UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

INTERNATIONAL BUSINESS MACHINES CORPORATION, Plaintiff, v. ZILLOW GROUP, INC.; and ZILLOW, INC., Defendants.	C20-1130 TSZ ORDER

THIS MATTER comes before the Court on a motion to dismiss brought pursuant to Federal Rule of Civil Procedure 12(b)(6) by defendants Zillow Group, Inc. and Zillow, Inc. (collectively, "Zillow"), docket no. 59. Having reviewed all papers filed in support of, and in opposition to, the motion, the Court enters the following order.

Discussion

In this case, plaintiff International Business Machines Corporation ("IBM") sued Zillow for infringement of five patents. This matter has been stayed with respect to one of those patents (U.S. Patent No. 7,543,234), pending a decision by the Patent Trial and Appeal Board of the United States Patent and Trademark Office ("PTO") concerning an inter partes review petition. *See* Minute Order at ¶ 1(a) (docket no. 51). IBM's claim premised on another patent (U.S. Patent No. 9,569,414) was dismissed upon a stipulated

motion of the parties. *See* Minute Order at ¶ 1 (docket no. 55). Zillow now moves to dismiss IBM's infringement claims relating to the remaining three patents, on the ground that they are not directed to eligible subject matter as required by § 101 of the Patent Act.[1]

In another action involving IBM and Zillow, the Court granted judgment on the pleadings in favor of Zillow and against IBM as to two other patents that did not survive scrutiny under § 101. *See Int'l Bus. Machs. Corp. v. Zillow Grp., Inc.*, No. C20-851 TSZ, --- F. Supp. 3d ---, 2021 WL 2982372 (W.D. Wash. July 15, 2021) [hereinafter "*IBM*"]. In its previous Order, the Court discussed the development of, and guidance distilled from, § 101 jurisprudence, and in deciding Zillow's current motion, the Court has relied on its earlier observations, which are briefly summarized below, as well as the more recent opinions issued by the Federal Circuit.

A. Section 101 Standards

Patentability may be decided upon a Rule 12(b)(6) motion, which, in this case, is governed by Ninth Circuit law.[2] *IBM*, 2021 WL 2982372, at *1 n.1 & *4. Federal

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[1] Section 101 provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101.

[2] In ruling on a motion to dismiss, the Court must assume the truth of the plaintiff's allegations and draw all reasonable inferences in the plaintiff's favor. *Usher v. City of Los Angeles*, 828 F.2d 556, 561 (9th Cir. 1987). A complaint may be lacking for one of two reasons: (i) absence of a cognizable legal theory, or (ii) insufficient facts under a cognizable legal claim. *Robertson v. Dean Witter Reynolds, Inc.*, 749 F.2d 530, 534 (9th Cir. 1984). The question for the Court in connection with a Rule 12(b)(6) motion is whether the facts in the complaint sufficiently state a "plausible" ground for relief. *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007); *see also PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1314–15 (Fed. Cir. 2021).

Circuit jurisprudence, however, applies to "substantive and procedural issues unique to and intimately involved in federal patent law." *Verinata Health, Inc. v. Ariosa Diagnostics, Inc.*, 830 F.3d 1335, 1338 (Fed. Cir. 2016). Pursuant to § 101, "[l]aws of nature, natural phenomena, and abstract ideas are not patentable." *IBM*, at *1 (citing *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014)). With respect to patents challenged on the ground of abstractness, *Alice* applied an existing two-step framework, which asks (i) whether unpatentable subject matter is at the invention's core, and if so, (ii) whether the patent discloses an "inventive concept" that saves it from invalidation under § 101. *See id.* at *2. In conducting an *Alice* analysis, the Court must consider the "representative" claims of a patent. *Id.* at *4. A claim may be treated as "representative" if a patentee makes no "meaningful argument for the distinctive significance of any claim limitations not found in the representative claim" or if the parties agree to treat the claim as "representative." *Id.* In examining the "representative" claim or claims, the Court may assume, without deciding, that any disputed claim terms should be construed in the manner proposed by, or most favorable to, the patentee. *Id.*

The determination (at *Alice* Step One) of whether the "representative" claims are directed to an abstract idea is an issue of law, and the Court may limit its examination to the intrinsic record, meaning the claim language, the specification, and the prosecution history. *Id.* *Alice* teaches that stating an abstract idea and then adding words to the effect of "apply it" or "apply it on a computer" does not disclose a patent-eligible invention. *Id.* at *3. In cases involving computers, the question of whether the patent is directed to an abstract idea generally turns on whether the claim or claims at issue focus on a "specific

asserted improvement in computer capabilities" or on a process for which computers are "invoked merely as a tool." *Id.* at *5. Computer innovations may come in the form of either hardware or software, and two categories of patent claims involving computers have generally passed muster under § 101, namely (i) those solving a problem specifically arising in the realm of computers or computer networks; and (ii) those identifying with requisite detail an improvement in computer capability or network functionality. *See id.* As observed by the Federal Circuit, a "common thread" running through the cases in which computer-related inventions have been deemed patent eligible is "a determination that the claims were directed to an improvement in computer functionality." *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1362–63 (Fed. Cir. 2021).

In contrast, the use of a generic computer to organize, automate, or replicate historically human activity is not a patent-eligible invention. *IBM*, at *5. The following characteristics of patent claims involving computers usually indicate abstractness: (i) setting forth a process that can be performed by a human brain or by using a pen and paper;[3] (ii) using claim language that is result-oriented;[4] and (iii) focusing on intangibles

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[3] The Federal Circuit has labeled as a "telltale sign of abstraction" the ability to execute, either mentally or using pencil and paper, the functions outlined in a patent claim. *See PersonalWeb*, 8 F.4th at 1316.

[4] Setting forth only a result, without reciting a means of accomplishing it, does not state patent-eligible subject matter. *See Free Stream*, 996 F.3d at 1363. Section 101 requires a patent claim to identify *how* a functional result is achieved "by limiting the claim scope to structures specified at some level of concreteness, in the case of a product claim, or to concrete action, in the case of

like information, legal obligations, or relationships. *Id.* at *6–7. In rejecting patent claims that outline methods or systems employing computers merely as tools, the Federal Circuit has made clear that enhancing the experience of a *user* of a computer application, without more, does not qualify as an improvement in computer functionality. *Id.* at *6. Likewise, increased speed or efficiency in the process or entity that is using a computer, as opposed to the operation of the computer itself, does not confer patent eligibility. *Id.* Finally, limitations that provide only antecedent or subsequent components do not change the character of a patent claim that, as a whole, is directed to an abstract idea. *Id.*

For purposes of assessing (at *Alice* Step Two) whether the "representative" claims set forth an "inventive concept," the Court must consider any prior art or other extrinsic evidence proffered by the parties regarding what was "well-understood, routine, or conventional" at the time of the invention. *See id.* at *5. Any material factual questions on this subject will preclude a dispositive § 101 ruling. *Id.* If, however, an infringement plaintiff's factual allegations about what was "well-understood, routine, or conventional" at the time of the invention are not "plausible" or are refuted by the record, the Court may resolve a § 101-based motion as a matter of law. *Id.*

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a method claim." *See id.* (quoting *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1302 (Fed. Cir. 2020), *petition for cert. filed*, No. 20-891 (U.S. Dec. 28, 2020)).

B. IBM's Patents

1. U.S. Patent No. 6,778,193 (the "'193 Patent")

The '193 Patent discloses a "graphical user interface[5] for a customer self-service system that performs resource search and selection." '193 Patent, Ex. 2 to Am. Compl. (docket no. 36-2 at 2). According to IBM, the inventors of the '193 Patent attempted to address two drawbacks in the conventional graphical user interfaces of the early 2000s, namely display overcrowding and information overload. Pl.'s Resp. at 4–5 (docket no. 62). Display overcrowding, however, is not explicitly mentioned in the '193 Patent, and the focus of the invention is not on improving the graphical user interface itself, but on structuring the manner in which data is gathered from and displayed to the user. The '193 Patent explains that the then-current query systems demanded more contextual information than a typical user had time, patience, ability, and interest to provide, and that, because they attempted to search without sufficient context, they often returned an overwhelming amount of information, a high percentage of which was irrelevant. *See* '193 Patent at Col. 1, Lines 18–27 & Lines 49–54. In addition, the '193 Patent indicates that the prior art did not provide a graphical method of fine tuning the *context* variables

[5] A graphical user interface allows a user to communicate with a computer or other device. *See* '193 Patent at Col. 1, Lines 34–36. In graphical user interfaces, available applications and data sets may be represented by icons that can be selected by a user and/or moved around on a screen. *Id.* at Col. 1, Lines 36–39. The use of icons generally simplifies the process of operating a computer or device because the system may be programmed to understand that the selection of an icon (by, for example, clicking on it with a mouse) is equivalent to the entry of one or more commands. *See id.* at Col. 1, Lines 39–45.

relevant to a search, focusing instead on adjusting the *content* variables.[6] *Id.* at Col. 1, Lines 54–58.

IBM contends that the invention in the '193 Patent solves the previously-unstated overcrowded-display problem by offering three visual workspaces, namely the "Context Selection," "Detail Specification," and "Results Display" workspaces, each of which "performs a specific function in refining search results." Pl.'s Resp. at 5 (docket no. 62). A more accurate statement is that each workspace, as defined in Claim 1, displays icons, dialogue boxes, and data in a different manner. *See* '193 Patent at Col. 5, Lines 49–65 & Fig. 2. A user may navigate between the three workspaces by clicking on a labeled hyperlink. *See id.* at Col. 11, Lines 34–41 & Figs. 4, 5A–5D, & 6.

