

United States Court of Appeals for the Federal Circuit

**ERICSSON INC., TELEFONAKTIEBOLAGET LM
ERICSSON,**
Plaintiffs-Appellees

v.

**TCL COMMUNICATION TECHNOLOGY
HOLDINGS LIMITED, TCT MOBILE LIMITED, TCT
MOBILE (US) INC.,**
Defendants-Appellants

2018-2003

Appeal from the United States District Court for the
Eastern District of Texas in No. 2:15-cv-00011-RSP, Mag-
istrate Judge Roy S. Payne.

Decided: April 14, 2020

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TX, argued for plaintiffs-appellees. Also represented by
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defendants-appellants. Also represented by MICHAEL LIU SU, Palo Alto, CA; DAVID MROZ, Washington, DC.

Before PROST, *Chief Judge*, NEWMAN and CHEN,
Circuit Judges.

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

Dissenting opinion filed by *Circuit Judge* NEWMAN.

PROST, *Chief Judge*.

Appellants TCL Communication Technology Holdings, Limited, TCT Mobile Limited, and TCT Mobile (US) Inc., (collectively, “TCL”) appeal the decision of the U.S. District Court for the Eastern District of Texas denying summary judgment that U.S. Patent No. 7,149,510 (“the ’510 patent”) is ineligible for patenting under 35 U.S.C. § 101. TCL also appeals the denial of its motion for a new trial on damages and challenges the jury’s finding of willful infringement as not supported by substantial evidence. We reverse, hold that the ’510 patent claims ineligible subject matter under 35 U.S.C. § 101, and do not reach the issues of damages or willfulness.

I

In February 2015, Ericsson Inc. and Telefonaktiebolaget LM Ericsson (collectively, “Ericsson”) sued TCL for infringement of five patents. *See* J.A. 1000–04. Four patents were removed from the case following *inter partes* review proceedings, leaving only the ’510 patent. TCL moved for summary judgment that the asserted claims of the ’510 patent (then claims 1–5 and 7–11) were ineligible for patenting under 35 U.S.C. § 101. The district court denied the motion in November 2017, and the case proceeded to trial one month later. *See Ericsson Inc. v. TCL Commc’n Tech. Holdings, Ltd.*, 2017 WL 5137401 at *1, *7-8 (E.D. Tex. Nov. 4, 2017) (“Summary Judgment Decision”).

The '510 patent generally claims a method and system for limiting and controlling access to resources in a telecommunications system. At trial, Ericsson argued that TCL infringed claims 1 and 5 of the '510 patent by making and selling smartphones that include the Android operating system. According to Ericsson, these Android-based products infringe the claims of the '510 patent because they include “a security system that can grant apps access to a subset of services on the phone, with the end user controlling the permissions granted to each app.” Appellees’ Br. 6 (internal quotations omitted). The jury found claims 1 and 5 infringed, awarded Ericsson damages, and further found that TCL’s infringement was willful. J.A. 38–39.

Post-trial, TCL moved for renewed judgment as a matter of law and a new trial on damages and willfulness, among other issues. The district court initially agreed, concluding that Ericsson’s damages theory was “unreliable” and ordering a new trial on damages. J.A. 3. Following Ericsson’s motion for reconsideration, however, the district court reinstated the jury verdict, and denied TCL’s motion for a new trial. *Id.* It also denied TCL’s motion for judgment as a matter of law on willfulness, finding the jury’s verdict supported by substantial evidence. *Id.* at 20.

TCL timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II

Ericsson argues as a threshold matter that TCL has waived any right to appeal the issue of ineligibility under § 101 by failing to raise it in a motion for judgment as a matter of law under Federal Rule of Civil Procedure 50. *See* Appellees’ Br. 21–25. We disagree for two independent

reasons. We discuss each in turn below.

A

The district court’s § 101 opinion applied the two-step framework for patent eligibility first laid out in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), and further detailed in *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208 (2014). Patent eligibility under § 101 is an issue of law, although the inquiry may sometimes contain underlying issues of fact. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018); *Intellectual Ventures I LLC v. Capital One Financial Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017). In denying summary judgment here the district court concluded, at step one, that the claims of the ’510 patent “are not directed to an abstract idea” as a matter of law. Summary Judgment Decision at *7. That decision was based on the court’s analysis of the claim language and a comparison to our existing caselaw, and was not dependent on any factual issues that were or could have been raised at trial. *See id.* at 70–71.

Although not in the § 101 context, we have addressed a similar procedural scenario in *Lighting Ballast Control LLC v. Philips Electronics North America Corp.*, 790 F.3d 1329, 1337 (Fed. Cir. 2015). In that case, an appellee argued that the appellant had “waived any argument . . . by failing to raise the issue in either its pre- or post-verdict motions for judgment as a matter of law.” *Id.* at 1336–37. We noted that this may be true in cases where a motion for summary judgment is denied because “material issues of fact prevented judgment.” *Id.* at 1337. But that was not the case in *Lighting Ballast*, nor is it here. Rather, in *Lighting Ballast*, “[w]hen the district court denied [the movant]’s motion for summary judgment, it did not conclude that issues of fact precluded judgment; it effectively entered judgment of validity to [the non-movant],” and that grant of judgment was appealable. *Id.*

The same is true in this case. The district court did not conclude that there were issues of fact precluding judgment. Once the district court held that the '510 patent was not directed to an abstract idea at step one, there was no set of facts that TCL could have adduced at trial to change that conclusion. *See* Summary Judgment Decision at *7. As a result, the district court effectively entered judgment of eligibility to Ericsson. “This is sufficient to preserve the issue for appeal.” *Lighting Ballast*, 790 F.3d at 1338.

Ericsson argues that we are bound to apply Fifth Circuit law in this instance, and that therefore *Lighting Ballast* is inapplicable. Appellees’ Br. 21–22. Even under Fifth Circuit law, however, the district court effectively granted summary judgment of eligibility to Ericsson, which we may review.

Relying on Fifth Circuit law, Ericsson cites *Feld Motor Sports, Inc. v. Traxxas, L.P.*, 861 F.3d 591, 596 (5th Cir. 2017), for the proposition that “following a jury trial on the merits, this court has jurisdiction to hear an appeal of the district court’s legal conclusions in denying summary judgment, but only if it is sufficiently preserved in a Rule 50 motion.” But the district court here did not merely deny summary judgment. Rather, consistent with Fifth Circuit precedent, it effectively granted summary judgment in favor of the non-moving party by deciding the issue and leaving nothing left for the jury to decide. *See Hudson v. Forest Oil Corp.*, 372 F.3d 742, 744 (5th Cir. 2004) (“the district court’s decision to deny [a] motion for summary judgment was in effect a grant of summary judgment in favor of [non-movants]”). And when the district court’s action amounts to an “effective . . . grant of summary judgment,” the Fifth Circuit has treated the action akin to an express grant of summary judgment, and allowed an appeal accordingly. *See Luig v. North Bay Enters., Inc.*, 817 F.3d 901, 904–05 (5th Cir. 2016).

