

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

VISUAL MEMORY LLC,

Plaintiff;

v.

NVIDIA CORPORATION,

Defendant.

Civil Action No. 15-789-RGA

MEMORANDUM OPINION

Stamatios Stamoulis, Esq., Richard Charles Weinblatt, Esq. (argued), Stamoulis & Weinblatt LLC, Wilmington, DE, attorneys for Plaintiff Visual Memory LLC.

Jack B. Blumenfeld, Esq., Paul Saindon, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Maximilian A. Grant, Esq. (argued), Gabriel K. Bell, Esq., Latham & Watkins LLP, Washington, D.C.; Richard G. Frenkel, Esq., Latham & Watkins LLP, Menlo Park, CA, attorneys for Defendant NVIDIA Corporation.

May 27, 2016

  
ANDREWS, U.S. DISTRICT JUDGE:

Presently before the Court is Defendant's motion to dismiss for failure to state a claim. (D.I. 24). The issues have been fully briefed. (D.I. 25, 29, 33). Oral argument was held on February 18, 2016. (D.I. 41). For the reasons set forth herein, the motion to dismiss is **GRANTED**.

## **I. BACKGROUND**

Plaintiff filed this patent infringement lawsuit against Defendant on September 8, 2015. (D.I. 1). Plaintiff alleges that Defendant infringes U.S. Patent No. 5,953,740 (the "'740 patent"). (*Id.*). On November 6, 2015, Plaintiff filed a motion for leave to amend the complaint, which Defendant opposed. (D.I. 12, 16). After the Court granted the motion in part, Plaintiff filed its First Amended Complaint on December 8, 2015. (D.I. 22). On December 9, 2015, Defendant moved to dismiss the complaint pursuant to Fed. R. Civ. P. 12(b)(6), arguing that the '740 patent was directed to patent-ineligible subject matter. (D.I. 24).

The '740 patent describes a computer system that uses a three-tiered memory hierarchy: (1) slow, low-cost memory for "bulk storage of data," (2) medium speed memory for the "system's main memory," and (3) expensive, high speed "processor cache memory." '740 patent at 1:54-64. During the system's operation, data is "transferred from system memory to the cache memory in order to have quick access to the variables of the currently executing program." *Id.* at 2:1-4. "As additional data, not in the cache, is required, such data is transferred from the main memory by replacing selected data in the cache." *Id.* at 2:4-6. One factor which affects the efficiency of the cache is "the number of devices having access to the memory." *Id.* at 2:14-17. As more devices access the memory, the less likely it is that the cache will have the requested data. *Id.* at 2:20-21. Another factor affecting efficiency is "the fact that both code and non-code

data are cached.” *Id.* at 2:29-30. When “both code and non-code data are being cached, there will be overlap in their respective” physical locations in the cache, which may result in a significant decline in performance (known as “thrashing”) “as data is replaced in response to memory accesses.” *Id.* at 2:32-44.

To solve these problems, the ’740 patent claims “[a] computer memory system connectable to a processor and having one or more programmable operational characteristics.” *Id.* at 6:28-30. These “characteristics” of the memory are “programmable as a function of characteristics based on processor type.” *Id.* at 4:28-30. For instance, for one type of a processor, the cache may only hold code data, whereas for another type of processor, the cache may hold “both code and non-code data.” *Id.* at 4:30-35. Or, a cache could, in one instance, receive data only from sources “other than the system processor,” whereas in another, it could receive data from any source. *Id.* at 4:35-44. Similarly, the main memory can be “divided into pages which contain either code or non-code data,” where, based on the processor type, the system can “provide[] a bias towards code pages or non-code pages” by holding in a register the “most recently accessed page” of the preferred page type. *Id.* at 4:52-58.

## II. LEGAL STANDARD

Section 101 of the Patent Act defines patent-eligible subject matter. It provides: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. The Supreme Court has recognized an implicit exception for three categories of subject matter not eligible for patentability—laws of nature, natural phenomena, and abstract ideas. *Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014). The purpose of these carve outs is to protect the “basic

tools of scientific and technological work.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012). “[A] process is not unpatentable simply because it contains a law of nature or a mathematical algorithm,” as “an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” *Id.* at 1293-94 (internal quotation marks and emphasis omitted). In order “to transform an unpatentable law of nature into a patent-eligible application of such a law, one must do more than simply state the law of nature while adding the words ‘apply it.’” *Id.* at 1294 (emphasis omitted).

