

**This Opinion is NOT a
Precedent of the TTAB**

Mailed:
August 24, 2012

United States Patent and Trademark Office
Trademark Trial and Appeal Board

In re Seagate Technology LLC

Serial No. 85007424

Diane J. Mason of LeClairRyan for Seagate Technology LLC.

Heather D. Thompson, Trademark Examining Attorney, Law Office 109 (Dan Vavonese, Managing Attorney).

Before Bucher, Ritchie and Kuczma, Administrative Trademark Judges.

Opinion by Bucher, Administrative Trademark Judge:

Seagate Technology LLC seeks registration on the Principal Register of the mark **ADAPTIVE MEMORY** (*in standard character format*) for goods identified in the application, as amended, as follows:

computer hardware and software for processing storage of data utilizing non-volatile solid state storage, namely, hard disk drives combined with solid state memory, in International Class 9.¹

¹ Application Serial No. 85007424 was filed on April 6, 2010, based upon applicant's allegation of a *bona fide* intention to use the mark in commerce. On August 2, 2011, applicant submitted an Amendment to Allege Use (AAU) based upon applicant's claim of use anywhere and use in commerce since at least as early as May 2010.

The Trademark Examining Attorney refused registration on the grounds that the mark merely describes the applicant's goods under Section 2(e)(1) of the Trademark Act, 15 U.S.C. § 1052(e)(1).

After the Trademark Examining Attorney made the refusal final, applicant appealed to this Board. We affirm the refusal to register.

A. Preliminary matter

Applicant takes the position in its brief that we should ignore the evidence that the Trademark Examining Attorney placed into the record with her denial of applicant's Request For Reconsideration. We disagree. Evidence attached to a request for reconsideration submitted with a notice of appeal, as well as evidence attached to the Trademark Examining Attorney's denial of the request for reconsideration, is considered to have been filed prior to appeal, and is part of the application record on appeal. See TBMP §§ 1204 and 1207.04. Moreover, the industry-specific excerpts from the Internet about how computer memory works, for example, comprising the Trademark Examining Attorney's evidence of August 30, 2011, pertain to the arguments and evidence proffered by applicant in its Request for Reconsideration, and is not significantly different from the evidence of record previously supplied by the Trademark Examining Attorney in her earlier prosecution of this appli-

cation.² *See In re Davey Products Pty Ltd.*, 92 USPQ2d 1198, 1201 (TTAB 2009).

B. Issue before us

Applicant contends that the term “Adaptive Memory,” when used in connection with the named goods, does not merely describe a particular product or type of product, its function, characteristics, or use, and hence, should not be deemed to be merely descriptive. Instead, applicant has offered simply to disclaim the word “Memory” apart from the mark as shown.

By contrast, the Trademark Examining Attorney points to the evidence of record to show that the combined term “Adaptive Memory” immediately and directly conveys the fact that applicant’s hybrid systems (e.g., hard disk drives combined with solid state memory) do indeed feature memory or storage capacity that is constantly changing depending upon the nature of the operator’s open applications.

C. “Merely descriptive” under Section 2(e)(1) of the Act

A mark is merely descriptive, and therefore unregistrable pursuant to the provisions of Section 2(e)(1) of the Trademark Act, 15 U.S.C. § 1052(e)(1), if it immediately conveys information of significant ingredients, qualities,

² We note, for example, that applicant’s press release of May 24, 2010, had previously been made of record with the initial Office action. Entry of June 17, 2010, at 25-26 of 31.

characteristics, features, functions, purposes or uses of the goods or services with which it is used or is intended to be used. *See In re MBNA America Bank N. A.*, 340 F.3d 1328, 67 USPQ2d 1778, 1780 (Fed. Cir. 2003) (**MONTANA SERIES** and **PHILADELPHIA CARD** merely descriptive of “credit card services.” The Court found that a “mark is merely descriptive if the ultimate consumers immediately associate it with a quality or characteristic of the product or service.”). Hence, the ultimate question before us is whether the term **ADAPTIVE MEMORY** conveys information about a significant feature, function or characteristic of applicant’s goods with the immediacy and particularity required by the Trademark Act.

