

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZILLOW GROUP, INC., ZILLOW, INC., and CHEWY, INC.
Petitioner,

v.

INTERNATIONAL BUSINESS MACHINES CORP.,
Patent Owner.

IPR2020-01655
Patent 7,076,443 B1

Before KEN B. BARRETT, KEVIN W. CHERRY, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining Some Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Zillow Group, Inc. and Zillow, Inc. (collectively “Petitioner” or “Zillow”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–7, 9–17, 19, and 20 of U.S. Patent 7,076,443 B1 (Ex. 1001, “the ’443 patent”).¹ Petitioner filed a Declaration of Jonathan Hochman in support of the Petition. Ex. 1004. International Business Machines Corporation (“Patent Owner” or “IBM”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). Taking into account the arguments presented in Patent Owner’s Preliminary Response, we determined there was a reasonable likelihood Petitioner would prevail in its contention that at least one of the challenged claims of the ’443 patent is unpatentable under 35 U.S.C. § 103(a). On March 15, 2021, we instituted this *inter partes* review as to the challenged claims and all grounds presented in the Petition. Paper 8. (“Dec.”).

During the course of trial, Patent Owner filed a response to the Petition. Paper 20 (“PO Resp.”). Patent Owner filed a Declaration of Douglas C. Schmidt in support of the Patent Owner Response. Ex. 2003. Petitioner filed a Reply. Paper 24 (“Pet. Reply”). Patent Owner filed a Sur-reply. Paper 27 (“Sur-reply”). An oral hearing was held on December 15, 2021 and the transcript is entered into the record. Paper 35 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the challenged claims of the ’443 patent. For the reasons discussed below, we determine

¹ Chewy, Inc. filed a Petition seeking review of the same claims challenged in Zillow’s Petition and also a Motion for Joinder with this proceeding. Paper 25, 2. We granted Chewy Inc.’s Petition and Motion for Joinder. *Id.* at 25.

Petitioner establishes by a preponderance of the evidence that claims 1, 2, and 3 of the '443 patent are unpatentable but does not establish that claims 4–7, 9–17, 19, and 20 are unpatentable.

A. Related Matters

The '443 patent is currently at issue in *International Business Machines Corp. v. Zillow Group*, Case No. 2:20-cv-00851-TSZ (W.D. Wa.) and *Chewy, Inc. v. International Business Machines Corp.*, 1:21-cv-01319 (S.D.N.Y.). Pet. 1; Paper 5, 1; Paper 18, 1.

B. Real Parties in Interest

Petitioners and Patent Owner state that the named entities are the only real parties in interest. Pet. 1; Paper 5, 1; IPR2021–00757, Paper 2, 1.

C. The '443 Patent

The '443 patent “relates to e-commerce solutions that include target advertising.” Ex. 1001, 1:10–13. The patent explains that advertising to Internet users has typically involved the use of “banner ads,” which have drawbacks:

First, advertisements are made available to the users whether or not these ads have been specifically solicited. Second, banner ads rely on user profiling, which is burdensome to employ. Third, web site owners who are not technically savvy, or without available resources, can not easily acquire user profiling information.

Id. at 1:18–28. Additionally, shortcomings in the use of user profiles for targeted advertising include that collecting and building profiles is “cumbersome work,” that the information changes, and that it is “difficult to identify a specific user, i.e., a user interested in purchasing automobiles, and associate the correct advertisement profile to the user.” *Id.* at 1:46–56. The '443 patent provides a method for use with search engine services that does

not rely on user profiling, and is “uniquely different from the e-commerce method of user profiling.” *Id.* at 1:65–2:4, 4:54–56.

The patent relies on the idea that “if a user is interested in a specific piece of information, he or she may be interested in related or similar advertisements,” presented in banner advertisements, based on the results of searches. *Id.* at 5:11–19. “[F]or each search result item 30, the method requires a match search 40 of related products.” *Id.* at 5:33–35.

The method of the ’443 patent includes the use of a “product database 110,” which “provides storage for a list of potential product advertisements.” *Id.* at 6:13–14. “The type of information pertaining to these products may be in the form of images, such as hyperlinks or full HTML pages, and the like. It is not necessary to dictate the details of this database, provided accessible images can be acquired.” *Id.* at 6:14–18. According to the ’443 patent:

product matching manager 140 takes the search engine results set and attempts to match at least one product to each of the search result items. This is accomplished, in part, through communication with the product database 110. For example, if the search had yielded twenty five (25) in the results set, the product matching manager 140 would, for each of those twenty five search result items, try to match at least one of the products found in the product database 110 to the individual search result item.

Id. at 6:35–43. The patent describes “using the URL of the search result item as a unique key identifier.” *Id.* at 6:47–49.

D. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–7, 9–17, 19, and 20 would have been unpatentable on the following grounds (Pet. 3–4)²:

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102, 103. Because the

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–7, 9–17, 19, 20	102	Linden ³
1–7, 9–17, 19, 20	102	Bull ⁴

E. The Challenged Claims

Claims 1 and 15 are independent and are reproduced below with annotations added by Petitioner:

1. A method of targeting at least one associated advertisement from an Internet search having access to an information repository by a user, comprising:

- [a] identifying at least one search result item from a search result of said Internet search by said user;
- [b] searching for said at least one associated advertisement within said repository using said at least one search result item;
- [c] identifying said at least one associated advertisement from said repository having at least one word that matches said at least one search result item; and
- [d] correlating said at least one associated advertisement with said at least one search result item.

15. A method for providing related advertisements for search result items from a search of an information repository, comprising:

- [a] matching said search result items to said related advertisements;
- [b] designating each of said search result items that have said related advertisements matched therewith;

¹443 patent was filed before the effective date of the relevant amendment, the pre-AIA version of § 102 applies.

³ US 6,266,649 B1, issued July 24, 2001 (Ex. 1003, “Linden”).

⁴ US 5,995,943, issued Nov. 30, 1999 (Ex. 1004, “Bull”).

- [c] providing a corresponding graphical user interface for each of said search result items so designated for subsequent user selection;
- [d] searching and retrieving said related advertisement for one of said search result items when said corresponding graphical user interface is selected by a user; and
- [e] formatting and displaying said related advertisements upon selection.

Ex. 1001, 8:5–17, 8:61–9:8.

II. ANALYSIS

A. Overview

Petitioner bears the burden of establishing the unpatentability of the challenged claims by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A claim is anticipated under 35 U.S.C. § 102 “only if each and every element as set forth in the claims is found either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). However, this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *See In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). We analyze the asserted grounds based on anticipation in accordance with the above-stated principles.

B. Level of Ordinary Skill in the Art

Petitioner contends that a skilled artisan “would have possessed at least three years of experience in the field of information systems, e-commerce, or Internet marketing,” and “would have had a working knowledge about how to create useful software programs, including

familiarity with network database systems.” Pet. 9 (citing Ex. 1005 ¶¶ 18, 21) (Hochman Decl.).

Patent Owner agrees with Petitioner’s definition of the level of ordinary skill in the art. PO Resp. 10

We adopt Petitioner’s proposed level of ordinary skill in the art because it appears consistent with the problems addressed in the ’443 patent and the prior art of record.

C. Claim Construction

Petitioner contends that it “analyzed the claims using their plain and ordinary meaning.” Pet. 9. As a result, Petitioner contends that we “need not explicitly construe the terms here.” *Id.*

Patent Owner adopts our “application of the plain and ordinary meaning to the claim terms.” PO Resp. 10.

Because there is no dispute that the claims should be analyzed using the plain and ordinary meaning thereof, we apply the plain and ordinary meaning. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1015 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

D. Alleged Anticipation by Linden — Ground 1

Petitioner contends that Linden anticipates claims 1–7, 9–17, 19, and 20. Pet. 15–46. Petitioner supports its contentions with the declaration testimony of Jonathan Hochman. Ex. 1005.

1. Overview of Linden (Ex. 1003)

Linden is directed to “recommend[ing] items to individual users based on a set of items that are known to be of interest to the user” from “a merchant’s Web site.” Ex. 1003, Abstract. Linden describes that services for recommending products commonly use “content-based filtering,” which, in its “pure” form, “attempt[s] to identify items which, based on an analysis of item content, are similar to items that are known to be of interest to the user,” by parsing web pages and generating a profile of “commonly-occurring terms,” which is used to search for other web pages. *Id.* at 1:23–31. This process, according to Linden, has drawbacks that include a lack of “mechanism for evaluating the quality or popularity of an item,” and the requirement for the “items to include some form of content that is amenable to feature extraction algorithms.” *Id.* at 1:33–41. Linden also describes “collaborative filtering,” where “items are recommended to users based on the interests of a community of users, without any analysis of item content,” but this requires a user “having to rate items in the database to build up a personal ratings profile.” *Id.* at 1:42–61.

In Linden’s system, “recommended items are identified using a previously-generated table or other mapping structure which maps individual items to lists of “similar” items. “The item similarities reflected by the table are based at least upon correlations between the interests of users in particular items.” *Id.* at 2:42–45. The correlations include other products that users purchase along with the identified item, and “content-based similarities extracted by analyzing item descriptions or content.” *Id.* at 2:57–3:6.

Linden uses current or recent contents of a user’s “shopping cart” as a source of input to the recommendation service. *Id.* at 3:38–42. Linden discloses that in addition to using the contents of the “shopping cart” for input, “any search terms typed into the site’s search engine during the user’s browsing session could be captured and used to perform content-based filtering of the recommended items list.” *Id.* at 16:16–22. Correlations between items is based on a “commonality index,” where a “relatively high commonality index for a pair of items ITEM A and ITEM B indicates that a relatively large percentage of users who bought ITEM A also bought ITEM B (and vice versa).” *Id.* at 9:34–43.

An illustration of Linden’s recommendation service is shown in Figure 1, reproduced below.