The user begins with the first or "Context Selection" workspace, which "enables the expression of user context as part of a query in a manner optimized for ease of use." *Id.* at Col. 5, Lines 52–56. As shown in Figure 4 of the '193 Patent, the "Context Selection" screen **13** presents the user with "User Context" icons **132**,[7] from which the

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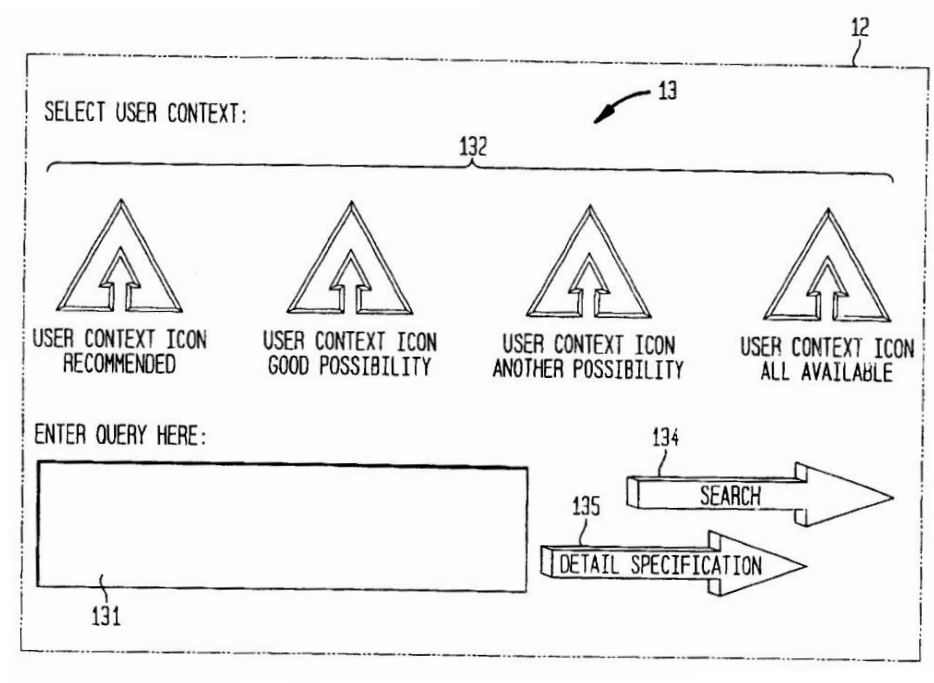
[6] The '193 Patent defines "context" variables as potentially including "aspects of the [users'] knowledge, their relationship to organizations and/or communities, their user environment(s), and their resource needs." '193 Patent at Col. 11, Lines 15–18. "Content" variables presumably consist of features of the resources for which a user is searching. *See* Ex. 4 to Am. Compl. (docket no. 36-4 at 11, Col. 1, Lines 35–39) (description of prior art in related U.S. Patent No. 6,785,676, which is cross-referenced multiple times in the '193 Patent).

[7] Each "User Context" icon signifies a predefined set of context attributes. *See* '193 Patent at Col. 11, Lines 10–18; *see also id.* at Col. 9, Lines 16–18 & 38–39 (circularly defining "User Context" as "a predefined set of context attributes" and a "context attribute" as an attribute "used to describe a characteristic associated with the User Context"). In the education domain, in which a user might be searching for resources about, for example, "Learn[ing] Lotus Notes at home," the "User Context" icons might include "Remote Staffie," "Commuting Techie," "Corp Exec at HQ," and "Traveling Consultant." *Id.* at Col. 15, Lines 54–67, Col. 16, Lines 32–36, &

user may select the one "most representative of his/her current situation." *Id.* at Col. 10, Line 46 – Col. 11, Line 10. The user may then enter search terms in the Query Entry Field **131** and click on either the "Search" **134** or "Detail Specification" **135** hyperlink. *See id.* at Col. 11, Lines 2–5 & Lines 34–41.



Id. at Fig. 4. The "Search" hyperlink **134** takes the user to the third or "Results Display" workspace, whereas the "Detail Specification" hyperlink **135** takes the user to the second or "Detail Specification" workspace. *Id.* at Col. 11, Lines 34–41. Within the second or "Detail Specification" workspace, the user may fine tune or override context attributes and other parameters. *Id.* at Col. 11, Lines 42–46. In the embodiment of the "Detail

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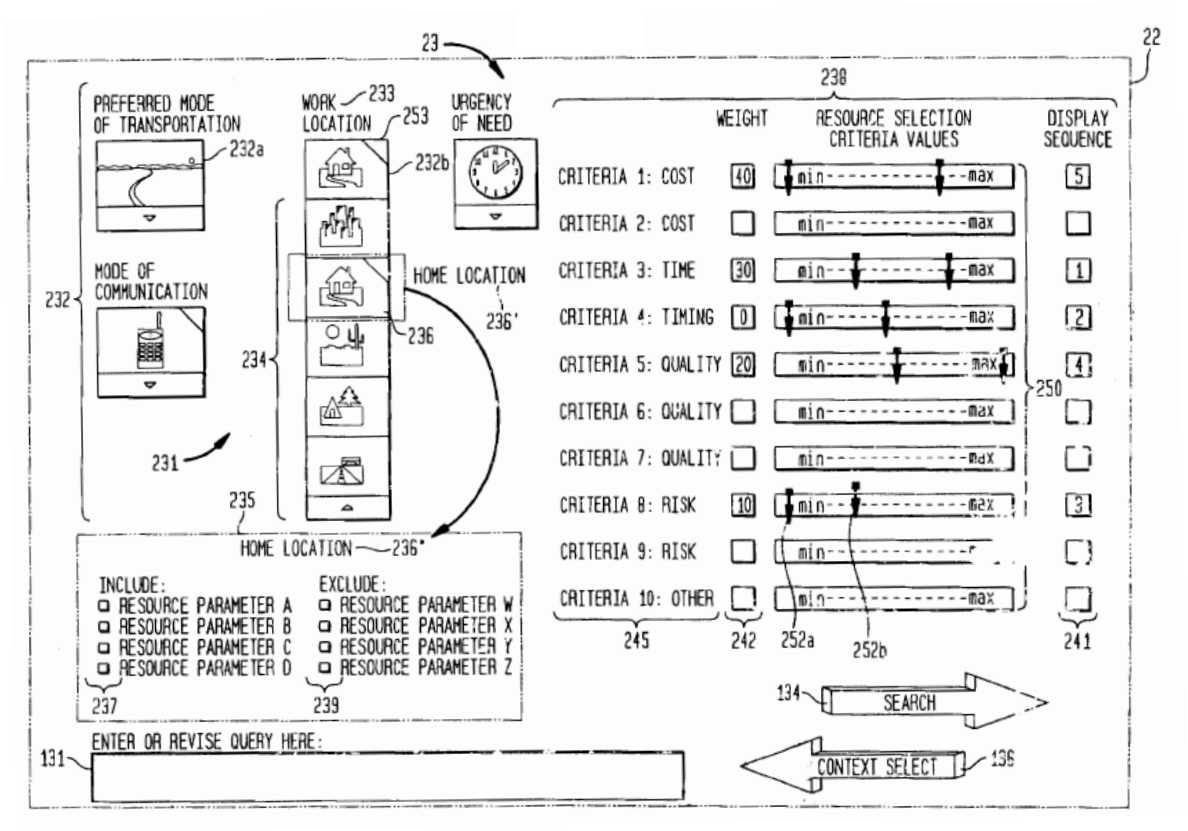
Fig. 3 (**62** & **72**). In the realm of real estate, in which a user might be trying to "Find housing near new job by August," the "User Context" icons might instead read "Relocating Business Professional," "Empty Nester," and "College Student." *Id.* at Col. 17, Lines 44–49, Col. 18, Lines 15–18, & Fig. 3 (**82**). "User Context" icons for travel-planning systems might consist of "Single Mom with Kids," "Swinging Singles," or "Business Traveler." *Id.* at Col. 18, Lines 41–44, Col. 19, Lines 9–13, & Fig. 3 (**92**).

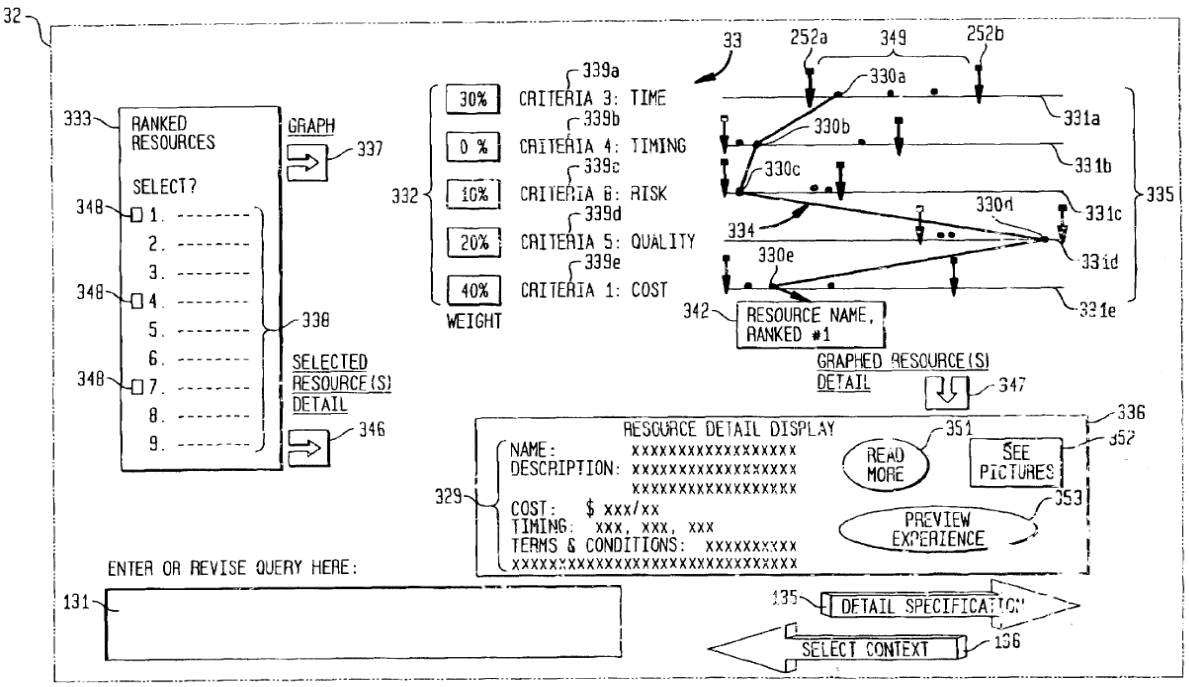
Specification" workspace illustrated in Figure 5D, various criteria **245** are listed in the "Resource Selection Criteria" workspace **238**; for each criterion (cost, time, quality, risk, etc.), the user may assign (i) minimum and maximum values with drag-and-drop tabs **252a** & **252b** on the slider elements **250**, (ii) a weight (or relevance expressed as a percentage) **242**, and (iii) a display sequence via an entry box **241**. *Id.* at Col. 13, Lines 32–61.