A mark is suggestive, and therefore registrable on the Principal Register without a showing of acquired distinctiveness, if imagination, thought or perception is required to reach a conclusion on the nature of the goods or services. *See In re Gyulay*, 820 F.2d 1216, 3 USPQ2d 1009 (Fed. Cir. 1987) (**APPLE PIE** merely descriptive of potpourri mixture: “Whether a given mark is suggestive or merely descriptive depends on whether the mark ‘immediately conveys ... knowledge of the ingredients, qualities, or characteristics of the goods ... with which it is used,’ or whether ‘imagination, thought, or perception is required to reach a conclusion on the nature of the goods.’”).

The question of whether a particular term is merely descriptive is not decided in the abstract. That is, when we analyze the evidence of record, we must keep in mind that the test is not whether prospective purchasers can

guess what applicant's goods are after seeing applicant's mark alone. *In re Abcor Development Corp.*, 588 F.2d 811, 200 USPQ 215, 218 (CCPA 1978). (“Appellant’s abstract test is deficient – not only in denying consideration of evidence of the advertising materials directed to its goods, but in failing to require consideration of its mark ‘when applied to the goods’ as required by statute”); *In re Home Builders Association of Greenville*, 18 USPQ2d 1313

(TTAB 1990) (NEW HOME BUYER’S GUIDE



is merely descriptive of “real estate adver

tisement services”); and *In re American Greetings Corp.*, 226 USPQ 365, 366

(TTAB 1985) (**APRICOT** is merely descriptive of apricot-scented dolls). Ra-

ther, the proper test in determining whether a term is merely descriptive is to

consider the alleged mark in relation to the goods or services for which regis-

tration is sought, the context in which the mark is used, and the significance

that the mark is likely to have on the average purchaser encountering the

goods or services in the marketplace. *See In re Omaha National Corp.*, 819

F.2d 1117, 2 USPQ2d 1859 (Fed. Cir. 1987)



(the term “first tier” describes a class of

banks); *In re Intelligent Instrumentation Inc.*, 40 USPQ2d 1792 (TTAB 1996)

(the term **VISUAL DESIGNER** is merely descriptive of “computer programs for

controlling the acquisition of data from measurement devices”); *In re Pennzoil*

Products Co., 20 USPQ2d 1753 (TTAB 1991) (**MULTI-VIS** is merely descrip-

tive of “multiple viscosity motor oil”); *In re Engineering Systems Corp.*, 2

USPQ2d 1075 (TTAB 1986) (**DESIGN GRAPHIX** merely descriptive of computer graphics programs); and *In re Bright-Crest, Ltd.*, 204 USPQ 591 (TTAB 1979) (**COASTER-CARDS** descriptive of a coaster suitable for direct mailing).

D. Analysis

The Trademark Examining Attorney placed dictionary entries into the record of the individual words in applicant's alleged mark:

adap-tive (*adj*) 1: showing or having a capacity for or tendency toward adaptation³

ad-ap-ta-tion (*noun*) ... 2: adjustment to environmental conditions⁴

memory <[storage](#)>⁵

Initially, applicant seemed to be arguing that while the compound term “adaptive memory,” in its broadest context, may well have a clear meaning in the biological world (e.g., the study of memory systems that have evolved to help retain survival- and fitness-related information), it has lost any significance as a descriptive term when moved into the world of information tech-

³ <http://www.merriam-webster.com/dictionary/adaptive>

⁴ <http://www.merriam-webster.com/dictionary/adaptation>

⁵ <http://foldoc.org/memory>

nology. However, it is inherent in our Section 2(e)(1) determinations that we must look to the world of computer memory to discover whether this terminology may have become a term of art in recent years across computerized storage systems in general, and with the evolution of hybrid drive technology of the type being offered by applicant, in particular.

