Two Years After *Alice v. CLS Bank*

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Abstract

As of June 19, 2016, courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. Specifically, the Federal Circuit upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%. Also, courts have decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit has decided 26 motions, resulting in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts have decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB has decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%.

Justice Stephen Breyer’s recent statement fully captured the U.S. Supreme Court’s view on software patents: “[T]here are these [] patent trolls, and [] the Patent Office has been issuing billions of patents that shouldn’t have been issued – I overstate, but only some.”¹

On June 19, 2014, the Supreme Court decided *Alice Corp. v. CLS Bank Int’l*,² raising the patentability standard for computer-implemented inventions under 35 U.S.C. § 101. The Court held that implementing an abstract idea on a computer is not enough to transform that idea into patentable subject matter.³ Put simply, *Alice* was a “noticeable judicial move[] to curb excessive patent assertion,”⁴ and § 101 post-*Alice* has proven “deadly” for software patents.⁵ For instance, between July 1 and August 15, 2014 (immediately after *Alice*), there were 830 patent applications related computer-implemented inventions withdrawn from the U.S. Patent and Trademark Office (“USPTO”).⁶

At *Alice*’s one-year mark, I reviewed all lower court decisions that cited *Alice* to invalidate software patents.⁷ Specifically, as of June 19, 2015, there were a total of 272 court cases—198 Patent Trial and Appeal Board (“PTAB”) decisions, 63 district court decisions, and 11 Federal Circuit opinions—that cited *Alice* to invalidate software patents, accounting for an average invalidation rate of 82.9%.⁸ I also estimated that—without accounting for selection bias—out of roughly 240,000 software patents in force as of 2015, about 199,000 of those, if challenged, would likely be invalidated under *Alice*, leaving about 41,000 actually valid patents.⁹

¹Justice Breyer made this statement on April 25, 2016 during *Cuozzo Speed Technologies v. Lee*’s oral arguments. See Transcript of Oral Argument, p. 14 ll. 8–12, *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 890 (No. 15–446), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/15-446_2dp3.pdf. In fact, *Alice* was a 9–0 decision with 3 concurring justices. *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2351 (2014).

²134 S. Ct. 2347 (2014).

³*Id.* at 2355, 2357.

⁴Christopher Beauchamp, *The First Patent Litigation Explosion*, 125 YALE L.J. 848, 934 (2016).

⁵Foley Hoag LLP, *The Post Office Gets into the Alice Act*, PTAB BLOG (Oct. 27, 2015), <http://www.ptab-blog.com/2015/10/27/the-post-office-gets-into-the-alice-act/>. For a background discussion on patents, see generally Jasper L. Tran, *Timing Matters: Prior Art’s Age Infracts Patent Nonobviousness*, 50 GONZ. L. REV. 189, 194–97 (2015) (discussing patent nonobviousness and prior arts); Jasper L. Tran, *Rethinking Intellectual Property Transactions*, 43 S.U. L. REV. 149, 150–56 (2015) (discussing patent transaction).

⁶See Tristan Gray–Le Coz & Charles Duan, *Apply It to the USPTO: Review of the Implementation of Alice v. CLS Bank in Patent Examination*, 2014 PATENTLY-O PATENT L.J. 1, 3 (2014).

⁷Jasper L. Tran, *Software Patents: A One-Year Review of Alice v. CLS Bank*, 97 J. PAT. & TRADEMARK OFF. SOC’Y 532, 539–45 (2015).

⁸*Id.* at 540.

⁹*Id.* at 541–42.

This Article continues my previous review at *Alice*'s two-year mark. As of June 19, 2016, courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. The Federal Circuit has upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%.

Courts have also decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit has decided 26 motions, resulting in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts have decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB has decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%.

The Federal Circuit notably released *Enfish, LLC v. Microsoft Corp.*,¹⁰ on May 12, 2016, marking the second Federal Circuit decision to uphold patent validity since *Alice*¹¹ and shed more light on how to analyze § 101 under *Mayo* / *Alice*. In *Enfish*, the Federal Circuit made clear that it was “not persuaded that the invention’s ability to run on a general-purpose computer dooms the claims.”¹² The Federal Circuit then released *BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC*¹³ on June 27, 2016, marking the third Federal Circuit decision to uphold patent validity since *Alice*.

This Article proceeds in four parts. Part I quickly recaps the *Alice v. CLS Banks* decision and *Alice*'s one-year statistics. Part II lays out and analyzes *Alice*'s two-year statistics. Part III reviews the Federal Circuit cases in *Alice*'s second year, including *Enfish*, *TLI Communications*, and *BASCOM*, with a quick coverage of the USPTO's reaction post-*Enfish*. Part IV concludes. Additionally, Appendix A includes the information of the patents or patent applications that courts have upheld under *Alice* from June 20, 2015 to June 19, 2016.

I. *Alice* at One

A. *Alice*'s Recap

My one-year review of *Alice* discussed *Alice*'s procedural history and opinion in detail.¹⁴ In short, *Alice* built on *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*¹⁵ and established a two-step framework for patentable subject matter of computer-implemented inventions:

1. The *Mayo* / *Alice* step one “determine[s] whether the claims at issue are directed to a patent-ineligible concept. If so, the Court then asks whether the claim’s [additional] elements, considered both individually and as an ordered combination,

¹⁰No. 2015-1244, 2016 WL 2756255 (Fed. Cir. May 12, 2016).

¹¹The first Federal Circuit decision that upheld patent validity since *Alice* was *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

¹²*Id.* at *7.

¹³No. 2015-1763, 2016 WL 3514158 (Fed. Cir. June 27, 2016).

¹⁴Tran, *One-Year Review*, *supra* note 7, at 535–39.

¹⁵132 S. Ct. 1289 (2012).

transform the nature of the claim into a patent-eligible application.”¹⁶

2. The *Mayo/Alice* step two “examine[s] the elements of the claim to determine whether it contains an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application. A claim that recites an abstract idea must include additional features to ensure that the claim is more than a drafting effort designed to monopolize the abstract idea.”¹⁷ Adequate “transformation into a patent-eligible application requires more than simply stating the abstract idea while adding the words ‘apply it.’”¹⁸

In *Alice* the challenged patents claimed “a computer-implemented scheme for mitigating ‘settlement risk’ (i.e., the risk that only one party to a financial transaction will pay what it owes) by using a third-party intermediary.”¹⁹ The Supreme Court found the claims were “directed to a patent-ineligible concept: the abstract idea of intermediated settlement,” and were “not enough to supply the inventive concept needed to make th[e] transformation” into a patent-eligible application because the claims did “no more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer.”²⁰

B. *Alice*'s One-Year Review

Following its § 101 framework in *Mayo*,²¹ the Supreme Court considered *Alice* a “minor case.”²² In fact, CLS Bank—at *Alice*'s oral argument—framed the issue as “a very small problem” that would only impact the “most marginal, most dubious, most skeptical patents,” citing the statistics of 57 district court on § 101 and 12 Federal Circuit cases on computer implementation in the four years following *Bilski*.²³ But the reality post-*Alice* has unfolded in the opposite direction.

Following *Alice*, the USPTO issued the 2014 Interim Guidance on Patent Subject Matter Eligibility to examiners on implementing *Alice*.²⁴ The 2014 Guidance allowed software claims of either “[i]mprovements to another technology or technical field; [i]mprovements to the functioning of the computer itself; [or m]eaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.”²⁵

Between July 1 and August 15, 2014, there were 830 patent applications related computer-implemented inventions withdrawn from the U.S. Patent and Trademark

¹⁶ *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2350 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1291 (2012)) (internal quotations omitted).

¹⁷ *Id.* at 2357 (citing *Mayo*, 132 S. Ct. at 1294, 1297–98) (internal quotations omitted).

¹⁸ *Id.* (some internal quotations omitted).

¹⁹ *Id.* at 2351–52.

²⁰ *Id.* at 2350–51, 2357 (internal quotations omitted).

²¹ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. at 1289 (2012).

