the figures of the ’080 patent consistently depict a grid of storage locations that is defined by the structural framework, and not merely by the location or positioning of the storage containers. *See* Ex. 1001, Figs. 5, 16. Although not dispositive, this supports Patent Owner’s proposed construction.

As noted by Petitioner, the ’080 patent discloses that in certain embodiments “grid 200 of containers 10” may be “stored in rows 100 and columns 120 of stacks 30,” without mention of a structural framework. Reply 11–12 (citing Ex. 1001, 6:35–38, 6:54–57). The ’080 patent goes on to explain, however, that the robotic overhead load handlers may operate “on rails 160 formed by frames used to support the containers 10 and thereby define the grid 200.” Ex. 1001, 6:35–42; Sur-Reply 13. This suggests that it is the structural framework that defines the grid of storage locations, and not the placement of storage containers within the system.

In view of the foregoing, we find that the written description of the ’080 patent supports construing the disputed claim phrase to require that the structural framework define the grid of storage locations, and not merely the placement or orientation of storage containers.

*c) Prosecution History*

During prosecution of the ’080 patent, the Applicants asserted that the independent claims all required a “storage and retrieval system having a grid of stacked containers stored in rows and columns.” Ex. 1002, 321–22. Petitioner contends this discussion is consistent with the grid of storage

locations in claims 1 and 23 being defined by the placement or arrangement of storage containers. Reply 12. The same discussion, however, states that “[t]he frame of the grid can be comprised of rails.” Ex. 1002, 322. This suggests that the grid is formed or defined by a structural frame, not by the placement of storage containers. As such, we find that the prosecution history of the ’080 patent is consistent with a construction requiring that the structural framework itself define the grid of storage locations.<sup>4</sup>

*d) Conclusion*

Upon review of the claims, written description, and prosecution history, we construe “a structural framework defining a grid of storage locations,” as recited in independent claims 1 and 23, to require that a structural framework define the grid of storage locations, as opposed to these locations being defined merely by the orientation or location of stacked containers.<sup>5</sup>

*B. Claims 1–8, 13–20, and 23 as Anticipated by Lert*

Petitioner contends that claims 1–8, 13–20, and 23 are anticipated by Lert.<sup>6</sup> Pet. 21–53.

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<sup>4</sup> Even if the Applicants’ statement was not clear as to what defines the grid, we do not find that the statement conveys a clear or unambiguous attempt to alter the language of claim 1, which expressly recites that the structural framework defines the grid.

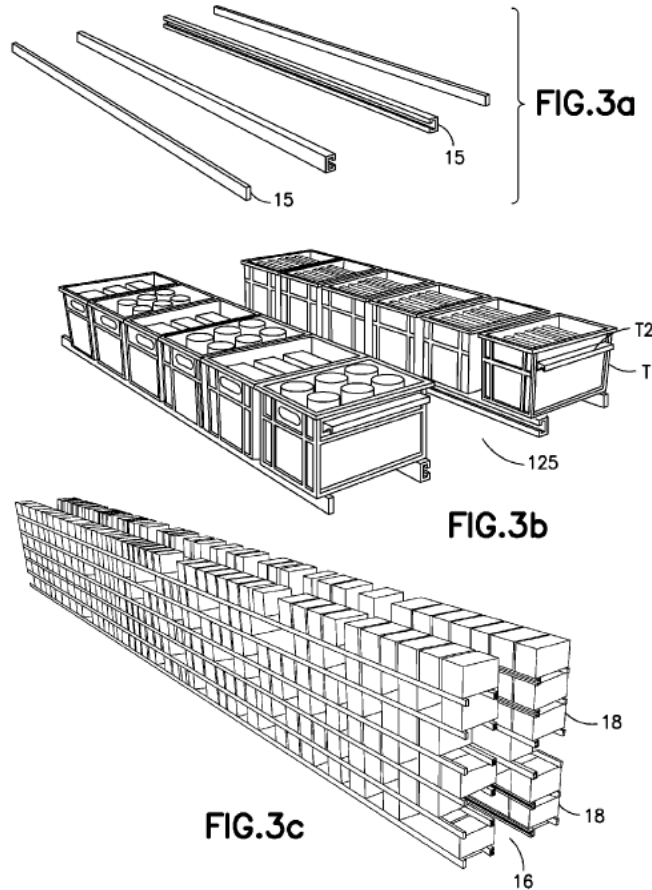
<sup>5</sup> We also agree with the parties that the above recitation from claims 1 and 23 requires a grid of storage locations. The issue we address above is what structure, if any, defines the grid.