The record contains several copies of applicant's press release of May 24, 2010:

Seagate Delivers World's Fastest Hard Drive For Laptop Computers; Momentus XT Solid State Hybrid Drive Offers Solid State Performance With The Capacity And Value Of Hard Disk Drives

The Momentus XT drive is a best-of-both-worlds solution that combines a 7200RPM spin speed, 4GB of solid state memory and Seagate's **Adaptive Memory** technology to deliver unprecedented hard drive performance. The unique **Adaptive Memory** technology works by identifying patterns in how often certain digital data is used, and then moving the most frequently used information to the embedded solid state memory for faster access – effectively tailoring hard drive performance to each user and their applications.⁶

In trade publication articles that issued based on this press release, the writers adopted applicant's characterization of "adaptive memory" (lower-case) as a descriptor for Seagate's proprietary algorithm:

Adaptive Memory: First Impressions

One of the Momentus XT's flagship features is its **adaptive memory** technology, which lets the drive minimize the amount of flash memory it needs, while maximizing the use of what's present. Seagate claims that you'll notice improved storage times within three reboots of your computer [T]he Momentus XT is

⁶ <http://www.seagate.com/about/newsroom/press-releases/momentus-xt-seagate-delivers-fastest-pr/?paramChannelName=newsroom>

an impressive, inventive solution to the ongoing problem of balancing performance, capacity, and price when it comes to storage
...⁷

Applicant argues that this reference clearly points to its unique technology, but does not describe the involved hybrid *hardware* systems having both solid state drives and hard drives. However, we note that the recited goods in International Class 9 involve both hardware *and software*. Most importantly, we need to understand whether someone versed in this technology, reading the *Gizmodo* or *ExtremeTech* write-ups in May 2010, *supra*, would immediately understand the term “Adaptive Memory” to convey a feature or a characteristic of “computer hardware and software for processing storage of data utilizing non-volatile solid state storage, namely, hard disk drives combined with solid state memory.” Whether one thinks of this feature of applicant’s goods as an algorithm, an inventive piece of software, or proprietary technology, it is most relevant what the term “Adaptive Memory” meant to someone knowledgeable in this art when applicant adopted and first used this term in commerce in May 2010.

The Trademark Examining Attorney has placed into the record detailed explanations of how computer memory works, which we have considered in its

⁷ <http://www.extremetech.com/computing/80326-seagate-momentum-xt-hard-drive-review/>; See also “Seagate Dishes Out Momentum XT HDD, World’s Fastest 2.5-Inch HDD,” Article written by *Kat Hannaford* for *Gizmodo, the Gadget Guide*, <http://gizmodo.com/5546086/seagate-dishes-out-momentum-xt-hdd-worlds-fastest-25+inch-hdd>

entirety. While the technology involved in digital storage changes at lightening speeds, it is also clear from this record that in order to take optimal advantage of the performance vs. cost characteristics of different types of storage media, there has long been a principle of “hierarchical storage management.” Whether one calls this “automated storage tiering,” “dynamic tiering,” “adaptive optimization,”⁸ or something else, the principle involves the highly automated migration of data among tiers of storage media.

Currently, the fastest storage tier includes solid state drives (SSDs), which get their high performance from the use of high-speed Flash memory instead of spinning discs. While preferred for frequently-accessed data, all other data is generally moved to lower tiers because of the high cost of SSDs. The next tier includes high-speed hard drives (HDDs) that are much less expensive on a per-gigabyte basis and feature much higher capacities. The final tier of storage includes low-cost tape and optical disc media having significant storage capacities. However, while the slower performance of this tier make it useful for backing up or archiving data, it is not likely to be accessed regularly for normal business purposes.

In this context, the Trademark Examining Attorney has also placed into the record copies of a number of third-party patents as well as scholarly articles:

⁸ HP 3PAR software, at <http://hpstorage.dcig.com/2010/03/adaptive-optimization-like-butter.html>

US Patent No. 5269013, **Adaptive memory** management method for coupled memory multiprocessor systems

... The present invention is a method of making certain that the most referenced data and stack pages are located in the coupled memory of the processor to which a specific process is assigned and lesser referenced pages are located in global memory or the coupled memory region of other processors. This result is accomplished by sampling the memory references made by the processors of the computer system and causing the most recently referenced pages in each coupled memory region to be maintained at the head of an active page list. References to remote data and stack pages are stored in a remote page hash table. Remote pages are pages stored in global memory or in coupled memory other than the coupled memory of the processor to which the process owning the pages is assigned. Any remote data and stack pages referenced more frequently than pages stored in a processor's coupled memory region are transferred to the processor's coupled memory region. If a processor's coupled memory region is tight, pages are transferred from the processor's coupled memory region to global memory or to the coupled memory region of another processor