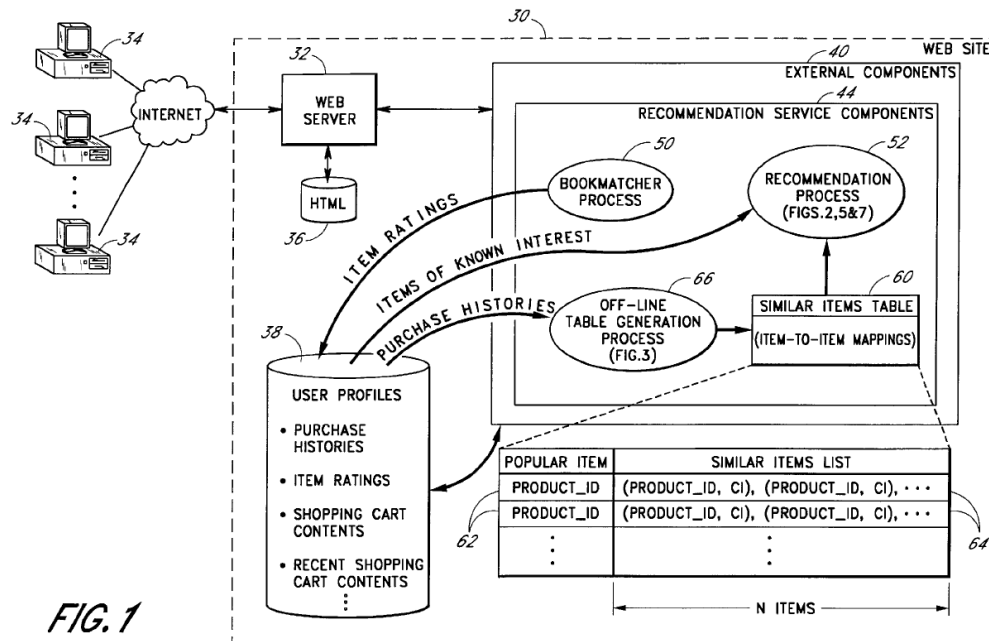


Figure 1 shows the basic components of the recommendation service, including web site 30, arrows that show the flow of information, user profiles database 38 (including shopping cart contents), similar items table 60, and recommendation process 52. *See generally id.* at 7:6–8:34.

2. *Claim 1*

Preamble: A method of targeting at least one associated advertisement from an Internet search having access to an information repository by a user, comprising:

Petitioner contends that Linden discloses the subject matter of the preamble of claim 1. Pet. 16–17. In particular, Petitioner contends “Linden specifically discloses targeting associated advertisements based on a user’s Internet search in explaining that ‘[t]he recommendations could be presented as advertisements for the recommended items.’” *Id.* at 16 (citing Ex. 1003, 11:55–56) (alteration in original). Petitioner further contends that Linden’s “recommendations service would include ‘a search engine and associated database . . . for enabling users to interactively search the catalog for particular items . . . [and] ‘any search terms typed into the site’s search engine during the user’s browsing session could be captured and used to perform content-based filtering of the recommended items list.’” *Id.* at 17 (citing Ex. 1003, 7:41–44, 16:18–22) (first alteration in original).

Patent Owner does not address Petitioner’s contentions or whether the preamble is limiting. *See* PO Resp. 15–23. We need not decide whether the preamble is limiting because Petitioner demonstrates that Linden discloses the subject matter of the preamble.

*1[a]*⁵ *identifying at least one search result item from a search result of said Internet search by said user;*

Petitioner contends Linden discloses this limitation because it uses “search terms typed into the site’s search engine by a user to generate search result items (list of books)” that “can be used to generate a recommendation

⁵ We use the limitation identifiers such as “1[a]” used by the parties for ease of reference.

or advertisement.” Pet. 17 (citing Ex. 1003, 6:46–51, 16:18–22; Ex. 1005 ¶ 63). Petitioner further contends “any search terms typed into the site’s search engine by a user are used to generate search result items (list of books) and used to generate a recommendation or advertisement (other books).” *Id.* (citing Ex. 1003, 16:18–22; Ex. 1005 ¶ 63). Based on this, Petitioner further contends that “Linden’s recommendation service identifies at least one search result item in response to a user request for results from the Internet search.” *Id.* (citing Ex. 1005 ¶ 63). Petitioner further contends “Linden’s ‘recommendation-generation process involves identifying a set of items that are of known interest to the user,’ for example, something the user searched for and then added to a shopping cart.” *Id.* (citing Ex. 1003, 3:37–55, 10:37–44, Fig. 2 at step 80). Petitioner concludes that a skilled artisan “would understand that a user entering a search query into a search engine is providing an indication of interest; the search query, including keywords, indicates what the user is looking for.” *Id.* at 18 (citing Ex. 1005 ¶¶ 63–65).

Patent Owner does not address Petitioner’s contentions. *See* PO Resp. 15–23.

Based on our review of the evidence cited by Petitioner, we find that Linden discloses this limitation.

1[b] searching for said at least one associated advertisement within said repository using said at least one search result item;

Petitioner contends that a feature of Linden’s “invention involves using the contents and/or recent contents of the user’s shopping cart as inputs to the recommendation service.” Pet. 18 (citing Ex. 1003, 3:37–42). According to Petitioner, “[w]hen a user performs a search and selects a search result item to place in the shopping cart, the selected search result

item strongly expresses what the user desires.” *Id.* (citing Ex. 1005 ¶ 67). Petitioner further contends that “Linden’s recommended products search using item-to-item mappings ‘includ[es] content-based similarities extracted by analyzing item descriptions or content’ of the chosen search result.” *Id.* at 19 (citing Ex. 1003, 3:3–6) (alteration in original). Petitioner further contends that Linden uses “content-based filtering to search for associated advertisements based on a user’s search results.” *Id.* (citing Ex. 1003, 1:23–32). Petitioner further contends that “Linden’s ‘uses of shopping cart contents’ — a subset of a user’s search results on the Website — to identify the user’s known interests and to search for recommendations is another example of a content-based similarity analysis of items that is well-known in the art.” *Id.* at 19–20 (citing Ex. 1003, 6:26–41, 16:49–58; Ex. 1005 ¶¶ 70–72).

Patent Owner does not address Petitioner’s contentions. *See* PO Resp. 15–23.

Based on our review of the evidence cited by Petitioner, we find that Linden discloses this limitation.

I[c] identifying said at least one associated advertisement from said repository having at least one word that matches said at least one search result item; and

Petitioner contends that “Linden specifically discloses that the recommended products search using item-to-item mappings ‘includ[es] content-based similarities extracted by analyzing item descriptions or content.’” Pet. 20 (citing Ex. 1003, 3:3–6) (alteration in original). Petitioner further contends that “[s]hopping cart contents, which is a chosen subset of a user’s search results listing, are analyzed to ‘generate recommendations in a system in which mappings of items to lists of similar items are generated

from a computer-based comparison of item contents’ and associated keywords.” *Id.* (citing Ex. 1003, 3:37–55, 16:49–58). Petitioner further contends that a skilled artisan “would understand that the analysis and comparison performed by Linden’s recommendation service and by table 60 to be based on keywords corresponding to a search result item.” *Id.* (citing Ex. 1005 ¶ 79). Petitioner further contends “Linden itself describes ‘methods for performing content-based similarity analyses of items are well-known in the art . . . suggesting to a [skilled artisan] that ‘item-to-item mappings’ are generated using word or text matching.” *Id.* at 20–21 (citing Ex. 1003, 16:56–58; Ex. 1005 ¶¶ 75–78).

Patent Owner, in turn, contends Petitioner fails to demonstrate that Linden discloses this limitation for two reasons. PO Resp 15.

First, Patent Owner contends that “the contents of Linden’s shopping cart are not ‘at least one search result item’” because “an item can end up in the user’s shopping cart without having ever been a search result.” PO Resp., 15–16 (citing Ex. 2003 ¶¶ 80–81; Ex. 2005, 110:11–16). Patent Owner contends that “users can add items to their shopping cart after browsing product category pages, without conducting any search queries” or “users might click on a hyperlink from an email attachment to go directly to a product page and add that item to their shopping cart.” *Id.* at 16 (citing Ex. 2005, 104:18–105:18, 106:21–107:12). Patent Owner further contends Linden’s “‘shopping cart contents’ are . . . a specific type of data in the shopping cart data structure, not ‘search result items.’” *Id.* (citing Ex. 1003, 4:66–5:1; Ex. 2003 ¶ 83). Patent Owner next contends that because the Petition never refers to Linden’s shopping cart contents for the “at least one search result item” in step 1[a], Petitioner “recognized that ‘items in the

shopping cart’ of Linden are different from the claimed ‘search result item.’”
Id. at 17.

Second, Patent Owner contends that “even assuming that Linden’s shopping cart contents are ‘at least one search result item’ . . . nowhere does Linden actually disclose or mention identifying recommendations having at least one word that *matches* any shopping cart content.” PO Resp. 18 (citing Ex. 2003 ¶¶ 85–89). Patent Owner contends Linden uses shopping cart contents to generate recommendations based on “mappings of items to lists of similar items” is not word matching. *Id.* (citing Ex. 1003, 8:64–65; Ex. 2003 ¶¶ 85–9-87). Patent Owner further contends Petitioner’s expert admits Linden doesn’t “necessarily identify recommendations having at least one word that *matches* any shopping cart content but instead it is merely one possibility.” *Id.* at 19 (citing Ex. 1005 ¶¶ 75–76). Patent Owner contends Mr. Hochman’s testimony is not sufficient because it is based on the “mere possibility or probability that a word or text matching can be carried out.” *Id.* at 18.

Petitioner replies Patent Owner did not dispute Petitioner’s contention that Linden discloses “identifying a [search result item] from [an] Internet search” in step 1[a]. Pet. Reply 1. Petitioner further contends Patent Owner “admits that ‘Linden’s shopping cart contents . . . are what the user has added to the shopping cart,’ . . . and therefore Linden’s disclosure that [a search result item] can be added to a shopping cart anticipates” this claim limitation. *Id.* at 1–2 (citing PO Resp. 16; Pet. 16–20). In connection with Patent Owner’s contention that Linden describes its shopping cart as a data structure, Petitioner contends “how Linden implements the *shopping cart* does not change Linden’s disclosure that its *contents* comprise [search result

items].” *Id.* at 2 (citing Pet. 17; Ex. 1001, 6:46–51, 10:37–44, 16:18–22; Ex. 1005 ¶ 63). In connection with Patent Owner’s inherency contention, Petitioner contends “Mr. Hochman correctly applied the inherency doctrine when he testified that word- or text-based ‘matching’ is not only ‘the primary way of doing this’ but that he ‘can’t think of another way to do matching with description other than through key words and texts.’” *Id.* at 3 (citing Ex. 1005, 66:13–67:7). Petitioner further contends that “[b]ased on Linden’s teachings, it would have been ‘very standard [and] conventional . . . that if [a POSA] want[s] to try to match an ad to a description, . . . you analyze the text of the description and you extract relevant key words and try to match them.’” *Id.* (citing Ex. 2005, 67:8–13).

