

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

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**TWO-WAY MEDIA LTD.,**  
*Plaintiff-Appellant*

v.

**COMCAST CABLE COMMUNICATIONS, LLC,  
COMCAST INTERACTIVE MEDIA LLC, VERIZON  
SERVICES CORP., VERIZON ONLINE LLC,**  
*Defendants-Appellees*

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2016-2531, 2016-2532

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Appeals from the United States District Court for the District of Delaware in Nos. 1:14-cv-01006-RGA, 1:14-cv-01212-RGA, Judge Richard G. Andrews.

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Decided: November 1, 2017

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MICHAEL F. HEIM, Heim, Payne & Chorush, LLP, Houston, TX, argued for plaintiff-appellant. Also represented by ROBERT ALLAN BULLWINKEL, MICAH JOHN HOWE, LESLIE PAYNE; PARKER C. FOLSE, III, RACHEL S. BLACK, JENNA FARLEIGH, Susman Godfrey LLP, Seattle, WA; SHAWN DANIEL BLACKBURN, JOSEPH SAMUEL GRINSTEIN, Houston, TX.

BRIAN LEE FERRALL, Keker & Van Nest, LLP, San Francisco, CA, argued for all defendants-appellees.

Defendants-appellees Comcast Cable Communications, LLC, Comcast Interactive Media LLC also represented by DANIEL E. JACKSON, LEO L. LAM, DAVID JUSTIN ROSEN.

THOMAS M. DUNHAM, Winston & Strawn LLP, Washington, DC, for defendants-appellees Verizon Services Corp., Verizon Online LLC. Also represented by SARAH J. KALEMERIS, KURT A MATHAS, Chicago, IL; ANUP MISRA, New York, NY.

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

REYNA, *Circuit Judge*.

Two-Way Media Ltd. appeals from a decision of the United States District Court for the District of Delaware that found the claims of the asserted patents to be directed to patent ineligible subject matter under 35 U.S.C. § 101. Because the claims are directed to abstract ideas and contain no additional elements that transform the nature of the claims into a patent-eligible application of the abstract ideas, we affirm.

## BACKGROUND

### A. Technical Background

The patents-in-suit are related as a series of continuation applications, and thus share substantially the same specification. U.S. Patent No. 5,778,187 (“187 patent”) issued first, followed by U.S. Patent Nos. 5,983,005 (“005 patent”), then 6,119,163 (not at issue here), then 6,434,622 (“622 patent”), and then 7,266,686 (“686 patent”). The patents are entitled “Multicasting Method and Apparatus,” and generally relate to a system for streaming audio/visual data over a communications system like the internet. Claim 1 of the ’187 patent is representative of all claims of the ’187 patent and ’005 patent, claims 1 and 29 of the ’622 patent, and claims 1,

