No. _____

In The
Supreme Court of the United States

MANTISSA CORP.,

Petitioner,

v.

ONDOT SYSTEMS, INC., LONE STAR NATIONAL BANK, LONE STAR NATIONAL BANCSHARES-TEXAS, INC.,

Respondents.

On Petition For A Writ Of Certiorari To The
United States Court Of Appeals
For The Federal Circuit

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1) Has this Court's *Alice* exception to patent-eligibility under 35 U.S.C. § 101 been improperly expanded to cover computer-implemented inventions that, while not necessarily improving the functioning of a computer, do "effect an improvement in [another] technology or technical field"?

2) Should courts acts as fact finders in determining material factual issues underlying patent-eligibility under § 101?

3) Should the abstract-idea exception to § 101 require considering pre-emption?

CORPORATE DISCLOSURE STATEMENT

Pursuant to Rule 29.6, Petitioner Mantissa Corporation states it has no parent or publicly held company that owns 10% or more of its stock.

RELATED PROCEEDINGS

There are no proceedings directly related to the case in this Court.

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INTRODUCTION

This is a plea to clarify the *Alice* two-step, abstract-idea exception to patent eligibility for computer-implemented inventions. While the exception was once narrowly construed, the lower courts have broadened it to deem most computer-implemented inventions patent-ineligible.

The claims at issue provide methods of protecting use of an identity over a computerized network and cover a product specifically developed by Petitioner to solve the problem of identity fraud over computerized networks by permitting an individual to control use of their identity, as opposed to the conventional and routine reactive measures of preventing identity fraud that were prevalent at the time of the invention in 2005.

Under *Alice*, lower courts have deemed numerous computer-implemented inventions patent-ineligible as merely ideas implemented with generic computers. However, a generic computer is a tool and all inventions can be characterized as ideas implemented with tools whether the tools be computers, gears, motors, transistors, or chemicals. The exception to the exception has been ideas that improve computer functionality. This is an arbitrary distinction based on an apparent bias against computers as valid tools for implementation of ideas. As explained in *Alice*, patent-eligibility for computer-implemented inventions may be based on improving not only a computer as a tool but also "any other technology or technical field."

The second step in the *Alice* exception opens the door for patent-eligibility of computer-implemented inventions if claim elements are "sufficient to ensure the

patent in practice amounts to significantly more than a patent upon the [abstract idea] itself". However, *Alice* appears to close the door for inventions "that "merely require generic computer implementation", language seized on by lower courts to deny patent-eligibility for computer-implemented inventions that do not improve the functioning of a computer per se.

Compounding the inconsistencies in the law for computer-implemented inventions, lower courts are dismissing or are themselves finding material facts in order to rule claims patent-ineligible in violation of the (i) presumption of validity of issued patents and (ii) jury's role to find facts. One solution suggested in *Alice* would be an analysis of whether claims found directed to an abstract idea pre-empt all uses of an abstract idea.

OPINIONS AND ORDERS BELOW

The district court's opinion and order of summary judgment on respondents' motion for judgment on the pleadings is unreported. App. 1a-38a. The order of the Federal Circuit panel affirming the district court's opinion and order is unreported and available at 796 F. App'x 738 (Fed. Cir. 2020). App. 39a-40a. The Federal Circuit's denials of panel and en banc rehearings are unreported. App. 41a-42a.

JURISDICTION

The Federal Circuit entered judgment on March 3, 2020. App. 39a-40a. It denied Mantissa's petitions for rehearing on May 4, 2020. App. 41a-42a. This Court extended all deadlines for filing petitions for certiorari due to COVID-19 on March 19, 2020. In this case, the deadline was extended to October 1, 2020. This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY PROVISION INVOLVED

The Patent Act 35 U.S.C. § 101 provides:

> 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.

The Patent Act 35 U.S.C. § 282(a) provides:

> A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

STATEMENT OF THE CASE

The Patents and the Technology

More than fifteen years ago, Petitioner Mantissa Corporation developed the iDovos® system (www.mantissa.com/dotcom2020/mantissa-product-families/idovos-identity-control/), a software-and-computer-based improvement to computerized transaction networks that allows an individual—rather than transacting institutions such as banks, hospitals, and credit reporting agencies—to control use of the individual's identity information without exposing the information for potential misuse by others. The U.S. Patent and Trademark Office ("PTO") examined the improvement and granted it patent protection in U.S. Patent Nos. 7,779,456 ("456") and 8,353,027 ("027") (collectively, "Patents") each titled "System and Method for Enhanced Protection and Control Over the Use of Identity". CAFC Appx. 39-59, 60-79.

The improvement was a solution to the problem of identity fraud over computerized networks. 456, 1:20-23[1] (CAFC Appx. 46). The rise of the Internet made identity information easier to steal by hacking. CAFC Appx. 1588. And it enabled imposters to misuse identity information with more anonymity than in brick-and-mortar transactions. *Id*. At the time of the invention, the routine practices for preventing identity misuse were reactive.

> The most common response involves monitoring the use of identity resources and notifying a consumer after detection of an unusual use of the identity. For example, a credit card company can detect unusual purchase activity and contact the account holder to determine whether the charges were authorized…Such methods are thus reactive in that the damage has already been done, and otherwise lack the ability to prevent or undo the ill effects of the damage in the first place.

456, 1:40-52 (CAFC Appx. 46).

The improvement included placement of an independent "service provider", uniquely controlled by an "entity" (e.g., bank customer), between a "user" (e.g., a bank) and the "entity". In the Patents, the "service provider" allows the "entity" to automatically respond to requests for use, e.g., requests for debiting, of a financial account at the bank according to rules specified by the improved system, types of conditions specified by the user, and conditions specified by the "entity". For example, the system could allow a bank customer to control her bank to deny all attempted charges at gas stations except for those between the hours of 6:00pm and 7:00pm when the bank customer would be driving home from work.

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[1] Citations to the Patents will be by Patent column number and line number, separated with a colon.

Other prior art solutions included a "smart instrument," a personal "credit scanning device", and "a bank as a third-party to a transaction as common as the simplest purchase." *Id*. at 1:56-64 (CAFC Appx. 46). They failed in part "because an identity owner has no means of proactively controlling the use of his identity and identification information with a system designed specifically for such control [as the invention provides]." *Id*. at 1:64-47.

Mantissa asserted claims 1-7 and 11-29 of 456 and claims 1-3 and 7-29 of 027 (collectively, "Claims") on, generally, methods of protecting use of an identity over a computerized network providing, *e.g.*, identity-owner control of identity, conditioned-use of identity, use of "insufficient" identity, and an improved identity-owner interface.

Respondent Ondot, formed in 2011 (CAFC Appx. 2275), admitted, after experiencing credit and debit card fraud, its founders

> were frustrated that the financial services industry lacked sufficient mechanisms for guarding against fraudulent activity. Ondot realized that a key component to combatting fraud was to enable end-users to directly identify circumstances under which their credit or debit card could not be used.