Patent Owner, in turn, contends it “did not and does not, accept that Linden anticipates 1[a].” Sur-reply 2. Patent Owner reiterates its contention that Linden’s shopping cart is a data structure while, “the ‘[s]earch result items are what the user has searched for’ on the Internet.” *Id.* at 3 (citing PO Resp. 16; Ex. 1015, 52:5–15, 53:3–7, 53:22–25, 59:25–60:4, 60:15–23). Patent Owner further contends Petitioner “did not even refer to Linden’s shopping cart contents as ‘at least one search result item’ for 1[a] and Linden does not disclose any type of search that results in shopping cart contents.” *Id.* (citing Pet. 17–18). Patent Owner further contends that Petitioner’s citations to Linden on page 2 of the Petitioner’s Reply “do not demonstrate that shopping cart contents are ‘search result items.’ Instead, Linden here simply states that recommendations can be generated based on items ‘[selected] for prospective purchase’ . . . ‘content-based filtering’ can be performed based on ‘search terms’ and ‘items that are of known interest to

the user’ can be ‘item[s] [added] to a shopping cart.’” *Id.* at 4 (citing Ex. 1003, 6:46–51, 16:18–22, 10:37–44).

For the following reasons, Petitioner establishes Linden discloses this limitation.

For context, we start by looking at Petitioner’s evidence in support of its contentions for step 1[a]. Although Patent Owner asserts in the Sur-reply it “does not accept that Linden anticipates 1[a],” its contentions for claim 1 in this ground are only directed to steps 1[c] and 1[d]. *See* PO Resp. 15–23 (arguing only steps 1[c] and 1[d]).

For step 1[a], Petitioner points to column 6, lines 46–51 and column 16, lines 18–22 of Linden to support the assertion that Linden “identifies at least one search result item in response to a user request for results from the Internet search.” Pet. 17. The first disclosure cited by Petitioner is “if the user is currently searching for a father’s day gift and has selected several books for purchase, this method will have a tendency to identify other books that are well suited for the gift recipient.” Ex. 1003, 6:46–51. The second disclosure is “any search terms typed into the site’s search engine during the user’s browsing session could be captured and used to perform content-based filtering of the recommended items list.” *Id.* at 16:18–22. As discussed above in connection with step 1[a], we find this evidence supports a finding that Linden discloses step 1[a].

Patent Owner’s contention that items may end up in a user’s shopping cart for reasons other than from a search is unavailing. In the portions of Linden just discussed, Linden explicitly discloses users typing search terms into the search engine (“father’s day gifts”) and a user selecting several items (books) for purchase. The fact that there may be alternative methods

for a user to place an item in the shopping cart that are not a result of a search is of little import in light of this explicit disclosure in Linden. Further, Patent Owner's contention that Linden's shopping cart is merely "a data structure and associated code" not search result items is also unavailing. The entire passage of Linden from which Patent Owner parses this quote is

Using a shopping cart feature of the site, users can add and remove items to/from a personal shopping cart which is persistent over multiple sessions. (As used herein, a "shopping cart" is a data structure and associated code which keeps track of items that have been selected by a user for possible purchase.) For example, a user can modify the contents of the shopping cart over a period of time, such as one week, and then proceed to a check out area of the site to purchase the shopping cart contents.

Ex. 1003 (4:63–5:5).

Linden's shopping cart does in fact represent items in the user's shopping cart which not surprisingly is effectuated through a data structure and associated code. For these reasons, Patent Owner's first reason (PO Resp. 15–16) that Linden purportedly does not disclose this limitation is unavailing.

Patent Owner's second reason that Linden does not purportedly disclose this limitation, *i.e.*, Linden does not perform word matching, is likewise unavailing because it is premised on an *ipsissimis verbis* test. We turn to Linden's disclosure relied on by Petitioner. Linden discloses that "[t]he similar items table 60 could also reflect non-collaborative type item similarities including content-based similarities derived by *comparing item contents or descriptions*." Ex. 1003, 9:12–15 (emphasis added). Linden also discloses "if the user is currently searching for books on a particular topic and has added several such books to the shopping cart, this method will more likely produce other *books that involve the same or similar*

topics.” Id. at 3:52–55 (emphasis added). Linden also discloses “the current and/or past contents of a shopping cart can be used to generate recommendations in a system in which mappings of items to lists of similar items are generated from a computer-based comparison of item contents.” *Id.* at 16:52–56. Linden, thus, explicitly discloses generating recommendations by comparing item contents or descriptions and provides a specific example of matching books involving the same or similar topics. We find this disclosure corresponds to the requirement of step 1[c] of “identifying . . . at least one advertisement . . . having at least one word that matches said . . . search result item.”

After considering the evidence cited by Petitioner in light of Patent Owner’s contentions, we find Petitioner establishes that Linden discloses this limitation.

1[d] correlating said at least one associated advertisement with said at least one search result item.

Petitioner contends Linden discloses that “if the user currently has three items in his or her shopping cart, these three items can be treated as the items of known interest for purposes of generating recommendations, in which case recommendations may be generated and displayed automatically when the user views the shopping cart contents.” Pet. 21 (citing Ex. 1003, 3:42–47). Petitioner further contends that Linden’s recommendations are “correlated with the search result item in that the former is ‘preferably presented to the user on the same Web page . . . as the shopping cart contents’ in the latter.” *Id.* (citing Ex. 1003, 16:39–41) (alteration in original). Petitioner further contends that “[n]ot only are the recommendations ‘presented as advertisements for the recommended items,’ they are returned to the user with ‘each recommended item being presented

as a hypertextual link to the item's product information page.” *Id.* (citing Ex. 1003, 11:50–56). Petitioner further contends that Figure 7 of Linden illustrates recommended items displayed in the Web page of the shopping cart contents. *Id.* at 21–22 (citing Ex. 1003, 10:20–25, Fig. 7). Petitioner concludes that “[b]ecause shopping cart contents comprise the search result items that the user selected from an Internet search, a [skilled artisan] would recognize the recommendations shown to the user are correlated to the results of the user's search for products. *Id.* at 22 (citing Ex. 1005 ¶ 83).

Patent Owner first repeats its contention for step 1[c] that “Linden's shopping cart are not the claimed ‘search result items.’” PO Resp. 20. This contention is unavailing for the reasons discussed above in connection with step 1[c].

Patent Owner next contends “Linden does not disclose ‘correlating said at least one associated advertisement’ with *any* type of item(s)” but, “[r]ather the purpose of Linden is to recommend products based on the user's shopping cart contents *as a whole*.” PO Resp. 20 (citing Ex. 1003, 10:20–25, 16:9–11; Ex. 2003 ¶ 101). According to Patent Owner, “Linden displays recommendations on the web page of the shopping cart, but does not explain how those recommendations might correspond to any specific content of the shopping cart.” *Id.* at 21.

Patent Owner next contends Linden's “‘similar items table 60’ does not meet the ‘correlating’ step because the ‘similar items table’ is simply ‘a mapping of one item to another item’ or ‘a correspondence between products and other products’ as Zillow's declarant testified.” PO Resp. 21 (citing Ex. 2005, 84:7–11, 85:13–18; Ex. 2003 ¶ 102). Patent Owner further contends “Figure 1 of Linden illustrates that any ‘correspondence’ is of

products to other products using Product ID . . . and CI (commonality index . . .).” *Id.* (citing Ex. 1003, 9:54–55, 9:37–38). According to Patent Owner, Product ID’s are not advertisements and are not search result items.

Petitioner replies that step 1[d] “neither demands a one-to-one correlation between [the advertisement and the search result item] nor specifies that a one-to-many or many-to-one correspondence would be insufficient.” Pet. Reply 3–4. Petitioner contends “similar items table 60 stores correlations between a shopping cart item (item of known interest to the user) and a corresponding similar items list 64 (list of potential recommendations.).” *Id.* at 4 (citing Ex. 1003, 10:64–67). Petitioner further contends Linden’s “Figure 7 illustrates that ‘for *each* shopping cart item’ . . . Linden’s service will ‘retrieve similar items list from table [60]’ for possible subsequent display.” *Id.* (citing Ex. 1003, 3:42–47, Fig. 7). Petitioner further contends that Linden discloses how recommendations might correspond to specific items in the shopping cart. *Id.* (citing Ex. 1003, 9:10–15, 9:34–37).

For the following reasons, we find Petitioner establishes Linden discloses this claim limitation.

Figure 7 of Linden is instructive for our analysis and is reproduced below:

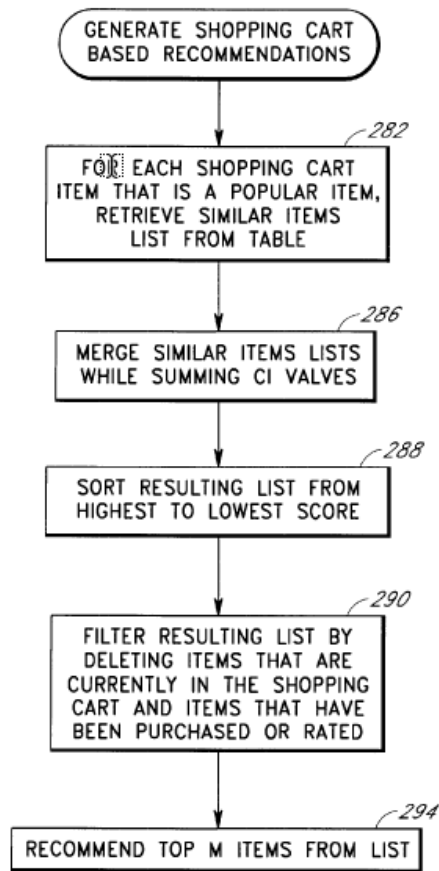


FIG. 7

Figure 7 is a “sequence of steps that are performed by the shopping cart recommendations service to generate a set of shopping-cart-based recommendations.” Ex. 1003, 16:23–25. Linden explains that at step 282, “the similar items list for *each* popular item in the shopping cart is retrieved from the similar items table 60.” *Id.* at 16:25–27 (emphasis added). The “similar items lists are merged while summing the commonality index (CI) values of the list items” at step 288 and at step 290, “the resulting list is sorted from highest-to-lowest score.” *Id.* at 16:33–36. “Finally, in step 294, the top M (e.g., 5) items of the list are returned as recommendations” and

“preferably presented to the user on the same Web page . . . as the shopping cart contents.” *Id.* at 16:39–41.

