

NOTE: This disposition is nonprecedential.

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

BRIDGE AND POST, INC.,
Plaintiff-Appellant

v.

**VERIZON COMMUNICATIONS, INC., CELLCO
PARTNERSHIP, DBA VERIZON WIRELESS,
VERIZON INTERNET SERVICES INC., VERIZON
ONLINE LLC, AOL INC., OATH INC.,**
Defendants-Appellees

2018-1697

Appeal from the United States District Court for the
Eastern District of Virginia in Nos. 3:17-cv-00094-JAG,
3:17-cv-00710-JAG, Judge John A. Gibney, Jr.

Decided: July 5, 2019

DANIEL JOHNSON, JR., Dan Johnson Law Group, South
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Washington, DC, argued for defendants-appellees. Also represented by SETH W. LLOYD, BRIAN ROBERT MATSUI; BITA RAHEBI, Los Angeles, CA.

Before PROST, *Chief Judge*, LOURIE and BRYSON,
Circuit Judges.

Opinion for the court filed by *Chief Judge* PROST.

Opinion concurring in part and dissenting in part
filed by *Circuit Judge* BRYSON.

PROST, *Chief Judge*.

Bridge and Post, Inc. appeals the decision of the U.S. District Court for the Eastern District of Virginia, which dismissed Bridge and Post's complaints under Federal Rule of Civil Procedure 12(b)(6). The district court held that the claims of U.S. Patent Nos. 7,657,594, 8,862,747, and 9,659,314 were ineligible for patenting under 35 U.S.C. § 101. *Bridge & Post, Inc. v. Verizon Commc'ns, Inc.*, 319 F. Supp. 3d 818, 821 (E.D. Va. 2018). For the reasons discussed below, we affirm.

I

Bridge and Post filed a complaint in February 2017 accusing Verizon Communications, Inc., Cellco Partnership d/b/a Verizon Wireless, Verizon Internet Services Inc., Verizon Online LLC, and AOL Inc. (collectively "Verizon") of infringing claims 1, 15, and 24 of U.S. Patent No. 7,657,594 (the "594 patent") and claims 1 and 10 of U.S. Patent No. 8,862,747 (the "747 patent"). In October 2017, Bridge and Post filed a second complaint accusing Verizon and Oath Inc. of infringing claims 1, 20, and 21 of U.S. Patent No. 9,659,314 (the "314 patent"), a newly issued continuation of the '747 patent. The cases were consolidated shortly thereafter.

All three patents describe tracking a user's computer network activity and using information gained about the user to deliver targeted media, such as advertisements. *See* '594 patent col. 1 ll. 20–22. Tailoring advertisements based on real-time information about the user and their location allows a publisher to “maximize their advertising revenues.” *Id.* at col. 3 ll. 4–7.

The concept of tailoring advertisements based on user data did not originate with these patents. The practice 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. '747 patent col. 1 ll. 28–33. In the computer context, prior art systems tracked users based on their personal accounts on a website, or by using small programs, known as cookies, downloaded onto users' devices. '594 patent col. 1 ll. 28–33. A user's location could be approximately determined by the IP address of their device, but this was occasionally imprecise. '747 patent col. 2 ll. 26–37. Moreover, cookie-based tailoring was disfavored as users expressed “concerns about privacy and data security” by routinely deleting their cookies and other tracking information. *Id.* at col. 2 ll. 59–63.

Bridge and Post contends that its patents solved the drawbacks of the prior art in two ways. First, its tagging and tracking system collects highly specific information about the user. For example, the '594 patent discusses identifying a user as a male between ages 18 and 30 who lives in San Francisco and is attending a baseball game. '594 patent col. 11 ll. 1–5. Based on this information, as well as the current time and weather report, the system can “determine that the optimized media should be an advertisement for Coke® since it is a hot day at the ballpark, and the user will likely be getting lunch soon from one of the food vendors (who sells Coke® products).” *Id.* at col. 11 ll. 5–12. Second, according to Bridge and Post, its inventions solved the problem of privacy-concerned users

deleting cookies and tracking data by using a persistent device identifier which “may not be deleted nor changed.” *Id.* at col. 3 ll. 2–4.

While each of the three patents at issue describes tracking a user on a network and serving tailored advertisements, the claims vary slightly. Claim 1 of the ’594 patent recites “[a] method for providing directed media to a user on a network.” The claim requires receiving a user request to access a website, retrieving a “persistent device identifier” from the user’s device, and gathering current and historical information about both the user and the device. ’594 patent claim 1. The collected information and identifier are analyzed to determine what advertisement (or other tailored media) should be shown to the user. *Id.*

Claim 1 of the ’747 patent recites a related process in which a user’s request to a server is intercepted and “tagged” with an identifier that contains information about the user, including the user’s location and demographic information. ’747 patent claim 1. The tagged request can then be passed to the server the user was trying to reach. *Id.* Claim 1 of the ’314 patent requires a similar “tagging” process. ’314 patent claim 1. Although neither the ’747 patent claims nor the ’314 patent claims recite the further step of determining what tailored advertisements should be shown based on the tagged user request, their shared specification makes clear that the purpose of tagging is to “facilitat[e] the delivery of directed media.” ’747 patent col. 3 ll. 26–29.

