

**United States Court of Appeals  
for the Federal Circuit**

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**SHOLEM WEISNER,**  
*Plaintiff-Appellant*

**SHMUEL NEMANOV,**  
*Plaintiff*

**v.**

**GOOGLE LLC,**  
*Defendant-Appellee*

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2021-2228

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Appeal from the United States District Court for the Southern District of New York in No. 1:20-cv-02862-AKH, Judge Alvin K. Hellerstein.

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Decided: October 13, 2022

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MATTHEW DE PRETER, Aronberg Goldgehn, Chicago, IL, argued for plaintiff-appellant. Also represented by JACOB GINSBURG, Jacob Ginsburg, Esq. PLLC, Monsey, NY.

TODD RICHARD GREGORIAN, Fenwick & West LLP, San Francisco, CA, argued for defendant-appellee. Also represented by DANIEL LEDESMA, KEVIN MCGANN, OLIVIA LYNN WHEELING, New York, NY; ALLEN W. WANG, Mountain View, CA.

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Before REYNA, HUGHES, and STOLL, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* STOLL.

Opinion dissenting in part filed by *Circuit Judge* HUGHES.  
STOLL, *Circuit Judge*.

Sholem Weisner appeals from the district court’s dismissal of his patent infringement suit under Federal Rule of Civil Procedure 12(b)(6). The district court held all of the asserted claims ineligible under 35 U.S.C. § 101. We affirm-in-part and reverse-in-part.

#### BACKGROUND

##### I

Mr. Weisner—a named inventor of U.S. Patent Nos. 10,380,202, 10,642,910, 10,394,905 and 10,642,911—sued Google LLC for patent infringement in the United States District Court for the Southern District of New York.

The four asserted patents are related and share a common specification.<sup>1</sup> The shared specification generally describes ways to “digitally record a person’s physical activities” and ways to use this digital record. ’202 patent, Abstract. Specifically, it describes a way in which individuals and businesses can sign up for a system so that they can exchange information, for instance “a URL or an electronic business card.” *Id.* at col. 3 ll. 30–36. Then, as individuals go about their day, they may encounter people or businesses that they want recorded in their “leg history,” which records the URLs or business cards along with the time and place of the encounters. *Id.* at col. 3 l. 48–col. 4

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<sup>1</sup> Because the specifications are identical, we refer only to the ’202 patent specification unless otherwise specified.

l. 23; *see also id.* at Fig. 8. The specification describes a “leg history” as “the accumulation of a digital record of a person’s physical presence across time.” *Id.* at col. 1 ll. 6–10.

Individuals record entries in their travel history either by accepting a proposal from another person/business (e.g., by “push[ing] a button”), or by unilaterally making an entry (e.g., by “tak[ing] a snapshot with a digital camera . . . and upload[ing] it to [their] databank”). *Id.* at col. 3 l. 48–col. 4 l. 11. These methods are illustrated in Figure 3 (showing a user accepting a proposed entry by “Macy’s”) and Figure 4 (showing a user unilaterally making an entry at “Benson’s” by taking a photograph):

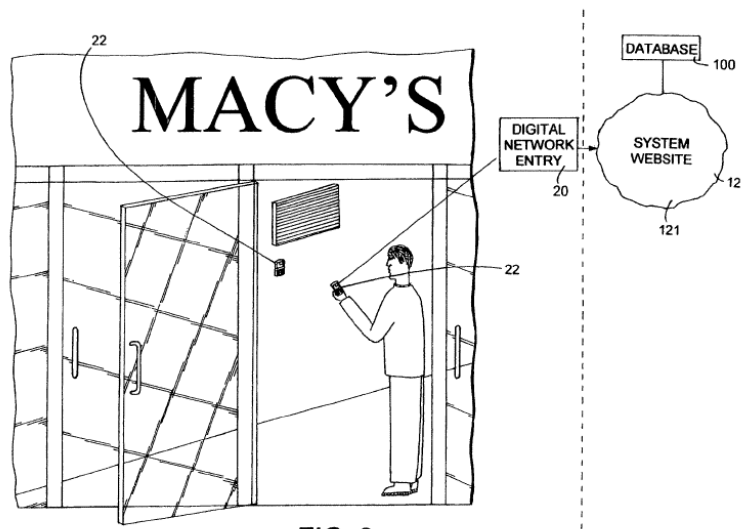
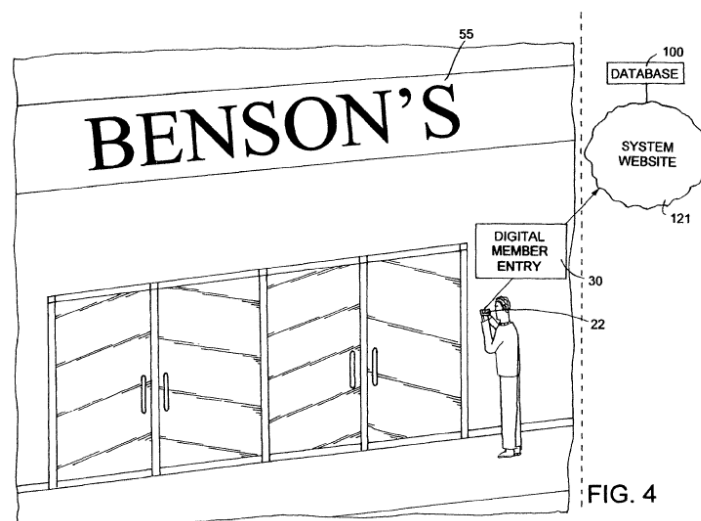


FIG. 3



*Id.* at Figs. 3–4; *see also id.* at col. 11 l. 20–col. 13 l. 18.