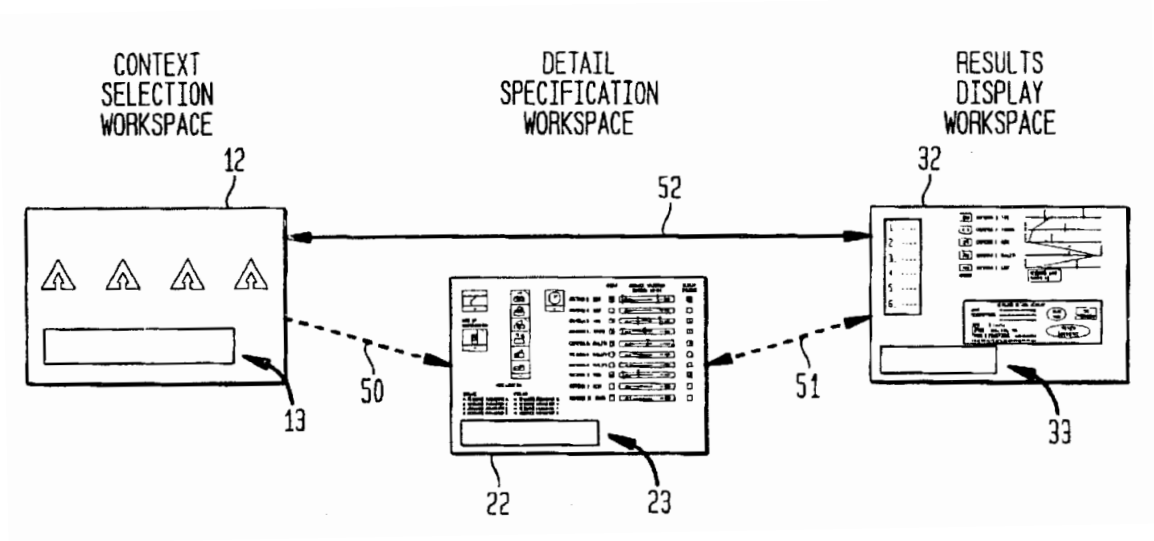
Id. at Fig. 5D. The "Detail Specification" workspace also contains an "Attribute Value" workspace **231**, which displays icon-based pull-down menus. *Id.* at Col. 12, Lines 16–20. Figure 5D shows a pull-down menu **234**, which is displayed upon mouse clicking a particular icon (labeled as "Work Location") **232b**, as well as a pop-up or dialog box (labeled "Home Location") **236′** that appears when the user hovers over or selects an icon

236 within the pull-down menu. *See id.* at Col. 12, Lines 50–60. By checking the include **237** or exclude **239** boxes within the dialog box **236′**, the user may change the resource parameters for the search. *See id.* at Col. 12, Lines 34–39 & Col. 13, Lines 9–15. Navigation arrows (hyperlinks) **134** and **136** offer the user an opportunity to either return to the first or "Context Selection" workspace or advance to the third or "Results Display" workspace. *Id.* at Col. 12, Lines 5–9.

The "Results Display" workspace offers users three ways to view search results: (i) a graphical element (or dialog box) **333** displays a list of ranked resources **338**, each of which is preceded by a check box **348**, via which the user may indicate the desire to view additional details, *id.* at Col. 14, Lines 26–33; (ii) a multidimensional plot **335**, which may be view by clicking on the "Graph" icon **337**, and which shows as data points the various resources checked by the user on the displayed list **333** and how they match the selection criteria **339a**–**339e**, *id.* at Col. 14, Lines 34–65; and (iii) a graphical element (or pop-up box) **336**, which is activated by clicking on the "Selected Resource(s) Detail" icon **346**, and which provides text descriptions **329** or hyperlinks to details **351** (labeled "READ MORE"), pictures **352**, or previews **353** of the resources selected from the ranked list **333**, *id.* at Col. 14, Line 66 – Col. 15, Line 9. The user may return to either the (first) "Context Selection" workspace or the (second) "Detailed Specification" workspace by clicking on the navigation arrows (hyperlinks) **136** and **135**, respectively. *Id.* at Col. 14, Lines 13–18.



Id. at Fig. 6. The relationship between the three workspaces is illustrated in the following diagram:



Id. at Fig. 2. By clicking on a navigation arrow (hyperlink), the user may proceed via a direct path **52** from the "Context Selection" workspace **12**/**13** to the "Results Display" workspace **32**/**33**. *Id.* at Col. 10, Lines 59–62. Otherwise, the user will navigate from the

"Context Selection" workspace to the "Results Display" workspace through the "Detail Specification" workspace **22**/**23** along paths **50** and **51**. *Id.* at Col. 10, Lines 62–65 & Col. 11, Lines 62–64.

a. Representative Claims of '193 Patent

IBM alleges that Zillow's website and mobile applications infringe Claims 1–12 of the '193 Patent. *See* IBM's Infringement Contentions at 7 & Exs. A & B (docket nos. 58, 58-1, & 58-2). Of the asserted claims, only Claims 1 and 8 are independent. Although Claim 1 describes a first, second, and third visual workspace, it does not use the labels "Context Selection," "Detail Specification," or "Results Display," and the numerical sequence assigned to those designations, *i.e.*, first, second, and third, respectively, is not consistent with the claim language. Claim 1 reads as follows:

> 1. A graphical user interface for a customer self service system that performs resource search and selection comprising:
>
> a first visual workspace comprising entry field enabling entry of a query for a resource and, one or more selectable graphical user context elements, each element representing a context associated with the current user state and having context attributes and attribute values associated therewith;
>
> a second visual workspace for visualizing the set of resources that the customer self service system has determined to match the user's query, said system indicating a degree of fit of said determined resources with said query;
>
> a third visual workspace for enabling said user to select and modify context attribute values to enable increased specificity and accuracy of a query's search parameters, said third visual workspace further enabling said user to specify resource selection parameters and relevant resource evaluation criteria utilized by a search mechanism in said system, said degree of fit indication based on said user's context, and said associated resource selection parameters and relevant resource evaluation criteria; and, a

> mechanism enabling said user to navigate among said first, second and third visual workspaces to thereby identify and improve selection logic and response sets fitted to said query.

'193 Patent at Col. 20, Lines 24–52. The text of Claim 1 appears to correlate the "Detail Specification" screen with the "third," not second, "visual workspace," and the "Results Display" interface with the "second," not third, "visual workspace."

Notwithstanding the specification's discussion of three workspaces, Claim 8 discloses only "a first" and "a second" visual workspace, which the Court interprets as consistent with the "Context Selection" and "Results Display" interfaces, respectively:

> 8. An interactive method for querying a customer self service system that performs resource search and selection, said method comprising the steps of:
>
> a) enabling via a graphic interface, entry of a query and selection of one or more user context icons, each representing a context associated with the current user situation and having context attribute parameters associated therewith;
>
> b) enabling, via a first visual workspace provided in said graphic interface, user specification of relevant resource selection criteria for enabling expression of relevance of resource results in terms of user context and, user specification of relevant resource evaluation criteria;
>
> c) generating a resource response set for best matching a users [sic] query based upon user input context attributes and user defined relevant resource selection criteria, and enabling user visualization of said response set via a second visual workspace provided in said graphic interface, said step further indicating a degree of fit of said determined resources with said query based on said user's context, and said associated resource selection parameters and relevant resource evaluation criteria; and,
>
> d) navigating between said first and second visual workspaces to thereby identify and improve selection logic and response sets fitted to said query.

Id. at Col. 21, Lines 8–35.

Zillow proposes to treat Claim 1 as "representative" of Claims 1–12 of the '193 Patent. *See* Defs.' Mot. at 6 (docket no. 59). IBM argues that Zillow has not met its burden, as the party challenging the validity of the patent, to explain why Claim 1 is "representative," and IBM asks the Court to deny Zillow's Rule 12(b)(6) motion on the basis of such failure. Pl.'s Resp. at 3–4 (docket no. 62). The Court declines IBM's request. The Federal Circuit has made clear that a patent claim may be considered "representative" if limitations not found in such claim have no distinctive significance. *See IBM*, 2021 WL 2982372, at *4 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018), and *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014)). The Court has examined the dependent claims of the '193 Patent and concludes that their additional elements would not alter the Court's § 101 analysis.

IBM relies on Claims 6 and 12 of the '193 Patent to argue that the independent claims are not representative. *See* Pl.'s Resp. at 13–14 (docket no. 62). Claims 6 and 12 are similar to each other and merely add to the "third visual workspace" (or "Detailed Specification" interface) "graphic resource filter elements for enabling user specification of inclusionary and exclusionary resource selection parameters." *See* '193 Patent at Col. 20, Line 66 – Col. 21, Line 3 & Col. 21, Lines 48–52. The "graphic resource filter elements" are simply additional components of the "Detailed Specification" screen, and they do not change the character of the patent or render the independent claims non-representative. The Court will therefore treat Claims 1 and 8 as "representative" of the asserted claims (Claims 1–12).

b. *Alice* Step One

IBM argues that the '193 Patent is analogous to the patents at issue in *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356 (Fed. Cir. 2018), which survived § 101 challenges. The Court disagrees. In *Core Wireless*, the two patents-in-suit disclosed "improved display interfaces, particularly for electronic devices with small screens like mobile telephones." *Id.* at 1359. The district court rejected the defendant's contention that the patents were directed to the abstract idea of "displaying an application summary window while the application is in an un-launched state," because the concepts of "application," "summary window," and "unlaunched state" are specific to computers and smart phones and have no counterpart outside the context of such devices. *Id.* at 1360. The Federal Circuit concluded that the asserted patent claims were directed to an improved user interface for computing devices, and not to the abstract idea of an index, as the defendant had argued on appeal. *Id.* at 1362. According to the Federal Circuit, the patent claims set forth "a specific manner of displaying a limited set of information to the user," rather than the conventional method of providing "a generic index on a computer," and the invention offered increased efficiency by combining certain "common functions and commonly accessed stored data" for viewing via the main menu, without opening any application (*i.e.*, while the applications are in an unlaunched state). *Id.* at 1363.