II

We review a district court’s grant of a Rule 12(b)(6) motion under regional circuit law. *ChargePoint, Inc. v. Sema-Connect, Inc.*, 920 F.3d 759, 764 (Fed. Cir. 2019). The Fourth Circuit reviews a district court’s decision under Rule 12(b)(6) de novo and assumes all well-pleaded, non-conclusory factual allegations in the complaint to be true. *Burnette v. Fahey*, 687 F.3d 171, 180 (4th Cir. 2012). The

issue of patent-eligibility under § 101 is a question of law that we review without deference. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016).

Section 101 of the Patent Act provides that “[w]hoever 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. However, laws of nature, natural phenomena, and abstract ideas are not patentable. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether this exception applies, we use the two-step framework laid out in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), and further detailed in *Alice*. We “first determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice*, 573 U.S. 218. If they are, we move to step two and “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.* at 217 (quoting *Mayo*, 566 U.S. at 77–78). This step represents “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 (quoting *Mayo*, 566 U.S. at 72–73) (internal quotation marks and alterations omitted).

A

We begin our step one analysis by determining whether the claims are “directed to” an abstract idea. *Alice*, 573 U.S. at 217. We do so by “looking at the ‘focus’ of the claims.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016)). In doing so, we “consider the ‘claims in their entirety to

ascertain whether their character as a whole is directed to excluded subject matter.” *ChargePoint*, 920 F.3d at 765 (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

While the specification is “helpful in illuminating what a claim is directed to . . . the specification must always yield to the claim language” when identifying the “true focus of a claim.” *ChargePoint*, 920 F.3d at 766. Moreover, “not every claim that recites concrete, tangible components escapes the reach” of step one. *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (collecting cases). The fact that a claim “recite[s] components more specific than a generic computer” does not save a claim from abstraction. *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1286 (Fed. Cir. 2018).

1

Claim 1 of the ’594 patent recites:

1. A method for providing directed media to a user on a network, comprising:

receiving a request from the user to access a content provider web site over a network through a network access device operated by the user;

retrieving a persistent device identifier of the network access device;

determining a current network address of the network access device and one or more characteristics of the access device, wherein the current network address is assigned to the network access device by a network service provider for a present network access session;

retrieving historic information for the user, the historic information including patterns of usage for the network access device, and wherein

the historic information comprises network access information including times and locations of network access and number of previous network accesses by the network access device;

retrieving location-centric information for a location from which the user is accessing the network;

generating a user profile based on the historic information for the user, the location-centric information, and the one or more characteristics of the access device;

storing the user profile as a record that identifies the user through the current network address and the persistent device identifier associated with the network access device;

incorporating into the user profile one or more group characteristics identifying a group with which the user is associated;

assigning a group identifier to the group based on the patterns of usage;

analyzing the retrieved device identifier, historic information, and location-centric information to determine a directed media component to be provided to the user or the group on the network access device, and

placing directed media referenced by the directed media component in the web site requested by the user request from the content provider, wherein the directed media comprises content that is customized to the user based on the user profile.

'594 patent claim 1. The district court concluded that the claims of the '594 patent are directed to the abstract idea

of using persistent identifiers to implement targeted marketing. We agree.¹

The language of claim 1 makes clear that, as a whole, the claim is directed to the use of persistent identifiers to implement targeted marketing. Targeted marketing is a form of “tailoring information based on [provided] data,” which we have previously held is an abstract idea. *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015). The concept is a “fundamental practice” that dates back to newspaper advertisements. *Id.* (ellipsis omitted). Bridge and Post acknowledges as much in its complaint, alleging that “[t]argeted marketing and market segmentation were originally developed to increase the effectiveness of advertisements placed in traditional media such as radio, television, and printed newspapers and magazines.” J.A. 111 ¶ 12.