U.S. Patent No. 5566325, Method and apparatus for **adaptive memory** access⁹

U.S. Patent No. 7574578, System and method of **adaptive memory** structure for data pre-fragmentation or pre-segmentation¹⁰

Publication number: US 2009/0024819 A1: **Adaptive memory** system for enhancing the performance of an external computing device

Abstract: An adaptive memory system is provided for improving the performance of an external computing device. The adaptive memory system includes a single controller, a first memory type (e.g., Static Random Access Memory or SRAM), a second memory type (e.g., Dynamic Random Access Memory or DRAM), a third memory type (e.g., Flash), an internal bus system, and an external bus interface. The single controller is configured to: (i)

⁹ <http://patft.uspto.gov/>

¹⁰ *Id.*

communicate with all three memory types using the internal bus system; (ii) communicate with the external computing device using the external bus interface; and (iii) allocate cache-data storage assignment to a storage space within the first memory type, and after the storage space within the first memory type is determined to be full, allocate cache-data storage assignment to a storage space within the second memory type.

Claims: ... **3.** The adaptive memory system of claim 1, wherein the first and second memory types are distinct volatile memory types and the third memory type is a non-volatile memory type; and wherein the single controller is further configured to power down portions of the first and second memory types that have not been written to, to minimize power consumption. ... ¹¹

Adaptive Memory System over Ethernet

[This paper presents an “adaptive memory system” wherein the authors adaptively attach external memory resources to a computer in order to expand its total memories.] ¹²

Digital system design; architectures, methods, and tools; proceedings. Euromicro Conference on Digital Systems Design ... (13th: 2010: Lille, France) Ed. by Sebastian Lopez.

The papers of this proceeding were presented at the joint conferences of the 13th Euromicro Conference on Digital System Design and the 36th Euromicro Software Engineering and Advanced Applications Conference, which were held in September 2010 in Lille, France. The papers are usefully grouped into specific topics, such as systems and networks on chips, fault tolerance in digital system design, system and circuit synthesis, and flexible digital radio. Presenting current research by computer scientists at institutions worldwide, the proceedings features such topics as adaptive cache memories for SMT processors, simulation of high-performance memory allocators, designing efficient source routing for mesh topology network on chip platforms, and design of trace-based split array caches for embedded applications. Tables, code, formula, images, and lists of references are included with each paper. Author indexed only.¹³

¹¹ <http://www.fags.org/patents/app/20090024819>

¹² <http://static.usenix.org/event/hotstorage10/tech/tech.html#Suzuki>

¹³ *SciTech Book News*, December 2010.

A Pattern Adaptive NAND Flash Memory Storage Structure

ABSTRACT: To enhance performance of flash memory-based solid state disk (SSD), large logically chained blocks can be assembled by binding adjacent flash blocks across several flash memory chips. However, flash memory does not allow in-place overwriting and thus the operations that merge writes on these blocks suffer a visible decrease in performance. Furthermore, when small random writes are spread over the disk address space, performance tends to be degraded significantly. We thus present a technique to manage random writes efficiently to achieve stable SSD performance. In this paper, we propose a pattern adaptive SSD structure, which classifies access patterns as either random or sequential. The structure primarily consists of a write cache and a flash translation layer that separates groups of writes by access pattern (S-FTL). Separately managing the two types of write patterns enables greater parallelism and reduces the cost of large block management, thus enhancing the performance of the proposed SSD. Simulation experiments show that the proposed **pattern adaptive structure** can provide 39 percent decrease in extra flash block erase overhead on the average, and write performance can be improved by around 60 percent, compared with a basic FTL applied to existing parallel SSD structures. ¹⁴

The record also contains information on others (e.g., SanDisk, TailWind Storage, RT) who offered systems having similarities to applicant's goods:

SanDisk Corp. CEO Discusses Q3 2010 Results -- Earnings Call Transcript
October 21, 2010, **Eli Harari** - Chairman and CEO:

“Let me give you a little bit of technology, just a little bit of technology. I will try to keep it a very simple. Our 3-bit-per-cell embedded iNAND, actually can write and very often relies on writing data into binary, SLC, not just 2 bits and certainly not 3 bits, but writing it to 1-bit-per-cell and then in background writing it into 3-bits-per-cell and that is what we call flash caching and **adaptive flash memory**, but we adapt the iNAND to that specific application.”