The specification also describes using this collected travel history data to “enhance web searching results.” *Id.* at col. 17 ll. 9–13. For example, the specification describes a method for enhancing search results by using a “useful person”—someone that has visited a location in common with the searching person. *Id.* at col. 17 l. 53–col. 18 l. 35; *see also id.* at col. 19 l. 27–col. 20 l. 61. As illustrated in Figure 9, in response to a person’s search, the system cross-references the digital histories of the searching person and the useful person to establish a common visit (e.g., “www.fourseasons.com” in Figure 9) and then gives priority to those search results that are found in the useful person’s travel history (e.g., “www.vegassteakhouse.com” in Figure 9):

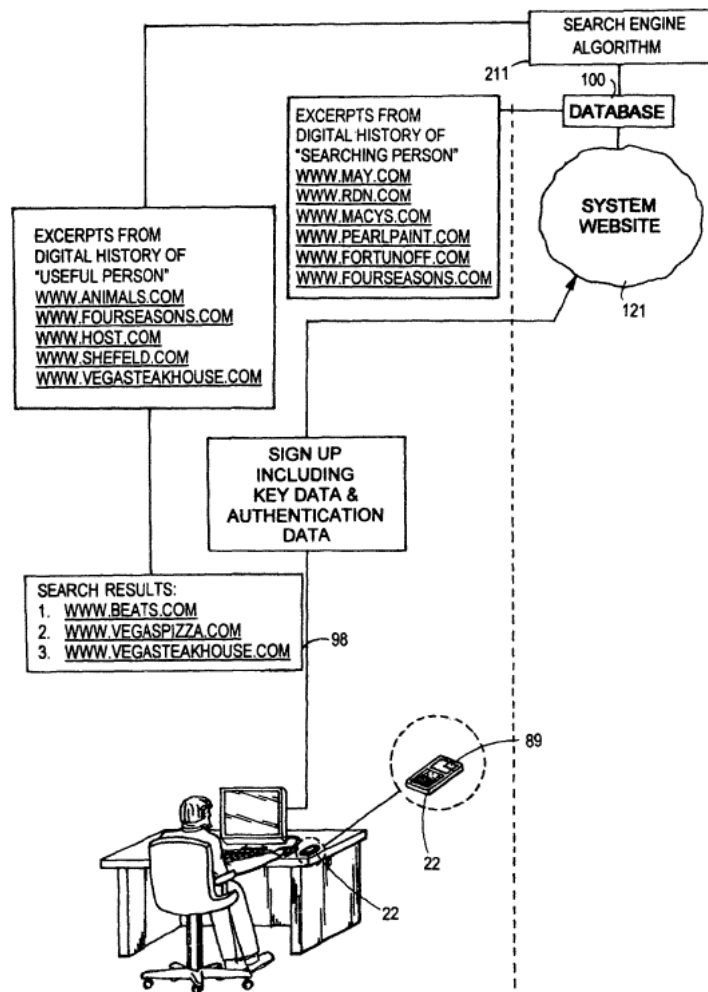


FIG. 9

*Id.* at Fig. 9.

Although the patents share a common specification, the claims are meaningfully different in their focus. Independent claim 1 of the '202 patent recites recording “physical location histories” of “individual member[s]” that visit “stationary vendor member[s]” in a “member network.” *Id.* at col. 21 ll. 13–67 (claim 1). In claim 1, the “physical encounter” entry is proposed by the stationary vendor “automatic[ally]” and is recorded “upon acceptance by the

handheld mobile communication device of the individual member.” *Id.* An example of such a system is shown in Figure 3, above.

Claim 1 also recites a variety of other generic hardware and software components and features, such as a “telecommunications network,” “database,” “application,” “positioning system,” “handheld mobile communication device,” “URL,” a “searchable” “physical encounter history,” and a “visual timeline.” *Id.* The full claim is lengthy:

1. A method of creating and/or using physical location histories, comprising:

maintaining a processing system that is connected to a telecommunications network and configured to provide an account to an individual member and to a stationary vendor member of a member network;

providing an application that configures a handheld mobile communication device of each individual member of a member network to, upon instances of a physical encounter between the individual member and the stationary vendor member of a plurality of stationary vendor members of the member network at a physical premises of the stationary vendor member, a location of the physical encounter determined by a positioning system in communication with either the handheld mobile communication device or a communication device of the stationary vendor member, and upon acceptance by the handheld mobile communication device of the individual member of an automatic proposal from the stationary vendor member, transmit a URL of the stationary vendor member and a URL of the individual member to the processing system automatically, thereby generating a location

history entry, in at least the account of the individual member, that includes (i) the URL of, and a location of, the stationary vendor member, (ii) a time and date of the physical encounter, and (iii) an identity or the account of the individual member and of the stationary vendor member,

the URL of the individual member associated with the individual member before the physical encounter between the individual member and the stationary vendor member;

the application maintaining a viewable physical encounter history on the handheld mobile communication device that includes URLs from multiple stationary vendor members and is searchable from the handheld mobile communication device (i) by URL of the individual member and of the stationary vendor member, (ii) by geographic location, and (iii) by time of the physical encounter,

maintaining, using the processing system, a database of physical encounter histories of members of the member network whose accounts received the location history entry that was generated during the physical encounters, the individual member's account having data transfer privileges that allow the physical encounter history to be accumulated through transmission of location history entries from multiple handheld mobile communication devices of the individual member over time; and

wherein the physical encounter history of a particular individual member includes at least one visual timeline of physical encounters of the particular individual member.

*Id.* at col. 21 ll. 13–67.