Unlike the patents in *Core Wireless*, the representative claims of the '193 Patent contain no elements (other than graphical user interface) that are specific to computers and have no equivalent outside the realm of electronic devices. For example, a "visual

workspace" could be a piece of paper, "selectable graphical user context elements" could be presented as pictures on a page, and the concepts of "search parameters," "resources that . . . match the user's query," and "degree of fit" existed long before computers. In addition, in contrast to the patents in *Core Wireless*, neither Claim 1 nor Claim 8 of the '193 Patent restrict the number of items that may be simultaneously displayed, meaning that a workspace could contain as many "User Context" icons and/or context variables as will fit on the screen. *See* '193 Patent at Col. 20, Lines 24–52 & Col. 21, Lines 8–35. Thus, the claim language must be interpreted as contemplating an embodiment that could overwhelm users with icons and parameters, and it contradicts IBM's assertion that the '193 Patent addresses an issue similar to the overcrowded display problem inspiring the invention in *Core Wireless*. *See* 880 F.3d at 1363 ("Because small screens 'tend to need data and functionality divided into many layers or views,' prior art interfaces required users to drill down through many layers to get to the desired data or functionality. That process could 'seem slow, complex and difficult to learn, particularly to novice users.'" (citations omitted)).

Rather than disclosing an improvement to computers or graphical user interfaces, the representative claims of the '193 Patent possess the following indicia of abstractness: (i) describing processes that can be performed with a pen and paper; (ii) using claim language that is result-oriented; and (iii) focusing on an intangible, namely information. The invention outlined in the '193 Patent merely mimics what humans do to search for information, with the added feature of conducting the entire exercise on a computer. The functions served by the "Context Selection" and "Detail Specification" interfaces can be

performed manually, by completing forms containing check boxes (with pictorial and/or textual labels) and/or multiple-choice, ranking, or percentage response options. The "Results Display" screen can also be replicated with pen and paper.

The steps preceding the process and between the input and output stages, namely formulating the relevant context variables, translating the user's selected parameters into an appropriate query, and executing a search, constitute the core of the customer self-service system at issue,[8] but the '193 Patent makes no claim concerning such operations. Instead, Claims 1 and 8 specify results (for example, "enabling entry of a query," "visualizing" or "enabling user visualization" of "the set of resources that . . . match the user's query," and "enabling said user to select and modify context attribute values"),

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[8] In its response to Zillow's Rule 12(b)(6) motion, IBM appears to take the position that the preambles of Claims 1 and 8 are limiting. *See* Pl.'s Resp. at 7–8 (docket no. 62) (indicating that "'customer self service system' is not an 'intended use,'" but reflects the "antecedent basis" to which the '193 Patent is "directed"). Whether a preamble is limiting must be determined "on the facts of each case in light of the overall form of the claim, and the invention as described in the specification and illuminated in the prosecution history." *Bio-Rad Labs., Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1369 (Fed. Cir. 2020). If a patent claim uses the preamble only to state a purpose or intended use of the invention, then the preamble is not limiting. *Id.* If, however, the preamble provides the antecedent basis for an element of the claim, it might be limiting. *Id.* As explained by one set of commentators, to avoid ambiguity, an antecedent basis must be provided for each element recited in a patent claim, usually by introducing each element with an indefinite article ("a" or "an"), for example, *a* filament or *an* electrode. John Gladstone Mills III, et al., PATENT LAW BASICS § 14:12, Westlaw (database updated Nov. 2021). Subsequent mention of the element can then be preceded by the definite article ("the") or by "said" or "such," for example, *the* filament or *said* electrode. *Id.* The term "customer self service system" appears in both the preamble (preceded by an indefinite article) and the portion of Claim 1 describing the second ("Results Display") workspace, and the Court accepts IBM's construction that "customer self service system" is limiting. Thus, the input and output components of the invention must be understood as relating to a self-service search, as opposed to a search conducted by another, and Zillow's travel agent or expert service provider analogies, *see* Def.'s Mot. at 9–10 (docket no. 59), are inapposite.

without reciting any means of accomplishing them. *See* '193 Patent at Col. 20, Lines 24–52 & Col. 21, Lines 8–35. The Court concludes that the invention at issue is directed to the abstract, information-related, concept of more precisely tailoring the outcome of a query[9] by guiding users (via icons, pull-down menus, dialogue boxes, and the like) to make choices about specific context variables, rather than requiring them to formulate and enter detailed search criteria. *See id.* at Col. 1, Lines 18–27 & Col. 3, Lines 51–62.

c. *Alice* Step Two

As a result, the Court must proceed to the second § 101 inquiry. IBM asserts that the '193 Patent contains the following inventive concepts: (i) "User Context" icons; (ii) separate workspaces with different sets of information; and (iii) iterative navigation among the workspaces. With respect to "User Context" icons, according to one of the inventors identified on the '193 Patent, Daniel A. Oblinger, Ph.D., pre-existing graphical user interfaces offered only "a 1:1 correspondence between the number of icons and the number of variables or functions that the user could specify." Oblinger Decl. at ¶ 13, Ex. 12 to Am. Compl. (docket no. 36-12). The '193 Patent, however, tells a different story. It acknowledges that the prior art "has addressed a 1:1 correspondence between

[9] Customizing search results is fundamentally different from increasing the accuracy with which inertial sensors measure a tracked object on a moving reference frame, which was one of the advantages of the invention deemed patent eligible in another case cited by IBM, *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017). In *Thales*, the patent claims specified "a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a moving platform." *Id.* at 1349. Unlike the patent in *Thales*, the '193 Patent does not concern tangible measurement devices or their configuration or output.

a limited range of contextual variables and icons," but criticizes earlier approaches for not employing "*the full range* of relevant user contextual variables as part of the query." '193 Patent at Col. 1, Lines 49–53 (emphasis added). In other words, the inventors told the PTO (and IBM is bound by their statement) that the graphical user interfaces of the early 2000s allowed an icon to be associated with more than one parameter, but such capability had not been extensively exploited. Thus, contrary to IBM's contention, "User Context" icons were not themselves inventive; rather, they employed existing technology to accomplish the abstract idea of using icons to represent predefined sets of contextual attributes.[10] Moreover, nothing in the '193 Patent suggests that the inventors overcame the need for a 1:1 correspondence; the representative claims and specification of the '193 Patent contemplate a 1:1 relationship between each "User Context" icon and the set of contextual variables it signifies.

With regard to the second and third allegedly inventive concepts, Oblinger asserts that the '193 Patent's "set of various visual workspaces" and "mechanism for the user to navigate among these workspaces" were "unique" and "innovative," Oblinger Decl. at ¶¶ 25 & 28, but he does not explain how they were different from what was "well-understood, routine, or conventional" at the time of the invention. He does not represent that multiple displays within a graphical user interface or navigation hyperlinks (forward

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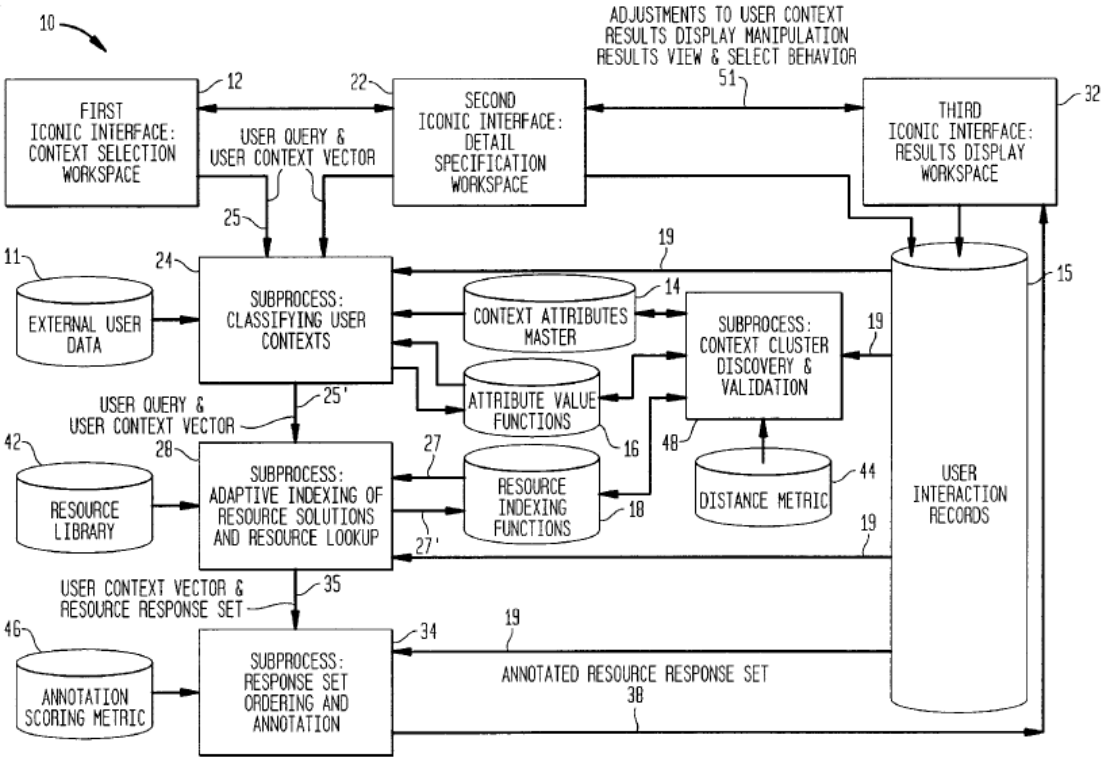
[10] Oblinger states that the goal of the development team was to "allow users to specify a full set of contextual variables without overwhelming the user with a crowded graphical user interface," Oblinger Decl. at ¶ 13, but the advantages of the invention in this regard depend largely on how the various sets of contextual parameters are defined, a topic about which the '193 Patent does not teach.

and back buttons) were unfamiliar to a person skilled in the art in the early 2000s, and the '193 Patent itself treats these elements as well-known and common, never stopping to even define them. Oblinger instead compares the conventional search "wizards" of the day, which might "walk the user through a pre-set sequence of displays in order, once, to specify search criteria," with the "soft wizard" disclosed in the '193 Patent, which allows users "to navigate the workspaces in whatever manner they wish, however many times they wish." *Id.* at ¶¶ 28 & 29. This somewhat overstated benefit does not, however, concern the computer's or graphical user interface's capability or functionality; it relates merely to the user's experience and satisfaction with the search process and results. The asserted claims of the '193 Patent (Claims 1–12) are not valid under 35 U.S.C. § 101, and IBM's first count of patent infringement, Am. Compl. at ¶¶ 78–93 (docket no. 36), is DISMISSED as failing to state a claim upon which relief can be granted.