CAFC Appx. 143. Ondot developed a computer system called "CardControl" that allows an identity owner (i.e., "entity") to securely interface with her bank over a computerized network to "proactively control" use of her account. CAFC Appx. 143, 2772, 395, 575, 613. Ondot's test case was with Respondents Lone Star National Bank and Lone Star National Bancshares-Texas, Inc. which offer "Lone Star LSNB Card Manager". CAFC Appx. 2057.

Relevant Procedural History

Respondents filed a Motion for Judgment on the Pleadings under §101 on Feb. 8, 2017. CAFC Appx. 88. On May 30, 2017, the district court issued a minute entry order converting the Motion for Judgment on the Pleadings to a Motion for Summary Judgment ("MSJ"). CAFC Appx. 90. The stated purpose for the conversion was to consider facts outside of the pleadings. CAFC Appx. 2524-2525.

On June 9, 2017, Mantissa filed a Brief Regarding Defendants' MSJ Under §101. CAFC Appx. 2224-2239. Mantissa argued the Claims were patent-eligible and in support, provided a declaration of Gary Dennis as one of ordinary skill in the art on: existing technology; the improvement provided by the Claims to the existing technology; the inventive concepts in the Claims; and routine and conventional practices in the industry (CAFC Appx. 2248-2254) as appropriate under steps one and two of *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014). Also, Mantissa argued summary judgment would not be proper because Respondent Ondot, the developer of the accused system analogous to Mantissa's patented product and the Claims, had refused to respond to Mantissa's pro forma discovery requests, some of which related to patent-eligibility. CAFC Appx. 2236-2238, 2390-2392.

On June 16, 2017, Respondents filed a Response to Plaintiff's Brief Regarding Defendants' MSJ under 35 U.S.C. §101. CAFC Appx. 90. Respondents provided no factual evidence, instead arguing there were no factual issues under 35 U.S.C. §101 in the case. CAFC Appx. 2308.

On June 23, 2017, Mantissa replied providing a Rule 56(c)(4) declaration of Dr. Chatterjee on factual issues relating to patent eligibility. *See* CAFC Appx. 2376-2377 (citing CAFC Appx. 2404-2409). Mantissa also noted (i) Dennis's "testimony that the claimed invention was designed to improve existing computer network technology", CAFC Appx. 2380 (citing CAFC Appx. 1777-1779) and 456, claims 1 and 5 (CAFC Appx. 54-56), and (ii) Chatterjee's testimony "explaining that the claims themselves cover improvements and a nonconventional approach to curb identify theft compared to the reactive measures in the prior art and the problems identified with those methods", "noting that Equifax's Head of Fraud Services acknowledged growing concern of identity theft in 2005 and referred to the patented invention as 'unique[]'", "noting that 'reactive' approaches, such as LifeLock, utilize enormous amounts of data which increase the need for data storage, network bandwidth, analytics, and processing power compared to the claimed invention", and noting "Ondot itself called its product 'radical' and 'innovative' and 'cutting edge'". CAFC Appx. 2380 (citing CAFC Appx. 2405-2410).

On August 1, 2017, the district court held a teleconference to discuss Mantissa's request for responses to its discovery requests regarding patent eligibility. The district court believed any responses to the discovery requests were irrelevant to the MSJ. CAFC Appx. 2551-2552. Accordingly, it denied Mantissa's request, set a MSJ hearing, and precluded expert testimony at the hearing, including that of experts Dennis and Chatterjee. CAFC Appx. 2551-2552, 91, 2560, 2564.

At the MSJ hearing on August 7, 2017, Mantissa emphasized the identity-owner control limitations in claims 14 and 17 of 456. See CAFC Appx. 2506-2507, 2621-2623, 2642-2644. Three days later, the district court issued a 37-page Opinion granting the MSJ based on four new publications it raised *sua sponte* and relied upon to find the Claims abstract under *Alice* step one. Appx. 19a-22a.

The Federal Circuit heard oral argument on February 25, 2020 and issued a Rule 36 affirmance of the lower court's opinion on March 3, 2020. App. 39a-40a_. Mantissa filed petitions for panel and en banc rehearings, which were denied on May 4, 2020. App. 41a-42a.

REASONS FOR ALLOWING THE WRIT

I. This Court's *Alice* exception to patent-eligibility under 35 U.S.C. § 101 has been improperly expanded to cover computer-implemented inventions that, while not necessarily improving the functioning of a computer, do "effect an improvement in [another] technology or technical field".

A. The *Alice* exception to § 101 could be addressed by § 102/103 for computer-implemented inventions.

Congress provided that "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" is patent-eligible. 35 U.S.C. § 101. The standard is "new and useful", without indication of an exception for anything that might also be "abstract". This Court made exceptions to § 101 for scientific truths, laws of nature and natural phenomenon. *See Mackay Radio & Telegraph Co. v. Radio Corp. of Amer.*, 306 U.S. 86, 94 (1939). In 1972, this Court added "abstract" ideas to the list. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) ("abstract intellectual concepts"). In *Gottschalk*, the Court found a claimed method

that "varies the ordinary arithmetic steps a human would use" and "carried out in existing computers long in use" was not a protectable "process" under § 101. *Id*. at 64 n.2, 67. However, the analysis—an obvious idea carried out on an old computer—more-closely follows 35 U.S.C. § 102/103 than § 101. Further, the Court based the new exception on another case holding that a claimed rubber-tipped pencil was essentially an obvious combination of an old pencil and a rubber eraser, again an analysis more under today's § 102/103 than § 101. *Id*. (quoting *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. 498, 507 (1874) (an "idea, of itself, is not patentable"); *id* ("[t]he idea of this patentee was a good one, but his device to give it effect, though useful, was not new.").

Both *Rubber-Tip* and *Gottschalk* were careful to preserve patent-eligibility for ideas implemented in new, useful devices. *See id.* ("a new device by which [an idea] may be made practically useful is [patentable]"); *Gottschalk*, 409 U.S. at 67 ("a scientific truth, or the mathematical expression of it, is not a patentable invention, [but] a novel and useful structure created with the aid of knowledge of scientific truth may be"). At the same time, the initial standard for application of the "abstract idea" exception was high—"so manifestly abstract as to override the statutory language of 101", while 101 itself was considered a "coarse eligibility filter". *Research Corp. Techs., Inc., v. Microsoft Corp.*, 627 F.3d 859, 869 (Fed. Cir. 2010).