The facts of this case justify that same treatment. As discussed above, the district court did not deny summary judgment of ineligibility on the basis of additional facts that needed to be, or even could be, presented at trial. The court affirmatively “conclude[d] that the claims are not directed to an abstract idea but rather to an improved technological solution to mobile phone security software.” Summary Judgment Decision at *7. Had Ericsson chosen to file a cross-motion for summary judgment of eligibility, this exact same conclusion would have sufficed to grant that motion. Under Fifth Circuit law, this conclusion effectively serves as a grant of summary judgment for Ericsson, which is appealable. *See Hudson*, 372 F.3d at 744. Ericsson’s citation to *Feld*, which limits the appealability of denials of summary judgment, is therefore inapposite.

TCL has preserved its right to appeal what was effectively a grant of summary judgment of patent validity to Ericsson.

B

Even if the district court had not effectively granted summary judgment to Ericsson, both Federal Circuit and Fifth Circuit law make clear that we have the discretion to hear issues that have been waived. And, to the extent the issue of patent eligibility in this case was waived (it was not, for the reasons discussed above), both circuits’ precedent supports our decision to exercise our discretion and hear the issue.

We note first that this is not a typical waiver scenario in which we are asked to “consider an issue not passed upon below.” *Singleton v. Wulff*, 428 U.S. 106, 120 (1976). Here, the issue of patent eligibility was fully briefed, argued, and decided below, and then fully briefed and argued again before us. Summary Judgment Decision at *7; Appellants’ Br. 20–31; Appellees’ Br. 21–38; Appellants’ Reply Br. 3–9; Oral Arg. at 5:22–9:57, 21:40–33:07, 34:12–35:55,

No. 2018-2003, <http://www.cafc.uscourts.gov/oral-argument-recordings>.

While we always possess “the discretion to decide when to deviate from th[e] general rule of waiver,” *Interactive Gift Express., Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1344 (Fed. Cir. 2001), exercise of that discretion is especially appropriate in cases that do not present new issues on appeal. While there is “no general rule” for when we exercise our discretion to reach waived issues, *Singleton*, 428 U.S. at 121, we have done so where, among other factors, “the issue has been fully briefed by the parties.” See *Automated Merch. Sys., Inc. v. Lee*, 1376, 1379–80 (Fed. Cir. 2015) (“A circuit court will disregard the rule of waiver in compelling circumstances, particularly if the issue has been fully briefed, if the issue is a matter of law or the record is complete, if there will be no prejudice to any party, and if no purpose is served by remand” (quoting *Interactive Gift*, 256 F.3d at 1345 (internal quotations and alterations omitted))). That is the case here.

Our general rule against reaching waived issues is based on sound policy. As we have noted,

It ensures finality in litigation by limiting the appealable issues to those a lower court had an opportunity to, and did, address. The rule also conserves judicial resources because it prevents parties from undoing a lower court's efforts—sometimes spanning years of litigation—based on an error that a lower court could have considered and corrected. In the same regard, the rule discourages parties from inviting an alleged error below only to raise it on appeal.

HTC Corp. v. IPCOM GmbH & Co., KG, 667 F.3d 1270, 1281 (Fed. Cir. 2012) (collecting cases). But none of those policies would be served by declining to reach the issue of patent eligibility in this case. The district court “had an opportunity to, and did, address” the issue with finality.

Id.; *c.f. In re Nuvasive, Inc.*, 842 F.3d 1376, 1380 (Fed. Cir. 2016) (declining to reach waived issue where we do not have “the benefit of the [lower court]’s informed judgment”). Unlike prior cases in which we have declined to reach waived issues, TCL’s arguments did not shift over time or present “a moving target.” *Finnigan Corp. v. Int’l Trade Comm’n*, 180 F.3d 1354, 1363 (Fed. Cir. 1999). To the contrary, its “argument[s] at the trial and appellate level [were] consistent, thereby ensuring a clear presentation of the issue to be resolved.” *Id.* And, as discussed in Section III below, the resolution of the patent eligibility question in this case is straightforward. *See Interactive Gift*, 256 F.3d at 1345 (noting that we consider arguably waived issues when “the proper resolution is beyond any doubt”).

Accordingly, to the extent the issue of patent eligibility was not properly preserved below, we nonetheless exercise our discretion to address and resolve the issue. *See Icon Health and Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1040 (Fed. Cir. 2017) (“Because the issue has been fully briefed, the record is complete, there will be no prejudice to any party, and no purpose is served by remand, we will consider [Appellant]’s arguments”).

The Fifth Circuit’s statements regarding the proper use and purpose of waiver similarly support addressing the patent-eligibility legal question here. The en banc Fifth Circuit has explained that the doctrine of waiver “exists to prevent an appellate court from analyzing the facts of a particular issue without the benefit of a full record or lower court determination.” *New Orleans Depot Servs., Inc. v. Dir., Office of Worker’s Comp. Programs*, 718 F.3d 384, 388 (5th Cir. 2013) (en banc). That concern is not present here. The parties have fully briefed the issue of ineligibility under § 101 both before the district court and before us. We also have the benefit of the district court’s decision, which resolved the matter without resort to factual considerations, and no party has raised a genuine fact issue that

requires resolution. *See id.* at 388 (“[A] well-settled discretionary exception to the waiver rule exists where a disputed issue concerns a pure question of law.”). This is not “a case in which a party has wholly ignored a major issue” until it reached the appellate level, but rather one in which the issue was “squarely addressed” below, and therefore it is appropriate for us to reach the issue. *Id.*

Like the Fifth Circuit in *New Orleans Depot*, we find that because the issue was “presented to” and “fully litigated before” the district court judge, and because “every party was provided an adequate opportunity to brief and argue the issue” before us, we can and should “exercise our discretion to decide this legal issue.” *Id.*; *see also Glass v. Paxton*, 900 F.3d 233, 242–32 (5th Cir. 2018) (where “the only remaining issues are purely legal questions that were briefed below,” the Fifth Circuit has “been willing to resolve those issues on appeal.”)¹

Although the particular waiver at issue in *New Orleans Depot* and *Glass* did not involve motions for judgment as a matter of law under Rule 50, Fifth Circuit authority makes clear that the policy behind Rule 50 is consistent with this result. “Rule 50(b) is designed to prevent a litigant from ambushing both the district court and opposing counsel