²² Robert R. Sachs, *Two Years After Alice: A Survey of the Impact of a “Minor Case,” Part I*, BILSKI BLOG (June 16, 2016), <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case.html> (last visited June 20, 2016) (citing a conversation with a Supreme Court Justice).

²³ Transcript of Oral Argument, pp. 43–44, *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S.Ct. 2347 (No. 13–298), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/13-298_869d.pdf.

²⁴ Memorandum from Andrew H. Hirschfield, Deputy Comm'r of the U.S. Pat. & Trademark Off. to Patent Examiners (June 25, 2014), available at http://www.uspto.gov/sites/default/files/patents/announce/alice_pec_25jun2014.pdf.

²⁵ *Id.*

Office (“USPTO”).²⁶ By December 15, 2014, there were 36 lower court cases—32 in the district courts and 4 in the Federal Circuit—that cited *Alice* to invalidate software patents.²⁷

By June 19, 2015 (*Alice*’s one-year mark), the case was cited in 190 PTAB decisions, 60 district court decisions, and 9 Federal Circuit opinions, in a total of 261 court cases, to invalidate patents under § 101.²⁸ Specifically, the PTAB upheld 18 patent applications and invalidated 170 patent applications—an invalidation rate of 90.4%.²⁹ The district courts upheld 40 patents and invalidated 89 patents—an invalidation rate of 69.0%.³⁰ The Federal Circuit upheld 1 patent and invalidated 14 patents—an invalidation rate of 93.3%.³¹ In total, 273 invalidations out of 332 patents or patent applications yield an average invalidation rate of 82.2% before the three venues.³²

II. *Alice* at Two

A. *Alice*’s Two-Year Statistics

By the end of 2015, patent grants had dropped for the first time in seven years, “a drop likely attributable to the *Alice* decision’s impact on obtaining and asserting software patents,” according to an annual study by PricewaterhouseCoopers analysts.³³

Under the *Mayo/Alice* standard, patents’ validity can be challenged in district court under § 101 motions. Table 1 shows the statistics of courts’ implementation of *Alice* from June 19, 2014 to June 19, 2016.³⁴

Patents. As of June 19, 2016 (i.e. *Alice*’s two-year mark), courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. Specifically, the Federal Circuit upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%. The USPTO has rejected over 36,000 published patent applications

²⁶ See Gray–Le Coz & Duan, *supra* note 6, at 3.

²⁷ See Jennifer A. Albert et al., *Impact of the Alice V. CLS Bank Decision – A Year-End Review*, GOODWIN PROCTER: IP ALERT (Dec. 19, 2014), <http://www.goodwinprocter.com/Publications/Newsletters/IP-Alert/2014/1219-Impact-of-the-Alice-V-CLS-Bank-Decision.aspx?article=1>.

²⁸ Tran, *One-Year Review*, *supra* note 7, at 540.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ Kevin Penton, *Patent Grants Dropped For First Time In 7 Years, Report Says*, LAW360 (May 17, 2016), <http://www.law360.com/ip/articles/797381>. Note that in May 2016, President Obama signed the Uniform Trade Secret Act into law, which creates a federal cause of action for trade secret infringement and could affect the landscape of patent filing in the future. The Defend Trade Secrets Act of 2015, S. 1890, H.R. 3326, 114th Cong. (2015).

³⁴ Methodology note: Using WestlawNext, I searched for all cases citing *Alice* from June 19, 2014 to June 19, 2016. In performing my research, I compared my own data on *Alice* with the data of Fenwick & West’s Bilski Blog. Sachs, *Part I*, *supra* note 22, at tbl. 1 (containing table and chart); see also *Decoding Patent Eligibility Post-Alice: Patent Eligibility Case Analysis Tool*, Fenwick & West LLP, <https://www.fenwick.com/pages/post-alice.aspx> (last visited May 18, 2016) (containing the case names, holdings, and reasonings of cases decided in 2015 and the latter half of 2014). To explain the minor disagreement between the two sets of data: my collection included data of cases until June 19, 2016 to meet the actual two-year anniversary date of *Alice* whereas Sachs’ set of data ended on June 8, 2016. See also Jason Rantanen, *Empirical Analyses of Judicial Opinions: Methodology, Metrics and the Federal Circuit*, 49 CONN. L. REV. — (forthcoming 2016), available at <http://ssrn.com/abstract=2774307> (examining how to consider reported data in collective terms and discussing substantial variation of reported empirical results even when using the same parameter to measure).

June 19, 2014 to June 19, 2016		§ 101 motions				Patents	
		Fed. Cir.	Distr. Ct.	PTAB	Total	Fed. Cir.	Total
Holding	Invalid	24	167	200	391	34	378
	Valid	2	84	23	109	3	190
	Total	26	251	223	500	37	568
Invalidation Rate		92.3%	66.5%	89.7%	78.2%	91.9%	66.5%

Table 1: *Alice* statistics from June 19, 2014 to June 19, 2016.

under *Alice*, where over 5,000 such applications were abandoned.³⁵

§ 101 Motions. Courts decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit decided 26 motions, which resulted in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%.

B. Analysis and Recommendation

Alice's invalidation rate seemed to slightly drop through *Alice's* second year, but the drop was almost unnoticeable.³⁶ Individually, the invalidation rate ranged from 66% to 93%, which remains very high. Before three venues, namely the district courts, the PTAB and the Federal Circuit, the average invalidation rate was 82.9% at *Alice's* one-year³⁷ and 78.2% at *Alice's* two-year. Given that *Enfish* and *BASCOM* came out very late toward the end of *Alice's* second year, a determination of whether *Enfish* and *BASCOM* (in combination with *DDR Holdings*) affect *Alice's* interpretation will have to wait until *Alice's* third-year review.

At *Alice's* first year, the Federal Circuit has the highest invalidation rate at 93.3% with the PTAB immediately behind at 90.4%, whereas the district courts have the lowest invalidation rate of 69.0%. The numbers remain similar at *Alice's* second year review, where the Federal Circuit had the highest invalidation rate at 92.3% with the PTAB immediately behind at 89.7%, whereas the district courts again had the lowest invalidation rate of 66.4%. Because the PTAB continues to aggressively implement *Alice*,³⁸ my rec-

³⁵Robert R. Sachs, *Two Years After Alice: A Survey of the Impact of a "Minor Case" (Part 2)*, BILSKI BLOG (June 20, 2016), <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case.html> (last visited July 20, 2016). Sachs further noted: "Actually, it's worse than that because statistics presented here are based on published applications, which have historically accounted for 60% of all patent applications. It is reasonable to assume that unpublished applications get the same treatment with respect to § 101 as published ones. The upshot: the actual number of applications rejected due to *Alice* is likely closer 60,000, and the number abandoned is likely closer to 8,400." *Id.* at n.1.

³⁶Tran, *One-Year Review*, *supra* note 7, at 541.

³⁷*Id.* at 540.

³⁸*Id.* at 541; see also Albert, *supra* note 27 (arriving at the same conclusion). Note that the sample size of the § 101 motions at the Federal Circuit remains insufficiently small (n=26) to fully predict its behavior, thus the opinions may not be wholly indicative of the Federal Circuit's view on software patents. For a tally on how the Federal Circuit judges have voted on § 101 since *Alice*, see Sachs, *Part I supra* note 22, at fig. 3. However, this does not apply to the PTAB (n=223) and the district courts (n=251), where their larger sample sizes could sufficiently predict the cases' outcomes at the PTAB and the district courts.

ommendation remains the same: Plaintiffs should file an invalidation motion at the PTAB, whereas defendants should defend patent validity at the district court.³⁹

III. The Federal Circuit Cases in *Alice's* Second Year

A. Federal Circuit Cases from *Alice's* One-Year Mark to Pre-*Enfish*

In *Internet Patents Corp., v. Active Network, Inc.*⁴⁰ (June 23, 2015), the district court characterized the challenged patent as claiming “the use of a conventional web browser Back and Forward navigational functionalities without data loss in an online application consisting of dynamically generated web pages.”⁴¹ The Federal Circuit found the claims directed to ineligible subject matter because they “represent merely generic data collection steps or siting the ineligible concept in a particular technological environment.”⁴² In other words, the claims here were directed to the abstract idea of maintaining computer state without recitation of specific activity used to generate that result.