Today the standard for the exception is no longer "manifestly abstract" but is still essentially a § 102/103 analysis without the rigors and underlying factfinding

thereof—essentially asking if it was obvious to implement an old idea with an old computer. *See, generally, Alice*, 134 S.Ct. at 2359 (finding patent-ineligible the old idea of "intermediated settlement on a generic computer"). As such, we must ask whether the abstract-ideas exception remains useful or is even necessary. From a statutory perspective, 35 U.S.C. § 102/103 does the heavy lifting for § 101. If a process implemented with tools, including generic computers, satisfies § 102/103, it likely satisfies the "new…processes…or improvements thereof" language of § 101. The ubiquity of published ideas and the age of computers means much prior art can be asserted against computer-implemented inventions to sufficiently test for patentability. The rules for doing so are evidence-based and well-developed in both prosecution (including *inter partes* reviews and reexaminations) and litigation. For other concerns about abstract or overly-broad inventions, computer-implemented inventions are still excepted from patent protection by other invalidity tools and defenses such as Covered Business Method Patent Reviews, 37 CFR § 42.300[2], and the prior use defense in 35 U.S.C. § 273.

B. Computer-implemented inventions are patent eligible under *Alice* step one if they "purport to…effect an improvement in any other technology".

Alice asks if computer-implemented claims "[i] purport to improve the functioning of the computer itself or [ii] effect an improvement in any other technology or technical field." *Alice*, 134 S.Ct. 2347 at 2351. With few exceptions,

[2] 37 CFR § 42.300(d) ("applicable until September 15, 2020, except that the rules shall continue to apply to any petition for a covered business method patent review filed before the date of repeal").

only part (i) of this test has been followed by the Federal Circuit and the district courts. *See, e.g.*, *Enfish,* F.3d at 1335 (admitting "some improvements in computer-related technology when appropriately claimed are undoubtedly not abstract"); *compare McRO*, 837 F.3d at 1316 ("achieve an improved technological result in conventional industry practice"). The vast majority of § 101 cases instead find claims-at-issue are not directed to improving the functioning of a computer itself while overlooking part (ii) of the test, "effect[ing] an improvement in any other technology". *Alice*, 134 S.Ct. at 2351. In doing so, the Federal Circuit (and district courts following it) abandon or distort the distinction in *Alice* between the cases *Parker v. Flook*, 437 U.S. 584, 594(1978) (patent-ineligible because "formula itself was an abstract idea, and the computer implementation was purely conventional"), *Alice* at 2358 (citation omitted) and *Diamond v. Diehr*, 450 U.S. 175, 188 (1981); ("patent eligible because they improved an existing technological process [curing rubber], not because they were implemented on a computer.")[3]

Even the Federal Circuit in *Enfish*, which found eligible computer-implemented claims that improve the functioning of a computer, showed its inexperience with computer-related technology and a bias that computer-implemented inventions are patent-ineligible as abstract.

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[3] The conflicting and fractured state of §101 jurisprudence as applied by the Federal Circuit is evident in the ineligibility decision in *American Axle.* Six judges voted against and six judges voted for granting a petition for rehearing en banc while arguing whether the rigors of other invalidity defenses, including "factfinding based on expert testimony" should be applied to §101 instead of "convert[ing]fact questions into legal ones and eliminate[ing] the knowledge of a skilled artisan." *American Axle*, 967 F.3d at 1312, 1316 (CJ Moore, dissenting).

> The Supreme Court has *suggested* that claims "purport[ing] to improve the functioning of the computer itself," or "improv[ing] an existing technological process" might not *succumb* to the abstract idea exception.
>
> * * *
>
> We do not read *Alice* to broadly hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at step two. Indeed, some improvements in computer-related technology when appropriately claimed are undoubtedly not abstract, such as a *chip architecture, an LED display*, and the like.
>
> * * *
>
> We thus see no reason to conclude that all claims directed to improvements in computer-related technology…are abstract and necessarily analyzed at the second step of *Alice*, nor do we believe that *Alice* so directs. Therefore, we find it relevant to ask *whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea*, even at the first step of the *Alice* analysis.

Enfish, F.3d at 1335 (emphasis added). First, "an LED display", as highly technical physical device, is so "undoubtedly not abstract", it does not belong in a list of technology informing others what is and is not abstract. Meanwhile, "chip architecture", a rarely-used term possibly confused with "computer architecture", is more of a concept and much less "undoubtedly not abstract". The use of "chip architecture, LED display, and the like" is as if to show a detailed understanding of electronics but subtly indicates a bias for hardware and against software in patent eligibility.

Second, *Enfish* appears to have supplemented the *Alice* step one test, whether claims are directed to an "abstract" idea, with a part of the *Alice* step two test, whether claims "purport to improve the functioning of the computer itself".

Alice, 134 S.Ct. at 2351. By omission, *Enfish* thus indicates other computer-related inventions are "abstract" even if they, satisfy the other part of *Alice* step two, "purport to…effect an improvement in any other technology or technical field". *Id.* at 2351. However, the language of § 101 and Alice do not indicate that in the category of computer-implemented inventions, only improved computers are eligible. That, however, was the thrust of the district court and the Federal Circuit panel at oral argument in this case, and of numerous other lower court decisions. App. 23a-24a; s*ee, e.g., Customedia Tech., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1364 (Fed. Cir. 2020) (finding claims patent-ineligible after repeatedly asking whether they improve computer functioning without asking whether they improve "any other technology of technical field" as in *Alice*); *Trading Tech. Int'l, Inc. v. IBG LLC*, 921 F.3d 1378, 1383 (Fed. Cir. 2019) (finding a claim patent-ineligible because it "focuses on improving the trader, not the functioning of the computer"). Thus, control of patent eligibility under 101 has been wrested from Congress by judges applying their own experience in determining what (i) is "abstract" and (ii) are improvements in a technical field.

C. Ignoring a test in *Alice*, the lower court did not evaluate whether the Claims "purport to…effect an improvement in any other technology or technical field".

In this case, the Federal Circuit and the district court selectively-ignored tests in *Alice* for computer-implemented inventions and simply asked if the claims improve "computer capabilities".

> The crucial question is "whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are

> invoked merely as a tool."…Here, the claims simply recite, in broad, generic fashion, that the methods they describe "be[] executed on electronic computer hardware in combination with software."

