United States Court of Appeals for the Federal Circuit

BROADBAND ITV, INC.,
Plaintiff-Appellant

v.

AMAZON.COM, INC., AMAZON.COM SERVICES LLC, AMAZON WEB SERVICES, INC.,
Defendants-Appellees

2023-1107

Appeal from the United States District Court for the Western District of Texas in No. 6:20-cv-00921-ADA, Judge Alan D. Albright.

Decided: September 3, 2024

JEFFREY A. LAMKEN, MoloLamken LLP, Washington, DC, argued for plaintiff-appellant. Also represented by RAYINER HASHEM; JONATHAN E. BARBEE, BENOIT QUARMBY, New York, NY; DAVID ALBERTI, ROBERT KRAMER, HONG LIN, Kramer Alberti Lim & Tonkovich LLP, Burlingame, CA.

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SHAMILOV; TODD RICHARD GREGORIAN, San Francisco, CA;
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Before DYK, REYNA, and STARK, *Circuit Judges.*

REYNA, *Circuit Judge.*

Broadband iTV sued Amazon in the Western District
of Texas alleging patent infringement of five patents. Amazon
moved for summary judgment, arguing that all asserted
claims were patent ineligible subject matter under
35 U.S.C. § 101. The district court granted Amazon's motion,
finding the claims were directed to an abstract idea
and the patents failed to provide an inventive step that
transformed that abstract idea into a patent-eligible invention.
Broadband iTV timely appeals. For the following reasons,
we affirm.

BACKGROUND

A. The Asserted Patents

Broadband iTV ("BBiTV") owns U.S. Patent Nos.
10,028,026 ('026 patent); 9,648,388 ('388 patent);
10,536,750 ('750 patent); 10,536,751 ('751 patent); and
9,973,825 ('825 patent). Four of the five asserted patents
are related—the '026, '388, '750, and '751 patents ('026 patent
family)—and all claim priority to the same patent application.
The '388, '750, and '751 patents share a common
specification that overlaps significantly with the '026 patent's
specification. The '825 patent is unrelated to the '026
patent family but covers similar technology.

i. '026 Patent Family

The '026 patent family generally relates to electronic
programming guides for televisions. According to the '026
patent, "video-on-demand" systems had recently emerged.
'026 patent, 2:13–36. These systems offered an "interactive
television service" by allowing a viewer to navigate through

a program guide using a remote control and select a desired video program. *Id.* The '026 patent family seeks to improve existing program guides by automating the creation of a hierarchically arranged, template-based program guide. *Id.* at Abstract, 3:16–4:5. A computer automatically creates the program guide by using video content and associated metadata that content providers upload to a server. *Id.*

For purposes of this appeal, the parties treat claim 1 of the '026 patent as representative of the '026 patent family claims. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018). Claim 1 recites:

> 1. An Internet-connected digital device for receiving, via the Internet, video content to be viewed by a subscriber of a video-on-demand system using a hierarchically arranged electronic program guide,
>
> the Internet-connected digital device being configured to obtain and present to the subscriber an electronic program guide as a templatized video-on-demand display, which uses at least one of a plurality of different display templates to which the Internet-connected digital device has access, to enable a subscriber using the Internet-connected digital device to navigate in a drill-down manner through titles by category information in order to locate a particular one of the titles whose associated video content is desired for viewing on the Internet-connected digital device using the same category information as was designated by a video content provider in metadata associated with the video content;
>
> wherein the templatized video-on-demand display has been generated in a plurality of layers, comprising: (a) a first layer comprising a background screen to provide at least one of a basic color, logo, or graphical theme to display; (b) a second layer

comprising a particular display template from the plurality of different display templates layered on the background screen, wherein the particular display template comprises one or more reserved areas that are reserved for displaying content provided by a different layer of the plurality of layers; and (c) a third layer comprising reserved area content generated using the received video content, the associated metadata, and the associated plurality of images to be displayed in the one or more reserved areas in the particular display template as at least one of text, an image, a navigation link, and a button,

wherein the navigating through titles in a drill-down manner comprises navigating from a first level of the hierarchical structure of the video-on-demand content menu to a second level of the hierarchical structure to locate the particular one of the titles, and