The recited steps of “retrieving a persistent device identifier,” “determining” and “retrieving” information associated with the identifier, “analyzing” the information, and “placing directed media” based on that analysis are nothing more than a computer-implementation of targeted

¹ The district court considered claim 1 representative of the ’594 patent. *Bridge & Post*, 319 F. Supp. 3d at 821. Because Bridge and Post did not challenge that decision or separately argue any other claims in its opening brief, we likewise consider claim 1 representative. Although Bridge and Post argues for the first time on reply that claim 1 is not representative (Reply Br. 1), we will not consider that untimely argument. The single sentence summarizing the dependent claims in its opening brief does not preserve the argument that claim 1 is not representative. *See United States v. Great Am. Ins. Co. of N.Y.*, 738 F.3d 1320, 1328 (Fed. Cir. 2013) (“It is well established that arguments that are not appropriately developed in a party’s briefing may be deemed waived.”).

marketing over the Internet. The remaining limitations, including “receiving a request . . .,” “generating a user profile . . .,” and “storing the user profile . . .,” are generic computer functions performed in the service of implementing targeted marketing, and do not change the focus of the claim. *See Intellectual Ventures*, 792 F.3d at 1368 (holding that “a user profile” is a generic computer element used to implement an abstract idea).

The specification, including its description of “the problem facing the inventor” and “what the patent describes as its invention,” can also be useful in determining what a claim is directed to. *See ChargePoint*, 920 F.3d at 767 (citing *In re TLI Commc’ns*, 823 F.3d at 612). Here, the specification confirms that “the present invention relate[s] generally to network access and more particularly to providing directed media in a network” and to “systems and method[s] for determining directed media to provide to a user on a website.” ’594 patent col. 1 ll. 20–22, col. 2 ll. 1–8, 65–66. These statements are consistent with our determination that the claims of the ’594 patent are directed to the abstract idea of implementing targeted marketing using a persistent identifier.

Bridge and Post argues that, because claim 1 requires “specific information . . . to be included in the user profile and utilized in determining directed media,” the ’594 patent is not directed to an abstract idea but instead to a “technological solution to an internet-centric problem.” Appellant’s Br. 36, 38–39. But as we have previously held, claims related to “customizing information based on (1) information known about the user and (2) [specific] data” are directed to abstract ideas. *Internet Patents Corp.*, 790 F.3d at 1346. The claim’s recitation of additional generic network elements does not change its character as a whole. Thus, the claims of the ’594 patent are directed to the abstract idea of using persistent identifiers to implement targeted marketing.

Bridge and Post does not dispute that claim 1 of the '747 patent is representative of that patent. Claim 1 recites:

1. A method of processing data sent from a user of a client computer over a network, comprising:

intercepting a request that is in a hypertext transport protocol (HTTP) format from the client computer to a server computer over the network at a routing device within the network and coupled between the client and server computers, and prior to receipt by the server computer, wherein the network is the World Wide Web portion of the Internet, and further wherein the client computer is selected from the group consisting of: a personal computer, a mobile computing device, a cellular phone, a personal digital assistant, a media playback device, and a gaming device;

extracting non-personal information about the user during a Media Access Control (MAC) layer process, wherein the non-personal information includes one or more of data related to the client computer, software on the client computer, information stored on the client computer regarding use of the client computer, and non-personal data associated with the user;

creating a unique device identifier associated with hardware and corresponding to the client computer from the non-personal information, wherein the unique identifier is based directly on at least one of a MAC address, port identifier, or hardcoded identifier embodied in software or hardware and assigned to the client computer;

generating a local user identifier for the client computer by performing a one-way hashing operation on the unique device identifier;

deriving instance information based on request timing information provided by the client computer, and geographic location and demographic information for the client computer from information provided by a remote authentication server on the network;

generating a request identifier associated with the intercepted request by combining and encrypting, in a tag process executed on the routing device, the local user identifier, instance information, and geographic location and demographic information in an alphanumeric string;

embedding the alphanumeric string in an extensible field of a packet within the request to generate a tagged request, wherein the extensible field comprises a portion of an HTTP header field of the packet that is normally unused or essentially left blank;

transmitting the tagged request to the server computer;

providing appropriate decoding tools to the server computer to perform a decoding operation on the tagged request to decode the request identifier embedded in the HTTP extensible field; and

receiving a request to decode the tagged request from the server computer.

The district court concluded that the '747 patent was directed to the abstract idea of sending and receiving information over the Internet. We agree with Bridge and Post

that this description is too reductive. However, we conclude that the claims of the '747 patent are directed to the abstract idea of communicating information using a personalized marking.

The claim language above shows that claim 1 is directed to receiving network traffic, adding a “tag” that identifies the user or client computer that made the request, and sending that traffic onward. The remaining limitations are generic implementation steps in service of that goal. We have previously held that “us[ing] an identifier, in this case a personalized network address, to communicate information about a mail object” is directed to the abstract idea of “communicating information about a mail object using a personalized marking.” *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 911 (Fed. Cir. 2017). The claims of the '747 patent, which use an identifier derived from an existing “MAC address, port identifier, or hardcoded identifier embodied in software or hardware and assigned to the client computer” in order to “transmit[] a tagged request,” are directed to that same abstract idea.