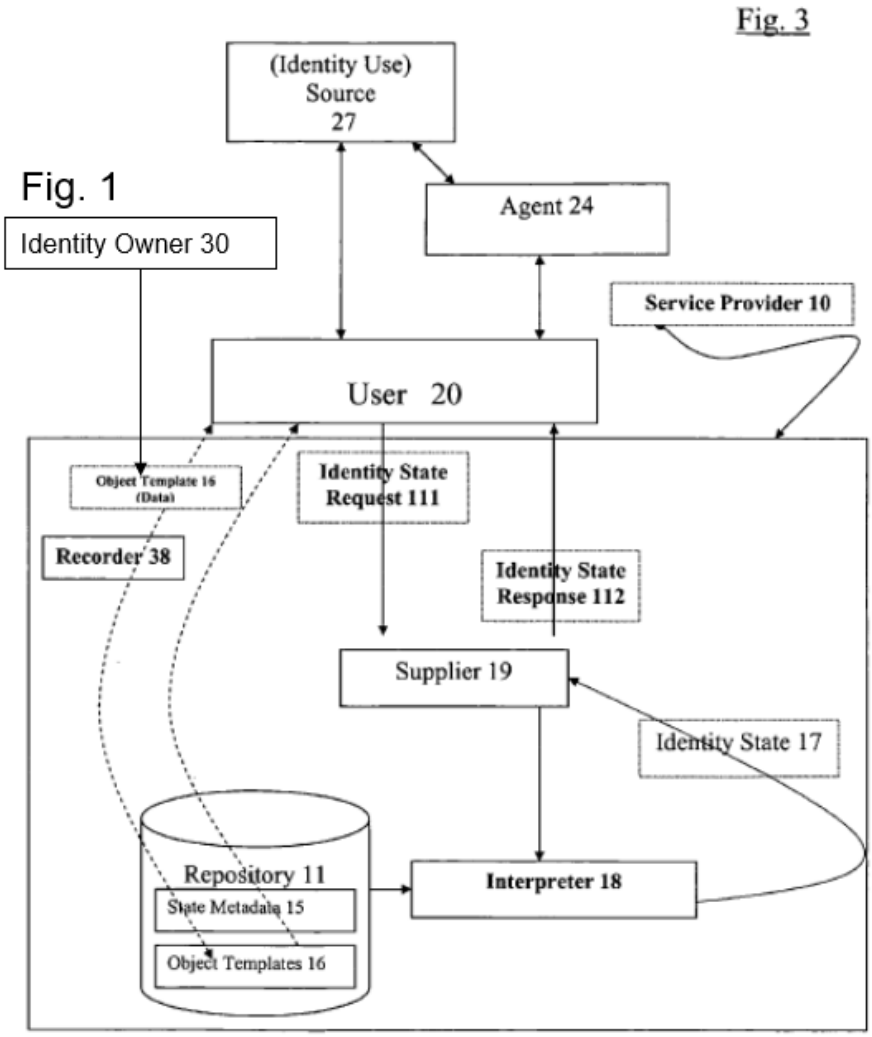
App. 23a. However, the Claims, in the context of the Patents, the prior art, and the prosecution history, and as confirmed by the unrebutted testimony in two experts' declarations, clearly purport to improve then-existing technology in computerized transaction networks in order to minimize fraudulent use of identity.

First, the Patents describe conventional industry practices to prevent fraudulent use of identity over computerized transaction networks. *See, e.g.*, 456, 1:26-34 ("[w]ith the increased technical and Internet literacy of our culture,…it has now become necessary [] to protect our most precious identification information from use by an unscrupulous stranger [or] a disgruntled employee"); 1:29-34 (referencing current "ease that identification information can be used to commit fraud against an identity owner"); 1:41-43 ("most common response involves monitoring the use of identity resources and notifying a consumer after detection of an unusual use of the identity"); 1:53-55 ("[c]urrent technology, as disclosed in U.S. Pat. Nos. 6,529,885, 6,811,082, 6,817,521, and 6,332,134 [each directed to transaction processing over computerized networks] highlights a fundamental failing in the current state of the art")

Second, the Patents describe the means and embodiments for improvement to the conventional industry practices. *See, e.g.*, 456, 1:64-67 ("an identity owner has [] means of proactively controlling use of his identity and identification information with a system designed specifically for such control"); 2:2-6 ("embodiments of the

invention…giving an individual or other entity increased control over implied or direct use of his identity").

Third, the Claims capture the improvements. For example, limitations capturing identity-owner-control can be seen in claim 14 of 456 with reference to the embodiment in combined Figures 1 and 3 of 456 below.[4]



[4] *See, also,* CAFC Appx. 2505-2507 (the combined Figures annotated with arrows from the language of claims 14 and 17 were presented at the motion-for-summary-judgment hearing leading to this appeal).

As background, claim 14 requires four parties to the transaction—the "entity", i.e., identity owner, the "user" 20 (e.g., bank), the "service provider" 10 and the "source" 27 (e.g., merchant). The "source" is implied in claim 14 as the source of the claimed "request by the user [to the service provider] to authorize use of the identity of the entity". For example, an imposter with the identification of the identity owner attempts a transaction at a merchant. The merchant sends a request to the bank for the attempted transaction that would use the identification, e.g., debit the identity owner's account and credit the merchant's account in this case. The bank sends a related but different request to the service provider to determine whether the proposed use is authorized, and the service provider responds.

Before the attempted transaction, claim 14 provides identity-owner-control by (i) "establishing, by a user, a set of desired identification information parameters; sending, from the user to a service provider, the set", which is represented by the two-headed dashed arrow between User 20 and the Object Templates 16 in Repository 11 of Service Provider 10, and (ii) "obtaining, by the service provider **from the entity**, information from the entity consistent with the set, the **information including at least one pre-determined condition**", which is represented by the arrow from Identity Owner 30 to Object Template 16 (Data) in Service Provider 10. In addition, the claim requires the "service provider cannot provide the permission unless consistent with the intent of the entity as reflected in the results of said obtaining [information from the entity consistent with the set]." *See* 456, 1:64-67 (CAFC Appx. 46) ("an identity owner [can] proactively control[] use

of his identity and identification with a system designed specifically for such control"); *see, e.g.*, CAFC Appx. 2226.

Thus, at least claim 14 and other claims limited to identity-owner-control[5] satisfy *Alice*. The analysis should have stopped here. Instead, the lower court and the appeal panel compared generalizations of the Claims, seemingly without reviewing the Patents, to hypotheticals of an identity owner (or agent thereof) approaching a bank teller to withdraw money, or a person acting as an "intermediary" between two opposing transacting parties. However, these hypotheticals fail upon a review of the Patents and a basic understanding of the Claims for at least the following reasons:

1) the hypotheticals mistakenly equate a bank or merchant's conditions of verification of identity *before* any use of the identity with the claimed "at least one pre-determined condition" of a particular use of the identity (checking ID before any purchase vs. checking whether a purchase at a gas station is allowed);[6]
2) in the hypotheticals, the identity owner sends a request to the user to debit the identity owner's account; in at least claim 14, the user sends a request to the service provider to determine whether to debit the identity owner's account (thus

[5] Identity-owner control limitations are in claims 11-14, 17, and 23 of 456 and claims 7-17, 19, 20, 22, 23, 25, 26, 28 and 29 of 027.

