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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

WESTERN DIVISION

ENFISH, LLC,
Plaintiff,
v.
MICROSOFT CORPORATION; FISERV, INC.; INTUIT, INC.; SAGE SOFTWARE, INC.; and JACK HENRY & ASSOCIATES, INC.,
Defendants.

Case No. 2:12-cv-07360-MRP-MRW

ORDER GRANTING DEFENDANTS' MOTION FOR SUMMARY JUDGMENT ON INELIGIBILITY UNDER 35 U.S.C. § 101

I. Introduction

Plaintiff Enfish, LLC ("Enfish") has sued Defendants Microsoft Corporation ("Microsoft"), Fiserv, Inc., Intuit, Inc., Sage Software, Inc., and Jack Henry & Associates, Inc. (collectively, "Defendants") for infringement of two patents: U.S. Patent Nos. 6,151,604 ("the '604 Patent") and 6,163,775 ("the '775 Patent").[1] In an order issued March 31, 2014, the Court invalidated claims 1, 2, and 16 of the '604 patent as single means claims prohibited by 35 U.S.C. § 112(a). *See Enfish, LLC v. Microsoft Corp.*, 9 F. Supp. 3d 1126 (C.D. Cal. 2014). In a separate order issued March 31, 2014, the Court invalidated claims 31, 32, 46, and 47 of the '604 patent and claims 31, 32, and 47 of the '775 patent as anticipated under 35 U.S.C. § 102. *See Enfish, LLC v. Microsoft Corp.*, No. 2:12-cv-07360, 2014 U.S. Dist. LEXIS 46523 (C.D. Cal. Mar. 31, 2014).

Defendants move for summary judgment on the basis that all asserted claims are unpatentable under 35 U.S.C. § 101.[2] For the reasons set forth in this order, the Court grants the motion.

II. Background

The abstract of the patents provides a clear explanation of the invention. *See* '604 Patent, Abstract. The patents are directed to an information management and database system. The patents improve upon prior art by employing a flexible, self-referential table to store data. This table is composed of rows and columns. Each column and each row has an object identification number ("OID"). Rows correspond to records and columns correspond to attributes. The intersection of a row and column comprises a cell, which may contain information for a particular record relating to a particular attribute. A cell also may simply point to another

[1] Both patents are continuations of application Ser. No. 08/383,752 filed Mar. 28, 1995, and their specifications are substantively the same. For consistency, the Court will cite to the specification of the '604 patent.

[2] In this order, the Court uses the term "patentable" to refer to subject matter eligibility under § 101.

record. Columns are entered as rows in the table. The record corresponding to a column contains information about the column, rendering the table self-referential.

The invention includes an index structure to allow for searching. A key word index contains text from each cell in the table. This index is itself stored in the table. Text cells in the table contain pointers to entries in the index, and the index contains pointers to the cells. This arrangement provides for extended inquiries. *See* '604 Patent, 2:66–3:6.

III. Standard for Summary Judgment

The Court shall grant summary judgment if there is no genuine dispute as to any material fact, as supported by facts on the record that would be admissible in evidence, and if the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56; *see Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250 (1986). Ineligibility under § 101 is a question of law.[3] *In re Comiskey*, 554 F.3d 967, 975 (Fed. Cir. 2009). The Court may appropriately decide this issue at the summary judgment stage.

IV. Ineligibility Under 35 U.S.C. § 101

Section 101 of the Patent Act defines patentable subject matter: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. Section 101 defines four broad categories of patentable inventions: processes, machines, manufactures, and compositions of matter. "Congress took

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[3] In an order issued today by this Court in *California Institute of Technology v. Hughes Communications, Inc.* (*Caltech*), No. 2:13-cv-7245, slip op. at 3 n.6 (C.D. Cal. Nov. 3, 2014), the Court discusses the applicability of the clear and convincing evidence standard to § 101 inquiries. Federal Circuit precedent requires courts to apply the standard to § 101 challenges. *See Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir. 2013), *vacated sub nom. WildTangent, Inc. v. Ultramercial, LLC*, 134 S. Ct. 2870 (2014). Despite misgivings about the standard's relevance to § 101, the Court must follow binding precedent. The Court therefore notes that the parties have identified no material disputed facts. The parties dispute only the legal conclusions drawn from the facts.

this permissive approach to patent eligibility to ensure that ingenuity should receive a liberal encouragement." *Bilski v. Kappos*, 561 U.S. 593, 601 (2010) (internal quotation marks omitted). But § 101 does not encompass all products of human effort and discovery. Laws of nature, physical phenomena, and abstract ideas are not patentable. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). These exceptions are well established. *See, e.g.*, *Chakrabarty*, 447 U.S. at 309; *Diamond v. Diehr*, 450 U.S. 175, 185 (1981); *Parker v. Flook*, 437 U.S. 584, 600 (1978) (Stewart, J., dissenting); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948); *Le Roy v. Tatham*, 55 U.S. 156, 175 (1853).