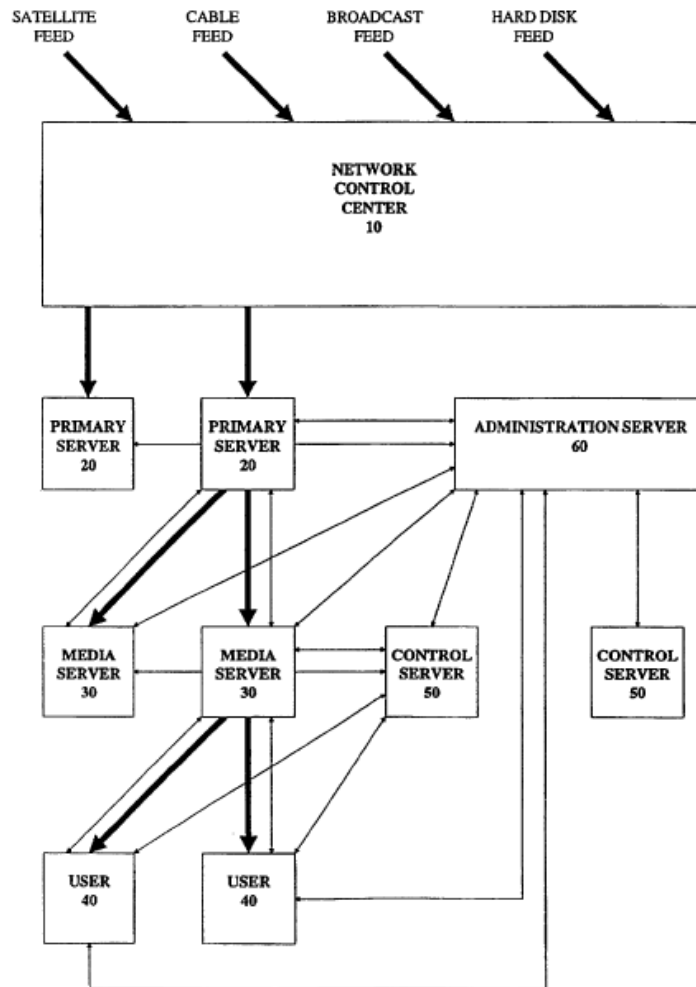
22, 26, and 30 of the '686 patent are representative of their respective patents.

The patents explain that internet systems typically operate on a point-to-point, or unicast, basis. In unicast systems, a message is converted into a series of addressed packets which are routed from a source node to a destination node. But these unicast systems lack the capability to broadcast a message from a source node to all the other recipients in a network, as this type of operation could easily overload the network.

IP Multicasting, in contrast, provides a way to transmit one packet of information to multiple recipients. In such a system, packets destined for several recipients are encapsulated in a unicast packet and forwarded from a source to a point in a network where the packets are replicated and forwarded on to all desired recipients. A multicast packet can be routed from a source node through a plurality of multicast routers to one or more devices receiving the multicast packets. The packet can then be distributed to all the host computers that are members of the multicast group. The patents explain that this technology had previously been used to provide internet-based audio/visual conferencing servicing as well as radio-like broadcasts to interested parties.

The patents describe the invention as an improved scalable architecture for delivering real-time information. Embedded in the architecture is a control mechanism that provides for the management and administration of users who are to receive real-time information. Figure 1 provides a schematic diagram depicting an overview of the system:

FIGURE 1



J.A. 80. In this system, the Primary Servers and Media Servers are interconnected by the internet. The Control Servers connect users with Media Servers using a series of message exchanges. The patents also describe monitoring network conditions and generating records about the real-time streams.

The parties agree that claim 1 of the '187 patent is representative of the claims of the '187 patent and '005 patent. It recites:

1. A method for transmitting message packets over a communications network comprising the steps of:

converting a plurality of streams of audio and/or visual information into a plurality of streams of addressed digital packets complying with the specifications of a network communication protocol,

for each stream, routing such stream to one or more users,

controlling the routing of the stream of packets in response to selection signals received from the users, and

monitoring the reception of packets by the users and accumulating records that indicate which streams of packets were received by which users, wherein at least one stream of packets comprises an audio and/or visual selection and the records that are accumulated indicate the time that a user starts receiving the audio and/or visual selection and the time that the user stops receiving the audio and/or visual selection.

J.A. 111 at col. 18 ll. 17–34; J.A. 114 (certificate of correction). Two-Way Media asserts that the claims of the '622 patent are directed to the features described in the specification, but are claimed more broadly. For example, claim 29 recites:

29. A method for forwarding real-time information to one or more users having access to a communications network comprising:

processing one or more streams of audio or visual information into one or more streams of packets for forwarding over the communications network, wherein at least one stream of packets comprises audio or video information,

forwarding the digital packets to the users in response to information selection signals received from the users,

verifying the operational status of the users' access to the communications network during delivery of the real-time information, and

updating a database with indications of: (i) which streams of packets were received by which users, (ii) the time when delivery of each stream to each user commenced, and (iii) the time when delivery of each stream to each user terminated.