“That is where we have this benefit that our X3 can look in an application superior to somebody else's X2 because actually we have this combination, which is very nicely covered by early patents between writing in binary and in background writing into X3. This is where you see tremendous advantage to experience and to the system know-how that we've been talking about.”¹⁵

¹⁴ <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5601704>

¹⁵ *Fair Disclosure Wire*, October 21, 2010.

<p>ULTRA PERFORMANCE</p> <ul style="list-style-type: none">• Outstanding Ops• Hybrid system combined with DRAM and Flash SSD• Adapted FCI-Express for enhanced speed• Uses newly developed technologies, including: Perfect Mirroring, Replication, SnapShot, TimeMark, Rollback features (S/W)• Complete compatibility with other storage systems and a managing feature to control it all <p>ECONOMIC FEASIBILITY</p> <ul style="list-style-type: none">• The DDR + Flash + HDD product lineup delivers the best of all worlds• Low cost for the level of performance• Money will be saved by decreasing network overhead costs, as well as saving electricity and space• Increases the user's efficiency	<p>OUR TECHNOLOGY</p> <p>HDD persists as the leader in the memory sector. Colloquially called JBOD (just a bunch of disks) HDD is an old technology that uses up tons of energy and takes up large amounts of space. So there's a lot of fuss over the swarms of new SSD companies coming out; however, SSD technology by itself isn't cost effective for most businesses (the \$/GB is simply too high). Tailwind Storage come in as the golden mean: an adaptive memory system with HDD, DDR, and SSD memory, utilizing the strengths of each technology. We make your systems capable of using the processing power you already have.</p>
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ST reveals 120MHz ARM Cortex-M3 family

... Dubbed STM32 F-2, "it runs at 120MHz, much faster than our previous 72MHz," microcontroller marketing manager Alexander Czajor told *Electronics Weekly*. "It delivers 150DMIPS because we have integrated a memory accelerator that allows zero wait-state operation from flash at 120MHz, even with a couple of branches."

Zero wait-state operation for branch-less code comes through using an internal 128bit flash interface.

"128bits is four to eight instructions. The interface can fill the pipeline so the processor can run four times the flash speed with linear code," said Czajor.

The 'adaptive real-time' memory accelerator comes into play with branched code and interrupts.

"Branching would normally introduce a wait-state. To avoid this we have 64x128bit of zero wait-state branch cache," said Czajor. "Many times the processor will find the branch target in there, after the first cycle of a loop for example. For high-speed interrupts, it will find the instruction in the branch cache. If you have a couple of interrupts, there is no performance decrease."

Adaptive?

"It is **adaptive** because the memory accelerator remembers the latest branch targets including interrupts," said Czajor. "Most applications benefit greatly from interrupt acceleration." ... ¹⁷

¹⁶ <http://tailwindstorage.com/technology/> as accessed by the Trademark Examining Attorney on August 30, 2011. See also <http://xoticpcforums.com/showthread.php?9834-RAID-0-or-4GB-SSD-Memory&highlight=adaptive+memory+hdd> and <http://www.legitreviews.com/article/1310/>

¹⁷ *Electronics Weekly*, December 1, 2010.

With evidence attached to the first Office action, the Trademark Examining Attorney demonstrated from dictionary entries that the word “Adaptive” and the word “Memory” are susceptible of highly descriptive meanings as applied to these goods. Furthermore, the above uses show that the precise combination of the word “Adaptive” immediately before the word “Memory” does not render applicant’s mark unique or incongruous, and the descriptive aspects of applicant’s alleged mark are not lost in the combined form. Consistent with the respective dictionary definitions, the highlighted feature of applicant’s computer hardware and software for processing storage of data (“memory”) is actually “learning” and then modifying the placement of computerized data among tiers of storage media.

The complexity of applicant’s hybrid systems, having both flash-based storage SSDs and HDDs, as reflected in its press release of May 24, 2010, involves the automated movement of data “hot spots.” The hybrid drive’s software is actually “learning” what the computer operator is using the most and then stores parts of these applications directly into the NAND Flash for improved loading times. In its press release, this is what applicant touts as the purpose of its adaptive memory technology. According to the reviews in the record, after time, users discovered that indeed, applications opened faster using this hybrid drive.