On occasion, the Federal Circuit has described § 101 as a "coarse eligibility filter," barring only "manifestly abstract" inventions and leaving §§ 102, 103, and 112 as the finer sieves. *See Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1341, 1354 (Fed. Cir. 2013*), vacated sub nom. WildTangent, Inc. v. Ultramercial, LLC*, 134 S. Ct. 2870 (2014). But in the Supreme Court's last few terms, it has indicated that patentability is a higher bar. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2334–35 (2014); *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293–94 (2012); *Bilski*, 130 S. Ct. at 3230–31. As noted by Judge Mayer of the Federal Circuit, a "robust application" of § 101 ensures "that patent protection promotes, rather than impedes, scientific progress and technological innovation." *I/P Engine, Inc. v. AOL Inc.*, 576 F. App'x 982, 996 (Fed. Cir. 2014) (nonprecedential) (Mayer, J., concurring).

The concern underlying § 101 is preemption: the idea that allowing a patent on the invention will impede innovation more than it incentivizes it. Of course, a court should not overstate this concern. By definition, every patent preempts an area of technology. A patentee with a groundbreaking invention is entitled to

monopolize a segment of technology, subject to the limits of the Patent Act.[4] The court must be wary of litigants who exaggerate preemption concerns in order to avoid developing innovative workarounds. *See McRO, Inc. v. Sega of America,, Inc.*, No. 2:12-cv-10327, 2014 WL 4749601, at *7 (C.D. Cal. Sept. 22, 2014) (Wu, J.) ("[W]e must be wary of facile arguments that a patent preempts all applications of an idea. It may often be easier for an infringer to argue that a patent fails § 101 than to figure out a different way to implement an idea, especially a way that is less complicated." (internal quotation mark omitted)). Nonetheless, § 101 prevents patentees from too broadly claiming a building block of research and development. Building blocks include basic tools of mathematics or formulas describing preexisting natural relationships. *See Mayo*, 132 S. Ct. 1296–97; *Benson*, 409 U.S. at 68, 72. But "a novel and useful structure created with the aid of knowledge of scientific truth" may be patentable. *Mackay Radio & Tel. Co. v. Radio Corp. of America*, 306 U.S. 86, 94 (1939).

Concerns over preemption have called into question when, if ever, computer software is patentable. A basic truth is that algorithms comprise computer software and computer codes. *See* J. Glenn Brookshear, *Computer Science: An Overview* 2 (6th ed. 2000) ("A machine-compatible representation of an algorithm is called a **program**. Programs, and the algorithms they represent, are collectively referred to as **software**."). But Supreme Court precedents make clear that "a scientific truth, or the mathematical expression of it, is not a patentable invention." *Benson*, 409 U.S. at 67. In light of this principle, the Supreme Court has heavily scrutinized algorithms and mathematical formulas under § 101. *See, e.g.*, *Flook*, 437 U.S. at 594–95 (finding unpatentable mathematical formula for updating alarm

[4] Justice Stevens in *Parker v. Flook*, 437 U.S. 584 (1978), expressed skepticism at the notion of preemption as a § 101 concern, perhaps for this reason. *Id.* at 590 n.11 ("[T]he formula [in *Benson*] had no other practical application; but it is not entirely clear why a process claim is any more or less patentable because the specific end use contemplated is the only one for which the algorithm has any practical application.").

limits); *Benson*, 409 U.S. at 71–72 (finding unpatentable mathematical formula for converting binary-coded decimal to pure binary). In early § 101 decisions on computer technology, the Supreme Court suggested that Congress, rather than courts, should determine whether software is patentable. *See Flook*, 437 U.S. at 596 ("It is our duty to construe the patent statutes as they now read, in light of our prior precedents, and we must proceed cautiously when we are asked to extend patent rights into areas wholly unforeseen by Congress."); *Benson*, 409 U.S. at 73 ("If these programs are to be patentable, considerable problems are raised which only committees of Congress can manage, for broad powers of investigation are needed, including hearings which canvass the wide variety of views which those operating in this field entertain.").

But intervening precedents and Congressional action have demonstrated that software is patentable. In *Diamond v. Diehr*, 450 U.S. 175 (1981), the Supreme Court found patentable a method claim implementing a mathematical formula on a computer. *See Diehr*, 450 U.S. at 179 n.5, 192–93 (finding patentable claim on "method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer"). More recently, in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014), the Supreme Court again suggested that software is patentable. *See id.* at 2359 (suggesting that software which improves function of a computer may be patentable).[5] Moreover, the America Invents Act mentions "computer program product[s]" in a section discussing tax strategy patents. *See* Leahy-Smith America Invents Act, 112 P.L. 29, § 14, 125 Stat. 284, 327–28 (2011). This section implicitly affirms software as eligible subject matter. *See* Mark J. Patterson & M. Andrew Pitchford, *First to File*, 47 Tenn. B.J. 14, 16 (November 2011) ("[T]ax strategies are no longer patentable, but

[5] The Supreme Court also stated, somewhat cryptically, that "many computer-implemented claims are ***formally*** addressed to patent-eligible subject matter." *Alice*, 134 S. Ct. at 2359 (emphasis added). It is unclear whether this statement explicitly approves of software patents or merely notes that some eligible patents on industrial processes happen to recite computers.