J.A. 202 at col. 20 ll. 19–36. Claim 30 of the '686 patent includes certain “commercial purposes” and recites:

30. A method for metering real-time streaming media for commercial purposes, said method comprising:

selecting an intermediate server from multiple intermediate servers;

forwarding at least one copy of a real-time media stream from said intermediate server toward a user device;

detecting a termination of said forwarding;

after said termination, determining an extent of said real-time media stream forwarded toward said user device; and

logging said extent for commercial purposes.

J.A. 248 at col. 20 ll. 6–16; J.A. 251 (certificate of correction).

### B. District Court Decision

The district court granted Appellees'<sup>1</sup> motion for judgment on the pleadings and held that the '187 patent, '005 patent, '622 patent, and '686 patent were ineligible under § 101. *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, Nos. 14-1006-RGA, 14-1212-RGA, 2016 WL 4373698 (D. Del. Aug. 15, 2016). The district court first addressed claim construction, then addressed evidentiary arguments, and finally addressed the patents' eligibility under the two-step framework espoused in *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

Two-Way Media argued before the district court that Appellees' motion was premature because claim construction was necessary to evaluate whether the representative claims were eligible under § 101. Two-Way Media provided proposed claim constructions for certain terms of the asserted patents. J.A. 599–602. Appellees agreed that the district court should adopt Two-Way Media's claim constructions, but argued that the constructions did not alter the § 101 analysis. The district court ultimately adopted Two-Way Media's proposed constructions for the purposes of the motion. *Two-Way Media*, 2016 WL 4373698, at \*3.

Two-Way Media also argued that the district court should take judicial notice of certain materials from prior proceedings before the U.S. Patent and Trademark Office and other federal courts. *Id.* at \*3–4. The materials, consisting of expert report excerpts, expert trial testimony, inventor trial testimony, and a press release, [BB45;

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<sup>1</sup> Appellees are Comcast Cable Communications, LLC, Comcast Interactive Media LLC, Verizon Services Corp., and Verizon Online LLC.

**RB31]** purportedly related to other tribunals' evaluation of the novelty and nonobviousness of the claimed inventions. *Id.* The district court denied the request, reasoning that the proffered materials were irrelevant to a § 101 inquiry: "The novelty and nonobviousness of the claims under [35 U.S.C.] §§ 102 and 103 does not bear on whether the claims are directed to patent-eligible subject matter under § 101." *Id.* at \*4.

The district court then addressed the eligibility of the claims of the '187 patent and '005 patent and determined that the claims were directed to an abstract idea:

The '187 and '005 patents are directed to the abstract idea of (1) sending information, (2) directing the sent information, (3) monitoring receipt of the sent information, and (4) accumulating records about receipt of the sent information. The claims are thus directed to methods of sending and monitoring the delivery of audio/visual information.

*Id.* at \*5 (citations omitted). The district court determined that the claims did not recite a saving inventive concept under *Alice* step two. Although Two-Way Media had argued that the claims were directed to computer architecture that solved the technical problems of load, bottlenecking, and inadequate records, the district court disagreed, holding that "[n]one of the claims, however, recite or refer to anything that could be described as an architecture." *Id.* The district court expressly considered Two-Way Media's proffered claim constructions when making this determination: "The claims cannot fairly be read to recite computer architecture even in light of [Two-Way Media's] proposed claim constructions, some of which explicitly incorporate the words 'intermediate computers.'" *Id.* at \*5 n.3 (citations omitted).

Having concluded that the claims of the '187 patent and the '005 patent were patent ineligible under § 101, the district court next addressed the '622 patent and '686



patent. The district court determined that the '622 patent was directed to the abstract idea of monitoring the delivery of real-time information to a user or users, and the '686 patent was directed to the abstract idea of measuring the delivery of real-time information for commercial purposes. *Id.* at \*6–7. The claims contained no saving inventive concept because although they recited some computer components, they required only ordinary functionality of these components. *Id.* at \*6–8.