Step 1[d] requires that at least one advertisement is correlated with at least one search result item. We agree with Petitioner that the plain language of the claim does not require a one-to-one correlation between the advertisement and a particular search result item or any other numerical correlation. Regardless of whether the claim requires a one-to-one correlation, Figure 7 of Linden and the associated text just discussed disclose that M recommended items are generated for “each” shopping cart item. Patent Owner’s contention that Linden’s recommendations are made based on the shopping cart contents as a whole is, thus, unavailing. Patent Owner’s contention that Linden displays the recommendations on the web page but does not explain how the recommendations correlate⁶ to specific items in the shopping cart is contrary to the specific disclosure in Figure 7 which explains how the recommended items are related to each search result item in the shopping cart. In addition, Linden explains similar items “include content-based similarities derived by comparing item contents or descriptions” and “correlations between purchases of items . . . deemed to be most closely related to the respective popular item.” Ex. 1003, 9:12–15, 9:34–37. Likewise, Patent Owner’s contention that Linden merely correlates Product ID’s to Commonality Index (CI) is not supported and contrary to Linden’s explicit disclosure that CI is summed and used to generate the recommended items.

⁶ An ordinary meaning of correlate is “to present or set forth as to show relationship.” Merriam-Webster.com (accessed February 28, 2022), <https://www.merriam-webster.com/dictionary/correlate>.

After considering the evidence cited by Petitioner in light of Patent Owner's contentions, we find Petitioner establishes that Linden discloses this limitation.

Claim 1 Conclusion

For all the foregoing reasons, Petitioner establishes by a preponderance of the evidence that Linden anticipates claim 1.

3. Claim 2

Claim 2 depends from claim 1 and recites "providing said at least one associated advertisement on demand by said user." Ex. 1001, 8:18–20.

Petitioner contends Linden's personal recommendation generation process in Figure 2 "is preferably invoked in real-time in response to an online action of the user." Pet. 23–24 (citing Ex. 1003, 10:13–14, 18:35–37, 22:7–8). Petitioner further contends a skilled artisan would have understood "step 94 of Figure 2, 'Recommend Top M Items from Recommendations List,' to be the presentation of an advertisement in real-time in response to a user's request." *Id.* at 24 (citing Ex. 1005 ¶ 90).

Patent Owner does not address Petitioner's contentions for claim 2.
See generally PO Resp.

Based on our review of the evidence cited by Petitioner, we determine Petitioner establishes by a preponderance of the evidence that Linden anticipates claim 2.

4. Claim 3

Claim 3 depends from claim 1 and recites "wherein said information repository is associated with an Internet server." Ex. 1001, 8:21–22.

Petitioner contends "Linden discloses an information repository associated with an Internet server that is accessible to users over the world

wide web.” Pet. 24–25 (citing Ex. 1005 ¶ 95). Petitioner further contends “the Amazon.com Website includes a searchable repository and ‘online catalog of several million book titles, music titles, video titles, and other types of items.” *Id.* at 25 (citing Ex. 1003, 4:60–64). Petitioner further contends Linden’s Figure 1 shows “the ‘Web server 34 accesses a database 36 . . . and other browsable information about various products of the catalog.’” *Id.*

Patent Owner does not address Petitioner’s contentions for claim 3.
See generally PO Resp.

Based on our review of the evidence cited by Petitioner, we determine Petitioner establishes by a preponderance of the evidence that Linden anticipates claim 3.

5. *Claim 4*

Claim 4 depends from claim 1 and recites “displaying along with said at least one search result item a user-selectable icon containing a link to said at least one associated advertisement.” Ex. 1001, 8:23–26.

Petitioner refers to its contentions for step 1[d] and contends “Linden discloses displaying at least one search result item along with a hypertextual link to an associated recommendation.” Pet. 26 (citing Ex. 1005 ¶ 99). Petitioner further contends “Linden discloses a ‘user-selectable icon containing a link’ in the form of a ‘button 200,’ which a ‘user can select to view additional items from the list of M items’ being recommended.” *Id.* (citing Ex. 1003, 15:57–59, Fig. 6). According to Petitioner, a skilled artisan would have understood “‘button 200’ to be a user-selectable icon containing a hyperlink to at least one associated advertisement.” *Id.* (citing Ex. 1005 ¶ 100).

Patent Owner first repeats its contention for step 1[d] that “shopping cart contents are not ‘said at least one search result’ and “displaying a ‘hypertextual link to an associated recommendation’ still does not anticipate claim 4.” PO Resp. 23 (citing Ex. 2003 ¶¶ 108–113); *see also id.* at 23–25 (repeating the same argument but pointing to its contention for step 1[c]). For the same reasons discussed above in connection with steps 1[c] and 1[d], we are not persuaded by this contention.

Patent Owner next contends that “Linden’s ‘Instant Recommendations’ page, as shown in Figure 6 only displays product recommendations and ‘button 200.’” PO Resp. 25 (citing Ex. 2005, 101:4–10. According to Patent Owner, “Linden does not disclose displaying *along with* the shopping cart contents . . . ‘button 200’ ‘containing a link to said at least one associated advertisement.’” *Id.* at 25 (citing Ex. 2003 ¶¶ 114–116).

Petitioner, in turn, contends “IBM does not contest that Linden’s ‘button 200,’ depicted in Figure 6 is a user-selectable icon containing a link to at least one recommendation.” Pet. Reply 5 (citing PO Resp. 23; Pet. 26; Ex. 1003, 15:57–59). Petitioner further contends “[i]t is unclear if by ‘*along with*’ IBM means ‘at the same time’ or ‘on the same page’” but “[e]ither way, Linden discloses the limitation.” *Id.*

With respect to displaying at the same time, Petitioner contends “Linden discloses that ‘if the user currently has three items in his . . . shopping cart, these three items can be treated as the items of known interest for the purposes of generating recommendations, in which case the recommendations may be generated and displayed automatically *when the user views the shopping cart contents.*” Pet. Reply 5 (citing Ex. 1003,

3:42–47; Ex. 1005 ¶ 78) (emphasis added by Petitioner). Petitioner further contends “Linden also teaches that ‘[t]he FIG. 2 process is preferably invoked in real-time in response to an online action of the user. For example, in [one] implementation (FIGS. 5 and 6) . . . ***in response to selection by the user of a corresponding hyperlink[.]***” *Id.* (citing Ex. 1003, 10:12–20) (emphasis added by Petitioner).

With respect to displaying on the same page, Petitioner contends Linden’s Figure 7 shopping cart implementation shows “the recommendations are generated . . . in real-time when the user initiates a display of a shopping cart, and are ***displayed on the same Web page*** as the shopping cart contents.” Pet Reply 5–6 (citing Ex. 1003, 10:20–26). Petitioner further contends “Linden’s ‘button 200’ is not limited to the “Instant Recommendations’ page in Figure 6, as IBM suggests.” *Id.* at 6 (citing PO Resp. 23–25; Ex. 1003, 10:8–12). Petitioner further contends “Linden teaches that ‘any of a variety of other methods can be used to initiate the recommendations generation process and to display the recommendations to the user.” *Id.* (citing Ex. 1003, 10:28–31). According to Petitioner, a skilled artisan would have understood that “‘button 200’ in Figure 6, which a ‘user can select to view additional items from the list of M items’ being recommended in Figure 7, can be displayed *along with*, at the same time as, or on the same page as, Linden’s shopping cart contents.” *Id.* (citing Ex. 1003, 15:57–59; Ex. 1005 ¶¶ 99–100).

In the Sur-reply, Patent Owner contends that Petitioner “does not explain how ‘button 200’ . . . is ‘display[ed] along with said at least one search result item.” Sur-reply 9 (citing Pet. Reply 5–6). Patent Owner further contends Petitioner’s “citation to a new Linden passage stating that

recommendations can be generated when a user selects a hyperlink also fails to disclose ‘said at least one search result item.’” *Id.* (citing Pet. Reply 5).

For the following reasons, we are not persuaded Petitioner has established that claim 4 is anticipated by Linden.

Petitioner starts by referring to its contentions for step 1[d] to satisfy the requirements of claim 4. Pet. 26. Step 1[d], however, recites correlating “at least one associated advertisement with . . . at least one search result item” as opposed to displaying a user selectable icon along with the search result item in claim 4. Correlating is not the same as displaying.

For step 1[d], Petitioner relies on Figure 7 of Linden (Pet. 21–26) as opposed to Figure 6 for claim 4. The only disclosure cited by Petitioner for step 1[d] that refers to displaying an icon containing a link to an advertisement does not mention displaying both a search result item and the icon containing a link. Pet. 21. Petitioner first directs us to the following disclosure in Linden: “Web pages . . . are returned to the user, with each recommended item being presented as a hypertextual link to the item’s product information page” or “as advertisements for the recommended items.” Ex. 1003, 11:47–56. The description of Figure 7 cited by Petitioner provides “recommendations are preferably presented to the user on the same Web page . . . as the shopping cart contents.” *Id.* at 16:39–41. Neither of these disclosures provide for displaying both search result items and the icon together.