¹ *Feld*, cited by Ericsson and discussed above, also supports our conclusion. While Ericsson cites *Feld* to argue that TCL’s claim is waived, *Feld* itself found that the appellant “sufficiently preserved” the issue, noting that post-trial briefing requirements should be “construed liberally” and “the purpose of the rule is to provide notice to the district court and the plaintiff of the defendant’s objections.” 861 F.3d at 596 (citing *Navigant Consulting, Inc. v. Wilkinson*, 508 F.3d 277, 288 (5th Cir. 2007)). Here, Ericsson does not and cannot argue that that it was not on notice of TCL’s § 101 claim, having fully briefed and argued the issue both before the district court and now before us.

after trial.” *Puga v. RGX Solutions, Inc.*, 922 F.3d 285, 290 (5th Cir. 2019). Similarly, Rule 50(a) is intended to allow a trial court “to re-examine the question of evidentiary insufficiency” and alert opposing counsel to any insufficiency. *Id.* at 291 (quoting *Scottish Heritable Tr., PLC v. Peat Marwick Main & Co.*, 81 F.3d 606, 610 (5th Cir. 1996)). Barring review of the district court’s § 101 ruling would not promote either of these purposes.

Because the issue of eligibility was fully briefed and decided below, neither Ericsson nor the district court can claim to be “ambush[ed]” by our decision to address the issue on appeal. *Id.* at 290. Further, because the district court’s denial of TCL’s summary judgment motion rested on its conclusion that the asserted claims are not directed to an abstract idea at step one, no concerns about evidentiary insufficiency are present. Therefore, there is no impediment to us addressing the issue of patent ineligibility. See *Scottish Heritable*, 81 F.3d at 610 (“Technical noncompliance with Rule 50(b) may be excused in situations in which the purposes of the rule are satisfied.”). To the contrary, the Fifth Circuit has “repeatedly counseled against” the “slavish adherence” to Rule 50 when it would not prevent against ambush or evidentiary insufficiency. *Id.* at 611.

We therefore exercise our discretion—to the extent the issue was not properly preserved below—to review the district court’s eligibility determination, and turn now to the merits of TCL’s appeal.

III

We “review a district court’s summary judgment ruling under the law of the regional circuit.” *Intellectual Ventures*, 850 F.3d at 1337. Under Fifth Circuit law, we “review a district court’s ruling on a motion for summary judgment *de novo* and apply the same legal standards as the district court.” *Bellard v. Gautreaux*, 675 F.3d 454, 460 (5th Cir. 2012). The issue of patent eligibility under § 101

is a question of law that we review without deference. *Intellectual Ventures*, 850 F.3d at 1338.

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*, 573 U.S. at 216. To determine whether this exception applies, we evaluate at step one “whether the claims at issue are directed to a patent-ineligible concept,” such as an abstract idea. *Alice*, 573 U.S. at 218. We have alternately described this inquiry as “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)). While the specification may be “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, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 766 (Fed. Cir. 2019)

If the claims are directed to an abstract idea, 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.” *Alice*, 573 U.S. 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 quotations and alterations omitted).

A

The ’510 patent, titled “Security Access Manager in Middleware,” describes “a system and method for

controlling access to a platform for a mobile terminal for a wireless telecommunications system.” ’510 patent col.1 ll. 25–28. Ericsson describes the field of the invention as “securing mobile phones against improper access by apps.” Appellees’ Br. 3. Claim 1 recites:

1. A system for controlling access to a platform, the system comprising:

a platform having a software services component and an interface component, the interface component having at least one interface for providing access to the software services component for enabling application domain software to be installed, loaded, and run in the platform;

an access controller for controlling access to the software services component by a requesting application domain software via the at least one interface, the access controller comprising:

an interception module for receiving a request from the requesting application domain software to access the software services component;

and a decision entity for determining if the request should be granted wherein the decision entity is a security access manager, the security access manager holding access and permission policies; and

wherein the requesting application domain software is granted access to the software services component via the at least one interface if the request is granted.

’510 patent claim 1. The only other claim on appeal, claim 5, further recites:

5. The system according to claim 1, wherein:

the security access manager has a record of requesting application domain software; and

the security access manager determines if the request should be granted based on an identification stored in the record.

'510 patent claim 5.

Based on the claim language, we conclude that claims 1 and 5 are directed to the abstract idea of controlling access to, or limiting permission to, resources. Although written in technical jargon, a close analysis of the claims reveals that they require nothing more than this abstract idea. By the plain language of claim 1, the “security access manager” and the “decision entity” are the same thing. *See* '510 patent col. 8 ll. 50–53 (“... wherein the decision entity is a security access manager”). According to the specification, this combined decision entity / security access manager can further be the same as the “interception module.” *Id.* at col. 8 ll. 50–53 (“Instead of sending a permission request . . . from the IM [interception module] 223 to the SAM [security access manager] 518, the IM 223 makes a decision locally”); *see also* J.A. 107–110 (district court adopting Ericsson’s proposed construction, and noting that it includes “an embodiment where the interception module and the decision entity are one and the same.”) Because the security access manager / decision entity / interception module is the only claimed component of the “access controller,” all four components collapse into simply “an access controller for controlling access” by “receiving a request” and then “determining if the request should be granted.” That bare abstract idea, controlling access to resources by receiving a request and determining if the request for access should be granted, is at the core of claim 1.

Neither of the remaining limitations alter our conclusion that claim 1 is directed to the abstract idea of controlling access to resources. The first limitation recites “a platform having a software services component and an interface component,” for the ultimate goal of “enabling application domain software to be installed, loaded, and run

in the platform.” ’510 patent claim 1. This recitation of functional computer components does not specify how the claim “control[s] access to a platform,” nor does it direct the claim to anything other than that abstract idea. It merely provides standard components that are put to use via the “access controller” limitation. Similarly, the “wherein” limitation simply recites the necessary outcome of the abstract idea, “grant[ing] access . . . if the request is granted.”

We are mindful that the step one inquiry looks to the claim’s “character as a whole” rather than evaluating each claim limitation in a vacuum. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). But where, as here, the bulk of the claim provides an abstract idea, and the remaining limitations provide only necessary antecedent and subsequent components, the claim’s character as a whole is directed to that abstract idea. *See In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016) (claim directed to abstract idea where additional recited components “merely provide a generic environment in which to carry out the abstract idea.”) For the same reason, claim 5, which merely adds that the determination to grant access should be “based on an identification,” is directed to the same abstract idea.