2. U.S. Patent No. 6,785,676 (the "'676 Patent")

The '676 Patent is related to the '193 Patent. It concerns a method of "annotating response sets via an adaptive algorithm, wherein the annotations supplied are used to drive any visualization system that presents resource response results." '676 Patent at Col. 1, Lines 10–13, Ex. 4 to Am. Compl. (docket no. 36-4). The algorithm described in the '676 Patent may be (but need not be) used in conjunction with the input and output features of the graphical user interface outlined in the '193 Patent. *See* Oblinger Decl. at ¶ 24 (docket no. 36-12) ("[T]he different visual workspaces of the '193 Patent can be combined with the ordering and annotation function of the '676 Patent in the same overall customer self-service system."). The '676 Patent contains the same drawings as

the '193 Patent of embodiments of the three visual workspaces, as well as the following flowchart, which also appears in the '193 Patent, but is explained in more detail in the '676 Patent:



'676 Patent at Fig. 1.

The specification of the '676 Patent indicates that users are able to "enter queries and manipulate the system's responses" via a three-part graphical user interface **12**, **22**, & **32**. *Id.* at Col. 5, Lines 11–13. Before the user interacts with the interface, however, the system **10** performs the following processes: (1) creates an empty "user context vector" **25** and populates it with information from an "external user data" element **11**; and (2) uses "context classification logic" to process the "user context vector" **25** against the "Context Attributes Master" database **14**, the "Attribute Value Functions" database **16**, and the "User Interaction Records" database **15** for the purpose of suggesting that "this

particular[11] user" might fall within a small number of user context definitions selected from a predefined longer list of context definitions. *Id.* at Col. 5, Lines 33–46 (emphasis added).[12]

After the user initiates a search, the user's query (for example, "Learn Lotus Notes at home," *see id.* at Col. 15, Line 44) and the "user context vector" **25** are processed sequentially through the "Classifying User Contexts" subprocess **24**, the "Adaptive Indexing of Resource Solutions and Resource Lookup" subprocess **28**, and the "Response Set Ordering and Annotation" subprocess **34**. *Id.* at Col. 5, Line 66 – Col. 6, Line 6. The latter subprocess is the subject of the '676 Patent. The "Response Set Ordering and Annotation" subprocess **34** receives as input a modified "User Context Vector" **25′** and the "Resource Response Set" **35**, which is generated by the "Adaptive Indexing of Resource Solutions and Resource Lookup" subprocess **28** described in expired U.S. Patent No. 6,643,639 (Appl. No. 09/778,135). *See id.* at Col. 6, Lines 44–63. Operating on the input **25′** & **35**, and using data from the "Annotation Scoring Metric"

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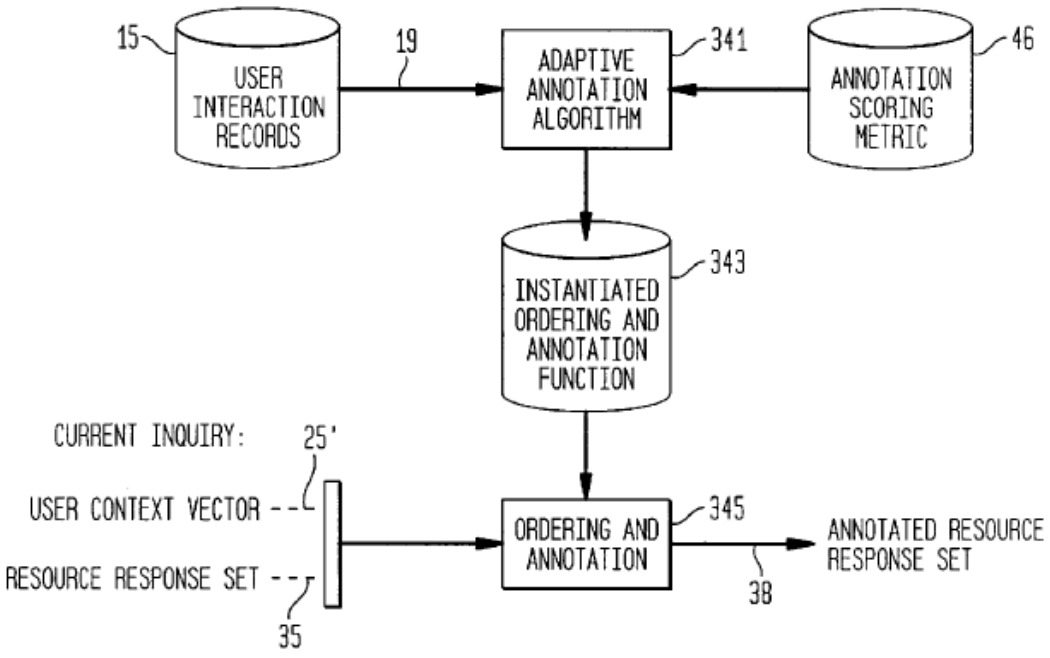
[11] The specification does not explain how the system knows which particular user will be entering a query. No mention is made of facial-recognition software, browser cookies, spyware, or other modes of determining identity that would not require user input. The Court must therefore conclude that the outlined steps are conducted *after* the user signs on, not "prior to," as indicated in the patent, *see* '676 Patent at Col. 5, Line 33, but before the system displays the "User Context" icons on the first workspace at a system terminal or via a web-browser, *see id.* at Col. 5, Lines 46–49.

[12] The "Context Attributes Master" database **14** stores the definitions of all attributes and their relationships to predefined user contexts. '676 Patent at Col. 5, Lines 17–20. The "Attribute Value Functions" database **16** stores the definitions and logic associated with assigning a value to an attribute for specific instances. *Id.* at Col. 5, Lines 20–23. The "User Interaction Records" database **15** stores users' prior "queries, responses, and interactions" with the system **10**. *Id.* at Col. 5, Lines 26–28.

database **46** and the "User Interaction Records" database **15**, the "Response Set Ordering and Annotation" subprocess **34** "weights and ranks the potential responses according to the resource selection criteria specified by the user" on the "Detailed Specification" workspace. *Id.* at Col. 6, Line 61 – Col. 7, Line 3 & Figs. 1 & 6. The "Response Set Ordering and Annotation" subprocess **34** also "tags the response set with data elements necessary for display and manipulation on a visualization system," and generates an "Annotated Resource Response Set" **38**. *Id.* at Col. 7, Lines 3–8 & Figs. 1 & 6. The following flowchart depicts a preferred embodiment of the "Response Set Ordering and Annotation" subprocess **34**:



Id. at Fig. 6.

a. Representative Claims of '676 Patent

IBM asserts that Zillow's website and mobile applications infringe all 28 claims of the '676 Patent. *See* IBM's Infringement Contentions at 7 & Exs. C & D (docket nos. 58,

58-3, & 58-4). The '676 Patent has three independent claims, namely Claims 1, 14, and 21. Claim 1 describes:

> 1. A resource results annotator for a customer self service system that performs resource search and selection comprising:
>
> mechanism for receiving a resource response set of results obtained in response to a current user query;
>
> mechanism for receiving a user context vector associated with said current user query, said user context vector comprising data associating an interaction state with said user and including context that is a function of the user; and,
>
> an ordering and annotation function for mapping the user context vector with the resource response set to generate an annotated response set having one or more annotations for controlling the presentation of the resources to the user, wherein the ordering and annotation function is executed interactively at the time of each user query.

'676 Patent at Col. 20, Lines 5–21. Claim 14 is directed to a "method for annotating resource results," whereas Claim 21 reveals a "program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for annotating resource results," but both Claims 14 and 21 contain identical language:

> a) receiving a resource response set of results obtained in response to a current user query;
>
> b) receiving a user context vector associated with said current user query, said user context vector comprising data associating an interaction state with said user and including context that is a function of the user;
>
> c) applying an ordering and annotation function for mapping the user context vector with the resource response set to generate an annotated response set having one or more annotations, and,
>
> d) controlling the presentation of the resource response set to the user according to said annotations, wherein the ordering and annotation function is executed interactively at the time of each user query.

Id. at Col. 21, Lines 9–26 & Col. 21, Line 63 – Col. 22, Line 20.

Zillow proposes to treat Claim 14 as representative. Def.'s Mot. at 12 (docket no. 59). IBM contends that Claim 17 is "independently eligible," Pl.'s Resp. at 18 (docket no. 62), but offers no reason why Claim 14 cannot be considered representative with respect to the other independent claims, Claims 1 and 21, which are worded in similar, if not identical, fashion. Claim 17 depends from Claim 14 and reads:

> 17. The method as claimed in claim **14**, wherein said self service system includes a database of user interaction records including actual resources selected by the users and the annotation schemes used for presenting them via a graphical interface, said method further comprising the steps of:
>
> receiving user interaction data from among said database of user interaction records and an annotation scoring metric representing a measure of performance in locating resource response results displayed via said graphical interface; and,
>
> generating said ordering and annotation function, said annotation function being adaptable based on history of user interactions as provided in said database of user interaction records.