. . . computer implemented methods and computer program products (e.g., software) have been implicitly affirmed as patentable subject matter."); *see also Bilski*, 561 U.S. at 595 (noting that courts should not "violate the canon against interpreting any statutory provision in a manner that would render another provision superfluous"); *Cal. Inst. of Tech. v. Hughes Commc'ns, Inc.* (*Caltech*), No. 2:13-cv-7245, slip op. at 12–15 (C.D. Cal. Nov. 3, 2014)

The aftermath of *Alice* tells a different but misleading story about software patentability. *Alice* brought about a surge of decisions finding software patents ineligible. *See, e.g.*, *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (invalidating claim addressed to a "transaction performance guaranty" performed on a computer); *Digitech Image Techs., LLC v. Elec. for Imaging, Inc.*, 758 F.3d 1344, 1349, 1351 (Fed. Cir. 2014) (invalidating method claim for generating and combining data sets for device profile); *Eclipse IP LLC v. McKinley Equip. Corp.*, No. 8:14-cv-742, 2014 WL 4407592 (C.D. Cal. Sept. 4, 2014) (invalidating claims reciting methods for communications). Despite this flurry of § 101 invalidations, in reality, *Alice* did not significantly increase the scrutiny that courts must apply to software patents. It held only that an ineligible abstract idea does not become patentable simply because the claim recites a generic computer. *See Alice*, 134 S. Ct. at 2360 ("[T]he claims at issue amount to 'nothing significantly more' than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer. Under our precedents, that is not '*enough*' to transform an abstract idea into a patent-eligible invention." (citations omitted)). Courts must not extend the reach of *Alice* too far, lest they read in § 101 limitations that do not exist. *Cf. Bilski*, 561 U.S. at 603 ("This Court has not indicated that the existence of these well-established exceptions gives the Judiciary *carte blanche* to impose other limitations that are inconsistent with the text and the statute's purpose and design."). In evaluating the patentability of computer software, courts must continue to rely on the Supreme Court's long line

of § 101 precedents. *Alice*'s holding is only a small part of evaluating patentability.

Other than its narrow holding, *Alice* reaffirmed that courts must evaluate patent eligibility using the two-part test applied in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012). First, a court must ask if the claim is "directed to one of those patent-ineligible concepts": a law of nature, physical phenomenon, or abstract idea. *Alice*, 134 S. Ct. at 2355. Second, if the claim is directed to one of these concepts, the court must ask "[w]hat else is there in the claims before us?" *Mayo*, 132 S. Ct. at 1297. This second step determines whether there is an "inventive concept" that "ensure[s] that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Alice*, 134 S. Ct. at 2355. These steps are broadly stated and, without more, would be difficult to apply. Although the two-part test was created in *Mayo*, pre-*Mayo* precedents offer guidance in applying the steps.

A. The First Step of *Mayo*

At the first step of *Mayo*, the court must identify whether a claim is directed to an abstract idea. To do so, the court must identify the purpose of the claim—in other words, determine what the claimed invention is trying to achieve—and ask whether that purpose is abstract. For example, in *Alice*, the court concluded that the claims were directed to mitigating settlement risk using a third party, but the claims recited more. The claims outlined an entire process, including creating shadow records, obtaining from an exchange institution a start-of-the-day balance, and so on. *See Alice*, 134 S. Ct. at 2359. But these steps were meant to achieve the purpose of mitigating settlement risk. The Supreme Court took the same approach in *Bilski* and *Mayo* by characterizing the claims in terms of the inventions' purposes: hedging risk and applying a natural law, respectively. *See Bilski*, 561 U.S. at 611; *Mayo*, 132 S. Ct. at 1296–97.

Characterization of a claim is essential to the § 101 inquiry. In *Diamond v. Diehr*, 450 U.S. 175 (1981), the dispute boiled down to *what* the majority and dissent were evaluating for abstractness. *See id.* at 206 (Stevens, J., dissenting) (faulting majority for characterizing claim by its purpose, which was "constantly measuring the actual temperature inside a rubber molding press"). The *Diehr* majority took the correct approach by asking what the claim was trying to achieve, instead of examining the point of novelty. *Id.* at 207. Courts should recite a claim's purpose at a reasonably high level of generality. Step one is a sort of "quick look" test, the purpose of which is to identify a risk of preemption and ineligibility. If a claim's purpose is abstract, the court looks with more care at specific claim elements at step two.