Ericsson makes two arguments as to why the asserted claims are not directed to an abstract idea at step one. Neither is persuasive. First, it argues that the idea of controlling access to resources is not an abstract idea because it does not “resemble[] one previously recognized by the Supreme Court.” Appellees’ Br. 31–32. Ericsson’s suggestion that an abstract idea must be a “mathematical algorithm,” “method of organizing human activity,” or “fundamental economic practice,” *id.*, is legally erroneous. The Supreme Court has explicitly rejected the use of such “categorical rules” to decide patent eligibility. *Bilski v. Kappos*, 561 U.S. 593, 610 (2010). As a result, “[t]he Supreme Court and we have held that a wide variety of well-known and other activities constitute abstract ideas.” *Intellectual Ventures*

I LLC v. Symantec Corp., 838 F.3d 1307, 1314 (Fed. Cir. 2016) (collecting cases).

Controlling access to resources is exactly the sort of process that “can be performed in the human mind, or by a human using a pen and paper,” which we have repeatedly found unpatentable. See *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011). The idea long predates the ’510 patent and is pervasive in human activity, whether in libraries (loaning materials only to card-holding members), office buildings (allowing certain employees entrance to only certain floors), or banks (offering or denying loans to applicants based on suitability and intended use). In each of these circumstances, as in the claims at issue, a request is made for access to a resource, that request is received and evaluated, and then the request is either granted or not.

Ericsson defends the ’510 patent by arguing that its claims, unlike these fundamental practices, are specific to mobile phones. But “limit[ing] the abstract idea to a particular environment—a mobile telephone system—[] does not make the claims any less abstract for the step 1 analysis.” *In re TLI*, 823 F.3d at 607. To the contrary, we have repeatedly found the concept of controlling access to resources via software to be an abstract idea. See *Smart Sys. Innovations, LLC v. Chicago Transit Authority*, 873 F.3d 1364, 1371 (Fed. Cir. 2017) (claim involving “denying access to a transit system if the bankcard is invalid” was directed to an abstract idea); *Prism Techs. LLC v. T-Mobile USA, Inc.*, 696 F. App’x 1014, 1017 (Fed. Cir. 2017) (abstract idea of “providing restricted access to resources”); *Smartflash LLC v. Apple Inc.*, 680 F. App’x 977 (Fed. Cir. 2017) (abstract idea of “conditioning and controlling access to data”). The claims at issue here are no different.

Second, Ericsson contends that its claims are not directed to an abstract idea because they “solve the specific computer problem . . . of controlling app access in resource-

constrained mobile phones.” Appellees’ Br. 29. We disagree. As an initial matter, the district court was incorrect to conclude that “[t]he claims of the ’510 patent are limited to mobile platform technology,” and Ericsson is wrong to repeat that point. Summary Judgment Decision at *7.² The asserted claims merely require “[a] system for controlling access to a platform,” whether mobile, desktop, or otherwise. They do not mention, and are not limited to, mobile phones or a “resource-constrained” environment. For the same reason, Ericsson’s reference to “a specific, layered software architecture,” Appellees’ Br. 29–30, which does not appear in the claims, is unavailing.

Moreover, the claims here do not “ha[ve] the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018). Ericsson does not deny that its claims are drafted functionally, but argues that the process of requesting and controlling access as recited in the claim is a specific technique for improving computer performance. Appellees’ Br. 29–30. As discussed above, we disagree. The claims are silent as to how access is controlled. They merely make generic functional recitations that requests are made and then granted. Merely claiming “those functions in general terms, without limiting them to technical means for

² The district court was also incorrect to state that “[t]he PTAB’s highly technical characterization of the claims supports the conclusion that the claims are not directed to an abstract idea.” Summary Judgment Decision at *7. Claims do not become eligible simply because they are written or characterized in a “highly technical” manner. That would violate the Supreme Court’s caution that patent eligibility must not “depend simply on the draftsman’s art.” *Alice*, 573 U.S. at 224 (quoting *Mayo*, 566 U.S. at 72).

performing the functions that are arguably an advance,” does not make a claim eligible at step one. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016).

B

Having determined that the asserted claims of the ’510 patent are directed to the abstract idea of controlling access to resources, we next ask whether the asserted claims contain an inventive concept that would support patent eligibility. We conclude that they do not.

Ericsson argues that the “layered architecture” of the invention provides the necessary inventive concept. According to Ericsson, claims 1 and 5 “recite three specific layers of software,” in which the bottom “services layer” is “further arranged into vertical functional software stacks.” Appellees’ Br. 36 (internal quotations omitted). Ericsson contends that the novelty of the claims is, in part, the “arrangement of horizontally partitioned functional software units” which “differs from the standard model, which uses vertical layers only.” *Id.* But this allegedly novel aspect of the invention is wholly missing from claims 1 and 5. Neither claim recites any particular architecture at all—much less the specific three layered architecture advocated by Ericsson. Nor does either claim recite software stacks or units—vertical, horizontal, or otherwise.

Ericsson concedes that at least some of these elements do not appear in the claims. *See* Appellees’ Br. 37 n.3. Rather, it argues that our analysis must be “aided by a consideration of the specification” under which “the described benefits flow from the claimed ‘interception module.’” *Id.* Ericsson misstates the role of the specification, which “cannot be used to import details from the specification if those details are not claimed.” *ChargePoint*, 920 F.3d at 769. Rather, “any reliance on the specification in the § 101 analysis must always yield to the claim language.” *Id.*

Here, Ericsson alleges that the inventive concept of the '510 patent lies in a particular three-layer arrangement of software, in which the bottom layer is “arranged into vertical functional software stacks” and “horizontally partitioned functional software units.” Appellees’ Br. 36 (citing '510 patent col. 2 ll. 20–25, col. 5 ll. 1, 23–30, 40). Even assuming that Ericsson’s explanation of the scheme described in the specification is correct, this cannot provide an inventive concept at step two because it is not recited in claims 1 or 5. See *Intellectual Ventures*, 838 F.3d at 1315 (holding claims ineligible where “the asserted claims do not contain any limitations that address” problems the specification purported to solve); *ChargePoint*, 920 F.3d at 769–70 (holding claims ineligible where “[e]ven if [the] specification had provided, for example, a technical explanation of how to enable communication over a network for a device interaction . . . the claim language here would not require those details”).

Because its alleged inventive concept is not otherwise recited in the claims, Ericsson asks us to import the three-layer architecture and the horizontal partition requirement into the claim through the recited “interception module.” Appellees’ Br. 37 n.3. We decline to do so. The claims in question describe the role of the interception module clearly: “an interception module for receiving a request from the requesting application domain software to access the software services component.” '510 patent claim 1. Nothing in that language supports Ericsson’s contention that the claim requires a three-layer architecture, horizontally partitioned functional software units, vertical functional software stacks, or any other component of the structure that it claims is inventive. If Ericsson believes that the recited “interception module” necessarily requires these structures, the time to make that argument would have been at claim construction. But Ericsson elected not to propose any construction for this term, and the parties agreed that the term would be given its plain and ordinary

meaning. J.A. 102. Indeed, Ericsson's expert testified at trial that an interception module is merely "a segment of code that performs the interception function." J.A. 6 (district court summarizing testimony of Ericsson's expert). Thus, we do not agree with Ericsson that the use of "interception module" in the claim is sufficient to import the three-layer architecture from the specification.