Figure 6 of Linden is reproduced below:

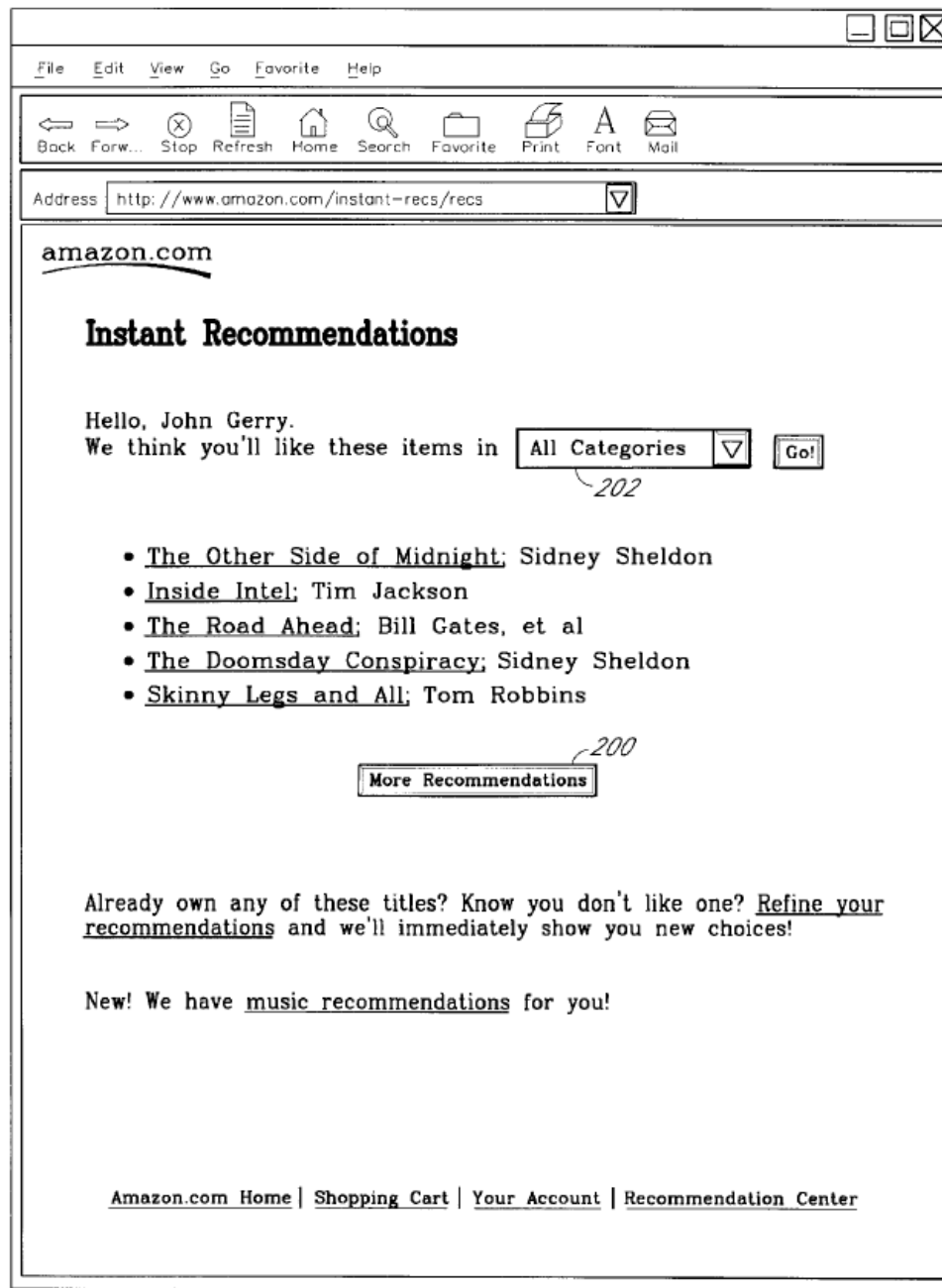


FIG. 6

Figure 6 “illustrates the general form of a Web page[] used to present the recommendations” to a user. Ex. 1003, 4:32–34. Button 200 shown in Figure 6 contains the following text: “More Recommendations.” *Id.*, Fig. 6.

Selecting button 200 allows the user “to view additional items.” *Id.* 15:57–59.

Petitioner does not explain where Figure 6 discloses displaying a search result item. *See* Pet. 26–27. Figure 6 shows five bullet points with recommended books listed next to each bullet point and button 200 which is linked to more recommendations. Ex. 1003, 15:53–59. Mr. Hochman, likewise does not identify any item in Figure 6 that represents a search result item. Ex. 1005 ¶¶ 99–100. None of the citations to Linden in the Petitioner Reply describe a search result item along with an icon containing a link to an advertisement for a recommended product in Figure 6 or Figure 7. *See* Pet. Reply 5–6 (citing Ex. 1003, 3:42–47, 10:12–20, 10:20–25, 11:47–52); *see also* Ex. 2003 ¶ 116 (Dr. Schmidt testifying button 200 does not meet the requirements of claim 4). Finally, Petitioner’s argument that a skilled artisan would have understood that button 200 in Figure 6 can be combined with the list of items from Figure 7 to satisfy this claim limitation is unsupported by the testimony of Mr. Hochman cited by Petitioner. Mr. Hochman draws no connection between button 200 in Figure 6 and a search result item, makes no reference at all to Figure 7, but merely testifies that a skilled artisan would have understood “‘button 200’ to be a user-selectable icon containing a hyperlink to at least one advertised product.” Ex. 1005 ¶ 100. Petitioner provides insufficient evidence showing that Linden actually describes such an arrangement. The fact that the components of Figures 6 and 7 could be rearranged or combined in the same way as recited in claim 4 is not sufficient, because in order to anticipate under 35 U.S.C. § 102 the prior art reference must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements “arranged as

in the claim.” *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983). “[D]ifferences between the prior art reference and a claimed invention, however slight, invoke the question of obviousness, not anticipation.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008).

For all the foregoing reasons, Petitioner does not establish that Linden anticipates claim 4.

6. *Claim 5*

Claim 5 depends from claim 1 and recites “designating said at least one search result item matched to said at least one associated advertisement for subsequent selection by a user.” Ex. 1001, 8:27–30.

Petitioner’s first contention is “Linden allows ‘users [to] add and remove items to/from a personal shopping cart which is persistent over multiple sessions’ and ‘over a period of time, such as one week.’” Pet. 28 (citing Ex. 1003, 4:64–5:3). Petitioner further contends that “[w]hen a user adds an item to the shopping cart, they are designating the item as one that potentially interests them.” *Id.* (citing Ex. 1005 ¶ 103).

Petitioner’s second contention is “Linden’s invention also discloses the ability to designate multiple shopping carts and items matched to associated recommendations for subsequent user selection.” Pet. 28 (citing Ex. 1005 ¶ 105). According to Petitioner, “the user can be prompted to select a particular shopping cart . . . and the recommendations can then be generated based on the items that were purchased from or otherwise placed into designated shopping cart(s).” *Id.* (citing Ex. 1003, 3:60–64).

Petitioner’s third contention is that recommendations “may also be ‘cached by the Web site 30 until requested’—that is designated for

subsequent selection by the user. [R]ecommendations could be generated in advance of any request or action by the user.” *Id.* at 28–29 (citing Ex. 1003, 10:20–36).

Patent Owner, in turn, contends “under Zillow’s theory for claim 1, individual contents within the shopping cart matched to at least one advertisement must be designated . . . for subsequent selection by a user to meet claim 5” but, according to Patent Owner, “Zillow never makes such an assertion.” PO Resp. 26 (citing Ex. 2003 ¶ 121). Patent Owner further contends “Zillow argues that a search result item resulting from a search on Amazon.com that a user can select such that a product is added to the contents of the shopping cart corresponds to the ‘search result item.’” *Id.* (citing Pet. 28; Ex. 2005, 136:9–13, 138:11–17; Ex. 2003 ¶ 122). Patent Owner further contends “Linden does not disclose that a search result item resulting from a search on Amazon.com that a user can select . . . is matched to a product recommendation.” *Id.* (citing Ex. 2003 ¶¶ 123–124).

Patent Owner next contends that, contrary to Zillow’s assertion, “an entire shopping cart (or carts) of Linden is also not a ‘search result item’ nor is an entire shopping cart matched to a product recommendation.” PO Resp. 27–28. Patent Owner further contends “Linden discloses that recommendations are generated only *after* a user selects a shopping cart” but Mr. Hochman testified “the claimed ‘*matching is happening at the same time or before designating.*’” *Id.* at 28 (citing Ex. 1003, 3:60–64; Ex. 2005, 25:16–26:10); *see also* Ex. 2003 ¶¶ 125–128 (Dr. Schmidt testifying that claim 5 is not met under Petitioner’s theory based on selecting an entire shopping cart).

Petitioner replies “[b]ecause Linden’s service ‘retrieve[s] [a] similar items list . . . for *each* item of know[n] interest’ in a shopping cart, . . . it follows that associated recommendations are necessarily available for each shopping cart item, lest Linden’s service is terminated.” Pet. Reply 7 (citing Ex. 1003, 10:64–11:1, Fig. 2). Petitioner contends when Linden’s service “‘prompt[s] a user to view a shopping cart item or ‘to select a particular shopping cart’ as in claim 37, the service is ‘designating’ a[] [search result item] for subsequent selection because ‘the designated . . . shopping cart’ provides the basis for generating recommendations for the user.” *Id.* (citing Pet. 28; Ex. 1003, 3:60–64, 10:64–11:1; Ex. 1005 ¶¶ 103–106). Petitioner further contends “[s]tated differently, the act of ‘designating’ or specifying that a[] [search result item] matched to an advertisement is available is necessary for Linden’s recommendation service because Figure 2 shows that for ‘*each* item of know[n] interest’ . . . the invention proceeds to identify associated recommendations stored in table 60.” *Id.* at 7–8 (citing Ex. 1003, 9:10–12, 10:64–66, Fig. 2). Petitioner next contends because Linden has the ability to “generate recommendations in advance and to ‘cache[] [them] until requested’ by the user illustrates that *at least* one [search result item] or shopping cart is designated for subsequent user selection, because each such item or cart already has associated advertisement(s) available which were generated and/or cached in advance.” *Id.* at 8 (citing Pet. 28–29; Ex. 1003, 10:34–37).

For the following reasons, we determine Petitioner does not establish Linden anticipates claim 5.

We first look to the ’443 patent for guidance concerning “designating” as recited in claim 5. The ’443 patent first describes “matching the search

result items to the related advertisements; designating each of the search result items that have the related advertisements matched therewith; providing a corresponding graphical user interface for each of the search result items so designated for subsequent user selection.” Ex. 1001, 2:59–63. The next description is “designating each of the search result items that have the related advertisements matched therewith; providing a corresponding graphical user interface for each of the search result items so designated for subsequent user selection.” *Id.* at 3:36–40. The next description is “causing a computer to effect designating each of the result items that have the related advertisements matched therewith” and “causing a computer to effect providing a corresponding graphical user interface for each of the search result items so designated for subsequent user selection by a user.” *Id.* at 4: 19–24. In connection with Figure 2, the ’443 patent describes “the user designates a selection 60. This can be either one of two designations: a) the search result items may be selected for further investigation 62; or b) a graphical user interface or product icon may be selected to acquire information on related advertised products 69.” *Id.* at 5:46–50. Further, the ’443 patent describes that if

the user desires related product information associated with each search result item having been flagged with corresponding related product advertisement, the user selects 69 one of the graphical user interfaces (flags) or product icons . . . Each product advertisement acquired and assimilated with the designated search result item is then formatted 75 and displayed 80 to the user.

