IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ROUND ROCK RESEARCH, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 12-569-SLR
	)	
SANDISK CORPORATION,	)	
	)	
Defendant.	)	

Brian Farnan, Esquire of Farnan, LLP, Wilmington, Delaware. Counsel for Plaintiffs. Of Counsel: Paul A. Bondor, Esquire, Jon T. Hohenthaner, Esquire, John C. Spaccarotella, Esquire, Richard M. Cowell, Esquire, Tamir Packin, Esquire, Eric J. Stieglitz, Esquire, Ameet A. Modi, Esquire and Elizabeth Kimmel, Esquire of Desmarais LLP.

Jack B. Blumenfeld, Esquire, Rodger D. Smith II, Esquire, and Jeremy A. Tigan, Esquire of Morris, Nichols, Arsht & Tunnell LLP, Wilmington, Delaware. Counsel for Defendants. Of Counsel: Christopher V. Ryan, Esquire, Efrén Garcia, Esquire and Seth Linder, Esquire of Vinson & Elkins LLP, and Robert A. Van Nest, Esquire, Leo L. Lam, Esquire, Ajay S. Krishnan, Esquire, Ryan Wong, Esquire, and Erin Meyer, Esquire of Keker & Van Nest LLP.

MEMORANDUM OPINION

Dated: December 17, 2014
Wilmington, Delaware

ROBINSON, District Judge

I. INTRODUCTION

On May 3, 2012, plaintiff Round Rock Research, LLC ("Round Rock") instituted suit against defendant SanDisk Corporation ("SanDisk"), alleging infringement of eleven patents, of which five are the subject of the current litigation:[1] U.S. Patent Nos. 5,615,159 ("the '159 patent")[2], 6,728,798 ("the '798 patent"), 6,948,041 ("the '041 patent"), 7,336,531 ("the '531 patent"), and 8,060,719 ("the '719 patent").[3] (D.I. 1) Round Rock filed an amended complaint on May 14, 2012. (D.I. 5) On July 9, 2012, SanDisk answered and asserted the affirmative defenses of non-infringement, patent invalidity, prosecution history estoppel, statutory limitations on damages, equitable doctrines, costs unavailable, license and patent exhaustion, standing and estoppel. (D.I. 8) SanDisk also asserted counterclaims for non-infringement and invalidity. *Id.* The parties submitted their competing claim construction briefs and, on July 21, 2014, the court issued a memorandum order with its claim construction. (D.I. 172)

Round Rock is a Delaware limited liability company with its principal place of business in New York. SanDisk is a corporation organized and existing under the laws

---

[1]The parties stipulated to the dismissal of one of the remaining six patents, and the other five will be litigated separately. (D.I. 15)

[2]In *SanDisk v. Round Rock Research LLC*, 2014 WL 2700583, at *5 (N.D. Cal. June 13, 2014), the District Court for the Northern District of California addressed whether "the doctrine of patent exhaustion bars Round Rock's claims for infringement" against SanDisk under the same license that governs the '159 patent. This opinion is currently on appeal to the Federal Circuit. The court grants a stay of all litigation in the present case relating to the '159 patent, pending the outcome of the appeal to the Federal Circuit.

[3]Of the five patents currently at issue, only three – the '159, '798 and '041 patents – are discussed in this memorandum as the court set staggered schedules for expert discovery, summary judgment, and trial for the '719 and '531 patents.

of Delaware with its principal place of business in California.

Presently before the court are: (1) SanDisk's motion for summary judgment of invalidity of the'159 and '041 patents and partial summary judgment on priority dates (D.I. 213); (2) SanDisk's motion for summary judgment of non-infringement of the '159, '798 and '041 patents (D.I. 215); and (3) Round Rock's motion for summary judgment of infringement and partial summary judgment of no anticipation (D.I. 217). The court has jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

II. STANDARDS OF REVIEW

A. Summary Judgment

"The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). The moving party bears the burden of demonstrating the absence of a genuine issue of material fact. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 415 U.S. 574, 586 n.10 (1986). A party asserting that a fact cannot be—or, alternatively, is—genuinely disputed must support the assertion either by citing to "particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations (including those made for the purposes of the motions only), admissions, interrogatory answers, or other materials," or by "showing that the materials cited do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact." Fed. R. Civ. P. 56(c)(1)(A) & (B). If the moving party has carried its burden, the nonmovant must then "come forward with

specific facts showing that there is a genuine issue for trial." *Matsushita*, 415 U.S. at 587 (internal quotation marks omitted). The court will "draw all reasonable inferences in favor of the nonmoving party, and it may not make credibility determinations or weigh the evidence." *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000).