<sup>6</sup> The parties dispute whether Petitioner has sufficiently demonstrated that Lert is prior art to the ’080 patent. Pet. 6–7; Prelim. Resp. 15–29; Reply 2–4; Sur-Reply 1–6. In view of our determination that Petitioner does not demonstrate a reasonable likelihood of prevailing with respect to the challenged claims, we need not address this issue.

1. *Lert*

*Lert* is directed to an “automated warehouse storage system including a multi-level storage array with storage distributed along multiple aisles.” Ex. 1005, Abstr. In *Lert*’s system, “Product Totes,”<sup>7</sup> or “P-Totes,” containing eaches are used to fulfill orders. *Id.* at 3:13–14. “Order Totes,” or “O-Totes,” are used to hold eaches picked from P-Totes. *Id.* at 3:15–16.

A Tote-Storage Structure (“TSS”) stores both P-Totes and O-Totes. *Id.* at 3:17–18. Figures 3a–3c of *Lert* depict a portion of the TSS and are reproduced below:

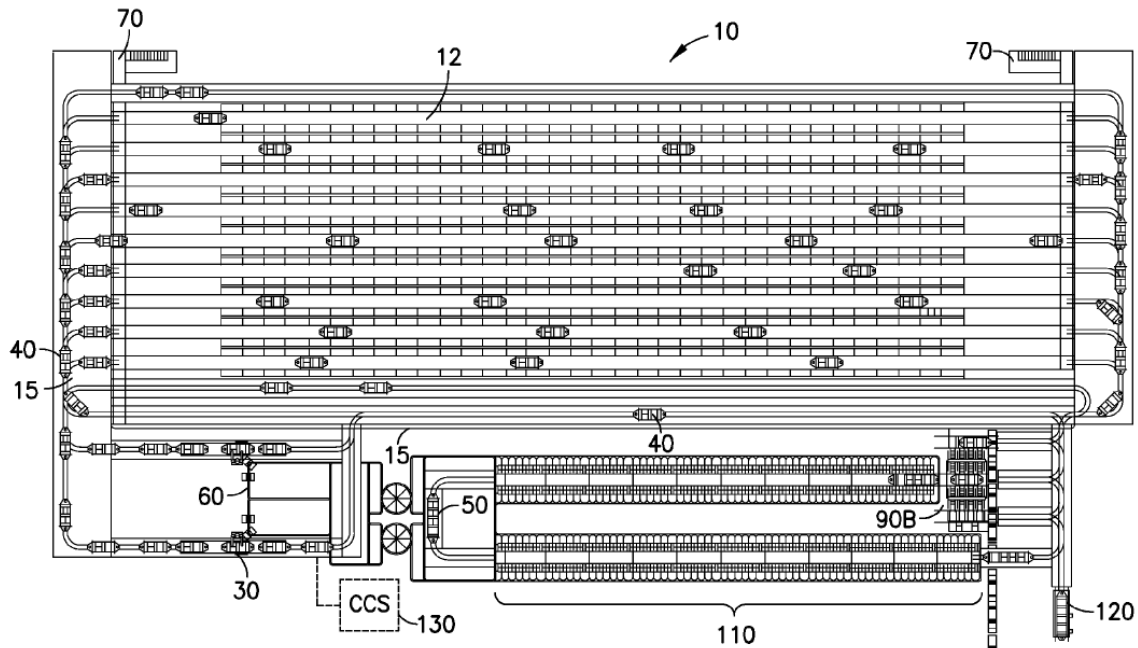


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<sup>7</sup> *Lert* explains that in the art individual product units are referred to as “eaches” and a “container that holds material being stored or handled” is referred to as a “tote.” Ex. 1005, 1:18–22, 3:6–8.

Figure 3a depicts a pair of parallel beams 15 and Figure 3b depicts those beams, or rails, forming a rack structure that supports the front and rear of totes, which are oriented lengthwise perpendicular to the beams. *Id.* at 6:41–43. As shown in Figure 3c, multiple sets of beam pairs may be attached to a common vertical frame to form a “bay” containing multiple levels of storage. *Id.* at 6:44–46. Lert explains that “[m]ultiple bays are constructed in a linear series, with adjacent bays sharing a common frame, to form ‘modules,’ and the modules are arranged in opposing pairs separated by spaces to create ‘aisles.’” *Id.* at 6:46–49. Roam-to-desired-destination bots, or “R-Bots,” are supported by C-channels formed in support beams 15 (shown in Figures 3a and 3b) and are used to store and retrieve P-Totes and O-Totes within the storage structure. *Id.* at 3:20–24, 6:53–64.