In *Intellectual Ventures I LLC, v. Capital One Bank (USA)*⁴³ (July 6, 2015), the two patents at issue claimed (1) “methods of budgeting, particularly methods of tracking and storing information relating to a user’s purchases and expenses and presenting that information to the user vis-à-vis the user’s pre-established, self-imposed spending limits,” and (2) “methods and systems for providing customized web page content to the user as a function of user-specific information and the user’s navigation history.”⁴⁴ The Federal Circuit found the first patent “directed to an abstract idea: tracking financial transactions to determine whether they exceed a pre-set spending limit (i.e., budgeting), . . . [and] the budgeting calculations . . . ‘could still be made using a pencil and paper’ with a simple notification device even in real time as expenditures were being made.”⁴⁵ Likewise, the Federal Circuit found that the second patent “claim[s] an abstract idea and do[es] not otherwise claim an inventive concept.” In short, the claims simply added generic computer components to financial budgeting. Notably, the Federal Circuit in *Intellectual Ventures I* held in dicta that the “claims here do not address problems unique to the Internet, so *DDR* has no applicability.”⁴⁶ This statement of the Federal Circuit⁴⁷ essentially narrows *DDR*’s holding to only claims “address[ing] prob-

³⁹Tran, *One-Year Review*, *supra* note 7, at 541.

⁴⁰790 F.3d 1343 (Fed. Cir. 2015). For a thorough treatment of the Federal Circuit cases in *Alice’s* first year, see generally Tran, *One-Year Review*, *supra* note 7, at 542–45.

⁴¹*Id.* at 1344 (citing Dist. Ct. Op. at 1269). The district court described the challenged patent “subject matter as retaining information lost in the navigation of online forms,” and deemed it as an abstract concept ineligible for patenting. *Id.* at 1344.

⁴²*Id.* at 1349.

⁴³792 F.3d 1363 (Fed. Cir. 2015).

⁴⁴*Id.* at 1365.

⁴⁵*Id.* at 1367–69 (internal citations omitted).

⁴⁶*Id.* at 1371 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256–69 (Fed. Cir. 2014)). Recall *DDR Holdings, LLC v. Hotels.com, L.P.* was one of the only two opinions that the Federal Circuit has ever upheld patent-eligibility of a computer-implemented invention under *Alice*. *DDR*, 773 F.3d 1245 (Fed. Cir. 2014). *DDR*’s patent covers “systems and methods of generating a composite web page that combines certain visual elements of a ‘host’ website with content of a third-party merchant.” *Id.* at 1248.

⁴⁷It might be important to note that a panel of Judges Dyk, Reyna and Chen resided over this case, with Judge Dyk writing for the Court, thus this view on *DDR* might only represent their own views and not of all Federal Circuit judges. *Intellectual Ventures I*, 792 F.3d at 1365.

lems unique to the Internet.”⁴⁸

In *Versata Development Group, Inc., v. SAP America, Inc.*⁴⁹ (July 9, 2015), the challenged “invention operate[d] under the paradigm of WHO (the purchasing organization) is buying WHAT (the product).”⁵⁰ The Federal Circuit found that the claimed invention was “a covered business method patent as that term is understood, and it does not fall within the meaning of a ‘technological invention.’”⁵¹ The Federal Circuit invalidated the CMB patent as the computer performed “purely conventional” steps to carry out an “abstract idea of determining a price using organization and product group hierarchies.”⁵²

In *Morales v. Square, Inc.*⁵³ (October 16, 2015), the challenged patent claimed a “system [which] allows viewers of television programs to respond to offers for products and services displayed on the television screen using a remote control.”⁵⁴ The Federal Circuit, via a one-line order,⁵⁵ affirmed the district court’s invalidation of the claims as “an abstract idea because it describes the fundamental concept of relaying a signal containing the sender’s identity.”⁵⁶ The district court viewed the claims as “simply too broadly drawn to withstand the scrutiny required by the Supreme Court’s admonition that patents not impede innovation by preempting the basic tools of scientific and technological work.”⁵⁷ The U.S. Supreme Court denied certiorari review on March 21, 2016.⁵⁸

In *Cloud Satchel, LLC v. Barnes & Noble, Inc.*⁵⁹ (December 17, 2015), the challenged “patents are directed to systems, devices, and methods for enabling the transmission and storage of document references or ‘tokens,’ each of which is associated with an electronic document stored in a database.”⁶⁰ The Federal Circuit, via a one-line order,⁶¹ affirmed the district court’s invalidation of the claims as abstract idea because the “[p]laintiff [was] unable to meaningfully address the fact that the specification unambiguously states that the portable electronic reference transport device may be any ‘suitable’ portable computer, [nor was] plaintiff able to address the fact that the specification states that the electronic document reference may appear in ‘any suitable format’ and the distributed document subsystem consists of purely ‘conventional’ elements

⁴⁸ *Id.* at 1371.

⁴⁹ 793 F.3d 1306 (Fed. Cir. 2015).

⁵⁰ *Id.* at 1311.

⁵¹ *Id.* at 1336.

⁵² *Id.* at 1333–34. Concurring in part and dissenting in part, Judge Hughes “agree[d] with the majority that the Patent Trial and Appeal Board properly held that the [p]atent claims at issue were invalid under § 101,” but opined that the Federal Circuit “do[es] not have jurisdiction to review the Board’s determination that [plaintiff’s] patent is a ‘covered business method patent,’ AIA § 18(d).” *Id.* at 1336–37, 1343 (Hughes, J., concurring-in-part, dissenting-in-part).

⁵³ 621 F. App’x 660 (Fed. Cir. 2015).

⁵⁴ *Morales v. Square, Inc.*, 75 F. Supp. 3d 716, 719 (W.D. Tex. 2014).

⁵⁵ *Morales*, 621 F. App’x 660 at 661. Technically, the four Federal Circuit cases of (1) *Morales v. Square, Inc.*, 621 F. App’x 660 (Fed. Cir. 2015), (2) *Cloud Satchel, LLC v. Barnes & Noble, Inc.*, 626 F. App’x 1010 (Fed. Cir. 2015), (3) *Wireless Media Innovations, LLC v. Maher Terminals, LLC*, No. 2015-1634, 2016 WL 463218 (Fed. Cir. Feb. 8, 2016), and (4) *Clear with Computers LLC v. Altec Industry Inc.*, No. 2015-1525, 2016 WL 494593 (Fed. Cir. Feb. 9, 2016). did not per se cite *Alice* to invalidate software patents (as I initially set out to do), but it did invalidate software patents under the *Alice* § 101 standard via affirmance (thus I included this order in the count of the Federal Circuit cases).

⁵⁶ *Morales*, 75 F. Supp. 3d at 725.

⁵⁷ *Id.* at 727.

⁵⁸ *Morales v. Square, Inc.*, 136 S. Ct. 1461 (2016).

⁵⁹ 626 F. App’x 1010 (Fed. Cir. 2015).

⁶⁰ *Cloud Satchel, LLC v. Amazon.com, Inc.*, 76 F. Supp. 3d 553, 557–58 (D. Del. 2014).