'676 Patent at Col. 21, Lines 37–51. For purposes of the analysis required by *Alice*, the Court will treat Claims 14 and 17 as representative.

b. *Alice* Step One

IBM contends that *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), "compels a ruling that the '676 Patent is eligible." Pl.'s Resp. at 15 (docket no. 62). IBM overstates the effect of *Enfish* with respect to this matter. In *Enfish*, the patents-in-suit were directed to "an innovative logical model for a computer database." 822 F.3d at 1330. Conventional logical models were "relational," whereas the invention at issue in *Enfish* was "self-referential." *Id.* at 1330–33. A "relational" model might include a separate table for each data type, for example, a document table, a person table,

and a company table; each table would have a means of cross-referencing (establishing a relationship with) one or more other tables. In the following illustration, the document table shows that a file at address C:\WORD\PROJ.DOC was authored by person 1, which refers to Scott Wlaschin in the person table, who is employed by company 1, which relates to DEXIS in the company table. *Id.* at 1331–32. In contrast, the patented "self-referential" model stores all data types in a single table, and a row of the table can be used to define a column of the same table. *Id.* at 1332. The data type "field" signifies that a row defines a column, and in the following table, rows with the ID "#4" and "#5" define the second from the right ("Employed By") and far right ("Email") columns, respectively. *See id.* at 1332–33. The "self-referential" table shown below stores the same information as the "relational" model above, with the addition of a location for email information.

Document Table			
ID	**Title**	**Address**	**Author**
1	PROJECT PLAN	C:\WORD\PROJ.DOC	1

Document.Author --refers to--> Person.ID

Person Table		
ID	**Label**	**Employed By**
1	SCOTT WLASCHIN	1

Person.Employed_By --refers to--> Company.ID

Company Table		
ID	**Label**	**Address**
1	DEXIS	117 EAST COLORADO

SELF-REFERENTIAL TABLE							
ID	**Type**	**Title**	**Label**	**Address**	**Employed By (#4)**	**Author**	**Email (#5)**
#1	DOCUMENT	PROJECT PLAN		C:\WORD\PROJ.DOC		#2	
#2	PERSON		SCOTT WLASCHIN		#3		
#3	COMPANY		DEXIS	117 EAST COLORADO			
#4	FIELD		EMPLOYED BY				
#5	FIELD		EMAIL				

In *Enfish*, the "self-referential" model was described as having three benefits: (i) enabling computers to search more quickly for data; (ii) allowing for more effective

storage of data other than structured text (*e.g.*, images); and (iii) offering more flexibility in configuring a database in that a database can be launched with no or minimal column definitions and, as new attributes are encountered, columns for storing them can be created by simply inserting new rows with "field" as the type and a "label" specified. *Id.* at 1333. The Federal Circuit concluded that the focus of the patents-in-suit in *Enfish* was on improving "computer functionality itself," rather than the "tasks for which a computer is used in its ordinary capacity." *Id.* at 1336; *see also id.* at 1339 ("[T]he claims are directed to a specific implementation of a solution to a problem in the software arts."). As a result, the invention was deemed patent eligible. *Id.* at 1339.

In contrast, the '676 Patent is aimed at offering a user "the most beneficial and meaningful way" to view the results of a query, *see* '676 Patent at Abstract (docket no. 36-4 at 2), and not at advancing computer capabilities per se. Both the '676 Patent and the inventor praise the contribution of the *system* **10** in delivering better search results, as opposed to the role played by the only invention at issue, namely the "Response Set Ordering and Annotation" subprocess **34**. According to the specification, although the prior art had "focused on the discovery of database structure, the clustering of data within the resources, or discovering relevant taxonomy for resources," the *system* "is focused on learning about the user/user groups rather than the resources/resource groups and is able to discover user group characteristics and apply them to individuals." *See id.* at Col. 19, Lines 32–40. The specification further boasts that the "*system* discovers contexts and context attributes among users which can be used predictively," by using "a highly specialized and optimized combination of supervised & unsupervised

logic along with both automated and semi-automated entry of learned results." *Id.* at Col. 19, Lines 39–44 (emphasis added). Moreover, in contrast to the prior art, which applied "machine learning at the front, middle, or back [of a search], but not integrated throughout," the *system* (of which the "Response Set Ordering and Annotation" subprocess **34** is just one component) is touted in the '676 Patent as using contexts in "a closed loop" for self-improvement, thereby increasing the "specificity and accuracy of a query's search parameters," while reducing the burden to users "of fully communicating their question[s]." *Id.* at Col. 19, Lines 45–53; *see also* Oblinger Decl. at ¶ 18 (docket no. 36-12) ("Through the user context vector . . . , the *system* was able to combine heterogeneous data about a user from a wide variety of sources . . . , which is not structured as a fixed vector of data values, and thus is not directly usable by a conventional learning algorithm. Our innovation was to transform this user history and other data into such a fixed length vector which is directly usable by learning. The heterogeneous data is therefore transformed into a homogeneous data structure with strong predictive value regarding the user's interests." (emphasis added)).

Whether the *system* **10** as a whole, or more specifically, the "Classifying User Contexts" subprocess **24** and/or "Adaptive Indexing of Resource Solutions and Resource Lookup" subprocess **28**, which are not defined in any detail in the '676 Patent, are directed to improvements in computer or search engine functionality is not at issue in this case. The Court's § 101 inquiry concerns only what is claimed in the '676 Patent, namely the annotation and presentation of search results, as opposed to the generation of such results via an information retrieval system with adaptive learning capability. With

respect to the exact invention outlined in the '676 Patent, representative Claim 14 discloses four steps: (i) receiving a set of results; (ii) receiving a vector of data associated with the user; (iii) mapping the vector against the set of results to generate an annotated set of results; and (iv) presenting the annotated set of results to the user in a manner consistent with the annotations, which are produced upon each user query. *See* '676 Patent at Col. 21, Lines 9–26. Representative Claim 17 adds the following actions: (v) receiving user interaction data and an annotation scoring metric[13] (collectively, "historical information"); and (vi) using historical information in generating an annotated set of results. *Id.* at Col. 21, Lines 37–51.

These processes can be performed with a pen and paper, albeit not with the speed of a computer, and they are focused on the intangible of information. The claim language is entirely result-oriented, specifying what data enters and leaves the proverbial "black box," but revealing nothing about the inner workings of the box itself. *See supra* note 4. The representative claims of the '676 Patent are directed to abstract ideas, specifically (i) showing users the correlations between their search parameters and the search results, and (ii) tailoring the presentation of search results based on users' perusal of prior search results, and they fail *Alice* Step One. *See*, *e.g.*, *Intell. Ventures I LLC v. Cap. One Bank*

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[13] An "annotation scoring metric" represents "a measure of performance in locating resource response results" that were previously displayed. '676 Patent at Col. 21, Lines 45–47. The "annotation scoring metric" **46** might reflect "how easily the user may find the resources in the response set" by, for example, "penaliz[ing] an annotation . . . that places most of the resources ultimately selected by the user on a second screen on the user interface or at the bottom of the first screen" or rewarding one that puts selected items near "the top of the response set." *Id.* at Col. 7, Lines 39–52.

(USA), Nat'l Ass'n, 792 F.3d 1363 (Fed. Cir. 2015) (affirming district court's judgment invalidating a patent relating to the customization of web page content as a function of navigation history and information known about the user).

c. *Alice* Step Two

The Court must therefore engage in the next stage of the *Alice* analysis. IBM asserts that the '676 Patent contains the following inventive concepts: (i) transforming heterogeneous information (about a user's background, skill level, goals, search history, etc.) into usable homogeneous data for placement in a user context vector; and (ii) using an ordering and annotation function to produce annotated search results. *See* Pl.'s Resp. at 16–17 (docket no. 62). With regard to the former alleged innovation, the '676 Patent does not even purport to teach how to turn heterogeneous information into homogeneous data. The invention described in the '676 Patent merely *receives* a user context vector from another component of the system. *See* '676 Patent at Col. 21, Lines 14–15. As to the latter allegedly inventive concept, the claim language offers nothing more than the abstract idea of "applying an ordering and annotation function for mapping the user context vector with the resource response set to generate an annotated response set having one or more annotations." *Id.* at Col. 21, Lines 18–21.

The '676 Patent is distinguishable from the patent at issue in *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), on which IBM relies. In *Bascom*, the patent-in-suit recited a "system for filtering Internet content." *Id.* at 1345. Although the patent in *Bascom* was deemed to be directed to an abstract concept, it was held to contain an inventive concept, namely the "installation of a filtering

tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user." *Id.* at 1348 & 1350. The Federal Circuit observed that the patent claims did not "merely recite the abstract idea of filtering content along with the requirement to perform it on the Internet, or to perform it on a set of generic computer components. Such claims would not contain an inventive concept." *Id.* at 1350. In addition, the claims did not "preempt all ways of filtering content on the Internet," but instead recited "a specific, discrete implementation of the abstract idea of filtering content." *Id.*

In contrast, the '676 Patent offers no similar "specific, discrete implementation" of the abstract ideas of applying an ordering and annotation function, mapping the user context vector with the resource response set, or generating an annotated response set.[14]

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[14] The district court decisions cited by IBM are likewise inapposite. The more recent case, *Palo Alto Research Center, Inc. v. Facebook, Inc.*, Nos. 2:20-cv-10753, 54, & 55, 2021 WL 1583906 (C.D. Cal. Mar. 16, 2021), concerned three separate infringement actions involving five different patents: (i) two of the patents-in-suit were dismissed as directed to abstract ideas and not containing any inventive concept, and the analysis regarding those patents does not assist IBM; (ii) one of the patents survived an *Alice* Step One inquiry because, unlike the '676 Patent, it "provided a technological solution to an internet-based problem," *id.* at *15; and (iii) two patents that were evaluated under *Alice* Step Two withstood the § 101 challenge because questions of fact existed about whether the patents' claims' elements or combinations of elements were well-understood, routine, or conventional, *id.* at *8 & *9–10, which is not the posture of the '676 Patent. In the other order on which IBM relies, *Allconnect, Inc. v. Consumer Brands, LLC*, Nos. CV 18-1192 & CV 18-5959, 2018 WL 7377934 (C.D. Cal. Dec. 14, 2018), both patents-in-suit were found to be focused on the abstract idea of "recommending products or services using customer-specific information," but the defendants' separate Rule 12(b)(6) motions were not granted in light of the limited record and the allegations, which had to be construed in favor of the nonmovant, that the patent claims "entail an unconventional technological solution through a specialized database permitting powerful data analytics." *Id.* at *6–7. In contrast, the record in this matter is sufficient for purposes of Zillow's motion concerning the '676 Patent, and IBM makes no assertion that the databases or other computer equipment required for the algorithm set forth in the '676 Patent are anything other than generic and/or commonplace.