Despite Bridge and Post’s argument to the contrary, the '747 patent is not analogous to the patents this court addressed in *Enfish*, 822 F.3d at 1335–36. The *Enfish* court distinguished between claims that focus on a specific improvement in computer capabilities, on the one hand, and an abstract idea that merely invokes computers as a tool, on the other. *Id.* at 1336. This case is the latter. Bridge and Post does not claim to have invented new networking hardware or software. Nor does it claim to have invented HTTP header fields, user identifiers, encryption techniques, or any other improvement in the network technology underlying its claims. The specification states that the invention filled a need for a system which would “ensure higher access rates, longer browse times, and increased consumption of media” by users. '747 col. 3 ll. 15–22. But each of these goals is in the abstract realm—an improvement in the success or monetization of tracking

users with personalized markings in order to serve advertisements—not an improvement in networking or computer functionality. None of these alleged improvements “enables a *computer* . . . to do things it could not do before.” *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1305 (Fed. Cir. 2018) (emphasis added). Such claims, whose focus is “not a physical-realm improvement but an improvement in a wholly abstract idea,” are not eligible for patenting. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018).

Bridge and Post faults the district court for ignoring the “granular specifics” of its claim. Appellant’s Br. 45. But even a highly specific method for implementing an abstract idea is, at step 1 of the *Alice* test, still directed to that abstract idea. “[C]laims are not saved from abstraction merely because they recite components more specific than a generic computer.” *BSG Tech*, 899 F.3d at 1286. Moreover, the fact that the ’747 claim is limited to a particular networking environment does not render the claims any less abstract. *See Affinity Labs of Texas, LLC v. DirecTV, LLC*, 838 F.3d 1253, 1259 (Fed. Cir. 2016). The specificity of claim 1 does not change the fact that, as a whole, the claim is directed to the abstract idea of communicating information using a personalized marking.

3

The ’314 patent is a continuation of the ’747 patent. Bridge and Post contends that the ’314 patent is directed to the same “innovations” as the ’747 patent. Appellant’s Br. 20. Representative claim 1 recites:

1. A method for improving the selection of media for delivery to a targeted user of a client computing device, comprising:

determining user information for a user;

generating a user identifier for the user from the determined user information;

tagging, with a network routing device, network traffic that is bound for a destination site, the tagging including:

generating a request identifier by encrypting the user identifier in an alphanumeric string, and

adding the request identifier to the network traffic to generate tagged network traffic;

transmitting the tagged network traffic to the destination site;

receiving from a requester associated with the destination site a decode request to decode the tagged network traffic;

decoding the tagged network traffic to obtain the user identifier;

retrieving stored user information associated with the user identifier; and

transmitting the stored user information to the requester.

Based on this claim language, we conclude that the '314 patent is also directed to the abstract idea of communicating information using a personalized marking. Fundamentally, the claim is focused on “generating” an identifier, “tagging” the user’s traffic with that identifier, and “transmitting” the tagged traffic so that the user can be identified. This language is consistent with the specification of the '314 patent, which confirms that its invention generally relates “to tagging network traffic with user relevant information.” '314 patent col. 1 ll. 20–24. The remaining limitations do not offer any concrete technological improvement, and merely implement that abstract idea.

Bridge and Post argues that its claims are not analogous to the claims in *Secured Mail* that we held were directed to an abstract idea. Appellant’s Br. 54. But there is no material distinction. In *Secured Mail*, we analyzed claims that required “generating . . . a barcode,” “affixing said barcode to said mail object,” and “submitting said mail object to a mail carrier.” 873 F.3d at 908. We concluded that the claims were directed to an abstract idea. Here, the ’314 patent recites “generating a user identifier,” “tagging . . . network traffic [with the user identifier],” and “transmitting the tagged network traffic to the destination site.” ’314 patent claim 1. The ’314 patent merely parallels the focus of the *Secured Mail* patents in a networking environment. In both cases, “each step of the process is directed to the abstract process of communicating information about a mail [or network] object using a personalized marking.” *Secured Mail*, 873 F.3d at 911. The claims of the ’314 patent are directed to exactly that abstract idea.

B

Having determined that the claims of the ’594, ’747, and ’314 patents as a whole are directed to an abstract idea, we next “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.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78–79).

Transformation of an abstract idea into a patent-eligible claim “requires more than simply stating the abstract idea while adding the words ‘apply it.’” *Alice*, 573 U.S. at 222 (quoting *Mayo*, 566 U.S. at 72) (alterations omitted). Rather, transformation requires “additional features,” which must be more than “well-understood, routine, conventional activit[ies].” *Alice*, 573 U.S. at 225. Whether a claim “supplies an inventive concept that renders a claim significantly more than an abstract idea to which it is directed is a question of law,” although it may be informed by

underlying factual determinations. *BSG Tech*, 899 F.3d at 1290 (internal quotation marks omitted).