Two-Way Media appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

#### STANDARD OF REVIEW

We review procedural aspects of the grant of judgment on the pleadings under Federal Rule of Civil Procedure 12(c) based on the law of the regional circuit, in this case the Third Circuit. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1311 (Fed. Cir. 2016). The Third Circuit exercises plenary review of Rule 12(c) motions. *E.g., CoreStates Bank, N.A. v. Huls Am., Inc.*, 176 F.3d 187, 193 (3d Cir. 1999). We also review de novo whether a claim is invalid under the judicially created exceptions to § 101. *McRO*, 837 F.3d at 1311.

#### DISCUSSION

Section 101 of the Patent Act defines patent eligible subject matter:

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 long held that there are certain judicial exceptions to this provision: laws of nature, natural phenomena, and abstract ideas. *Alice*, 134 S. Ct. at 2354 (collecting cases).

In *Alice*, the Court supplied a two-step framework for analyzing whether claims are patent eligible. First, we determine whether the representative claims are “directed to” a judicial exception, such as an abstract idea. *Id.* at 2355. If the claims are directed to eligible subject matter, the inquiry ends. *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016). If the claims are determined to be directed to an abstract idea, we next consider whether the claims contain an “inventive concept” sufficient to “transform the nature of the claim into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (internal quotation marks omitted).

We conclude that the ’187 patent, ’005 patent, ’622 patent, and ’686 patent are patent ineligible under § 101. We discuss each in turn.

#### A. ’187 Patent and ’005 Patent

##### 1. *Alice* Step One

Under *Alice* step one, “the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015). We look to whether the claims in the patent focus on a specific means or method, or are instead directed to a result or effect that itself is the abstract idea and merely invokes generic processes and machinery. *McRO*, 837 F.3d at 1314. Claims directed to generalized steps to be performed on a computer using conventional computer activity are not patent eligible. *Internet Patents*, 790 F.3d at 1348–49.

The district court found that claim 1 of the ’187 patent, which is representative of all of the claims of the ’187 patent and ’005 patent, is directed to the abstract idea of (1) sending information, (2) directing the sent information, (3) monitoring the receipt of the sent infor-

mation, and (4) accumulating records about receipt of the sent information. *Two-Way Media*, 2016 WL 4373698, at \*5. Two-Way Media argues that the district court erred by oversimplifying the claim and ignoring claim limitations present in its proposed constructions. We disagree.

Claim 1 recites a method for routing information using result-based functional language. The claim requires the functional results of “converting,” “routing,” “controlling,” “monitoring,” and “accumulating records,” but does not sufficiently describe how to achieve these results in a non-abstract way. *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258–59 (Fed. Cir. 2016) (holding that claims were directed to an abstract idea where they claimed “the function of wirelessly communicating regional broadcast content to an out-of-region recipient, not a particular way of performing that function”). Claim 1 is similar to other claims found to be directed to an abstract idea. In *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016), the challenged claims were directed to systems and methods for achieving real-time performance monitoring of an electric power grid. We held that the challenged claims were directed to the abstract idea of “gathering and analyzing information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions.” *Id.* at 1354. In the same way, claim 1 manipulates data but fails to do so in a non-abstract way.

Two-Way Media’s proposed constructions do not change this outcome. Though Two-Way Media argues that its proposed claim constructions sufficiently tie the claims to particular scalable network architecture, the constructions recite only conventional computer components. For example, Two-Way Media proposed a construction of “controlling the routing of the stream of packets in response to selection signals received from the users” as “directing a portion of the routing path taken by

the stream of packets from one of a designated group of intermediate computers to the user in response to one or more signals from the user selecting the stream.” J.A. 600. This construction fails to indicate how the claims are directed to a scalable network architecture that itself leads to an improvement in the *functioning* of the system. *Enfish*, 822 F.3d at 1338. Nor does the construction provide any parameters for the “signals” purportedly dictating how the information is being routed. At best, the constructions propose the use of generic computer components to carry out the recited abstract idea, but that is not sufficient. *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (holding that, despite reciting “concrete, tangible components,” the claims were directed to an abstract idea where “the physical components merely provide[d] a generic environment in which to carry out the abstract idea”). The claim is therefore directed to an abstract idea.