At step one, prior art plays no role in the analysis. The court does not filter out claim elements found in prior art and evaluate the remaining elements for abstractness. *See Caltech*, slip op. at 18–21; *but see McRO*, 2014 WL 4749601 at *9 (claims must be evaluated in light of prior art because such art is "understood, routine, conventional activity"). Using prior art to filter out elements revives the point-of-novelty approach of *Parker v. Flook*, 437 U.S. 584 (1978), which was rejected by *Diehr*. *See Diehr*, 450 U.S. at 189 (noting that novelty "is of no relevance" when determining patentability); *Flook*, 437 U.S. at 586–87 (filtering out claim elements using prior art and focusing only on point of novelty).[6] The Supreme Court did not revive *Flook*'s methodology in *Bilski*, *Mayo*, or *Alice*.

[6] Justice Stevens' dissent in *Diehr* is proof that the Supreme Court abandoned this methodology. Justice Stevens faults the majority for not focusing on the point of novelty—that is, what the patentee newly invented, as opposed to what the patentee borrowed from the prior art. *See Diehr*, 50 U.S. at 211–12 (Stevens, J., dissenting) ("[I]f the only concept that the inventor claims to have discovered is not patentable subject matter, § 101 requires that the application be rejected without reaching any issue under § 102; for it is irrelevant that unpatentable subject matter -- in that case a formula for updating alarm limits -- may in fact be novel. Proper analysis, therefore, must start with an understanding of what the inventor claims to have discovered -- or phrased somewhat differently -- what he considers his inventive concept to be.").

Using prior art at step one also impermissibly conflates the two steps of *Mayo*. Of course, at step two, courts must remember that reciting purely conventional activity will not save a claim, and claim elements found in prior art may occasionally, though not always, constitute conventional activity. *Mayo*, 132 S. Ct. at 1298. But at step one, the court neither identifies nor disregards conventional activity. That inquiry occurs only at step two.

Once the court has identified a claim's purpose, it must determine whether that purpose is abstract. This task is difficult, especially with regard to computer software. Because software is necessarily intangible, accused infringers can easily mischaracterize and oversimplify software patents. *Cf. Oplus Techs. Ltd. v. Sears Holding Corp.*, No. 12-cv-5707, 2013 WL 1003632, at *12 (C.D. Cal. Mar. 4, 2013) ("All software ***only*** 'receives data,' 'applies algorithms,' and 'ends with decisions.'"). To avoid this trap, courts should rely on Supreme Court precedents to help determine whether a claim is abstract. Recent precedents have suggested longstanding, fundamental practices may be abstract. For example, in *Bilski v. Kappos*, 561 U.S. 593 (2010), the Supreme Court invalidated a claim addressed to hedging risk, a fundamental economic practice long in use. *See id.* at 611. Similarly, in *Alice*, the Supreme Court invalidated a claim addressed to a computerized method of intermediated settlement because the idea was longstanding. *See Alice*, 134 S. Ct. at 2356 (noting intermediated settlement is a fundamental economic concept and a building block of the economy). Longstanding practices are often the building blocks of future research and development. Patents on these practices would significantly impede productive or inventive activity, to the detriment of society. Section 101 ensures that patents remain an incentive for inventors without stifling too much development.

B. The Second Step of *Mayo*

If the court finds the claim's purpose abstract at step one, it must then determine whether there is an inventive concept that appropriately limits the claim, such that

the claim does not preempt a significant amount of inventive activity. In performing the second step of analysis, the court must be wary of making patentability "a draftsman's art," *Flook*, 437 U.S. at 593, but inevitably, drafting plays a key role. Patents that claim inventions too broadly or prohibit a vast amount of future applications are suspect. *See Benson*, 409 U.S. at 68; *O'Reilly*, 56 U.S. at 113. Thus, the second step should provide "additional features that provide practical assurance that the process is more than a drafting effort designed to monopolize [the ineligible concept] itself." *Mayo*, 132 S. Ct. at 1297. A claim cannot avoid this preemption concern by limiting itself to a particular technological environment. *See Alice*, 134 S. Ct. at 2358 (noting that limiting an abstract idea to computer implementation did not mitigate preemption concerns).

With this concern in mind, the court must disregard "well-understood, routine, conventional activity" at step two. *Mayo*, 132 S. Ct. at 1299.[7] A conventional element may be one that is ubiquitous in the field, insignificant or obvious. *See Mayo*, 132 S. Ct. at 1298 ("Purely 'conventional or obvious' '[pre]solution activity' is normally not sufficient to transform an unpatentable law of nature into a patent eligible application of such a law."); *Diehr*, 450 U.S. at 191–92 ("Similarly, insignificant postsolution activity will not transform an unpatentable principle into a patentable process."). A conventional element may also be a necessary step, which a person or device must perform in order to implement the abstract idea. For example, the claim elements in *Mayo* recited steps that all doctors needed to perform in order to apply the natural law. *See Mayo*, 132 S. Ct. at 1298 ("Anyone who wants to make use of these laws must first administer a thiopurine drug and measure the resulting metabolite concentrations, and so the combination amounts to nothing significantly more than an instruction to doctors to apply the applicable laws when treating their patients."). As discussed above, conventional elements do

[7] This Court will refer to this concept as "conventional elements."

not constitute everything in the prior art, although conventional elements and prior art may overlap. *But see McRO*, 2014 WL 4749601 at *9–11 (using prior art to identify conventional elements).