The Supreme Court recently reaffirmed the framework laid out in *Mayo* “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. First, the court must determine whether the claims are drawn to a patent-ineligible concept. *Id.* If the answer is yes, the court must look to “the elements of the claim both individually and as an ‘ordered combination’” to see if there is an “‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (alteration in original). “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].’” *Id.* at 2357 (alterations in original) (quoting *Mayo*, 132 S. Ct. at 1297). “[S]imply appending conventional steps, specified at a high level of generality, to . . . abstract ideas cannot make those . . . ideas patentable.” *Mayo*, 132 S. Ct. at 1300. Further, “the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment.” *Alice*, 134 S. Ct. at 2358 (quoting *Bilski v. Kappos*, 561 U.S. 593, 610-11

(2010)). Thus, “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Id.* For this second step, the machine-or-transformation test can be a “useful clue,” although it is not determinative. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014), *cert. denied*, 135 S. Ct. 2907 (2015).

Patent eligibility under § 101 is a question of law suitable for resolution on a motion to dismiss. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014), *cert. denied*, 136 S. Ct. 119 (2015). The Federal Circuit follows regional circuit law for motions to dismiss. *Content Extraction*, 776 F.3d at 1346. When reviewing a motion to dismiss pursuant to Federal Rule of Civil Procedure 12(b)(6), this Court must accept the complaint’s factual allegations as true. *See Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555-56 (2007).

The Federal Circuit has held that the district court is not required to individually address claims not asserted or identified by the non-moving party, so long as the court identifies a representative claim and “all the claims are substantially similar and linked to the same abstract idea.” *Content Extraction*, 776 F.3d at 1348 (internal quotation marks omitted).

#### **IV. ANALYSIS**

The ’740 patent has 3 independent claims. Claim 1 of the ’740 patent reads:

A computer memory system connectable to a processor and having one or more programmable operational characteristics, said characteristics being defined through configuration by said computer based on the type of said processor, wherein said system is connectable to said processor by a bus, said system comprising:

- a main memory connected to said bus; and
- a cache connected to said bus;

wherein a programmable operational characteristic of said system determines a type of data stored by said cache.

'740 patent at 6:28-38. Claim 6 reads:

A computer memory system connectable to a processor and having one or more programmable operational characteristics, said characteristics being defined through configuration by said computer based on the type of said processor comprising:

a main memory, connected to said processor by a bus, including a plurality of pages of a first type and a plurality of pages of a second type; and

a register connected to said memory for holding a page address of a most recently accessed one of said first type pages;

wherein said page address is used to reopen the most recently accessed one of said first type pages after one of said second type pages has been accessed; and

wherein a programmable operational characteristic of said system determines a type of data stored in said main memory.

*Id.* at 7:3-22. Claim 8 reads:

A computer memory system, connectable to a processor and bus master by a bus and having programmable operational characteristics based on characteristics of said processor, comprising:

a plurality of caches connected to said bus;

a main memory connected to said bus and including a plurality of pages of a first and second type; and

a register connected to said memory for holding the page address of the most recently accessed of said first type pages;

wherein a first programmable characteristic of said system determines whether a first of said caches stores only code data or whether said first of said caches stores both non-code data and code data;

wherein a second of said caches performs buffering of data writes to said main memory, and a second programmable characteristic of said system determines whether said second of said caches performs buffering of data solely from said bus master and whether said second of said caches performs buffering of data both from said bus master and said processor;

wherein said page address is used to reopen a most recently accessed of said first type pages after one of said second type pages has been accessed; and

wherein a third programmable operational characteristic of said system determines a type of data stored by said main memory

*Id.* at 7:27-8:24.

**A. *Mayo/Alice* Step One: Abstract Idea**

“First, we determine whether the claims at issue are directed to [an abstract idea].” *Alice*, 134 S. Ct. at 2355. “The ‘abstract ideas’ category embodies ‘the longstanding rule that an idea of itself is not patentable.’” *Id.* (internal quotation marks omitted) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). In the wake of *Alice*, “precision has been elusive in defining an all-purpose boundary between the abstract and the concrete.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1345 (Fed. Cir. 2015). The Supreme Court has recognized, however, that “fundamental economic practice[s],” *Bilski*, 561 U.S. at 611, “method[s] of organizing human activity,” *Alice*, 134 S. Ct. at 2356, and mathematical algorithms, *Benson*, 409 U.S. at 64, are abstract ideas. Additionally, the Federal Circuit recently found that claims were not directed to an abstract idea where “the focus of [those] claims [was] on the specific asserted improvement in computer capabilities . . . , [rather than] on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 2016 WL 2756255, at \*5 (Fed. Cir. May 12, 2016).