[6] To be sure, the Patents and Claims are not about adding steps to verify identity, a brute force solution described in prior art cited in the Patents and suggested at the Federal Circuit panel hearing, but rather elegantly modifying conventional transaction processing over computerized networks to allow an identity owner (rather than a bank or merchant) to control the types use of identity ordinarily sufficient for use.

permitting real time control of use of the identity without the need for the identity owner to be constantly present in the network);

3) the hypotheticals often are missing the claimed "source", such as a merchant;

4) the alleged "service provider" in the hypotheticals has sufficient identity information to authorize a requested transaction but that is expressly not so in some of the Claims (to minimize exposure of sufficient identity information for a fraudulent transaction);

5) the hypothetical "user" has access to the "conditions" for use of the identity but that is not so in the Claims (to prevent use even if a fraudster has sufficient identity information for a transaction);

6) the hypotheticals don't determine, by execution on computers in real-time, whether a requested use of identity at a "source", e.g., merchant, is authorized for use in the time-frame of a transaction, e.g., before delays would cause the identity owner to abandon the transaction or cause a merchant to give goods to an imposter in anticipation of authorization; and

7) the alleged "service provider" in the hypotheticals is not an "intermediary" mediating between the interests of two opposing parties to a transaction but rather, at best, is a proxy for the identity owner to provide her with real-time control over use of the identity over the network.

D. The body of growing Federal Circuit case law on 101 provides little consistent guidance and instead, conflicting views of what computer-implemented inventions are patent-eligible.

Neither the Supreme Court nor the Federal Circuit has given a "single, succinct, usable definition or test" for determining a patent-ineligible "abstract idea."

Amdocs (Israel) Ltd. v. Openet Telecom, Inc., 841 F.3d 1288, 1294 (Fed. Cir. 2016); *see Alice*, 134 S. Ct. at 2357 (declining to "delimit the precise contours of the 'abstract ideas' category in this case"). The Federal Circuit and the U.S. Patent & Trademark Office ("PTO") have tried to develop the tests set forth in *Alice*. But the tests have become muddled and inconsistent, and are often selectively ignored. The result is a body of law that creates, more often than not, a bias against computer-implemented inventions and opportunity for time-pressed judges to dismiss patent cases in early stages based upon what they believe is "abstract" or not an improvement in computer functioning.

In *Enfish*, the Federal Circuit supplemented *Alice* step one with tests for improvements in computer functioning or another technology. In *Alice*, step one asks simply whether claims are directed to an abstract idea such as a "fundamental economic practice long prevalent in our system of commerce" while step two asked for the aforementioned improvements. *Alice*, 134 S.Ct at 2351.

In the case here, the district court applied *Enfish* to find the Claims were abstract because they did not improve computer functioning. To bolster their case, the district court and the appeal panel compared the Claims with those held patent-ineligible in *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089 (Fed. Cir. 2016). However, *FairWarning IP,* underscores why the Claims pass both steps one and two of *Alice*. There, the Federal Circuit concluded the claims, described as a "method of detecting fraud and/or misuse in a computer environment based on analyzing data such as in log files, or other similar records, including user identifier

data", were abstract because they described a conventional business practice. *Id*. at 1093-94. That conventional business practice of monitoring for fraud is precisely the prior art method described in the Patents that the Claims distinguish over.

> Traditional responses to [fraudulent use of identity] have been inadequate. The most common response involves monitoring the use of identity resources and notifying a consumer after detection of an unusual use of the identity. For example, a credit card company can detect unusual purchase activity and contact the account holder to determine whether the charges were authorized.

456, 1:40-46.

The Claims here are more analogous to those held patent-eligible in *Ancora Tech., Inc. v. HTC Amer., Inc. et al.*, 908 F.3d 1343 (Fed. Cir. 2018) and *McRO v. Bandai Namco Games America*, 837 F.3d 1299 (Fed. Cir. 2016). In *Ancora*, the claims improved the functioning of a generic computer, inhibiting hacking by moving key information into a computer's BIOS memory, which is harder for a hacker to access. The lower court saw no patent-eligible distinction in having the key information in the BIOS memory versus any other memory. The Federal Circuit reversed, finding "[i]mproving security…can be a non-abstract computer-functionality improvement if done by a specific technique that departs from earlier approaches to solve a specific computer problem." *Ancora*, 908 F.3d at 1348. The claims achieved this by "assigning certain functions to particular computer components and having them interact in specified ways". *Id*. 1344.

Like *Ancora*, the Claims here are an improvement to computer functioning, albeit in a computerized transaction network, to prevent fraudulent use of identity. Key information, i.e., "identification information parameters" from the "user" and

"at least one pre-determined condition" from the identity owner, are placed in an additional computer at the "service provider", which the "user does not have direct access to". 456, claim 11. This improvement prevents a hacker or "disgruntled employee" at the "user" from accessing the key information at the "service provider" and fraudulently using the identity.

In *McRo*, the claims did not recite any computer components but rather a "method for automatically animating lip synchronization" which this Court described as an "ordered combination of claim steps, using unconventional rules". *McRo*, 837 F.3d at 1302-1303. The claims improved upon prior animating processes "driven by subjective determinations rather than specific, limited mathematical rules". *Id*. at 1314.

Similarly, at least the Claims limited to identity-owner-control are an ordered combination of unconventional claim steps that permit an identity owner to automatically control use of her identity over a computerized transaction network. Further, these claims improve upon aspects of prior art processes using subjective determinations of sufficient identification information by merchants and banks.

II. Courts should not act as fact finders in determining material factual issues underlying patent-eligibility under 35 U.S.C § 101.

A. Application of the *Alice* exception can raise material factual issues.

Section 101 raises material factual issues as to whether inventive subject matter is "new and useful", a "process, machine, manufacture, or composition of matter", or an "improvement thereof". Step one of *Alice* can raise factual issues as to whether claims are drawn to a "fundamental economic practice" that is "long

prevalent in our system of commerce". *Alice*, 134 S.Ct. at 2350. Step two of *Alice* can raise factual issues as to whether claim elements individually or as an ordered combination (i) "improve the functioning of [a] computer", (ii) "effect an improvement in any other technology or technical field", (iii) "improve[] an existing technological process" or (iv) are not "well-understood, routine, conventional activities previously known in the industry". *Id.* at 2358-359.

B. The Federal Circuit ignored material factual issues underpinning the *Alice* exception in this case and many other cases.

"[T]he Supreme Court recognized that in making the §101 determination, the inquiry 'might sometimes overlap' with other fact-intensive inquiries like novelty under §102." *Berkheimer v. HP Inc., et al.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018) (*quoting Mayo*, 566 U.S. at 90). The Federal Circuit recognized "[w]hether claims [] perform well-understood, routine, and conventional activities to a skilled artisan is a genuine issue of material fact", *Berkheimer*, 881 F.3d at 1370, and "whether a claim element or combination of elements would have been well-understood, routine, and conventional to a skilled artisan in the relevant field at a particular point in time is a question of fact", *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1355 (Fed. Cir. 2018) ("*Aatrix Reh'g*"). This inquiry "may require 'weigh[ing] evidence,' 'mak[ing] credibility judgments,' and addressing 'narrow facts that utterly resist generalization.'" *Id.* (*citing U.S. Bank Nat'l Ass'n v. The Village at Lakeridge, LLC*, 138 S.Ct. 960, 967 (2018)). "Because the patent challenger bears the burden of demonstrating that the claims lack patent eligibility, 35 U.S.C. §282(a), there must be evidence supporting a finding that the additional elements

were well-understood, routine, and conventional." *Aatrix Reh'g* at 1356. "Any fact…that is pertinent to the invalidity conclusion [under 35 U.S.C. §101] must be proven by clear and convincing evidence." *Berkheimer,* 881 F.3d at 1368.