Figure 2b of Lert is reproduced below:



**FIG.2b**

Figure 2b depicts an embodiment that is optimized for direct-to-consumer applications. *Id.* at 2:24–27. This embodiment contains five primary

structures: TSS 12, Picking Workstations 30, Central Control System (“CCS”) 130, Order-Loading Structure (“OLS”) 110, and Circulating Vertical Conveyor (“CVC”) 90. *Id.* at 3:18–50.

As shown in Figure 2b, and as generally described in Figures 3a–3c above, TSS 12 “may be a large rack system with attached guideways 15 for robots and human-access structures.” *Id.* at 5:13–16. The TSS “serves two functions: (1) it provides storage for totes of eaches in the system, both P-Totes containing the picking stock and filled O-Totes that are waiting to be delivered to customers, and (2) it provides a closed operating environment for the R-Bots that store and retrieve these totes and transport them between storage locations, Picking Workstations, and [the] CVC.” *Id.* at 5:17–22.

At Picking Workstations 30, human pickers transfer eaches from P-Totes to E-Bots, which are robotic vehicles that transfer eaches from P-Totes to target O-Totes stored in OLS 110. *Id.* at 3:27–29, 12:28–34.

OLS 110 provides a rack structure for the temporary storage of O-Totes and is designed such that E-Bots may be positioned over any of the O-Totes on a particular level. *Id.* at 18:24–26, 18:53–56. O-Bots 50 move O-Totes in and out of the OLS. *Id.* at 19:36–37. In particular, O-Bots “receive empty O-Totes being inducted into the system via the CVC 90, place them on the rack to be filled, take them off the rack when filled, and put them back on the CVC to be either discharged from the system or moved into storage within the TSS by R-Bots.” *Id.* at 19:37–41.

CVC 90 may be a “paternoster lift” that “moves P-Totes and O-Totes vertically as desired to support the order-fulfillment process.” *Id.* at 19:55–57, 20:16.

CCS 130, consisting of software, computers, and network equipment, “manages all of the resources within the system (including all of the various robots), orchestrates the entire order-fulfillment process and all related processes, and provides status and control interfaces to human operators of the system.” *Id.* at 3:44–50.

2. *Analysis: Independent Claims 1 and 23*

Independent claims 1 and 23 each require “a structural framework defining a grid of storage locations configured for receiving a plurality of shipment containers including storage containers and delivery containers.” Ex. 1001, 14:5–8, 16:34–35. Petitioner contends that the TSS of Lert is a “multi-aisle, multi-level” rack structure having a “structural framework” with a “grid of storage locations.” Pet. 23 (citing Ex. 1005, 3:33–35, 18:24–37, Figs. 2a–2b, 3c–3g).

Patent Owner contends that Lert fails to disclose a grid of storage locations because, in the rack system of Lert, “[n]o element of the structural framework defines or sets the boundaries where totes are placed along the length of the parallel beams.” Prelim. Resp. 35 (citing Ex. 2009 ¶ 67).

Petitioner responds that it is not the structural elements of the storage system that must define the grid, but the placement of the storage containers. Reply 13. Accordingly, Petitioner contends Lert’s rack system satisfies the grid limitations of independent claims 1 and 23. *Id.*

As discussed in Section II.A.2 above, we construe “a structural framework defining a grid of storage locations,” as recited in claims 1 and 23, to require that a “structural framework” define the grid of storage locations, as opposed to these locations being defined merely by the orientation or location of stacked containers. Petitioner identifies no

structural framework in Lert that defines a grid of storage locations.<sup>8</sup>

Accordingly, we are not persuaded that Petitioner demonstrates a reasonable likelihood that independent claims 1 and 23 are anticipated by Lert.

3. *Analysis: Dependent Claims 2–8*

Claims 2–8 depend, directly or indirectly, from independent claim 1. Petitioner’s arguments with respect to these claims do not resolve the deficiencies noted above with respect to independent claim 1. *See* Pet. 35–42. Accordingly, Petitioner has not shown a reasonable likelihood that dependent claims 2–8 are anticipated by Lert.

4. *Analysis: Independent Claim 13*

Independent claim 13 differs from independent claims 1 and 23 in that, *inter alia*, (1) it does not require a structural framework that defines a grid of storage locations, and (2) it requires delivering storage containers that contain at least one delivery container to an order picking station. Ex. 1001, 15:19–41.