Claim 1 of the '910 patent is similar. It, too, describes “accumulation of physical location histories.” '910 patent col. 21 ll. 16–61. It likewise recites generic features such as an “application,” “handheld mobile communication device,” “database,” etc. *Id.* The '910 patent’s recited method, however, involves “capture by the particular individual member” that is processed “automatically.” *Id.* In other words, the location history is recorded based on the initiative of the individual choosing to record entries, rather than in response to an individual “accept[ing]” an automatic proposition by a vendor as in claim 1 of the '202 patent. *See id.*

The representative claims of the remaining two patents have a different focus: using physical location histories to improve computerized search results. For instance, the preamble of claim 1 of the '911 patent recites “enhancing digital search results . . . using URLs of location histories.” '911 patent col. 21 ll. 14–53 (claim 1). The preamble to claim 1 of the '905 patent likewise recites “combining enhanced computerized searching . . . with use of humans as physical encounter links.” '905 patent col. 21 ll. 15–63 (claim 1). The claims then recite a number of steps for accumulating physical location histories (similar to the '202 and '911 patents) but then also include steps related to computerized searches using these histories. Because we will discuss claim 1 of both the '911 and '905 patents in the analysis below, we repeat the claim language in full here:

1. A computer-implemented method of enhancing digital search results for a business in a target geographic area using URLs of location histories, comprising:  
  
providing, by at least one processing system in communication with a positioning system, an account to (i) an individual member and (ii) a stationary vendor member, of a member



network, the account associated with a URL, the individual member's account associated with a mobile communication device or multiple mobile communication devices,

maintaining a communication link between the mobile communication device and the at least one processing system or the positioning system such that the mobile communication device is configured to accumulate a location history on a database maintained by the at least one processing system from physical encounters by the individual member at multiple stationary vendor members upon the mobile communication device being set to enter instances of a physical encounter between the individual member carrying the mobile communication device and the stationary vendor member at a physical premises of the stationary vendor member, the positioning system determining a location of the individual member at the physical premises;

for each individual member having a location history who sends a search query to a search engine of the at least one processing system, the search query targeting a geographic area:

(1) searching, by the search engine, the database for URLs of stationary vendor members in the location history, the location history also identifying time and geographic place of the physical encounters therein, and

(2) assigning a priority, by the at least one processing system, in a search result ranking based on an appearance of one of the stationary vendor member URLs in the location history of the individual member, wherein that one of the URLs is of a particular stationary

vendor member located in the target geographic area.

'911 patent col. 21 ll. 14–53.

1. A method of combining enhanced computerized searching for a target business with use of humans as physical encounter links, comprising:

maintaining a processing system connected to a telecommunications network;

providing an application that allows a handheld mobile communication device of each individual member of a member network, the device in communication with a—positioning system, upon a physical encounter between the individual member and a stationary vendor member of a plurality of stationary vendor members of the member network at a physical premises of the stationary vendor member, to transmit key data of the stationary vendor member and of the individual member to the processing system automatically as a result of the physical encounter, a location of each individual member's device determined by the positioning system, the key data being a URL or an identifier associated with the URL;

maintaining, using the processing system, a database of physical location histories of members of the member network whose key data was transmitted to the processing system during the physical encounters,

determining, by the processing system, a physical location relationship recorded in the database between a searching person who is a member of the member network, a reference individual member of the member network and a first stationary vendor member of the

plurality of stationary vendor members, upon the searching person making a search query on a search engine having access to the processing system; and

responding to the search query by generating a computerized search result that increases a ranking of the first stationary vendor member based on the physical location relationship wherein the relationship is as follows:

- (a) the reference individual member's physical location history includes key data of the first stationary vendor member; and
- (b) the searching person's physical location history and the reference individual member's physical location history each include key data of a second stationary vendor member of the plurality of stationary vendor members,

wherein the searching person's physical location relationship to the first stationary vendor member is such that the searching person has a physical location relationship with the second stationary vendor member who has a physical location relationship with the reference individual member who has a physical location relationship with the first stationary vendor member.

'905 patent col. 21 ll. 15–63.

## II

Mr. Weisner filed suit on April 6, 2020, in the Southern District of New York. At first, Mr. Weisner alleged infringement of only the '202 patent. J.A. 3023–31 (Complaint). But he voluntarily amended his complaint on June 16, 2020—before Google had responded to the initial

complaint—to add allegations of infringement of the other three patents. J.A. 3032–61 (First Amended Complaint).

Google moved to dismiss Mr. Weisner’s First Amended Complaint on two alternative bases. First, Google argued that the asserted patent claims are ineligible under 35 U.S.C. § 101. Second, Google argued that Mr. Weisner had failed to meet the minimum threshold for plausibly pleading his claim of patent infringement under *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007) and *Ashcroft v. Iqbal*, 556 U.S. 662 (2009). The district court granted dismissal on the *Twombly / Iqbal* basis on January 4, 2021. J.A. 12–14. It then held a hearing the next day to discuss patent eligibility. J.A. 2001–25 (Hr’g Tr.). After the hearing, the district court also granted dismissal based on ineligibility under § 101 in a short, one-paragraph order. J.A. 15. In that same order, the district court provided Mr. Weisner an opportunity to file an amended complaint. *Id.*

Mr. Weisner filed a Second Amended Complaint (SAC), adding allegations of infringement and allegations related to patent eligibility. J.A. 2026–55. Relevant to this appeal, Mr. Weisner added a section entitled “Invention Background and System Details Explained.” J.A. 2028–33 (SAC ¶¶ 11–30). Google again moved to dismiss the SAC based on both § 101 and *Twombly / Iqbal*. The district court granted dismissal based on § 101 without another hearing. *Weisner v. Google LLC*, 551 F. Supp. 3d 334 (S.D.N.Y. 2021) (*Weisner*).