To defeat a motion for summary judgment, the non-moving party must "do more than simply show that there is some metaphysical doubt as to the material facts." *Matsushita*, 475 U.S. at 586-87; *see also Podohnik v. U.S. Postal Service*, 409 F.3d 584, 594 (3d Cir. 2005) (stating party opposing summary judgment "must present more than just bare assertions, conclusory allegations or suspicions to show the existence of a genuine issue") (internal quotation marks omitted). Although the "mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment," a factual dispute is genuine where "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Anderson v. Liberty Lobby, Inc.*, 411 U.S. 242, 247-48 (1986). "If the evidence is merely colorable, or is not significantly probative, summary judgment may be granted." *Id.* at 249-50 (internal citations omitted); *see also Celotex Corp. v. Catrett*, 411 U.S. 317, 322 (1986) (stating entry of summary judgment is mandated "against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial").

B. Infringement

A patent is infringed when a person "without authority makes, uses or sells any patented invention, within the United States . . . during the term of the patent." 35

U.S.C. § 271(a). A two-step analysis is employed in making an infringement determination. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995). First, the court must construe the asserted claims to ascertain their meaning and scope. *See id.* Construction of the claims is a question of law subject to de novo review. *See Cybor Corp. v. FAS Techs.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998). The trier of fact must then compare the properly construed claims with the accused infringing product. *See Markman*, 52 F.3d at 976. This second step is a question of fact. *See Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir. 1998).

"Direct infringement requires a party to perform each and every step or element of a claimed method or product." *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378 (Fed. Cir. 2007), *overruled on other grounds by* 692 F.3d 1301 (Fed. Cir. 2012). "If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law." *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). If an accused product does not infringe an independent claim, it also does not infringe any claim depending thereon. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1553 (Fed. Cir. 1989). However, "[o]ne may infringe an independent claim and not infringe a claim dependent on that claim." *Monsanto Co. v. Syngenta Seeds, Inc.*, 503 F.3d 1352, 1359 (Fed. Cir. 2007) (quoting *Wahpeton Canvas*, 870 F.2d at 1552) (internal quotations omitted). A product that does not literally infringe a patent claim may still infringe under the doctrine of equivalents if the differences between an individual limitation of the claimed invention and an element of the accused product are insubstantial. *See Warner-Jenkinson Co. v. Hilton Davis*

Chem. Co., 520 U.S. 17, 24 (1997). The patent owner has the burden of proving infringement and must meet its burden by a preponderance of the evidence. *See SmithKline Diagnostics, Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988) (citations omitted).

When an accused infringer moves for summary judgment of non-infringement, such relief may be granted only if one or more limitations of the claim in question does not read on an element of the accused product, either literally or under the doctrine of equivalents. *See Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1376 (Fed. Cir. 2005); *see also TechSearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1369 (Fed. Cir. 2002) ("Summary judgment of noninfringement is ... appropriate where the patent owner's proof is deficient in meeting an essential part of the legal standard for infringement, because such failure will render all other facts immaterial."). Thus, summary judgment of non-infringement can only be granted if, after viewing the facts in the light most favorable to the non-movant, there is no genuine issue as to whether the accused product is covered by the claims (as construed by the court). *See Pitney Bowes, Inc. v. Hewlett–Packard Co.*, 182 F.3d 1298, 1304 (Fed. Cir. 1999).

"[A] method claim is not directly infringed by the sale of an apparatus even though it is capable of performing only the patented method. The sale of the apparatus is not a sale of the method. A method claim is directly infringed only by one practicing the patented method." *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993). Therefore, "an accused infringer must perform all the steps of the claimed method, either personally or through another acting under his direction or control."