wherein a first template of the plurality of different display templates is used as the particular display template for the templatized display for displaying the first level of the hierarchical structure and wherein a second template of the plurality of different display templates is used as the particular display template for the templatized display for displaying the second level of the hierarchical structure,

wherein the received video content was uploaded to a Web-based content management system by a content provider device associated with the video content provider via the Internet in a digital video format, along with associated metadata including title information and category information, and along with an associated plurality of images designated by the video content provider, the associated

metadata specifying a respective hierarchical loca-
tion of a respective title of the video content within
the electronic program guide to be displayed on the
Internet-connected digital device using the respec-
tive hierarchically-arranged category information
associated with the respective title,

wherein at least one of the uploaded associated plu-
rality of images designated by the video content
provider is displayed with the associated respective
title in the templatized video-on-demand display.

'026 patent, claim 1.

ii. '825 Patent

The '825 patent also generally relates to electronic pro-
gramming guides for "video-on-demand" television sys-
tems. '825 patent, 1:58–64. The patent seeks to improve
existing program guides by adjusting the order of catego-
ries of listings within a guide based on a user's viewing his-
tory. Through these readjustments, the system reduces the
number of keypresses needed for a viewer to reach their
desired video program. *Id.* at Abstract.

For purposes of this appeal, the parties treat claim 1 of
the '825 patent as representative of the '825 patent claims
but also address dependent claim 15. *See Berkheimer*, 881
F.3d at 1365. Claim 1 recites:

1. A method for dynamic adjustment of an individ-
ualized electronic program guide where the adjust-
ment is based at least in part on individual viewer
consumption of video-on-demand programs on a
subscriber TV system to enable navigating by an
individual viewer in a TV subscriber household
that may have a plurality of viewers to video-on-
demand programs offered on a video-on-demand
platform of a digital TV services provider which is
at least part of a digital TV services provider sys-
tem, the method comprising:

(a) maintaining, at the digital TV services provider system, an electronic program guide database comprising electronic program guide data, and a usage history database comprising a log of selection data corresponding to the viewer's consumption of the video-on-demand programs using the video-on-demand platform;

(b) establishing, at the digital TV services provider system, viewer-individualized electronic program guide data for each of a plurality of individual viewers to enable the generation of viewer-individualized electronic program guides for each of said plurality of individual viewers at the subscriber TV system for use in accessing the video-on-demand programs, and allowing each respective individual viewer to access a display of their respective viewer-individualized electronic program guide through a Log-In step by which the respective individual viewer operating the subscriber TV system can be associated with their respective viewer-individualized electronic program guide;

(c) in one or more previous sessions while said respective individual viewer is logged onto their respective viewer-individualized electronic program guide in order to access the video-on-demand programs on the subscriber TV system, tracking, at the digital TV services provider system, said respective individual viewer's consumption of the video-on-demand programs listed in their respective viewer-individualized electronic program guide and saving the selection data in the usage history database;

(d) determining, at the digital TV services provider system, an order of relevance of a plurality of category names for said respective individual viewer selection of video-on-demand programs from their

respective viewer-individualized electronic program guide based at least in part on said respective individual viewer's selection data from said one or more previous sessions as stored in the usage history database and reflecting said respective individual viewer's preferences for selection of video-on-demand programs from their respective viewer-individualized electronic program guide, and based at least in part on the electronic program guide data in the electronic program guide database; and

(e) at the start of each new session when said respective individual viewer logs onto their respective viewer-individualized electronic program guide in order to access video-on-demand programs on the subscriber TV system, reordering a current display listing of the category names for categories of video-on-demand programs on said respective individual viewer's viewer-individualized electronic program guide based at least in part on said determined order of relevance.

'825 patent, claim 1.

Claim 15 recites:

15. The method of claim **1**, further comprising automatically generating an additional category or subcategory based on the log of said respective individual viewer's consumption of the video-on-demand programs maintained in the usage history database.

Id. at claim 15.

B. Procedural History

In October 2020, BBiTV sued Amazon.com, Inc., Amazon.com Services LLC, and Amazon Web Services, Inc. (collectively, Amazon) in the United States District Court for the Western District of Texas alleging patent infringement.