1

Turning to the '594 patent, the district court concluded that “the patent . . . does not invent a sufficiently new, non-conventional arrangement of known pieces to overcome a technical challenge.” *Bridge & Post*, 319 F. Supp. 3d at 825. We agree.

Bridge and Post does not claim to have invented the persistent identifier and does not argue that any individual limitation of the '594 patent is unconventional or non-routine. Nor could it. The specification confirms that the claimed hardware is conventional: the “network access device” can be “any digital device capable of communications over the network.” '594 patent col. 3 ll. 26–32 (listing exemplary prior art devices). And the “device identifier may comprise” numerous existing persistent identifiers, such as a MAC address, IMSI, IMEI, or indeed “any anonymous device identifier.” *Id.* at col. 3 ll. 36–42.

Bridge and Post contends instead that the ordered combination of known steps claimed in the '594 patent was neither conventional nor routine. Appellant's Br. 40. But patentability requires that the claimed combination of elements amount to “significantly more than a patent upon the ineligible concept itself.” *Alice*, 573 U.S. at 219 (quoting *Mayo*, 566 U.S. at 73) (alterations omitted). The claims of the '594 patent do not meet that standard. Even as an ordered combination, the limitations of claim 1 recite no more than a computer implementation of the abstract idea of using persistent identifiers to implement targeted marketing, lacking anything “significantly more.”

Bridge and Post further contends that the '594 patent is patent eligible at step two because, like the patent this court analyzed in *DDR Holdings, LLC v. Hotels.com, L.P.*, “the claimed solution is necessarily rooted in computer

technology in order to overcome a problem specifically arising in the realm of computer networks.” 773 F.3d 1245, 1257 (Fed. Cir. 2014). But as this court noted in *DDR*, “not all claims purporting to address Internet-centric challenges are eligible for patent.” *Id.* at 1258. In that case, the court distinguished problems “necessarily rooted in computer technology,” like the visual presentation of a website, from claims that “recite the performance of some business practice known from the pre-internet world.” *Id.* The ’594 patent is the latter, as evidenced by its acknowledgement that tracking users in order to display advertisements was known in the pre-Internet world, and that its steps for accomplishing this on the Internet were conventional. We therefore hold that the asserted claims of the ’594 patent are unpatentable.

2

With respect to the ’747 patent, Bridge and Post identifies two alleged inventive concepts at step two: (1) “intercepting a request . . . from the client computer to a server computer,” and (2) “embedding the alphanumeric string in an extensible field of a packet . . . wherein the extensible field comprises a portion of an HTTP header field of the packet that is normally unused or essentially left blank.” Appellant’s Br. 46–47, 49–50. We are not persuaded by either.

Bridge and Post argues that the “intercepting” limitation “functions differently than prior art targeted content delivery systems.” Appellant’s Br. 46–47. That is not the test for eligibility. At *Alice* step two we assess “whether the claim limitations *other than* the invention’s use of the ineligible concept to which it was directed were well-understood, routine, and conventional.” *BSG Tech*, 899 F.3d at 1290 (emphasis added). The “intercepting” limitation, even interpreted generously, amounts to no more than a computer-focused reformulation of affixing and using a personalized marking. “As a matter of law, narrowing or

reformulating an abstract idea does not add ‘significantly more’ to it.” *Id.* at 1291. Because this limitation does not add significantly more to the claim than the abstract idea itself, it does not provide an inventive concept at step two.

Moreover, “intercepting” traffic is itself an abstract idea. As this court has noted, “communicating requests to a remote server and receiving communications from that server, i.e. communication over a network,” is an abstract idea. *ChargePoint*, 920 F.3d at 767. “[I]ntercepting” network traffic amounts to nothing more than that idea. Adding the abstract idea of intercepting traffic to the abstract idea of communicating information with personalized markings cannot result in a patent-eligible invention. *See RecogniCorp, LLC v. Nintendo Co.*, 885 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract.”).

The “embedding” limitation fares no better. Bridge and Post argues that because the claim language recites a portion of the header field that is “normally unused or essentially left blank,” it is unconventional on its face and survives at step two. Like the district court, we find that this limitation is insufficient to create an inventive concept. The specification of the ’747 patent makes clear that HTTP headers were known, and their use to store information was conventional in the art. *See, e.g.*, ’747 patent col. 9 ll. 1–8 (noting that “[s]tandard HTTP requests include various content fields, such as headers” and identifiers can be stored “in the extensible space of the HTTP header in an appropriate format”). It further illustrates that there is no novelty in this method of storing data, and that “[i]n general, any extensible space of the header or similar portion of a pervasively used network traffic component can be used.” *Id.* at col. 12 ll. 40–42. This limitation merely instructs the user to store information in a known portion of the conventional header field that is not already holding information.