⁶¹ *Cloud Satchel*, 626 F. App’x at 1011; see also discussion in *supra* note 55.

connected by a ‘conventional’ network.”⁶² The U.S. Supreme Court denied certiorari review on April 25, 2016.⁶³

In *Vehicle Intelligence & Safety LLC v. Mercedes-Benz USA, LLC*⁶⁴ (December 28, 2015), the challenged “patent claims methods and systems that screen equipment operators for impairment, selectively test those operators, and control the equipment if an impairment is detected.”⁶⁵ The Federal Circuit found the claims “drawn to a patent-ineligible concept, specifically the abstract idea of testing operators of any kind of moving equipment for any kind of physical or mental impairment” because “[n]one of the claims at issue are limited to a particular kind of impairment, explain how to perform either screening or testing for any impairment, specify how to program the ‘expert system’ to perform any screening or testing, or explain the nature of control to be exercised on the vehicle in response to the test results.”⁶⁶ Furthermore, the Federal Circuit found “[n]othing in these claims—considered as individual elements or an ordered combination—disclose an inventive concept sufficient to transform the abstract idea of testing operators of any kind of moving equipment for any kind of physical or mental impairment into a patent-eligible application of that idea.”⁶⁷ The Supreme Court denied certiorari review on May 31, 2016.⁶⁸

In *Mortgage Grader, Inc. v. First Choice Loan Services Inc.*⁶⁹ (January 20, 2016), the challenged claims were “directed to systems and methods for assisting borrowers to obtain loans.”⁷⁰ The Federal Circuit invalidated the claims as “directed to the abstract idea of ‘anonymous loan shopping’” because the claims “recite nothing more than the collection of information to generate a ‘credit grading’ and to facilitate anonymous loan shopping,” and simply “‘add’ only generic computer components such as an ‘interface,’ ‘network,’ and ‘database.’”⁷¹ Notably, the Federal Circuit again reiterated DDR’s claims as “solv[ing] a problem unique to the Internet.”⁷²

In *Wireless Media Innovations, LLC v. Maher Terminals, LLC*⁷³ (February 8, 2016), the two challenged patents claimed “a system for monitoring shipping containers, . . . 5 steps for monitoring the location and load status of shipping containers, . . . a computerized system for monitoring and recording location and load status of shipping containers relative to a facility, . . . [and] steps for generating a report for monitoring containers to be unloaded without first being placed in a yard at the container facility.”⁷⁴ The Federal Circuit, via a one-line order,⁷⁵ affirmed the district court’s invalidation of the claims as “directed to the same abstract idea: monitoring locations, movement, and load status of shipping containers within a container-receiving yard,

⁶²*Cloud Satchel*, 76 F. Supp. 3d at 564 (internal citations omitted).

⁶³*Cloud Satchel, LLC v. Barnes & Noble, Inc.*, No. 15-1161, 2016 WL 1059941 (U.S. Apr. 25, 2016).

⁶⁴No. 2015-1411, 2015 WL 9461707 (Fed. Cir. Dec. 28, 2015).

⁶⁵*Id.* at *1.

⁶⁶*Id.* at *2 (analyzing under *Mayo/Alice* step one).

⁶⁷*Id.* at *3 (analyzing under *Mayo/Alice* step two).

⁶⁸*Vehicle Intelligence & Safety LLC v. Mercedes-Benz USA, LLC*, No. 15-1201, 2016 WL 1171121 (U.S. May 31, 2016).

⁶⁹811 F.3d 1314 (Fed. Cir. 2016).

⁷⁰*Id.* at 1318.

⁷¹*Id.* at 1324.

⁷²*Id.* at 1325 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)); see also discussion in *supra* note 46.

⁷³No. 2015-1634, 2016 WL 463218 (Fed. Cir. Feb. 8, 2016).

⁷⁴*Wireless Media Innovations, LLC v. Maher Terminals, LLC*, 100 F. Supp. 3d 405, 414–15 (D.N.J. 2015).

⁷⁵*Wireless Media*, 2016 WL 463218 at *1; see also discussion in *supra* note 55.

and storing, reporting and communicating this information in various forms through generic computer functions.”⁷⁶

In *Clear with Computers LLC v. Altec Industry Inc.*⁷⁷ (February 9, 2016), “[t]he patents-in-suit relate to computer-implemented systems and methods for creating a sales proposal.”⁷⁸ The Federal Circuit, again via a one-line order,⁷⁹ affirmed the district court’s invalidation of “the asserted claims [as] directed to the abstract idea of creating a customized sales proposal for a customer.”⁸⁰ The district court acknowledged that “the contours are often unclear between those inventions that are directed to an abstract idea and those that are not,” but found “the claims in this particular case plainly fall within the category of claims that, without some additional inventive concept, are directed to abstract ideas which are ineligible for patent protection.”⁸¹ Notably, the district court in *Clear with Computers* made “clear [that it] does not hold that all claims in software-based patents are directed to an abstract idea,”⁸² which is consistent with the Federal Circuit’s view in *Enfish*.⁸³

In *In re Smith*⁸⁴ (March 10, 2016), the challenged invention “relate[d] to a wagering game utilizing real or virtual standard playing cards.”⁸⁵ The Federal Circuit affirmed the rejection of the invalid claims as “directed to rules for conducting a wagering game, compare to other ‘fundamental economic practices’ found abstract by the Supreme Court” because the claimed “method of conducting a wagering game [here] is drawn to an abstract idea much like *Alice*’s method of exchanging financial obligations and *Bilski*’s method of hedging risk.”⁸⁶ Notably, the Federal Circuit declined to review the USPTO’s 2014 Interim Guidance on Patent Subject Matter Eligibility to examiners on how to apply *Alice* because the Interim Eligibility Guidance “is not intended to create any right or benefit, substantive or procedural, enforceable by any party against the Office, [but] Rejections will continue to be based upon the substantive law, and it is these rejections that are appealable.”⁸⁷

In *Genetic Techs. Ltd. v. Merial L.L.C.*⁸⁸ (April 8, 2016), the challenged “patent claim[ed] methods of analyzing sequences of genomic deoxyribonucleic acid (‘DNA’).”⁸⁹ Citing to *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*⁹⁰ and *In re BRCA1- &*

⁷⁶*Wireless Media*, 100 F. Supp. 3d at 413.

⁷⁷No. 2015-1525, 2016 WL 494593 (Fed. Cir. Feb. 9, 2016).

⁷⁸*Clear with Computers, LLC v. Altec Indus., Inc.*, No. 6:14-CV-79, 2015 WL 993392 (E.D. Tex. Mar. 3, 2015). It might be important to note that this case is from Judge Rodney Gilstrap’s docket. *Id.* See generally Daniel Klerman & Greg Reilly, *Forum Selling*, 89 S. CAL. L. REV. 241 (2016), for a discussion of Judge Gilstrap’s patent docket, who resides over roughly a quarter of all patent cases filed in the United States.

⁷⁹*Clear with Computers*, 2016 WL 494593 at *1; see also discussion in *supra* note 55.

⁸⁰*Clear with Computers*, 2015 WL 993392 at *4.

⁸¹*Id.*

⁸²*Id.*

⁸³See *Enfish, LLC v. Microsoft Corp.*, No. 2015-1244, 2016 WL 2756255, at *7 (Fed. Cir. May 12, 2016) (stating “we are not persuaded that the invention’s ability to run on a general-purpose computer dooms the claims”).

⁸⁴815 F.3d 816 (Fed. Cir. 2016).

⁸⁵*Id.* at 817.

⁸⁶*Id.* at 818–19. The Federal Circuit further noted that a “wagering game is, effectively, a method of exchanging and resolving financial obligations based on probabilities created during the distribution of the cards.” *Id.*

⁸⁷*Id.* at 819 (quoting Interim Eligibility Guidance, 79 Fed. Reg. 74618, 74619 (Dec. 16, 2014)).

⁸⁸No. 2015-1202, 2016 WL 1393573 (Fed. Cir. Apr. 8, 2016).

⁸⁹*Id.* at *1.

⁹⁰788 F.3d 1371, 1373 (Fed. Cir. 2015) (invalidating patent claiming certain methods of using cell-free fetal DNA (‘cffDNA’)). The Supreme Court denied certiorari review on June 27, 2016. *Sequenom, Inc. v. Ariosa Diagnostics, Inc.*, No. 15-1182, 2016 WL 1117246 (U.S. June 27, 2016).