Akamai Technologies, Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1307 (Fed. Cir. 2012).

With respect to apparatus claims, "to infringe a claim that recites capability and not actual operation, an accused device 'need only be capable of operating in the described mode.'" *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1204 (Fed. Cir. 2010) (citing *Intel Corp. v. U.S. Int'l Trade Comm'n*, 946 F.2d 821, 832 (Fed. Cir. 1991). However, if an apparatus claim requires "software [to] be configured in a particular way to infringe," infringement does not occur merely because the apparatus could be used in an infringing fashion. *Finjan*, 626 F.3d at 1204-05.

C. Anticipation

Under 35 U.S.C. § 102(b), "[a] person shall be entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States." The Federal Circuit has stated that "[t]here must be no difference between the claimed invention and the referenced disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). In determining whether a patented invention is explicitly anticipated, the claims are read in the context of the patent specification in which they arise and in which the invention is described. *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc.*, 45 F.3d 1550, 1554 (Fed. Cir. 1995). The prosecution history and the prior art may be consulted if needed to impart clarity or to avoid ambiguity in ascertaining whether the invention is novel or was previously known in the

art. *Id.* The prior art need not be ipsissimis verbis (i.e., use identical words as those recited in the claims) to be anticipating. *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716 (Fed. Cir. 1984).

A prior art reference also may anticipate without explicitly disclosing a feature of the claimed invention if that missing characteristic is inherently present in the single anticipating reference. *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). The Federal Circuit has explained that an inherent limitation is one that is necessarily present and not one that may be established by probabilities or possibilities. *Id.* That is, "[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* The Federal Circuit also has observed that "[i]nherency operates to anticipate entire inventions as well as single limitations within an invention." *Schering Corp. v. Geneva Pharms. Inc.*, 339 F.3d 1373, 1380 (Fed. Cir. 2003). Moreover, recognition of an inherent limitation by a person of ordinary skill in the art before the critical date is not required to establish inherent anticipation. *Id.* at 1377.

An anticipation inquiry involves two steps. First, the court must construe the claims of the patent in suit as a matter of law. *Key Pharms. v. Hercon Labs Corp.*, 161 F.3d 709, 714 (Fed. Cir. 1998). Second, the finder of fact must compare the construed claims against the prior art. *Id.* A finding of anticipation will invalidate the patent. *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 147 F.3d 1374, 1378 (Fed. Cir. 1998).

III. DISCUSSION

A. The '041 Patent

The '041 patent, entitled "Permanent Memory Block Protection in a Flash

Memory Device," issued on September 20, 2005 and claims priority to an October 24, 2002 filing date. The '041 patent is directed to "a method for permanent memory block protection in a Flash memory device." ('041 patent, col. 1:51-53) One of the characteristics of Flash memory devices is that individual memory "cells" cannot be erased independently — instead, an "erase" operation typically erases all of the memory cells on a given device at once. The '041 patent discloses a "secure command" function that protects specific blocks of memory from being erased. Unlike temporary memory block protection, the memory block protection disclosed in the '041 patent is "permanent" in that it "cannot be cleared once it is set." ('041 patent, col. 2:21-23)

Round Rock asserts claims 1, 5, 18, 23 and 27 of the '041 patent, reproduced below:

> 1. A method for permanent memory block protection in a memory device having a plurality of control registers that are used to control operation of the memory device, the method comprising:
>
> submitting a secure command to the memory device to initiate a secure function; and
>
> writing a control data word that indicates which memory blocks to protect, wherein the control data word specifies which blocks of memory of the memory device are to be permanently secured against write and erase operations
>
> . . .
>
> 5. The method of claim 1 wherein each bit of the control data word indicates a different block of memory.
>
> . . .
>
> 18. A Flash memory device comprising:

a plurality of memory blocks;

control circuitry to which a secure command can be written in order to initiate a secure function; and

an unused control address to which a control data word can be written to specify which of the plurality of memory blocks to permanently secure with the secure function against write and erase operations.

. . .