Id. at 5:54–62. Based on the foregoing, “designating” in the ’443 patent covers both the computer system and user performing “designating” in connection with a search result item matched with an associated

advertisement. In either case, “designating” is described as occurring after search result items are matched with related product advertisements or have been flagged with related product advertisements.

Claim 5 recites “designating said at least one search result item matched to said at least one associated advertisement.” Ex. 1001, 8:28–29. The antecedent basis for *matched* in claim 5 appears in step 1[c] of claim 1. *Id.* at 8:15. Claim 5 is, thus, consistent with the description of designating in the ’443 patent in that the designating step occurs after search result items are matched or flagged with associated advertisements.

Petitioner’s first contention is “[w]hen a user adds an item to the shopping cart, they are designating the item as one that potentially interests them.” Pet. 28. Although user designation is contemplated by the ’443 patent, claim 5 requires more than a user designating that an item may of interest. Petitioner’s contention does not account for the matching of the search result item to the associated advertisement in step 1[c]. For steps 1[a] and 1[b], Petitioner refers to users adding items to Linden’s shopping cart. Pet. 17–18. For step 1[c], Petitioner argues shopping cart contents are matched to similar items through comparison of associated keywords *after* being added to the cart (*id.* at 20) but argues for claim 5 that the search results are designated by the user when the items are added to the shopping cart prior to matching.

Petitioner’s second contention suffers from a similar defect. Petitioner contends Linden “discloses the ability to designate multiple shopping carts,” “users can be prompted to select a particular shopping cart,” and “recommendations can then be generated based on the items . . . purchased from or otherwise placed into the designated shopping carts.”

Pet. 28. Regardless of whether the items are placed in one shopping cart or in multiple shopping carts, Petitioner still fails to explain how items in the cart(s) are matched to associated advertisements prior to what it purports to be the designating step. Petitioner fails to direct us to any evidence in Linden that any item in any of the multiple shopping carts is matched to an associated advertisement prior to a user designating the cart.

Petitioner third contention is also not persuasive. Petitioner contends that recommendations that are displayed in real time on the same web page as the shopping cart contents may be cached which Petitioner contends is “designated for subsequent selection by the user.” Pet. 28–29. This contention is apparently based on Linden’s system performing the designating step when the recommendations are cached. *See id.* This contention fails because it is based on designating cached *recommendations* but claim 5 requires designating search result items.

Petitioner’s argument in the Reply that Linden’s claim 37 supports its contentions concerning claim 5 of the ’443 patent is unavailing for the following reasons. We initially note that the Petition does not refer to Linden’s claim 37.⁷ Pet. 28–29. The argument in the Reply is premised on Linden’s system purportedly “prompting the user to view a shopping cart item or to select a particular shopping cart” but neither claim 37 nor claim 33 from which claim 37 depends require the system to prompt the user to do anything. *See* Ex. 1003, 19:61–20:12, 20:26–20:30. Although Linden discloses its system may prompt the user at column 3 lines 60–64 cited by

⁷ Petitioner takes the position that its reference to Linden’s claims 33 and 37 is in response to arguments raised in the Patent Owner Response. Tr. 14:3–19.

Petitioner, Petitioner does not cite to evidence or otherwise explain how the disclosure at column 3 of Linden relates to Linden's claims 33 and 37. In any event, we are not persuaded that Petitioner's arguments regarding Linden's claims 33 and 37 cure the problems with the contentions in the Petition concerning claim 5 of the '443 patent just discussed.

Linden's claim 37 requires the user to request to view a shopping cart and "the method comprises looking up the data structure respective similar product sets for each of multiple products represented within the shopping cart." Ex. 1003, 20:26–30. Claim 37 aligns with Petitioner's second contention that the user selects a particular shopping cart. Pet. 28. The difference is that Petitioner now switches gears and argues that Linden's "service is 'designating' a[] [search result item] for subsequent user selection." Pet. Reply 7. But, even if Petitioner had shown that claim 37 requires the service to prompt the user, Petitioner has still not shown that Linden matches the advertisement to search result items prior to what Petitioner purports is the designation of search result items in Linden's claim 37.

For all the foregoing reasons, we determine Petitioner does not establish that Linden anticipates claim 5.

7. Claims 6, 7, 9–14

Claims 6, 7, and 9–14 all depend from claim 5. Ex. 1001, 8:31–36, 8:39–60. We reviewed Petitioner's contentions and additional citations to Linden for these claims and determine that the additional evidence does not cure the deficiencies in Petitioner's contentions for claim 5. Consequently, we determine Petitioner does not establish that Linden anticipates claims 6, 7, and 9–14.

8. *Claim 15*

For the reasons explained below, we find that Linden does not disclose step 15[b] and consequently, we agree with Patent Owner that Petitioner does not establish Linden anticipates claim 15. PO Resp. 38.

Preamble: A method for providing related advertisements for search result items from a search of an information repository, comprising:

Petitioner contends that Linden discloses the subject matter of the preamble of claim 15 because its “service provides advertisements that are related to users’ search result items, because the service treats a users’ items placed in a shopping cart as items of known interest for the purposes of generating recommendations for other products.” Pet. 37 (citing Ex. 1003, 3:42–47). Petitioner further contends that “[n]ot only are the recommendations ‘presented as advertisements for the recommended items,’ they are returned to the user with ‘a hypertextual link to the item’s product information page.” *Id.* (citing Ex. 1003, 11:50–56). Petitioner further contends that “[t]o the extent items in a shopping cart constitute a subset of a user’s search results, a [skilled artisan] as of the late 1990’s would understand that Linden’s recommendation service could be applied to a list of items matching a user’s search criteria, even before the user places the items in an online shopping cart.” *Id.* at 37–38 (citing Ex. 1005 ¶ 147).

Patent Owner does not squarely address Petitioner’s contentions or whether the preamble is limiting. *See* PO Resp. 38–42. We need not decide whether the preamble is limiting because Petitioner demonstrates sufficiently that Linden discloses the subject matter of the preamble.

15[a] matching said search result items to said related advertisements;

Petitioner contends “Linden anticipates this claim element because the invention ‘involves using the current and/or recent contents of the user’s shopping cart as inputs to the recommendation service.’” Pet. 38 (citing Ex. 1003, 3:37–55). Petitioner further contends that “[f]or example, ‘if the user is currently searching for books on a particular topic and has added several such books to the shopping cart, this method will more likely produce other books that involve the same or similar topics and recommend them to the user.’” *Id.* Petitioner further contends that Linden’s “recommendations are matched with a user’s search result items when the former are ‘preferably presented to the user on the same Web page . . . as the shopping cart contents’ and are ‘presented as advertisements for the recommended items.’” *Id.* (citing Ex. 1003, 11:54–56, 16:39–41) (alteration in original). Petitioner further contends that each recommended item is “presented to the user as a hypertextual link to the item’s product information page.” *Id.* (citing Ex. 1003, 11:50–52).

For step 15[a], Patent Owner relies on its contention for step 1[c] of claim 1 that the “contents of a user’s shopping cart are not ‘search result items.’” PO Resp. 39 (citing Ex. 2003 ¶¶ 180–189). We are not persuaded by this contention for the reasons discussed above in our analysis of step 1[c]. Based on our review of the evidence cited by Petitioner, we find that Linden discloses step 15[a].

15[b] designating each of said search result items that have said related advertisements matched therewith:

Petitioner contends that Linden anticipates this claim limitation “[f]or the same reasons as . . . for claims 5, 14, and 15[a].” Pet. 39. Petitioner

further contends that “‘designating’ search results items that have matching advertisements means simply indicating that one or more recommendations are available for a search result item to be displayed.” *Id.* (citing Ex. 1005 ¶¶ 159–165).

Patent Owner contends claims 5 and 14 differ in scope from step 15[b] because those claims “do no recite designating ‘each of’ said search result items.” PO Resp. 39–40. Patent Owner further contends Petitioner did not “attempt to explain how Linden anticipates ‘designating *each of* said search result items.’” *Id.* at 40 (citing Ex. 2003 ¶ 192).

Petitioner, in turn, directs us to deposition testimony by Mr. Hochman which Petitioner contends establishes that “Linden inherently discloses this step.” Pet. Reply 13 (citing Ex. 2005, 64:2–16). According to Petitioner, “[b]ecause Linden teaches designating *one* [search result item] with related advertisements for subsequent selection, it . . . inherently discloses—designating *each* of the [search result items] that have advertisements matched therewith through the application of higher-order ‘map functions.’” *Id.* (citing [https://en.wikipedia.org/wiki/Map_\(higher-order_function\)](https://en.wikipedia.org/wiki/Map_(higher-order_function))).

In the Sur-reply, Patent Owner contends that “Linden does not disclose a ‘higher order map function.’” Sur-reply 7. Patent Owner further contends Petitioner “does not explain why allegedly designating ‘one’ search result item inherently discloses ‘each’ search result item.” *Id.*

For the following reasons, Petitioner does not persuade us Linden discloses step 15[b].

Petitioner relies on its contentions for claims 5 and 14 without further explanation as to how those contentions apply to step 15[b]. However, as discussed above, we are not persuaded by Petitioner’s contentions for claim

5. Petitioner’s inherency contentions in the Reply attempt to address the differing scope between claim 5 and step 15[b] with respect to designating each of the search result items but does not cure the underlying problems with its claim 5 contentions. Petitioner’s Reply also does not address how claim 14 applies to step 15[b]. Further, Petitioner has not shown that Linden discloses or suggests using “higher order map functions.” *See* Pet. Reply 13 (citing Mr. Hochman’s deposition testimony and referring to Wikipedia). Nor does Mr. Hochman’s cited testimony support Petitioner’s assertion that Linden inherently discloses this step. Rather, Mr. Hochman testified that “*it’s obvious* that if Linden is showing you how to find related ads to a single item of content, *you might take*, for example, the higher order map function that exists in many programming languages and run that procedure over a list of content items.” Ex. 2005, 64:2–7 (emphasis added).

