

**UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF PENNSYLVANIA**

LAMBETH MAGNETIC STRUCTURES, LLC,	:	
	:	Civil Action No.
	:	
Plaintiff,	:	
	:	
v.	:	
	:	
TOSHIBA CORPORATION,	:	
	:	
	:	
Defendant.	:	
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**COMPLAINT AND DEMAND FOR TRIAL BY JURY**

Plaintiff Lambeth Magnetic Structures, LLC, with a principal place of business at 1230 Squirrel Hill Avenue, Pittsburgh, PA 15217 ("Lambeth Magnetic Structures"), alleges the following for its complaint against defendant Toshiba Corporation, with offices at 1251 Avenue of the Americas, New York, NY 10020 ("Toshiba"):

**NATURE OF ACTION**

1. This is a civil action for infringement of United States Patent No. 7,128,988. The action arises under the laws of the United States related to patents, including 35 U.S.C. § 281.

**PARTIES**

2. Lambeth Magnetic Structures is a limited liability company organized and existing under the laws of Pennsylvania, with an address and having its principal place of business at 1230 Squirrel Hill Avenue, Pittsburgh, PA 15217.

3. Upon information and belief, defendant Toshiba is incorporated in the State of Delaware, with a principal place of business at 1251 Avenue of the Americas, New York, NY.

### **JURISDICTION AND VENUE**

4. Subject matter jurisdiction is conferred upon this Court under 28 U.S.C § 1331 and 1338(a) because this action is for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.*

5. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b).

6. Toshiba is subject to this Court's specific and general personal jurisdiction as it is regularly doing or soliciting business in this judicial district and committing at least a portion of the infringements alleged herein in this judicial district.

### **BACKGROUND**

7. Lambeth Magnetic Structures is an entity formed to license patents invented by Dr. David N. Lambeth, a retired Carnegie Mellon professor and recognized pioneer in the area of materials science, specifically magnetic structures for computer memory devices, included electronic hard disk drives (also referred to herein as "magnetic disk drives").

8. One of Lambeth's patents, United States Patent No. 7,128,988 ("the '988 Patent"), entitled "Magnetic Material Structures, Devices and Methods," was issued on October 31, 2006. (A copy of the '988 Patent is attached as Exhibit A.)

9. The current owner of '988 Patent, by assignment, is Lambeth Magnetic Structures, which has the right to sue and recover damages for infringement thereof.

10. Our modern society runs on computers. A central attribute of computers is to store and retrieve information accurately. Every year, the amount of information that needs to be stored grows exponentially, requiring more and more storage capacity for individuals and companies alike. For many computers, the information is stored on hard disk drives. Hence, the storage capacity of hard disk drives continually needs to be increased.

11. A major requirement to accommodate the growing need for data storage without increasing the size of the hard disk drives is to shrink the physical size of the data on the storage medium. While it would be possible to make hard disk drives physically larger to store more data, if the storage density is not increased (that is, allowing more data to be stored in the same footprint), it would take hard disk drives the size of a house to store a small music library.

12. Hard disk drives store much of the digital information (data) in the world today. Central to the operation of hard disk drives is the storage medium, which is implemented on a set of spinning magnetic platters. A magnetic head is mounted to an actuator to move it across the spinning platters, reading and writing the data.

13. The magnetic head is composed of various materials and structures which play a vital role in determining the hard disk drive storage capacity. It is important that the structures be as small as possible and the materials be sufficiently potent to perform the required function of changing the states of very small areas of magnetic material on

the platter, *i.e.*, magnetic media. This changing of the magnetized state is equivalent to modifying or writing the 0's and 1's representing data on the platter.

14. In connection with the '988 Patent, Dr. Lambeth invented a new magnetic structure for hard disk drives comprised of the following elements:

a substrate;

at least one bcc-d layer which is magnetic, forming a uniaxial symmetry broken structure; and

at least one layer providing a (111) textured hexagonal atomic template disposed between said substrate and said bcc-d layer.

15. Independent claims 1 and 27 of the '988 Patent claim a magnetic material and a magnetic device, respectively, comprising the above structure.

16. This structure allows higher storage capacity hard disk drives to be made than before without increasing their physical size, allowing the ever-increasing miniaturization of computers and the concomitant increase of data storage capacity to continue.