23. The Flash memory device of claim 18 wherein the control data word comprises a plurality of bits that each indicate a different block to secure of the plurality of memory blocks.

. . .

27. An electronic system comprising:

a processor that controls operation of the system; and

a Flash memory device, coupled to the processor, comprising:

a plurality of memory blocks;

control circuitry to which a secure command can be written in order
to initiate a secure function; and

an unused control address to which a control data word can be written to specify which of the plurality of memory blocks to permanently secure with the secure function against write and erase operations.

('041 Patent, col. 6:2-8:41)

1. Invalidity

SanDisk argues that independent claims 1, 18 and 27 of the '041 patent are anticipated by U.S. Patent No. 5,363,334 to Samuel E. Alexander ("Alexander").

Alexander is titled "Write Protection Security for Memory Device," and claims an April 10, 1993 priority date. Alexander was not disclosed to the Patent Office or considered during the prosecution of the '041 patent. (*See* D.I. 223, ex. 27 at A656, A665, A672, and A692)

Alexander is directed to "provid[ing] an improved write protection for erasable programmable memory devices of memory size or capacity made up of contiguous blocks of memory, where selected blocks are to be protected." (D.I. 221, ex. 4 at 2:15-19) In describing which blocks are afforded protection, Alexander explains that "any number but less than all of the contiguous, equally sized blocks of memory making up the total data memory capacity of an erasable programmable memory device such as an [erasable programmable read-only memory ("EEPROM")] are selectively write protected." (*Id.* at 2:24-27) Once a cell is write protected, "its contents may not thereafter be erased or overwritten." (*Id.* at abstract)

SanDisk argues that Alexander discloses all of the limitations of claims 1, 18 and 27 of the '041 patent, including: (1) "Flash memory;" (2) "memory blocks;" (3) "secure command" to "initiate a secure function" that permanently protects memory blocks against write and erase operations in Flash memory; (4) a "control data word" that indicates which memory blocks to protect; (5) an "unused control address" to which the "control data word" is written; and (6) various remaining limitations including "an electronic system," "a plurality of memory blocks," "a processor that controls the operation of the system," and "control circuitry." (D.I. 214 at 25-33)

The parties address four of the above limitations, two of which are included here. With respect to "Flash memory," SanDisk argues that Alexander discloses Flash

memory[4] because Flash memory is a type of the EEPROM recited in Alexander. (*Id.* at 25) For support, SanDisk cites to the specification of the '798 patent,[5] which reads, "Flash memory is a type of EEPROM that can be erased and reprogrammed in blocks instead of one byte at a time." ('798 patent, col. 1:37-40) SanDisk argues that block-wise erasure is the defining characteristic of Flash memory, and Alexander's permanent write-protection scheme possesses this characteristic in that it allows those blocks of data that are not permanently protected "to be erased and rewritten at will." (D.I. 221, ex. 4, col. 10:1-4) Because unprotected blocks may be erased at will, SanDisk reasons that Alexander necessarily also discloses "memory blocks," defined by the court as "[a] division of the [F]lash memory that is designed to be erased in response to an erase operation." (D.I. 172 at 3)

Round Rock replies that not only does the term "Flash memory" not appear expressly in Alexander, but "common usage" of the term at the relevant time reveal that Flash memory is not a type of EEPROM. (D.I. 243 at 30-31) Round Rock's expert, Robert Zeidman ("Zeidman"), opined that "[t]here are a number of [] important differences between Flash memories and older EEPROM memories" such as the number of transistors and differences in memory density, reliability and power consumption. (D.I. 245, ex. 3 at ¶ 489) Zeidman also explained that, in the preferred

---

[4]The parties agree that the term "Flash memory" appears expressly in claims 18 and 27 of the '041 patent, and obliquely in claim 1 of the '041 patent in that "memory blocks" was construed by the court to be "[a] division of the [F]lash memory that is designed to be erased in response to an erase operation." (D.I. 172 at 3)

[5]The '798 patent is also a subject of the current litigation, but has no apparent familial relationship to the '041 patent.