Based on the foregoing, we determine Petitioner does not establish that Linden discloses step 15[b] and, thus, fails to establish that Linden anticipates claim 15.

9. Claims 16, 17, 19, and 20

Claims 16, 17, 19, and 20 depend from claim 15. Ex. 1001, 9:9–13, 9:16–22. We reviewed Petitioner’s contentions and additional citations to Linden for these claims and determine that the additional evidence does not cure the deficiencies in Petitioner’s contentions for claim 15. Consequently, we determine Petitioner does not establish that Linden anticipates claims 16, 17, 19, and 20.

E. Alleged Anticipation by Bull — Ground 2

Petitioner contends that claims 1–7, 9–17, 19, and 20 are anticipated by Bull. Pet. 46–76.

1. Overview of Bull (Ex. 1004)

Bull “is directed to an information aggregation and synthesization system which connects with local and network accessible datastores through an intermediary gateway system.” Ex. 1004, 1:15–18. Bull describes its purpose is “to provide an information aggregation and synthesization process and system connecting a network operable device and a plurality of local or network accessible datastores wherein data passing there between is accessed, polled and retrieved through an intermediary gateway system.” *Id.* at 3:14–20.

Bull describes that current methods for displaying advertisements on web pages are “based on keywords or on a psychographic profile of the user.” *Id.* at 5:11–13. Bull further describes that advertisements “will be inserted based on the content of the existing web page being read. An analysis of the text stream of the user’s interactive session will be performed on-line.” *Id.* at 5:19–22.

During a user’s session, advanced text analysis tools are used in real-time to understand the interests of the user by synthesis of the text stream of pages looked at. This synthesis is used as input to a statistical correlation with similar interests of a larger population. The results of this correlation are used to predict the extended interests of the user.

Id. at 5:38–44.

Bull also describes that:

the user will be presented with advertisements and/or coupons based on criteria entered by advertisers. This criteria may take the form of simple logic, linking an ad/coupon with a display or be derived from complex software text search agents that analyze one or more of the following: The user’s looking pattern, the user’s psychographic profile, the user’s personal profile, the

availability of the advertisers/couponer's goods or services at the instant in time that the criteria is being exercised.

Id. at 4:27–37.

2. *Claim 1*

Preamble: A method of targeting at least one associated advertisement from an Internet search having access to an information repository by a user, comprising:

Petitioner contends that Bull discloses the subject matter of the preamble with its disclosure “that users are presented with a variety of options for searching the Internet for information” such as using key words and Natural Language Queries. Pet. 46–47 (citing Ex. 1004, 3:22–25, 3:66–4:9; Ex. 1005 ¶ 199). Petitioner further contends that “Bull teaches that the Internet user has access to an information repository, such as that for advertisements and coupons.” *Id.* at 47–48 (citing Ex. 1004, 4:27–37, 8:3–9). Petitioner further contends that “Bull teaches that the user searches an information repository” through “aggregating and synthesizing the information repository.” *Id.* at 48 (citing Ex. 1004, 3:45–50). According to Petitioner, Bull “calls the process . . . ‘URL Munging’ which ‘allows the goods and services of many merchants to be displayed through a single virtual shopping center.’” *Id.* Petitioner further contends that Bull discloses targeting advertisements during an Internet search session whereby “ads/coupons are inserted alongside displayed data (text picture or index displays) from the ad DataStore 250, based on ad/coupon insertion agents 233 and inserted by session management system 292.” *Id.* at 49 (citing Ex. 1004, 9:36–42; Ex. 1005 ¶ 202). Petitioner further contends that Bull’s “Ad/Coupon Insertion Agent[s] . . . are complex software text search patterns that when matched within the text being reviewed within a given

session, cause an advertisement/coupon to be added to the display.” *Id.* (citing Ex. 1004, 12:12–18) (alteration in original).

Patent Owner does not squarely address Petitioner’s contentions. *See* PO Resp. 48–54. We need not decide whether the preamble is limiting because Petitioner establishes that Bull discloses the subject matter of the preamble.

1[a] identifying at least one search result item from a search result of said Internet search by said user;

Petitioner contends Bull discloses this limitation because it “allows a user to employ a variety of methods, such as Natural Language Query or using keywords or combinations, to conduct an Internet search for items of interest.” Pet. 50 (citing Ex. 1004, 3:66–4:9; Ex. 1005 ¶ 207). Petitioner further contends that the user’s “search criteria is used to search the index DataStore 220 and a list of data sources is presented to the user for selection.” *Id.* (citing Ex. 1004, 9:11–15). According to Petitioner, a skilled artisan “would understand the ‘list of data sources’ in Bull constitutes the ‘search result items’ of claim 1[a].” *Id.* (citing Ex. 1005 ¶ 210). Petitioner further contends that a skilled artisan “would understand that after search options are presented, and a search is run, then at least one search result item will be identified and presented to the user, because that is the way search engines operated as of the late 1990’s, and still operate today.” *Id.* at 51 (citing Ex. 1005 ¶¶ 207, 211).

Patent Owner does not squarely address Petitioner’s contentions. *See* PO Resp. 48–54. Based on our review of the evidence cited by Petitioner, we find Bull discloses this limitation.

1[b] searching for said at least one associated advertisement within said repository using said at least one search result item;

Petitioner contends that “Bull’s methodology searches for advertisements and/or coupons based on criteria entered by advertisers in a repository that matches, among other things, a search result item.” Pet. 51 (citing Ex. 1004, 4:27–39; Ex. 1005 ¶ 212). Petitioner further contends the criteria may be “simple logic, *linking an ad/coupon* with a display or *be derived from complex software text search agents that analyze . . . [t]he user’s looking pattern* . . . the availability of the advertiser’s/couponer’s goods or services at the instant in time that the criteria is being exercised.” *Id.* at 51–52 (citing Ex. 1004, 4:27–37) (alterations in original). Petitioner further contends a skilled artisan would have understood “that ‘the user’s looking pattern’ may include what the user looked at on the search results page and the content of any search results page selected, and does not consist merely of the search items used to obtain them.” *Id.* at 52 (citing Ex. 1005 ¶ 213). Petitioner further contends that a skilled artisan would have understood “that Bull’s system searched for associated advertisements in the ‘advertising DataStore 250,’ which constitutes the ‘repository’ identified in claim 1[b].” *Id.* (citing Ex. 1005 ¶ 214).

Petitioner alternately contends that “Bull’s use of ‘URL Munging’ process also populates an ‘information aggregation and synthesization’ repository” that may be “accessed at a single WWW site by an Internet user conducting a search.” *Id.* (citing Ex. 1004, 4:53–63). Petitioner further contends that Bull provides a user with a “‘gateway’ to the repository” that a skilled artisan would have understood “is a web-based GUI that allows a

user to access content from one or more database/information repositories via search criteria.” *Id.* at 52–53 (citing Ex. 1004, 3:60–63; Ex. 1005 ¶ 217).

Patent Owner first contends that Petitioner’s reference to Bull’s disclosure at column 4, lines 27–37 does not support Petitioner’s contention that Bull discloses “the ‘user’s looking pattern’ includes search result pages.” PO Resp. 49 (citing Ex. 1004, 4:27–37). According to Patent Owner, Petitioner relies on Mr. Hochman’s testimony “that ‘the user’s looking pattern’ *may include* what the user looked at on the search results page and the content of any search results page selected” which Patent Owner asserts “is insufficient to establish anticipation.” *Id.* (citing Pet. 52; Ex. 1005 ¶ 213).

Patent Owner’s second contention is “[n]owhere does Bull state that the advertising DataStore 250 is searched using ‘at least one search result item.’” PO Resp. 50 (citing Ex. 2003 ¶¶ 214–215).

Patent Owner’s third contention is that Bull’s URL Munging process is “a ‘gateway’ to display goods and services of different merchants through a single website” but “Bull does not describe searching for at least one associated advertisement within Bull’s ‘gateway’ using ‘at least one search result item.’” PO Resp. 50 (citing Ex. 2003 ¶¶ 216–218).

Petitioner, in turn, replies that Bull discloses the user’s looking pattern “comprises many things, *e.g.*, ‘historical search activity,’ . . . ‘data being viewed,’ . . . ‘[t]he user[’s] select[ion of] information to be viewed from the results of the search,’ . . . ‘data stream returned to the user,’” and “‘records . . . maintained from the user usage of the Internet [and] the WWW content retrieved.” Pet. Reply 15–16 (citing Ex. 1004, 2:40–41, 3:1, 4:10–11, 4:21–22, 5:61–63). According to Petitioner, “[t]he fact that Bull’s system may not

search for advertisements using at least one SRI *each and every* time does not defeat Bull’s disclosure that ‘the user’s looking pattern’ which includes a user’s returned search result pages, is used to match advertisements.” *Id.* at 16.

In response to Patent Owner’s second contention, Petitioner contends “Bull discloses that ‘the user will be presented with advertisements and/or coupons based on . . . [t]he user’s looking pattern . . . and points out that ‘[t]he ad/coupon may be . . . stored in the Advertising DataStore 250.’” Pet. Reply 16 (citing Pet. 51–52; Ex. 1004, 4:27–39, 8:9–12).

In the Sur-reply, Patent Owner contends Petitioner “improperly references new Bull passages that do not even mention a ‘user’s looking pattern.’” Sur-reply 15 (citing Reply 15–16; Ex. 1004, 2:40–41, 3:1, 4:10–11, 4:21–22, 5:61–63). Patent Owner further contends Petitioner’s “new citation to Bull merely stating that the ‘Advertising DataStore . . . is the storehouse of ads to be presented when a match is made,’ also fails to meet this limitation.” *Id.* (citing Pet. Reply 16 (citing Ex. 1004, 12:32–34)).

For the following reasons, Petitioner does not persuade us that Bull discloses this limitation.