Mr. Weisner appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

#### DISCUSSION

We apply regional circuit law when reviewing motions to dismiss for failure to state a claim under Rule 12(b)(6). *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1092 (Fed. Cir. 2016). “In the Second Circuit, grant of a

motion to dismiss is reviewed de novo to determine whether the claim is plausible on its face, accepting the material factual allegations in the complaint and drawing all reasonable inferences in favor of the plaintiff.” *Ottah v. Fiat Chrysler*, 884 F.3d 1135, 1141 (Fed. Cir. 2018) (first citing *Iqbal*, 556 U.S. at 678; and then citing *Johnson v. Priceline.com, Inc.*, 711 F.3d 271, 275 (2d Cir. 2013)).

Patent eligibility under § 101 is a question of law that may involve underlying questions of fact. *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018) (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018)). We review a district court’s ultimate conclusion on patent eligibility de novo. *Id.* We have held that “[p]atent eligibility can be determined on the pleadings . . . when there are no factual allegations that, when taken as true, prevent resolving the eligibility question as a matter of law.” *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1007 (Fed. Cir. 2018).

Section 101 defines patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court established a two-step test for examining patent eligibility under § 101 in *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014). Under step one, we “determine whether the claims at issue are directed to . . . [a] patent-ineligible concept[.]” such as an abstract idea. *Id.* at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Lab’s, Inc.*, 556 U.S. 66, 77–79 (2012)). Under step two, we “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* Step two is “a search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible

concept] itself.” *Id.* at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72).

## I

We start with the ’202 and ’910 patents. We determine the challenged claims of these patents are patent ineligible, and thus we affirm the district court’s dismissal as to the claims of these two patents.

## A

At step one of *Alice*, we agree with the district court that the representative claims<sup>2</sup> of these patents are directed to an abstract idea. The district court correctly determined that the patent claims are directed to “collect[ing] information on a user’s movements and location history [and] electronically record[ing] that data.” *Weisner*, 551 F. Supp. 3d at 339. Put more simply, the claims are directed to creating a digital travel log.

The claim language supports our conclusion that the claims are directed to creating a digital travel log. For instance, the preamble of claim 1 of the ’202 patent recites “creating and/or using physical location histories.” ’202 patent col. 21 ll. 13–14. The steps in the body of the claim describe a generic process for achieving the goal of creating

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<sup>2</sup> Although Mr. Weisner argues on appeal that a number of claims are “exemplary,” Appellant’s Br. 20, 28, 32, 37, he only describes and analyzes claim 1 of each patent in any significant detail. Accordingly, we treat claim 1 of each patent as representative.

Mr. Weisner briefly mentions claim 3 of the ’202 patent in two short paragraphs of his opening brief. Appellant’s Br. 57, 59; *see also* Appellant’s Reply Br. 26. To the extent that this was sufficient to preserve his argument, we also determine that claim 3 is ineligible for the reasons described below. *See infra* at 25 n.4.

a digital travel log, such as “maintaining a processing system” and using an “application” to generate a user’s “location history entry” on their “handheld mobile communication device.” *Id.* at col. 23 ll. 15–67. The preamble to claim 1 of the ’910 patent likewise recites a “method for accumulation of physical location histories.” ’910 patent col. 21 ll. 16–19. And again, the body of the claim recites generic features like a “processing system that is connected to a telecommunications network,” a “URL,” and a “handheld mobile communication device.” *Id.* at col. 21 ll. 20–61.

Mr. Weisner does little to combat the district court’s articulation of what the claims are directed to for these two particular patents. Indeed, Mr. Weisner’s opening brief states that “[t]he method of claim 1 of the ’202 patent is directed to the creation and use of physical location histories.” Appellant’s Br. 37. Likewise, Mr. Weisner’s own allegations in the SAC of what the patents are “generally directed to” also support our conclusion that the claims are directed to creating a digital travel log. For instance, Mr. Weisner states that “[t]he ’202 Patent is generally directed to a method and system of creating and/or using physical location histories.” J.A. 2035–36 (SAC ¶ 34). Similarly, for the ’910 patent, Mr. Weisner alleges that patent “is generally directed to a method, system and computer-readable medium for accumulating physical location histories based on digital member entries using a URL or an identifier associated with a URL.” J.A. 2044 (SAC ¶ 52).

Both the Supreme Court and this court’s precedent suggest that claims purporting to improve “the functioning of the computer itself” or “an existing technological process” might not be directed to an abstract idea. *Alice*, 573 U.S. at 225; *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). Based on this precedent, Mr. Weisner asserts that claim 1 is not abstract, but rather “improves the functionality of the underlying system” by “[1] automatically recording physical interactions and

[2] limiting what is recorded to only specific types of interactions that are pre-approved and agreed to by an individual member and a vendor member.” *See, e.g.*, Appellant’s Br. 57. As the district court correctly observed, however, “[h]umans have consistently kept records of a person’s location and travel in the form of travel logs, diaries, journals, and calendars, which compile information such as time and location.” *Weisner*, 551 F. Supp. 3d at 339. Automation or digitization of a conventional method of organizing human activity like the creation of a travel log on a computer does not bring the claims out of the realm of abstractness. *See Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017) (“[M]ere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology.”); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (“The concept of data collection, recognition, and storage is undisputedly well-known.”).

Likewise, the fact that the claims recite a number of generic elements—including a processing system, an application, and a handheld mobile communication device—does not shift their focus away from the core idea of creating a digital travel log. “[S]imply appending conventional steps, specified at a high level of generality, to . . . abstract ideas cannot make those . . . ideas patentable.” *Mayo*, 566 U.S. at 82; *see also Affinity Labs of Tex., LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1272 (Fed. Cir. 2016) (“The addition of basic user customization features to the interface does not alter the abstract nature of the claims . . .”).