embodiment of Alexander, EEPROM is writable on a byte-by-byte basis (*see id.* at ¶ 490), whereas SanDisk's own expert, Brian Berg ("Berg"), admitted that Flash memory is not writable on a byte-by-byte basis (*see* D.I. 244, ex. 67 at 80:24-81:3). Additionally, Zeidman opined that there is no indication that the EEPROM disclosed in Alexander may be erased on a block-wise basis.[6] (D.I. 245, ex. 3 at ¶ 489)

As for disclosure of "memory block," Round Rock argues that because "memory block" is a division of Flash memory, Alexander's failure to disclose Flash memory translates into a failure to disclose memory blocks. (D.I. 243 at 31-32) Round Rock argues that even if memory blocks were disclosed, Alexander does not disclose "write protection of memory blocks." (*Id.* at 32) Zeidman explained that due to a mis-match in the size of protected and erasable blocks, Alexander does not disclose "memory blocks" that are "designed to be erased in response to an erase command."[7] (D.I. 245, ex. 3 at ¶ 490)

The parties' experts dispute the disclosure of "Flash memory" and "memory blocks," thus creating genuine issues of material fact. Most critically, the parties contest: (1) whether, at the time of patenting, Flash memory was considered a type of

---

[6]By opining generally about the failure of Alexander to disclose erasure on a block-wise basis and common usage of the term "Flash memory" at the time of patenting, Zeidman does not confine himself to a discussion of the preferred embodiment, as argued by SanDisk. (*See* D.I. 245, ex. 3 at ¶ 489)

[7]SanDisk argues that Round Rock impermissibly focuses on features of the preferred embodiment for its argument regarding memory blocks, but SanDisk offers no evidence (beyond what is "clearly" claimed) purporting to show the actual scope of disclosure. (D.I. 268 at 16-17) As the evidence now stands, a factual dispute exists as to whether erasable blocks are "memory blocks" if the write-protected blocks differ in size from the erasable blocks.

EEPROM; (2) the defining characteristics of Flash memory and whether those characteristics are disclosed in Alexander; (3) whether Alexander discloses memory erasure in a block-wise manner; and (4) whether Alexander discloses memory blocks that are "designed to be erased in response to an erase command." For these reasons, the court denies SanDisk's motion for summary judgment of invalidity of the '041 patent.

2. No anticipation

Round Rock moves for partial summary judgment that claims 1, 5, 18, 23 and 27 of the '041 patent are not anticipated by the Intel 3 Volt StrataFlash Memory Data Sheet ("StrataFlash").[8] StrataFlash discloses a 128-bit protection register that is divided into two 64-bit segments. (D.I. 220, ex. 4 at RRR-SAND00050082) Round Rock argues that neither 64-bit register is "designed to be erased in response to an erase operation," as required by the court's construction of the term "memory block." (D.I. 218 at 23) As for the first 64-bit register, SanDisk's own expert admitted that the segment "is programmed at the Intel factory and is unchangeable." (D.I. 220, ex. 2 at 287:1-5) Round Rock argues the second 64-bit register is similarly not "designed to be erased" because, as admitted by SanDisk's expert, the register is "one-time programmable." (*Id.* at 287:22-288:16) For both registers, SanDisk failed to "identify any erase operation that is capable of erasing either segment," given that reprogramming the

[8]The court denies as moot Round Rock's motion for partial summary judgment of no anticipation of claims 1, 5, 18, 23 and 27 of the '041 patent by U.S. Patent No. 6,209,069 to Baltar ("Baltar") and claims 5 and 23 of the '041 patent by Alexander, given that SanDisk does not intend to assert these as invalidating prior art references at trial. (*See* D.I. 248 at 2 n.2)

register is not the same as erasing the register. (D.I. 265 at 13-14)

San Disk replies that StrataFlash does disclose memory blocks because the Flash memory blocks "can be erased through reprogramming using a Protection Program command" up until the segment is made unchangeable, either at the factory or by the consumer. (D.I. 248 at 11-12; *see* D.I. 249, ex. B at ¶¶ 460-63) SanDisk adds that there would be no reason to engineer a means for locking the memory "if the 64-bit memory segments were not erasable." (D.I. 248 at 13) SanDisk reasons that the "designed to be erased" requirement in the court's construction does not require that the memory block actually be erased in practice. (*Id.*)