BBiTV asserted claims 1, 6, and 7 of the '026 patent; claims 1, 13, and 17 of the '388 patent; claims 1, 7, and 8 of the '750 patent; claims 1, 3, and 8 of the '751 patent; and claims 1, 10, 15, and 17 of the '825 patent. Amazon moved for summary judgment in June 2022, arguing that all of BBiTV's asserted claims were patent ineligible under 35 U.S.C. § 101. The district court agreed, granted Amazon's summary judgment motion, and entered judgment against BBiTV. *See Broadband iTV, Inc. v. Amazon.com, Inc.*, 2022 WL 4703425 (W.D. Tex. Sept. 30, 2022).

In conducting its § 101 analysis, the district court applied the two-step test set forth by the Supreme Court in *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 573 U.S. 208 (2014). The district court conducted separate analyses for the '026 patent family and the '825 patent.

i. '026 Patent Family

At *Alice* step one, the district court determined the claims "are directed to the abstract idea of receiving hierarchical information and organizing the display of video content." *Broadband*, 2022 WL 4703425, at *15. The district court likened the claims to both a "computerized implementation of [a] business process" and the abstract idea of sending classification information with content or displaying content hierarchically. *Id.* at *15–16. The district court also considered the generic nature of the claimed server and the "routine and conventional practice" of using the claimed templates. *Id.* at *16. The district court concluded that neither feature "transform[ed]" or "save[d] the claims under *Alice*." *Id.*

At *Alice* step two, the district court determined nothing transforms the claims into something other than the abstract idea itself. *Id.* at *17–18. The district court determined there is no genuine dispute of material fact that the claims "recite only generic and conventional components, arranged in a conventional manner, and provide only conventional functionalities." *Id.* at *17. After considering

BBiTV fact and expert testimony, along with the '026 and '825 patents' specifications, the district court found no genuine dispute of material fact as to whether the claimed server or hierarchical organization was conventional. *Id.* The district court also determined that the claimed hierarchical navigation and the use of templates are fundamental human practices that form the abstract idea itself. *Id.*

ii. '825 Patent

At *Alice* step one, the district court determined the claims "are directed to the abstract idea of collecting and using a viewer's video history to suggest categories of video content." *Id.* at *11. The district court reasoned that "clerks at video rental stores" have done what the '825 patent claims for years. *Id.* The district court determined that the claims are not meaningfully different from other claims that this court has found abstract, including claims directed to collecting user information and providing content based on that information. *Id.* at *11–12 (collecting cases).

At *Alice* step two, the district court determined nothing transforms the claims into something other than the abstract idea itself. *Id.* at *13–15. The district court reasoned that the '825 patent itself "admits that tracking systems that could collect the users' viewing history were 'conventional.'" *Id.* at *13 (citing '825 patent, 7:28–38). Further, the district court explained, there is no genuine dispute of material fact that the claims recite conventional databases, servers, and televisions, combined with a generic method of identifying a user. *Id.* at *13–14.

The district court determined that all asserted claims were patent ineligible under § 101. BBiTV appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

STANDARD OF REVIEW

We review a district court's grant of summary judgment under the law of the regional circuit, here the Fifth

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Circuit. *See Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018). The Fifth Circuit reviews summary judgment de novo. *Id.* Summary judgment is proper when, viewing all evidence in the light most favorable to the nonmovant, there is no genuine dispute of material fact and the moving party is entitled to judgment as a matter of law. *Triple Tee Golf, Inc. v. Nike, Inc.*, 485 F.3d 253, 261 (5th Cir. 2007).

We review decisions of § 101 patent eligibility de novo. *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018). Patent eligibility is a question of law that may be based on underlying factual findings. *Berkheimer*, 881 F.3d at 1365. Section 101 patent eligibility may be resolved on summary judgment so long as there is not a genuine dispute of material fact. *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018).

DISCUSSION

Section 101 of the Patent Act provides that: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court has found that § 101 "contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice*, 573 U.S. at 216 (citation omitted). The Supreme Court has articulated a two-step test, commonly referred to as the "*Alice*" test, to determine whether a patent claims patent-ineligible subject matter. *Id.* at 217–18. At *Alice* step one, we determine whether a claim is directed to a patent-ineligible concept, here an abstract idea. *Id.* at 217. If not, the inquiry ends. But if the claims are directed to an abstract idea, we must proceed to step two. At *Alice* step two, we review whether the claim recites elements sufficient to transform it into a patent-eligible application of the abstract idea. *Id.* at 217–18.