Here, however, these factual underpinning were not required by the district court or the Federal Circuit, untethering the eligibility analysis from anything other than limited judicial personal experience. Respondents entered no evidence the elements or limitations in the Claims were well-understood, routine, and conventional under *Alice* step two. On the other hand, Mantissa presented evidence the limitations were not well-understood, routine, and conventional. The proof, discussed below, included: (1) citations to the Patents' specification, the prosecution history, and the prior art; (2) detailed explanation of the claims; (3) descriptions of existing technologies such as LifeLock® and evidence from Equifax that the claimed inventions were not conventional; (4) testimony from two skilled artisans; and (5) praise in industry publications and admissions from Respondent Ondot that technology corresponding to patent-eligibility-conferring limitations was not a longstanding, fundamental economic practice. *See* Mantissa CAFC Appeal Br. 46-63 (Doc. 29 filed March 14, 2018) and Reply Br. 16-25 (Doc. 43 filed July 3, 2018). The proof of Mantissa against the lack of proof of Respondents at least creates genuine factual disputes making summary judgment of patent-ineligibility improper.

C. Courts should not be permitted to act as litigants and juries in finding and weighing material facts in a patent-eligibility analysis.

Alice and its progeny should not become an I-know-ineligibility-when-I-see-it[7] test for computer-implemented inventions. We should return to proper fact-finding as is done in § 102/103 analyses. In determining whether claims "effect an improvement in any [] technology or technical field"," judges are rarely better than inventors, examiners at the PTO, and experts with experience in the field, particularly looking backwards from the time frame of the invention. *Alice*, 134 S.Ct. at 2358; *see American Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1304-305 (Fed. Cir. 2020) (finding claims patent-ineligible as directed to a law of nature) (Judge Moore dissenting: "majority instead holds that we appellate judges, based on our background and experience, will resolve questions of science de novo on appeal. We will determine whether Hooke's law and nothing more results in a reduction of two types of vibration in a propshaft.") Particularly challenging here is viewing the improvements in the Patents relative to the existing technology at the time of the invention in 2005 while ignoring the advances in payment transaction processing since then.

Further, the courts should be reminded that the clear-and-convincing burden-of-proof applies for factual issues underlying a determination of patent-ineligibility

[7] *See Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Justice Stewart concurring) ("I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description [hard-core pornography]…But I know it when I see it…")

of claims that have been reviewed, challenged, and granted by the PTO. *See Microsoft v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011).

After Respondents failed to enter any evidence the Claims were not improvements of existing technology, the district court apparently conducted its own research, and found and applied four new references as evidence the Claims were abstract. *See* App. 19a-22a. The four references and the district court's assertions regarding their teachings are:

(i) SANDRA K. HOFFMAN & TRACY G. MCGINLEY, IDENTITY THEFT: A REFERENCE HANDBOOK 1-16 (2010)—"identity theft and methods of preventing identity theft", App. 19a;

(ii) ALBERT S. BOLLES, PRACTICAL BANKING 83 (8th ed. 1892)—process for determining whether a signature on a withdrawal draft was genuine using a "signature book…near him"), App. 19a-20a (*quoting* BOLLES);

(iii) Douglas Akers et al., Overview of Recent Developments in the Credit Card Industry, 17 FDIC BANKING REVIEW No. 3 (2005) – "one commonly-used framework for credit card networks, known as the 'multiple card issuer model,' involved 'one card association, many cardholders, many merchants, and multiple banks", App. 20a (quoting Akers et al.); and

(iv) *Authentication in an Electronic Banking Environment*, OCC Advisory Letter, 2001 WL 897188, at *4 (July 30, 2001)—"merchants have long requested additional information beyond the [credit] card itself—information like a driver's license or signature—as a means of verifying the identity of the individual attempting to use the credit card", App. 21a.

The district court concluded BOLLES and Akers et al. "show[] it is a longstanding, fundamental economic practice to determine whether a given use of an identity is permitted based on (i) information that is, in itself, insufficient to enable use of the identity, and (ii) (changeable) conditions defining when the identity may be used" and "a longstanding fundamental practice of this sort constitutes a patent-ineligible

abstract idea."[8] App. 21a-23a. As discussed above, these references went to conditions of verification of identity *before* any use of the identity, not the condition of a particular use of the identity as in the Claims.

By raising the four new references and applying at least BOLLES and Akers *et al*. against the Claims to find them abstract under *Alice* step one, the district court raised new factual issues as to, *e.g.*, (i) whether each asserted example in the references is in fact "a longstanding, fundamental economic practice", Appx. 22a, (ii) whether the time frame of the examples constitutes "long-standing", (iii) whether the references disclose an existing technology under *Alice* step two (relevant to whether the Claims are an improvement over the existing technology in the references), and (iv) whether the references disclose "well-understood, routine, conventional activities" under *Alice* step two (relevant to whether the Claims are more than the performance of such activities).

Compounding its error, the district court did not afford Mantissa any opportunity to review or rebut the four new references before ruling on patent-eligibility. Due process before depriving one of a property right requires far more. *See* U.S. Const. amend. V ("[n]o person shall…be deprived of life, liberty, or property, without due process of law")*; McCormick Harvesting Mach. Co. v. C. Aultman & Co.*, 169 U.S. 606, 608-609 (1898) (a patent right "is entitled to the same legal protection as other property"); *see American Axle ,* 967 F.3d at 1305 (Fed. Cir. 2020) ("I am

[8] The district court asserts it may find facts in making a §101 determination because the Supreme Court did so in *Bilski* and *Alice*. Appx21, fn 3. But there was no such fact finding in *Alice* because the Petitioner in *Alice* agreed the claims were directed to intermediated settlement. *Alice*, 134 S. Ct. at 2356.

troubled by the deprivation of property rights without due process" (CJ Moore dissenting)). Even the PTO allows for review and rebuttal of references before taking a patent right in *inter partes* reviews or reexaminations. Despite the balance of facts on eligibility presented by Mantissa and the district court, the district court concluded "there are no material fact issues in this case" and therefore had no need to apply any burden of proof to its review of the §101 challenge under either step one or two of *Alice*. App. 10a-11a.