The same is true of the term "software services component." During claim construction the district court expressly rejected both parties' proposed constructions, noting that each would improperly read limitations into the claims. J.A. 105. As the district court noted, "the claims do not describe the internal composition or arrangement of the software services component itself," and therefore the invention was not limited to "a plurality of functional software units," or any of the parties' other proposed limitations. *Id.* The district court therefore construed the term to mean "a software component for providing services." J.A. 107. That broad construction, which is not challenged before us, provides no reason to import the allegedly novel layered architecture described in the specification into the language of the claims.

Ericsson also relies in part on the district court's brief discussion of *Alice* step two, which provided two reasons that the claims of the '510 patent supposedly recite an inventive concept. We disagree with both. First, the court stated that the claims "recite a technological improvement to . . . the problem of limited memory and resources on mobile phones." Summary Judgment Decision at *8. As discussed above, however, claims 1 and 5 are not limited to mobile phones and make no mention of limited memory or resources. We cannot agree that the claims present a "particularized solution" to the problem of limited memory in mobile phones as the district court suggests, Summary Judgment Decision at *8, when the claims as written make no mention of memory and encompass not just mobile phones but any "system for access to a platform." '510

patent claim 1. Indeed, the specification of the '510 patent expressly disavows any interpretation that would limit its scope only to “mobile terminal[s].” '510 patent col. 10 ll. 58–67.

Second, the district court concluded that the claims “are not merely conventional applications of computer technology.” Summary Judgment Decision at *8. But it reached this conclusion based solely on the Patent Trial and Appeal Board’s conclusion in a related *inter partes* review proceeding that one of ordinary skill in the art allegedly would not be “motivated to combine computer-based security software with the relevant mobile platform technology.” *Id.* The district court overstates the breadth of the Board’s conclusion. The Board concluded that TCL had “failed to persuasively establish an articulated reason” that one of ordinary skill would “implement the access controller of [one prior art reference] as the security management mechanism of [a second prior art reference] to provide the fine-grained access control identified in [the second prior art reference].” *TCL Corp. v. Telefonaktiebolaget LM Ericsson*, No. IPR2015-01605, Paper 44, at 27 (PTAB Jan. 25, 2017). The Board did not conclude, as the district court suggests, that there was a fundamental incompatibility between conventional computer-based security software and mobile platform technology prior to the invention of the '510 patent. Even if it had, that conclusion could not demonstrate that the claims here possess an inventive step because the feature that was allegedly lacking in the combination (*i.e.*, technology specific to mobile phone platforms) is not recited in the claims at issue.

Because the architecture identified by Ericsson as inventive does not appear in claims 1 or 5 of the '510 patent, we conclude at step two that claims 1 and 5 do not provide a sufficient inventive concept to render them patent eligible. The most specific elements actually recited in the claim are “an access controller for controlling access,” “an interception module for receiving a request,” and “a

decision entity for determining if the request should be granted.” ’510 patent claim 1. None of these elements are sufficient to turn the claim into anything more than a generic computer for performing the abstract idea of controlling access to resources. Even assuming that this collection of elements led to a more efficient way of controlling resource access, “our precedent is clear that merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea.” *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015). Thus, the claims do not “recite[] a specific solution to a security problem,” as Ericsson contends. Appellees’ Br. 35. To the contrary, when a claim “does no more than require a generic computer to perform generic computer functions,” as here, the claims lack an inventive concept sufficient to demonstrate eligibility at step two. *Alice*, 573 U.S. at 225.

III

We have considered the parties’ remaining arguments and find them unpersuasive. For the foregoing reasons, claims 1 and 5 of the ’510 patent are directed to the abstract idea of controlling access to resources, and do not recite an inventive concept sufficient to transform that idea into patent-eligible subject matter. The claims are therefore ineligible for patenting under § 101. Accordingly, the district court’s damages verdict is vacated.

VACATED-IN-PART AND REVERSED

COSTS

Costs to Appellants.

United States Court of Appeals for the Federal Circuit

**ERICSSON INC., TELEFONAKTIEBOLAGET LM
ERICSSON,**
Plaintiffs-Appellees

v.

**TCL COMMUNICATION TECHNOLOGY
HOLDINGS LIMITED, TCT MOBILE LIMITED, TCT
MOBILE (US) INC.,**
Defendants-Appellants

2018-2003

Appeal from the United States District Court for the Eastern District of Texas in No. 2:15-cv-00011-RSP, Magistrate Judge Roy S. Payne.

NEWMAN, *Circuit Judge*, dissenting.

The court today sets aside the Federal Rules and sound practice for civil trials and appeals, and holds that the district court's pre-trial denial of a motion for summary judgment based on 35 U.S.C. § 101 is the same as a final decision in favor of the non-movant. That is not the general rule, and it is not the rule of the Fifth Circuit, whose procedural law controls this trial and appeal.

Nonetheless, the panel majority treats the district court's pre-trial denial of summary judgment as a final decision on the merits, ripe for appeal. And on appeal, the

panel majority decides patent eligibility under Section 101, although there was no final judgment on this issue—and no record, no evidence, no witnesses, no expertise, no argument, and no district court decision.

The panel majority, now deciding patent eligibility under Section 101, finds facts and applies law without the benefit of district court trial. The majority ignores the pre-trial findings of the district court, rejects the estopped findings of the Patent Trial and Appeal Board in the related IPR proceeding, and discards the guidance of precedent, to hold the subject matter of claims 1 and 5 ineligible for patenting.

The majority announces new law and disrupts precedent. I respectfully dissent.

1.

Section 101 arguments were not raised at district court trial and post-trial

After the district court denied TCL's pre-trial motion for summary judgment on Section 101,¹ TCL did not pursue any Section 101 aspect at the trial or in any post-trial proceeding. Although other pre-trial motion issues were litigated, Section 101 disappeared. TCL took no action to preserve the Section 101 issue, and Section 101 was not raised for decision and not mentioned in the district court's final judgment.²

Nonetheless, Section 101 eligibility is the focus of TCL's appeal, and my colleagues decide it for themselves.

¹ *Ericsson Inc. v. TCL Commc'n Tech. Holdings, Ltd.*, 2017 WL 5137401 (E.D. Tex. Nov. 4, 2017) ("Summ. J. Order").