A. '026 Patent Family

i. *Alice* Step One

The district court determined the claims of the '026 patent family "are directed to the abstract idea of receiving hierarchical information and organizing the display of video content." *Broadband*, 2022 WL 4703425, at *15. BBiTV argues that the '026 patent family claims are directed to patentable improvements to computer user interfaces, and that the district court erred by dismissing claim elements it found to be generic at *Alice* step one rather than step two. We disagree with BBiTV.

At *Alice* step one, we must determine whether the claims at issue are directed to patent-ineligible subject matter, here, an abstract idea. The "directed to" inquiry requires that we look to the character of the claims as a whole. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). In addition to the claim language itself, we may also examine the patent's specification to determine the meaning of the claims as a whole. *Yu v. Apple Inc.*, 1 F.4th 1040, 1043 (Fed. Cir. 2021) (citation omitted). The step one inquiry often turns to the question of what the patent asserts as the claimed advance over the prior art. *Id.*

Whether a claim is directed to a longstanding or fundamental human practice can inform whether a claim is abstract. *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1372–73 (Fed. Cir. 2020); *Intell. Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1314 (Fed. Cir. 2016). Additionally, whether a patent's claims can be performed in the human mind or using a pencil and paper can inform whether a claim is abstract. *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1316 (Fed. Cir. 2021). But the *Alice* inquiry is not a prior art search. *See CardioNet*, 955 F.3d at 1373. And it is not enough to "merely trace the invention to some real-world analogy." *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011 (Fed. Cir. 2018).

The claims of the '026 patent family are directed to receiving metadata and organizing the display of video content based on that metadata. Representative claim 1 of the '026 patent recites an "electronic program guide" that is automatically created using "metadata" that was "uploaded to a [server] by a content provider." '026 patent, claim 1. Specifically, the claimed metadata determines the "respective hierarchical location of a respective title of the video content within the electronic program guide to be displayed." *Id.*

The specification further confirms our understanding of what the claims are directed to. According to the '026 patent, an increase in content offerings created the need to "enable home TV viewers to find something of interest for viewing among the vast numbers of new programs." *Id.* at 2:66–3:12. In response, the '026 patent's claimed advance is using a computer to generate a programming guide that automatically "list[s] the title of the video content in an electronic program guide" according to metadata uploaded by a content provider. *Id.* at 3:16–37.

The district court correctly determined that receiving metadata and organizing the display of video content based on that metadata is abstract. The '026 patent family claims are substantively similar to claims this court has previously found directed to abstract ideas. In *Electric Power Group*, we found patent ineligible certain claims for "monitoring of an electric power grid by collecting data from multiple data sources, analyzing the data, and displaying the results." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016). In *TLI*, we found patent ineligible claims for "classifying and storing digital images in an organized manner" based on "'classification data,' such as a date or timestamp." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 609–610 (Fed. Cir. 2016). Here, the '026 patent family claims are directed to receiving and displaying information like *Electric Power Group* and organizing information based on classification

information like *TLI*. As we have previously recognized, the combination of two abstract ideas does not render an abstract idea less abstract. *See RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

BBiTV's first argument relies heavily on *Core Wireless* and *Data Engine*. In *Core Wireless*, we held that claims directed to a "particular manner of summarizing and presenting information in electronic devices" were not abstract. 880 F.3d at 1362. We explained that the claims at issue there were directed to the features of an improved user interface, including the size and location of the user interface. *Id.* at 1362–63. In *Data Engine*, we held that claims directed to a "specific method for navigating through three-dimensional electronic spreadsheets" were not abstract. 906 F.3d at 1007–08. There, the patent's specification identified the shortcomings and technological challenges in computer spreadsheets, and the claims provided a specific solution to the "known technological problem." *Id.*

Unlike the claims in *Core Wireless* or *Data Engine*, the '026 patent family claims are not directed to an improved structure or function of a user interface. It is true that the claims are directed to a program guide, which is a type of user interface. But the fact that the claims involve a user interface does not automatically put the claims in the same category as *Core Wireless* and *Data Engine*. Instead, *Core Wireless* and *Data Engine* require an improved structure or function that is missing here. 880 F.3d at 1362–63; 906 F.3d at 1007–09. Put another way, *Core Wireless* and *Data Engine* require a specific, technological solution to a technological problem. Here, the claims do not recite an improved structure or function within a user guide, but rather, are directed to arranging content in a particular order. Reordering content within a user guide is not a sufficient technological solution to a technological problem, but rather a results-oriented abstract idea. *See Elec. Power Grp., LLC*, 830 F.3d at 1355.