Petitioner contends that the R-Bots of Lert retrieve both P-Totes and O-Totes from the TSS and deliver them to an order picking station, and that Lert’s P-Totes and O-Totes contain sub-containers that are also delivery containers. Pet. 21, 29, 43 (citing Ex. 1003 ¶¶ 76, 101; Ex. 1005, 9:5–7). Petitioner further contends that O-Bots transfer filled O-Totes having sub-totes or sub-containers “from the OLS.” *Id.* at 30.

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<sup>8</sup> We note that the ’080 patent distinguishes between grid and racking systems (Ex. 1001, 2:31–46) and Lert expressly discloses that it uses a rack-based system, not a grid-based system. Ex. 1005, 5:15–16 (“The TSS may be a large *rack system* with attached guideways 15 for robots and human-access structures.”), 5:23–24 (“The TSS may be generally comprised of five elements: the storage rack 14, which is a multi-aisle 16, multi-level 18 *rack structure . . .*”) (emphasis added).

Patent Owner asserts that “Lert does not disclose the delivery of storage containers with nested delivery containers to an order picking station,” as recited in independent claim 13. Prelim. Resp. 41. Patent Owner implicitly asserts that the P-Totes of Lert do not contain nested delivery containers and expressly contends that the O-Totes of Lert are never delivered to an order picking station. *Id.* at 44–48.

We address the parties’ dispute regarding P-Totes and O-Totes below.

*a) P-Totes*

In Lert’s system, R-Bots retrieve P-Totes from a storage location in the TSS and deliver them to an order picking station. Ex. 1005, 6:25–29. The question is whether these P-Totes contain delivery containers. Pet. 29–30, 43.

Petitioner asserts that P-Totes and O-Totes “serve as ‘storage containers’” and have “nested ‘sub-totes’ or ‘sub-containers’ that are sent to customers, which serve as ‘delivery containers.’” *Id.* at 21 (citing Ex. 1003 ¶ 76). The conclusion that P-Totes contain sub-containers that are sent to customers, however, is supported only by the testimony of Dr. Derby. *Id.* Dr. Derby does not cite to any evidence to support his conclusion that P-Totes contain “delivery containers,” and throughout his declaration Dr. Derby relies on O-Totes as satisfying various claim limitations requiring nested storage and delivery containers. Ex. 1003 ¶¶ 76, 176–178 (“As discussed above, Lert discloses the P-Totes and O-Totes are both ‘storage containers’ and that sub-totes or sub-containers (‘delivery container’) are nested within O-Totes.”).

As noted by Petitioner in another section of the Petition, Lert disclosed that “eaches can be loaded into P-Totes (or sub-totes) loose, in which case the ‘de-trashing’ process of disposing of the original shipping-

container materials (e.g., cardboard, shrink wrap, etc.) may be performed immediately.” Ex. 1005, 4:40–43; Pet. 11. Lert further discloses that the shipping containers could also be cut open “only enough to expose the contained eaches for picking and then place[d] into the P-Tote Sub-Container with the eaches still contained inside. In this case, the de-trashing process may be performed later, either at the Picking Workstation or when the P-Tote/Sub-Container returns for the next reloading/picking cycle.” Ex. 1005, 4:44–50.

This disclosure demonstrates that P-Totes may contain sub-totes (or sub-containers), but Petitioner presents no persuasive evidence that these sub-totes are ever transferred or delivered to customers, such that they would be considered delivery containers.<sup>9</sup> Indeed, Lert suggests that the shipping-container materials are thrown away, either before or after the picking operation, and that the “P-Tote/Sub-Container returns for the next reloading/picking cycle.” Ex. 1005, 4:44–50; *see also id* at 2:64–3:4 (asserting that the invention of Lert is distinguishable over the prior art based on the fact that eaches are put into intermediate carriers prior to being placed in order containers).

In view of the foregoing, on this record, we are not persuaded that the delivery of P-Totes to an order picking station in Lert teaches or suggests delivering storage containers containing delivery containers to an order picking workstation.

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<sup>9</sup> Although the sub-totes are delivered to the P-Totes, we do not understand that this renders these sub-totes “delivery containers.” Instead, we understand that delivery containers are those containers that are provided to customers after the storage and picking process is complete. *See* Ex. 1001, 2:35–39.