The court must also consider the claim elements as a combination. A combination of conventional elements may be unconventional and therefore patentable. *See Diehr*, 450 U.S. at 188 ("[A] new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made."). Courts should consider all elements as part of the "ordered combination," even those elements which, in isolation, appear abstract. *See Diehr*, 450 U.S. at 189 n.12.

V. Discussion

Enfish has asserted eight claims from the '604 patent and three claims from the '775 patent. At step one, the Court determines that all of the asserted claims are addressed to abstract ideas. At step two, the Court determines that the claim limitations do not supply an inventive concept that sufficiently limits the scope of the claims. Therefore, all asserted claims are unpatentable.

A. Step One: The Asserted Claims Are Directed to Abstract Ideas

All asserted claims of the '604 and '775 patents are directed to abstract ideas. Every claim has a similar purpose: storing, organizing, and retrieving memory in a logical table. Memory represents data or information.[8] For millennia, humans have used tables to store information. *See* Martin Campbell-Kelly et al., *The History of Mathematical Tables: From Sumer to Spreadsheets* 19 (Oxford 2003) (showing example of ancient Mesopotamian table for year 1295 B.C.); *see also id.* at 86 (showing example of life table from seventeenth-century England). Tables continue to be elementary tools used by everyone from school children to scientists and programmers. Tables are a basic and convenient way to organize information

[8] It is also irrelevant whether the information is represented by binary digits—information is information, regardless of the form.

on paper; unsurprisingly, they are a basic and convenient way to organize information on computers. *Cf. id.* at 324 ("[A] writing surface affords the property of organizing information in a two-dimensional grid, and therefore tables can be viewed almost as a historical inevitability . . . [that] would arise spontaneously in any civilization where a writing surface was used. . . . The screen of a personal-computer shares the two-dimensional character of a writing surface."). A patent on the pervasive concept of tables would preempt too much future inventive activity.

The fact that the patents claim a "logical table" demonstrates abstractness. The term "logical table" refers to a logical data structure, as opposed to a physical data structure. *See* Claim Construction Order at 7, Dkt. No. 86 ("[A logical table has] a data structure that is logical as opposed to physical, and therefore does not need to be stored contiguously in memory."). Under this construction, it does not matter how memory is physically stored on the hardware. In essence, the claims capture the ***concept*** of organizing information using tabular formats. As such, the claims preempt a basic way of organizing information, without regard to the physical data structure. There can be little argument that a patent on this concept, without more, would greatly impede progress.

Given these observations, the Court determines that the claims are addressed to the abstract purpose of storing, organizing, and retrieving memory in a logical table. This abstract purpose does not become tangible because it is necessarily limited to the technological environment of computers. *See Alice*, 134 S. Ct. at 2358 ("[M]ere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention."). Tellingly, in *Alice*, the Supreme Court defined the purpose of the claims as achieving intermediated settlement; it did not define the purpose of the claims as achieving intermediated settlement using a computer. *See Alice*, 134 S. Ct. at 2356–57. When a claim recites a computer generically, the Court should ignore this element in defining the claim's purpose.

B. Step Two: Additional Limitations Do Not Supply Sufficiently Inventive Concepts

Because the claims are addressed to an abstract idea, the Court must determine whether the claims contain additional limitations that amount to an inventive concept. The claims do not. Instead, the claims recite conventional elements. These elements, when viewed individually or in a combination, do not sufficiently cabin the claims' scope.

i. Claim 47 of the '604 Patent Recites No Inventive Concept

The Court begins by analyzing claim 47 of the '604 patent, which is representative of the patents in general. It recites

> [a] method for storing and retrieving data in a computer memory, comprising the steps of:
>
> configuring said memory according to a logical table, said logical table including:
>
> a plurality of logical rows, each said logical row including an object identification number (OID) to identify each said logical row, each said logical row corresponding to a record of information;
>
> a plurality of logical columns intersecting said plurality of logical rows to define a plurality of logical cells, each said logical column including an OID to identify each said logical column; and
>
> indexing data stored in said table.