BBiTV argues that the claimed templates provide specific structure similar to *Core Wireless* and *Data Engine*. We disagree. While claim 1 does recite a "templatized" video-on-demand display that consists of three layers, the use of templates to create the electronic programming guide is not the claimed advance. Instead, as previously discussed, the claims are directed to receiving metadata and organizing the display of video content based on that metadata. The claimed templates themselves do not provide a technological solution or improve any computer-related function. *See Int'l Bus. Machs. Corp. v. Zillow Grp., Inc.*, 50 F.4th 1371, 1381–82 (Fed. Cir. 2022).

BBiTV's second argument is that the district court performed an *Alice* step two inquiry within *Alice* step one. We discern no error in the district court's analysis.

We have observed that steps one and two are "plainly related" and patent eligibility may "involve overlapping scrutiny of the content of the claims." *Elec. Power Grp., LLC*, 830 F.3d at 1353. This is not to say that the steps may be conflated or that a particular step may be disregarded. The step one analysis does not require that we "exclude the possibility that any particular inventive means are to be found somewhere in the claims." *Id.* But we have recognized that it may be necessary to analyze conventionality at step one as well as step two, such as to determine whether a claim is directed to a longstanding or fundamental human practice or to determine what the patent asserts is the claimed advance over the prior art. *See CareDx, Inc. v. Natera, Inc.*, 40 F.4th 1371, 1379 (Fed. Cir. 2022); *see also Bozeman Fin. LLC v. Fed. Rsrv. Bank of Atlanta*, 955 F.3d 971, 978 (Fed. Cir. 2020). When it comes to analyzing conventionality, there is no "bright line between the two steps." *CareDx*, 40 F.4th at 1379. Yet we must take care to avoid allowing a conventionality analysis at step one to render step two superfluous (except where the claimed innovation at step two is nothing more than practice of the abstract idea of step one). To find otherwise would ignore

the Supreme Court's guidance in *Alice*, which clearly set forth a two-step inquiry. *Alice*, 573 U.S. at 217–18.

Here, the district court determined at step one that the claimed "[w]eb-based content management system . . . is a generic server." *Broadband*, 2022 WL 4703425, at *16. Then, still at step one, the district court considered the claimed "templates," and determined they merely provided "a generic environment" and their use is "a routine and conventional practice." *Id.* We agree that the claimed server and templates do not change the fact that the claims are directed to an abstract idea. The claimed server and templates do not change the outcome at step one because the claims are not directed to an improved server or provide a technological solution to template technology. Put another way, analyzing the conventionality of the claimed content management system and templates at step one is proper for the purpose of determining what the claims are directed to. We determine the claims of the '026 patent family are directed to an abstract idea.

ii. *Alice* Step Two

The district court determined nothing transforms the claims into something other than the abstract idea because there is no genuine dispute of material fact that the claims "recite only generic and conventional components, arranged in a conventional manner, and provide only conventional functionalities." *Broadband*, 2022 WL 4703425, at *17. BBiTV points to three aspects of the claims that it believes transform the claims to more than the abstract idea: first, the idea of generating displays "automatically from specific template types" based on data that content providers upload to a database; second, the content management system which is a type of server; and third, the claimed templates. Appellant Br. 50–53. We agree with the district court that none of these elements transform the claims at step two into something other than the abstract idea itself.

At *Alice* step two, we must determine whether the claims include "an element or combination of elements" that transforms the claims into something "significantly more" than a claim on the patent-ineligible concept itself. *Alice*, 573 U.S. at 217–18 (citation omitted). The patent-ineligible concept itself cannot transform the invention into something significantly more than that concept. *BSG Tech LLC*, 899 F.3d at 1290. Similarly, claim elements or combinations of claim elements that are routine, conventional or well-understood cannot transform the claims. *Id.* at 1290–91. When the patent's specification "describes the components and features listed in the claims generically," it "support[s] the conclusion that these components and features are conventional." *Weisner v. Google LLC*, 51 F.4th 1073, 1083–84 (Fed. Cir. 2022); *see also Beteiro, LLC v. DraftKings Inc.*, 104 F.4th 1350, 1357–58 (Fed. Cir. 2024).