Finally, Mr. Weisner’s last counterpoint—that the claims are not abstract because they are directed to only capturing the travel history of “members”—is not persuasive. Appellant’s Br. 56–58. According to Mr. Weisner, this improves the “integrity” of the data and avoids an “inundation of information making it useless.” *Id.* at 56–58. But these purported technological advantages are nothing



more than attorney argument, unlinked to the complaint or the patent claims or specification. Indeed, neither the specification nor the SAC addresses this purported technological improvement. Although the claims do recite a “member of the member network” and other “member” limitations, they do not limit the data collection to only members. ’202 patent col. 21 ll. 13–67; ’910 patent col. 21 ll. 16–61. Thus, the purported benefit of limiting data accumulation to members is not captured in the claims and, accordingly, does not shift the focus of the claims away from the abstract idea of creating a digital travel log.

Accordingly, we agree with the district court’s analysis at step one for these claims and reject Mr. Weisner’s arguments to the contrary. Having concluded that the representative claims for the ’202 and ’910 patents are directed to an abstract idea, we proceed to step two.

## B

Turning to step two, we consider the elements of each claim both individually and “as an ordered combination” to determine whether the claims recite “something more” than the abstract idea to transform the nature of the claim into a patent-eligible application. *See Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 77–80). We conclude that the district court appropriately relied on statements in the specification and concessions by the patentee to conclude that the claims “rely on the use of existing technology to create a computerized version of [travel] logs and do not ‘focus on a specific means or method that improves the relevant technology.’” *Weisner*, 551 F. Supp. 3d at 340 (quoting *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016)).

As the district court appropriately determined, the specification describes the components and features listed in the claims generically, supporting the conclusion that these components and features are conventional, not inventive concepts in the patents. *See* ’202 patent col. 8

ll. 32–42 (describing the “software 89” for implementing the invention on a mobile device as being “content [that] is known to those skilled in the art of computer science” and which “can be readily developed or is already known to those skilled in the art”), col. 8 ll. 38–40 (describing methods to “receive and transmit wirelessly” including “methods such as Bluetooth®”), col. 8 ll. 43–60 (explaining that “handheld electronic network device 22” includes “any other handheld electronic device that is typically carried around by people during their day including iPods, cellular telephones, [etc.]”), col. 8 ll. 61–64 (generically describing having a customer “sign up at a web site” to become “a member of the network”), col. 11 ll. 44–46 (explaining that the “telecommunications network” is typically “a global network such as the world wide web”), col 15 ll. 44–50 (referencing a generic “GPS or other navigational system” to create a “geographical place stamp”). We agree with the district court that these claims do not recite significantly more than the abstract idea of digitizing a travel log using conventional components.

Mr. Weisner again argues that the claim limitations directed to “members” provide the something more to transform the claims into a patent-eligible invention. Appellant’s Br. 54–55, 58–59; Appellant’s Reply Br. 22–24. As explained above, however, this argument is not linked to the claims.

For these reasons, we agree with the district court’s conclusion that the asserted claims of the ’202 and ’910 patents are ineligible under § 101, and therefore affirm the district court’s dismissal as to these claims.

## II

We turn next to the ’905 and ’911 patents. We determine the challenged claims of these patents have not been shown to be ineligible at the Rule 12(b)(6) stage, where the court must accept all well-pleaded factual allegations as true and must construe all reasonable inferences in favor

of Mr. Weisner. Thus, we reverse the district court's dismissal as to the claims of these two patents.

#### A

At step one, the district court erred by failing to separately analyze these patents. Although the specifications in all four patents are the same, the claims of the '905 and '911 patents are not directed to the same subject matter as the '202 and '910 patents. Rather, at step one, we conclude that the representative claims of the '905 and '911 patents are directed to creating and using travel histories to improve computerized search results.

The claim language supports this focus. In contrast with the preambles of claim 1 of both the '202 and '910 patents, which focus on creating the location histories, the preamble to claim 1 of the '911 patent recites a "method of enhancing digital search results for a business in a target geographic area using URLs of location histories." '911 patent col. 21 ll. 14–16. Similarly, the preamble to claim 1 of the '905 patent recites a "method of combining enhanced computerized searching for a target business with use of humans as physical encounter links." '905 patent col. 21 ll. 15–17. The bodies of the '905 and '911 patent claims also support this emphasis. They first describe accumulation of physical location histories in a highly generic fashion, and then, in more detail, describe the use of the location histories in digital searches. '905 patent col. 21 ll. 18–37 (first half of claim 1 describing generating a database of physical location histories), col. 21 ll. 38–63 (second half describing using the physical location histories in response to a "search query"); '911 patent col. 21 ll. 17–37 (first half of claim 1 describing "accumulat[ing] a location history on a database"); col. 21 ll. 38–53 (second half describing using that information in a "search query").

The specification also supports this emphasis on using location histories in computerized searching as a distinct concept from mere accumulation of location histories. For

instance, the background of the invention lists certain aspects of searching on the world wide web as “[a]nother problem” that the patent is directed to solving. ’905 patent col. 2 ll. 47–62. Similarly, the “Summary of the Present Invention” emphasizes an “improved method of searching the world wide web . . . that makes use of digital histories.” *Id.* at col. 4 ll. 36–38. Finally, the detailed description of the invention includes a section describing “Using Digital Histories to Improve Search Results.” *Id.* at col. 17 l. 8–col. 20 l. 67.