These limitations comprise a series of conventional elements. "[C]onfiguring said memory according to a logical table" simply means storing computer information, possibly for later retrieval. The purpose of all tables is to store information for later retrieval. As such, this limitation is conventional because it recites the obvious purpose of all tables. The "logical table" element merely indicates that the table can store memory non-contiguously. Non-contiguous memory allocation is the concept of storing a program in various parts of the memory. The concept of

non-contiguous memory is ubiquitous in the art and therefore conventional. *See* D.M. Dhamdhere, *Operating Systems: A Concept-Based Approach* 213 (2d ed. 2006) ("In the noncontiguous memory allocation model, several non-adjacent memory areas are allocated to a process."); Robert C. Daley & Jack B. Dennis, *Virtual Memory, Processes, and Sharing in MULTICS* 309 (May 5, 1968), *available at* http://users.soe.ucsc.edu/~sbrandt/221/Papers/History/daley-cacm68.pdf ("Paging allows noncontiguous blocks of main memory to be referenced as a logically contiguous set of generalized addresses."). The recitation of rows and columns is also conventional, because these elements are necessary to create a table. *See Mayo*, 132 S. Ct. at 1298. The recitation of OIDs is likewise conventional. As the specification makes clear, OIDs assigned to rows and columns are used for "exact retrieval." '604 Patent, 2:1. Certainly, OIDs are helpful for computers to locate information, especially because computers store large amounts of information. But OIDs are essentially labels for each column and each row. *See* '604 Patent, Fig. 3; 6:47–48 ("[T]he OID's for both rows and columns may be used as pointers."). Using the labels to locate information is a basic concept that humans have long employed. Indeed, labels are often the easiest way to locate information in a table.[9] Efficient location of data is an unremarkable feature of a data storage system, especially in the computing age.

[9] Take, for example, the following table:

Name	Age	Height
Abby	27	5'11"
Ben	42	5'8"
Carla	39	5'5"

To locate Carla's age, one would look at the appropriate row label (Carla) and the appropriate column label (Age) to locate the cell that provides the appropriate information, which is 39. To locate Ben's height, one would look at the row labeled Ben and the column labeled Height to find the answer, which is 5'8". OIDs may operate in this manner.

Likewise, the limitation of "indexing data stored in said table" is not an inventive concept. The Court has construed "indexing" to mean "organizing data to enable searching." *Enfish*, 2014 U.S. Dist. LEXIS 46523 at *22. Humans engaged in this sort of indexing long before this patent, and the claim does not put forth an innovative and unconventional method of indexing. A bare recitation of an indexing limitation does not make this abstract idea patentable. Finally, the recitation of computer memory does nothing more than limit the abstract idea to a technological environment. This is not enough to make an abstract idea patentable. *See Alice*, 134 S. Ct. at 2358.

ii. Claim 17 of the '604 Patent Recites No Inventive Concept

The same analysis applies to claim 17 of the '604 patent. Claim 17 is drafted in a means-plus-function format and recites:

A data storage and retrieval system for a computer memory, comprising:

means for configuring said memory according to a logical table, said logical table including:

a plurality of logical rows, each said logical row including an object identification number (OID) to identify each said logical row, each said logical row corresponding to a record of information;

a plurality of logical columns intersecting said plurality of logical rows to define a plurality of logical cells, each said logical column including an OID to identify each said logical column; and

means for indexing data stored in said table.

This claim differs from claim 47 in two ways: it claims a "means for configuring" and a "means for indexing," each of which covers an algorithm described in the specification. The Court first determines whether the "means for configuring" limitation recites an inventive concept. It then determines whether the "means for indexing" limitation recites an inventive concept.

The "means for configuring" limitation does not recite an inventive concept. "Means for configuring" covers a four-step algorithm:

> 1. Create, in a computer memory, a logical table that need not be stored contiguously in the computer memory, the logical table being comprised of rows and columns, the rows corresponding to records, the columns corresponding to fields or attributes, the logical table being capable of storing different kinds of records.
>
> 2. Assign each row and column an object identification number (OID) that, when stored as data, can act as a pointer to the associated row or column and that can be of variable length between databases.
>
> 3. For each column, store information about that column in one or more rows, rendering the table self-referential, the appending, to the logical table, of new columns that are available for immediate use being possible through the creation of new column definition records.
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> 4. In one or more cells defined by the intersection of the rows and columns, store and access data, which can include structured data, unstructured data, or a pointer to another row.

See Claim Construction Order at 8–9. This algorithm does not constitute an inventive concept. The first step recites the creation of a logical table that need not be stored contiguously in computer memory. As discussed above, non-contiguous memory allocation is a basic idea in computing and is therefore conventional. As the Court also discussed above, creating a logical table on a computer is an abstract concept that is not patentable without something more. The second step recites two conventional elements: assigning OIDs and allowing for OIDs that may vary in length across databases ("variable-length OIDs"). As discussed with regard to claim 47, assigning OIDs is a conventional step. Variable-length OIDs are likewise conventional. The element merely allows OIDs across databases to comprise a different number of bits, "depending on the precision required." *See*

'604 Patent, 8:38–39. Varying the length of identifying labels, whether on a computer or otherwise, is a basic concept, and this limitation merely acknowledges the reality that computers can assign a different numbers of bits to OIDs.