Defendant contends that the claims of the ’740 patent are directed to the abstract idea of categorical data storage. Though the claims recite limitations pertaining to cache and memory, code and non-code data, and memory sources, Defendant argues that the abstract idea of categorical data storage is at the “heart” of the claims. *Ultramercial*, 772 F.3d at 714. Plaintiff responds that “[e]very claim . . . is an apparatus that requires certain elements to operate in a certain way, resulting in a tangible working thing that improves the operation of a computer.” (D.I. 29 at 16).

“Under step one of *Mayo/Alice*, the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents*, 790 F.3d at 1346. Here, the claims are directed to the abstract idea of categorical data storage. Humans have categorized data for many years. For instance, a library may have an easily-accessible section for popular novels, while maintaining less accessible storage for less-requested materials. This is an “undisputably well-known” practice that “humans have always performed.” *Content Extraction*, 776 F.3d at 1347. Courts have routinely found that similar claims are directed to abstract ideas. *See, e.g., In re TLI Commc’ns LLC Patent Litig.*, 2016 WL 2865693, at \*3 (Fed. Cir. May 17, 2016) (claims directed to “classifying and storing digital images in an organized manner” are abstract); *Content Extraction*, 776 F.3d at 1347 (claims directed to collecting, recognizing, and storing data are abstract); *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 F. App’x 988, 991-92 (Fed. Cir. 2014) (“using categories to organize, store, and transmit information” is an abstract idea); *Cloud Satchel, LLC v. Amazon.com, Inc.*, 76 F. Supp. 3d 553, 562-64 (D. Del. 2014) (claims were directed to the “abstract idea of cataloguing documents to facilitate their retrieval from storage in the field of remote computing”), *aff’d mem.*, 626 F. App’x 1010 (Fed. Cir. 2015), *cert. denied*, 2016 WL 1059941 (Apr. 25, 2016).

Plaintiff relies on the Federal Circuit’s recent decision in *Enfish* for the proposition that claims which “improve the functioning of a computer itself” are patent eligible. (D.I. 29 at 15; D.I. 42). Contrary to Plaintiff’s argument, however, the question of whether a given claim “improve[s] the way a computer [works]” is not, by itself, determinative. *See Enfish*, 2016 WL 2756255, at \*8; *see also TLI Commc’ns*, 2016 WL 2865693, at \*3 (describing *Enfish*’s dichotomy as “a relevant inquiry”). Although the Federal Circuit held “it relevant to ask whether the claims [in *Enfish* were] directed to an improvement to computer functionality versus being



directed to an abstract idea,” the court described the central question as “whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish*, 2016 WL 2756255, at \*4-5.<sup>1</sup> The Federal Circuit did not fault the district court for failing to appreciate the extent to which the patent improved a computer’s functioning, but rather, for “describ[ing] the claims at [too] high a level of abstraction, . . . untethered from the language of the claims.” *Id.* at \*6. In so doing, the district court abstracted away “the claimed advance over the prior art.” *See id.* at \*4 (quoting *Genetic Techs., Ltd. v. Merial L.L.C.*, 2016 WL 1393573, at \*5 (Fed. Cir. Apr. 8, 2016)). *Enfish* is thus best understood as a case which cautions against oversimplification during step one of *Mayo/Alice*, rather than a case which exempts from § 101 scrutiny all patents which purport to improve the functioning of a computer. *See TLI Commc’ns*, 2016 WL 2865693, at \*5 (acknowledging *Bilski*’s “rejection of ‘categorical rules’ to decide subject matter eligibility” (quoting *Bilski*, 561 U.S. at 610)).