*b) O-Totes*

It appears undisputed that O-Totes are delivery containers and that these containers may be stored in the TSS and OLS. The question with respect to claim 13 then is (1) whether O-Totes are delivered to the order picking station in Lert, and/or (2) whether Lert's OLS constitutes an order picking station.

*(1) Delivery to the Order Picking Station*

In Lert, P-Totes are delivered to the picking workstation and eaches are picked from these totes and placed into E-Bots. Ex. 1005, 12:27–34. In contrast to P-Totes, Lert does not expressly describe any process or procedure wherein an O-Tote is delivered to an order picking workstation. *See id.* at 3:25–26, 4:51–52 (“The function of the O-Totes is to hold eaches that have been picked from P-Totes to fill customer orders.”).

As noted by Petitioner, Lert does state that the TSS serves two functions: (1) “it provides storage for totes of eaches in the system, both P-Totes containing picking stock and filled O-Totes that are waiting to be delivered to customers, and (2) it provides a closed operating environment for the R-Bots that store and retrieve these totes and transport them between storage locations, Picking Workstations, and [the] CVC.” *Id.* at 5:16–22, 9:5–9; *see* Pet. 22, 29. Interpreted broadly and out of context of the remaining disclosures of Lert, this disclosure might suggest that O-Totes are delivered by R-Bots to “Picking Workstations.” There is no actual disclosure, description, or reason provided in Lert, however, for the R-Bots to deliver O-Totes to the Picking Workstations. Indeed, according to Lert, the use of intermediate carriers (E-Bots) to transfer picked eaches between the Picking Workstation and the order containers (O-Totes in the OLS) is a distinguishing feature of its system. Ex. 1005, 2:64–3:4; Sur-Reply 44–45.

As such, the identified disclosure of Lert is insufficient to demonstrate that O-Totes are in fact delivered to an order picking station, as required by independent claim 13.

In view of the foregoing, Petitioner has not demonstrated sufficiently that O-Totes (storage containers containing delivery containers) are delivered to the Picking Workstations of Lert.

*(2) OLS*

The OLS of Lert includes a rack structure for the temporary storage of O-Totes. Ex. 1005, 18:24–26. Petitioner provides no reasoned argument to explain why the OLS of Lert would be considered by one of ordinary skill in the art to be “an order picking station.” As such, Petitioner has not demonstrated that the presence of O-Totes within the OLS satisfies the disputed limitations of independent claim 13.

*c) Conclusion with Respect to Claim 13*

For the reasons set forth above, Petitioner has not demonstrated sufficiently that Lert discloses delivering storage containers that contain at least one delivery container to an order picking station. Accordingly, Petitioner has not demonstrated a reasonable likelihood that claim 13 is anticipated by Lert.

*d) Dependent Claims 14–20*

Claims 14–20 depend, directly or indirectly, from independent claim 13. Petitioner’s arguments with respect to these claims do not resolve the issues discussed above with respect to independent claim 13. Pet. 44–48. Accordingly, Petitioner has not shown a reasonable likelihood that claims 14–20 are anticipated by Lert.

*C. Claims 1–8, 13–20, and 23 as Obvious over Lert*

Petitioner contends the subject matter of claims 1–8, 13–20, and 23 would have been obvious over Lert. Pet. 21–53. Petitioner’s obviousness arguments with respect to these claims do not resolve the issues noted above with respect to independent claims 1, 13, and 23. In particular, Petitioner provides no persuasive argument that one of ordinary skill in the art would have modified Lert to have a structural framework that defines the storage locations or to have delivery containers stored within storage containers and delivered to picking workstations. Accordingly, Petitioner has not shown a reasonable likelihood that claims 1–8, 13–20, and 23 would have been obvious over the disclosures of Lert.

*D. Claims 9–12, 21, and 22 as Obvious over Lert and Winkler*

Petitioner contends that claims 9–12, 21, and 22 would have been obvious over the combined disclosures of Lert and Winkler. Pet. 53–68. In this ground, Petitioner relies on Winkler for its disclosures of a mechanism for removing delivery containers from a storage container. *Id.* at 53–54 (citing Ex. 1007, 6:40–49). Petitioner’s arguments with respect to Winkler do not resolve the deficiencies noted above with respect to independent claims 1 and 13. Accordingly, for the reasons set forth above, Petitioner has not shown a reasonable likelihood that the subject matter of claims 9–12, 21, and 22 would have been obvious over the combined disclosures of Lert and Winkler.

### III. CONCLUSION

For the reasons set forth above, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to at least one challenged claim.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied* and no *inter partes* review is instituted.

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