The third step recites the conventional element of creating columns from information stored in rows, in order to render the table self-referential. A table is self-referential if each column is defined by information stored in one or more of the table's rows. Enfish's Opp'n to Non-Infringement at 11–12, Dkt. No. 280. Figure 3 of the '604 patent shows one example of this: column 126 has the definition "Employed By," which corresponds to row 136. *See* '604 Patent, Fig. 3; '604 Patent, 7:16–19 ("The column definition is stored as a record in the table **100** of FIG. 3. For example, the 'Employed By' column **126** has a corresponding row **136**. The addition [of] rows that correspond to columns renders the table **100** self-referential."). But this step is written broadly, and it encompasses more than this example. The step also encompasses tables where a single row defines the type of information contained in each column. *See supra* at 14 n.9 (showing table where the first row defines the type of information—name, age, and height—contained in each column); Enfish's Opp'n to Non-Infringement at 11–12 (arguing that single row that contains information for each column satisfies the third step of the algorithm). Of course, a vast majority of tables use a row to define the type of information contained in each column. This concept is ubiquitous and ancient. *See* Campbell-Kelly et al., *supra* at 217 (showing table from 1871 where the first row defines the type of information contained in each column). This concept is conventional in hand-drawn tables, and equally conventional in computerized tables.[10] Finally, the fourth step does not add any unconventional element. Storing

[10] Enfish rightly criticizes Defendants for employing the pencil-and-paper test. As Enfish correctly observes, "[v]irtually every patent application, covering every type of technology known to man, can be illustrated and conceptualized. If that were enough to render a patent ineligible under § 101, the patent system would be eviscerated." Enfish's § 101 Opp'n at 21, Dkt. No. 299. But as noted by this Court in *Caltech*, "[t]he pencil-and-paper test is a stand-in for

and accessing data is the basic purpose of tables. The step gives examples of the types of data that cells may store, but the step does not limit cell contents to these types of data only. The concept of storing data is inherent in the concept of tables, and it is therefore conventional.

All four steps of the algorithm are conventional, and as an ordered combination, they remain conventional. The algorithm creates a table with labeled rows and columns, where one row defines the type of information in each column. This is the description of a purely conventional table, and nothing more. Nothing in this algorithm sufficiently limits the scope of the claim.

As with the "means for configuring" limitation, the "means for indexing" limitation recites no inventive concept. "Means for indexing" covers a three-step algorithm:

1. Extract key phrases or words from the applicable cells in the logical table.
2. Store the extracted key phrases or words in an index, which is itself stored in the logical table.
3. Include, in text cells of the logical table, pointers to the corresponding entries in the index, and include, in the index, pointers to the text cells.

See Claim Construction Order at 9. The first two steps are the essence of indexing. Extracting key phrases and storing these phrases in an index are steps that are necessary for indexing. As a result, they are purely conventional. The fact that the index is stored in the logical table itself does not sufficiently limit the scope of the claim. The logical table is an obvious place to store an index for the same logical table, much like the back of a textbook is an obvious place to store an index for

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another concern: that humans engaged in the same activity long before the invention of computers." *Caltech*, slip op. at 30. In this case, it just so happens that humans created tables using writing utensils on writing surfaces. As such, a relevant question is whether an inventor could patent the recited elements if they were implemented in a hand-drawn table. This question is not the same as pencil-and-paper analysis. This question simply reflects the idea that tables have been used by humans for millennia, outside of the computing context.

that textbook. The third step is likewise conventional. An index's purpose is to point to the location of information, and it is unremarkable for the cells to contain information pointing back to the index, in order to aid in further data retrieval. Again, an inventor could not patent a hand-drawn table with pointers from a text cell to an index, and this concept remains unpatentable when applied to a computer. This concept is not sufficiently inventive enough to cabin the claims, because it would preclude inventors from performing a basic step to maximize the potential of indices. Viewing these steps as an ordered combination adds nothing, because the algorithm as a whole represents a conventional process of indexing.

Viewing claim 17 as an ordered combination does not change the result. Claim 17 describes how to store information in a table and use an index to find information in that table. These ideas in combination are purely obvious, conventional activity. Therefore, claim 17 is unpatentable.

iii. The Other Asserted Claims Add Only Conventional Elements to the Substance of Claims 17 and 47 of the '604 Patent

The other asserted claims add little to the substance of claims 17 and 47. Claims 16 and 46 of the '604 patent requires OIDs to be of variable length, but this limitation is insignificant and conventional. As discussed above, varying the length of identifying labels, whether on a computer or otherwise, is a basic concept. This limitation simply acknowledges the reality that computers may assign a different numbers of bits to different labels. Viewing the claims' elements as a combination adds nothing: the result is a conventional table for storing and retrieving information, implemented on a computer. Claims 16 and 46 are therefore unpatentable.