Regardless of whether it is novel, the “embedding” limitation does not render the ’747 patent eligible. Where a claim’s “essential advance” is abstract, a novel method of performing that advance “does not avoid the problem of abstractness.” *Affinity Labs*, 838 F.3d at 1263. In *Affinity Labs*, this court found that the claims lacked an inventive concept “[e]ven assuming,” as the patent owner argued, that “the use of a downloadable application for presenting a graphical user interface . . . was novel as of the priority date of the patent.” *Id.* We noted that “the essential advance is not in the process of downloading applications, but only in the content of this particular application,” which amounted to an abstract idea. *Id.* That logic applies equally here.

The essential advance taught by the ’747 patent is not an HTTP header, or even the use of a particular HTTP header. This fact is clear from the patent’s statement that its invention can be implemented with “any extensible space of the header or similar portion of a pervasively used network traffic component.” *Id.* at col. 12 ll. 40–42. The claimed advance is a method of tagging and tracking user traffic, which amounts to nothing more than the abstract idea of communicating information using a personalized marking, regardless of whether the use of a particular HTTP header to perform that abstract idea was novel. We therefore hold that the asserted claims of the ’747 patent are unpatentable.

3

The district court found the claims of the ’314 patent ineligible at step two, as the patent “provides only a generalized recitation of standard Internet components and processes which highly resembles a physical process of tagging and tracking that would not be patent eligible in the physical world.” *Bridge & Post*, 319 F. Supp. 3d at 827. We agree. As discussed above with respect to step one, the individual limitations of the claims of the ’314 patent merely

describe the steps necessary to implement the abstract idea of transmitting information with personalized markings, reformulated for the computer networking context.

Unlike the '747 patent, Bridge and Post does not identify any arguably inventive limitations of the '314 patent. It argues instead that its claims are analogous to those in *BASCOM Global Internet Services. v. AT&T Mobility LLC*, which this court held to be an eligible non-conventional and non-generic arrangement of otherwise conventional components. 827 F.3d 1341, 1350 (Fed. Cir. 2016). But *BASCOM* presented a solution that “improve[d] the performance of the computer itself,” making the computer “more dynamic and efficient.” *Id.* at 1351 (internal quotation marks omitted). No similar allegations are present here.

The '314 patent describes its solution as filling a need for “effective and efficient revenue modeling for advertising,” and “efficiently enabling the creation of dynamic ad campaigns and effective targeted ad serving,” which “facilitates the creation of comprehensive ad campaigns.” '314 patent col. 3 ll. 8–12; col. 10 l. 65–col. 11 l. 9. None of these statements reflects an improvement to “the performance of the computer itself.” The ability to run a more efficient advertising campaign, even if novel, and even if aided by conventional computers, is an advance “entirely in the realm of abstract ideas,” which we have repeatedly held to be ineligible. *SAP Am.*, 898 F.3d at 1163; *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (claims that “specify what information it is desirable to gather, analyze, and display” using “conventional, generic technology” did not present an inventive concept). In the absence of any identified improvement to computer technology, or other identified inventive concept, the asserted claims of the '314 patent are unpatentable.

III

Separate from its eligibility arguments, Bridge and

Post argues that the district court’s failure to cite to the allegations of its complaints constitutes reversible error in and of itself. Reply Br. 21. We disagree. It is true that, at the Rule 12(b)(6) stage, the district court must accept a complaint’s factual allegations as true. *See ChargePoint*, 920 F.3d at 764–65 (applying Fourth Circuit law). But we have never held that a district court is required to cite to a complaint, and we decline to create such a rule now.

As this court has noted, patent eligibility can be determined at the 12(b)(6) stage “when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018). That is the case here. In its opening brief, Bridge and Post failed to explain how any particular factual allegation in either of its complaints, taken as true, would create a factual issue preventing resolution of the case as a matter of law. We need not address whether the issue is waived, however, because none of the allegations in Bridge and Post’s complaints would affect the outcome described above.

As the district court correctly noted, it was not required to accept Bridge and Post’s legal conclusions as true, even if couched as factual allegations. *Bridge & Post*, 319 F. Supp. 3d at 823 n.3. That includes Bridge and Post’s repeated characterization of its inventions as “technical innovations.” J.A. 112–16 ¶¶ 14–19. The remaining allegations in the complaints, identified by Bridge and Post for the first time on reply, are related to the alleged novelty of the invention over the prior art.² But as discussed above

² Bridge and Post identifies “paragraphs 12 through 19 of the Complaint” as allegedly providing relevant factual allegations. Reply Br. 22. This citation appears to be a reference to its first complaint, asserting the ’594 and ’747 patents. *See* J.A. 108–116. We note that Bridge and

with respect to step two, the '594, '747, and '314 patents are directed to ineligible subject matter even if their conventional steps had never previously been applied in connection with their respective abstract ideas. The district court's lack of discussion of Bridge and Post's complaints was, at worst, harmless error.