*BRCA2–Based Hereditary Cancer Test*⁹¹ as “instructive,” the Federal Circuit nixed this non-coding gene sequencing patent as “directed to patent-ineligible subject matter” because the challenged patent was “directed to the relationship between non-coding and coding sequences in linkage disequilibrium and the tendency of such non-coding DNA sequences to be representative of the linked coding sequences—a law of nature.”⁹²

In *In re Brown*⁹³ (April 22, 2016), the challenged invention “claims methods of cutting hair.”⁹⁴ The Federal Circuit invalidated the claims as “drawn to the abstract idea of assigning hair designs to balance head shape” “coupled with routine and conventional hair-cutting steps.”⁹⁵

B. *Enfish v. Microsoft*

As of June 19, 2016, the Federal Circuit has only issued two opinions that upheld the patent-eligibility of a software invention under *Alice*: (1) *DDR Holdings, LLC v. Hotels.com, L.P.*⁹⁶ (Dec. 5, 2014), and (2) *Enfish, LLC v. Microsoft Corp.*⁹⁷ (May 12, 2016). *DDR* was covered in depth in my one-year review of *Alice*.⁹⁸ On June 27, 2016, the Federal Circuit issued a third opinion that upheld the patent-eligibility of a software invention under *Alice*: *BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC*,⁹⁹ which is covered in depth in Part III.E.

In *Enfish, LLC v. Microsoft Corp.*¹⁰⁰ (May 12, 2016), the two patents at issue were “directed to an innovative logical model for a computer database, . . . [that] includes all data entities in a single table, with column definitions provided by rows in that same table, . . . as the ‘self-referential’ property of the database.”¹⁰¹ The district court found the claims were “directed to the abstract idea of ‘storing, organizing, and retrieving memory in a logical table’ or, more simply, ‘the concept of organizing information using tabular formats.’”¹⁰²

Conversely, the Federal Circuit found “the plain focus of the claims is on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity.”¹⁰³ The claimed “self-referential table . . . is a specific type of data structure designed to improve the way a computer stores and retrieves data in memory.”¹⁰⁴ Furthermore, the patent “specification’s disparagement of conventional data structures, combined with language describing the ‘present

⁹¹774 F.3d 755, 757 (Fed. Cir. 2014) (invalidating patents “cover[ing] compositions of matter and methods relating to the BRCA1 and BRCA2 genes”).

⁹²*Id.* at *4, *9.

⁹³No. 2015-1852, 2016 WL 1612776 (Fed. Cir. Apr. 22, 2016).

⁹⁴*Id.* at *1; see also Michael S. Kwun, *Alice Tells a Joke*, 19 GREEN BAG 2D 329 (2016).

⁹⁵*In re Brown*, 2016 WL 1612776 at *1, *2.

⁹⁶773 F.3d 1245 (Fed. Cir. 2014).

⁹⁷No. 2015-1244, 2016 WL 2756255 (Fed. Cir. May 12, 2016).

⁹⁸See Tran, *One-Year Review*, *supra* note 7, at 544–45.

⁹⁹No. 2015-1763, 2016 WL 3514158 (Fed. Cir. June 27, 2016).

¹⁰⁰No. 2015-1244, 2016 WL 2756255 (Fed. Cir. May 12, 2016). It might be important to note that Judges Hughes, Moore, and Taranto resided over this case, with Judge Hughes writing for the Court. *Id.* Five days later, Judge Hughes also wrote for the court in *In re TLI Communications LLC Patent Litigation*, No. 2015-1372, 2016 WL 2865693 (Fed. Cir. May 17, 2016), a decision that came out in the opposite direction from *Enfish*.

¹⁰¹*Id.* at *1.

¹⁰²*Id.* at *6.

¹⁰³*Id.* at *5.

¹⁰⁴*Id.* at *8.

invention’ as including the features that make up a self-referential table, confirm that our characterization of the ‘invention’ for purposes of the § 101 analysis has not been deceived by the ‘draftsman’s art.’”¹⁰⁵ The Federal Circuit characterized the claims here as “directed to an improvement in the functioning of a computer” and as “directed to a specific improvement to computer functionality” to distinguish *Enfish* from precedents that invalidated software patents as abstract ideas.¹⁰⁶ The Federal Circuit found the claims here “not simply directed to any form of storing tabular data, but instead are specifically directed to a self-referential table for a computer database.”¹⁰⁷ Put simply, the Federal Circuit was “not faced with a situation where general-purpose computer components are added post-hoc to a fundamental economic practice or mathematical equation. Rather, the claims were directed to a specific implementation of a solution to a problem in the software arts.”¹⁰⁸ Accordingly, the Federal Circuit found the claims were “not directed to an abstract idea within the meaning of *Alice*. Rather, they were directed to a specific improvement to the way computers operate, embodied in the self-referential table.”¹⁰⁹

Notably (but unsurprisingly), the Federal Circuit was “not persuaded that the invention’s ability to run on a general-purpose computer dooms the claims.”¹¹⁰ Unlike the lower courts, the Federal Circuit in *Enfish* “do[es] not read *Alice* to broadly hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at [*Mayo/Alice*] step two. . . . [nor] think that claims directed to software, as opposed to hardware, are inherently abstract and therefore only properly analyzed at the second step of the *Alice* analysis.”¹¹¹ Indeed, “[m]uch of the advancement made in computer technology consists of improvements to software that, by their very nature, may not be defined by particular physical features but rather by logical structures and processes. [The Federal Circuit] do not see in *Bilski* or *Alice*, or [their] cases, an exclusion to patenting this large field of technological progress.”¹¹²

The *Enfish* analysis reframes the *Mayo/Alice* step one inquiry into a bright-line dichotomy of “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*.”¹¹³ In other words, the *Enfish* framework asks: “is the claimed invention something that makes a computer work better? Or are computers merely being used to do another task?”¹¹⁴ The former is patentable; whereas the latter fails under *Mayo/Alice* step two.¹¹⁵ The Federal Circuit’s *Enfish* framework signifies a huge departure from “the Supreme Court’s rejection of ‘categorical rules’ to decide subject matter eligibility [as in] *Bilski v. Kappos*.”¹¹⁶

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at *7.

¹⁰⁷ *Id.* at *5–*6. The Federal Circuit noted that “[b]ecause the claims are not directed to an abstract idea under step one of the *Alice* analysis, we do not need to proceed to step two of that analysis.” *Id.* at *8.

¹⁰⁸ *Id.* at *8.

¹⁰⁹ *Id.* at *5.

¹¹⁰ *Id.* at *7.

¹¹¹ *Id.* at *4.

¹¹² *Id.* at *8.

¹¹³ *Id.* at *5 (emphasis added).

¹¹⁴ Jason Rantanen, *Judge Hughes and the New § 101 Dichotomy*, PATENTLYO (May 23, 2016), <http://patentlyo.com/patent/2016/05/hughes-%C2%A7-dichotomy.html>.

¹¹⁵ *Id.*

¹¹⁶ *In re TLI Commc’ns LLC Patent Litig.*, No. 2015-1372, 2016 WL 2865693, at *5 (Fed. Cir. May 17, 2016) (citing *Bilski v.*

Central to *Enfish* is the Federal Circuit's recognition of what is *not* patentable subject matter.¹¹⁷ To distinguish the *Enfish* claims, the Federal Circuit listed the precedents:

[T]he claims at issue in *Alice* and *Versata* can readily be understood as simply adding conventional computer components to well-known business practices. See *Alice*, 134 S. Ct. at 2358–60; *Versata*, 793 F.3d at 1333–34 (computer performed “purely conventional” steps to carry out claims directed to the “abstract idea of determining a price using organization and product group hierarchies”); see also *Mortgage Grader*, 811 F.3d at 1324–25 (claims attaching generic computer components to perform “anonymous loan shopping” not patent eligible); *Intellectual Ventures I*, 792 F.3d at 1367–69 (claims adding generic computer components to financial budgeting); *OIP Techs.*, 788 F.3d at 1362–64 (claims implementing offer-based price optimization using conventional computer activities); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714–17 (Fed. Cir. 2014) (claims applying an exchange of advertising for copyrighted content to the Internet); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1354–55 (Fed. Cir. 2014) (claims adding generic computer functionality to the formation of guaranteed contractual relationships). And unlike the claims here that are directed to a specific improvement to computer functionality, the patent-ineligible claims at issue in other cases recited use of an abstract mathematical formula on any general purpose computer, see *Gottschalk v. Benson*, 409 U.S. 63, 93 (1972), see also *Alice*, 134 S. Ct. at 2357–58, or recited a purely conventional computer implementation of a mathematical formula, see *Parker v. Flook*, 437 U.S. 584, 594 (1978); see also *Alice*, 134 S. Ct. at 2358, or recited generalized steps to be performed on a computer using conventional computer activity, see *Internet Patents*, 790 F.3d at 1348–49 (claims directed to abstract idea of maintaining computer state without recitation of specific activity used to generate that result), *Digitech Image Techs., LLC v. Electrs. For Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (claims directed to abstract idea of “organizing information through mathematical correlations” with recitation of only generic gathering and processing activities).¹¹⁸