The district court correctly determined that the '026 patent family claims do not include something "significantly more" than the abstract idea itself. The district court examined the intrinsic record and BBiTV's fact and expert testimony regarding the nature of certain features of the claims and found no genuine dispute of material fact that precluded summary judgment. *Broadband*, 2022 WL 4703425, at *17–18. We agree with the district court.

BBiTV argues that the idea of generating displays "automatically from specific template types" based on data that content providers upload to a database transforms the '026 patent family into more than the abstract idea. We are not persuaded. Automation of an abstract idea does not constitute an inventive concept. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363; *see also Alice*, 573 U.S. at 221–24. Further, this argument is nothing more than the abstract idea itself. *See BSG Tech LLC*, 899 F.3d at 1290. Receiving and displaying information is the abstract idea we identified at step one. Those elements,

therefore, cannot transform that idea into significantly more.

BBiTV next argues that the content management system transforms the '026 patent family into more than the abstract idea. This argument fares no better than the last. The district court concluded that the content management system is a conventional server. *Broadband*, 2022 WL 4703425, at *17. Notably, the '026 patent's specification does not claim to improve server technology, but instead discloses using conventional server capabilities such as "manag[ing] a [d]atabase," and "retrieving" and "transmitt[ing]" content. '026 patent, 3:44–53, 5:24–29, 6:4–9. The district court also considered inventor testimony that the server used to implement the claimed content management system was available "off the market." *Broadband*, 2022 WL 4703425, at *17 (citation omitted). We agree with the district court that no genuine dispute of material fact precludes summary judgment.

BBiTV's third argument is that the claimed templates transform the claims to more than the abstract idea. We are not persuaded. The district court found no genuine dispute of material fact (albeit, at step one), that the claimed templates are generic, routine and well-understood in the art. The '026 patent's specification does not purport to improve templates, but instead discloses using known templates, such as those created by a "template design firm," to automate content-creation. '026 patent, 7:44–49. In reaching its conclusion, the district court also considered BBiTV's infringement expert's admission that templates "were a known entity" at the time of the invention. *Broadband*, 2022 WL 4703425, at *10. We agree with the district court's conclusion. When properly analyzed at step two, we reach the same conclusion as the district court and determine that the claimed templates do not transform the claims to more than the abstract idea.

Because we determine the claims of the '026 patent family do not include "significantly more" than the abstract idea itself, we find that the claims are patent ineligible under § 101.

B. '825 Patent

i. *Alice* Step One

The district court determined the claims of the '825 patent "are directed to the abstract idea of collecting and using a viewer's video history to suggest categories of video content." *Id.* at *11. BBiTV argues that the '825 patent claims are directed to patentable improvements to computer user interfaces, again relying on *Data Engine* and *Core Wireless*. We disagree with BBiTV.

Representative claim 1 of the '825 patent is directed to the abstract idea of collecting and using viewing history data to recommend categories of video content. Claim 1 recites "maintaining . . . a usage history database," using a "Log-In step" to track an "individual viewer's consumption," and "generat[ing] . . . viewer-individualized electronic program guides." '825 patent, claim 1. Claim 1 does not disclose how to maintain a usage history database, track viewer consumption, or generate a program guide. Instead, the claims recite functions in the abstract.

The '825 patent's specification confirms that the claims are directed to an abstract idea. The specification discloses claim 1 as "(a) maintaining a list of category names . . . (b) tracking a viewer's past history . . . [and] (c) reordering a current display listing of the category names based on [viewer history]." *Id.* at 3:1–9.

Put another way, claim 1 is directed to a type of "targeted advertising," which we have repeatedly found abstract. *See, e.g.*, *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1361–62 (Fed. Cir. 2021); *Intell. Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015); *Customedia Techs., LLC v. Dish Network Corp.*,

951 F.3d 1359, 1363 (Fed. Cir. 2020). Many of our targeted advertising cases have noted, as the district court did here, that patent claims on targeted advertising are abstract. *See Intell. Ventures I LLC*, 792 F.3d at 1369 (tailoring information, as in targeted advertising, is a "fundamental . . . practice long prevalent in our system" (citation omitted)). Further, determining content to recommend based on user consumption history can be performed in the human mind or using a pencil and paper. This is another indication that the claims are abstract. *See PersonalWeb Techs.*, 8 F.4th at 1316; *see also Beteiro*, 104 F.4th at 1356. Indeed, the patent claims differ little from a check-out system at a public library. Consistent with our "targeted advertising" precedent, we conclude that the claims of the '825 patent are directed to an abstract idea.