In *Enfish*, the court noted that “the claims [at issue were] not simply directed to *any* form of storing tabular data, but instead [were] specifically directed to a *self-referential* table for a computer database.” *Id.* at \*6 (emphasis in original). The claims described “a specific type of data structure designed to improve the way a computer stores and retrieves data in memory.” *Id.* at \*8. The claims were thus “directed to a specific implementation of a solution to a problem in the software arts.” *Id.* The Federal Circuit concluded that “the district court oversimplified the

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<sup>1</sup> This distinction is particularly relevant to software-implemented inventions, like those found in *Enfish*. There, the court concluded that “claims directed to software” were not “inherently abstract.” *Id.* at \*4. Specifically, when software-implemented “claims are directed to an improvement to computer functionality,” they may not “succumb to the abstract idea exception,” whereas software implementations of “‘abstract idea[s]’ for which computers are invoked merely as a tool” might. *Id.* at \*4-5.

self-referential component of the claims and downplayed the invention's benefits.” *Id.* at \*7. Put another way, the “level of abstraction” employed by the court in describing the claims must be consonant with the level of abstraction expressed in the claims themselves. *Id.* at \*6; *see also Alice*, 134 S. Ct. at 2354 (“we tread carefully in construing this exclusionary principle lest it swallow all of patent law”); *Mayo*, 132 S. Ct. at 1302 (“[T]he more abstractly [a patent’s] claims are stated, the more difficult it is to determine precisely what they cover.” (quoting Christina Bohannon & Herbert Hovenkamp, *Creating Without Restraint: Promoting Liberty and Rivalry in Innovation* 112 (2012))); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1367 (Fed. Cir. 2015) (“At step one of the *Alice* framework, it is often useful to determine the breadth of the claims in order to determine whether the claims extend to cover a ‘fundamental . . . practice long prevalent in our system’” (quoting *Alice*, 134 S. Ct. 2356)). Here, there is no analog to the “specific type of data structure” that was found sufficiently un-abstract in *Enfish*. Although the claims “touch[] on what is asserted to be an improvement to . . . computer capabilities,” they are not “directed to a ‘specific’ or ‘concrete’ improvement in the way software operates,” but instead are “directed to . . . the mere *idea* of” categorical data storage. *Yodlee, Inc. v. Plaid Techs., Inc.*, 2016 WL 2982503, at \*9 (D. Del. May 23, 2016) (emphasis in original) (quoting *Enfish*, 2016 WL 2756255, at \*8); *see also Device Enhancement LLC v. Amazon.com, Inc.*, 2016 WL 2899246, at \*10 (D. Del. May 17, 2016) (“it is evident that there is a specificity requirement”). The ’740 patent claims, “considered in their entirety,” are directed to the concept of categorical data storage. *Internet Patents*, 790 F.3d at 1346. That broad concept is an abstract idea, despite the patent’s limitation of that idea to a particular technological environment.

Plaintiff insists that “there are issues of claim construction that must be decided before resolving the motion,” specifically citing the “programmable operational characteristic” term.

(D.I. 29 at 12-13). Plaintiff, however, offers neither a proposed construction, nor an explanation of how the term's construction would impact the § 101 analysis. (D.I. 41 at 4-6). Without providing a proposed construction—which the Court would accept as true for purposes of this motion—Plaintiff's protestations about claim construction are unavailing. *See Content Extraction*, 776 F.3d at 1349 (“Although the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter, claim construction is not an inviolable prerequisite to a validity determination under § 101.”).

Plaintiff also argues that Defendant must provide “clear and convincing” evidence of invalidity, and therefore resolution of this motion requires further factual development. (D.I. 29 at 9-10 (citing *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1346 (Fed. Cir. 2008))). Patent eligibility is a matter of law. *OIP Techs.*, 788 F.3d at 1362. With questions of law, the clear and convincing standard “has no application.” *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2253 (2011) (Breyer, J., concurring). Additionally, “[w]hile there may be cases in which the legal question as to patentable subject matter may turn on subsidiary factual issues, [Plaintiff] has not identified any relevant fact issues that must be resolved in order to address” patent eligibility. *In re Comiskey*, 554 F.3d 967, 975 (Fed. Cir. 2009). Plaintiff's argument is therefore rejected.