C. *In re TLI Communications LLC Patent Litigation*

In *In re TLI Communications LLC Patent Litigation*¹¹⁹ (May 17, 2016, five days after *Enfish*), the challenged patent claimed “an apparatus for recording of a digital image, communicating the digital image from the recording device to a storage device, and to admin-

Kappos, 561 U.S. 604, 610 (2010)).

¹¹⁷Rantanen, *supra* note 114. The *Enfish* “opinion does not try to fight the idea that there is some subject matter that is not patentable. Instead, it acknowledges that there are limits on patentable subject matter and works with those limits. [The Federal Circuit] considers the precedents in this area and identifies them as fundamentally involving the use of a computer as a general-purpose tool. By defining what is not patentable subject matter in this way, [the Federal Circuit] is freed to identify some ‘other’ that is outside that impermissible category: developments that improve on the operation of the computer itself.” See Rantanen, *supra* note 114.

¹¹⁸*Enfish*, 2016 WL 2756255, at *7 (some internal citations were modified to shorten the block quote).

¹¹⁹No. 2015-1372, 2016 WL 2865693 (Fed. Cir. May 17, 2016). It might be important to note that Judges Hughes, Dyk, and Schall resided over this case, with Judge Hughes again writing for the Court (Judge Hughes also penned the *Enfish* opinion, see discussion in *supra*, note 100). *TLI Communications*, 2016 WL 2865693.

istering the digital image in the storage device.”¹²⁰ The Federal Circuit analyzed the claims under the new *Enfish* framework, “ask[ing] whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea.”¹²¹ Unlike the *Enfish* claims, the Federal Circuit found the claims were “not directed to a specific improvement to computer functionality, [but r]ather, they are directed to the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem presented by combining the two.”¹²² In other words, the claims here are “simply directed to the abstract idea of classifying and storing digital images in an organized manner,” and “fail to recite any elements that individually or as an ordered combination transform the abstract idea of classifying and storing digital images in an organized manner into a patent-eligible application of that idea.”¹²³

In addition to defining what is *not* patentable subject matter in *Enfish*, the Federal Circuit in *TLI Communications* contours some characteristics of what is patentable subject matter, such as “a solution to a ‘technological problem’ as was the case in *Diamond v. Diehr*” or an “attempt to solve a challenge particular to the Internet [as in] *DDR Holdings*.”¹²⁴ Given the contrasting opinions of *Enfish* and *TLI Communications*, future Federal Circuit opinions (or a Supreme Court decision) would likely shed more light into other characteristics of what is patentable subject matter in the context of computer-implemented invention.

In the two years post-*Alice*, the Federal Circuit has released 26 opinions on § 101 but out of those 26, only 2 opinions upheld patent validity (*DDR Holdings* and *Enfish*). However, past failures do not predict future results,¹²⁵ as *Enfish* has ignited an optimistic fire in many software patent owners.¹²⁶ *Enfish* (and *BASCOM*), which came out very late toward *Alice*’s two-year anniversary,¹²⁷ could mark a significant turning point for the fate of software patents. Before *Enfish*, many plaintiffs cited *DDR Holdings* in attempt to analogize their patents to the patent in *DDR Holdings*. However, this strategy mostly did not work, as seen by the similar invalidation rate in *Alice*’s second year as compared to *Alice*’s first year. Now with *Enfish* and *DDR Holdings* (in combination with *BASCOM*) as ammunition, plaintiffs would foreseeably have more of a shot to win the § 101 battle.¹²⁸

¹²⁰ *Id.* at *1.

¹²¹ *Id.* at *4 (citing *Enfish, LLC v. Microsoft Corp.*, No. 2015-1244, 2016 WL 2756255, at *11 (Fed. Cir. May 12, 2016)).

¹²² *Id.* at *4.

¹²³ *Id.* at *5.

¹²⁴ *Id.* at *4. The Federal Circuit “[l]eft unclear [] the meaning of this discussion: does one only get to the solution to a technological problem inquiry if the claims are not directed to a specific improvement to computer functionality? Or is the analysis more flexible than *Enfish* implies?” Rantanen, *supra* note 114.

¹²⁵ Cf. Jasper L. Tran, *The Law and 3D Printing*, 31 J. MARSHALL J. INFO. TECH. & PRIVACY L. 505, 511 (2015) (“Past performance in law and 3D printing scholarship may not predict future returns in the field”). For a discussion on 3D Printing, see generally Jasper L. Tran, *To Bioprint or Not to Bioprint*, 17 N.C. J.L. & TECH. 123 (2015) (covering 3D bioprinting); Jasper L. Tran, *3D-Printed Food*, 17 MINN. J.L. SCI. & TECH. 855 (2016) (covering 3D-printed food); Jasper L. Tran, *Press Clause and 3D Printing*, 14 NW. J. TECH. & INTELL. PROP. 75 (2016) (covering the First Amendment right of 3D printing).

¹²⁶ E.g., Joff Wild, *After so much 101 Gloom Enfish Is a Major Step in the Right Direction, Says Former Microsoft Chief Patent Counsel*, IAM (May 30, 2016), <http://www.iam-media.com/blog/Detail.aspx?g=81b12b32-c2b9-4b24-801c-b917d430d776>.

¹²⁷ *Enfish* came out on May 12, 2016, shortly before *Alice*’s two-year anniversary on June 19, 2016.

¹²⁸ It could be that *Alice*’s holding was so hard for software patents (at roughly 80% invalidation rate) that it cannot get lower than that (as there is only one way left to go, i.e. to go back up). Given the Federal Circuit’s release of *Enfish* and *DDR Holdings*, there could likely be an upswing of valid software patents in the coming years.

D. The USPTO's Reaction Immediately After *Enfish* and *TLI Communications*

Following *Enfish* and *TLI Communications*, the USPTO, on May 19, 2016, issued new guidance instructing examiners to immediately implement *Enfish*'s reinterpretation of *Alice/Mayo*.¹²⁹ The new guidance, on its face, instructs examiners to “develop well-reasoned, substantive rejections rather than conclusory rejections.”¹³⁰ The guidance emphasizes the Federal Circuit’s recognition of *Mayo/Alice* step one in the *Enfish* framework: “comparisons to prior abstract idea determinations; a caution against operating at too high a level of abstraction of the claims, and the rejection of the tissue-paper argument that use of a computer automatically dooms the claim (it doesn’t).”¹³¹

The guidance concludes with: “[W]hen performing an analysis of whether a claim is directed to an abstract idea (Step 2A), examiners are to continue to determine if the claim recites (i.e., sets forth or describes) *a concept that is similar to concepts previously found abstract by the courts*.”¹³² However, “a claim is directed to an improvement in computer-related technology *can demonstrate* that the claim does *not* recite a concept similar to previously identified abstract ideas.”¹³³ Notably, the language used to include “a concept that is similar to concepts previously found abstract by the courts” and “not recite a concept similar to previously identified abstract idea,” which are not much help, especially when used with the qualifier “*can demonstrate*.”¹³⁴ Essentially, the guidance says nothing new, as examiners still have broad power over rejecting patent claims as they see fit.¹³⁵

E. *BASCOM v. AT&T*

Eight days outside of *Alice*’s two-year mark, the Federal Circuit released its third opinion that upheld the patent-eligibility of a software invention under *Alice: BASCOM v. AT&T*.¹³⁶ Although this opinion is slightly outside of *Alice*’s two-year review, I would be remiss if I did not cover *BASCOM*.¹³⁷

¹²⁹Memorandum from Robert W. Bahr, Deputy Comm’r for Pat. Examining Pol’y of the U.S. Pat. & Trademark Off. to Pat. Examining Corps. (May 19, 2016) [hereinafter USPTO New Guidance], available at http://www.uspto.gov/sites/default/files/documents/ieg-may-2016_enfish_memo.pdf. This guidance is the latest in the series dating back to 2009 after *Bilski v. Kappos*.