D. Mantissa presented unrebutted evidence sufficient to deny summary judgment of patent ineligibility.

Mantissa presented an abundance of evidence the Claims were patent eligible under *Alice* step one and two. An improvement and inventive concept in the Claims is a method in a system to effect real-time, identity-owner control of identity in transactions consummated over a computerized network while protecting the identity from hacking through "second information" or "insufficient information". CAFC Appx. 2073, 2227. This was an improvement over "conventional industry practice" using a computerized network to execute financial transactions related to credit or debit cards and the remedial use of identity monitoring systems. *See Alice*, 134 S. Ct. at 2357 (*citing Diehr*, 450 U.S. 175); *DDR Holdings*, 773 F.3d at 1257. The Claims also provide improvements in terms of reduced computer processing and network bandwidth use, 456, 1:41-43 ("[t]raditional…response involves monitoring the use of identity resources and notifying a consumer after detection of an unusual use of the identity"), and reducing fraud and hacking, *id*. at 1:15-23, 27-39, 40-53, 64-67, 4:54-5:6, 5:46-5:58, 5:62-67, 6:54-64, 7:4-6.

This inventive concept is shown in the Patents' specification and prosecution histories. 456, 1:40-67 (CAFC Appx. 46) (describing existing technology and improvement of an identity owner having a "means of proactively controlling use of his identity and identification information with a system designed specifically for such control"), 5:54-58 (CAFC Appx. 48) ("modifying identification information on a whim, creating a real-time, or near real-time system that is fluid and constantly capable of meeting the needs of identity owner **30** while securing the identification information"). For example, and as explained by expert Dennis at the claim construction hearing, the PTO's notice of allowance of 027 specifically focused on "service provider lacks sufficient data to execute the use of identity" and "pre-determined condition defined by the entity in the context of authorized use of identity" not being found in the prior art. CAFC Appx. 1265.

Mantissa provided evidence the PTO found some of the limitations of the Claims are not taught in the prior art. For example, the reference "Schaal" does not teach "identity information owned by the identity owner" or concept of "insufficient information." CAFC Appx. 2500, 1785-1788, 1977. The reference "Nguyen" does not teach "entity identification information or change of state responsive to usage" of identity information. CAFC Appx. 2500, 1788-1791, 1977. The reference "Vogel" does not teach "service provider lacks sufficient information to execute the attempted use of the identity" and "predetermined condition defined by the entity." CAFC Appx. 2500, 1792-1796, 1978.

The Patents also establishes the invention is an improvement to existing technology and is "significantly more" than an abstract idea by providing multiple aspects of real-time control. *See Alice*, 134 S.Ct. at 2355. For example, the Patents state that entity (or identity-owner)-defined, pre-registered conditions or limitations

> establish default and real-time use control over the identity of an identity owner 30. Attempts to use identity outside the authorized scope will be denied, preventing misuse before it takes place...If identity owner 30 needs to use its identity in a manner inconsistent with the above limitations, then identity owner 30 can modify account profile 14 in advance of such use and then return account profile 14 to its prior state (or any other desired state) after the need for the use concludes. It is also helpful for an identity owner 30 to be capable of modifying identification information on a whim, creating a real-time, or near real-time system that is fluid and constantly capable of meeting the needs of identity owner 30…

456, 5:44-57 (CAFC Appx. 48) and 1:40-67 (CAFC Appx. 46). The Claims show, e.g., "**setting** a status of the identity to a first state, the first state defining a scope of permitted use", "**changing**, in advance of an intended use of the identity, the status to a second state defining a scope of permitted use…different from the first state", "**requesting** use", "**returning**, after said requesting the state back to the first state…said **returning** occurs in response to a completion of a use", "said setting, changing, requesting and returning are **executed on electronic computer hardware** in combination with software." 456, claim 1 (CAFC Appx. 55). The prosecution history of 456 emphasized the above in distinguishing over three references of record (Pearson, Orbke, and UKPO). CAFC Appx. 946 (causal relationship between state changes, one is designed default state, and use of identity returns second state back to first default state); CAFC Appx. 951 (no determination made by Orbke as to whether request to use information is

consistent with identity owner's intent); CAFC Appx. 947-948. (UKPO "'states' [in service, out of service] do not include a default state and do not change from second state to first default state based on the use of identity."). These steps executed on a computer provide three forms of real-time control, setting scope of use, effecting the scope of permitted use, and effecting the change of scope.

To dismiss the identity-owner control limitations emphasized by Mantissa, the district court wrote in its *Alice* step two analysis:

> [n]one of the asserted claims states that the identity owner has untrammeled control over the identity asset state. In fact, some asserted claims, such as claim 11 of the '456 Patent, specify that the user, not the identity owner, establishes the "set of desired identification information parameters."

App. 29a. Here, the district court confused "parameters" (e.g., time frame) established by the "user" and the "information" for the parameters (e.g., 5:00am – 7:00am) obtained from the identity owner. This caused the district court to ignore the identity-owner-control limitations in the Claims.

The Patents described implementations of the inventive concept of identity-owner control.

> User 20 provides service provider 10 with an object template 16. Object template 16 contains various fields that define the type(s) and nature of information that service provider 10 preferably accepts and/or stores for any particular identity owner(s) 30. Identity owner 30 will in turn provide that information to service provider 10 for use in the authorization, limitation or denial of requests from user(s) 20 to use the identity of identity owner 30.

456, 4:31-39 (CAFC Appx. 47).

> [I]identity owner 30 could set up account profile 14 as follows:
> (1) credit cards can only be used between 9 AM and 11 PM…Limitations such as the above establish default and real-time use

> control over the identity of an identity owner 30. Attempts to use identity outside the authorized scope will be denied, preventing misuse... If identity owner 30 needs to use its identity in a manner inconsistent with the above limitations, then identity owner 30 can modify account profile 14 in advance of such use and then return account profile 14 to its prior state (or any other desired state) after the need for the use concludes…helpful for an identity owner 30 to be capable of modifying identification information on a whim, creating a real-time, or near real-time system…

456, 5:36-57 (CAFC Appx. 48). The identity-control limitations in the Claims include: (i) "obtaining by the service provider **from the entity**, information **from the entity** consistent with the set, the information including at least one pre-determined condition" in 456, claim 11; (ii) "receiving **from the entity**, the data representing the first identification information and the at least one criteria" in 456, claim 17; (iii) "obtaining, at the service provider, information **from the entity** consistent with the set, the information including at least one predetermined condition **defined by the entity**" in 027, claim 7, (iv) "at least one **entity defined** criteria" in 027, claim 11; and (v) "**entity defined** criteria"[9] in 027, claim 13.

The identity-owner-control limitations in combination with other limitations in claims 11-14 and 17 of 456 and claims 7-17, 19, 20, 22, 23, 25, 26, 28 and 29 of 027 prevent them from being deemed invalid on summary judgment because they show an improvement over the existing technology for protecting use of an entity's identity and show something more than routine industry practices at the time of the invention. The Patents' specification provide examples of the identity-owner-control

[9] A certificate of correction for the 027 Patent corrected the claim language from "identity use criteria" to "entity defined criteria". CAFC Appx. 78. The district court may not have seen the correct limitations because it apparently reviewed and analyzed the uncorrected claims of the patents.

limitations of claim 11 of 456 showing a completed "object template 16" (9:38-52 and Figs. 3 and 4) corresponding to "establishing, by a user, a set of desired identification information parameters" and "obtaining, by the service provider from the entity, information…including at least one pre-determined condition". CAFC Appx. 57, 50, 42-43. The completed template is reflected in Fig. 6 of 456, identity owner "Interface", section "303, (12)". CAFC Appx. 45.