Relying on *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), Plaintiff argues that the claims of the '740 patent are not directed to an abstract idea because “the claimed solution [i]s clearly rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *Id.* at 1257. Plaintiff misreads *DDR Holdings*. There, the Federal Circuit stated that “identifying the precise nature of the abstract idea [was] not as straightforward as in *Alice*” or other cases. *Id.* Therefore, the court simply

assumed that the patent-in-suit was directed to an abstract idea, and then proceeded to *Mayo/Alice* step two. *See id.* (“[U]nder any of these characterizations of the abstract idea, the ’399 patent’s claims satisfy *Mayo/Alice* step two.”). Similarly, Plaintiff’s repeated incantations of “technology” cannot save claims directed to an abstract idea. *See Bilski*, 561 U.S. at 610-11 (“The prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment.” (quotation marks omitted)); *TLI Commc’ns*, 2016 WL 2865693, at \*3 (“not every claim that recites concrete, tangible components escapes the reach of the abstract-idea inquiry”); *Cyberfone*, 558 F. App’x at 992. Any “novelty in implementation of the idea is a factor be considered only in the second step of the *Alice* analysis.” *Ultramercial*, 772 F.3d at 715.

I therefore conclude that the claims are directed to the abstract idea of categorical data storage.

#### **B. *Mayo/Alice* Step Two: Inventive Concept**

The determination that a patent is directed to an abstract idea “does not render the subject matter ineligible.” *Internet Patents*, 790 F.3d at 1346. Having decided that the patent’s claims are directed to an abstract idea, the Court must next “determine whether the claims do significantly more than simply describe the abstract method.” *Ultramercial*, 772 F.3d at 715. Since “a known idea, or one that is routine and conventional, is not inventive in patent terms,” this analysis “favors inquiries analogous to those undertaken for determination of patentable invention.” *Internet Patents*, 790 F.3d at 1346. Neither “[a] simple instruction to apply an abstract idea on a computer,” nor “claiming the improved speed or efficiency inherent with applying the abstract idea on a computer” satisfies the requirement of an “inventive concept.” *Intellectual Ventures*, 792 F.3d at 1367.

Defendant contends that the claims recite generic computer components, and amount to nothing more than “apply[ing] [the abstract idea] on a computer.” *Id.* Plaintiff argues that claims which “improve the functioning of the computer itself” are patent eligible. (D.I. 29 at 15 (quoting *Alice*, 134 S. Ct. at 2359)). Plaintiff also likens the claims of the ’740 patent to those at issue in *DDR Holdings*, asserting that the claims of the ’740 are necessarily rooted in technology. Additionally, Plaintiff argues that “the combination of elements results in an improved computer system, and thus the claims are patent eligible.” (*Id.* at 20).

While the *DDR Holdings* court concluded that the patent at issue was “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” it also concluded “that not all claims purporting to address Internet-centric challenges are eligible for patent.” *DDR Holdings*, 773 F.3d at 1257. Therefore, determining that a patent is necessarily tied to a computer- or Internet-centric problem does not resolve the question of patent eligibility. *See Alice*, 134 S. Ct. at 2358 (“limiting the use of an abstract idea to a particular technological environment” is insufficient to confer patent eligibility (quotation marks omitted)); *Ultramercial*, 772 F.3d at 1264; *see also Diamond v. Diehr*, 450 U.S. 175, 191-93 (1981) (holding that “when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole . . . [,] is drawn to [the non-computer-centric] industrial process for the molding of rubber products,” the claim is directed to patent-eligible subject matter). The “rooted in computer technology” heuristic of *DDR Holdings* is best understood as a clue that when a solution “overcome[s] a problem specifically arising in” a particular technological realm, that solution—though it may implement an abstract idea—may likely contain an inventive concept. *See DDR Holdings*, 773 F.3d at 1257-58.

Just as *DDR Holdings* did not create a § 101 safe harbor for patents rooted in Internet-centric problems, *Alice* did not declare eligible any patent which “purport[s] to improve the functioning of the computer itself.” *Alice*, 134 S. Ct. at 2359 (citing *CLS Bank Int’l v. Alice Corp. Pty.*, 717 F.3d 1269, 1286 (Fed. Cir. 2013) (Lourie, J., concurring), *aff’d*, 134 S. Ct. 2347 (2014)). In *Alice*, the Supreme Court contrasted claims directed to “the concept of intermediated settlement as performed by a generic computer” with those that may “express[ly] . . . define the computer’s participation” in a way that may supply an inventive concept—i.e. by “improv[ing] the functioning of the computer itself.” *Id.* (quoting *CLS Bank*, 717 F.3d at 1286 (Lourie, J., concurring)). The important question is whether the patent expresses an inventive concept, not whether it improves a computer.