² *Ericsson Inc. v. TCL Commc'n Tech. Holdings, Ltd.*, 2018 WL 2149736 (E.D. Tex. May 10, 2018) ("Dist. Ct. Dec.").

There is no trial record and no evidence on the question of whether the claimed invention is an abstract idea and devoid of inventive content. The panel majority departs from the Federal Rules and from precedent.

Federal Rule of Civil Procedure 50 provides guidance after a pre-trial denial of summary judgment; the Rule assumes that the issue is litigated at trial, and provides the post-trial procedure to preserve the issue for district court decision and for appeal. Rule 50 includes:

If the court does not grant a motion for judgment as a matter of law made under Rule 50(a), the court is considered to have submitted the action to the jury subject to the court's later deciding the legal questions raised by the motion. No later than 28 days after the entry of judgment . . . the movant may file a renewed motion for judgment as a matter of law

Fed. R. Civ. P. 50(b). The Supreme Court, in *Unitherm Food Sys., Inc. v. Swift-Eckrich, Inc.*, 546 U.S. 394 (2006), summarized the purpose of this Rule:

This Court has addressed the implications of a party's failure to file a postverdict motion under Rule 50(b) on several occasions and in a variety of procedural contexts. This Court has concluded that, "[i]n the absence of such a motion" an "appellate court [is] without power to direct the District Court to enter judgment contrary to the one it had permitted to stand." *Cone v. West Virginia Pulp & Paper Co.*, 330 U.S. 212, 218 (1947).

Id. at 400–01. The Court explained that a motion under Rule 50(b) is necessary in order to obtain the views of the judge who experienced the trial, if the issue is sought to be decided:

A postverdict motion is necessary because "[d]etermination of whether a new trial should be granted

or a judgment entered under Rule 50(b) calls for the judgment in the first instance of the judge who saw and heard the witnesses and has the feel of the case which no appellate printed transcript can impart.” *Cone, supra*, at 216.

Id. at 401 (footnote omitted). Absent such post-trial motion and decision, the issue is not available for appeal. Here there was no post-trial motion, and no final decision of the district court.

Contrary to the panel majority’s theory, the Section 101 issue was not preserved for appeal. The Fifth Circuit is explicit that an “interlocutory order denying summary judgment is not to be reviewed,” even after “full trial on the merits” and even for “purely legal issues,” unless “it is sufficiently preserved in a Rule 50 motion.” *Feld Motor Sports, Inc. v. Traxxas, L.P.*, 861 F.3d 591, 595–96 & n.4 (5th Cir. 2017); *Puga v. RCX Sols., Inc.*, 922 F.3d 285, 291 n.2 (5th Cir. 2019). The Fifth Circuit stresses that appellate review is available only for issues preserved in a Rule 50 motion. *Feld*, 861 F.3d at 596.

Other circuits are in accord. *See, e.g., Ji v. Bose Corp.*, 626 F.3d 116, 127 (1st Cir. 2010) (a party “must restate its objection” in order “to preserve its challenge for appeal”); *Elm Ridge Expl. Co., LLC v. Engle*, 721 F.3d 1199, 1219 (10th Cir. 2013) (a party cannot appeal the denial of its Rule 50 motion “when it did not renew the motion under Rule 50(b) after the jury’s verdict”); *Duban v. Waverly Sales Co.*, 760 F.3d 832, 835 (8th Cir. 2014) (“Litigants must renew summary judgment arguments in Rule 50 motions to preserve their arguments for appeal.”); *Luxottica Grp., S.p.A. v. Airport Mini Mall, LLC*, 932 F.3d 1303, 1310 n.1 (11th Cir. 2019) (“[T]he only way to preserve a Rule 50(a) motion is to renew it under Rule 50(b).”). Although courts have allowed a few departures in extraordinary circumstances, the case at bar is not asserted to present extraordinary circumstances.

My colleagues on this panel propose that they are under no constraint, stating that the Fifth Circuit has treated the denial of summary judgment akin to an express grant of summary judgment. Maj. Op. at 5. However, in every case cited by the majority, there was a trial or a post-trial motion or a district court decision on the disputed issue. The majority states that it has authority to decide this issue not presented at trial, citing *Lighting Ballast Control LLC v. Philips Electronics North America Corp.*, 790 F.3d 1329 (Fed. Cir. 2015), where the court held that the question of whether a term was governed by § 112/6 was a claim construction question for the court, not the jury, and could be appealed on final judgment on the jury verdict. There was no Rule 50 issue on appeal of the district court's decision on a motion for JMOL. *Lighting Ballast* does not support the panel's venture herein, where there was no mention at trial of a Section 101 issue; no record, no evidence, no witness testimony, no expertise, no motion during or after trial, no argument, no district court decision, and no motion for JMOL on Section 101.

The Fifth Circuit has plainly ruled that “[f]ailure to raise an argument before the district court waives that argument.” *Frugé v. Amerisure Mut. Ins. Co.*, 663 F.3d 743, 747 (5th Cir. 2011). The Fifth Circuit is clear that it “reject[s] ‘the contention that . . . review should depend on whether the party claims an error of law or an error of fact.’” *Feld*, 861 F.3d at 596 (quoting *Chesapeake Paper Prods. Co. v. Stone & Webster Eng’g Corp.*, 51 F.3d 1229, 1235 (4th Cir. 1995)). The Fifth Circuit has stressed that “even legal errors cannot be reviewed unless the challenging party restates its objection in a [Rule 50] motion.” *Id.*

The Federal Circuit has recognized that “[d]enials of summary judgment are not appealable.” *Novo Nordisk A/S v. Becton Dickinson & Co.*, 304 F.3d 1216, 1221 (Fed. Cir. 2002). Our departure today defies this classical procedural rule. Here, TCL's pre-trial motion for summary judgment was denied by the district court, no post-trial motion

was filed, and Section 101 was not mentioned in the district court's final decision or requested for reconsideration. Yet the majority accepts this untried and undecided issue for our appellate decision, and decides it, overriding the judgment entered on the jury verdict. That is not fair and reasonable judicial process.

TCL cites the Federal Circuit's statement in *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509 (Fed. Cir. 2012), that a party is "not required to ignore the writing on the wall and press the issue over and over again to preserve it for appeal." TCL Reply Br. 3–4. In *ePlus*, the defendant raised an indefiniteness issue in a post-trial motion for judgment as a matter of law, and although the district court held the issue waived, this court disagreed, citing the defendant's several arguments of indefiniteness of the means-plus-function claim. This "over and over" usage in *ePlus* does not excuse the total abandonment of the issue herein.