Our conclusion is again supported by allegations in Mr. Weisner’s SAC regarding what the ’911 and ’905 patents are “generally directed to.” *See* J.A. 2041 (SAC ¶ 46) (“The ’911 Patent is generally directed to a method and system of enhancing digital search results for a business in a target geographic area using URLs of location histories . . . .”); J.A. 2038–39 (SAC ¶ 40) (“The ’905 Patent is generally directed to a method and system of combining enhanced computerized searching for a target business with use of physical encounters between individuals having communications devices and vendors . . . .”).

Whether these claims are directed to an abstract idea presents a much closer question than the claims in the ’202 and ’910 patents. We ultimately conclude that the representative claims of the ’905 and ’911 patents are directed to an abstract idea, but that, on the pleadings, they satisfy step two of the *Alice* test. Thus, we proceed to step two.

## B

Turning to step two of *Alice*, we conclude that Mr. Weisner has plausibly alleged that the ’905 and ’911 patent claims recite a specific implementation of the abstract idea that purports to solve a problem unique to the Internet and that, accordingly, these claims should not have been held ineligible under step two at this stage.

The district court rejected the claims at step two because the “patents at issue . . . confirm that the patented search and data collection uses conventional techniques without an inventive concept.” *Weisner*, 551 F. Supp. 3d at 340. In particular, the court relied on statements from the SAC and specification that concede the patentee did not invent a new search engine algorithm. J.A. 2030 (SAC ¶ 18) (conceding the patented system “uses the same or similar algorithm used by existing search engines”); ’905 patent col. 17 ll. 13–15. Although this means the search engine algorithm cannot be the inventive concept that saves the claims at step two, this does not doom these claims. As explained below, we conclude that the claims’ specificity as to the mechanism through which they achieve improved search results (through a “location relationship” with a “reference individual” for the ’905 patent or through the “location history of the individual member” who is running the search in a targeted “geographic area” for the ’911 patent) is sufficient. Stated another way, disclosing a new search engine algorithm is not necessary as these claims do not per se concern searching for new information, but rather concern a new technique for prioritizing the results of the conventional search.<sup>3</sup>

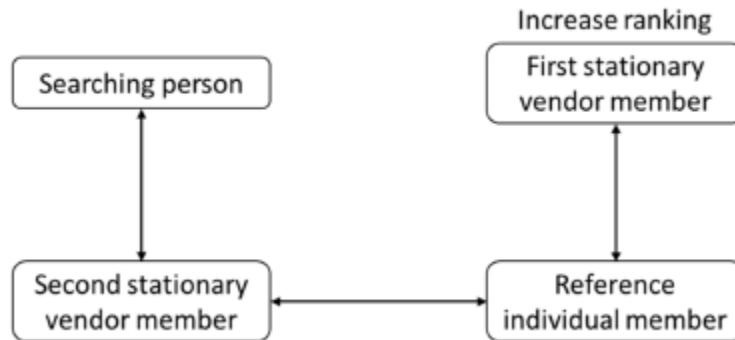
Claim 1 of the ’905 patent plausibly captures an inventive concept in the form of a specific technique for using

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<sup>3</sup> The dissent also echoes this same paragraph of the SAC and lines from the specification regarding the search algorithm. Dissent at 3. Like the district court’s opinion, this misses the point. It is not the algorithm itself that is alleged to be unconventional in the SAC. Rather, the SAC and the patent specification allege that it is the specific implementations for using the travel histories to prioritize the order of the search results that operate differently than conventional methods and solve an internet-centric problem, as further described below.

physical location history data to improve computerized search results. In particular, claim 1 uses a “physical location relationship” with a third-party “reference individual” to increase the priority of search results. Claim 1 describes how the physical relationship is established—the system searches the physical location histories of both a reference individual and the searching person to determine whether they have visited a common location (“second stationary vendor member”). ’905 patent col. 21 ll. 46–56. The system then prioritizes search results that the reference individual has visited. *Id.* at col. 21 ll. 46–48, 61–63 (stating “the reference individual . . . has a physical location relationship with the first stationary vendor member” and “increas[ing] a ranking of the first stationary vendor member”).

This is more than just the concept of improving a web search using location history—it is a specific implementation of that concept. Even Google recognizes the specificity in this process with the following diagram from its appeal brief “illustrat[ing] the relationships”:



Appellee’s Br. 12.

This specific implementation is also alleged to solve a problem particular to the Internet. The SAC emphasizes this particular aspect as “something significantly more,” explaining that “when a user will search for a physical location to visit, the inventive system will search a list of the physical location URLs and produce a result, based

on: past visit of such user, and past visits of location relatives of such user.” J.A. 2031 (SAC ¶ 21). The SAC explains this feature provides “specifically tailored result[s] to the searcher’s unique characteristics” and “eliminates the inherent bias of pushing and referring places through conventional web searches.” J.A. 2031–32 (SAC ¶¶ 22–23). The SAC explains that this is different from the conventional method, in which web searches merely defaulted to the “highest-ranking Uniform Resource Locator (‘URL’) link” by using purely “virtual encounters.” J.A. 2029 (SAC ¶¶ 15–16).

Looking to the intrinsic record, the specification also emphasizes that conventional web searches have a problem of returning voluminous, generic, non-personalized search results. For example, the specification states that the current “process of searching the world wide web does not adequately take cognizance of the unique characteristics and tastes of the searching person.” ’905 patent col. 2 ll. 57–60. The solution, according to the specification, is an “improved method of searching the world wide web . . . that makes use of digital histories.” *Id.* at col. 4 ll. 36–38. That portion of the specification specifically calls out the method of using a “useful person” which operates the same as the “reference individual” of the claims. *Id.* at col. 4 ll. 43–55. The specification describes this “useful person” mechanism in significant detail. *Id.* at col. 17 l. 53–col. 20 l. 67. Accepting these factual allegations in the SAC and specification as true, together with all reasonable inferences, as we must at this stage, see *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1127–30 (Fed. Cir. 2018); see also *Johnson*, 711 F.3d at 275, we conclude that the claims of the ’905 patent include an inventive concept that suffices to defeat Google’s motion to dismiss.