The district court also dismissed the limitations considered as an ordered combination writing that because the Claims did something "with" a computer network instead of "to" a computer network, they were patent-ineligible. Appx. 33a. However, the Claims can be viewed as applying their limitations "to" a prior art computer network by appreciating the limitations of the claims that were not in the prior art, as the PTO did to allow the claims. The district court ended its analysis here by simply saying neither the individual limitations nor the combination of them is unconventional.

In addition to the above intrinsic evidence, Mantissa presented descriptions of existing technology such as the LifeLock® system, excerpts from scholarly industry publications shortly after the time of invention in 2005,[10] a statement of the Head of Fraud at Equifax UK in 2005 (CAFC Appx. 2098), and declarations of two skilled artisans in the field, Dennis and Chatterjee.

[10] "User-controlled identity management… Users need *control* over *all disclosure of their personal data*...user would decide intuitively what to tell whom according to the specific situation." CAFC Appx. 1589 (quoting "User-controlled Identity Management: The Future of Privacy," Marit Hansen, *Identity in a Networked World*, Future of Identity in the Information Society(FIDIS) (August 2006) (emphasis added) and citing other articles).

Chatterjee's declaration describes the significant and unconventional improvements in the inventive concept over, for example, the payment processing technology in 2005. CAFC Appx. 2404-2409 (explaining Mantissa's claimed inventions are improvements in and have inventive concepts over conventional computerized networks with regards to identity protection, including, for example, LifeLock and other reactive measures to curb identity fraud that were conventional in 2005); *see, also,* CAFC Appx. 2248-2254 (Dennis Declaration proving existing technology, improvement provided by the Claims to existing technology, inventive concepts in the Claims, and routine and conventional practices in the industry).

The district court dismissed the experts' testimony as irrelevant based on an incorrect assessment of the law as confirmed by Federal Circuit. *See Berkheimer*, 881 F.3d at 1370 ("Whether claims 4–7 perform well-understood, routine, and conventional activities to a skilled artisan is a genuine issue of material fact making summary judgment inappropriate with respect to these claims…We only decide that on this record summary judgment was improper, given the fact questions created by the specification's disclosure.")

> The fact that Mr. Dennis' testimony reaches legal conclusions contrary to the Court's is irrelevant for summary judgment; legal conclusions are the sole province of the Court…[Expert Chatterjee]'s statement are directed to legal conclusions rather than material fact issues.

App. 34a, 36a. As accepted persons of ordinary skill in the art, Dennis and Chatterjee were providing just the sort of evidence sanctioned by the Federal Circuit in *Berkheimer*.

Mantissa also presented evidence the real-time, identity-owner-control-of-identity limitations corresponding to features in the Respondents' product were seen by industry commentators as a new and useful concept in computerized transaction networks. *TechCrunch* article (CAFC Appx. 2280-2282); *PR Newswire* (CAFC Appx. 2289-2290).

Despite these statements of record and similar statements by Ondot in the industry press, the district court concluded, "[g]iven the timing of these publications (nine years or more after '456 was filed) and the fact that they deal with Ondot's product, rather than Mantissa's, the Court finds that they do not create a genuine issue of material fact." Appx. 34a. This errs in two ways. First, it concludes that something that was admitted in 2015 to be an "improvement over existing technology" is somehow not relevant to whether it is an improvement over technology existing in 2005. Technology progresses. An improvement in 2015 is a bigger improvement in 2005. Second, it concludes that evidence an allegedly infringing product is an improvement over industry practices is not relevant while recognizing that evidence that a patented product would be relevant. Because both reflect the limitations of the Claims, evidence they are an improvement is probative of eligibility.

In this litigation, Respondent Ondot admitted that subject matter covered by the Claims was not a longstanding fundamental economic practice, or well-understood, routine or conventional, and was an improvement over existing technology:

> the financial services industry lacked sufficient mechanisms for guarding against fraudulent activity. Ondot realized that a key component to combatting fraud was to enable end-users to directly identify circumstances under which their credit or debit cards could not be used. For example, someone [] could indicate that all debit card transactions outside of the Houston area should be declined.

CAFC Appx. 143.

> [Ondot] started to develop software to help prevent credit and debit card fraud…implementation of the Ondot technology which basically allows someone who is a bank customer of [Respondent] Lone Star to, through their cell phone, turn on and off a debit card which could—you know, previously it was something you would have to call the bank and go through the hassle of calling and talking to somebody. And now you can, you know, with just a flip of a switch turn it on and off.

CAFC Appx. 214-215.

Ondot also admitted in promotional literature that the real-time, identity-owner control features of its product, which are analogous to identity-owner-control limitations of the Claims discussed herein, were improvements over existing technology. CAFC Appx. 2768 ("Switch Card On/Off…ultimate control comes peace of mind…Control by Location…Presence of cardholder at merchant location is proof positive while absence of cardholder is a strong indicator of potential fraud…Act instantly on real-time transaction alerts and offers. Higher engagement drives cardholder loyalty and increased card usage"). Only by improperly ignoring the overwhelming facts presented by Mantissa and finding its own facts of patent-ineligibility could the district court rule all Claims patent-ineligible.

III. The abstract-idea exception to § 101 should require considering pre-emption.

This Court "described the concern that drives this [abstract idea] exclusionary principle as one of pre-emption." *Alice*, 134 S.Ct. at 2354 (citing *Bilski*

v. Kappos, 561 U.S. 593, 611-612 (2010) (upholding the patent "would pre-empt use of this approach in all fields, and would effectively grant a monopoly over the abstract idea.") In this case, the district court simply indicated the Claims may not be preemptive but it does not matter. App. 35a. Indeed, pre-emption does not apply to the Claims because there are other ways for an identity owner to protect use of her identity over a computerized network, e.g., by not using the limitations of the claims such as "service provider", "insufficient information", or "second information", or using the prior art methods cited on the front pages of the Patents.

Pre-emption is a possible solution to the untethered state of patent-ineligibility law. Most of the Federal Circuit cases finding or upholding patent-ineligibility, including this one, fail to substantively address whether claims-at-issue effectively grant a monopoly over an abstract ideal. A possible reason for this is the claims-at-issue in some of those cases are not pre-emptive and concluding so would undercut rationalizations for patent ineligibility. However, the law of patent-ineligibility continues to drift over more and more subject matter. Dorothy is watching the Wizard rising above Oz in his balloon, calling out "Please come back!" and hearing the Wizard reply, "I can't come back! I don't know how it works!" Testing whether claims directed to an abstract idea preclude all use of the abstract idea would provide an additional line of defense to patent-ineligibility, and mitigate the tragedy taking patent holders' property without due process.

CONCLUSION

The Court should grant the petition.

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