The Supreme Court reminds us that Rule 50 implements fairness:

Moreover, the "requirement of a timely application for judgment after verdict is not an idle motion" because it "is . . . an essential part of the rule, firmly grounded in principles of fairness."

Unitherm, 546 U.S. at 401 (quoting *Johnson v. New York, N.H. & H.R. Co.*, 344 U.S. 48, 53 (1952)); see *Johnson*, 344 U.S. at 53 ("Rewriting the rule to fit counsel's unexpressed wants and intentions would make it easy to reintroduce the same type of confusion and uncertainty the rule was adopted to end.").

In a few situations, courts have excused the inadvertent omission of a Rule 50 motion. However, such excuse is not here offered. In this case, the question of Section 101 eligibility was not pursued and not mentioned at trial and was not raised by post-trial motion. Whether viewed as

abandoned or waived, the Section 101 issue is not before us for determination *ab initio* on appeal.

On accepting the appeal and deciding for itself the question of Section 101 eligibility, the majority further errs, as I next outline.

2.

The majority's decision on Section 101 is not in accord with law and precedent

Applying Supreme Court guidance on Section 101, and the now-extensive body of precedent applying that guidance, it is apparent that the claims of U.S. Patent No. 7,149,510 (“the ’510 patent”) are not for an abstract idea. A cursory glance at claims 1 and 5, the only claims in suit, shows their technological substance and inventive step:

1. A system for controlling access to a platform, the system comprising:
 - a platform having a software services component and an interface component, the interface component having at least one interface for providing access to the software services component for enabling application domain software to be installed, loaded, and run in the platform;
 - an access controller for controlling access to the software services component by a requesting application domain software via the at least one interface, the access controller comprising:
 - an interception module for receiving a request from the requesting application domain software to access the software services component;
 - and a decision entity for determining if the request should be granted wherein the decision entity is a security access manager, the security

access manager holding access and permission policies; and

wherein the requesting application domain software is granted access to the software services component via the at least one interface if the request is granted.

5. The system according to claim 1, wherein:

the security access manager has a record of requesting application domain software; and

the security access manager determines if the request should be granted based on an identification stored in the record.

'510 patent, col. 11, ll. 2–23, 46–51.

The district court, in its pre-trial denial of summary judgment, applied the Supreme Court's two-step analysis from *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014). Ericsson summarizes this analysis, starting with *Alice Corp.*'s Step 1:

At Step 1, the claims are directed not to an abstract idea, but to a technological solution to a technological problem. The district court correctly found that the claims recite a technological “system”—one using a “layered architecture” that isolates an “application domain” containing apps from phone “services” using an “interception module”—that enables users to control apps' access to phone features. That is an improvement in the operation of computers—enabling users to mitigate security risks from downloaded apps—not an abstract idea.

Ericsson Br. 18. The district court concluded that Step 1 is met and that “the claims are not directed to an abstract idea but rather to an improved technological solution to mobile phone security software.” Summ. J. Order at *7.

The panel majority finds that “the claims . . . require nothing more than this abstract idea” of “controlling access to, or limiting permission to, resources.” Maj. Op. at 13. The majority offers analogy to a library’s requirement of a library card in order to obtain access to a book. Maj. Op. at 15 (“Controlling access to resources . . . is pervasive in human activity [such as] in libraries (loaning materials only to card-holding members).”). I agree that the idea of controlling access to library books is an ancient idea, but this does not convert every method of controlling access, no matter how novel and unobvious and technologically complex, into an ineligible abstraction. The analogy between a library card and this complex multi-layered system of computer-implemented interception, conversion, and control, does not convert the subject matter of claims 1 and 5 into an abstract idea. As the Supreme Court recognized in *KSR Int’l Co. v. Teleflex Inc.*: “We build and create by bringing to the tangible and palpable reality around us new works based on instinct, simple logic, ordinary inferences, extraordinary ideas, and sometimes even genius.” 550 U.S. 398, 427 (2007).

The district court also discussed Step 2 of *Alice Corp.* As summarized by Ericsson:

The court also correctly found that, at Step 2, the claims recite an inventive, patent-eligible application of any purported underlying abstract idea. The ’510 Patent’s layered architecture is a specific implementation of a mobile-phone security system that was unknown in the prior art.

Ericsson Br. 18. Claims 1 and 5 are directed to a specific solution to a technological problem, as discussed in *Enfish, LLC v. Microsoft Corp.*, where claims that recited a “data storage and retrieval system” with a “logical table” that stores information, were found to be directed to “a specific type of data structure,” not an abstract idea. 822 F.3d 1327, 1336, 1339 (Fed. Cir. 2016). Again in *Smart Systems*

Innovations, LLC v. Chicago Transit Authority, this court explained that claims that are “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” do not recite an abstract idea. 873 F.3d 1364, 1372 (Fed Cir. 2017).

The panel majority does not discuss the district court’s findings and does not apply the *Alice Corp.* criteria or draw on the guidance of precedent. Instead, the majority creates new Section 101 law. The majority observes that the technologic description in the specification is more extensive than the description in the claims, stating that only the specification describes “a particular three-layer arrangement of software, in which the bottom layer is ‘arranged into vertical functional software stacks’ and ‘horizontally partitioned functional software units,’” and therefore that the technology “cannot provide an inventive concept at step two because it is not recited in claims 1 or 5.” Maj. Op. at 18.

The majority appears to require that all of the technologic information in the specification must be recited in the claims in order to avoid abstractness of the claims. This is a new requirement for claims, and not only conflicts with the opportunity to present claims of varying scope, but also conflicts with the principle that claims are intended to be concise statements of the patented invention as distinguished from the prior art. See 35 U.S.C. § 112. It is not the law and is not the practice that every descriptive and distinguishing detail from the specification must be stated in the claims.

Section 101 does not impose claim requirements beyond those of Sections 102, 103, 112, and the rest of patent law. The majority’s new law of claim content brings fresh uncertainty to an already strained innovation incentive.

3.

The majority contravenes the statutory estoppel of PTAB proceedings between the same parties

Claims 1 and 5 recite the limitations of the software services component, the interface component, the access controller, the interception module, and the security access manager, in multi-layered architecture. The panel majority disposes of this claim content as irrelevant to Section 101, as “conventional applications of computer technology.” Maj. Op. at 20 (citing Summ. J. Order at *8). The district court in its denial of summary judgment had referred to the PTAB’s finding that a person of ordinary skill in the art would not be “motivated to combine computer-based security software with the relevant mobile platform technology,” the PTAB holding the claims patentable under Section 103.³

The PTAB decision is final and binding as to “any ground that the petitioner raised or reasonably could have raised during that inter partes review.” 35 U.S.C. § 315(e)(2). The panel majority effectively holds that the district court is not bound by the PTAB decision and findings. Maj. Op. at 20 (“[The PTAB’s] conclusion could not demonstrate that the claims here possess an inventive step because the feature that was allegedly lacking in the combination (*i.e.*, technology specific to mobile phone platforms) is not recited in the claims at issue.”).