Although the court agrees that "designed to be erased" does not require actual erasure in practice, SanDisk's remaining arguments distort the meaning of "designed" beyond the bounds of what was contemplated by the court during claim construction. According to SanDisk, any memory block that is capable of being erased at any stage of manufacture is necessarily "designed" to be erased. Both parties agree that the first 64-bit memory segment is unchangeable at the time of manufacture, and – even putting aside the question of whether reprogramming is equivalent to erasure – the court is unpersuaded that this segment was designed to be erased either by the manufacturer or any future user. The court is similarly unpersuaded by the argument that the "one-time programmable" segment is designed to be erased merely because it may be locked by the user following programming. Finding otherwise would be inconsistent with a straightforward reading of the court's construction of the term "memory block." Because SanDisk's rebuttal rests entirely on adoption of the expansive interpretation of "designed," it has failed to create a genuine dispute of material fact. Accordingly, the

court grants Round Rock's motion for summary judgment of no anticipation of claims 1, 5, 18, 23 and 27 of the '041 patent by StrataFlash.

B. The '798 Patent

The '798 patent, entitled "Synchronous Flash Memory With Status Burst Output," issued April 27, 2004 and claims a priority date of July 28, 2000. The '798 patent relates to a non-volatile Flash memory device that can be synchronized to a clock signal. Generally, synchronous memory, or memory that can be synchronized to a clock signal (used as a reference for timing operations), tends to be "volatile," meaning that all the data in memory is lost when the power is turned off. Flash memory, on the other hand, is non-volatile, in that it does not lose its contents if power is lost. Non-volatile memory tended to be asynchronous at the time of the '798 patent, meaning that it was not designed to synchronize with a clock signal. The '798 patent describes a method for outputting data from the device's registers involving establishing a "burst length," or amount of data, that will be output over consecutive clock cycles.

Round Rock asserts claims 1, 3-5, 7, 9-11 and 13-22 of the '798 patent. Claim 1 of the '798 patent, which is representative of all the asserted claims, provides:

> 1. A method of operating a synchronous memory device comprising:
>
> establishing a read burst length of a predetermined number of cycles such that data output from the synchronous memory device is output on the predetermined number of consecutive clock cycles;
>
> initiating a register read operation to read data stored in an internal register; and
>
> outputting data stored in the internal register on external data connections for the predetermined number of

consecutive clock cycles.

('798 patent, col. 28:30-39)

1. Non-infringement

The claims at bar were amended by the examiner, with authorization given for such in a telephone interview. The extent of the relevant prosecution history is recited in full below:

> The claims have been amended so that all recite the feature that when a data transfer of a particular number of clock cycles is desired, then a burst length is adjusted so that the data transfer will occur in that number of clock cycles. Although the number of clock cycles always depends on the burst length, applicant work backwards by predetermining the desired number of clock cycles and creates a burst length of a data transfer to achieve that desired number.
>
> None of the references, cited by the examiner or by applicant, either alone or in combination, are deemed to teach each and all of the features of present claims. Consequently, claims 1-22 are allowable.

(D.I. 223, ex. 34 at A762) Despite the examiner's explanation, there does not seem to be any discussion of the above identified references of record. Therefore, the court is left with an after-the-fact explanation of an amendment, rather than an enlightening discussion of why the amendment was made in the first instance.

The unusual history recited above has led to a dispute about what the parties are disputing. For instance, SanDisk summarizes the issue before the court as follows:

> Here, the question is whether the file history, the claim language, and the specification limit the invention to scenarios where the number of clock cycles and the burst length can be adjusted. Neither expert purports to provide technical insight into that issue, nor should they, in matters of claim interpretation.