IV

We have considered Bridge and Post's remaining arguments and find them unpersuasive. For the reasons discussed above, the district court correctly determined that the asserted claims of the '594, '747, and '314 patents are directed to abstract ideas, and lack any inventive concepts sufficient to transform the abstract ideas into patent-eligible inventions. As such, the asserted claims all fail to recite patent-eligible subject matter under § 101.

AFFIRMED

Post's second complaint, asserting the '314 patent, does not contain these paragraphs or any equivalent thereto. Therefore, as to that patent, Bridge and Post may not be entitled to rely on the allegations in those paragraphs. *See* J.A. 89–90.

NOTE: This disposition is nonprecedential.

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

BRIDGE AND POST, INC.,
Plaintiff-Appellant

v.

**VERIZON COMMUNICATIONS, INC., CELLCO
PARTNERSHIP, DBA VERIZON WIRELESS,
VERIZON INTERNET SERVICES INC., VERIZON
ONLINE LLC, AOL INC., OATH INC.,**
Defendants-Appellees

2018-1697

Appeal from the United States District Court for the Eastern District of Virginia in Nos. 3:17-cv-00094-JAG, 3:17-cv-00710-JAG, Judge John A. Gibney, Jr.

BRYSON, *Circuit Judge*, concurring in part and dissenting in part.

I agree with the court that the asserted claims of the '314 patent and the '594 patent are drawn to unpatentable subject matter under 35 U.S.C. § 101. I disagree with the court, however, as to its similar conclusion with regard to asserted claim 1 of the '747 patent.

The asserted claims of the '314 and '594 patents are drawn to an abstraction. They recite a series of functional steps, but do not recite with any specificity how those functional steps are to be carried out. Claim 1 of the '747 patent, by contrast, provides a specific and concrete way to accomplish the objectives set forth in the claims. It may be that the means set forth in the '747 patent are not novel, and thus would not pass muster under a test for obviousness or anticipation under sections 102 or 103 of the Patent Act. But the means are not abstract, and thus they do not render the subject matter ineligible for patenting under section 101.

The majority characterizes claim 1 of the '747 patent as being “directed to receiving network traffic, adding a ‘tag’ that identifies the user or client computer that made the request, and sending that traffic onward.” That functional characterization overlooks the technique that claim 1 recites to accomplish those functions. That technique entails intercepting network traffic in HTTP format at a routing device coupled between a client and server computer, embedding that traffic with an alphanumeric string identifying client user information in an HTTP header field normally unused or left blank, and sending that traffic onward.

The distinction between claims that recite functions or results (the “what it does” aspect of the invention) and those that recite concrete means for achieving particular functions or results (the “how it does it” aspect of the invention) is an important indicator of whether a claim is directed to an abstract idea. *See Uniloc USA, Inc. v. ADP, LLC*, Nos. 2018-1132, 2018-1346, 2018-1448, 2019 WL 2245938, *5 (Fed. Cir. May 24, 2019) (“It is true . . . that the goal of the claims is functional But the patent claims a particular improvement in *how* this is done This is the clear ‘focus’ of the claims”); *see also Diamond v. Diehr*, 450 U.S. 175, 182 n.7 (1981) (A patent may issue “for the means or method of producing a certain

result, or effect, and not for the result or effect produced.”); *SRI Int’l, Inc. v. Cisco Sys., Inc.*, 918 F.3d 1368, 1375 (Fed. Cir. 2019) (claims held not abstract because they were “directed to using a specific technique . . . to solve a technological problem arising in computer networks”); *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1288 (Fed. Cir. 2018) (claims held abstract because “the focus of BSG Tech’s claims is unrelated to how databases function. . . . The claims do not recite any improvement to the way in which such databases store or organize information”); *id.* at 1289 (patent in suit “says nothing about how to construct a database that is not modified by the addition of new parameters”); *Affinity Labs of Texas, LLC v. DirecTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016) (claim held abstract because “the claimed invention is entirely functional in nature. . . . There is nothing in [the claim] that is directed to *how* to implement out-of-region broadcasting on a cellular telephone”).

This court has repeatedly found claims similar to claim 1 of the ’747 patent to be patent eligible. *See Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1348 (Fed. Cir. 2018) (claimed method, which “specifically identifies how [improving security against a computer’s unauthorized use of a program] is effectuated in an assertedly unexpected way,” is not directed to an abstract idea); *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1007–08 (Fed. Cir. 2018) (“[C]laim 12 of the ’259 patent is not directed to an abstract idea. Rather, the claim is directed to a specific method for navigating through three dimensional electronic spreadsheets. The method provides a specific solution to then-existing technological problems in computers”); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (“Claim 1 of the ’576 patent is focused on a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type.”); *see also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016) (“[W]e are not faced

with a situation where general-purpose computer components are added post-hoc to a fundamental economic practice or mathematical equation. Rather, the claims are directed to a specific implementation of a solution to a problem in the software arts.”).