The district court had observed that a “pragmatic analysis of § 101 is facilitated by considerations analogous to those of §§ 102 and 103 as applied to the particular case,”

³ *TCL Corp. v. Telefonaktiebolaget LM Ericsson*, No. IPR2015-01605, 2017 WL 505375, at *9–13 (P.T.A.B. Jan. 25, 2017) (“PTAB Dec.”).

quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015). Summ. J. Order at *8. The majority acknowledges that the district court applied the PTAB ruling and stated that a person of skill in the field of the invention would not be “motivated to combine computer-based security software with the relevant mobile platform technology.” Maj. Op. at 20 (quoting Summ. J. Order at *8 (quoting PTAB Dec. at *9–13)). This PTAB decision created an estoppel in the district court. 35 U.S.C. § 315(e).

The majority holds that on appeal from the district court, we can take up issues on which the district court is estopped. That cannot be the intent of the America Invents Act, of which estoppel is a foundation. Nonetheless, exercising liberation from the statutory estoppel, the majority finds that the system of claims 1 and 5 does not “possess an inventive step,” Maj. Op. at 20, despite the PTAB’s ruling of non-obviousness. However, the PTAB ruling is final and binding between these parties.

4.

Claim limitations cannot be discarded in order to impart abstractness to the residue of the claim

The majority holds that “the bulk of the claim provides an abstract idea, and the remaining limitations provide only necessary antecedent and subsequent components.” Maj. Op. at 14. Thus the majority holds that the limitations in the claims are irrelevant, and that the claimed “necessary antecedent and subsequent components” of the “highly technical” composition of the claims are not considered in deciding whether the claims are for an abstract idea. Maj. Op. at 14, 16 n.2.

The majority discards the claim limitations, contrary to the Supreme Court’s admonition to examine “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” of the idea. *Alice Corp.*, 573 U.S. at 217 (internal quotation marks omitted). At the trial, witnesses described the claim limitations, including the multi-layered structure of the software services component, the middleware and the application domain layer, the access controller, and the interceptor module. Witnesses explained that all of these limitations are in the claims. This evidence must be considered with respect to Section 101 eligibility.

Section 101 is a question of law applied to specific facts. Precedent illustrates the factual nature of the inquiry into subject matter eligibility. For example, in *Aatrix Software, Inc. v. Green Shades Software, Inc.*, claims directed to a “data processing system for designing, creating, and importing data” into a “viewable form” were analyzed to apply their factual foundations to Section 101. 882 F.3d 1121, 1123, 1128 (Fed. Cir. 2018). Again in *Data Engine Technologies, LLC v. Google Inc.*, claims for an “electronic spreadsheet system for storing and manipulating information” by “a specific method for navigating through three-dimensional electronic spreadsheets” were analyzed to show the non-abstract quality of the limitations to the claimed subject matter. 906 F.3d 999, 1005, 1007–08 (Fed. Cir. 2018). In *Ancora Techs., Inc. v. HTC America, Inc.*, the technology for improving security was found to be “a non-abstract computer-functionality improvement if done by a specific technique that departs from earlier approaches to solve a specific computer problem.” 908 F.3d 1343, 1348 (Fed. Cir. 2018).

No evidence and no precedent supports the majority’s theory that the limitations in claims 1 and 5 constitute the well understood, routine, and conventional activity that is the foundation of “abstract idea” unpatentability.

The majority further reasons that the claims are for an abstract idea because “[c]ontrolling access to resources is

exactly the sort of process that ‘can be performed in the human mind, or by a human using a pen and paper.’” Maj. Op. at 15 (quoting *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011)). The majority discards the vast evidence of technological complexity and advance, and announces that the system “merely add[s] computer functionality to increase the speed or efficiency of the process.” Maj. Op. at 21. There was no evidence that this complex multi-level digital method can be performed by pen and paper.

The claimed system was not shown or suggested to be a computer substitute for pen and paper, as the majority now finds.

5.

An invention is defined by the claims, not the boiler-plate at the end of the specification

My colleagues also hold that, despite the technologically detailed claim limitations, the claims are for an abstract idea because of the final paragraph of the ’510 patent specification, the terminal boiler-plate beloved of patent draftsmen. This paragraph concludes the specification as follows:

While what has been described constitute exemplary embodiments of the invention, it should be understood that the invention can be varied in many ways without departing from the scope thereof. For example, although the present invention has been described primarily in connection with a platform for a mobile terminal for a wireless telecommunications system, the invention can also be used in connection with platforms for other products. Because the invention can be varied in many ways, it should be recognized that the invention should be limited only insofar as is required by the scope of the following claims.

'510 patent, col. 10, ll. 57–67; *see* Maj. Op. at 20. It is well recognized that such a generalized wrap-up does not enlarge the claims beyond what is described and enabled in the specification. *See, e.g., D Three Enterprises, LLC v. SunModo Corp.*, 890 F.3d 1042, 1051 (Fed. Cir. 2018) (“This boilerplate language at the end of the . . . specification is not sufficient to show adequate disclosure of the actual [invention].”).

The majority’s ruling that such general text converts the claimed subject matter into abstractness will import Section 101 invalidity into virtually all existing patents.

6.

Ericsson has the right to respond to TCL’s Section 101 arguments on this appeal

The panel majority also holds that Ericsson waived the right to argue that the claim limitations of the interception module and the software services component contribute to Section 101 eligibility; the majority’s reason is that Ericsson did not present evidence construing this technology at claim construction. Maj. Op. at 18–19 (“[T]he time to make that argument would have been at claim construction.”). However, these aspects were not in dispute in the infringement trial, for there was no dispute about the meaning of “interception module,” no dispute about the meaning of “software services component,” and no dispute about the application of these terms to TCL’s system.

A party cannot have waived its right to respond to arguments and issues that are presented for the first time on appeal. *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1356 (Fed. Cir. 2001) (“When a potentially material issue or argument in defense of the judgment is raised for the first time . . . , fundamental fairness requires that the [opposing party] be permitted to respond.”); 16A Charles A. Wright, Alan R. Miller, and Edward H. Cooper, *Federal Practice & Procedure* § 3974.3 (3d ed. 1999) (a reply is

proper where the opponent “has introduced a new issue or basis for upholding [or reversing] the decision below”).

Conclusion

The court errs in holding that Section 101 eligibility is before us on appeal although not decided or preserved at trial, and the court errs in holding that claims 1 and 5 are ineligible for patenting. I respectfully dissent.