Petitioner must show that Bull searches a repository using at least one search result item identified in step 1[a]. For the search result item in step 1[a], Petitioner relies on Bull’s disclosure of a list of data sources located by a search of DataStore 220 disclosed at column 9, lines 11 to 15. *See* Pet. 50. DataStore 220 contains an index of “[a] theme or definition of a class of information (e.g., central California travel and tourism or new automobiles)” screened for relevance, quality of information and appropriateness. Ex. 1004, 7:10–14. For step 1[b], Petitioner refers to column 4 lines 27–37

where Bull discloses using, *inter alia*, a user's looking pattern to search for associated product advertisements. Petitioner relies on Mr. Hochman's testimony that the user's looking pattern "may include what the user looked at on the search results page and the content of any search results page selected, and does not consist merely of the search terms used to obtain them." Pet. 52 (citing Ex. 1005 ¶ 213). The question raised by Patent Owner, based on Dr. Schmidt's testimony, is whether a skilled artisan would understand that Bull's user's looking pattern encompasses the results of a search. *See* Ex. 2003 ¶ 213 ("The Petition does not explain how a 'user's looking pattern' means 'search result items.'"); Ex. 1015 274:1–275:3.

Mr. Hochman does not cite to any part of Bull to support his testimony that the user's looking pattern encompasses search result items. *See* Ex. 1005 ¶ 213.

In the Petitioner Reply, Petitioner points to several portions of Bull to support its contention that the user's looking pattern comprises many things. Pet. Reply 15. The first two citations describe prior art patents not Bull's system and, thus, are of limited relevance to the scope of Bull's user looking patterns. Ex. 1004, 2:38–41, 3:1. The citations to column 4 lines 10–11 and 21–22 of Bull relate to information provided to the user but do not specifically address user looking patterns. The final citation to column 5 lines 61–63 is parsed out of context by Petitioner and relates to user queries "unmet" when content is retrieved. In any event, none of the citations to Bull provided by Petitioner in the Reply are directly related to the scope of Bull's user looking patterns and do not support Petitioner's argument concerning the scope of Bull's user looking patterns.

Our own review of Bull discloses that Bull specifically describes user looking patterns and other related terms. Bull describes “[t]he looking patterns of the user are monitored to develop a set of software text agent profiles that are integrated with explicitly collected profile information to assist the user in narrowing down information for future sessions as well as suggesting references, merchandise or services during the current session.” Ex. 1004 15:48–53. In the subsequent paragraphs, Bull describes “searching patterns of the user on the Internet are monitored by monitoring the text stream” and “advanced text analysis tools are used in real time to understand the interests of the user by synthesis of the text pages looked at.” *Id.* at 15:55–56, 15:62–64. Bull also describes analyzing “the user’s looking activity . . . for patterns” to customize future searches to the “individual desires” of the user. *Id.* at 4:40–45. Bull also describes “Browsing Activity DataStore” as “the record of the ‘looking’ activity of each user in each session.” *Id.* at 12:29–31. None of these passages disclose or suggest that search result items fall within the scope of Bull’s user looking patterns.

Based on our review of Bull’s description of user looking patterns, we find Petitioner does not show that Bull’s user looking patterns encompass search result items.

Petitioner identifies two repositories that it contends are searched in Bull to satisfy this claim limitation. First, is the “advertising DataStore 250” and second is the “information aggregation and synthesization” repository populated by the “‘URL Munging’ process.” Pet. 52. Petitioner, however, relies on the user looking patterns just discussed as the basis for searching both repositories. *Id.* at 52–53. Because of our finding that Petitioner has not shown that Bull’s looking patterns encompass search result items, we

agree with Patent Owner that Petitioner has not shown that Bull discloses “searching [either repository] . . . using said at least one search result item” as required by step 1[b]. Sur-reply 16–17.

Consequently, we find that Bull does not disclose this limitation.

Step 1[c] requires identifying an “associated advertisement for said repository having at least one word that matches” the search result item, and step 1[d] requires correlating the “associated advertisement with” the “search result item.” Ex. 1001, 8:13–17. Because Petitioner has not established step 1[b]’s requirement of searching a repository using the search result item, it does not establish that Bull discloses step 1[c] and step 1[d].

Claim 1 Conclusion

For all the foregoing reasons, Petitioner does not establish that claim 1 is anticipated by Bull.

3. Claims 2–7 and 9–14

Claims 2–7 and 9–14 depend directly or indirectly from claim 1. Ex. 1001, 8:18–36, 8:39–60. We reviewed Petitioner’s contentions and additional citations to Bull for these claims and determine that the additional evidence does not cure the deficiencies in Petitioner’s contentions for claim 1. Consequently, we determine Petitioner does not establish that Bull anticipates any of claims 2–7 and 9–14.

4. Claim 15

Preamble: A method for providing related advertisements for search result items from a search of an information repository, comprising:

Petitioner contends that “Bull discloses providing advertisements that are related to search result items.” Pet. 70. Petitioner further contends that

if a search result or web page is requested, Bull “will display a particular advertisement . . . based on the content of the existing web page being read.” *Id.* (citing Ex. 1004, 15:22–29). Petitioner further contends that “Bull’s ‘Ad/Coupon Insertion Agent’ and ‘Ad/Coupon Insertion System’ together identify advertisements that relates to search result items.” *Id.* at 71 (citing Ex. 1004, 12:12–18). Petitioner further contends that “Bull also teaches that the user performs searches of an information repository, which it calls an ‘information aggregation and synthesization system’” that Bull refers to as “URL Munging.” *Id.* (citing Ex. 1004, 3:45–50, 4:53–63).

Patent Owner does not squarely address Petitioner’s contentions or whether the preamble is limiting. *See* PO Resp. 65–68. We need not decide whether the preamble is limiting because Petitioner establishes that Bull discloses the subject matter of the preamble.

15[a] matching said search result items to said related advertisements;

Petitioner contends that “[a]s explained previously for claim 1[c] and 5, Bull discloses matching search result items to related advertisements.” Pet. 72 (citing Ex. 1005 ¶ 316). Petitioner further contends that “the user will be presented with advertisements and/or coupons based on criteria entered by advertisers.” *Id.* (citing Ex. 1004, 4:27–39). Petitioner further contends that a skilled artisan would have understood “that a search results page or search result listing would constitute ‘a display,’ and that ‘linking an ad/coupon with a display’ would include associating an advertisement with a search result listing.” *Id.* (citing Ex. 1005 ¶ 316).

Patent Owner does not squarely address Petitioner’s contentions. *See* PO Resp. 65–68.

To the extent that Petitioner relies on its contentions for step 1[c], we note that step 1[c] requires identifying an advertisement “having at least one word that matches said at least one search result.” Ex. 1001, 8:13–15. Step 15[a] requires “matching” search result items to related advertisements. While there is similarity between the language of step 1[c] and step 15[a], Petitioner does not contend or otherwise explain how the same evidence cited in step 1[c] also satisfies step 15[a]. In any event, as discussed above in connection with claim 1, we find that Petitioner does not establish that Bull discloses step 1[c] because, *inter alia*, it did not establish that Bull discloses step 1[b] which requires searching for associated advertisements using a search result item.

To the extent that Petitioner relies on its contentions for claim 5, we note that claim 5 requires “designating” a search result item “matched to at least on associated advertisement.” Ex. 1001, 8:27–30. While there is similarity between the language of claim 5 and step 15[a], Petitioner does not contend or otherwise explain how the same evidence cited in claim 5 also satisfies step 15[a]. In any event, as discussed above in connection with claim 5, we find that Petitioner does not establish that Bull discloses claim 5 because, *inter alia*, it did not establish that Bull discloses step 1[b] which requires searching for associated advertisements using a search result item.

Nonetheless, based on our review of the additional evidence cited by Petitioner beyond what is cited for step 1[c] and claim 5, we find that Bull discloses this limitation.

15[b] designating each of said search result items that have said related advertisements matched therewith:

Petitioner contends that “[f]or the same reasons as discussed above for claims 5, 14, and 15[a], claim 15[b] is anticipated by Bull.” Pet. 73 (citing Ex. 1005 ¶¶ 321–329).

Patent Owner contends that Petitioner’s contentions are “incorrect for the same reasons” it describes for claims 5, 14, and 15[a]. PO Resp. 65. Patent Owner further contends Petitioner does not “explain how Bull anticipates ‘designating *each of* said search result items’ and any new theory would be improper.” *Id.* (citing Ex. 2003 ¶ 301).

Petitioner, in turn, contends that a skilled artisan “would understand that Bull discloses this step by applying a higher-order ‘map function,’ as described” in Ground 1. Pet. Reply 23 (citing Ex. 2005, 64:2–16). Patent Owner contends this is a new theory “that Bull does not disclose.” Sur-reply 19.

Although claim 5 contains similar language to step 15[b], it does not require “designating *each* of said search result items.” We agree with Patent Owner that Petitioner does not explain how the same evidence cited for claim 5 (and claim 14) also satisfies step 15[b]. Petitioner’s contention in the Reply that Bull satisfies step 15[b] because of a higher order map function is not supported by evidence from Bull and is merely attorney argument.

For the foregoing reasons, we determine that Petitioner does not establish that Bull discloses step 15[b].

Step 15[c] recites “providing a corresponding graphical user interface for each of said search result items so designated.” Ex. 1001, 9:1–2.

Because Petitioner does not establish that Bull discloses step 15[b] it also does not establish that Bull discloses step 15[c].

Claim 15 Conclusion

For the reasons discussed above, we determine that Petitioner has not shown that Bull anticipates claim 15.

5. Claims 16, 17, 19, and 20

Claims 16, 17, 19, and 20 depend from claim 15. Ex. 1001, 9:8–13, 9:16–22. We reviewed Petitioner’s contentions and additional citations to Bull for these claims and determine that the additional evidence does not cure the deficiencies in Petitioner’s contentions for claim 15. Consequently, we determine Petitioner does not establish that Bull anticipates any of claims 16, 17, 19, and 20.

III. CONCLUSION

Based on the record before us, we determine the following:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–7, 9–17, 19, 20	102	Linden	1, 2, 3	4–7, 9–17, 19, 20
1–7, 9–17, 19, 20	102	Bull		1–7, 9–17, 19, 20
Overall Outcome			1, 2, 3	4–7, 9–17, 19, 20

IV. ORDER⁸

In consideration of the foregoing, it is hereby:

ORDERED that based on the preponderance of the evidence, claims 1, 2, 3 of the '443 patent have been shown to be unpatentable and claims 4–7, 9–17, 19, and 20 have not been shown to be unpatentable; and

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

⁸ 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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