Data Engine is particularly instructive. The court in that case grappled with the patent eligibility of a group of patents that claimed “a method of implementing a notebook-tabbed interface, which allows users to easily navigate through three-dimensional electronic spreadsheets.” *Data Engine*, 906 F.3d at 1003. The court found that representative claim 12 of one of the patents was not directed to an abstract idea, but instead was “directed to a specific method for navigating through electronic spreadsheets.” *Id.* at 1007–08. The court distinguished between that claim, which “recites specific steps detailing the method of navigating through spreadsheet pages within a three-dimensional spreadsheet environment using notebook tabs,” and the claims at issue in cases such as *Affinity Labs of Texas; Intellectual Ventures I LLC v. Capital One Financial Corp.*, 850 F.3d 1332 (Fed. Cir. 2017); and *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315 (Fed. Cir. 2017), all of which were “entirely functional in nature” and therefore abstract. *See Data Engine*, 906 F.3d at 1010.

In contrast to representative claim 12, the *Data Engine* court found claim 1 of another of the patents before it to be directed to patent-ineligible subject matter. The court explained that, unlike representative claim 12, the latter claim was “directed at something a bit more general.” *Id.* at 1012. It found that claim 1’s more general recitation was “not limited to the specific technical solution and improvement in electronic spreadsheet functionality,” but instead was directed to “any means for identifying electronic spreadsheet pages.” *Id.*

The same type of comparison can be made between the ’747 and ’314 patents here. Compared to the ’747 patent,

which recites a specific technique (i.e., the “how”) for intercepting, tagging, and forwarding network traffic, the ’314 patent is merely directed to the underlying functional objectives (i.e., the “what”).

That difference between the ’747 patent, on the one hand, and the ’314 and ’594 patents, on the other, illustrates the problem with the majority’s reliance on *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905 (Fed. Cir. 2017), to find claim 1 of the ’747 abstract. According to the majority, the claims of all three patents parallel the claims of the three sets of patents that the court found to be directed to abstract ideas in *Secured Mail*. In *Secured Mail*, however, the court’s finding of abstractness centered on the functional claiming in the patents in suit. The court explained that, for the Intelligent Mail Barcode patents, “[t]here is no description of how the unique identifier is generated or how a unique identifier is different from a personal name, or return address.” *Id.* at 910. And for the QR Code patents, the court stated that the “method whereby a barcode is generated, affixed to a mail object, and sent through the mail system . . . is not limited to any particular technology of generating, printing, or scanning a barcode, of sending a mail object, or of sending the recipient-specific information over a network.” *Id.* at 910–11. The court concluded that “[t]he claims of the three sets of patents are not limited by rules or steps that establish how the focus of the methods is achieved.” *Id.* at 911.

While the functional characterization of the *Secured Mail* patents is applicable to the ’314 and ’594 patents, it is not applicable to the ’747 patent. Instead, as noted above, the ’747 patent discusses how the unique identifier is generated—“by combining and encrypting . . . the local user identifier, instance information, and geographic location and demographic information in an alphanumeric string”—and how the identifier is to be added to the data packet—by “embedding the alphanumeric string in an extensible field . . . wherein the extensible field comprises a

portion of an HTTP header field of the packet that is normally unused or essentially left blank.” ’747 patent, claim 1.

Contrary to the majority’s suggestion, patent eligibility under section 101 does not depend on whether the patentee “invented new networking hardware or software.” That determination is one of novelty, not abstractness. While the majority may well be correct about the absence of novel features in the claims of the ’747 patent, *see Cellco Partnership d/b/a Verizon Wireless v. Bridge & Post, Inc.*, No. IPR2018-00054 (P.T.A.B. Apr. 15, 2019) (’747 patent claims held unpatentable as obvious), the question “whether a particular invention is novel is ‘wholly apart from whether the invention falls into a category of statutory subject matter.” *Diehr*, 450 U.S. at 190 (quoting *In re Bergy*, 596 F.2d 952, 961 (C.C.P.A. 1979)).

Finally, the majority states that “even a highly specific method for implementing an abstract idea is, at step 1 of the *Alice* test, still directed to that abstract idea.” While it is true that an abstract idea does not become concrete simply because it is limited to a specific field of use, the critical distinction is between claiming a function—even one directed to a specific use—as opposed to reciting a claim that is “directed to a specific implementation of a solution to a problem in the software arts,” *Enfish*, 822 F.3d at 1339. The former is patent ineligible, while the latter is not.

Because I would hold that the claims of the ’747 patent are patent eligible under 35 U.S.C. § 101, I respectfully dissent with respect to that portion of the court’s judgment.