Claim 1 of the ’911 patent is similar, although it presents a different solution to the problem of generic web search results. Claim 1 of the ’911 patent is particular to “search quer[ies] targeting a geographic area.” ’911 patent

col. 21 ll. 38–41. The claim recites searching the location history database for entries “in the location history of the individual member” conducting the geographically targeted search that fall within “the target geographic area.” *Id.* at col. 21 ll. 42–53. As described above, this implementation is alleged in the SAC to be an inventive concept that improves computerized search results by taking into account the “past visit of such user” (*i.e.*, the particular user conducting the search) and “geographic location” of the search. J.A. 2031 (SAC ¶ 21). This is contrasted against the conventional method of prioritizing searches based exclusively on “virtual encounters.” J.A. 2029 (SAC ¶¶ 15–16). And the claimed solution addresses the problem of non-personalized search results described in the specification. ’911 patent col. 2 l. 64–col. 3 l. 2. Thus, we conclude that the claims of the ’911 patent also include an inventive concept that precludes an ineligibility determination at the pleadings stage.

We have previously held patent claims eligible at step two when they provided a specific solution to an Internet-centric problem. For example, the claims in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), disclosed a system in which a visitor to a webpage that clicked on an advertisement on that webpage would not be transported to the third-party advertiser’s page but instead would remain within the original host’s webpage, allowing the host to retain web traffic. *Id.* at 1257–58. We explained that this provided “an inventive concept for resolving this particular Internet-centric problem, rendering the claims patent-eligible.” *Id.* at 1259. And we noted that, unlike other patent claims that a patentee argued were eligible based on an “Internet-centric challenge,” but that were held ineligible in *Ultramarcial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014), the “claims at issue [in *DDR*] specify how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of



events ordinarily triggered by the click of a hyperlink.” *DDR*, 773 F.3d at 1258.

The ’905 and ’911 patent claims are analogous to those we held eligible in *DDR*. Here, the record supports that the claims plausibly provide a solution to an Internet-centric problem regarding web searches, allowing for more personalized search results than conventional methods. And like the claims in *DDR*, the claims here avoid the *Ultramercial* problem of “broadly and generically claim[ing] ‘use of the Internet’ to perform an abstract business practice (with insignificant added activity)” because they provide a “specific way” to solve the problem—through the “reference individual.” *Id.* at 1258–59.

Thus, we conclude that claim 1 of the ’905 patent and claim 1 of the ’911 patent plausibly recite inventive concepts that add significantly more to the abstract idea of using travel histories to improve computerized search results. These inventive concepts are supported by allegations in the SAC as well as portions of the specification, which we must accept as true at the pleadings stage. *See Aatrix*, 882 F.3d at 1127–30; *see also Johnson*, 711 F.3d at 275.<sup>4</sup>

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<sup>4</sup> Like claim 1 of both the ’905 and ’911 patents, claim 3 of the ’202 patent (mentioned only in passing in Mr. Weisner’s brief) is directed to the idea of creating and using travel histories to improve computerized search results. Unlike the ’905 and ’911 patent claims, however, claim 3 of the ’202 patent fails to provide a “specific way” to solve the internet-centric problem regarding computerized search results. Instead, it recites the raw idea of using travel histories in a search. Claim 3 broadly describes “searching [] the physical encounter histories of the [location history] database” and “using results of the searching

### CONCLUSION

The district court correctly concluded that the claims in the '202 and '910 patents are ineligible under 35 U.S.C. § 101. Accordingly, we affirm the district court's dismissal as to those patents.

The '905 and '911 patent claims, in contrast, plausibly include more than merely the concept of improving computerized search results using travel histories. Instead, those claims add significantly more to that abstract idea by implementing a specific solution to a problem rooted in computer technology. Accordingly, we reverse the district court's dismissal as to the claims of the '905 and '911 patents.

### **AFFIRMED-IN-PART AND REVERSED-IN-PART**

### COSTS

No costs.

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. . . to affect a ranking” in response to a search query. '202 patent col. 22 ll. 4–7 (claim 3). It does not include any specificity as to whose histories are being used or how they are being used to affect the search ranking, nor does it provide any mechanisms for limiting the relevant histories. It thus recites nothing more than the abstract idea. Accordingly, we determine that claim 3 of the '202 patent is ineligible.

**United States Court of Appeals  
for the Federal Circuit**

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**SHOLEM WEISNER,**  
*Plaintiff-Appellant*

**SHMUEL NEMANOV,**  
*Plaintiff*

v.

**GOOGLE LLC,**  
*Defendant-Appellee*

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2021-2228

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Appeal from the United States District Court for the Southern District of New York in No. 1:20-cv-02862-AKH, Judge Alvin K. Hellerstein.

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HUGHES, *Circuit Judge*, dissenting-in-part.

I agree with the majority that the claims of the '202 and '910 patents are ineligible. I further agree that the claims of the '905 and '911 patents are directed to the abstract idea of "creating and using travel histories to improve computerized search results." I dissent-in-part because I disagree with Part II.B of the majority's analysis, determining that the claims of the '905 and '911 patents recite inventive concepts. Because the second amended complaint admits that the algorithms used to incorporate location data are routine and conventional, and because the claims do not solve

a problem specific to the internet, I would affirm the district court's determination that the claims of these two patents are ineligible.

## I

The second amended complaint and specifications reveal that the claimed methods of the '905 and '911 incorporate location history into a search engine algorithm in a routine and conventional way: using well-understood methods of incorporating browsing history. Thus, all the claims add is the idea of using location history in a search engine algorithm, which is the abstract idea itself.