Hence, contrary to the position of applicant, we find that “adaptive memory” qualifies as a term of art in the field of software designed to manage

or control the automated migration of computerized data among tiers of storage media.

As part of its response, applicant appears to argue that the leading word “Adaptive” has suggestive significance, at worst, by including copies of a number of third-party registrations containing an “Adaptive” formative in connection with computer hardware and software in International Class 9:

ADAPTIVE	for “electronic message displays and replacement parts therefor”; ¹⁸
ADAPTIV	for “computer software used for trading and risk management related to financial instruments”; ¹⁹
ADAPTIVE DESIGN	for “prerecorded video tapes and video discs in the field of health care management; computer software for use in the field of health care management”; ²⁰
ADAPTIVE METHODS	for, <i>inter alia</i> , computer hardware; computer software and related components namely, interface cards for data processing equipment in the form of printed circuits for use in sonar and multi-senor signal and display processing, sensor data fusion, situation management, and developing decision aids, data modeling, and simulations”; ²¹
ADAPTIVE PLANNING	for “computer software for business and financial analysis”; ²²

¹⁸ Registration No. 2437912 issued on March 27, 2001; renewed.

¹⁹ Registration No. 2977866 issued on July 26, 2005; Section 8 affidavit accepted and Section 15 affidavit acknowledged.

²⁰ Registration No. 3118242 issued on July 18, 2006; Section 8 affidavit accepted and Section 15 affidavit acknowledged. No claim is made to the exclusive right to use the word “Design” apart from the mark as shown.

²¹ Registration No. 3132260 issued on August 22, 2006.

²² Registration No. 3230480 issued on April 17, 2007. No claim is made to the exclusive right to use the word “Planning” apart from the mark as shown.

ADAPTIVE APPROACH TO WEB SERVICES SECURITY	for “computer hardware and software for network security”; ²³
ADAPTIVE SERVER	for “computer programs for distributed database management and development and user manuals sold as a unit”; ²⁴
ADAPTIVE RECALL	for “testing feature of computer software for learning and teaching languages”; ²⁵ and
Adaptive Document Recognition Technology	for “optical recognition apparatus (OCR); document analysis software feature that examines electronic documents for individual formatting elements incorporated as an integral feature of software for optical character recognition.” ²⁶

However, merely because these marks are registered on goods in the IT field is not probative of such a conclusion. While the single word “Adaptive” may well be inherently distinctive within these composite marks as applied to content-specific software or other identifications of goods, the facts of this case demonstrate that the combined term, “Adaptive Memory,” has significance when used in connection with the named goods herein.

Moreover, it is not outcome determinative herein that applicant may be the first producer of such hybrid systems to use prominently the term “Adap-

²³ Registration No. 3239113 issued on May 8, 2007. No claim is made to the exclusive right to use the words “Web Services Security” apart from the mark as shown.

²⁴ Registration No. 3448758 issued on June 17, 2008. No claim is made to the exclusive right to use the word “Server” apart from the mark as shown.

²⁵ Registration No. 3554829 issued on December 30, 2008.

²⁶ Registration No. 3664284 issued on August 4, 2009. No claim is made to the exclusive right to use the words “Document Recognition Technology” apart from the mark as shown.

tive Memory.” Considering that these goods involve innovative technologies that may or may not be covered by patent protection, the absence of parallel usage by competitors is not at all surprising. Nonetheless, we find most relevant the wide-spread usage of terms such as “adaptive memory systems,” “adaptive memory space,” “adaptive memory access,” “adaptive memory structure,” “adaptive memory architecture,” “adaptive cache memories,” “adaptive flash memories,” etc. These occurrences originate with scholars, engineers, patentees, and IT vendors, as reflected in patent records, articles in the trade press, and non-source-indicating uses in applicant’s field (and related fields) of computerized goods. Accordingly, on this record, we have no doubt about the descriptive nature of this term in connection with the identified goods.

Decision: The Trademark Examining Attorney’s refusal, under Section 2(e)(1) of the Act, to register the term “Adaptive Memory” in connection with “computer hardware and software for processing storage of data utilizing non-volatile solid state storage, namely, hard disk drives combined with solid state memory,” is hereby affirmed.