(D.I. 269 at 17 n.9) The court notes that neither party raised the relevant claim

language – "establishing a read burst length of a predetermined number of cycles such that data output from the synchronous memory device is output on the predetermined number of clock cycles" – during the claim construction exercise. Moreover, SanDisk appears to be requesting that the court construe the examiner's explanation of the amended claim language, rather than the claim language itself in light of the specification (which is not referenced at all except for the Abstract, which was amended by the examiner as well). As reflected above, SanDisk insists that the examiner, by his statement of reasons for allowance, limited the scope of the '798 patent "to methods and apparatuses with an adjustable burst length or adjustable clock cycle feature" (*Id.* at 17), characteristics missing from the accused products which "always transmit at "one bit per clock cycle; [o]nce manufactured, the products do not permit adjustment of the clock cycle or burst length settings." (*Id.* at 14)

For its part, Round Rock refers the court to the opinions of its technical expert in opposition to SanDisk's motion for summary judgment of non-infringement. Round Rock contends that

> SanDisk's products must establish a read burst length of a predetermined number of cycles before they can output data on that predetermined number of cycles. More specifically, SanDisk's hardware as described by its Verilog code actually sets the burst length of the data transfer, meeting the 'establishing' limitation of claim 1. . . .
>
> The loading of the shift register, discussed above, determines the number of clock cycles that sending the response will take and therefore "establishes a read burst length of a predetermined number of clock cycles."

(D.I. 250 at 30-31) Round Rock concludes its analysis by characterizing the dispute as "a factual disagreement that the court should allow the jury to resolve." (*Id.* at 32)

Because it is concerned that the jury will get confused if presented with this same record, the court will construe the limitation at issue. Aside from SanDisk's interpretation of the examiner's single statement, neither the claim language itself nor the specification nor the subsequent amendments support SanDisk's suggestion that the invention is limited to methods and apparatuses with clock cycles or burst lengths that can be adjusted during device operation (i.e. as opposed to being established once at the time of manufacture). The limitation, therefore, is construed to mean that data output (read burst length) will always be achieved within a predetermined number of consecutive clock cycles.

The court declines to grant SanDisk's motion for summary judgment of non-infringement on the record presented.

2. No anticipation

In its motion for partial summary judgment, Round Rock contends that the Intel 28F320D18 1.8 Volt Dual-Plane Flash Memory Data Sheet (the "D18 Data Sheet") and the product it describes are not prior art to the '798 patent because: (1) the D18 Data Sheet is not a "printed publication" within the meaning 35 U.S.C. § 102(a); and (2) the product described by the D18 Data Sheet was not sold or in public use prior to the July 28, 2000 filing date of the '798 patent.[9] (D.I. 218 at 26) Regarding the publication of the D18 Data Sheet, Round Rock argues that, even though Intel's corporate witness testified that it was Intel's "general procedure" to provide data sheets to customers, the

[9]The court denies as moot Round Rock's motion for summary judgment of no anticipation by the Micron MT48LC1M16A1 Data Sheet (the "M16A1 Data Sheet"), as SanDisk does not intend to present the M16A1 Data Sheet "as an invalidating prior-art reference against the '798 patent" at trial. (D.I. 248 at 2 n.2)

witness did not know exactly when the D18 Data Sheet was provided to customers. (D.I. 220, ex. 8 at 44:2-11) As for the product allegedly described by the D18 Data Sheet, Round Rock argues that there is no evidence that any such product was sold or used in the United States prior to July 28, 2000. Round Rock cites the lack of testimony describing the features of the products listed in the spreadsheet as well as the fact that Intel's corporate witness did not know if the sales were external sales to customers or internal sales within Intel. (*Id.* at 38:16-40:1)

SanDisk responds that the D18 Data Sheet is a "printed publication" under 35 U.S.C. § 102(a) because Intel's corporate witness authenticated the data sheet "as a business record created by a team of marketing and design engineers."[10] (D.I. 248 at 14) Intel's corporate witness further testified that it was Intel's business "practice" to publish the data sheet on or around October of 1999, as per the date of the cover page of the data sheet, and there were no "restrictions" on the dissemination of the data sheet that would indicate a failure to publish. (D.I. 249, ex. 2, ex. H at 43:9-44:11, 35:5-18) Finally, SanDisk argues that Intel's corporate witness testified that the product described by the D18 Data Sheet was in fact made and sold by Intel. (*Id.* at 12:19-13:19)

"The statutory phrase 'printed publication' has been interpreted to mean that, before the critical date, the reference must have been sufficiently accessible to the public interested in the art; dissemination and public accessibility are the keys to the legal determination whether a prior art reference was 'published.' " *In re Cronyn*, 890

---

[10]SanDisk "does not contend that prior sales of the D18 product invalidate the '798 patent." (D.I. 248 at 14, n.9)

F.2d 1158, 1160 (Fed.Cir.1989). Whether something is a "printed publication" is determined on a case by case basis, requiring inquiry into the facts and circumstances of the reference's disclosure to the public. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed.Cir.2004).