#### **FIRST CLAIM FOR RELIEF**

#### **Patent Infringement of United States Patent No. 7,128,988**

17. The foregoing allegations are restated and incorporated by reference as though fully set forth herein.

18. Toshiba makes and sells computers, electronic equipment, and hard disk drives with magnetic heads, including but not limited to: hard disk drives, including hard disk drives for inclusion in computers; stand-alone drives and portable drives; laptop and desktop computers with hard disk drives; media players and sound or video recording

devices with hard disk drives; servers and enterprise storage computers; hard disk drive storage devices in automotive vehicles and machinery; and other devices with hard disk drives (collectively, "Hard Disk Drive Devices").

19. Upon information and belief, past and current generations of such Hard Disk Drive Devices have magnetic heads that have the following structure, or equivalents thereto:

a substrate;

at least one bcc-d layer which is magnetic, forming a uniaxial symmetry broken structure; and

at least one layer providing a (111) textured hexagonal atomic template disposed between said substrate and said bcc-d layer.

20. Accordingly, Toshiba makes, uses, sells, or offers to sell structures and devices incorporating such structures that infringe claims 1 and 27 of the '988 Patent.

21. Toshiba is in violation of 35 U.S.C. § 271(a), and has been and continues to directly infringe at least claims 1 and 27 of the '988 Patent, literally or under the doctrine of equivalents, by making, using, selling, and/or offering to sell Hard Disk Drive Devices with the above structures in and to the United States and this District.

22. Upon information and belief, Toshiba is in violation of 35 U.S.C. § 271(b) and (c), by inducing and continuing to induce others to infringe, and/or contributing to the infringement of, at least claims 1 and 27 of the '988 Patent, literally or under the doctrine of equivalents, by contributing to or inducing others to make, use, sell, and/or offer to sell Hard Disk Drive Devices with the above structures in and to the United

States and this District. Such acts include, but are not limited to, directing others to manufacture materials or devices that in combination with other materials, infringe the claims of the '988 Patent, and have no substantial noninfringing use.

23. Lambeth Magnetic Structures has been damaged by Toshiba's infringement of the '988 Patent and is suffering and will continue to suffer irreparable harm and damage as a result of this infringement unless such infringement is enjoined by this Court.

24. As of the filing of the Complaint, and upon information and belief earlier than the date of this filing, Toshiba had actual knowledge of the '988 Patent and its acts of infringement since at least this time are willful and deliberate. This action, therefore, is "exceptional" within the meaning of 35 U.S.C. § 285 and willful under 35 U.S.C. § 284.

25. Lambeth Magnetic Structures has no adequate remedy at law.

#### **JURY DEMAND**

Pursuant to Fed. R. Civ. P. 38(b), Lambeth Magnetic Structures hereby demands a jury trial on all issues so triable raised in this action.

#### **REQUESTED RELIEF**

WHEREFORE, Lambeth Magnetic Structures demands judgment as follows:

- A. An order adjudging Toshiba to have infringed the '988 Patent;
- B. A permanent injunction enjoining Toshiba with its respective officers, agents, servants, employees, and attorneys, and all persons in active concert or

participation with any of them who receive actual notice of the order by personal service or otherwise, from infringing the '988 Patent;

C. An award of damages adequate to compensate Lambeth Magnetic Structures for the infringement by Toshiba along with the pre-judgment and post-judgment interest, but in no event less than a reasonable royalty, such damages to be trebled pursuant to the provision of 35 U.S.C. § 284;

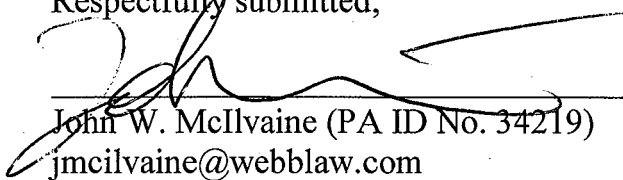
D. An award of Lambeth Magnetic Structure's reasonable attorney fees and expenses pursuant to the provisions of 35 U.S.C. § 285;

E. An award of Lambeth Magnetic Structure's costs; and

F. Such other and further relief as this Court may deem just and proper.

Dated: November 6, 2014

Respectfully submitted,



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***\* Pro Hac Vice Application forthcoming***

*Counsel for Plaintiff Lambeth Magnetic  
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