Claims 1, 2, 31, and 32 of the '604 patent and claims 31 and 32 of the '775 patent likewise recite a conventional element: requiring a single row in the database that defines all the columns. *See* Claim Construction Order at 6–7 ("[T]he implication is clear: at least one fully-populated row is required, *i.e.*, at

least one row with values defined for each column."); Enfish's § 101 Opp'n at 20, Dkt. No. 299. As discussed above, a common concept in tables is a fully populated row defining the information in each column. This concept was accomplished in tables created long before computers. Implementing this idea on a computer is so obvious as to be conventional. *See Mayo*, 132 S.Ct. at 1298 ("Purely 'conventional or obvious' '[pre]solution activity' is normally not sufficient to transform an unpatentable law of nature into a patent eligible application of such a law."). As with the variable length OIDs, the Court's analysis of the claim as a combination does not change the Court's conclusion. The combination of elements in the claims results in an unremarkable table, implemented on a computer. These claims, too, are unpatentable.

Claim 47 of the '775 patent is substantively identical to claim 47 of the '604 patent. The claim uses synonyms to describe the invention and recites conventional elements, such as a computer system and cells having address segments. Enfish does not argue that claim 47 of the '775 patent adds any concept which makes it uniquely patentable. Thus, claim 47 is also unpatentable.

C. When Are Computer Inventions Applying Longstanding Concepts Patentable?

Enfish's asserted claims are unpatentable because they apply longstanding concepts about storing information in tables to the technological environment of computers. But this does not mean that every software invention that uses longstanding concepts is unpatentable. To satisfy § 101, software inventions just need something sufficiently more than a recitation of a longstanding concept.

To understand this idea, imagine three computer programs directed at a longstanding concept: determining the best series of moves in a chess game. The first program calculates moves through a "brute force" method—that is, it determines the best moves by testing various moves. A claim for this program is unpatentable. Chess players have long used some form of brute force calculation

to determine their subsequent moves. The fact that a computer can perform brute force calculations faster than humans is irrelevant. Rapid processing of data is a generic function of computers.

The second chess program determines future moves by considering various factors, such as the safety of the king, the development of pieces, and the number of pieces each side has. Again, a claim for this program would be unpatentable without something more. Chess players have long used these factors to evaluate positions in chess games. A claim for this program takes fundamental ideas about chess and has a computer apply them. Again, it is irrelevant that a computer may apply these ideas more effectively than a human.

The third chess program determines future moves by evaluating various factors, just like the second program. But this third program does more. It allocates different amounts of computer memory to different factors, and it reallocates memory at different stages of the game, as some factors become more important and others less important. A claim for this program is patentable. The claim is not merely addressed to an abstract idea. It is addressed to an inventive computing concept: dynamic memory allocation. The claim's computer elements are not generic. Rather, the claim recites a modern, computer-specific concept to solve the modern, computer-specific problem of scarce memory. Although the claim implements longstanding ideas about chess, computing concepts form a significant part of the claim. The combination of these chess ideas and computing concepts constitutes patentable subject matter.

In contrast to this last example, tables are an age-old solution to an age-old problem. Tables are a basic building block of research and development and are not patentable. This remains true when tables are implemented on computers. Undoubtedly, tables improve data storage on a computer, but only inasmuch as tables improve data storage when used in ***any*** technological environment. Patent law should not protect inventions that do nothing more than implement

longstanding ideas (like tables) to solve computing problems (like data storage) when those problems predate computing. But patents should encourage inventors to create new computing solutions to today's computing problems.

VI. Conclusion

The Court today decides that Enfish's asserted claims are unpatentable. This determination does not mean that the invention is valueless. Many useful inventions are unpatentable, despite the tremendous effort that went into their creation. But usefulness is not the current standard for patentability, and the Court must follow the principles established by the Supreme Court. *See McRO*, 2014 WL 4749601 at *12 ("[T]he revolutionary nature of an abstract idea does not weigh in favor of patentability.").

The Court is mindful of the fact that inventors are the casualty of courts' evolving § 101 jurisprudence. The filing date for Enfish's patents is March 5, 1998. Only a few months after this date, the Federal Circuit created a generous standard for patentability, holding a process was patentable if it created a "useful, concrete, and tangible result." *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1375 (Fed. Cir. 1998). For years, patentees relied on this low bar when writing their applications to the Patent and Trademark Office. But the rules changed in *Bilski*, *Mayo*, and *Alice*. Many inventors drafted their patents for an age of patent law that no longer exists, and inventors have suffered the consequences of shifting jurisprudence.

Predictability and stability are crucial for a successful patent system, and courts bear the responsibility for developing a consistent § 101 standard by earnestly following the guidance of higher courts. Based on the Supreme Court's precedents, this Court concludes that all asserted claims are unpatentable. Therefore, the Court grants the Defendants' motion for summary judgment.

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IT IS SO ORDERED.

DATED: November 3, 2014

Hon. Mariana R. Pfaelzer
United States District Judge