Because the claim is directed to an abstract idea, we proceed to *Alice* step two to determine whether the representative claims disclose a saving inventive concept.

## 2. *Alice* Step Two

In *Alice* step two, we consider the elements of the claim, both individually and as an ordered combination, to assess whether the additional elements transform the nature of the claim into a patent-eligible application of the abstract idea. *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Merely reciting the use of a generic computer or adding the words “apply it with a computer” cannot convert a patent-ineligible abstract idea into a patent-eligible invention. *Alice*, 134 S. Ct. at 2358; *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015). To save a patent at step two, an inventive concept must be evident in the claims. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

The district court found no saving inventive concept in claim 1 of the '187 patent. While acknowledging that the specification of the '187 patent describes a system architecture as a technological innovation, the district court concluded that the claim does not recite this architecture, even taking into account Two-Way Media's proposed constructions. *Two-Way Media*, 2016 WL 4373698, at \*5. We agree with the district court. The main problem that Two-Way Media cannot overcome is that the *claim*—as opposed to something purportedly described in the specification—is missing an inventive concept. *RecogniCorp*, 855 F.3d at 1327. While the specification may describe a purported innovative “scalable architecture,” claim 1 of the '187 patent does not. J.A. 103 at col. 2 ll. 1–5.

The lack of an inventive concept recited in claim 1 precludes eligibility here. For example, the claim refers to certain data “complying with the specifications of a network communication protocol” and the data being routed in response to one or more signals from a user, without specifying the rules forming the communication protocol or specifying parameters for the user signals. Neither the protocol nor the selection signals are claimed, precluding their contribution to the inventive concept determination. *See Clarilogic, Inc. v. FormFree Holdings Corp.*, 681 F. App'x 950, 954–55 (Fed. Cir. 2017) (holding claim ineligible where it recited an “unknown and unclaimed process” to allegedly transform data).

Two-Way Media asserts that the claim solves various technical problems, including excessive loads on a source server, network congestion, unwelcome variations in delivery times, scalability of networks, and lack of precise recordkeeping. But claim 1 here only uses generic functional language to achieve these purported solutions. “Inquiry therefore must turn to any requirements for *how* the desired result is achieved.” *Elec. Power Grp.*, 830 F.3d at 1355. Nothing in the claims or their constructions, including the use of “intermediate computers,”

requires anything other than conventional computer and network components operating according to their ordinary functions. *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1319–21 (Fed. Cir. 2016) (holding ineligible a claim directed to a method of virus screening even where the method required use of an “intermediary computer in forwarding information”).

We likewise see no inventive concept in the ordered combination of these limitations. *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (“[A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.”). The claim uses a conventional ordering of steps—first processing the data, then routing it, controlling it, and monitoring its reception—with conventional technology to achieve its desired result. As the court in *BASCOM* noted, merely reciting an abstract idea performed on a set of generic computer components, as claim 1 does here, would “not contain an inventive concept.” *Id.* (citing *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011)). We thus find that claim 1 here fails to transform the abstract idea into something more. *Elec. Power Grp.*, 830 F.3d at 1355–56.

Two-Way Media argues that the claims of the ’187 and ’005 patents are not preemptive, and therefore are patent eligible, because many methods of sending and monitoring the delivery of audio/visual remain available. However, where a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Alice* framework, as they are in this case, preemption concerns are fully addressed and made moot. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

Finally, Two-Way Media argues that the district court erred by excluding its proffered evidence from prior cases

relating to the purported technological innovations of its invention. We find no error in the district court’s determination to reject Two-Way Media’s proffered material, as the court correctly concluded that the material was relevant to a novelty and obviousness analysis, and not whether the claims were directed to eligible subject matter. Eligibility and novelty are separate inquiries. *Affinity Labs*, 838 F.3d at 1263) (holding that “even assuming” that a particular claimed feature was novel does not “avoid the problem of abstractness”). Accordingly, the district court correctly determined that the patents were ineligible under § 101 on the basis of the representative claims and Two-Way Media’s proposed constructions, which the district court expressly adopted.