¹³⁰Daniel Young & Jessica Colantonio, *USPTO Provides Updates to Patent Subject Matter Eligibility Guidance*, IPWATCHDOG (June 1, 2016), <http://www.ipwatchdog.com/2016/06/01/uspto-updates-patent-subject-matter-eligibility-guidance/id=69602/>.

¹³¹Rantanen, *supra* note 114.

¹³²USPTO New Guidance, *supra* note 129, at 2 (emphasis added).

¹³³*Id.* (emphasis added).

¹³⁴*Id.* (emphasis added).

¹³⁵Relatedly, Gene Quinn of IPWatchdog “expect[s] examiners] will point to the *TLI Communications* decision as meaning that the *Enfish* decision was nothing more than a blip on the radar in the same way that *DDR Holdings* was a blip on the radar screen.” Gene Quinn, *USPTO Gives Examiner Guidance in Light of Enfish v. Microsoft*, IPWATCHDOG (May 19, 2016), <http://www.ipwatchdog.com/2016/05/19/uspto-guidance-enfish-v-microsoft/id=69275/>.

¹³⁶*BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC*, No. 2015-1763, 2016 WL 3514158 (Fed. Cir. June 27, 2016).

¹³⁷Note that eight days after *BASCOM*, the Federal Circuit released a fourth opinion that upheld the patent-eligibility citing *Alice: Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, No. 2015-1570, 2016 WL 3606624 (Fed. Cir. July 5, 2016). However, given this patent is not directed to computer-implemented invention, but instead describes “an improved process of preserving hepatocytes,” *id.* at *2, I will cover this opinion in depth in my three-year review.

In *BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC* (June 27, 2016),¹³⁸ the challenged patent “recite[s] a system for filtering Internet content, [where the] filtering system is located on a remote ISP server that associates each network account with (1) one or more filtering schemes and (2) at least one set of filtering elements from a plurality of sets of filtering elements, thereby allowing individual network accounts to customize the filtering of Internet traffic associated with the account.”¹³⁹ The district court invalidated this patent as directed to the abstract idea of “filtering content [because] content provided on the Internet is not fundamentally different from content observed, read, and interacted with through other mediums like books, magazines, television, or movies.”¹⁴⁰

The Federal Circuit vacated and remanded, finding that under *Mayo/Alice* step two, the claimed patent describes an inventive concept of “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user,” even though “the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself.”¹⁴¹ The Federal Circuit found this patent similar to one in *DDR Holdings*,¹⁴² because the instant invention “is not claiming the idea of filtering content simply applied to the Internet [but] instead claiming a technology-based solution (not an abstract-idea-based solution implemented with generic technical components in a conventional way) to filter content on the Internet that overcomes existing problems with other Internet filtering systems.”¹⁴³ Furthermore, the Federal Circuit distinguished the patent here with those in *OIP Techs., Inc. v. Amazon.com, Inc.*,¹⁴⁴ *Intellectual Ventures I*,¹⁴⁵ *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*,¹⁴⁶ *Ultramercial, Inc. v. Hulu, LLC*,¹⁴⁷ and *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*¹⁴⁸ because the claims here “do not preempt the use of the abstract idea of filtering content on the Internet or on generic computer components performing conventional activities, [but] carve out a specific location for the filtering system (a remote ISP server) and require the filtering system to give users the ability to customize filtering for their individual net-

¹³⁸2016 WL 3514158. It might be important to note that a panel of Judges Chen, O’Malley, and Newman resided over this case, with Judge Chen writing for the Court and Judge Newman concurring. *Id.*

¹³⁹*Id.* at *3.

¹⁴⁰*BASCOM Glob. Internet Servs., Inc. v. AT & T Mobility LLC*, 107 F. Supp. 3d 639, 650 (N.D. Tex. 2015).

¹⁴¹*BASCOM*, 2016 WL 3514158, at *6. The Federal Circuit also found the district court’s patent eligibility analysis conflated “with obviousness analysis under 35 U.S.C. § 103.” *Id.*

¹⁴²*DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1248–50, 1257–59 (Fed. Cir. 2014).

¹⁴³*BASCOM*, 2016 WL 3514158, at *7.

¹⁴⁴788 F.3d 1359, 1363 (Fed. Cir.), *cert. denied*, 136 S. Ct. 701 (2015). The Federal Circuit stated, “[u]nlike the claims [here], the patent in *OIP* was not limited to a specific technical solution of the abstract idea.” *BASCOM*, 2016 WL 3514158, at *7.

¹⁴⁵*Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1371 (Fed. Cir. 2015). The Federal Circuit stated, “[t]he claims in *Intellectual Ventures I* preempted all use of the claimed abstract idea on the Internet, on a generic computer.” *BASCOM*, 2016 WL 3514158, at *8 (internal quotation omitted).

¹⁴⁶776 F.3d 1343, 1347 (Fed. Cir. 2014), *cert. denied*, 136 S. Ct. 119 (2015). The Federal Circuit stated, “[t]he claims in *Content Extraction* preempted all use of the claimed abstract idea on well-known generic scanning devices and data processing technology.” *BASCOM*, 2016 WL 3514158, at *8.

¹⁴⁷772 F.3d 709, 715–16 (Fed. Cir. 2014), *cert. denied sub nom.*, *Ultramercial, LLC v. WildTangent, Inc.*, 135 S. Ct. 2907 (2015). The Federal Circuit stated, “[t]he claims in *Ultramercial* preempted all use of the claimed abstract idea on the Internet.” *BASCOM*, 2016 WL 3514158, at *8.

¹⁴⁸728 F.3d 1336, 1344–45 (Fed. Cir. 2013). The Federal Circuit stated, “the claims in *Accenture* preempted all use of the claimed abstract idea on generic computer components performing conventional activities.” *BASCOM*, 2016 WL 3514158, at *8.

work accounts.”¹⁴⁹ Accordingly, the Federal Circuit found this invention recite patent-eligible subject matter under *Alice*,¹⁵⁰ making this case the third Federal Circuit case that upheld patent validity since *Alice*.

Takeaway. The Federal Circuit’s behavior toward *Alice*’s two-year mark is worth paying attention to.¹⁵¹ *BASCOM* clarifies when to transition from the *Mayo/Alice* step one to step two: when step one includes reasonable arguments on either side as to whether a claim is directed to an abstract idea, step two can resolve the question of patent eligibility.¹⁵² In response to § 101 rejections, patent prosecutors can argue (1) under *Enfish*, the claim is unambiguously directed to a technological improvement, thus, eligible under step one, and (2) with step two as a fallback argument under *BASCOM*, that even if step one is a “close call,” the claim still recites patent-eligible subject matter because “the *specific arrangement* of features in the claim improves a technological process.”¹⁵³

IV. Conclusion

As of June 19, 2016, courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. Specifically, the Federal Circuit upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%. Also, courts have decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit has decided 26 motions, resulting in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts have decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB has decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%. In summary, the average invalidation rate of patents before the three venues was 82.9% at *Alice*’s one-year and 78.2 % at *Alice*’s two-year, which could be attributed to the Federal Circuit’s release of *DDR Holdings*.