A court should also consider whether or not the "printed publication" was the subject of confidentiality agreements or whether the disclosing party had "a reasonable expectation that the information [would] not be copied." *In re Klopfenstein*, 380 F.3d at 1351. "Professional and behavioral norms [that] entitle a party to a reasonable expectation that the information displayed will not be copied" can also be evidence that something is not a "printed publication." *Id.* On the other hand, "evidence of business practice that was sufficient to prove [a document] was widely available and accessible to the interested public" can be sufficient to prove that the document was publicly accessible. *Constant v. Advanced Micro–Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir.1988).

Here, the jury would be free to credit the testimony of Intel's corporate witness that it was Intel's "business practice" to disseminate data sheets on the date marked on the cover page, despite the fact that the witness did not know precisely when the D18 Data Sheet was provided to customers. Likewise, the jury would also be free to credit the testimony of Intel's corporate witness that the product described by the D18 Data Sheet was made and sold by Intel, even if he later expressed uncertainty as to whether those sales were internal or external. Because the evidence advanced by SanDisk is not clearly legally insufficient, the question of whether the D18 Data Sheet and the sale of its product are valid prior art references boils down to a determination of witness

credibility, a task properly left to the factfinder. As such, the court denies Round Rock's motion for partial summary judgment that the D18 Data Sheet is not prior art to the '798 patent.

V. CONCLUSION

For the foregoing reasons the court denies SanDisk's motion for summary judgment of invalidity of the '041 patent (D.I. 213), grants Round Rock's motion for summary judgment of no anticipation of claims 1, 5, 18, 23 and 27 of the '041 patent by StrataFlash (D.I. 217), denies as moot Round Rock's motion for partial summary judgment of no anticipation of claims 1, 5 18, 23 and 27 of the '041 patent by Baltar and claims 5 and 23 of the '041 patent by Alexander (D.I. 217), denies SanDisk's motion for summary judgment of non-infringement of the '798 patent (D.I. 215), denies as moot Round Rock's motion for partial summary judgment of no anticipation of the '798 patent by the M16A1 Data Sheet, and denies Round Rock's motion for partial summary judgment that the D18 Data Sheet and any product purportedly described by the D18 Data Sheet is not prior art to the '798 patent (D.I. 217). An appropriate order shall issue.

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ROUND ROCK RESEARCH, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 12-569-SLR
	)	
SANDISK CORPORATION,	)	
	)	
Defendant.	)	

ORDER

At Wilmington this 17th day of December, 2014, consistent with the memorandum opinion issued this same date;

IT IS ORDERED that:

1. SanDisk's motion for summary judgment of invalidity of the '041 patent (D.I. 213) is denied.

2. Round Rock's motion for summary judgment of no anticipation of claims 1, 5, 18, 23 and 27 of the '041 patent by StrataFlash (D.I. 217) is granted.

3. Round Rock's motion for partial summary judgment of no anticipation of claims 1, 5 18, 23 and 27 of the '041 patent by Baltar (D.I. 217) and claims 5 and 23 of the '041 patent by Alexander (D.I. 217) are denied as moot.

4. SanDisk's motion for summary judgment of non-infringement of the '798 patent (D.I. 215) is denied.

5. Round Rock's motion for partial summary judgment of no anticipation of the '798 patent by the M16A1 Data Sheet (D.I. 217) is denied as moot.

6. Round Rock's motion for partial summary judgment that the D18 Data Sheet and any product purportedly described by the D18 Data Sheet is not prior art to the '798 patent (D.I. 217) is denied.

United States District Judge