## B. ’622 Patent and ’686 Patent

### 1. *Alice* Step One

The district court also concluded that the ’622 patent was directed to the abstract idea of monitoring the delivery of real-time information to a user or users, and the ’686 patent was directed to the abstract idea of measuring the delivery of real-time information for commercial purposes. *Two-Way Media*, 2016 WL 4373698, at \*6–7. Two-Way Media argues that the district court erred by oversimplifying the claims down to merely their preamble and failing to recognize the claims solve technical problems. We disagree.

First, we see no error here in the district court citing to the preamble in its review of whether the claims are directed to an abstract idea. *See, e.g., BASCOM*, 827 F.3d at 1348 (citing preamble for distillation of abstract idea). The district court’s inquiry centered on determining the “focus” of the claims, and was thus in accord with our precedent. *E.g., Elec. Power Grp.*, 830 F.3d at 1353.

Second, these claims suffer from the same ineligibility infirmity as claim 1 of the ’187 patent. Two-Way Media

admits that the representative claims of the '622 patent and '686 patent are broader in several respects than claim 1 of the '187 patent. Appellant Br. 46, 53. We agree with the district court that the claims here—directed to monitoring the delivery of real-time information to user(s) or measuring such delivery for commercial purposes—are similar to other concepts found to be abstract. *BASCOM*, 827 F.3d at 1348 (filtering content is an abstract idea); *Elec. Power Grp.*, 830 F.3d at 1351–53 (collecting information, analyzing it, and displaying results is an abstract idea, even when undertaken in “real-time”); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (using advertising as an exchange or currency is an abstract idea). For these reasons, we conclude that the representative claims of the '622 patent and '686 patent are directed to abstract ideas. Accordingly, we proceed to *Alice* step two.

## 2. *Alice* Step Two

The district court found that that the claims of the '622 patent and '686 patent did not contain an inventive concept under *Alice* step two. *Two-Way Media*, 2016 WL 4373698, at \*6–8. Two-Way Media argues that the district court erred by failing to account for a central aspect of Two-Way Media’s invention, the system architecture, and failing to credit Two-Way Media’s nonconventional arrangement of components. We disagree.

As with claim 1 of the '187 patent, the problem is that no inventive concept resides in the claims. Claim 29 of the '622 patent requires processing data streams, transmitting them from “an intermediate computer,” and then confirming certain information about the transmitted data. J.A. 202 at col. 20 ll. 19–36; J.A. 600. Claim 30 of the '686 patent requires receiving and transmitting a real-time media stream from an intermediate server, detecting the termination of the stream, and recording certain information about the stream. J.A. 248 at col. 20



ll. 6–16; J.A. 251; J.A. 601. We agree with the district court that nothing in these claims requires anything other than conventional computer and network components operating according to their ordinary functions. *Intellectual Ventures*, 838 F.3d at 1319–21; *Elec. Power Grp.*, 830 F.3d at 1355–56.

Nor do we see any inventive concept in the ordered combination of these steps. The steps are organized in a completely conventional way—data are first processed, sent, and once sent, information about the transmission is recorded. The claims thus fail to describe a “specific, discrete implementation of the abstract idea” sufficient to qualify for eligibility under § 101. *BASCOM*, 827 F.3d at 1350.

#### CONCLUSION

We have considered Two-Way Media’s other arguments but do not find them persuasive. For the foregoing reasons, we affirm the district court’s judgment that the ’187 patent, ’005 patent, ’622 patent, and ’686 patent are ineligible under § 101.

**AFFIRMED**