The *Enfish* analysis reframes the *Mayo/Alice* step one inquiry into a bright-line dichotomy of “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*.” In *Enfish*, the Federal Circuit made clear that it was “not persuaded that the invention’s ability to run on a general-purpose computer dooms the claims.” *BASCOM* clarifies when to transition from the *Mayo/Alice* step one to step two. Together, *Enfish* and *BASCOM* (in addition to *DDR Holdings*) mark

¹⁴⁹ *BASCOM*, 2016 WL 3514158, at *8.

¹⁵⁰ *Id.*

¹⁵¹ Cf. Jasper L. Tran, *The Right to Attention*, 91 IND. L.J. 1023 (2016). It’s almost as though the Federal Circuit is trying to stanch *Alice*’s bleeding, one case at a time. E.g., Richard Lloyd, *Some Hope for Software Patents in the US After the CAFC’s Enfish Decision, But This Is No Game-Changer*, IAM (May 13, 2016), <http://www.iam-media.com/blog/detail.aspx?g=96d9253e-7c06-418c-b3ec-3251497a7eac> (“The Federal Circuit will continue, valiantly, to contain, limit and marginally reduce the harm. But, it will not be enough. That is the lesson of *Enfish*.”).

¹⁵² Albert W. Vredevel, *Alice Step 2 Eligibility Refined by Federal Circuit: Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, SHUMAKER & SIEFFERT NEWS, <http://www.ssiplaw.com/news/201606/alice-step-2-eligibility-refined-federal-circuit-bascom-global-internet-services-inc-v>.

¹⁵³ *Id.*

a significant turning point for the fate of software patents. Given the late release of *Enfish* and *BASCOM* at the end of *Alice*'s two-year anniversary, the downward trend in invalidation rates could continue in *Alice*'s third year.

Stay tuned!

Appendix A

In my one-review year, I listed the information of the patents or patent applications that withstand the *Alice* test because these challenged patents or patent applications could be useful to patent prosecutors to study and learn how to draft more meaningful claims.¹⁵⁴ For instance, based on statistical analysis of § 101 rejections under *Alice*, a computer program can utilize machine learning to predict subject matter rejections of patent claims.¹⁵⁵ Similarly, Appendix A below provides the information of the patents or patent applications that courts (namely district courts, the PTAB and the Federal Circuit) have upheld under *Alice* from June 20, 2015 to June 19, 2016.

Patent No. or Patent App. No.	Cases	Court	Holding	Reasoning
11/633,647	Ex Parte Edvard Sorgard, Borgar Ljosland, Jorn Nystad, Mario Blazevic, Frank Langtind (Decision on Appeal) 2012-012464 Date: July 16, 2015	PTAB	upheld	Not Abstract
12/765,954	Ex Parte Cyriac J. Wegman III (Decision on Appeal) 2013-008168 Date: September 18, 2015	PTAB	upheld	Not Abstract
6,998,977 and 7,852,212 and 8,144,011 and 7,489,923 and 7,876,218	The Chamberlain Group, Inc., v. Linear LLC (Memorandum Opinion) ILND-1-14-cv-05197 Date: July 7, 2015	DC	upheld	Not Abstract
8,393,007 and 8,370,956 and 7,523,072 and 7,269,576 and 6,963,859 and 7,774,280 and 8,001,053	ContentGuard Holdings, Inc., v. Amazon.com, Inc. (Memorandum Opinion and Order) TXED-2-13-cv-01112, TXED-2-14-cv-00061 Date: August 6, 2015	DC	upheld	Not Abstract
6,101,502	Datatern, Inc., v. Microstrategy, Inc., et al. (Memorandum Order) MAD-1-11-cv-12220 Date: September 4, 2015	DC	upheld	Not Abstract

¹⁵⁴Tran, *One-Year Review*, *supra* note 7, at 546–50.

¹⁵⁵Ben Dugan, *Ask Alice!*, available at <http://alice.cebollita.org:8000/predict> (including a few pre-loaded claims from well-known cases).

Patent No. or Patent App. No.	Cases	Court	Holding	Reasoning
RE44,956 and RE44,973	Canrig Drilling Technology LTD., v. Trinidad Drilling L.P. (Memorandum Order) TXSD-4-15-cv-01821 Date: September 17, 2015	DC	upheld	Not Abstract
5,659,891	Mobile Telecommunications Technologies, LLC, v. Leap Wireless International, Inc. (Memorandum Order) TXED-2-13-cv-00885 Date: September 23, 2015	DC	upheld	Not Abstract
8,572,279 and 8,601,154	SimpleAir, Inc., v. Google Inc. (Memorandum Opinion and Order) TXED-2-14-cv-00011 Date: September 25, 2015	DC	upheld	Not Abstract
7,631,346 and 5,961,601 and 5,796,967 and 7,072,849	International Business Machines Corporation v. The Priceline Group Inc. (Report and Recommendation) 15-137 Date: February 16, 2016	DC	upheld	Not Abstract
7,579,141 and 8,021,832 and 8,974,800	Rutgers v. Qiagen N.V. (Memorandum Order) NJD-15-cv-7187 Date: February 29, 2016	DC	upheld	Not Abstract
7,058,439	ContourMed Inc., v. American Breast Care L.P. (Memorandum Opinion and Order) TXSD-4-15-cv-02769 Date: March 17, 2016	DC	upheld	Not Abstract
6,130,761	Intellectual Ventures I LLC, v. Ricoh Americas Corporation (Memorandum Opinion) DED-1-13-cv-00474 Date: March 22, 2016	DC	upheld	Not Abstract
6,604,101 and 7,516,154	Improved Search LLC, v. AOL Inc. (Memorandum Opinion) DED-1-15-cv-00262 Date: March 22, 2016	DC	upheld	Not Abstract
6,711,615 and 6,484,203	SRI International, Inc., v. Cisco Systems, Inc. (Memorandum Opinion) DED-1-13-cv-01534 Date: April 11, 2016	DC	upheld	Not Abstract
5,764,034 and 6,321,560	Baxter International, Inc., v. Carefusion Corp. (Memorandum and Order) ILND-1-15-cv-09986 Date: May 13, 2016	DC	upheld	Not Abstract
6,891,566 and 8,185,964	JDS Technologies, Inc., v. Exacq Technologies (Memorandum and Order) MIED-2-15-cv-10387 Date: June 7, 2016	DC	upheld	Not Abstract

Patent No. or Patent App. No.	Cases	Court	Holding	Reasoning
13/079,976	Ex Parte Jonah C. Kagen (Decision on Appeal) 2013-008188 Date: December 18, 2015	PTAB	upheld	Significantly More than the Abstract Idea Itself
11/477,767	Ex Parte Juha Kallio (Decision on Appeal) 2014-005647 Date: March 17, 2016	PTAB	upheld	Significantly More than the Abstract Idea Itself
6,151,604 and 6,163,775	Enfish, LLC v. Microsoft Corp. 2015-1244 Date: May 12, 2016	Fed. Cir.	upheld	Significantly More than the Abstract Idea Itself
6,259,789	Luciano F. Paone, v. Broadcom Corporation (Memorandum Decision and Order) NYED-2-15-cv-00596 Date: August 19, 2015	DC	upheld	Significantly More than the Abstract Idea Itself
8,597,678 and 8,709,494	MiMedX Group, Inc., v. Nutech Medical, Inc. (Memorandum Opinion and Order) ALND-2-15-cv-00369 Date: November 24, 2015	DC	upheld	Significantly More than the Abstract Idea Itself
8,285,678	Motio, Inc., v. BSP Software, LLC (Memorandum Opinion and Order) TXED-4-12-cv-00647 Date: January 4, 2016	DC	upheld	Significantly More than the Abstract Idea Itself
6,826,620	Network Congestion Solutions, LLC, v. United States Cellular Corporation (Memorandum Opinion) DED-1-14-cv-00903 Date: March 22, 2016	DC	upheld	Significantly More than the Abstract Idea Itself
6,292,685 and 7,787,923	Exergen Corporation, v. Kaz USA, Inc. (Memorandum and Order) MAD-1-13-cv-10628 Date: March 25, 2016	DC	upheld	Significantly More than the Abstract Idea Itself