The stated goal of the '825 patent, to reduce the number of "keypresses needed for a viewer to navigate to a title of interest," does not compel a different result. '825 patent, Abstract. The reduction in keypresses is achieved through the recited targeted advertising method. And that method is abstract. As we have previously observed, a claim that results in increased speed or efficiency may still be directed to an abstract idea, as is the case here. *See Intell. Ventures I LLC*, 792 F.3d at 1366–67.

BBiTV argues that the claims of the '825 patent are directed to an improved structure or function of a user interface as in *Core Wireless* and *Data Engine*. We disagree. While claim 1 does involve a user interface, merely identifying a user interface does not invoke *Core Wireless* and *Data Engine*. The '825 patent claims are directed to reordering content within a user guide based on viewing history, which does not rise to a technological solution to a technological problem. Similar to the '025 patent family claims, the '825 patent claims do not claim a technological solution to a technological problem.

Because we determine the claims of the '825 patent are directed to an abstract idea, we proceed to *Alice* step two.

ii. *Alice* Step Two

The district court determined nothing transforms the claims into something other than the abstract idea itself. *Broadband*, 2022 WL 4703425, at *13–15. BBiTV argues that the claims include three elements that transform the claims into something significantly more than the abstract idea itself: generating displays where categories are arranged based on relevance; identifying a viewer using a log-in step; and creating new categories to encompass highly relevant content. BBiTV's third argument relies exclusively on claim 15, as only claim 15 requires "generating an additional category" of programs based on viewing history. '825 patent, claim 15. We are not persuaded.

The district court correctly determined that the '825 patent claims are not transformed into something "significantly more" than the abstract idea itself. As with the '026 patent family, the district court thoroughly examined the intrinsic record, including both the claims and the specification of the '825 patent. *Broadband*, 2022 WL 4703425, at *13–15. The district court largely based its step two analysis on the intrinsic record, and we again agree with the district court's interpretation of the intrinsic record.

BBiTV argues that generating displays where categories are arranged based on relevance transforms the claims. As with its argument at *Alice* step two for the '026 patent family, BBiTV fails to show transformative elements that recite something more than the abstract idea itself. *See BSG Tech LLC*, 899 F.3d at 1290. Generating displays that are arranged based on relevance is a restatement of the abstract idea of collecting and using viewing history data to recommend categories of content. Even if the recommended categories are "new," as only claim 15 requires, that requirement is a feature of the abstract idea of recommending categories and does not sufficiently

transform the claims. Further, the idea of creating categories is a longstanding human practice that does not transform the claims, especially given that claim 15 does not include any requirements for *how* the desired result is achieved. *See Intell. Ventures I LLC*, 838 F.3d at 1315; *Elec. Power Grp., LLC*, 830 F.3d at 1355.

The log-in step also fails to transform the claims. The district court correctly determined that there is no genuine dispute of material fact that the log-in step is anything other than well-understood, routine, and conventional. The patent does not claim any specific method of logging in, but rather, requires that each viewer can access their individualized program guide "through a Log-In step." '825 patent, claim 1. The patent's specification similarly does not claim to improve log-in technology or provide an innovative method of logging in, but instead merely discusses logging in as a way to identify a user and carry out the abstract idea of providing a targeted program guide. *Id.* at 3:28–35. Adding a generic log-in step to achieve the abstract idea of recommending content based on a user's viewing history does not sufficiently transform the abstract idea.

Because we determine the claims of the '825 patent do not include "significantly more" than the abstract idea itself, we find that the claims are patent ineligible under § 101.

CONCLUSION

We have considered BBiTV's other arguments and find them unpersuasive. For the above reasons, we hold that the asserted claims are directed to patent-ineligible subject matter and are not sufficiently transformed into something other than the abstract idea itself and therefore are rendered as non-patent eligible subject matter. We thus affirm the district court's grant of summary judgment based on subject matter ineligibility under § 101.

AFFIRMED

Costs

Costs to Amazon.