Indeed, by using broad, result-oriented claim language, the '676 seeks to preempt every method of sequencing, annotating, and displaying search results based on user-related parameters. Section 101 jurisprudence dating back to the nineteenth century precludes such extensive reach of the monopoly power of a patent. *See IBM*, 2021 WL 2982372, at *2 (citing *O'Reilly v. Morse*, 56 U.S. 62 (1853)). The '676 Patent is not valid under 35 U.S.C. § 101, and IBM's second count of patent infringement, Am. Compl. at ¶¶ 94–110 (docket no. 36), is DISMISSED as failing to state a claim upon which relief can be granted.

3. U.S. Patent No. 10,115,168 (the "'168 Patent")

The '168 Patent concerns the integration of "metadata from applications used for social networking" into a "customer relationship management" system. *See* '168 Patent, Ex. 10 to Am. Compl. (docket no. 36-10 at 2). IBM defines a customer relationship management ("CRM") system as a database used for gathering, organizing, automating, and synchronizing sales information, and asserts that a CRM system offers advantages over "pre-computer" storage methods like a rolodex. Pl.'s Resp. at 18 (docket no. 62).[15] Within the lexicography of the '168 Patent, an "application" is a "computer program for an online community of users with a common interest who use a website or other

[15] For support, IBM cites "D.I. 36 ¶¶ 57–58," which appears to refer to a declaration of an inventor listed on the '168 Patent, but no such document exists within the 2,026 pages filed with the Amended Complaint, docket no. 36. At the Court's request, *see* Minute Order at ¶ 1 (docket no. 64), the parties have clarified that no declaration of an inventor listed on the '168 Patent was prepared or included in the record contemporaneously with the Amended Complaint. *See* Joint Status Report at 2–3 (docket no. 65).

technologies to communicate with each other and share information and resources for social networking." '168 Patent at Col. 4, Lines 61–66. Facebook (now known as Meta) and LinkedIn are mentioned in the parties' briefs as examples of social-networking applications.

The '168 Patent indicates that "metadata" is "meant to be understood broadly as data that describes users of applications." *Id.* at Col. 5, Lines 27–29. According to the specification, "metadata" may consist of information that "maps relationships between users" of an application. *Id.* at Col. 4, Line 67. Metadata may also be derived from "interactions between the users of the applications" or "historical patterns across the applications." *Id.* at Col. 5, Lines 29–32. It may be used to "infer a social graph, subject matter experts [*i.e.*, individuals who "are specialists in a specific area"], opportunities, relationships for mapping clients, contacts, or combinations thereof." *Id.* at Col. 5, Lines 10–12 & 33–35.

a. Representative Claims of '168 Patent

IBM contends that Zillow's "Premier Agent" service infringes Claims 1–7 of the '168 Patent. *See* IBM's Infringement Contentions at 7 & Ex. G (docket nos. 58 & 58-7). Of the asserted claims, only Claim 1 is independent, and it reveals:

> 1. A method for integrating metadata from applications used for social networking into a customer relationship management (CRM) system, the method comprising:
>
> obtaining, from applications used for social networking, metadata associated with users of the applications;
>
> analyzing the metadata from the applications to infer opportunities, relationships for mapping clients, structures, and subject matter experts;

> integrating the opportunities, the relationships for mapping the clients, the structures, and the subject matter experts into a customer relationship management (CRM) system to populate the CRM system;
>
> *identifying potential customers based on integrated opportunities, relationships for mapping the clients, the structures, and the subject matter experts; and*
>
> *managing interactions with current and target customers based on the integrated opportunities, relationships for mapping the clients, the structures, and the subject matter experts.*

'168 Patent at Col. 13, Lines 22–40 (docket no. 36-10); see also Ex. 4 to Joint Status Report (docket no. 65-4 at 3) (italicized text added by amendment dated Jan. 4, 2018).

Zillow contends that Claim 1 is representative. Defs.' Mot. at 17 (docket no. 59). IBM argues that Claim 2 is independently eligible for patent protection. Pl.'s Resp. at 24 (docket no. 62). Dependent Claim 2 reads:

> 2. The method of claim **1**, in which the metadata from the applications is derived from interactions between the users of the applications, based on historical patterns across the applications, and used to infer a social graph, the subject matter experts, the opportunities, the relationships for mapping the clients, contacts, or combinations thereof.

'168 Patent at Col. 13, Lines 41–46. The Court has reviewed the other asserted claims of the '168 Patent, and concludes that, for purposes of a § 101 analysis, the additional limitations of Claims 3–7, which specify certain applications (*e.g.*, email, text or instant messaging, short message service, etc.), particular metadata (*e.g.*, patterns, social graphs, etc.), a basis for updating the CRM system (*i.e.*, modifications made by users in the applications), or a record structure (in which each opportunity is associated with "a number of fields of metadata"), respectively, have no distinctive significance. *See id.* at Col. 13, Line 47 – Col. 14, Line 7. Only Claims 1 and 2 will be treated as representative.

b. *Alice* Step One

Claims 1–7 of the '168 Patent were originally rejected by the patent examiner for a number of reasons, including "under 35 U.S.C. [§] 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more." Ex. 1 to Joint Status Report (docket no. 65-1 at 8). The examiner explained that Claim 1 recites the steps of "receiving data (e.g. obtaining metadata), recognizing data (e.g. analyzing metadata to infer), and storing information (e.g. integrating data to populate the CRM system), which correspond to concepts identified as abstract by the courts." *Id.* at ¶ 6 (docket no. 65-1 at 8) (citing *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343 (Fed. Cir. 2014)). With regard to Claims 2–7, the examiner concluded that their additional limitations "appear similar to manipulating data through mathematical correlations, . . . [and] correspond to concepts identified as abstract by the courts." *Id.* (docket no. 65-1 at 9) (citing *Digitech Image Techs., LLC. v. Elecs. for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014)).

In response to the non-final rejection, IBM amended Claim 1, added Claims 8 and 9, and insisted that Claims 1–7 were eligible for patenting. *See* Ex. 4 to Joint Status Report (docket no. 65-4). Citing *Enfish* and *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), IBM told the examiner that § 101 jurisprudence did not preclude patentability because the claims "1) recite an improvement in computer-related technology, 2) describe a particular way to achieve a desired outcome as opposed to merely claiming the idea of a solution, 3) describe non-

conventional and non-routine operations," and 4) are similar to the claims upheld in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). *See* Ex. 4 to Joint Status Report (docket no. 65-4 at 10–16). IBM also argued that the operations of "identifying customers based on the integration of specific pieces of information into the CRM system and the management of interactions with customers based on specific integrated information," which had been added to Claim 1 after the patent examiner's initial rejection, are not abstract steps. *Id.* (docket no. 65-4 at 9–10).

Approximately two and a half months later, in March 2018, the patent examiner allowed Claims 1–9. *See* Ex. 5 to Joint Status Report (docket no. 65-5). The examiner's written decision contained no comment concerning IBM's § 101 contentions; it focused solely on whether the prior art anticipated or rendered obvious the limitations of the patent claims. *Id.* (docket no. 65-5 at 7). In its motion to dismiss, Zillow contends that the Court is not constrained by the allowance of the '168 Patent over an initial § 101 rejection, asserting that "the Federal Circuit has since repudiated the ground[16] of the examiner's decision." *See* Defs.' Mot. at 19 (docket no. 59) (citing *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281 (Fed. Cir. 2018)).[17] Although the Court is not bound by

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[16] Zillow characterizes IBM as making only one argument to the patent examiner, namely that "the improvement comes in the form that user-specific metadata is used to identify potential customers and to manage the interactions with those customers." *See* Defs.' Mot. at 19 (docket no. 59) (quoting Ex. 2 to Peaslee Decl. (docket no. 59-3), which is an excerpt of Ex. 4 to Joint Status Report (docket no. 65-4)). IBM, however, offered other reasons why Claims 1–7 of the '168 Patent are not directed to ineligible subject matter, and which of those grounds the patent examiner found persuasive is unknown.

[17] Contrary to Zillow's contention, *BSG Tech* would not compel a conclusion different from the one that might have been reached by the examiner. In *BSG Tech*, the patents-in-suit disclosed a

a patent examiner's findings during an ex parte patent application proceeding, *see* *Exmark Mfg. Co. v. Briggs & Stratton Power Prods. Grp., LLC*, 879 F.3d 1332, 1341 (Fed. Cir. 2018), the Court must consider an examiner's decision in determining whether a party asserting invalidity has satisfied its statutory "clear and convincing evidence" burden, *id.* (citing *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1555 (Fed. Cir. 1985)); *see also* *VaporStream, Inc. v. Snap Inc.*, No. 2:17-cv-220, 2018 WL 1116530, at *7 (C.D. Cal. Feb. 27, 2018).