The claims here are “recited too broadly and generically to be considered sufficiently specific and meaningful applications of their underlying abstract ideas.” *DDR Holdings*, 773 F.3d at 1256; *see also Internet Patents*, 790 F.3d at 1348 (finding patent ineligible where claim “contain[ed] no restriction on how the result [was] accomplished”). While the ’740 patent describes the idea of categorical data storage as implemented on a computer, the claimed computer functionality can only be described as generic or conventional. Claim 1 recites generic computer components, specifically a “main memory” and a “cache” connectable via a “bus” to a “processor.” ’740 patent at 6:34-38. The specification acknowledges that these components were known in the art. *Id.* at 1:51-2:55. Further, the functions described, receiving and storing data, are certainly “‘well-understood, routine, conventional activit[ies]’ previously known in the industry.” *Alice*, 134 S. Ct. at 2359 (alteration in original) (quoting *Mayo*, 132 S. Ct. at 1294); *see also Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324-25 (Fed. Cir. 2016) (“These generic computer components do not satisfy the inventive concept requirement.”).

“At most, [Plaintiff’s] claims attempt to limit the abstract idea of [categorical data storage] to a particular technology environment.” *Content Extraction*, 776 F.3d at 1348. That is insufficient. *Alice*, 134 S. Ct. at 2358. The steps here “that do nothing more than spell out what it means to ‘apply [the abstract idea] on a computer’ cannot confer patent-eligibility.” *Intellectual Ventures*, 792 F.3d at 1370; *see also DDR Holdings*, 773 F.3d at 1257 (distinguishing claims found eligible from those that “merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet”).

The “programmable operational characteristics” limitation fails to supply the required inventive concept. Like the “interactive interface” element in *Intellectual Ventures*, the “programmable operational characteristic” is a “generic computer element” with only “vague and generic” descriptions. *Intellectual Ventures*, 792 F.3d at 1370. Like the “interactive interface” that “simply describe[d] a generic web server with attendant software,” the “programmable operational characteristic” is simply a generic concept which “determines a type of data stored by [a] cache.” *Id.* at 1370; ’740 patent at 6:28-38. Without an explanation of the “mechanism” for “how th[is] result is accomplished,” it cannot supply an inventive concept. *Internet Patents*, 790 F.3d at 1348.

Defendant contends that all nine claims are “substantially similar and linked to the same abstract idea,” and therefore all claims can be invalidated based on representative claim 1. *Content Extraction*, 776 F.3d at 1348. I agree, but will briefly summarize why claims 2 through 9 fail to supply an inventive concept. Claim 1’s dependent claims simply specify that the cache may store “only code data or “both code and non-code data” (claim 2), and that the cache may buffer data solely from the bus master or from both the bus master and processor (claim 3). ’740 patent at 6:39-51. Claim 4 merely recites additional caches. *Id.* at 6:52-56. Claim 5 combines

the limitations of claims 2, 3, and 4. *Id.* at 6:57-7:2. Independent claim 6 provides that the “programmable operational characteristic” may be used to “determine[] a type of data store in . . . main memory,” rather than the cache. *Id.* at 7:3-22. It goes on to recite all the same components as claim 1, with the addition of a generic “register.” *Id.* Aside from these components, claim 6 recites division of the main memory into pages, a technique which the specification acknowledges is “well known.” *Id.* at 7:9-18; 4:46-47. Claim 7, like claim 2, describes code and non-code data restrictions. *Id.* at 7:23-26. Claim 8 and claim 9 simply combine the limitations of the other claims. None of these conventional components, used in a conventional fashion, suffice to supply an inventive concept. Also, claims that simply narrow the types of data covered by the claims similarly fail to add an inventive concept. *See, e.g., Bilski*, 561 U.S. at 612 (“limiting an abstract idea to one field of use . . . d[oes] not make the concept patentable”); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1334 (Fed. Cir. 2012) (“Although directed to a particular use [of car loan applications], [the patent] nonetheless covers a broad idea.”).

I conclude that the claims of the ’740 patent are directed to an abstract idea and lack an inventive concept. The ’740 patent is therefore invalid. Plaintiff has failed to state a claim upon which relief can be granted.

## V. CONCLUSION

For the reasons set forth above, the motion to dismiss is **GRANTED**. An appropriate order will be entered.