At step two, we distinguish between “laws of nature, natural phenomena, and abstract ideas”—which are not themselves patentable subject matter—and inventive applications of the abstract idea—which might be eligible. *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 70–71 (“[A]n application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” (quoting *Diamond v. Diehr*, 450 U.S. 175, 187 (1981))). We make this distinction by examining “the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018) (quoting *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 221 (2014)). “If the elements involve ‘well-understood, routine, [and] conventional activity previously engaged in by researchers in the field,’ they do not constitute an ‘inventive concept.’” *Id.* at 1128 (alteration in original) (quoting *Mayo*, 566 U.S. at 73).

The question of inventiveness at step two can involve underlying issues of fact, *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018), and we take the facts alleged in the complaint as true when considering step two on a motion to dismiss.

Mr. Weisner's second amended complaint explains that, "[p]rior to 2007, . . . [e]xisting search engine and search algorithm technology used records of virtual encounters only." Appx2029 at ¶ 15. Rather than "discern the most relevant physical location," these search engines returned websites based on, among other things "the individual's cyber activity [and] surf history." Appx2029 at ¶ 16.

The claims of the '905 and '911 patents detail ways in which a search engine can use a person's history of physical encounters to provide relevant search results. In the '905 patent, the search engine uses location histories of both the "searching" person and a second "reference" person who has visited at least one of the same locations. '905 patent at 21:50–63. The search engine prioritizes search results appearing in the reference person's location history. *Id.* at 21:46–49. In the '911 patent, the search engine prioritizes results within the geographic area of the searching person's other physical encounters. '911 patent at 21:39–53.

The second amended complaint concedes, though, that the claimed method "uses the same or similar algorithm used by existing search engines, only with physical encounters that are now searchable online just as cyber encounters were until now." Appx2030 at ¶ 18. In other words, the claimed methods of using location history are conventional methods, merely reused or adapted for use with a new type of data—location history. This allegation accords with the specification, which states that "[a]lgorithms can be easily imagined by those skilled in the art of search engine algorithms that would improve searching." '905 patent at 17:13–15. Like search engines considered browsing history before 2007, the claimed "search engine algorithm would consider the URLs in the [location] history of the person doing the searching." *Id.* at 17:18–19.

Taking the allegations in the complaint as true, the claimed methods of incorporating location data are "well-

understood, routine, [and] conventional.” *Mayo*, 566 U.S. at 79 (alteration in original). The methods thus do not convert the abstract idea—creating and using travel histories to improve computerized search results—into an inventive application.

Because the details of the methods are conventional, the only purportedly unconventional aspect of the claims is the use of location history in a search engine. See Appx2029–31 at ¶¶ 17–21 (emphasizing “obstacles” related to the collection of location history and the “benefits” of having a location history and using it for search, rather than any obstacles or benefits arising from the details of the search algorithm implementation). But using location history to improve search results is, as the majority concludes, the abstract idea itself. Maj. Op. 20–22. “It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Thus, the ’905 and ’911 patents fail to claim an inventive concept adequate to save them at step two.

## II

*DDR Holdings* does not say otherwise. Although the claims here are limited to internet search engines, they do not solve an internet-specific problem.

In *DDR Holdings, LLC v. Hotels.com*, we upheld claims covering an “e-commerce outsourcing system.” 773 F.3d 1245, 1249, 1255 (Fed. Cir. 2014). “On activation of a hyperlink on a host website—such as an advertisement for a third-party merchant— . . . the system generates and directs the visitor to a composite web page that displays product information from the third-party merchant, but retains the host website’s ‘look and feel.’” *Id.* at 1248–49. This system solved the problem that “third-party merchants [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." *Id.* at 1248 (quoting U.S. Patent No. 6,629,135 at 2:26–30) (second alteration in original).

We upheld these claims at step two, distinguishing *Alice* and several other cases because the claims “do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet.” *Id.* at 1257. Instead, “the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *Id.*

The '905 and '911 patents purport to improve recommendations provided on the internet. *See* '905 patent at 2:47–62, 17:8; '911 patent at 2:50–3:2. But the problem of overly generic recommendations predates the internet, as does the solution of using location information to improve recommendations. To get more personalized recommendations from a travel agent, people could ask about specific destinations and list locations they have visited before, analogous to the method of the '911 patent. To get more personalized restaurant recommendations, people could ask friends with similar tastes who have visited some of the same restaurants, like the '905 patent. *Cf. In re Greenstein*, 778 F. App'x 935, 938–39 (Fed. Cir. 2019) (“[T]he problem of trustworthy recommendations predates the Internet” . . . “[and] is a business problem, not a technical one.”); *Bridge & Post, Inc. v. Verizon Commc'ns, Inc.*, 778 F. App'x 882, 884 (Fed. Cir. 2019) (“The concept of tailoring advertisements based on user data . . . dates back at least to local radio and television advertisements, which played only for users located in specific cities and were published in-between otherwise national programs. In the computer context, prior art systems tracked users . . . . A user's location could be approximately determined by the IP address of their device . . . .”). The sheer amount of non-local

information available on the internet perhaps exacerbates the problem of overly generic recommendations, but this does not make it an internet-centric problem.

By contrast, the claimed system in *DDR* “overc[a]me a problem specifically arising in the realm of computer networks” that does not have the same close analogues in the physical world—one cannot be inadvertently lured away from a physical retail store with the press of a button. *DDR*, 773 F.3d at 1257. Rather than solving a problem specifically arising in the realm of computer networks, the claimed methods of the ’911 and ’905 patents “merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet.” *Id.*

I would find all challenged claims ineligible and respectfully dissent-in-part.