Because the patent examiner offered no insight regarding why Claims 1–7 were deemed patentable over the initial § 101 rejection, the Court must consider each of the reasons invoked by IBM during the course of patent prosecution. Zillow has addressed only one of those arguments, namely that the patent claims "recite an improvement in computer-related technology." The Court agrees with Zillow that this contention lacks merit. IBM represented to the patent examiner that the alleged improvement was "in the

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"self-evolving generic index" for organizing information in a database. 899 F.3d at 1283. The "self-evolving" aspect of the invention enabled users to "add new parameters for use in describing items," and the claimed invention guided such user inputs "to maintain consistency in how different users describe items." *Id.* at 1284. The Federal Circuit agreed with the district court that the patent claims at issue were "directed to the abstract idea of considering historical usage information while inputting data," or in other words, of "having users consider previous item descriptions before they describe items to achieve more consistent item descriptions." *Id.* at 1286. Zillow summarizes *BSG Tech* as holding that "an improvement to the data contained in a database does not improve a computer because it leaves the database itself unchanged," Defs.' Mot. at 19 (docket no. 59), but the Federal Circuit made no such ruling, which is internally inconsistent (if the database is "improved," it cannot also be "unchanged") and which is contrary to *Enfish* and the line of cases involving "improved ways in which systems store and access data," *see* *BSG Tech*, 899 F.3d at 1288. The patents-in-suit in *BSG Tech*, which sought to influence user inputs by providing previously-used parameters and corresponding information, are fundamentally different from the '168 Patent, which does not involve any attempt to affect user inputs.

form" of employing "user-specific metadata" to "identify potential customers" and to "manage the interactions with those customers." Ex. 4 to Joint Status Report (docket no. 65-4 at 12). IBM's summary did not describe an improvement in computer capability or a solution to a problem arising in the realm of computers, but rather the benefits to businesses (for example, identifying customers) that might flow from acquiring and analyzing "user-specific metadata." The Court concludes that the patent examiner could not have been persuaded by the notion that relying on "user-specific metadata" to extrapolate business opportunities constituted an improvement in computer-related technology.

The Court further determines that IBM's other theories for why Claims 1–7 are not directed to an abstract idea lack merit, and the examiner would not have been convinced by them. The method outlined in the patent claims at issue uses well-known, "classical data mining techniques," *see* '168 Patent at Col. 8, Line 43, along with generic computer equipment, to mimic what sales personnel have done by hand, as well as with their eyes and ears, for centuries, namely infer business prospects by observing or being privy to the relationships between people, and then making note of such information in a rolodex or little black book. *Cf. People.ai, Inc. v. SetSail Techs., Inc.*, Nos. C20-9148 & C21-6314, 2021 WL 5882069, at *4 (N.D. Cal. Dec. 13, 2021) (observing that the patents-in-suit disclosed methods for optimizing CRM platforms that "parallel[ed] the activities of a prototypical corporate salesperson"). An age-old adage emphasizes the importance of "who you know" over "what you know," and efforts to apply such advice have many familiar labels, some more innocuous than others, including networking,

schmoozing, gossiping, eavesdropping, surveilling, spying, and intelligence gathering. The replication of these traditionally human endeavors via technology (*i.e.*, obtaining and analyzing metadata from applications like Facebook and LinkedIn and storing the results in a database) is a patent ineligible "do it on a computer" concept. *See id.* at *1; *see also PersonalWeb*, 8 F.4th at 1317 (reiterating that starting a process with data, applying an algorithm, and ending with a new form of data constitutes an abstract idea).

Contrary to IBM's statements to the patent examiner, the '168 Patent bears no resemblance to the patents-in-suit in *DDR*. In *DDR*, the patents-in-suit disclosed a solution to "a challenge particular to the Internet," namely that a third-party merchant could "'lure the [host website's] visitor traffic away' from the host website because visitors would be taken to the third-party merchant's website when they clicked on the merchant's advertisement on the host site." 773 F.3d at 1248 (alteration in original) & 1257. The invention at issue in *DDR* created a new "composite" web page, when a user activated a hyperlink imbedded in a third-party merchant's advertisement, that displayed product information from the third-party merchant, but retained the host website's "look and feel." *Id.* at 1248–49. This answer to "a problem specifically arising in the realm of computer networks" was "necessarily rooted in computer technology." *Id.* at 1257. In contrast, Claims 1–7 of the '168 Patent do not address a computer or network issue, but rather a business concern, namely that loading data into a new CRM platform might require substantial time. *See* '168 Patent at Col. 4, Lines 32–53. The specification of the '168 Patent indicates that, by integrating metadata from social-networking applications, a new CRM system can be "quickly populated" and "become effective very quickly in

targeting various customers." *Id.* at Col. 4, Lines 50–53. Neither the '168 Patent nor the allegations of the Amended Complaint, however, identify any technological impediment to rapid entry of information into a CRM database, and the declared advantage of using metadata is merely increased speed when compared with manual methods of acquiring and storing potential customer records. *See IBM*, 2021 WL 2982372, at *6 ("[I]ncreased speed or efficiency in the process or the entity that is using a computer, as opposed to the operation of the computer itself, does not confer patent eligibility.").

In opposing Zillow's Rule 12(b)(6) motion, IBM also cites to *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143 (Fed. Cir. 2019). IBM's reliance on *Koninklijke*, which IBM abridges as *Gemalto*, is misplaced. The appeal in *Koninklijke* concerned the three dependent claims of the patent-in-suit, which were "directed to an improved check data generating device that enables a data transmission error detection system to detect a specific type of error that prior art systems could not." *Id.* at 1145. As information is transmitted through the air in binary form (in other words, as a series of electromagnetic pulses representing 0s and 1s), two types of error can occur, namely variable or random error and systematic error. *Id.* at 1146. The patent in *Koninklijke* addressed the latter, which could be caused by persistent properties in the environment, for example, an interference signal with a certain frequency, or by problems with the employed equipment. *Id.* Prior art systems, which generated "check data" based on the original data ("d_1"), appended check data d_1 to the transmission, generated "check data" based on the transmitted data ("d_2"), and then compared d_1 with d_2, could not reliably detect systematic errors because they used the same or "fixed" generating function to

process every block of data. *Id.* at 1146–47. The dependent patent claims at issue in *Koninklijke* solved the problem of undetected systematic errors by varying, from time to time, the way "check data" is generated so that environmental or equipment-related effects did not continuously produce the same defective check data. *Id.* at 1147. In other words, the patented device, which was configured "to *modify* the permutation [of check data] *in time*," *id.* at 1148 (emphasis in original), provided a concrete technological approach to a technological challenge. For the same reasons that the '168 Patent is not analogous to the patents-in-suit in *DDR*, the asserted claims of the '168 Patent are distinguishable from the patent claims in *Koninklijke* that survived a § 101 challenge. The '168 Patent does not clear the *Alice* Step One hurdle.

c. *Alice* Step Two

Given the obviously abstract nature of the representative claims of the '168 Patent, the patent examiner's allowance of Claims 1–7 must have been based on an *Alice* Step Two rationale. In the initial § 101 rejection, the examiner observed that Claim 1:

> does not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements when considered both individual[ly] and as an ordered combination do not amount to significantly more than the abstract idea. The claim recites the limitation of "a customer relationship management (CRM) system." The customer relationship management (CRM) system can be [a] hardware component or program in a general computer. This generic computer component is well-understood in the art. The use of [a] generic computer component for receiving data, recognizing data, and storing information do[es] not impose any meaningful limit on the computer implementation of the abstract idea.

Ex. 1 to Joint Status Report (docket no. 65-1 at 9). In response, IBM contended that the invention at issue (i) improved "the related technical field of customer management,"

and (ii) added "a specific limitation other than what is well-understood, routine and conventional in the field," which was "evidence of 'significantly more' being claimed than an abstract idea." Ex. 4 to Joint Status Report (docket no. 65-4 at 15).

In now opposing Zillow's motion to dismiss, IBM asserts that the '168 Patent sets forth the inventive concepts of "extracting specific types of user interactions on social networks and the unconventional integration of this data into CRM systems." Pl.'s Resp. at 23 (docket no. 62). According to the Amended Complaint, although "some prior art systems were able to scrape social networking data from social media applications, . . . this process would only allow the system to extract the data presented on the social media webpage itself, and not the metadata stored within the social media application that provides valuable insights into the context of and connections between different users." Am. Compl. at ¶ 63 (docket no. 36). The operative pleading further explains that, unlike existing CRM platforms, which "relied on scraping . . . front-end data from social media applications," the "smart" CRM system described in the '168 Patent uses "back-end data" and leverages "numerous fields of metadata" to provide "dynamic insights about current and future customers." *Id.* at ¶ 65.

At this stage of the proceedings, the Court must accept the allegations of the Amended Complaint as true and construe them in the light most favorable to IBM, provided that they are plausible and not contradicted by the claim language, specification, or prosecution history. The representative claims of the '168 Patent do not use the terminology "front-end" or "back-end" to differentiate between categories of metadata, but Claims 1 and 2 appear to differ along these lines, with Claim 1 contemplating that

any type of metadata could be obtained from social-networking applications, and Claim 2 specifying that metadata must be "*derived* from interactions between the users of the applications," '168 Patent at Col. 13, Lines 41–43 (emphasis added).

Although Claim 2 of the '168 Patent seems to allude to "back-end" metadata, the harvesting of which was allegedly not "well-understood, routine, or conventional" at the time of the invention, the Court agrees with Zillow that the '168 Patent does not actually teach a procedure for extracting such data. The specification merely advises that "[d]ata mining may be used to identify metadata," *id.* at Col. 9, Lines 30–33, and invokes a "user interaction deriver," which "represents programmed instructions that, when executed, cause the processing resources to derive interactions between the users of the applications and based on historical patterns across the applications," *id.* at Col. 11, Lines 59–63. In other words, to borrow W.P. Kinsella's phrasing, build the software and the metadata will come. This exhortation does nothing more than repeat the abstract idea of accumulating information about and from the relationships that people form online. *See PersonalWeb*, 8 F.4th at 1318–19 (concluding that "the purported improvements . . . just restate the abstract ideas"); *see also People.ai*, 2021 WL 5882069, at *10 ("The improvements that come with the incorporation of a computer fail to qualify as an inventive concept."). The patent examiner erred in allowing Claims 1–7 of the '168 Patent, which are not valid under 35 U.S.C. § 101, and IBM's fifth count of patent infringement, Am. Compl. at ¶¶ 140–49 (docket no. 36), is DISMISSED as failing to state a claim upon which relief can be granted.

Conclusion

For the foregoing reasons, the Court ORDERS:

(1) Zillow's motion to dismiss pursuant to Rule 12(b)(6), docket no. 59, is GRANTED, and IBM's first, second, and fifth claims are DISMISSED. The only claim left in this matter, *i.e.*, IBM's third claim for infringement of U.S. Patent No. 7,543,234, remains stayed.

(2) The Clerk is directed to send a copy of this Order to all counsel of record.

IT IS SO ORDERED.

Dated this 9th day of March, 2022.

Thomas S. Zilly
United States District Judge